

Jiaju Zhou · Guirong Xie · Xinjian Yan

# Encyclopedia of Traditional Chinese Medicines

Molecular Structures, Pharmacological Activities,  
Natural Sources and Applications

## Vol.4

Isolated Compounds N-S

 Springer

Encyclopedia of Traditional Chinese Medicines  
Molecular Structures, Pharmacological Activities,  
Natural Sources and Applications



Jiaju Zhou • Guirong Xie • Xinjian Yan

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Traditional Chinese Medicines  
Molecular Structures, Pharmacological  
Activities, Natural Sources and Applications

Vol. 4: Isolated Compounds N-S



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# Encyclopedia of Traditional Chinese Medicines

Molecular Structures, Pharmacological Activities, Natural Sources and Applications

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# Preface

A significant preoccupation of modern traditional Chinese medicine (TCM) research has been the characterization of TCM components, such as pertain to their isolation, purification, structural determination, and pharmacological activity. As a reference tool, this *Encyclopedia of Traditional Chinese Medicines* presents a comprehensive and integrative work on surveying TCM plant sources, chemistry, pharmacology and medicinal effects and indications in a systematic manner.

This encyclopedia is an integrated achievement of a long-term TCM research project by the authors at the Chinese Academy of Sciences<sup>[1-4]</sup>, involving three parts and now organized in six volumes:

Part I (Volumes 1 to 4 and part of Volume 5) provides structural, physical, pharmacological and natural source information on 23,033 isolated chemicals captured from 5,535 references, basically up to year 2005. A great deal of effort has been paid on overlapping or contradictory data in order to provide readers with an accurate and reliable resource.

Part II (last part of Volume 5) describes 6,926 TCM plants and congeners, together with their medicinal effects and indications. The contents of Part I and Part II are all organized in alphabetical order.

Part III (Volume 6) includes seven indexes produced by a computer program. Based on the indexes, users can readily find concerned contents in multiple ways.

With this encyclopedia, the authors attempt to provide a bridge for the communication between the TCM system and Western medicinal systems, and a platform with multiple-subjects in support of research and development of the health sciences.

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# Introduction

This encyclopedia mainly consists two parts - compound and plant. Its core content is the structural and pharmacological information of 23,033 phytochemicals, as well as medical effects and indications of 6,926 plant species from which the phytochemicals were isolated. The compounds, i.e. phytochemicals, are ordered alphabetically, and their ordinal numbers are used as compound unique codes. The plant species are coded from T0001 to T6926. With this code system, the complicated “many to many” relationship between compounds and plants can be clearly expressed, and any individual compound or plant could be located easily in this 6 volumes book.

## 1. Compound Entry

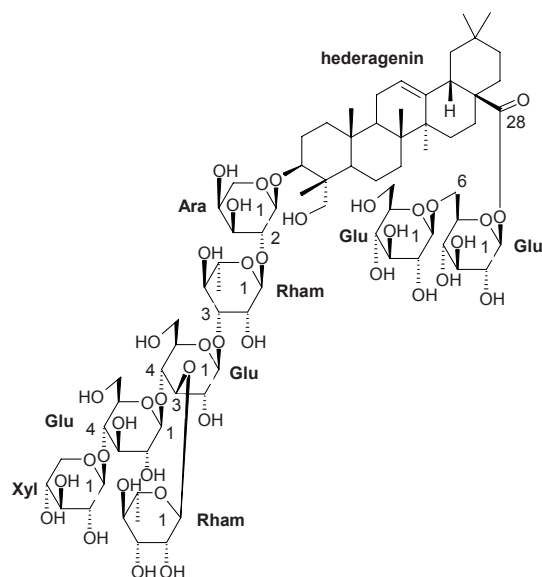
**Format of Compound Entry.** A compound entry starts with a title line, in which there are two items: the compound’s unique code and main name. Following the title line is the compound physical, pharmacological and source information, which may include 8 items:

**Title line (code number, main name)**

- A. Synonyms of the compound (if any);
- B. CASRN number (if any);
- C. Formula (relative molecular mass);
- D. Physicochemical properties;
- E. Pharmacological data (if any);
- F. Source(s);
- G. Reference(s);
- H. Graphic structure.

**Chemical Names and Synonyms.** Generally, a compound may have one scientific name and several trivial names. In the encyclopedia, based on original articles, we select one name as the “main name” (appeared at the title line of each compound entry), and use it to alphabetically order the 23,033 compounds in the first 5 volumes. The main name is either a scientific name or a trivial name. All of other names of each compound, if any, are presented after the title line.

**Stereochemistry of Chemical Structure.** We protracted all compound structures down to atom-bond level including complicated glycosides, with stereo-chemical information based on the data in the original papers. For example, the structure with full stereochemistry of compound 22,834 (isolated from CHUAN XU DUAN *Dipsacus asperoides*) is:



3-*O*-[ $\beta$ -*D*-Xylopyranosyl(1 $\rightarrow$ 4)]- $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 4)]  
 [ $\alpha$ -*L*-rhamnopyranosyl(1 $\rightarrow$ 3)]- $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 3)-  
 $\alpha$ -*L*-rhamnopyranosyl(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranosyl hederagenin-  
 28-*O*- $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside

**Normalization of Pharmacological Data.** More than 8,000 TCM components in this encyclopedia have a variety of pharmacological data, which are valuable not only for the study of TCM, but also for the development of Western medicine. Because different expressions are used for the same kind of data in different articles, we have to define and normalize thousands pharmacological terms, so that the data could be expressed by a unified way, and be easily understood by readers.

The pharmacological terms in the encyclopedia are presented by a multi-layered structure. In the top layer, there are around 20 types of pharmacological activity terms, they are cytotoxic (*in vitro* anticancer), antineoplastic (*in vivo* anticancer), antibacterial, antifungal, antiviral, anti-HIV, anti-inflammatory, antioxidant, antimalarial, enzyme inhibitors, NO production inhibitors, cardiovascular activity, smooth muscle relaxant and stimulant, toxin and medium lethal dose LD<sub>50</sub>, and so forth. For each term there is a regulation about how to describe related pharmacological data. The following is an example:

**Term name** (*in vitro/in vivo*,  
 target cell **1**, quantitative data,  
 control Compound, control's data;  
 target cell **2**, quantitative data,  
 control Compound, control's data;  
 target cell **3**, quantitative data,  
 control Compound, control's data;  
 terse description of related mechanism if any).

Under the subtitle “Pharm:” of compound entry 248 (17-Acetoxyabda-7,12(*E*),14-triene), a set of bio-data is presented as follows:

Pharm: **Cytotoxic** (*in vitro*,  
 BT474 human galactophore cancer cell, IC<sub>50</sub> = 4.7μg/mL,  
 control Doxorubicin hydrochloride, IC<sub>50</sub> = 0.08μg/mL;  
 CHAGO human undifferentiated lung cancer cell, IC<sub>50</sub> = 5.7μg/mL,  
 control Doxorubicin hydrochloride, IC<sub>50</sub> = 2.3μg/mL;  
 HepG2 human liver cancer cell, IC<sub>50</sub> = 6.5μg/mL,  
 control Doxorubicin hydrochloride, IC<sub>50</sub> = 0.9μg/mL;  
 Kato3 human gastric cancer cell, IC<sub>50</sub> = 5.3μg/mL,  
 control Doxorubicin hydrochloride, IC<sub>50</sub> = 1.7μg/mL;  
 SW620 human colorectal adenocarcinoma cell, IC<sub>50</sub> = 5.6μg/mL,  
 control Doxorubicin hydrochloride, IC<sub>50</sub> = 1.1μg/mL).

In order to standardize abbreviations of cancer cells, such as BT474, CHAGO, etc., we defined and used 270 cancer cell codes (CCC) in the encyclopedia. For explanations of these codes, please see “Cancer Cell Codes in the Pharmacological Models” in Volume 1 of the encyclopedia.

By means of the formatted and structuralized methods, we normalized expressions of most pharmacological data appeared in the encyclopedia. For complete information of all 3367 normalized pharmacological activity terms, please see “Compound Pharmacological Activities Index” in Volume 6.

## 2. Plant Entry

**One Species One Entry.** Conventionally, a TCM name may include more than one plant species that have the same medical functions; therefore, a plant may not have an independent TCM entry and may be described under a TCM name. In this book, modern botany classification regulation is adopted and each plant species has an independent entry.

For example, traditional Chinese medicine DAN SHEN includes three species. They are equivalent in both effects and indications in TCM practice. In this encyclopedia, we defined three plant entries for each one of them.

T5680 *Salvia miltiorrhiza* (Lamiaceae); DAN SHEN; Danshen;  
 T5681 *Salvia miltiorrhiza* f. *alba* (Lamiaceae); BAI HUA DAN SHEN; Whiteflower Danshen;  
 T5688 *Salvia przewalskii* (Lamiaceae); GAN XI SHU WEI CAO; Przewalsk Sage.

With this method, we are able to smoothly link TCM information with that of modern botany.

**Simplified Latin Name.** For each TCM plant or TCM congener, four names are used in the encyclopedia. They are Latin name, English name, PIN-YIN name and Chinese



name, while the Chinese name only appears in TCM Plants PIN-YIN/Chinese Names Index” not in the main part of the book. For plant Latin name (e.g. scientific name), we use a simplified nomenclature, in which the nomenclator(s) information is not included. For example the Latin name of Chinese Angelica (DANG GUI) in the encyclopedia is “*Angelica sinensis*”, not “*Angelica sinensis* (Oliv.) Diels”.

**Family Name.** According to the “International Code of Botanical Nomenclature” (2007), the following eight authoritative family names are used in the encyclopedia. The family names of long usage, which are not used in are the encyclopedia, indicated in parentheses:

Apiaceae (Umbelliferae);  
 Arecaceae (Palmae);  
 Asteraceae (Compositae);  
 Brassicaceae (Cruciferae);  
 Clusiaceae (Guttiferae);  
 Fabaceae (Leguminosae);  
 Lamiaceae (Labiatae) and  
 Poaceae (Gramineae).

**PIN-YIN Name and Chinese Name.** A simplified PIN-YIN name system is used in the encyclopedia. That is not to include the four-tone mark. However, there are exceptions. Among the thousand PIN-YIN names in the book, there are seven confusing cases. For each mistakable name, a superscript is attached to the name for indicating its four-tone in order to distinguish it from other plant species. For example: BAI MAO GEN<sup>(1)</sup> and BAI MAO GEN<sup>(4)</sup> are two different TCM plants:

T3416 *Imperata cylindrica* var. *major* (Poaceae); BAI MAO GEN<sup>(1)</sup>; Lalang Grass Rhizome.  
 T3309 *Hydrastis canadensis* (Ranunculaceae); BAI MAO GEN<sup>(4)</sup>; Golden-seal.

Other six cases are:

T1449 *Cirsium japonicum* (Asteraceae); DA JI<sup>(4)</sup>; Japanese Thistle.  
 T2608 *Euphorbia pekinensis* (Euphorbiaceae); DA JI<sup>(3)</sup>; Peking Euphorbia.  
 T4124 *Matricaria chamomilla* [Syn. *Matricaria recutita*] (Asteraceae); MU<sup>(3)</sup> JU; Mayweed.  
 T0197 *Aegle marmelos* (Rutaceae); MU<sup>(4)</sup> JU; Sepiaria.  
 T1039 *Bruguiera gymnorrhiza* (Rhizophoraceae); MU LAN<sup>(3)</sup>; Common Bruguiera.  
 T3423 *Indigofera tinctoria* (Fabaceae); MU LAN<sup>(2)</sup>; True Indigo.  
 T6798 *Vitis vinifera* (Vitaceae); PU<sup>(2)</sup> TAO; European Grape.  
 T6267 *Syzygium jambos* (Myrtaceae); PU<sup>(3)</sup> TAO; Roseapple.  
 T2107 *Dendrobium nobile* (Orchidaceae); SHI HU<sup>(4)</sup>; Noble Dendrobium.  
 T2646 *Evodia rutaecarpa* var. *officinalis* (Rutaceae); SHI HU<sup>(3)</sup>; Official Evodia.  
 T1221 *Caryopteris divaricata* (Verbenaceae); YOU<sup>(2)</sup>; Divaricate Bluebeard.  
 T1478 *Citrus grandis* (Rutaceae); YOU<sup>(4)</sup>; Pummelo.

**Translation of TCM Effects Terms.** In the Volume 5 of the encyclopedia, 6,926 TCM Plant entries list in alphabetical order of *Latin names*, including 2,923 original TCM plants (including few of animals)<sup>[R01-R04]</sup> and 4,003 congeners (including a few of non-TCM medicinal plants). For each TCM plant, two most important features are traditional TCM effects and indications.

For preparing this encyclopedia, one of the greatest challenges is how to correctly translate each TCM term into correspondent English, so that Western readers are able to understand the true meaning of the content in the book. After comparing several translation systems, we decided to use Wiseman's terminological system<sup>[R05-R07]</sup> for this book.

Wiseman's system obeys two most important principles: (1). The English-language terms should be faithful to the original concepts in traditional Chinese medicine. (2). The English-language TCM terminology should be flexible enough to allow modifications and extensions so that derivative effects can be described by a structuralized manner. For instance, the term "quicken blood" describes a general effect meaning "activating blood flow" or "promoting blood circulation". Elaboration of this term produces "quicken blood and transform stasis", "quicken blood and relieve pain", "quicken blood and regulate menstruation", and so on. The following illustrations are an example of the structuralized expressions related to the term "quicken blood":

quicken blood and disinhibit water  
 quicken blood and dispel stasis  
 quicken blood and dispel wind  
 quicken blood and disperse swelling  
 quicken blood and disperse welling abscess  
 quicken blood and dissipate binds  
 quicken blood and dissipate stasis  
 quicken blood and free menstruation  
 quicken blood and free network vessels  
 quicken blood and free vessels  
 quicken blood and joint bones  
 quicken blood and move *qi*  
 quicken blood and move stasis  
 quicken blood and nourish heart  
 quicken blood and promote milk  
 quicken blood and quiet spirit  
 quicken blood and regulate menstruation  
 quicken blood and relieve pain  
 quicken blood and resolve toxin  
 quicken blood and settle pain  
 quicken blood and soothe sinews  
 quicken blood and stanch bleeding  
 quicken blood and strengthen sinews  
 quicken blood and transform stasis  
 quicken blood and vessels

**Translation of TCM Indications Terms.** Based on Wiseman's terminological system, "Chinese-English Dictionary of Traditional Chinese Medicine" compiled by Guangzhen Gao *et al.*<sup>[R08]</sup>, "An English-Chinese Medical Dictionary, Second Edition" compiled by Weiyi Chen *et al.*<sup>[R09]</sup>, and other reference dictionaries, we defined over 3,800 standard indication terms for translating TCM indications terms from Chinese to English. Among the 3,800 terms, 2,526 terms are actually used in the encyclopedia, in which 85% terms are traditional TCM terms and the rest 15% are common modern medicinal terms. Some typical examples of traditional TCM indication terms are as follows:

*yin* vacuity internal heat  
*yin* vacuity lung dryness  
*yin* vacuity tidal fever  
 chest impediment  
 chest impediment and heart pain  
 chest impediment and heart pain over back  
 chest oppression and pain  
 chest oppression with breathe hard  
 distention pain in rib-side  
 distention pain in stomach duct  
 distention pain in stomach duct and abdomen  
 externally contracted summer heat-damp  
 externally contracted wind evil  
 externally contracted wind-cold  
 externally contracted wind-heat  
 knocks and falls  
 sores  
 sores clove boil  
 swelling of sores and boils  
 sore scab and lichen  
 toxin swelling of sores

In summary, this encyclopedia provides a collection of more than 23,000 TCM chemical components isolated from natural resources and a large number of pharmacological activity data of these components. It may be used not only as a handbook to look for structures and pharmacological activities of TCM chemical components and source plant information, but also a fundamental platform for studying TCM with a systematic and integrative approach.

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# How to Use the Books

## 1. Three Kinds of “Many to Many” Relationships

To help readers effectively search and use of the books, authors strongly suggest readers being familiar with the structure of the encyclopedia and certain important linkers or pointers between different data sets.

Firstly, in order to avoid confusing cases, please keep in mind the following three features of the book:

(a) In the encyclopedia, all of pharmacological data belong to compounds, not to plants. In other words, the encyclopedia doesn't include plants' pharmacological data.

(b) All effect and indication terms belong to TCM plants, not to compounds. And almost all of effect terms as well as 85% indication terms are pure Chinese traditional concepts.

(c) In the encyclopedia, there are three kinds of “many to many” relationships: (i), compounds to plants, which is the most important relationship. (ii), pharmacological data to compounds in the molecular level only. (iii), plants to effects/indications in the species level.

Pharm. data ↔ Compound 1		Plant T0001 ↔ effects, indications
Pharm. data ↔ Compound 2		Plant T0002 ↔ effects, indications
Pharm. data ↔ Compound 3	↔	Plant T0003 ↔ effects, indications
.....		.....
Pharm. data ↔ Compound 23032		Plant T6925 ↔ effects, indications
Pharm. data ↔ Compound 23033		Plant T6926 ↔ effects, indications
(Molecular level)		(Species level)

### Sketch Map of Three Important “Many to Many” Relationships

## 2. Seven Useful Indexes

In Volume 6, there are seven indexes for data searching.

The indexes 1-3 are tools to search compounds from different starting-points:

**Index 1** (Compound Pharmacological Activity Index) links pharmacological terms



with related compound codes. For example, if there is a question as:

“Which compounds have *in vitro* cytotoxic activity against human breast cancer cells?”

From the index 1, the answer can easily be obtained as follows:

Cytotoxic, BC hmn breast cancer cells 24, 349, 526, 2244, 3416, 3429, 3708, 4775, 5095, 6759, 6759, 6759, 12453, 12454, 15494, 15495, 18515, 20671.

Cytotoxic, BC-1 hmn breast cancer cells 1277, 2260, 5064, 5327, 6759, 6759, 8220, 8221, 8222, 8235, 10250, 10297, 10511, 11353, 13489, 13490, 13491, 13492, 13493, 13494, 13495, 15919, 17008, 18866, 20809.

Cytotoxic, BCA-1 hmn breast cancer cells 6759, 13468, 13469, 13470, 15739.

Cytotoxic, Bcap37 hmn breast cancer cells 843, 11392, 13123, 16183, 17717, 18499.

Then, from compounds code numbers, one can get detailed data for each compound.

**Index 2** (Compound Molecular Formula Index) connects a molecular formula to its all isomers. For example, there are five isomers with formula  $C_{45}H_{76}O_{18}$ :

$C_{45}H_{76}O_{18}$

Abutiloside F, 40

Asp-IV, 1905

Asp-V, 1906

Trigoneoside IIIa, 21669

Trigoneoside IIIb, 21670

**Index 3** (Compound Synonym Index) is useful for searching a compound from a known name. A strong suggestion to readers is that when searching a compound from a known name, to search twice probably is necessary: firstly from entry title in the encyclopedia text and then from the index 3.

The indexes 4–7 are tools to search TCM plants:

**Index 4** (TCM Plant English Name Index) links a Plant English Name to other names of the plant, for example:

Chinese Angelica = T0495 *Angelica sinensis* = DANG GUI

Siberian Phlojodicarpus = T4804 *Phlojodicarpus sibiricus* = ZHANG GUO QIN

Dahurian Angelica = T0478 *Angelica dahurica* [Syn. *Angelica porphyrocaulis*] = BAI ZHI

Gigantic Angelica = T0483 *Angelica gigas* = CHAO XIAN DANG GUI

Narrowleaf Angelica = T0476 *Angelica anomala* = XIA YE DANG GUI

**Index 5** (TCM Plant PIN-YIN and Chinese Name Index) links PIN-YIN name to Latin name and/or English name, for example:

BAI HUA QIAN HU = T4768 *Peucedanum praeruptorum* = Whiteflower Hogfennel

BAI HUA SHE GAN = T3457 *Iris dichotoma* = Vesper Iris

BAI HUA SHE SHE CAO = T4485 *Oldenlandia diffusa* [Syn. *Hedyotis diffusa*] = Spreading Hedyitis

**Index 6** (TCM Plant Traditional Effects Index) and **Index 7** (TCM Plant Traditional Indications Index) connect specific effect and/or indication to related plants.

For example, to search all plants with effect “nourish heart and quiet spirit”, the result is:

**nourish heart and quiet spirit:**

T0944 *Biota orientalis* [Syn. *Thuja orientalis*; *Platyclusus orientalis*],  
 T1292 *Celastrus orbiculatus* [Syn. *Celastrus articulatus*],  
 T1381 *Choerospondias axillaris*,  
 T4194 *Menyanthes trifoliata*,  
 T4400 *Nelumbo nucifera*,  
 T4902 *Pimpinella thelungiana*,  
 T5108 *Polygonum multiflorum*,  
 T5497 *Rhodiola kirilowii*,  
 T5701 *Salvia yunnanensis*.

If searching all plants with indication “angina pectoris” (a modern medicinal term), “externally contracted wind-cold” (a TCM term), and “externally contracted wind-heat” (a TCM term), you will obtain the following results:

**angina pectoris:** T1215 *Carthamus tinctorius*, T1395 *Chrysanthemum morifolium* [Syn. *Dendranthema morifolium*], T1775 *Crataegus pinnatifida*, T1778 *Crataegus pinnatifida* var. *major*, T2274 *Dryobalanops aromatica*, T2389 *Epimedium acuminatum*, T2390 *Epimedium brevicornum*, T2392 *Epimedium davidii*, T2394 *Epimedium elongatum*, T2398 *Epimedium koreanum*, T2401 *Epimedium pubescens*, T2402 *Epimedium sagittatum*, T2404 *Epimedium sutchuenense*, T2406 *Epimedium wushanense*, T2846 *Ganoderma japonicum* [Syn. *Ganoderma sinense*], T2848 *Ganoderma lucidum*, T2964 *Ginkgo biloba*, T3388 *Ilex chinensis* [Syn. *Ilex purpurea*], T3396 *Ilex pubescens*, T3397 *Ilex pubescens* var. *glaber*, T3875 *Liriope spicata* var. *prolifera*, T3925 *Loranthus parasiticus* [Syn. *Loranthus chinensis*; *Taxillus chinensis*], T3926 *Loropetalum chinense*, T4303 *Moschus moschiferus*; *Moschus berezovskii*; *Moschus sifanicus*, T4507 *Ophiopogon japonicus*, T4608 *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], T4953 *Piper longum*, T5312 *Pueraria edulis*, T5313 *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*], T5316 *Pueraria omeiensis*, T5318 *Pueraria phaseoloides*, T5320 *Pueraria thomsonii*, T5680 *Salvia miltiorrhiza*, T5681 *Salvia miltiorrhiza* f. *alba*, T5688 *Salvia przewalskii*, T6510 *Trichosanthes kirilowii*, T6513 *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*], T6584 *Typha angustata*, T6585 *Typha angustifolia*, T6587 *Typha latifolia*.

**externally contracted wind-cold:** T4039 *Magnolia grandiflora*, T4445 *Notopterygium forbesii* [Syn. *Notopterygium franchetii*], T4446 *Notopterygium incisum*, T4956 *Piper mullesua*, T5727 *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*].

**externally contracted wind-heat:** T0480 *Angelica decursiva* [Syn. *Peucedanum decursivum*], T1395 *Chrysanthemum morifolium* [Syn. *Dendranthema morifolium*], T1933 *Cyclea sutchuenensis*, T2798 *Fritillaria verticillata* var. *thunbergii* [Syn. *Fritillaria thunbergii*], T3819 *Ligusticum brachylobum*, T4413 *Nepeta cataria*, T4761 *Peucedanum longshengens*, T4768 *Peucedanum praeruptorum*, T4769 *Peucedanum rubricaulis*, T6791 *Vitex rotundifolia* [Syn. *Vitex trifolia* var. *simplicifolia*], T6793 *Vitex trifolia*.

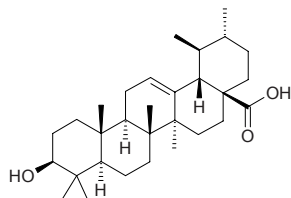
### 3. Data Survey Example of Compound Entry

At last, we would like to take Ursolic acid (compound code 22270 in the books) as a data survey example. Under this compound there are a quite number of data as follows:

**22270 Ursolic acid**

$\beta$ -Ursolic acid [77-52-1] C<sub>30</sub>H<sub>48</sub>O<sub>3</sub> (456.72).

White solid powder (chloroform–methanol), mp 298~294°C, 265~267°C.

**Pharm: (27 items)**

**Cytotoxic** (KB, ED<sub>50</sub> > 25μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.12μg/mL; Hep3B, ED<sub>50</sub> > 25μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.14μg/mL; Colon205, ED<sub>50</sub> > 25μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.10μg/mL; HeLa, ED<sub>50</sub> > 25μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.11μg/mL)<sup>[4369]</sup>;

**cytotoxic** (*in vitro*, HONE-1 cell, IC<sub>50</sub> = (8.8±1.5)μmol/L, control Etoposide, IC<sub>50</sub> = (0.5±0.2)μmol/L, *cis*-Platin, IC<sub>50</sub> = (3.2±0.5)μmol/L; KB cell, IC<sub>50</sub> = (8.2±2.7)μmol/L, Etoposide, IC<sub>50</sub> = (0.9±0.3)μmol/L, *cis*-Platin, IC<sub>50</sub> = (4.4±0.9)μmol/L; HT29 cell, IC<sub>50</sub> = (4.7±1.5)μmol/L, Etoposide, IC<sub>50</sub> = (2.4±0.5)μmol/L, *cis*-Platin, IC<sub>50</sub> = (5.7±1.1)μmol/L)<sup>[5254]</sup>;

**antineoplastic** (liver cancer cells *in vitro*, mus ascites carcinoma *in vivo*, life was prolonged);

**antibacterial** (*Escherichia coli*, IZD = 13~15mm, control Chloramphenicol, IZD = 16~20mm, control DMSO (4%), IZD < 10mm; *Staphylococcus aureus*, IZD = 10~12mm, control Chloramphenicol, IZD = 16~20mm, control DMSO (4%), IZD < 10mm; *Bacillus subtilis*, IZD = 13~15mm; control Chloramphenicol, IZD = 16~20mm, control DMSO (4%), IZD < 10mm)<sup>[5315]</sup>;

**antibacterial** (*Staphylococcus* spp. *in vitro*, MIC = 300μg/mL, gram-positive bacteria *in vitro*, MIC = 50~400μg/mL, gram-negative bacteria *in vitro*, MIC = 200~800μg/mL, microzyme *in vitro*, MIC = 100~700μg/mL);

**antitubercular** (*Mycobacterium tuberculosis*, MIC = 41.9μg/mL, cytotoxic, Vero cells, IC<sub>50</sub> = 46.5μg/mL, SI (IC<sub>50</sub>/MIC) = 1.11, positive control Rifampin, MIC = 0.03μg/mL, IC<sub>50</sub> = 98.3μg/mL, SI = 3277)<sup>[4986]</sup>;

**anticonvulsant** (induced by corazol);

**anti-inflammatory** (rat, induced by embedding woolball, 12.5mg/(kg·d) ip, 7 days, effective);

**anti-inflammatory** (*in vitro*, murine macrophage RAW264.7 Cells, inhibits LPS-induced NO and PGE<sub>2</sub> release)<sup>[5016]</sup>;

**COX-2 enzyme selective inhibitor** (mean IC<sub>50</sub> of isomers = 130μmol/L)<sup>[4415]</sup>;

**COX-2 enzyme inhibitor** (PMA-treated hmn mammary and oral epithelial cells, molecular mechanisms is mediated by a cAMP response element in the COX-2 promoter, associated with inhibition of protein kinases)<sup>[4415]</sup>;

**antipyretic** (clearly reduces normal body temperature of rat);

**reduces serum transaminase** (animal, 100mg/kg);

**antitrypanosomal** (epimastigotes of *Trypanosoma cruzi*, MLC = 6.2μmol/L, control Gentian violet, MLC = 6.2μmol/L)<sup>[2579]</sup>;

**mucin release stimulator** (acts directly on airway mucin-secreting cells, increased mucin release (40~50)% above control at the highest concentrations 0.00001~0.001mol/L, possible use to treatment of chronic airway diseases)<sup>[4084]</sup>;

**platelet aggregation inhibitor** (2~5mg/mL collagen-induced, IC<sub>50</sub> = (511±4)μmol/L, control ASA, IC<sub>50</sub> = (420±3)μmol/L; 1~4μmol/L epinephrine-induced with 0.8~1.0mg/mL collagen, IC<sub>50</sub> = (82.6±2.8)μmol/L, ASA, IC<sub>50</sub> = (53.0±4.5)μmol/L; 10~40μmol/L Sodium arachidonate-induced with 0.8~1.0mg/mL collagen, IC<sub>50</sub> =

(669±12)μmol/L, ASA, IC<sub>50</sub> = (66.0±2.1)μmol/L; 1~5μmol/L PGH<sub>2</sub>/TXA<sub>2</sub> receptor agonist U46619-induced with 0.8~1.0mg/mL collagen, IC<sub>50</sub> > 1000μmol/L, ASA, IC<sub>50</sub> = (340±12)μmol/L)<sup>[4994]</sup>;

**tissue factor inhibitor inactive**<sup>[5387]</sup>;

**antirheumatic**<sup>[5341]</sup>;

**anti-diabetic**<sup>[5341]</sup>;

**antiulcer**<sup>[5341]</sup>;

**hypolipidemic**<sup>[5341]</sup>;

**anti-atherosclerotic**<sup>[5341]</sup>;

**anti-HIV**<sup>[5341]</sup>;

**TGF-β1 antagonist** (inhibits the binding of <sup>125</sup>I-TGF-β1 to its receptor in Balb/c 3T3 cell, IC<sub>50</sub> = (6.9±0.8)μmol/L, suggests TGF-β1 antagonistic activity is responsible, at least in part, for therapeutic efficacy of *Clerodendranthus spicatus* to treat humans with renal disease)<sup>[5496]</sup>;

**glucocorticoid** (enhances glycogen in liver, reduces glycogen in heart and striated muscles);

**LD<sub>50</sub>** (mus, ip) = 680mg/kg.

### Sources: (52 species)

BAI HUA SHE SHE CAO *Oldenlandia diffusa* [Syn. *Hedyotis diffusa*] (whole herb: mean content of 16 origins = 0.211%)<sup>[5508]</sup>;

BI LU GOU TENG *Uncaria tomentosa*,

CHE QIAN *Plantago asiatica* (whole herb: content scope = 0.28%~2.32%, mean content = 0.97%)<sup>[5508]</sup>;

CHI NAN *Syzygium buxifolium*,

CHONG YA YAO *Isodon ternifolius*,

CI WU JIA YE *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*],

DA CHE QIAN *Plantago major*,

DA ZAO *Ziziphus jujuba* (ripe fruit: mean content = 0.016%)<sup>[5508]</sup>,

DAN SHEN *Salvia miltiorrhiza*,

DIAN NAN HONG HOU KE *Calophyllum polyanthum* (seed: yield = 0.0064%dw),

DONG LING CAO *Rabdosia rubescens* (whole herb: mean content = 0.414%)<sup>[5508]</sup>; leaf: mean content = 0.573%)<sup>[5508]</sup>;

DU ZHONG *Eucommia ulmoides*,

DUAN TING SHAN MAI DONG *Liriope muscari* (tuber),

GOU GU YE *Ilex cornuta* (leaf: mean content = 0.96%)<sup>[5508]</sup>,

GUANG JING QIAN CAO *Rubia wallichiana* (stem),

HONG HUA LU TI CAO *Pyrola incarnata* (whole herb: content = 2.06%)<sup>[5508]</sup>,

HU BEI SHAN ZHA *Crataegus hupehensis* (dried ripe fruit: mean content = 0.455%),

JIAN YE TOU WU GEN *Ligularia sagitta*,

LIAN QIAN CAO *Glechoma lungituba*,

LIAN QIAO *Forsythia suspensa*,

LIU QIU SHE GEN CAO *Ophiorrhiza liukiensis* (whole herb),

MA BIAN CAO *Verbena officinalis* (whole herb: mean content of 5 batch samples = 0.227%)<sup>[5508]</sup>,

MAO CAO LONG *Ludwigia octovalvis* (whole herb: yield = 0.00012%dw),

MAO PAO TONG *Paulownia tomentosa*,

MAO XU CAO *Clerodendranthus spicatus*,

MU GUA *Chaenomeles sinensis*,

NV ZHEN ZI *Ligustrum lucidum*,

PI PA YE *Eriobotrya japonica* (dried leaf: mean content = 0.677%)<sup>[5508]</sup>,

PI PA YE *Eriobotrya japonica* (stem and leaf),

PING CHE QIAN *Plantago depressa* (whole herb: mean content = 0.276%)<sup>[5508]</sup>,

RI BEN LU TI CAO *Pyrola japonica*,

RONG SHU *Ficus microcarpa* (aerial root),  
 SHAN DI XIANG CHA CAI *Isodon oresbia*,  
 SHAN LI HONG *Crataegus pinnatifida* var. *major*,  
 SHAN ZHA *Crataegus pinnatifida* (fruit: content scope = 0.31%~0.56%)<sup>[5501]</sup>,  
 SHAN ZHU YU *Cornus officinalis* [Syn. *Macrocarpium officinale*] (dried ripe fruit: content  
 scope = 0.24%~0.32%)<sup>[5501]</sup>, mean content = 0.263%)<sup>[5508]</sup>,  
 SHI NAN *Photinia serrulata* (leaf: mean content = 1.50%)<sup>[5508]</sup>,  
 SHI SHENG BIAN LEI *Gentianopsis paludosa*,  
 SHI YE *Diospyros kaki* (dried leaf: mean content = 0.784%)<sup>[5508]</sup>,  
 SHU HUA JIE CAO *Valeriana laxiflora* (aerial parts and root),  
 SUAN ZAO *Ziziphus jujuba* var. *spinosa* (ripe fruit: content = 0.030%)<sup>[5508]</sup>,  
 SUO YANG *Cynomorium songaricum* (fleshy stem: content = 0.78%)<sup>[5508]</sup>,  
 WEI LING CAI *Potentilla chinensis*,  
 WU GENG WU JIA PI *Acanthopanax sessiliflorus* (fruit),  
 XIA KU CAO *Prunella vulgaris* (dried spike: content = 0.780%)<sup>[5508]</sup>,  
 YANG MEI SHU PI *Myrica rubra* (bark: content = 0.027%),  
 YE SHAN ZHA *Crataegus cuneata* (dried ripe fruit: mean content of 3 origins =  
 0.399%)<sup>[5508]</sup>,  
 YI LANG QING LAN *Dracocephalum kotschyi*,  
 ZHI ZI *Gardenia jasminoides* [Syn. *Gardenia florida*] (dried ripe fruit: mean content =  
 0.041%)<sup>[5508]</sup>,  
 ZHOU YE LU TI CAO *Pyrola rugosa* (whole herb: content = 3.00%)<sup>[5508]</sup>,  
*Cussonia bancoensis*,  
 Occurs in many plants.

**Ref:** 4, 367, 428, 454, 501, 592, 595, 600, 658, 660, 2579, 3005, 3061, 4084, 4163, 4369,  
 4415, 4527, 4767, 4772, 4986, 4994, 5016, 5254, 5315, 5382, 5387, 5341, 5496, 5501,  
 5508.

# Abbreviations and Symbols

12(S)-HETE	12(S)-Hydroxy-5,8,10,14-EicosaTetraEnoic acid	cAMP-PDE	cAMP-phosphodiesterase
<sup>125</sup> I-TGF- $\beta$ 1	<sup>125</sup> I-Transforming Growth Factor- $\beta$ 1	CAPE	Caffeic Acid Phenethyl Ester
5-FU	5-FluoroUracil	CB	cytochalasin B
5-HT	5-HydroxyTryptamine (serotonin)	CC	macrophage inflammatory protein (MIP-1 $\beta$ ), monocyte chemotactic protein (MCP-2), and C lymphotactin (Itn) (a chemokine family)
95%FL (=CI <sub>95</sub> )	95% Fiducial Limits (=95% Confidence Interval)	CC <sub>0</sub>	Minimum cytotoxic concentration
AA	Arachidonic Acid	CC <sub>50</sub>	IC <sub>50</sub> of cytotoxicity (concentration of the 50% cytotoxic effect)
AAPH	2,2'-Azo-bis-(2-AmidinoPropane)-diHydrochloride	CCR1	chemokine receptor 1
ABTS <sup>+</sup>	2,2'-Azino-Bis-(3-ethylbenzThiazoline 6-Sulphonic acid), radical	CD	concentration required to double enzyme (induction) activity
ACAT	Acyl-CoA Cholesterol acyltransferase	CD	Concentration required to double quinone reductase (induction) activity
ACE	Angiotensin Converting Enzyme	CD <sub>50</sub>	medium Convulsive Dose
Ach	Acetylcholine	cGMP	cyclic guanosine monophosphate
AChE	Acetylcholinesterase	cGMP-PDE	cGMP-phosphodiesterase
ACTH	AdrenoCorticoTropic Hormone	CGN	<i>cis</i> -Golgi network
AD	Alzheimer's disease	CGRP	Calcitonin gene-related peptide
ADM	adriamycin	CHO	Chinese hamster ovarian
ADP	adenosine diphosphate	CI	Chemopreventive index (=IC <sub>50</sub> /CD)
AG	aminoguanidine	CI <sub>95</sub> (=95%FL)	95% Confidence Interval (=95% Fiducial Limits)
AggRt	aggregation rate	CIC	complete inhibiting concentration
AIDS	acquired immunodeficiency syndrome	CIMC	complete inhibiting minimum concentration
ALS	amyotrophic lateral sclerosis	CINC-1	cytokine-induced neutrophil chemoattractant 1
ALT	alanine aminotransferase	CMV	Cytomegalovirus
AMP	adenosine monophosphate	CNQX	6-Cyano-7-nitroquinoxaline-2,3-dione (non-NMDA receptor antagonist)
AMV	avian myeloblastosis virus	CNS	central nervous system
AP	angina pectoris	ConA	concanavalin A
AP-1	activator protein-1	COX	cyclooxygenase
APN	Aminopeptidase N	COX-1	cyclooxygenase-1
APV	<i>dl</i> -2-Amino-5-phosphonovaleric acid (a competitive antagonist of the NMDA receptor)	COX-2	cyclooxygenase-2
aq.	aqueous solution	CPT	camptothecin
ASA	AcetylSalicylic Acid	CRF	corticotrophin releasing factor
AST	aspartate transaminase; aspartate aminotransferase	CRH-1	corticotrophin releasing hormone-1
AT-III	Antithrombase-III	CRP	C-reactive protein
ATPase	Adenosine triphosphatase	CV-3988	<i>rac</i> -3-( <i>N</i> -octadecylcarbomoyloxy)-2-methoxypropyl 2-thiazoliethyl phosphate
AZT	3'-azido-3'-deoxythymidine	CVS	cardiac vascular system
BACE1	$\beta$ -Secretase	CXC	Stromal cell-derived factor (SDF)-1 $\alpha$ and IL-8 (a chemokine)
BChE	Butyrylcholinesterase	CYP1A	Cytochrome P450 1A
bFGF	basic Fibroblast Growth Factor	CYP2D6	Cytochrome P450 2D6
BHA	Butylated HydroxyAnisole; 3- <i>tert</i> -Butyl-4-HydroxyAnisole	CYP3A4	Cytochrome P450 3A4
BHT	Butylated HydroxyToluene	d	day
bid	bis in die (Latin)	DCFH	2',7'-dichlorodihydrofluorescein dye
BLM	bleomycin	DDDP	DNA-dependent DNA polymerase
bp	boiling point	dec	decomposition
BST	Brine Shrimp lethality bioassay = Brine Shrimp Test	<i>D</i> -GalN	<i>D</i> -galactosamine
<i>c</i>	concentration		
C5a	complement 5a		
cAMP	cyclic adenosine monophosphate		

DGAT	Diacylglycerol acyltransferase	GSH	Glutathione; <i>N</i> -( <i>N</i> - <i>L</i> - $\gamma$ -Glutamyl- <i>L</i> -cysteinyl)glycine
dil.	dilute	GTP	Guanosine TriPhosphate
DIZ	Diameter of Inhibitory Zone	GVHR	Graft-Versus-HostReaction
DMBA	9,10-dimethyl-1,2-benzanthracene (carcinogen); 7,12-dimethylbenz[a]anthracene (carcinogen)	h	hour
DMDP	(2 <i>R</i> ,3 <i>R</i> ,4 <i>R</i> ,5 <i>R</i> )-2,5-DihydroxyMethyl-3,4-Dihydroxy-Pyrrolidine	HAD	hmn immunodeficiency virus associated dementia
DMSO	DiMethyl SulphOxide	HBeAg	hmn type B Hepatitis, e Antigen
DNA	deoxyribonucleic acid	HBsAg	hmn type B Hepatitis, Surface Antigen
DNJ	1-Deoxynojirimucin (one kind of polyhydroxy alkaloid, glucosidase inhibitor)	HBV	Hepatitis B Virus
DOX	doxorubicin	HC <sub>50</sub>	medium Hemolytic Concentration
DPI	Diphenyleneiodonium	HCoV-229E	hmn coronavirus strain 229E
DPPH	1,1-DiPhenyl-2-PicrylHydrazyl free radical	HD	Huntington's disease
DS8000	Dextran sulphate, prepared from average Mr 8000	HER rat	Hypertensive Essential Rat
DSCG	DiSodium ChromoGlycate (anti-allergic agent)	HIV	hmn immunodeficiency virus
dw	dried weight	HIV-1	hmn immunodeficiency virus type 1
E.A.	Enzyme Activity	HIV-1 IN	hmn immunodeficiency virus type 1 integrase
EBV-EA	Epstein-Barr Virus Early Antigen	HIV-1 RT	hmn immunodeficiency virus type 1 reverse transcriptase
EC	Effective Concentration	HIV-RT	hmn immunodeficiency virus reverse transcriptase
EC <sub>50</sub>	medium Effective Concentration	hmn	human
ED	Effective Dose	HSV-1	herpes simplex virus 1
ED <sub>25</sub>	Effective Dose for 25%	HSV-2	herpes simplex virus 2
ED <sub>50</sub>	medium Effective Dose (in some cases for the medium Effective Concentration)	HVA	homovanillic acid
EGCG (EGCg)	(-)-Epigallocatechin gallate	hydroxyl radical	OH <sup>•</sup>
EGF	Epidermal Growth Factor (it protects MPP <sup>+</sup> -induced cell death)	ia	intra-arterial injection
EGFR	Epidermal Growth Factor Receptor	IAA	indole-3-acetic acid
ELAM-1	Endothelial-Leukocyte Adhesion Molecule-1	IC	Inhibiting Concentration
ELISA	Enzyme-Linked ImmunoSorbent Assay	IC <sub>50</sub>	median Inhibiting Concentration
eotaxin	eosinophilous cytotoxin	IC <sub>100</sub>	Absolute Inhibiting Concentration
ERK	Extracellular signal-Regulated Kinase	ICAM-1	Intercellular Cell Adhesion Molecule-1
ET	experimental times	ICR	Imprinting Control Region mouse
FAG	Fagomine (one kind of polyhydroxy alkaloid, glucosidase inhibitor)	id	intradermal injection
FCA	Freund's complete adjuvant	ID	Inhibiting Dose
FI	Feeding Index (= ((C-T)/(C+T)×100)	ID <sub>50</sub>	Median Inhibiting Dose
Flu-A	influenza virus type A	IFN	interferon
fMLP	<i>N</i> -formyl- <i>L</i> -Methionyl- <i>L</i> -Leucyl- <i>L</i> -Phenylalanine	IFN- $\gamma$	Interferon- $\gamma$
fp	freezing point	IgE	Immunoglobulin E
FR <sub>50</sub>	Feeding ratio when the consumed area of control disc (CCD) is 50% [FR = CTD(consumed area of treated disc)/CCD]	IgG	Immunoglobulin G
fw	fresh weight	IL	interleukin
G6PD	Glucose-6-Phosphate Dehydrogenase	IL-1	Interleukin-1
GABA	$\gamma$ -aminobutyric acid	IL-1 $\alpha$	interleukin-1 $\alpha$
GaIN	galactosamine	IL-1 $\beta$	interleukin-1 $\beta$
GI	growth inhibition	IL-2	Interleukin-2
GI <sub>50</sub>	the concentration of sample necessary to inhibit the growth to 50% of the control	IL-4	Interleukin-4
Glu	glutamate	IL-6	Interleukin-6
GOT	Glutamate-Oxaloacetate Transaminase	IL-8	Interleukin-8
Gp	Gastro protective effect	IL-10	Interleukin-10
gpg	guinea pig	IL-12	Interleukin-12
GPT	GlutamicPyruvic Transaminase	im	intramuscular injection
GRO	Growth-Related Oncogene	<i>in vitro</i>	<i>in vitro</i>
		<i>in vivo</i>	<i>in vivo</i>
		Indo	indomethacin
		iNOS	inducible Nitric Oxide Synthase
		InRt	inhibitive rate
		ip	intraperitoneal injection



i.t.	intrathecal injection	MMP	Matrix MetalloProteinases
iv	intravenous injection	MMP-2	Matrix MetalloProteinase-2
IZA	Inhibition Zone Area (mm <sup>2</sup> )	mp	melting point
IZD	Inhibition Zone Diameter (mm)	mPGES	microsomal ProstaGlandin E Synthase
J774.A1	murine monocyte/macrophage cell J774.A1	MPP+	1-methyl-4-phenylpyridinium ion (neurotoxin)
JNK	c-Jun NH <sub>2</sub> -terminal kinase	MRSA	Methicillin-Resistant <i>Staphylococcus aureus</i>
KD <sub>50</sub>	Dose required to Knock down 50% of the population of insects	MSSA	Methicillin-Sensitive <i>Staphylococcus aureus</i>
LC <sub>50</sub>	concentration at which only 50% of the cell are viable	MTC	Minimal Toxic Concentration
LC <sub>50</sub>	concentration of inhibiting luminous intensity 50%	MTT	A Cytotoxicity measurement method (tetrazolium-based colorimetric assay used for cytotoxicity bioassay, see Rubinstein L. V., et al., <i>Nat. Cancer Inst.</i> , 82, 1113-1118, 1990)
LCIC	Lowest Complete Inhibition Concentration	mus	mouse
LD	Lethal Dose	<i>n</i>	number of parallel experiments
LD <sub>100</sub>	100% Lethal Dose	nAChR	neuronal nicotinic AcetylCholine Receptor
LD <sub>50</sub>	medium Lethal Dose	NADH	reduced nicotinamide adenine dinucleotide
LDH	lactate dehydrogenase	NADPH	cytochrome C reductase
LDL	Low Density Lipoprotein	NCCLS	A standard antibacterial activity test method (see Wayne P. A., "National Committee for Clinical Laboratory Standards Performance Standards for Antimicrobial Disk Susceptibility Tests," 6th ed., Approved standards M2-A6. NCCLS, 1997)
L-NA	N <sup>o</sup> -L-nitroarginine	NDGA	Nordihydroguaiaretic acid
L-NMMA	N <sup>G</sup> -monomethyl-L-arginine	NEP	Neutral EndoPeptidase
LOX	Lipoxygenase	NF	Nuclear Factor
LPO	lipid peroxidation	NF-κB	Nuclear Factor κB
LPS	lipopolysaccharide	NFAT	Nuclear Factor of Activated T cell
LTB <sub>4</sub>	Leukotriene B <sub>4</sub>	NGF	Nerve Growth Factor
LTC <sub>4</sub>	Leukotriene C <sub>4</sub>	NMDA	<i>N</i> -methyl- <i>D</i> -aspartate
LTD <sub>4</sub>	Leukotriene D <sub>4</sub>	NO	nitric oxide
MA	maytenfolic acid	non-oral	paraoral
MA	maslinic acid	NOR1	(+/-)-(E)-4-methyl-2-[(E)-hydroxyimino]-5-nitro-6-methoxy-3-hexenamid
MA	minimal amount	NOS-2	Nitric oxide synthase type-2
MABA	Microplate Alamar Blue Assay	OCIF	OsteoClastogenesis-Inhibitory Factor
MAC-1	integrin MAC-1	oral	oral
MAO-A	Monoamine oxidase A	OVA	ovalbumin
MAO-B	Monoamine oxidase B	oxazolone	oxazolone
MAPK	Mitogen-Activated Protein Kinase	OZ	opsonized zymosan
MCC	Minimum Cytocidal Concentration	P450	Cytochrome P450
MCP	Monocyte Chemotactic Protein	PAF	Platelet Activating Factor
MCTHBE	Minimum Concentration for Total Haemolysis of Bovine Erythrocytes (µg/mL)	PAF	Platelet Aggregation Factor
MDA	Methylene Dihydroxy Amphetamine	PAI-1	Plasminogen Activator Inhibitor type 1
MDA	Malondialdehyde	Para-3 (=PIV3)	Parainfluenza type 3 virus
MDR	MultiDrug Resistance	PBMC	hmN Peripheral Blood Mononuclear Cell
MED	Minimal Effective Dose	PCA reaction	Passive Cutaneous Anaphylaxis reaction
MFC	Minimal Fungicidal Concentration	PD	Parkinson's Disease
MIA	Minimal Inhibitory Amounts (µg/disc)	PD	a cytotoxic model
MIC	Minimum Inhibitory Concentration	pD2 (=pEC <sub>50</sub> )	negative logarithm (-logM) of the concentration required to produce 50% of the maximum response (EC <sub>50</sub> )
MIC <sub>80</sub>	Minimal Inhibitive Concentration for 80%	PDE	phosphodiesterase
MIC <sub>90</sub>	Minimal Inhibitive Concentration for 90%	PDTC	pyrrolidine dithiocarbamate
min	minute	PEBP2αA	polyoma enhancer binding protein 2αA
MIP-1α/β	macrophage inflammatory protein	pEC <sub>50</sub>	negative logarithm (-logM) of the concentration required to produce 50% of the maximum response (EC <sub>50</sub> )
MIQ	Minimum inhibitory quantity (µg)		
MK-801	dizocipline maleate (a non-competitive antagonist of the NMDA receptor)		
MLC	Minimum Lethal Concentration		
MLD	Minimum Lethal Dose		
MMDC	Minimal Morphological Deformation Concentration		
MMOC	Mouse Mammary Organ Culture model		



PEG	PolyEthylene Glycol	Singlet oxygen	$^1\text{O}_2$
PEP	Prolyl endopeptidase (a serine protease)	SIZ	sulfisoxazole
pet. ether	petroleum ether	SNP	sodium nitroprusside
PFTase	farnesylprenyltransferase	SOD	Superoxide dismutase
PGD <sub>2</sub>	prostaglandin D <sub>2</sub>	sp.	species
PGE <sub>2</sub>	prostaglandin E <sub>2</sub>	SP-A	pulmonary surfactant Protein A
PGF <sub>2<math>\alpha</math></sub>	prostaglandin F <sub>2<math>\alpha</math></sub>	spp.	species (plural)
PGH <sub>2</sub>	prostaglandin H <sub>2</sub>	SRSA	Slow-Reacting Substance of Anaphylaxis
PGI <sub>2</sub>	prostacyclin (prostaglandin I <sub>2</sub> )	StRt	Stimulatory Rate
PHA	phytohemagglutinin	STZ	streptozotocin
Phe	Phenylephrine	superoxide anion	$\text{O}_2^{\bullet-}$
pIC <sub>50</sub>	negative logarithm (-logM) of IC <sub>50</sub>	SuRt	survival rate
PK	protein kinase	Syn.(= ‡)	Synonym
PKC	protein kinase C	T/C	survival ratio
PLA <sub>2</sub>	phospholipase A <sub>2</sub>	TACE	$\alpha$ -Secretase (a serine protease)
PMA (=TPA)	Phorbol-12-Myristate-13-Acetate	TBARS	ThioBarbituric Acid Reactive Substance assay
PMNs	polymorphonuclear cell	TC <sub>50</sub>	50% cytoToxic Concentration
pNPPase	<i>p</i> -nitrophenylphosphate enzyme	TCM	Traditional Chinese Medicines
POA	pentacyclic oxindole alkaloids	TFP	Trifluoperazine (calmodulin antagonist)
PPase1	Protein serine/threonine Phosphatase	TGF- $\beta_1$	Transforming Growth Factor- $\beta_1$
PRA	Plaque Reduction Assay	TGI	Total Growth Inhibition, concentration at which no growth was observed
PTH	parathyroid hormone	TI	Therapeutic Index (=IC <sub>50</sub> /EC <sub>50</sub> )
PTN	parthenolide	TNF- $\alpha$	Tumor Necrosis Factor- $\alpha$
PTP1B	Protein Tyrosine Phosphatase 1B	TOA	tetracyclic oxindole alkaloids
QR	quinone reductase	topo II	DNA topoisomerase II
RA	rheumatoid arthritis	TP	Thymidine phosphorylase
Raji	EBV-transformed B cell line	tPA	tissue Plasminogen Activator
rat	white rat	TPA (=PMA)	12- <i>O</i> -tetradecanoyl phorbol 13-acetate
rbt	rabbit	TrkA	proto-oncogene TrkA
RDDP	RNA-dependent DNA polymerase	TXA <sub>2</sub>	thromboxane A <sub>2</sub>
RDS	Respiratory Distress Syndrome	TXB <sub>2</sub>	thromboxane B <sub>2</sub>
rel-InRt	relative inhibitive rate (taking the control compound as 100%)	UDP-MurNac	UDP- <i>N</i> -acetylmuramic acid
RM	Relative Mobility	VCAM-1	Vascular Cell Adhesion Molecule-1
RNA	ribonucleic acid	VCR	vincristine
RNase H	inherent ribonuclease H	VEGF	Vascular Endothelial Growth Factor
ROS	reactive oxygen species (they are involved in the genesis of various cancers, arteriosclerosis, rheumatism and ageing)	Veraguensin	veraguensin
RSV	Respiratory Syncytial Virus	VHR DS-PTPase	VHR Dual-Specificity Protein Tyrosine Phosphatase
RT	Reverse Transcriptase	VHR protein	Vaccina open reading-frame H1-Related protein phosphatase
RT-PCR	reverse-transcribed polymerase chain reaction	VP-16	A positive control for cytotoxic assay (Sigma product)
sALT	serum alanine transaminase	VRE	Vancomycin-Resistant <i>Enterococci</i> sp
sAST	serum aspartate transaminase	VSE	Vancomycin-Sensitive <i>Enterococci</i> sp
sc	subcutaneous injection	VSV	Vesicular Stomatitis Virus
SC <sub>50</sub>	Half-maximal radical Scavenging Concentration	ww	wet weight
SC <sub>50</sub>	50% Scavenging Concentration	XTT	sodium 3'-[1-(phenylaminocarbonyl)-3,4-tetrazolium] bis(4-methoxy-6-nitrobenzene)sulfonic acid
ScRt	scavenging rate	†	homonym mark
SDF	Stromal cell-Derived Factor	‡ (=Syn.)	synonym mark
SGOT	serum Glutamic Oxalacetic Transaminase	*	the name is given by the authors of the books
SGPT	serum Glutamic Pyruvic Transaminase		
SHR rat	Spontaneously Hypertensive Rats		
SI	Selective index = cytotoxic CC <sub>50</sub> /target EC <sub>50</sub>		
SI	Selective index = cytotoxic IC <sub>50</sub> /target IC <sub>50</sub>		
SI	Selective index = cytotoxic IC <sub>50</sub> /target MIC		

# Cancer Cell Codes

This set of codes for 270 cancer cells, named as **CCC code**, are defined and tried out in the books for the first time by the authors.

<b>1A9</b>	hmn ovarian cancer (cell).	<b>CaEs-17</b>	hmn esophageal cancer (cell).
<b>212</b>	inducible Ha- <i>ras</i> oncogene transformed from the NIH/3T3 cell line.	<b>CAKI</b>	hmn renal cancer (cell).
<b>308</b>	cultured mouse epidermal cells.	<b>CAKI-1</b>	hmn renal cancer (cell).
<b>3LL</b>	mus Lewis lung cancer (cell).	<b>Calu1</b>	hmn lung cancer (cell).
<b>3PS</b>	mouse leukemia (cell).	<b>Capan1</b>	pancreas cancer (cell).
<b>780-6</b>	renal cancer (cell).	<b>Capan2</b>	pancreas cancer (cell).
<b>9KB</b>	hmn epidermatoid nasopharyngeal carcinoma (cell).	<b>CaSki</b>	hmn cervical carcinoma (cell).
<b>9L</b>	rat glioma (cell).	<b>CEM</b>	leukemia (cell).
<b>9PS</b>	mouse lymphocytic leukemia (cell).	<b>CHAGO</b>	hmn undifferentiated lung cancer (cell).
<b>A2780</b>	hmn ovarian cancer (cell).	<b>CNE</b>	hmn nasopharyngeal carcinoma (cell).
<b>A375</b>	hmn melanoma (cell).	<b>Col1</b>	hmn colorectal cancer (cell).
<b>A431</b>	hmn epidermic cancer (cell).	<b>Col2</b>	hmn colorectal cancer (cell).
<b>A498</b>	hmn renal cancer (cell).	<b>COLO320DM</b>	hmn colorectal cancer (cell).
<b>A549</b>	hmn non-small cell lung cancer (cell).	<b>Colon205</b>	colorectal cancer (cell).
<b>ACHN</b>	hmn renal cancer (cell).	<b>Colon26-L5</b>	mus colorectal cancer (cell).
<b>AGS</b>	gastric adenocarcinoma (cell).	<b>COS-7</b>	monkey kidney cells.
<b>APM1840</b>	hmn leukemia (cell).	<b>CPAE</b>	calf pulmonary arterial endothelial cells.
<b>B16</b>	mouse melanoma (cell).	<b>CT-26</b>	mus colorectal cancer (cell).
<b>B16(F-10)</b>	mouse melanoma (cell).	<b>CTV1</b>	hmn leukemia (cell).
<b>BAEC</b>	bovine aortic endothelial cells.	<b>CXF94L</b>	hmn tumor (cell).
<b>BC</b>	hmn breast cancer (cell).	<b>DLD</b>	hmn colorectal adenocarcinoma (cell).
<b>BC-1</b>	hmn breast cancer (cell).	<b>DLD-1</b>	hmn colorectal adenocarcinoma (cell).
<b>BCA-1</b>	hmn breast cancer (cell).	<b>DMS114</b>	hmn lung cancer (cell).
<b>Bcap37</b>	hmn breast cancer (cell).	<b>DMS273</b>	hmn lung cancer (cell).
<b>Bel7402</b>	hmn liver cancer (cell).	<b>DU145</b>	prostatic cancer (cell).
<b>Bel7405</b>	hmn liver cancer (cell).	<b>EAC</b>	Ehrlich ascites cancer (cell).
<b>BGC823</b>	hmn gastric cancer (cell).	<b>EJ-1</b>	hmn bladder cancer (cell).
<b>BIU87</b>	bladder cancer (cell).	<b>FM3A</b>	mus breast cancer (cell).
<b>BL6</b>	mouse melanoma (cell).	<b>H.Ep.-2</b>	hmn cutis cancer cells in throat.
<b>Bowes</b>	skin cancer cells.	<b>H116</b>	hmn colorectal cancer (cell).
<b>Bre04</b>	hmn breast cancer (cell).	<b>H9</b>	lymphocytes.
<b>BSY1</b>	breast cancer (cell).	<b>HBC4</b>	breast cancer (cell).
<b>BT474</b>	hmn galactophore cancer (cell).	<b>HBC5</b>	breast cancer (cell).
<b>BT549</b>	hmn galactophore cancer (cell).	<b>HCC2998</b>	hmn colorectal cancer (cell).
<b>BXPC3</b>	pancreas cancer (cell).	<b>HCT</b>	hmn colorectal cancer (cell).
<b>C6</b>	rat glioma (cell).	<b>HCT116</b>	hmn colorectal cancer (cell).
<b>CA</b>	hmn liver cancer (cell).	<b>HCT15</b>	hmn colorectal cancer (cell).

**HCT8** hmn colorectal cancer (cell).  
**HEK-293** hmn epithelial kidney cell.  
**HEL** hmn embryonic lung fibrocytes.  
**HeLa** culture cervical epithelial cancer (cell) from Henrietta Lack.  
**HeLa ATCC-17** hmn cervical epithelial cancer (cell).  
**HeLa-S3** hmn cervical epithelial cancer (cell).  
**HELF** normal hmn embryo lung fibroblasts.  
**Hep2** hmn liver cancer (cell).  
**Hep2,2,15** hmn liver cancer (cell) transfected with hepatitis B virus.  
**Hep3B** hmn liver cancer (cell).  
**Hepa** hmn liver cancer (cell).  
**Hepa1c1c7** mus liver cancer (cell).  
**Hepa59T/VGH** hmn liver cancer (cell).  
**HepG2** hmn liver cancer (cell).  
**HEPZ** hmn epithelial cancer (cell).  
**HFF** hmn foreskin fibroblasts.  
**HGF** normal hmn gingival fibroblast cells.  
**HL-60** hmn acute promyelocytic leukemia (cell).  
**HM02** hmn melanoma (cell).  
**HMC-1** hmn leukemic mast cells.  
**HMEC** hmn microvascular endothelial cells.  
**HO-8910** hmn ovarian cancer (cell).  
**HOG.R5** green fluorescent protein (GFP)-based reporter cell.  
**HONE-1** hmn nasopharyngeal carcinoma (cell).  
**HOP-62** non-small cell lung cancer (cell).  
**Hs578T** hmn breast cancer (cell).  
**Hs740T** hmn gastric cancer (cell).  
**Hs742T** hmn breast cancer (cell).  
**Hs756T** hmn gastric cancer (cell).  
**HSC-2** hmn oral squamous cell carcinoma cells.  
**HSG** hmn salivary gland tumor (cell).  
**HT** sarcoma (cell).  
**HT1080** hmn fibrosarcoma (cell).  
**HT29** hmn colorectal cancer (cell).  
**HT3** hmn cervical carcinoma (cell).  
**hTERT-RPE1** hmn telomerase reverse transcriptase-retinal pigment epithelial cells.  
**Huh7** hmn hepatoma (cell).  
**HUVEC** hmn umbilical vein endothelial cell.  
**Jurkat-T** hmn T-cell leukemia (cell).  
**K562** hmn leukemia (cell).  
**K562/ADM** hmn leukemia (cell) of adriamycin-resistant.  
**Kato3** hmn gastric cancer (cell).  
**KB** hmn nasopharyngeal carcinoma (cell).  
**KB15** hmn nasopharyngeal carcinoma (cell).  
**KB16** hmn nasopharyngeal carcinoma (cell).  
**KB3** hmn nasopharyngeal carcinoma (cell).  
**KBV200** MDR nasopharyngeal carcinoma (cell).  
**KB-VIN** vincristine-resistant nasopharyngeal carcinoma (cell).  
**Ketr3** hmn renal cancer (cell).  
**KG-1** hmn leukemia (cell).  
**KM12** hmn colorectal cancer (cell).  
**KM20L2** hmn colorectal cancer (cell).  
**KU-1** hmn bladder cancer (cell).  
**L<sub>1210</sub>** Lymphocytic leukemia (cell).  
**L5178Y** lymphosarcoma (cell).  
**L-6** rat skeletal myoblasts.  
**L<sub>615</sub>** mouse spleen leukemia (cell).  
**L<sub>7212</sub>** mouse leukemia (cell).  
**L-929** fibrosarcoma (cell).  
**LLC** mouse Lewis lung cancer (cell).  
**LMTK** mouse fiber cells.  
**LNCaP** hmn prostatic cancer (cell).  
**LNCaP-FGC** hmn prostatic cancer (cell).  
**LO2** hmn liver cell.  
**LoVo** hmn colorectal cancer (cell).  
**LoVo/Doxo** hmn colorectal cancer cell, drug-resistant subclone.  
**LOX** melanoma (cell).  
**LOX-IMVI** melanoma (cell).  
**LS174T** colorectal cancer (cell).  
**Lu04** hmn lung cancer (cell).  
**Lu1** hmn lung cancer (cell).  
**LXFL529L** hmn large cell lung cancer (cell).  
**M1** mus myelocytic leukemia (cell).  
**M14** melanoma (cell).  
**M4BEU** hmn melanoma (cell).  
**M5076** ovarian sarcoma (cell).  
**Ma7373** mus breast cancer (cell).  
**MALME-3M** melanoma (cell).  
**MBT-2** mus bladder cancer (cell).  
**MCF7** hmn breast cancer (cell).  
**MCF7/6** hmn breast cancer (cell).  
**MCF7/ADR-RES** hmn breast cancer (cell).  
**MCF7-ras** hmn breast cancer (cell).  
**MDA231** hmn breast cancer (cell).  
**MDA-MB-231** hmn breast cancer (cell).  
**MDA-MB-435** hmn breast cancer (cell).  
**MDCK** Madin-Darby Canine.  
**MEL-28** hmn melanoma cell.  
**Meth-A** Meth-A sarcoma (cell).  
**MGe803** hmn gastric adenocarcinoma (cell).  
**MH-60** mus leukemia (cell).  
**MI4** melanoma (cell).  
**MIA-PaCa-2** hmn pancreas cancer (cell).  
**MK1** hmn gastric cancer (cell).  
**MKN1** hmn gastric cancer (cell).  
**MKN28** hmn gastric cancer (cell).  
**MKN45** hmn gastric cancer (cell).  
**MKN7** hmn gastric cancer (cell).  
**MKN74** hmn gastric cancer (cell).  
**MM1** highly invasive clone isolated from parental rat ascites hepatoma AH130 cells.  
**Molt4** hmn lymphoma (cell).  
**Mono-Mac-6** mononuclear cells.  
**MQc80-3** gastric adenocarcinoma (cell).  
**MRC-5** hmn diploid embryonic cells.

**MS301** mus breast cancer (cell).  
**MS310** mus breast cancer (cell).  
**N04** hmn neuroma (cell).  
**NCI-H1417** hmn small cell lung cancer (cell).  
**NCI-H187** hmn small cell lung cancer (cell).  
**NCI-H226** hmn non-small cell lung cancer (cell).  
**NCI-H23** hmn lung cancer (cell).  
**NCI-H460** hmn lung cancer (cell).  
**NCI-H522** hmn lung cancer (cell).  
**NK/LY** ascites cancer (cell).  
**NSCLC-N6** hmn non-small cell lung cancer (cell).  
**NUGC** hmn gastric cancer (cell).  
**NUGC-3** hmn gastric cancer (cell).  
**NUGC-4** hmn gastric cancer (cell).  
**OVCAR-2780** ovarian adenocarcinoma (cell).  
**OVCAR-3** ovarian adenocarcinoma (cell).  
**OVCAR-4** ovarian adenocarcinoma (cell).  
**OVCAR-5** ovarian adenocarcinoma (cell).  
**OVCAR-8** ovarian adenocarcinoma (cell).  
**P1534** mus, transplanted leukemia (cell).  
**P<sub>388</sub>** mouse lymphocytic leukemia (cell).  
**P<sub>388</sub>/ADM** mouse lymphocytic leukemia (cell) of adriamycin-resistant.  
**PACA-2** hmn pancreas cancer (cell) .  
**PANC1** pancreas cancer (cell).  
**PBMC** peripheral blood mononuclear cells.  
**PC12** hmn lung cancer (cell).  
**PC3** hmn prostatic cancer (cell).  
**PC-6** hmn lung cancer (cell).  
**PLC/PRF/5** hmn liver cancer (cell).  
**PSN1** hmn pancreas cancer (cell).  
**PTX10** ovarian cancer cells with  $\beta$ -tubulin mutation.  
**QGY-7703** hmn liver cancer (cell).  
**RAW264.7** mouse macrophages.  
**RBL-2H3** rat basophilic cells.  
**RL33** rbt lung cancer (cell).  
**RPMI-7951** melanoma (cell).  
**RPMI-8226** leukemia (cell).  
**RXF-393** renal cancer (cell).  
**RXF-631L** renal cancer (cell).  
**S<sub>180</sub>** mouse sarcoma (cell).  
**S37** mouse sarcoma (cell).  
**Sca7901** hmn gastric adenocarcinoma (cell).  
**SCL** hmn gastric cancer (cell).  
**SCL-37'6** hmn gastric cancer (cell).  
**SCL-6** hmn gastric cancer (cell).  
**SCL-9** hmn gastric cancer (cell).  
**SF268** hmn brain tumor (cell).  
**SF295** hmn brain tumor (cell).  
**SF539** hmn brain tumor (cell).  
**SGC** hmn gastric cancer (cell).  
**SGC7901** hmn gastric cancer (cell).  
**SiHa** hmn cervical carcinoma (cell).  
**SKBR3** hmn breast cancer (cell).  
**SKCO1** colorectal cancer (cell).  
**SK-MEL** hmn caucasian melanoma (cell).  
**SK-MEL-2** hmn melanoma (cell).  
**SK-MEL-28** hmn melanoma (cell).  
**SK-MEL-5** hmn melanoma (cell).  
**SK-MES-1** bronchogenic carcinoma cell.  
**SK-OV-3** ovarian adenocarcinoma (cell).  
**SMMC-7721** hmn liver cancer (cell).  
**SNB75** hmn brain tumor (cell).  
**SNB78** hmn brain tumor (cell).  
**SNU638** hmn gastric adenocarcinoma (cell).  
**SR** leukemia (cell).  
**St4** gastric cancer (cell).  
**SVR** mouse endothelial cells.  
**SW620** hmn colorectal adenocarcinoma (cell).  
**T24** hmn liver cancer (cell).  
**T24S** hmn bladder cancer (cell).  
**T47D** hmn breast cancer (cell).  
**T98G** hmn caucasian glioblastoma (cell).  
**TK10** renal cancer (cell).  
**Tmolt3** hmn leukemia (cell).  
**U14** mouse cervical carcinoma (cell).  
**U251** brain tumor (cell).  
**U373** caucasian glioblastoma (cell).  
**U4** mouse cervical carcinoma (cell).  
**U-87-MG** caucasian glioblastoma (cell).  
**U937** hmn monocytic leukemia (cell).  
**UACC62** melanoma (cell).  
**UO-31** renal cancer (cell).  
**Vero** green monkey kidney tumour (cell).  
**W<sub>256</sub>** rat Walker sarcoma (cell).  
**WEHI-164** mus fibrosarcoma (cell).  
**WHCO1** hmn esophageal cancer (cell).  
**WI-38** hmn lung fibrocyte (normal hmn diploid fibrocyte).  
**WiDr** colorectal adenocarcinoma (cell).  
**Wish** transformed epithelial tumour (cell).  
**XF-498** hmn tumor (cell).  
**ZR-75-1** hmn breast cancer (cell).



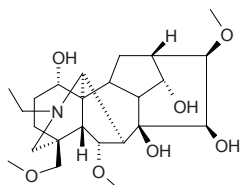
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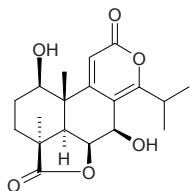
## N

**15228 Nagarine**

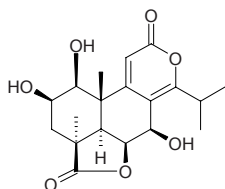
15-Episenbusine C; 15-Epifuziline; Crassicaulisine; 3-Deoxycrassicaulidine; Bullatine F [80665-73-2]  $C_{24}H_{39}NO_7$  (453.58). Crystals (Me<sub>2</sub>CO), mp 190~191°C,  $[\alpha]_D^{21} = +20.4^\circ$  ( $c = 0.88$ , CHCl<sub>3</sub>). Source: CU JING WU TOU *Aconitum crassicaule*, XIAO BAI CHENG *Aconitum nagarum* var. *heterotrichum* [Syn. *Aconitum bullatifolium*]. Ref: 2595, 2596.

**15229 Nagilactone A**

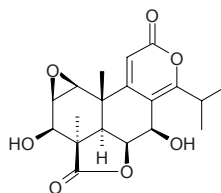
[19891-50-0]  $C_{19}H_{24}O_6$  (348.40). mp 305°C (sub). Pharm: Plant growth regulator (pea, 10 μmol/L). Source: DUO SUI LUO HAN SONG SHI *Podocarpus polystachyus*, FEI LV BIN LUO HAN SONG *Podocarpus philippinensis*, ZHU BAI *Myrica nagi* [Syn. *Podocarpus nagi*] (in 1968, the compound was isolated from the plant by Y.Hayahi et al.)<sup>[5505]</sup>. Ref: 5, 658, 1521, 5505.

**15230 Nagilactone B**

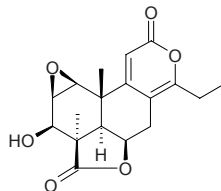
[19891-51-1]  $C_{19}H_{24}O_7$  (364.40). mp 258~261°C (dec). Pharm: Cytotoxic (cultured Kichita sarcoma cells *in vitro*, IC<sub>50</sub> = 1.72 μmol/L); plant growth regulator (pea, 10 μmol/L). Source: ZHU BAI *Myrica nagi* [Syn. *Podocarpus nagi*] (in 1968 the compound was isolated from the plant by Y.Hayahi, et al.)<sup>[5505]</sup>. Ref: 5, 658, 1521, 5505.

**15231 Nagilactone C**

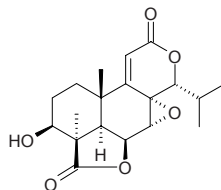
[24338-53-2]  $C_{19}H_{22}O_7$  (362.38). mp 325°C, 290°C (dec). Pharm: Antineoplastic (mus P<sub>388</sub>, *in vivo*, 40mg/kg, biotic prolonged rate = 45%); cytotoxic (cultured Kichita sarcoma cells *in vitro*, IC<sub>50</sub> = 2.25 μmol/L); larvicide (larva of housefly and apple moth); plant growth regulator (pea, 10 μmol/L). Source: GAO SHAN LUO HAN SONG *Podocarpus nivalis*, HA SHI LUO HAN SONG *Podocarpus hallii*, LUO HAN SONG SHI *Podocarpus macrophyllus*, PU ER DI LUO HAN SONG *Podocarpus purdieana*, YUN WU LUO HAN SONG *Podocarpus nubigenus*, ZHU BAI *Myrica nagi* [Syn. *Podocarpus nagi*] (in 1968, the compound was isolated from the plant by Y.Hayahi et al.)<sup>[5505]</sup>. Ref: 5, 6, 658, 1521, 5505.

**15232 Nagilactone D**

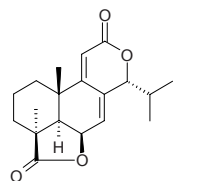
[19891-53-3]  $C_{18}H_{20}O_6$  (332.36). mp 265~266°C (dec). Pharm: Cytotoxic (cultured Kichita sarcoma cells *in vitro*, IC<sub>50</sub> = 0.332 μmol/L); pesticide (larva, pupa and adult insect of housefly); plant growth regulator (pea, 10 μmol/L). Source: ZHU BAI *Myrica nagi* [Syn. *Podocarpus nagi*] (in 1968, the compound was isolated from the plant by Y.Hayahi, et al.)<sup>[5505]</sup>. Ref: 5, 658, 1521, 5505.

**15233 Nagilactone E**

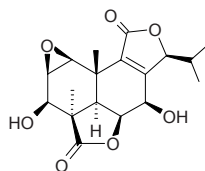
[36895-12-2]  $C_{19}H_{24}O_6$  (348.40). Pharm: Antineoplastic (mus P<sub>388</sub>, 20mg/kg, ip); cytotoxic (cultured Kichita sarcoma cells *in vitro*, IC<sub>50</sub> = 3.6 μmol/L); pesticide (housefly); plant growth regulator (10~100 μmol/L). Source: LUO HAN SONG SHI *Podocarpus macrophyllus*, *Podocarpus* sp. Ref: 5, 658, 1521.

**15234 Nagilactone F**

[36912-00-2]  $C_{19}H_{24}O_4$  (316.40). Pharm: Cytotoxic (cultural Kichita sarcoma cells *in vitro*); plant growth regulator (10~100 μmol/L). Source: LUO HAN SONG SHI *Podocarpus macrophyllus*. Ref: 5, 6, 658, 1521.

**15235 Nagilactone J**

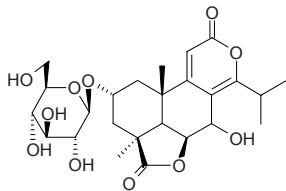
$C_{18}H_{22}O_7$  (350.37). Needles (MeOH), mp 310°C (dec). Source: ZHU BAI GEN *Myrica nagi* [Syn. *Podocarpus nagi*]. Ref: 2597.



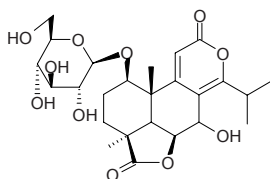


**15236 Nagilactoside A**

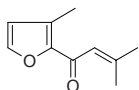
$C_{25}H_{34}O_{11}$  (510.54). Source: ZHU BAI GEN *Myrica nagi* [Syn. *Podocarpus nagi*]. Ref: 2598.

**15237 Nagilactoside B**

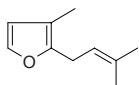
$C_{25}H_{34}O_{11}$  (510.54). Source: ZHU BAI GEN *Myrica nagi* [Syn. *Podocarpus nagi*]. Ref: 2599.

**15238 Naginataketone**

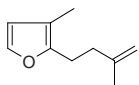
[6138-88-1]  $C_{10}H_{12}O_2$  (164.21). bp 116~119°C/20mmHg. Source: BAN BIAN SU *Elsholtzia ciliata*, HUI HUI SU GENG *Perilla frutescens* var. *crispa*, JIAN ZI SU YE *Perilla frutescens* var. *acuta* [Syn. *Perilla frutescens* var. *purpurascens*]. Ref: 6, 660, 1521.

**15239  $\alpha$ -Naginatene**

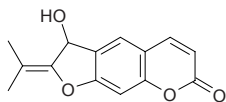
[15186-51-3]  $C_{10}H_{14}O$  (150.22). Source: BAN BIAN SU *Elsholtzia ciliata*. Ref: 6.

**15240  $\beta$ -Naginatene**

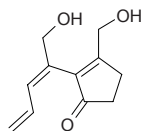
$C_{10}H_{14}O$  (150.22). Source: BAN BIAN SU *Elsholtzia ciliata*. Ref: 6.

**15241 Nakhsmyrin**

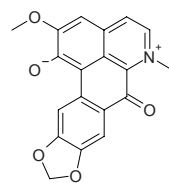
[119617-29-7]  $C_{14}H_{12}O_4$  (244.25). Source: *Smyrniopsis aucheri*. Ref: 2701, 5502.

**15242 Nakienone A**

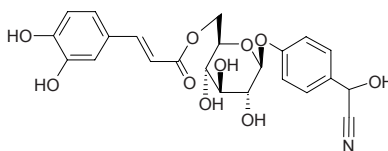
[161407-85-8]  $C_{11}H_{14}O_3$  (194.23). Pharm: Cytotoxic (KB ED<sub>50</sub> = 5  $\mu$ g/mL, HCT116 ED<sub>50</sub> = 20  $\mu$ g/mL). Source: *Synechocytis* sp. Ref: 2600.

**15243 Nandazurine**

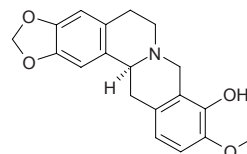
[49679-20-1]  $C_{19}H_{13}NO_5$  (335.32). mp 250~251°C. Source: NAN TIAN ZHU GEN *Nandina domestica*, NAN TIAN ZHU GENG *Nandina domestica*. Ref: 6, 1521.

**15244 Nandinin**

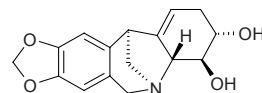
$C_{23}H_{23}NO_{10}$  (473.44). Source: NAN TIAN ZHU YE *Nandina domestica*. Ref: 2602.

**15245 Nandinine**

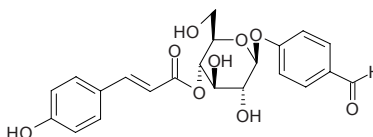
[572-76-9]  $C_{19}H_{19}NO_4$  (325.37). mp 195~196°C,  $[\alpha]_D = +303^\circ$  (CHCl<sub>3</sub>),  $[\alpha]_D = +298^\circ$  (EtOH). Source: NAN TIAN ZHU ZI *Nandina domestica*, NAN TIAN ZHU GEN *Nandina domestica*. Ref: 6, 1521.

**15246 Nangustine**

$C_{16}H_{17}NO_4$  (287.32). White solid, mp 261°C,  $[\alpha]_D^{20} = -69.6^\circ$ . Source: WU KE LAN XIA YE SHUI XIAN *Narcissus angustifolius*. Ref: 1978.

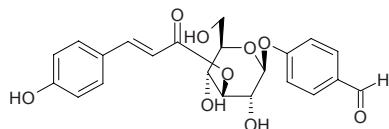
**15247 Nantenoside A**

$C_{22}H_{22}O_9$  (430.42). Source: NAN TIAN ZHU YE *Nandina domestica*. Ref: 2603.

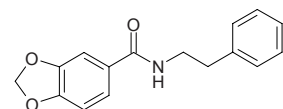


**15248 Nantenoside B**

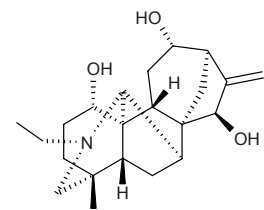
$C_{22}H_{22}O_9$  (430.42). Source: NAN TIAN ZHU YE *Nandina domestica*. Ref: 2603.

**15249 Nantoamide**

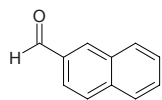
$C_{16}H_{15}NO_3$  (269.30). Colorless syrup. Pharm: Anti-HIV (inhibits HIV replication, H9 lymphocytic cells,  $IC_{50}$  (concentration that inhibits uninfected H9 cell growth by 50%) > 25  $\mu\text{g}/\text{mL}$ ,  $EC_{50}$  no suppression, TI no suppression, control AZT,  $IC_{50}$  = 500  $\mu\text{g}/\text{mL}$ ,  $EC_{50}$  = 0.0007  $\mu\text{g}/\text{mL}$ , TI = 710 000); cytotoxic (hmn cancer lines NUGC-3,  $IC_{50}$  > 20  $\mu\text{g}/\text{mL}$ , hmn cancer lines HONE-1,  $IC_{50}$  > 20  $\mu\text{g}/\text{mL}$ , hmn cancer lines A549,  $EC_{50}$  > 20  $\mu\text{g}/\text{mL}$ , hmn cancer lines MCF7,  $EC_{50}$  > 20  $\mu\text{g}/\text{mL}$ ). Source: NAN TOU QIU HAI TANG *Begonia nantoensis* (rhizome). Ref: 4267.

**15250 Napelline**

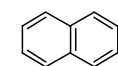
[5008-52-6]  $C_{22}H_{33}NO_3$  (359.51). Crystals,  $+1H_2O$ , mp 117–118.5°C,  $[\alpha]_D^{21} = -13^\circ$  (MeOH). Pharm: Antihypertensive (cat, brief action). Source: OU WU TOU *Aconitum napellus*, DUO GEN WU TOU *Aconitum karakolicum*. Ref: 658, 1521.

**15251  $\beta$ -Naphthaldehyde**

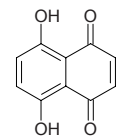
[66-99-9]  $C_{11}H_8O$  (156.19). mp 59°C. Source: WU MU XIE *Diospyros ebenum*. Ref: 6.

**15252 Naphthalene**

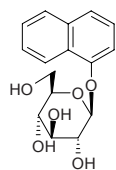
[91-20-3]  $C_{10}H_8$  (128.18). Source: FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*], XI XIN *Asarum sieboldii*. Ref: 2.

**15253 Naphthazarin**

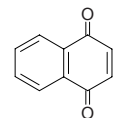
5,8-Dihydroxy-1,4-naphthoquinone [475-38-7]  $C_{10}H_6O_4$  (190.16). Pharm: Contracts blood vessels (inhibits ACh-induced relaxation on intact thoracic aorta,  $IC_{50} = (0.29 \pm 0.04) \mu\text{mol}/\text{L}$ , 1,4-Naphthoquinone,  $IC_{50} = (1.50 \pm 0.17) \mu\text{mol}/\text{L}$ )<sup>[4916]</sup>; molluscicide (toxic to shellfish). Source: DONG BEI HU TAO *Juglans mandshurica* var. *sieboldiana*, *Macrotomia euchroma* (root), XIN ZANG JIA ZI CAO *Arnebia euchroma* (root). Ref: 658, 4916.

**15254 1-Naphthol- $\beta$ -D-glucopyranoside**

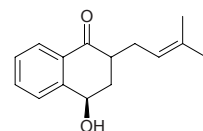
$C_{16}H_{18}O_6$  (306.32). Source: HAI ZHOU GU SUI BU *Davallia mariesii*. Ref: 2604.

**15255 1,4-Naphthoquinone**

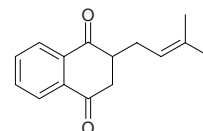
$C_{10}H_6O_2$  (158.16). Source: HU TAO REN *Juglans regia*, ZHI JIA HUA YE *Lawsonia inermis*. Ref: 2605, 2606.

**15256 Naphthoquinone I**

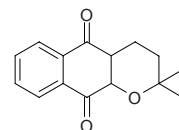
$C_{15}H_{18}O_2$  (230.31). Source: ZI MU *Catalpa ovata*. Ref: 6.

**15257 Naphthoquinone II**

$C_{15}H_{16}O_2$  (228.29). Source: ZI MU *Catalpa ovata*. Ref: 6.

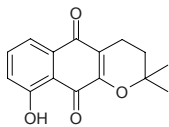
**15258 Naphthoquinone III**

$C_{15}H_{16}O_3$  (244.29). Source: ZI MU *Catalpa ovata*. Ref: 6.

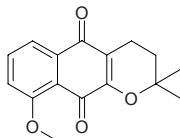


**15259 Naphthoquinone IV**

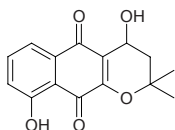
$C_{15}H_{14}O_4$  (258.28). Source: ZI MU *Catalpa ovata*. Ref: 6.

**15260 Naphthoquinone V**

$C_{16}H_{16}O_4$  (272.30). Source: ZI MU *Catalpa ovata*. Ref: 6.

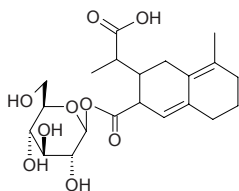
**15261 Naphthoquinone VI**

$C_{15}H_{14}O_5$  (274.28). Source: ZI MU *Catalpa ovata*. Ref: 6.

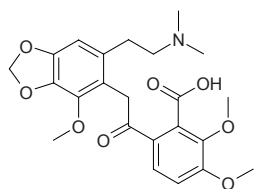
**15262 Napiferoside**

4,9-Dien-eudesmine-13,15-dicarboxylic acid-15- $\beta$ -D-glucopyranoside

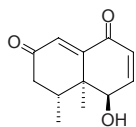
$C_{21}H_{30}O_9$  (426.47). Amorphous powder mp 176–178°C. Source: YUAN JING HUAN YANG SHEN *Crepis napifera*. Ref: 854.

**15263 Narceine**

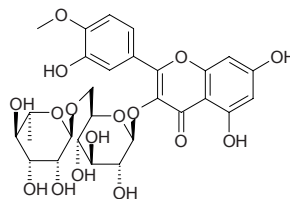
[131-28-2]  $C_{23}H_{27}NO_8$  (445.47). mp 145.2°C. Pharm: Antitussive; antihypertensive; promotes intestinal motion; respiratory stimulant. Source: YING SU *Papaver somniferum*, YA PIAN *Papaver somniferum*. Ref: 6, 658.

**15264 Narchinol A**

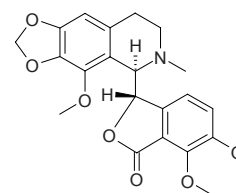
[38226-98-1]  $C_{12}H_{14}O_3$  (206.24). Yellow Crystals (EtOAc), mp 146–148°C. Source: GAN SONG *Nardostachys chinensis*. Ref: 2607.

**15265 Narcissin**

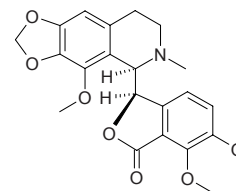
[604-80-8]  $C_{28}H_{32}O_{16}$  (624.56). mp 174°C. Source: GAN CAO *Glycyrrhiza uralensis*, SHUI XIAN HUA *Narcissus tazetta* var. *chinensis*. Ref: 6, 231, 660.

**15266  $\alpha$ -Narcotine**

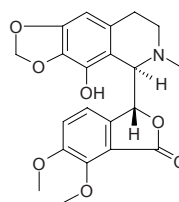
[128-62-1]  $C_{22}H_{23}NO_7$  (413.43). mp 176°C. Pharm: Antispasmodic; non-addictive antitussive (used in treatment of paroxysmal cough); LD<sub>50</sub> (mus, iv) = 83mg/kg. Source: LI CHUN HUA *Papaver commutatum* [Syn. *Papaver rhoeas*], TIAN CHENG *Citrus sinensis*, YA PIAN *Papaver somniferum*, YING SU *Papaver somniferum*, YING SU KE *Papaver somniferum*. Ref: 6, 658, 660.

**15267  $\beta$ -Narcotine**

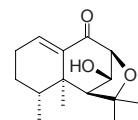
$C_{22}H_{23}NO_7$  (413.43). Source: YA PIAN *Papaver somniferum*. Ref: 660.

**15268 Narcotoline**

[521-40-4]  $C_{21}H_{21}NO_7$  (399.40). mp 202°C. Pharm: Antispasmodic; respiratory stimulant. Source: YA PIAN *Papaver somniferum*, YING SU *Papaver somniferum*, YING SU KE *Papaver somniferum*. Ref: 6, 658.

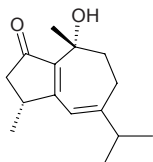
**15269 Nardofuran**

[42438-76-6]  $C_{15}H_{22}O_3$  (250.34). Oil. Source: GAN SONG *Nardostachys chinensis*. Ref: 2608.

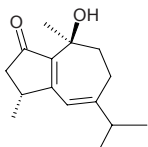


**15270 Nardoguaianone J**

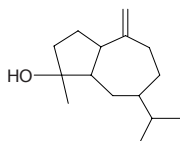
(4*R*,10*R*)-10-Hydroxyguaia-1(5),6-dien-2-one C<sub>15</sub>H<sub>22</sub>O<sub>2</sub> (234.34). Colorless oil,  $[\alpha]_D^{26} = -34.1^\circ$  ( $c = 0.26$ , MeOH). Source: GAN SONG *Nardostachys chinensis*. Ref: 2007.

**15271 Nardoguaianone K**

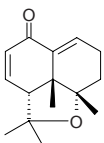
(4*R*,10*S*)-10-Hydroxyguaia-1(5),6-dien-2-one C<sub>15</sub>H<sub>22</sub>O<sub>2</sub> (234.34). Colorless oil,  $[\alpha]_D^{26} = +210.3^\circ$  ( $c = 0.53$ , MeOH). Source: GAN SONG *Nardostachys chinensis*. Ref: 2007.

**15272 Nardol**

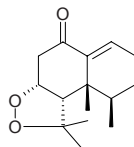
[6090-27-3] C<sub>15</sub>H<sub>26</sub>O (222.37). bp 120~125°C/0.5mmHg. Source: GAN SONG *Nardostachys chinensis*. Ref: 6.

**15273 Nardonoxide**

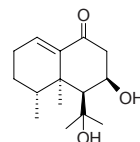
[111514-48-8] C<sub>15</sub>H<sub>20</sub>O<sub>2</sub> (232.33). Crystals (MeOH), mp 62~64°C,  $[\alpha]_D^{20} = -85^\circ$  ( $c = 0.65$ , CHCl<sub>3</sub>). Source: GAN SONG *Nardostachys chinensis*. Ref: 2609.

**15274 Nardosinone**

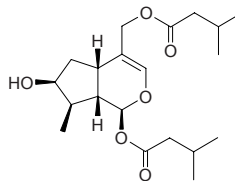
C<sub>15</sub>H<sub>22</sub>O<sub>3</sub> (250.34). mp 108~110°C. Source: GAN SONG *Nardostachys chinensis*. Ref: 6.

**15275 Nardosinonediol**

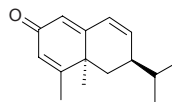
[20489-11-6] C<sub>15</sub>H<sub>24</sub>O<sub>3</sub> (252.36). Crystals (MeOH aq.), mp 141~143°C. Source: GAN SONG *Nardostachys chinensis*. Ref: 2608.

**15276 Nardostachin**

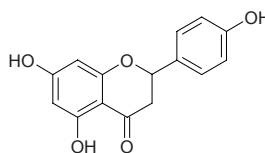
[114687-82-0] C<sub>21</sub>H<sub>32</sub>O<sub>6</sub> (368.47). Yellow oil,  $[\alpha]_D = -80.9^\circ$  ( $c = 0.4$ , CHCl<sub>3</sub>);  $[\alpha]_D^{23} = -80.9^\circ$  ( $c = 0.4$ , MeOH). Source: GAN SONG *Nardostachys chinensis*, BIAN DOU CAI YE BAI JIANG *Patrinia saniculaefolia* (whole herb). Ref: 2610, 4341.

**15277 Nardostachone**

C<sub>15</sub>H<sub>20</sub>O (216.33). bp 130~135°C/0.09mmHg. Source: GAN SONG *Nardostachys chinensis*. Ref: 6, 2781.

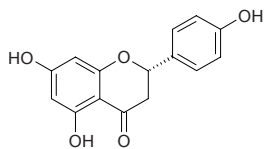
**15278 (±)-Naringenin**

C<sub>15</sub>H<sub>12</sub>O<sub>5</sub> (272.26). Pharm: Vasorelaxant; antioxidant<sup>†</sup>; cyclonucleotide phosphodiesterase inhibitor. Source: *Citrus* spp. (fruit). Ref: 3371.

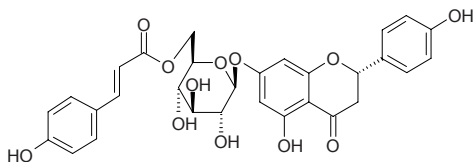


**15279 Naringenin**

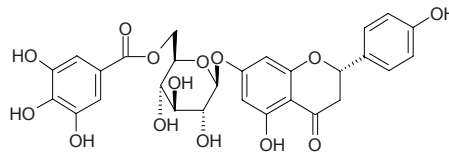
5,7,4'-Trihydroxyflavanone; (2*S*)-Naringenin [480-41-1] C<sub>15</sub>H<sub>12</sub>O<sub>5</sub> (272.26). mp 251°C. **Pharm:** Antibacterial (*Staphylococcus aureus*, *Bacillus coli*, *Bacillus dysenteriae* and *B. Typhosus*); antineoplastic (rat L<sub>1210</sub> and sarcoma); cytotoxic (HSC-2 cells, CC<sub>50</sub> = 0.55mmol/L; HGF, CC<sub>50</sub> > 0.74mmol/L)<sup>[3025]</sup>; antifungal (TLC bioautographic assay, *Cladosporium cladosporioides*, MA = 10µg, control Miconazole, MA = 1.0µg; *Cladosporium sphaerospermum*, MA = 5.0µg, Miconazole, MA = 1.0µg)<sup>[3440]</sup>; antihepatotoxic; anti-inflammatory (rat, wool-ball model, 20mg/(kg·d), ip); antispasmodic; choleric (bile secretion promotor); induces nodulin gene expression of symbion in *Rhizobium leguminosarum* and *Pisum sativum*; antioxidant; platelet aggregation inhibitor; 5-HT inhibitor; histidine decarboxylase inhibitor; anti-inflammatory (macrophages, COX-2 inhibitor, inhibits COX-2 expression)<sup>[4415]</sup>; passive cutaneous anaphylaxis inhibitor (inhibits IgE-induced β-hexosaminidase release from RBL-2H3 cells, IC<sub>50</sub> = (29±1)µmol/L, control Azelastine, IC<sub>50</sub> = (35±2)µmol/L; PCA reaction inhibitor, 5mg/kg ip, InRt = (70±2)%<sup>[5041]</sup>; aromatase inhibitor (*in vitro*, IC<sub>50</sub> = 17µmol/L; control Aminoglutethimide, IC<sub>50</sub> = 6.4µmol/L)<sup>[3090]</sup>. **Source:** CU YE MAI HU JIAO *Piper crassinervium*, DU XIAN ZI *Anacardium occidentale*, GOU JI *Cudrania cochinchinensis* (root: yield = 0.0010%dw)<sup>[3025]</sup>, GOU SHU *Broussonetia papyrifera*<sup>[3090]</sup>, HU LU BA *Trigonella foenum-graecum*, HUA ZHOU YOU *Citrus grandis* var. *Tomentosa* (closing ripe exocarp: mean content = 0.044%)<sup>[5508]</sup>, LENG ZHI HU JI SHENG *Viscum angulatum* (whole herb: yield = 0.00090%dw)<sup>[4626]</sup>, PU ER CHA *Camellia sinensis* var. *assamica*, RI BEN YING HUA *Prunus yedoensis*, SHA SHENG LA JU *Helichrysum arenarium*, SHAN TAO JING BAI PI *Prunus davidiana*, SHAN TAO ZHI *Prunus davidiana*, SHAN ZHU ZI *Garcinia multiflora* (stem: yield = 0.00007%dw)<sup>[4708]</sup>, TAO HUA *Prunus persica*, TAO JING BAI PI *Prunus persica*, TAO ZHI *Prunus persica*, TAOYE *Prunus persica*, WU HE MI JU *Citrus unshiu* (pericarp), WU MEI *Prunus mume*, XIA YE XIANG PU *Typha angustifolia*, YOU<sup>(4)</sup> *Citrus grandis* (closing ripe exocarp: mean content = 0.043%)<sup>[5508]</sup>, YOU GAN YE *Phyllanthus emblica* (branch and leaf), *Artemisia* sp., *Dahlia* sp., occurs in many plants. **Ref:** 4, 6, 581, 615, 658, 660, 3025, 3090, 3440, 4205, 4415, 4626, 4708, 5041, 5508.

**15280 Naringenin 7-O-(6''-O-trans-p-coumaroyl)-glucoside**

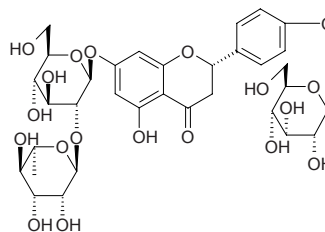
C<sub>30</sub>H<sub>28</sub>O<sub>12</sub> (580.55). **Source:** YOU GAN YE *Phyllanthus emblica* (leaf and branch). **Ref:** 4205.

**15281 Naringenin 7-O-(6''-O-galloyl)-glucoside**

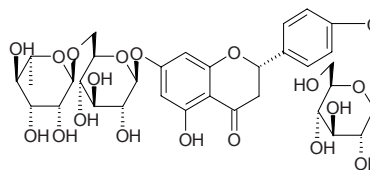
C<sub>28</sub>H<sub>26</sub>O<sub>14</sub> (586.51). **Source:** YOU GAN YE *Phyllanthus emblica* (leaf and branch). **Ref:** 4205.

**15282 Naringenin-4'-glucoside-7-neohesperidoside**

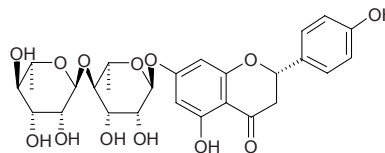
C<sub>33</sub>H<sub>42</sub>O<sub>19</sub> (742.69). **Source:** YOU<sup>(4)</sup> *Citrus grandis*. **Ref:** 6.

**15283 Naringenin-4'-glucoside-7-rutinoside**

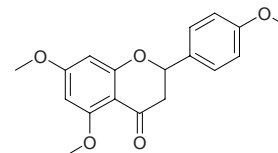
C<sub>33</sub>H<sub>42</sub>O<sub>19</sub> (742.69). **Source:** TIAN CHENG *Citrus sinensis*. **Ref:** 6.

**15284 Naringenin-7-O-α-L-rhamnosyl(1→4)-rhamnoside**

C<sub>27</sub>H<sub>32</sub>O<sub>13</sub> (564.55). **Source:** ZI WEI JING YE *Campsis grandiflora*. **Ref:** 2611.

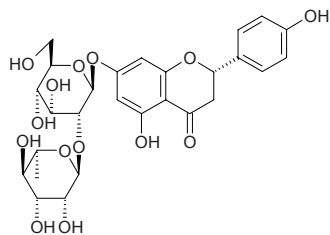
**15285 Naringenin trimethyl ether**

5,7,4'-Trimethoxyflavanone C<sub>18</sub>H<sub>18</sub>O<sub>5</sub> (314.34). Prisms (*n*-hexane–EtOAc), mp 124°C, mp 123.5~124.5°C. **Source:** CHANG YE GE NA XIANG *Goniothalamus gardneri* (aerial parts). **Ref:** 5096.

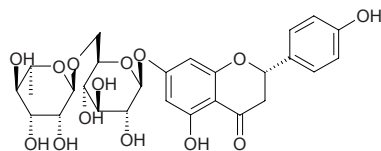


**15286 Naringin**

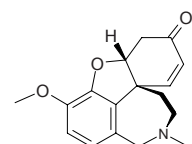
Aurantiin [10236-47-2]  $C_{27}H_{32}O_{14}$  (580.55). mp 82°C, 171°C. **Pharm:** Antibacterial (*Staphylococcus aureus*, *Bacillus coli*, *Bacillus dysenteriae* and *B. typhosus*); anti-inflammatory (mus, ip, swollen foot caused by formaldehyde, ED = 100mg/kg, rat, sc, ED = 100mg/kg); antiviral (vesicular stomatitis virus, 200µg/mL); bitter principle; aldose reductase inhibitor (rat eye lens, 100µmol/L, InRt = 80%); passive cutaneous anaphylaxis inhibitor (inhibits IgE-induced  $\beta$ -hexosaminidase release from RBL-2H3 cells,  $IC_{50} > 500\mu\text{mol/L}$ , control Azelastine,  $IC_{50} = (35\pm 2)\mu\text{mol/L}$ ; PCA reaction inhibitor, 20mg/kg orl, InRt = (79.2±7.4)%<sup>[5041]</sup>). **Source:** GOU JU *Poncirus trifoliata*, GOU JU ZHI KE *Poncirus trifoliata*, GOU JU ZHI SHI *Poncirus trifoliata*, GU SUI BU *Drynaria fortunei* (rhizome: content scope = 0.179%–0.540%<sup>[5508]</sup>), GUAN ZHONG *Dryopteris crassirhizoma*, HUA ZHOU YOU *Citrus grandis* var. *Tomentosa* (closing ripe exocarp: content = 1.55%<sup>[5508]</sup>), JU PI *Citrus reticulata* (closing ripe exocarp: content = 0.32%<sup>[5508]</sup>), NING MENG *Citrus limon*, NING MENG PI *Citrus limon*, PU TAO YOU *Citrus paradisi*, QIU SUI QIAN JIN BA *Flemingia strobilifera*, TU XIANG RU *Origanum vulgare*, WU HE MI JU *Citrus unshiu* (pericarp), YOU<sup>(4)</sup> *Citrus grandis* (closing ripe exocarp: mean content = 3.12%<sup>[5508]</sup>), ZHI KE *Citrus aurantium* (closing ripe exocarp: content = 6.98%<sup>[5508]</sup>), ZHI SHI *Citrus aurantium* (closing ripe exocarp: content = 1.05%<sup>[5508]</sup>), ZHU LUAN *Citrus decumana*, *Adiantum* sp. **Ref:** 2, 4, 658, 660, 5041, 5501, 5508.

**15287 Narirutin**

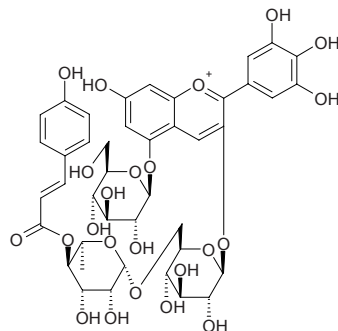
[14259-46-2]  $C_{27}H_{32}O_{14}$  (580.55). mp 160–165°C. **Pharm:** Stimulates egg deposition (*Papilio xuthus*). **Source:** TIAN CHENG *Citrus sinensis*, *Citrus* sp. **Ref:** 6, 658.

**15288 Narwedine**

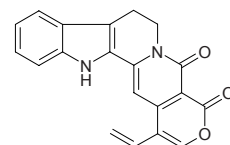
[510-77-0]  $C_{17}H_{19}NO_3$  (285.36). **Pharm:** Enhances amplitude of contraction and reduces frequency of heart beat; enhances respiration. **Source:** GUANG XI SHI SUAN *Lycoris guangxiensis*, XUE HUA LIAN *Galanthus nivalis*. **Ref:** 658.

**15289 Nasunin**

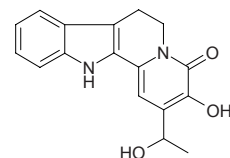
Violanin; Delphanin [28463-30-1]  $C_{42}H_{47}O_{23}$  (919.83). mp 179–180°C. **Source:** QIE ZI *Solanum melongena*. **Ref:** 6.

**15290 Nauclealine A**

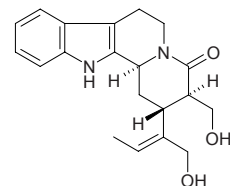
3,14,15,16,17,20-Hexadehydro-16-ethenylxayohimban-19,21-dione  $C_{20}H_{14}N_2O_3$  (330.35). Yellowish amorphous solid, mp 267–268°C (MeOH). **Source:** DONG FANG WU TAN *Nauclea orientalis* (bark). **Ref:** 3074.

**15291 Nauclealine B**

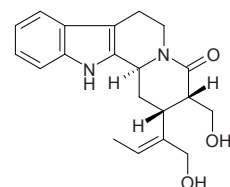
Indolo[2,3-*a*]quinolizine-2-(1-hydroxyethyl)-3-hydroxy-4,6,7,12-tetrahydro-4-one  $C_{17}H_{16}N_2O_3$  (296.33). Yellowish amorphous solid, mp 222–223°C (MeOH),  $[\alpha]_D^{22} = -11.4^\circ$  ( $c = 0.07$ , MeOH). **Source:** DONG FANG WU TAN *Nauclea orientalis* (bark). **Ref:** 3074.

**15292 Naucleamide A**

$C_{20}H_{24}N_2O_3$  (340.43). **Source:** KUAN YE WU TAN *Nauclea latifolia* (bark and wood: yield = 0.0016%). **Ref:** 4303.

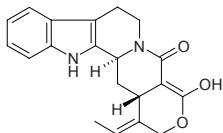
**15293 Naucleamide B**

$C_{20}H_{24}N_2O_3$  (340.43). **Source:** KUAN YE WU TAN *Nauclea latifolia* (bark and wood: yield = 0.0016%). **Ref:** 4303.

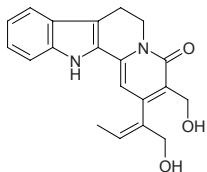


**15294 Naucleamide C**

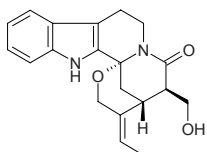
$C_{20}H_{20}N_2O_3$  (336.39). Source: KUAN YE WU TAN *Nauclea latifolia* (bark and wood: yield = 0.0012%). Ref: 4303.

**15295 Naucleamide D**

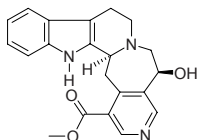
$C_{20}H_{20}N_2O_3$  (336.39). Source: KUAN YE WU TAN *Nauclea latifolia* (bark and wood: yield = 0.0012%). Ref: 4303.

**15296 Naucleamide E**

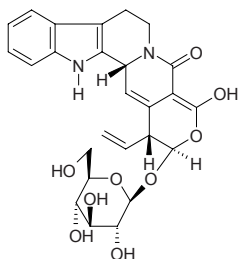
$C_{20}H_{22}N_2O_3$  (338.41). Source: KUAN YE WU TAN *Nauclea latifolia* (bark and wood: yield = 0.0008%). Ref: 4303.

**15297 Nauclechine**

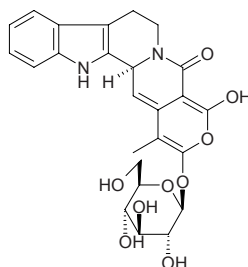
[38940-73-7]  $C_{21}H_{21}N_3O_3$  (363.42). Crystals (MeOH), mp = 108–114°C. Pharm: Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). Source: DI SHI WU TAN *Nauclea diderrichii*, KUAN YE WU TAN *Nauclea latifolia*. Ref: 2178, 1521.

**15298 Nauclecoside**

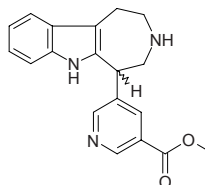
[121880-11-3]  $C_{26}H_{28}N_2O_9$  (512.52). Colorless granular crystals, mp > 310°C,  $[\alpha]_D^{25} = -149^\circ$  ( $c = 0.1$ , 50% EtOH). Pharm: Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Salmonella* sp., *Bacillus proteus*, *Aspergillus niger*, *Bacillus lactis*, *Klebsiella* sp.); antileishmanial. Source: DAN MU *Nauclea officinalis*. Ref: 118, 2178.

**15299 Nauclecosidine**

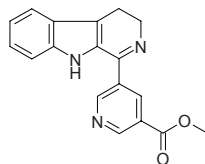
[121880-13-5]  $C_{25}H_{26}N_2O_9$  (498.49). Acicular crystals, mp 200–202°C. Source: DAN MU *Nauclea officinalis*. Ref: 118, 1521.

**15300 Nauclederine**

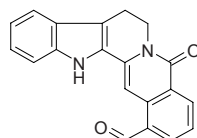
[38940-72-6]  $C_{19}H_{19}N_3O_2$  (321.38). mp 102–124°C,  $[\alpha]_D^{25} = +0^\circ$  ( $c = 3.3$ ,  $CHCl_3$ ). Pharm: Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). Source: DI SHI WU TAN *Nauclea diderrichii*. Ref: 2178, 1521.

**15301 Naucedine**

[26238-84-6]  $C_{18}H_{15}N_3O_2$  (305.34). Yellowish needles (MeOH). mp 84–90°C. Pharm: Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). Source: DI SHI WU TAN *Nauclea diderrichii*. Ref: 2178, 1521.

**15302 Naucleficine**

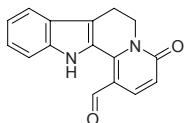
[96400-54-3]  $C_{20}H_{14}N_2O_2$  (314.35). mp 290–291°C. Pharm: Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). Source: DAN MU *Nauclea officinalis*. Ref: 2178, 1521.



**15303 Nauclefidine**

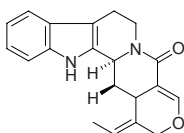
[96400-52-1] C<sub>16</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub> (264.29). Orange-yellow crystals, mp 307~309°C.

**Pharm:** Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). **Source:** DAN MU *Nauclea officinalis*. **Ref:** 2178, 1521.

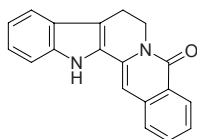
**15304 Nauclefiline**

[102358-19-0] C<sub>20</sub>H<sub>20</sub>N<sub>2</sub>O<sub>2</sub> (320.39). Colorless acicular crystals, mp 315~317°C,

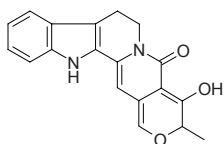
[α]<sub>D</sub><sup>20</sup> = -281 (c = 0.1, ethanol). **Pharm:** Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; ; antifungal (*Aspergillus niger*). **Source:** DAN MU *Nauclea officinalis*. **Ref:** 41, 2178, 1521.

**15305 Nauclefine**

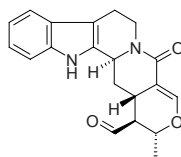
[57103-51-2] C<sub>19</sub>H<sub>14</sub>N<sub>2</sub>O (286.34). mp 285~290°C. **Pharm:** Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; ; antifungal (*Aspergillus niger*). **Source:** KUAN YE WU TAN *Nauclea latifolia*. **Ref:** 2178.

**15306 Nauclefoline**

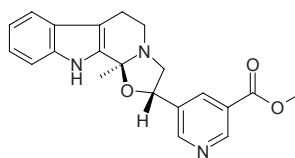
[96400-51-0] C<sub>19</sub>H<sub>16</sub>N<sub>2</sub>O<sub>3</sub> (320.35). mp 270~272°C. **Pharm:** Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; ; antifungal (*Aspergillus niger*). **Source:** DAN MU *Nauclea officinalis*. **Ref:** 2178, 1521.

**15307 Naucleidinal**

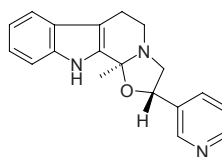
[77513-45-2] C<sub>20</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub> (336.39). mp 203~205°C. **Pharm:** Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). **Source:** DAN MU *Nauclea officinalis*. **Ref:** 2178, 1521.

**15308 Naucleonidine**

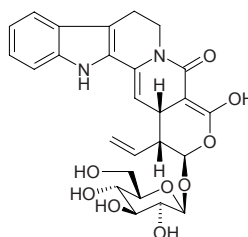
C<sub>21</sub>H<sub>21</sub>N<sub>3</sub>O<sub>3</sub> (363.42). mp 233~240°C. **Pharm:** Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). **Source:** BO SHI WU TAN *Nauclea pobequinii*. **Ref:** 2178, 1521.

**15309 Naucleonine**

C<sub>19</sub>H<sub>19</sub>N<sub>3</sub>O (305.38). **Pharm:** Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). **Source:** DI SHI WU TAN *Nauclea diderrichii*. **Ref:** 2178, 1521.

**15310 Naucleoside A**

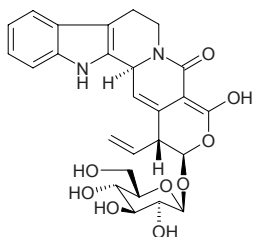
3,14,19,20-Tetrahydro-16-ethenyl-17-(β-D-glucopyranosyloxy)-19-hydroxy-(15β,16α,17β)-oxayohimban-21-one C<sub>26</sub>H<sub>28</sub>N<sub>2</sub>O<sub>9</sub> (512.52). Orange-yellow amorphous solid, mp 171~172°C (MeOH), [α]<sub>D</sub><sup>22</sup> = 48.6° (c = 0.15, MeOH). **Source:** DONG FANG WU TAN *Nauclea orientalis* (bark). **Ref:** 3074.



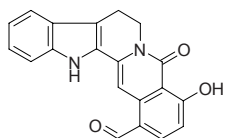


**15311 Naucleoside B**

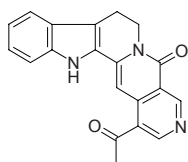
14,15,19,20-Tetrahydro-16-ethenyl-17-( $\beta$ -D-glucopyranosyloxy)-19-hydroxy- $\gamma$ -(3 $\alpha$ ,16 $\alpha$ ,17 $\beta$ )-oxayohimban-21-one C<sub>26</sub>H<sub>28</sub>N<sub>2</sub>O<sub>9</sub> (512.52). Orange-yellow amorphous solid, mp 189~190°C (MeOH),  $[\alpha]_D^{22} = -58.2^\circ$  ( $c = 0.15$ , MeOH). Source: DONG FANG WU TAN *Nauclea orientalis* (bark). Ref: 3074.

**15312 Nauclequiniine**

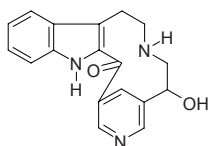
C<sub>20</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub> (330.35). mp 291~292°C. Pharm: Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). Source: BO SHI WU TAN *Nauclea pobequini*. Ref: 2178.

**15313 Nauclefine**

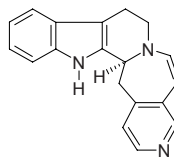
[54698-29-2] C<sub>20</sub>H<sub>15</sub>N<sub>3</sub>O<sub>2</sub> (329.36). mp 310°C. Pharm: Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). Source: KUAN YE WU TAN *Nauclea latifolia*. Ref: 2178, 1521.

**15314 Nauclexine**

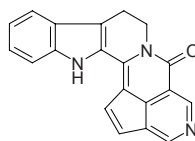
[38940-74-8] C<sub>18</sub>H<sub>17</sub>N<sub>3</sub>O<sub>2</sub> (307.36). Needles (CH<sub>2</sub>Cl<sub>2</sub>-MeOH), mp 229~232°C. Pharm: Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). Source: DI SHI WU TAN *Nauclea diderrichii*. Ref: 2178, 1521.

**15315 Naufoline**

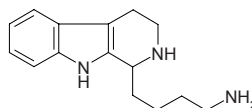
[59785-75-0] C<sub>19</sub>H<sub>17</sub>N<sub>3</sub> (287.37). Crystals (MeOH), mp 252°C. Pharm: Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). Source: KUAN YE WU TAN *Nauclea latifolia*. Ref: 2178, 1521.

**15316 Naulafine**

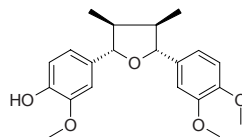
[70503-66-1] C<sub>20</sub>H<sub>13</sub>N<sub>3</sub>O (311.35). mp 300°C. Pharm: Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Streptobacillus* sp., *Salmonella* sp., *Bacillus proteus*, *Bacillus lactis*, *Klebsiella pneumoniae*); antileishmanial; antifungal (*Aspergillus niger*). Source: KUAN YE WU TAN *Nauclea latifolia*. Ref: 2178.

**15317 Nazlinin**

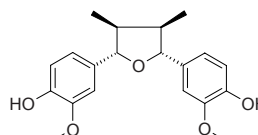
[136945-81-8] C<sub>15</sub>H<sub>21</sub>O<sub>3</sub> (243.35). White amorphous powder. Pharm: Vascular relaxant and vasoconstrictor (rbt, assay by aortal ring with endodermis, when dose less than 40nmol relaxes blood vessel, when dose over 40nmol contracts blood vessel, for assay without endodermis relaxing activity disappears). Source: DONG QIANG *Nitraria schoberi*. Ref: 1521, 2612.

**15318 (-)-Nectandrin A**

[74683-15-1] C<sub>21</sub>H<sub>26</sub>O<sub>5</sub> (358.44). Colorless oleaginous substance,  $[\alpha]_D^{25} = -28^\circ$  (CHCl<sub>3</sub>). Source: DUAN JU *Piper mullesua*. Ref: 424.

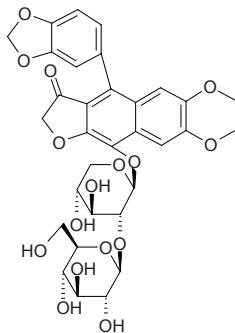
**15319 Nectandrin B**

[74683-16-2] C<sub>20</sub>H<sub>24</sub>O<sub>5</sub> (344.41). Colorless oleaginous substance. Pharm: Immunosuppressant (hmn, inhibits mitogen-induced hyperplasia of lymphocyte in peripheral blood, IC<sub>50</sub> = 3.30 $\mu$ g/mL); 5-lipoxygenase inhibitor (used in treatment of diseases due to metabolic imbalance of arachidonic acid); aldose reductase inhibitor. Source: DUAN JU *Piper mullesua*. Ref: 424, 1669, 1670.

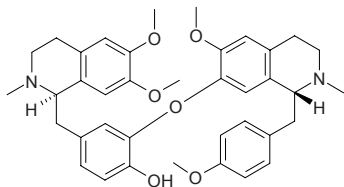


**15320 Neesiinoside A**

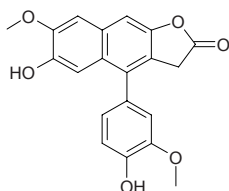
$C_{32}H_{34}O_{16}$  (674.62). Source: QIANG DAO YAO *Hypoestes purpurea* [Syn. *Justicia purpurea*; *Hypoestes sinica*] (whole herb: yield = 0.027%dw). Ref: 4712.

**15321 Neferine**

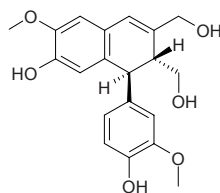
[2292-16-2]  $C_{38}H_{44}N_2O_6$  (624.78). Amorphous loose yellowish powder (diethyl ether), mp 59–61°C,  $[\alpha]_D^{24} = -44.1^\circ$  ( $c = 0.301$ , chloroform). Pharm: Antiarrhythmic; antihypertensive (vasodilation, independent of vascular endothelium); calcium antagonist (10–40  $\mu\text{mol/L}$ , inhibits the increase of  $\text{Ca}^{2+}$  concentration caused by ET-1); inhibits cardiac muscles; platelet aggregation inhibitor (inhibits calcium entry and releases in platelets); inhibits promotor of cancer. Source: LIAN ZI XIN *Nelumbo nucifera* (dried plumule and radicle in seed: mean content of 7 origins = 0.251%<sup>[5508]</sup>). Ref: 6, 900, 5501, 5508.

**15322 Negundin A**

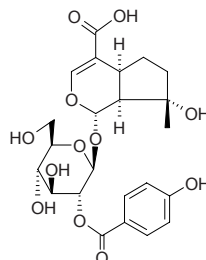
$C_{20}H_{16}O_6$  (352.35). Amorphous white solid, mp 125°C. Pharm: Lipoxygenase inhibitor (*in vitro*,  $\text{IC}_{50} = (99.5 \pm 2.0) \mu\text{mol/L}$ , control Baicalein,  $\text{IC}_{50} = (22.5 \pm 0.3) \mu\text{mol/L}$ ); AChE inhibitor (*in vitro*,  $\text{IC}_{50} > 300 \mu\text{mol/L}$ , control Galanthamine,  $\text{IC}_{50} = 0.5 \mu\text{mol/L}$ ); butyrylcholinesterase inhibitor (*in vitro*,  $\text{IC}_{50} = (85.0 \pm 0.8) \mu\text{mol/L}$ , control Galanthamine,  $\text{IC}_{50} = (8.7 \pm 0.1) \mu\text{mol/L}$ ). Source: HUANG JING GEN *Vitex negundo*. Ref: 2555.

**15323 Negundin B**

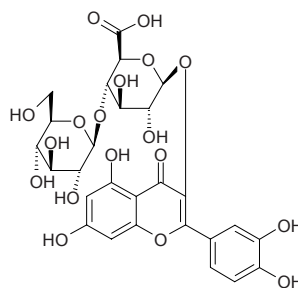
$C_{20}H_{22}O_6$  (358.39). White amorphous solid.  $[\alpha]_D^{25} = -56^\circ$  ( $c = 0.11$ , MeOH). Pharm: Lipoxygenase inhibitor (*in vitro*,  $\text{IC}_{50} = (6.25 \pm 0.50) \mu\text{mol/L}$ , control Baicalein,  $\text{IC}_{50} = (22.5 \pm 0.3) \mu\text{mol/L}$ ); AChE inhibitor (*in vitro*,  $\text{IC}_{50} = (254 \pm 1) \mu\text{mol/L}$ , control Galanthamine,  $\text{IC}_{50} = 0.5 \mu\text{mol/L}$ ); butyrylcholinesterase inhibitor (*in vitro*,  $\text{IC}_{50} = (194.0 \pm 4.4) \mu\text{mol/L}$ , control Galanthamine,  $\text{IC}_{50} = (8.7 \pm 0.1) \mu\text{mol/L}$ ). Source: HUANG JING GEN *Vitex negundo*. Ref: 2555.

**15324 Negundoside**

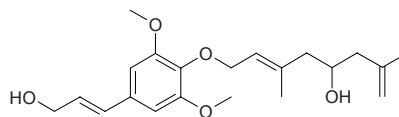
[82451-20-5]  $C_{23}H_{28}O_{12}$  (496.47). Needles (MeOH), mp 160–162°C,  $[\alpha]_D^{24} = -117.6^\circ$  ( $c = 3$ , MeOH). Source: HUANG JING YE *Vitex negundo*. Ref: 1521.

**15325 Nelumboside**

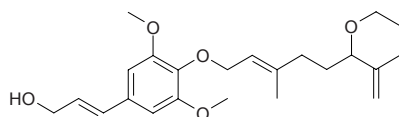
$C_{27}H_{28}O_{18}$  (640.51). mp 174–175°C. Source: HE YE *Nelumbo nucifera*, HUI XIANG JING YE *Foeniculum vulgare*. Ref: 6.

**15326 Nelumul B**

4-*O*-[(2*E*)-3,7-Dimethyl-2,7-octadien-5-yl]sinapyl alcohol  $C_{21}H_{30}O_5$  (362.47). Source: LIAN YE TUO WU *Ligularia nelumbifolia* (root: yield = 0.00070%dw). Ref: 4632.

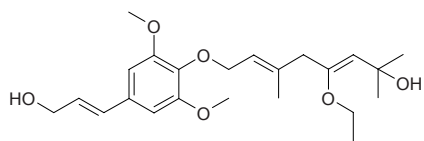
**15327 Nelumul C**

4-*O*-[(2*E*)-3,7-Dimethyl-6-ethoxy-2,7-octadiene]-sinapyl alcohol  $C_{23}H_{34}O_5$  (390.52). Source: LIAN YE TUO WU *Ligularia nelumbifolia* (root: yield = 0.0011%dw). Ref: 4632.

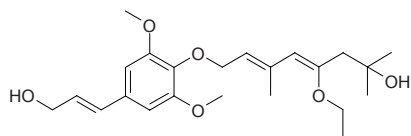


**15328 Nelumol D**

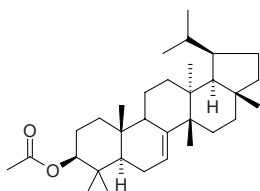
4-*O*-[(2*E*,5*E*)-3,7-Dimethyl-5-ethoxy-2,5-octadiene-7-ol]-sinapyl alcohol  
 $C_{23}H_{34}O_6$  (406.52). Source: LIAN YE TUO WU *Ligularia nelumbifolia* (root):  
 yield = 0.00085%dw). Ref: 4632.

**15329 Nelumol E**

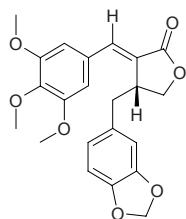
4-*O*-[(2*E*,4*E*)-3,7-Dimethyl-5-ethoxy-2,4-octadien-7-ol]-sinapyl alcohol  
 $C_{23}H_{34}O_6$  (406.52). Source: LIAN YE TUO WU *Ligularia nelumbifolia* (root):  
 yield = 0.00075%dw). Ref: 4632.

**15330 Nematocyphol acetate**

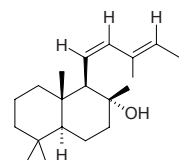
$C_{32}H_{52}O_2$  (468.77). White lamellar crystals, mp 264–265°C,  $[\alpha]_D^{21} = 0^\circ$  ( $c = 0.049$ , chloroform). Source: DA LANG DU *Euphorbia nematocypha*. Ref: 232.

**15331 Nemosin**

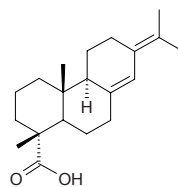
[17187-79-0]  $C_{22}H_{22}O_7$  (398.42). Pharm: Cytotoxic (hmn peripheral blood T cells, dose = 2.0 μg/mL, T cell survival rate = 69%); immunosuppressant (inhibits IL-2 secretion costimulated by CD28, dose = 2.0 μg/mL, InRt = 53%). Source: HONG CHAI HU *Bupleurum scorzoniferolium* (root). Ref: 3498.

**15332 cis-Neoabienol**

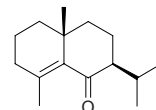
[25578-83-0]  $C_{20}H_{34}O$  (290.49).  $[\alpha]_D^{20} = +12.6^\circ$  ( $c = 3.8$ ,  $CHCl_3$ ). Source: HAI SONG ZI *Pinus koraiensis*, XI BO LI YA LENG SHAN *Abies sibirica*. Ref: 6, 2613.

**15333 Neoabietic acid**

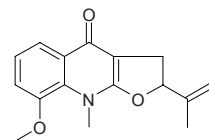
8(14),13(15)-Abietadien-18-oic acid [471-77-2]  $C_{20}H_{30}O_2$  (302.46). mp 167–169°C,  $[\alpha]_D^{24} = +159^\circ$ . Pharm: Platelet aggregation inhibitor (rbt, due to ADP and calcium); topical protectant. Source: SONG XIANG *Pinus massoniana*. Ref: 900.

**15334 Neoacolamone**

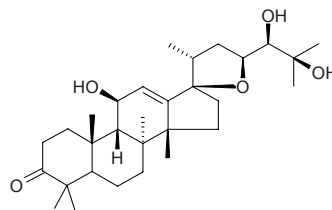
4-Eudesmen-6-one [1209-63-8]  $C_{15}H_{24}O$  (220.36). Oil,  $[\alpha]_D^{25} = +69^\circ$  ( $c = 0.22$ ,  $CHCl_3$ ). Source: JI JI *Chloranthus serratus*. Ref: 1521, 1540.

**15335 Neoacutifolin**

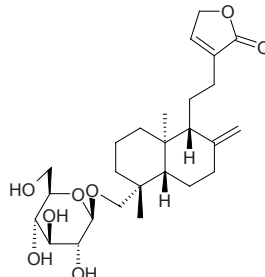
$C_{16}H_{17}NO_3$  (271.32). Pharm: Platelet aggregation inhibitor; DNA isomerase inhibitor; antibacterial; cytotoxic. Source: *Zanthoxylum* sp. Ref: 2176.

**15336 Neoalisol**

$C_{30}H_{48}O_5$  (488.71). Colorless powder, mp 211°C. Source: ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*]. Ref: 2202.

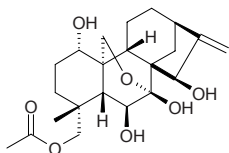
**15337 Neoandrographolide**

[27215-14-1]  $C_{26}H_{40}O_8$  (480.60). mp 168–169°C. Pharm: Antibacterial and antipyretic (rbt infected by *Diplococcus pneumoniae* or hemolytic β-streptococcus); low toxin (mus, orl, max. tolerance > 1.5g/kg). Source: CHUAN XIN LIAN *Andrographis paniculata* [Syn. *Justicia paniculata*] (dried aerial parts: mean content = 0.717%<sup>[5508]</sup>). Ref: 2, 658, 5508.

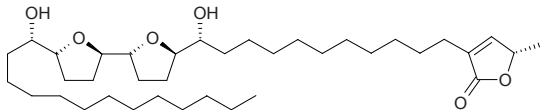


**15338 Neoangustifolin**

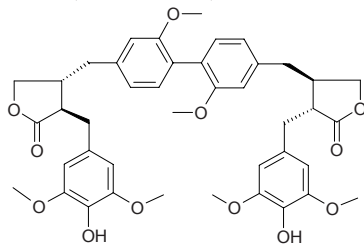
$C_{22}H_{32}O_7$  (408.50). mp 195~197°C. Source: SHAN DI XIANG CHA CAI *Isodon oresbia*. Ref: 4067.

**15339 Neoannonin**

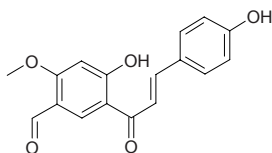
$C_{37}H_{66}O_6$  (606.93). Colorless oil,  $[\alpha]_D^{25} = +3.2^\circ$  ( $c = 0.51$ ,  $CHCl_3$ ). Pharm: Cytotoxic (hmn hepatoma cell lines HepG2,  $IC_{50} = 0.064$ ng/mL, control Adriamycin,  $IC_{50} = 0.241$ μg/mL; hmn hepatoma cells transfected with hepatitis B virus Hep2,2,15,  $IC_{50} = 0.073$ ng/mL, Adriamycin,  $IC_{50} = 0.450$ μg/mL). Source: CI GUO FAN LI ZHI *Annona muricata*. Ref: 5377.

**15340 Neoarctin B**

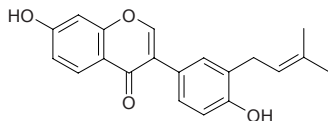
$C_{42}H_{46}O_{12}$  (742.83). Yellowish amorphous powder, mp 102.0~103.5°C,  $[\alpha]_D^{15} = -46.86^\circ$  ( $c = 0.083$ ,  $CHCl_3$ ). Source: NIU BANG ZI *Arctium lappa*. Ref: 288.

**15341 Neobavachalcone**

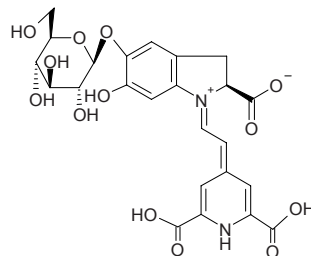
[65621-10-5]  $C_{17}H_{14}O_5$  (298.30). Source: BU GU ZHI *Psoralea corylifolia*. Ref: 2, 545.

**15342 Neobavaisoflavone**

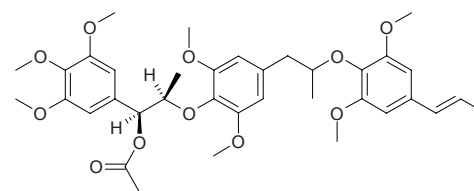
7,4'-Dihydroxy-3'-γ,γ-dimethylallyl isoflavone [41060-15-5]  $C_{20}H_{18}O_4$  (322.36). Pharm: Antibacterial (*Escherichia coli*, MIA = 0.50μg, control Chloramphenicol, MIA = 0.001μg; *Staphylococcus aureus*, MIA = 0.10μg, Chloramphenicol, MIA = 0.0001μg; *Bacillus subtilis*, MIA = 0.10μg, Chloramphenicol, MIA = 0.0001μg)<sup>[5247]</sup>; antifungal (*Candida mycoderma*, MIA = 0.02μg, control Miconazole, MIA = 0.0001μg)<sup>[5247]</sup>; antioxidant (DPPH scavenger, TLC, MIA = 0.5μg,  $IC_{50} = 671$ μg/mL; control Quercetin, MIA < 0.05μg,  $IC_{50} = 7$ μg/mL, Gallic acid, MIA < 0.05μg,  $IC_{50} = 4$ μg/mL; Ascorbic acid, MIA < 0.10μg,  $IC_{50} = 18$ μg/mL)<sup>[5247]</sup>. Source: BU GU ZHI *Psoralea corylifolia*, JI KUAN CI TONG *Erythrina latissima* (stem wood). Ref: 2, 545, 5247.

**15343 Neobetatin**

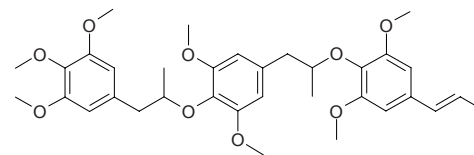
[71199-29-6]  $C_{24}H_{24}N_2O_{13}$  (548.46). Source: XIE ZHUA LAN *Schlumbergera truncata*. Ref: 2614.

**15344 Neobonaspectin A**

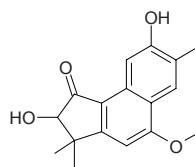
$C_{36}H_{46}O_{11}$  (654.76). Oil,  $[\alpha]_D^{20} = +5.3^\circ$  ( $c = 0.23$ ,  $CHCl_3$ ). Source: *Bonamia spectabilis* (aerial parts). Ref: 3904.

**15345 Neobonaspectin B**

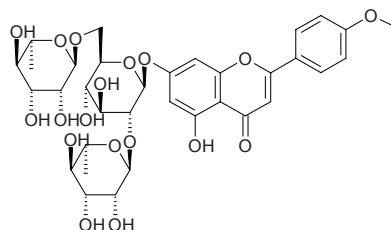
$C_{34}H_{44}O_9$  (596.72). Oil. Source: *Bonamia spectabilis* (aerial parts). Ref: 3904.

**15346 Neoboutonin**

$C_{17}H_{18}O_4$  (286.33). Pale yellow crystals (hexane-EtOAc), mp 277~278°C,  $[\alpha]_D^{20} = -41^\circ$  ( $c = 0.2$ , MeOH). Source: *Neoboutonia glabrescens*. Ref: 3441.

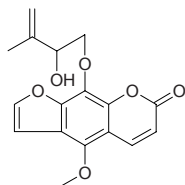
**15347 Neobudofficide**

5,7-Dihydroxy-4'-methoxyflavone-7-O-α-L-rhamno-pyranosyl-(1→2)-[α-L-rhamnopyranosyl-(1→6)]-β-D-glucopyranoside  $C_{34}H_{42}O_{18}$  (738.70). Yellowish powder, mp 180~182°C. Source: MI MENG HUA *Buddleja officinalis*. Ref: 369.

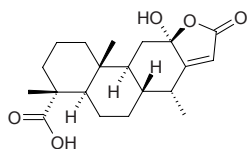


**15348 Neobyakangelicol**

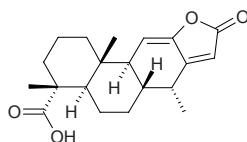
[35214-82-5] C<sub>17</sub>H<sub>16</sub>O<sub>6</sub> (316.31). mp 106–107°C. Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], YU JU *Ptelea trifoliata*, HANG BAI ZHI *Angelica taiwaniana*. Ref: 2, 1521.

**15349 Neocaesalpin H**

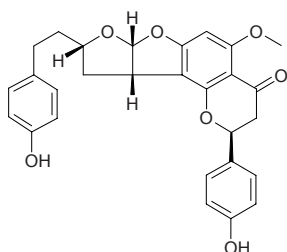
C<sub>20</sub>H<sub>28</sub>O<sub>5</sub> (348.44). Colorless needles, mp 255–256°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -73.2° (c = 0.101, MeOH). Source: CI GUO SU MU *Caesalpinia crista* (leaf). Ref: 4474.

**15350 Neocaesalpin I**

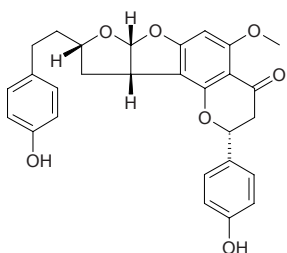
C<sub>20</sub>H<sub>26</sub>O<sub>4</sub> (330.43). Colorless needles, mp > 260°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +27.7° (c = 0.098, MeOH). Source: CI GUO SU MU *Caesalpinia crista* (leaf). Ref: 4474.

**15351 Neocalyxin A**

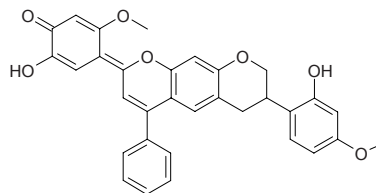
C<sub>28</sub>H<sub>26</sub>O<sub>7</sub> (474.52). Pharm: Cytotoxic (Colon26-L5, ED<sub>50</sub> > 100 μmol/L; HT1080, ED<sub>50</sub> = 10.7 μmol/L; control Curcumin, Colon26-L5, ED<sub>50</sub> = 23.2 μmol/L; HT1080, ED<sub>50</sub> = 23.4 μmol/L). Source: YUN NAN CAO KOU *Alpinia blepharocalyx* (seed: yield = 0.000022%). Ref: 3035.

**15352 Neocalyxin B**

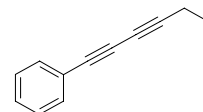
C<sub>28</sub>H<sub>26</sub>O<sub>7</sub> (474.52). Pharm: Cytotoxic (Colon26-L5, ED<sub>50</sub> = 78.0 μmol/L; HT1080, ED<sub>50</sub> = 20.2 μmol/L; control Curcumin, Colon26-L5, ED<sub>50</sub> = 23.2 μmol/L; HT1080, ED<sub>50</sub> = 23.4 μmol/L). Source: YUN NAN CAO KOU *Alpinia blepharocalyx* (seed: yield = 0.000022%). Ref: 3035.

**15353 Neocandenatone**

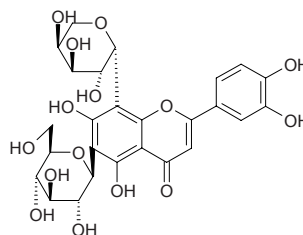
Vestitol[6→9";7O→7"]obtusaquinone C<sub>32</sub>H<sub>26</sub>O<sub>7</sub> (522.56). Purple amorphous powder. Source: JU HUA HUANG TAN *Dalbergia congestiflora* (heart wood). Ref: 3791.

**15354 Neocapillene**

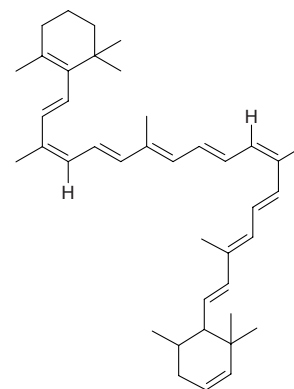
1-Phenyl-1,3-hexadiyne [10508-66-4] C<sub>12</sub>H<sub>10</sub> (154.21). Source: YIN CHEN HAO *Artemisia capillaris*. Ref: 2.

**15355 Neocarlinoside**

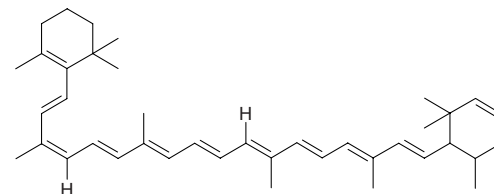
[83151-89-7] C<sub>26</sub>H<sub>28</sub>O<sub>15</sub> (580.50). Pharm: Insect phagostimulant (*Plant hoppers*). Source: JING MI *Oryza sativa*. Ref: 658.

**15356 Neo-β-carotene B**

C<sub>40</sub>H<sub>56</sub> (536.89). Source: BO CAI *Spinacia oleracea*. Ref: 6.

**15357 Neo-β-carotene U**

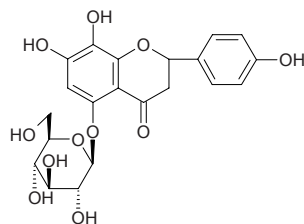
C<sub>40</sub>H<sub>56</sub> (536.89). Source: BO CAI *Spinacia oleracea*. Ref: 2615.



**15358 Neocarthamin**

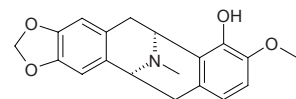
Isocarthamin C<sub>21</sub>H<sub>22</sub>O<sub>11</sub> (450.40). Source: HONG HUA *Carthamus tinctorius*.

Ref: 2.

**15359 Neocaryachine**

C<sub>19</sub>H<sub>19</sub>NO<sub>4</sub> (325.37). Source: HOU KE GUI *Cryptocarya chinensis* (wood).

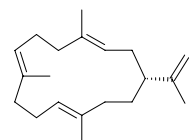
Ref: 3092.

**15360 Neocembrene**

Cembrene A [31570-39-5] C<sub>20</sub>H<sub>32</sub> (272.48). Pharm: Pheromone of

*Nasutitermis exitiosus* (for tracking). Source: XI BO LI YA YUN SHAN

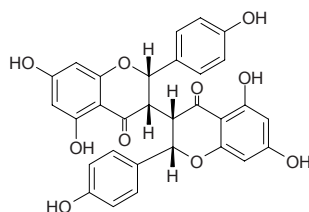
*Picea obovata*. Ref: 658, 1521.

**15361 Neochamaejasmin A**

Neochamaejasmin A [90411-13-5] C<sub>30</sub>H<sub>22</sub>O<sub>10</sub> (542.50). mp 287°C (dec), [α]<sub>D</sub>

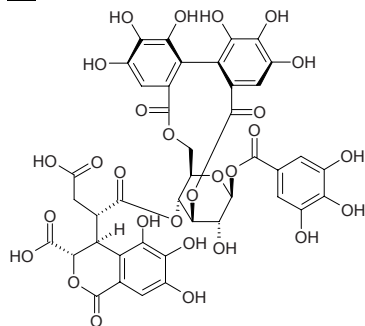
= +129° (c = 1.0, ethanol). Pharm: Inhibits promotor of cancer (inhibits teleocidin activity)<sup>[900]</sup>; antimitotic and antifungal (*Pyricularia oryzae*, 200μg/mL, strong inhibition, 400μg/mL, complete inhibition)<sup>[4476]</sup>. Source:

LANG DU *Stellera chamaejasme*. Ref: 900, 4476.

**15362 Neochebulagic acid**

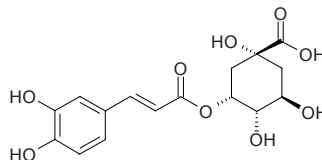
C<sub>41</sub>H<sub>32</sub>O<sub>28</sub> (972.70). Source: AN MO LE *Phyllanthus emblica* (leaf, branch).

Ref: 3094.

**15363 Neochlorogenic acid**

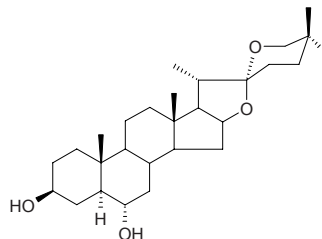
5-*O*-Caffeoylquinic acid [906-33-2] C<sub>16</sub>H<sub>18</sub>O<sub>9</sub> (354.32). mp 218~219°C.

Source: BIAN YE TIE XIAN JUE *Adiantum caudatum*, DA CHE QIAN *Plantago major*, MENG GU SHAN LUO BO *Scabiosa comosa*, SHA ZAO *Elaeagnus angustifolia*, TANG LI *Pyrus betulaefolia*, XIANG RI KUI JING *SUI Helianthus annuus*, XIANG RI KUI YE *Helianthus annuus*. Ref: 6, 660.

**15364 Neochlorogenin**

[511-91-1] C<sub>27</sub>H<sub>44</sub>O<sub>4</sub> (432.65). mp 269~270°C. Source: XIA YE LONG SHE

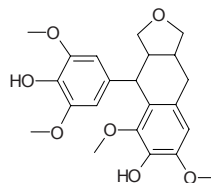
LAN *Agave cantala*. Ref: 10.

**15365 Neociwujiaphenol**

C<sub>22</sub>H<sub>26</sub>O<sub>7</sub> (402.45). White acicular crystals mp 197~199°C. Source: CI WU

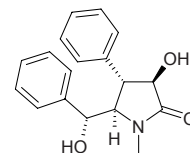
JIA YE *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*]. Ref:

835.

**15366 Neoclausenamide**

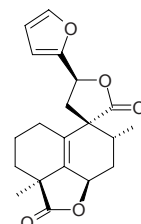
[114528-82-4] C<sub>18</sub>H<sub>19</sub>NO<sub>3</sub> (297.35). Colorless diamond crystals (methanol),

mp 205~206°C. Pharm: Antihepatotoxin (mus, liver toxicosis induced by CCl<sub>4</sub>, reduces GPT). Source: HUANG PI YE *Clausena lansium*. Ref: 1182.

**15367 Neoclerodan-5,10-en-19,6β;20,12-diolide**

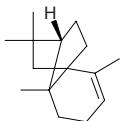
C<sub>20</sub>H<sub>22</sub>O<sub>5</sub> (342.40). mp 139~140°C, [α]<sub>D</sub><sup>18</sup> = +50° (c = 1.9, CHCl<sub>3</sub>). Source:

CHANG SUI BA DOU *Croton macrostachys* (root). Ref: 3983.

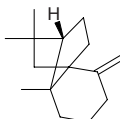


**15368  $\alpha$ -Neoclovene**

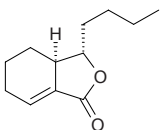
$C_{15}H_{24}$  (204.36). Source: REN SHEN *Panax ginseng* [Syn. *Panax schinseng*].  
Ref: 2616, 5330.

**15369  $\beta$ -Neoclovene**

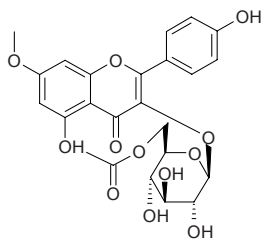
[56684-96-9]  $C_{15}H_{24}$  (204.36).  $[\alpha]_D^{25} = -30^\circ$  (MeOH). Source: REN SHEN  
*Panax ginseng* [Syn. *Panax schinseng*]. Ref: 2616, 5330.

**15370 Neocnidilide**

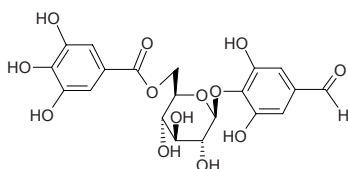
[4567-33-3]  $C_{12}H_{18}O_2$  (194.27). mp 24~27°C, bp 147~148°C/4mmHg. Pharm:  
Anticonvulsant (rat, cerebral section, inhibits release of Glu-transmitter with  
low toxin); antibacterial (*Aspergillus niger*, *Cochliobolus miyabeanus*,  
*Pyricularia oryzae*); antiasthmatic (gpg, *in vitro*, tracheal smooth muscle  
relaxant, stronger than papaverine hydrochloride). Source: CHA XIONG  
*Ligusticum sinense* cv. *chaxiong*, CHUAN XIONG *Ligusticum chuanxiong*  
[Syn. *Ligusticum wallichii*], GAO BEN *Ligusticum sinense* (25.27% in  
volatile oil). Ref: 2, 531, 1596, 1597, 1598, 1599, 5501.

**15371 Neocomplanoside**

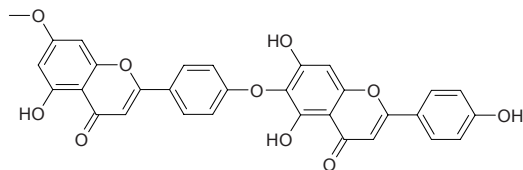
$C_{24}H_{24}O_{12}$  (504.45). Yellow acicular crystals, mp 217~219°C. Source: BIAN  
JING HUANG QI *Astragalus complanatus*. Ref: 123, 1521.

**15372 Neocretanin**

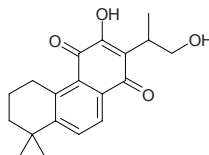
[67771-96-4]  $C_{20}H_{20}O_{13}$  (468.37). Needles +2H<sub>2</sub>O (H<sub>2</sub>O), mp 195~197°C  
(dec),  $[\alpha]_D^{23} = -63.8^\circ$  ( $c = 0.99$ , MeOH). Source: LI SHU PI *Castanea*  
*mollissima*. Ref: 1521, 2618.

**15373 Neocryptomerin**

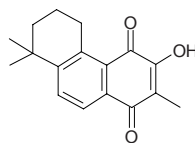
[20931-36-6]  $C_{31}H_{20}O_{10}$  (552.50). Source: LUO HAN SONG YE *Podocarpus*  
*macrophyllus*. Ref: 6.

**15374 Neocryptotanshinone**

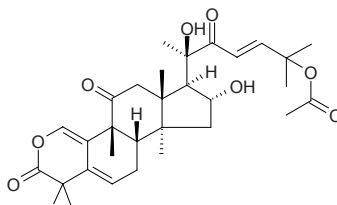
[109664-02-0]  $C_{19}H_{22}O_4$  (314.38). Orange-red needles, mp 165~167°C,  $[\alpha]_D^{23}$   
 $= +29.8^\circ$  ( $c = 0.84$ , CHCl<sub>3</sub>). Source: DAN SHEN *Salvia miltiorrhiza*. Ref:  
2619.

**15375 Neocryptotanshinone II**

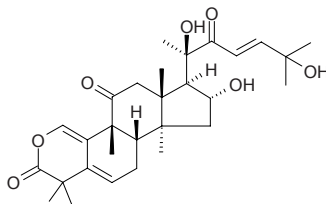
$C_{17}H_{18}O_3$  (270.33). Yellow acicular crystals, mp 129~130°C,  $[\alpha]_D^{25} = 3.8^\circ$  ( $c =$   
 $1$ , CHCl<sub>3</sub>). Source: DAN SHEN *Salvia miltiorrhiza*. Ref: 769.

**15376 Neocucurbitacin A**

$C_{31}H_{42}O_8$  (542.68). Amorphous powder,  $[\alpha]_D = +71.3^\circ$  ( $c = 0.46$ , CHCl<sub>3</sub>).  
Pharm: Polyoma enhancer binding protein 2aA (PEBP2aA) inhibitor (hmn  
osteoblast-like cells Saos-2 cell line); osteoclastogenesis-inhibitory factor  
(OCIF) gene expression inhibitor (hmn osteoblast-like cells Saos-2 cell  
line). Source: NANG GAI SI GUA *Luffa operculata*. Ref: 4136.

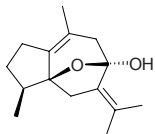
**15377 Neocucurbitacin B**

$C_{29}H_{40}O_7$  (500.64). Amorphous powder,  $[\alpha]_D = +82.0^\circ$  ( $c = 0.50$ , CHCl<sub>3</sub>).  
Source: NANG GAI SI GUA *Luffa operculata*. Ref: 4136.

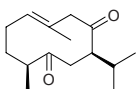


**15378 Neocurcumenol**

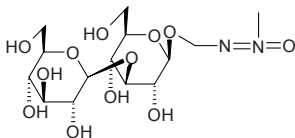
$C_{15}H_{22}O_2$  (234.34). Colorless oil,  $[\alpha]_D^{25} = +15.3^\circ$  ( $c = 2.00$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (mus peritoneal macrophages, induced by LPS,  $100\mu\text{mol/L}$ ,  $\text{InRt} = (45.4 \pm 2.2)\%$ , control  $L$ -NMMA,  $100\mu\text{mol/L}$ ,  $\text{InRt} = (79.2 \pm 0.9)\%$ ,  $p < 0.01$ ). **Source:** PING E SHU *Curcuma zedoaria* [Syn. *Curcuma aeruginosa*]. **Ref:** 4150.

**15379 Neocurdione**

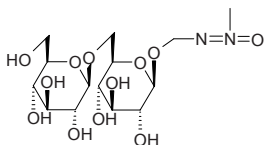
$C_{15}H_{24}O_2$  (236.36). **Pharm:** NO production inhibitor (mus peritoneal macrophages, induced by LPS,  $100\mu\text{mol/L}$ ,  $\text{InRt} = (50.4 \pm 2.3)\%$ , control  $L$ -NMMA,  $100\mu\text{mol/L}$ ,  $\text{InRt} = (79.2 \pm 0.9)\%$ ,  $p < 0.01$ ). **Source:** PING E SHU *Curcuma zedoaria* [Syn. *Curcuma aeruginosa*]. **Ref:** 4150.

**15380 Neocycasin A**

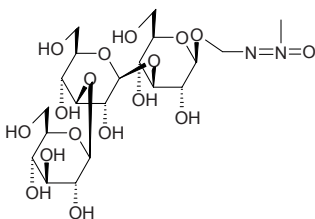
$C_{14}H_{26}N_2O_{12}$  (414.37). **Source:** SU TIE SHU GUO *Cycas revoluta*. **Ref:** 6.

**15381 Neocycasin B**

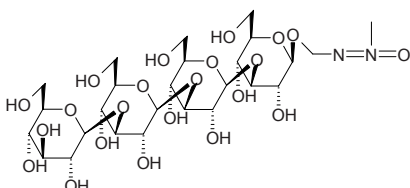
$C_{14}H_{26}N_2O_{12}$  (414.37). **Source:** SU TIE SHU GUO *Cycas revoluta*. **Ref:** 6.

**15382 Neocycasin C**

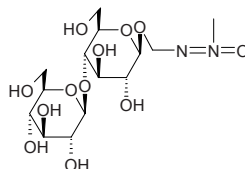
$C_{20}H_{36}N_2O_{17}$  (576.51). **Source:** SU TIE SHU GUO *Cycas revoluta*. **Ref:** 6.

**15383 Neocycasin D**

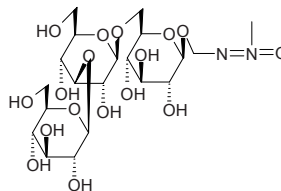
$C_{26}H_{46}N_2O_{22}$  (738.66). **Source:** SU TIE SHU GUO *Cycas revoluta*. **Ref:** 6.

**15384 Neocycasin E**

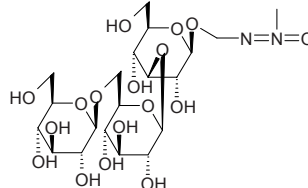
$C_{14}H_{26}N_2O_{12}$  (414.37). **Source:** SU TIE SHU GUO *Cycas revoluta*. **Ref:** 6.

**15385 Neocycasin F**

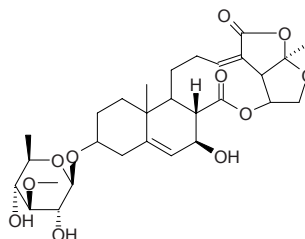
$C_{20}H_{36}N_2O_{17}$  (576.51). **Source:** SU TIE SHU GUO *Cycas revoluta*. **Ref:** 6.

**15386 Neocycasin G**

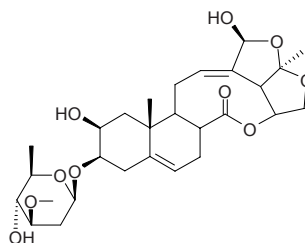
[2288-28-0]  $C_{20}H_{36}N_2O_{17}$  (576.51). **Source:** SU TIE SHU GUO *Cycas revoluta*. **Ref:** 6.

**15387 Neocynanversicoside**

$C_{29}H_{40}O_{11}$  (564.64). **Source:** WAN SHENG BAI WEI *Cynanchum versicolor*. **Ref:** 2620.

**15388 Neocynapanogenin C 3-O-β-D-oleandropyranoside**

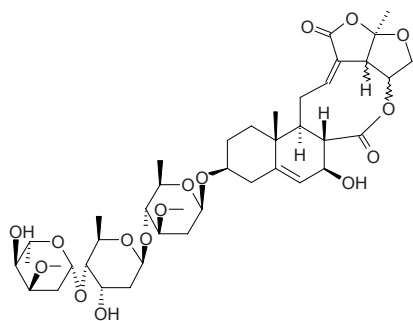
$C_{28}H_{40}O_{10}$  (536.63). Colorless powder. **Source:** XU CHANG QING *Cynanchum paniculatum*. **Ref:** 2264.



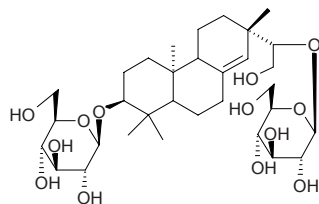


**15389 Neocynapanoside A**

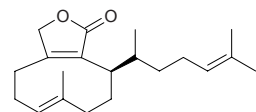
$C_{41}H_{60}O_{16}$  (808.93). Amorphous powder, mp 105–108°C,  $[\alpha]_D = -57.3^\circ$  ( $c = 1.54$ ,  $CHCl_3$ ). Source: XU CHANG QING *Cynanchum paniculatum*. Ref: 2621.

**15390 Neodarutoside**

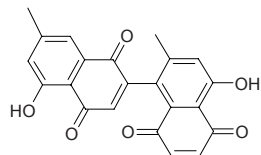
$C_{32}H_{54}O_{13}$  (646.78). Source: MAO GENG XI XIAN *Siegesbeckia orientalis* var. *glabrescens* [Syn. *Siegesbeckia glabrescens*]. Ref: 143, 2622.

**15391 Neodictyolactone**

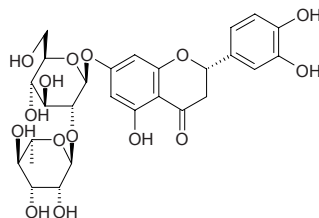
$C_{20}H_{30}O_2$  (302.46).  $[\alpha]_D^{20} = -35^\circ$  ( $c = 0.30$ ,  $CH_2Cl_2$ ). Source: XIAN ZHUANG WANG DI ZAO *Dictyota linearis*. Ref: 3818.

**15392 Neodiospyrin**

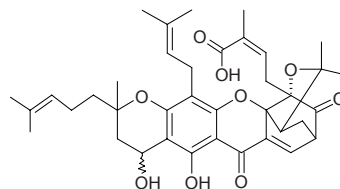
[33916-25-5]  $C_{22}H_{14}O_6$  (374.35). mp 253–254°C. Source: SHI GEN *Diospyros kaki*. Ref: 6.

**15393 Neoeriocitrin**

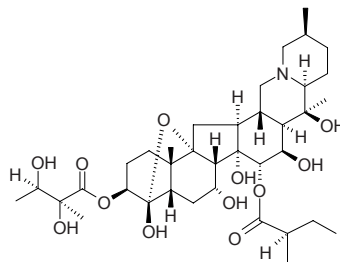
[13241-32-2]  $C_{27}H_{32}O_{15}$  (596.55). Source: *Citrus* sp. Ref: 658.

**15394 Neogambogic acid**

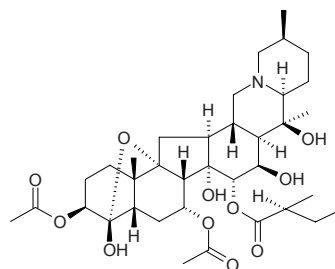
[93772-31-7]  $C_{38}H_{46}O_9$  (646.78). Yellow. Source: TENG HUANG *Garcinia morella* (dried balsam: content scope of 9 batch samples = 9.55%–22.22%, mean content = 14.98%)<sup>[5508]</sup>, TENG HUANG SHU *Garcinia hanburyi*<sup>[2623]</sup>. Ref: 2623, 5508.

**15395 Neogermbudine**

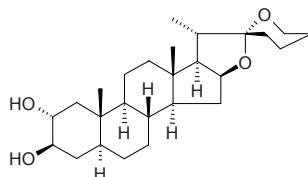
[595-64-2]  $C_{37}H_{59}NO_{12}$  (709.88). Sericate crystals (benzene), mp 149–152°C,  $[\alpha]_D^{25} = -12^\circ$  ( $c = 1$ , pyridine). Pharm: Antihypertensive (anesthetic dog, 2mg/(kg·min), iv, 10min, blood pressure lowered by 30% on average). Source: LV LI LU *Veratrum viride*, BAI LI LU *Veratrum album*. Ref: 661.

**15396 Neogermitrine**

$C_{36}H_{55}NO_{11}$  (677.84). Colorless long bar crystals or clustered acicular crystals (diluting acetone), mp 234–235°C,  $[\alpha]_D^{24} = -77^\circ$  ( $c = 1.0$ , pyridine). Pharm: Reduces myocardial contractility and antihypertensive (dog, iv); used in treatment of myasthenia gravis. Source: AI XI SHOU SHI LI LU *Veratrum eschscholtzii*, LIU SU LI LU *Veratrum fimbriatum*, LV LI LU *Veratrum viride*. Ref: 658.

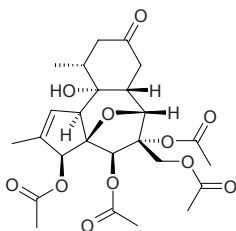
**15397 Neogitogenin**

[6811-13-8]  $C_{27}H_{44}O_4$  (432.65). Source: ZHI MU *Anemarrhena asphodeloides*. Ref: 2.

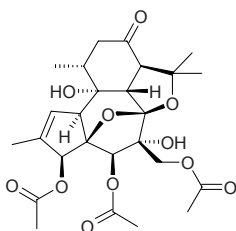


**15398 Neoglabrescin A tetraacetate**

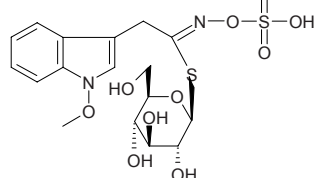
$C_{25}H_{32}O_{11}$  (508.53). Colorless crystals (acetone-petroleum ether), mp 247~248°C,  $[\alpha]_D^{20} = -64.9^\circ$  ( $c = 0.7$ ,  $CHCl_3$ ). Source: *Neoboutonia glabrescens*. Ref: 3441.

**15399 Neoglabrescin B triacetate**

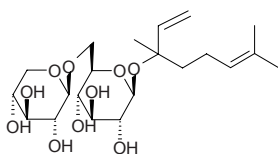
$C_{26}H_{34}O_{11}$  (522.55). Colorless crystals (acetone-petroleum ether), mp 215~216°C,  $[\alpha]_D^{20} = +8.9^\circ$  ( $c = 0.09$  MeOH). Source: *Neoboutonia glabrescens*. Ref: 3441.

**15400 Neoglucobrassicin**

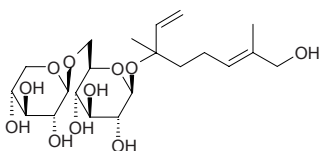
[5187-84-8]  $C_{17}H_{22}N_2O_{10}S_2$  (478.50). Source: BAO ZI GAN LAN *Brassica oleracea* var. *gemmifera*, DA QING YE *Isatis indigotica*, JING HUA HUA YE CAI *Brassica oleracea* var. *botrytis* subvar. *cauliflora*, JU SAN HUA YE CAI *Brassica oleracea* var. *botrytis* subvar. *cymosa*, PIE LAN *Brassica oleracea* var. *gongylodes*, OU ZHOU YOU CAI *Brassica napus*, ZUAN GUO SUAN JIE *Sisymbrium officinale*. Ref: 2.

**15401 Neohancoside A**

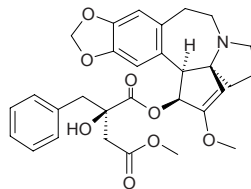
$C_{21}H_{36}O_{10}$  (448.52). White amorphous powder, mp 84~86°C (methanol). Source: HUA BEI BAI QIAN *Cynanchum hancockianum*. Ref: 244.

**15402 Neohancoside B**

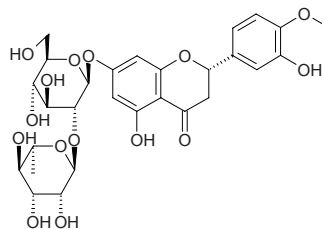
8-Hydroxy-linalool-3-O-β-D-xylopyranosyl(1→6)-β-D-glucopyranoside  
 $C_{21}H_{36}O_{11}$  (464.51). Source: HUA BEI BAI QIAN *Cynanchum hancockianum*. Ref: 244.

**15403 Neoharringtonine**

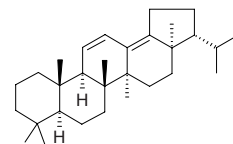
[142748-51-4]  $C_{30}H_{33}NO_8$  (535.60). Pharm: Antineoplastic (leukemia). Source: SAN JIAN SHAN *Cephalotaxus fortunei*. Ref: 2, 2630.

**15404 Neohesperidin**

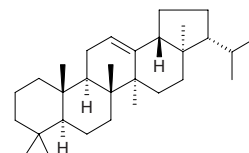
[13241-33-3]  $C_{28}H_{34}O_{15}$  (610.57). mp 234~235°C, 244°C. Pharm: Bitter principle. Source: GOU JU ZHI SHI *Poncirus trifoliata*, NING MENG PI *Citrus limon*, WU HE MI JU *Citrus unshiu*, ZHI SHI *Citrus aurantium*. Ref: 2, 658, 660.

**15405 11,13(18)-Neohopadiene**

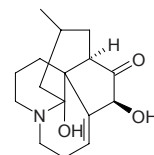
Wallichienene [3608-05-7]  $C_{30}H_{48}$  (408.72). Crystals ( $CHCl_3$ /MeOH), mp 213~215°C,  $[\alpha]_D = +42^\circ$ . Source: GAO SHAN TIAO JUE *Oleandra wallichii*, TIE SI QI *Adiantum pedatum*. Ref: 6, 1521.

**15406 12-Neohopene**

[2734-37-4]  $C_{30}H_{50}$  (410.73). Crystals ( $CHCl_3$ /MeOH), mp 134~137°C, 210~211°C,  $[\alpha]_D = +18.4^\circ$  ( $CHCl_3$ ),  $[\alpha]_D = +41.1^\circ$  ( $CHCl_3$ ). Source: DA YE GU SUI BU *Davallia divaricata* [Syn. *Davallia formosana*; *Davallia orientalis*], TIE SI QI *Adiantum pedatum*, *Adiantum* spp. Ref: 6, 1521, 2722.

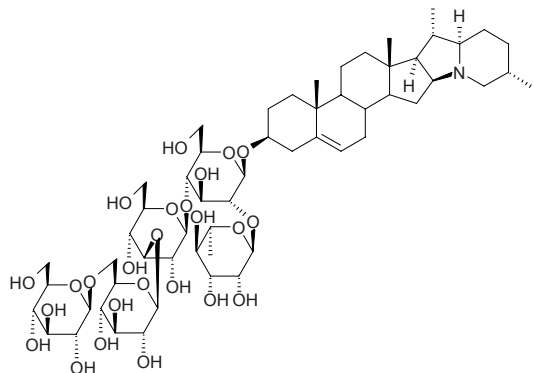
**15407 Neohuperzine**

$C_{16}H_{23}NO_3$  (277.37). Colorless needles,  $[\alpha]_D^{22} = -48.2^\circ$  ( $c = 0.1037$ , EtOH). Source: QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*]. Ref: 2245.

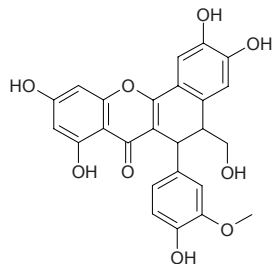


**15408 Neohyacinthoside**

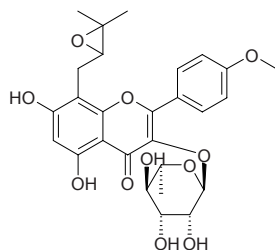
Solanidine-3-*O*- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)-[ $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)] $\beta$ -*D*-glucopyranoside  
 $C_{57}H_{93}NO_{25}$  (1192.37). White powder, mp 262~265°C,  $[\alpha]_D^{20} = -25.9^\circ$  ( $c = 0.29$ , pyridine). Source: BAI HE *Lilium brownii* var. *viridulum* [Syn. *Lilium brownii* var. *colchesteri*]. Ref: 93.

**15409 Neohydncarpin**

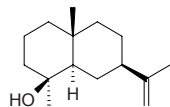
[71417-57-7]  $C_{25}H_{20}O_9$  (464.43). Yellow powder (benzene/acetone), mp 235~237°C,  $[\alpha]_D = -20.3^\circ$  ( $c = 0.59$ , MeOH). Pharm: Cytotoxic (mus, L1210; hmn: KB, colon glandular cancer, bone cancer, HeLa-S3 cervical cancer; Tmolt3 leukaemia cells). Source: WEI SHI DA FENG ZI *Hydnocarpus wightiana*. Ref: 2624, 2625.

**15410 Neocariin**

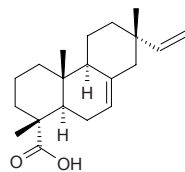
$C_{27}H_{30}O_{11}$  (530.53). Yellow powder, mp 185~187°C. Source: YIN YANG HUO *Epimedium brevicornum* Ref: 4427.

**15411 Neointermedeol**

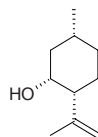
[5945-72-2]  $C_{15}H_{26}O$  (222.37). Oil, bp 85~87°C/0.5mmHg,  $[\alpha]_D^{25} = +7.5^\circ$  ( $c = 2.6$ , EtOH). Source: REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 2626, 2627.

**15412 Neoisodextropimaric acid**

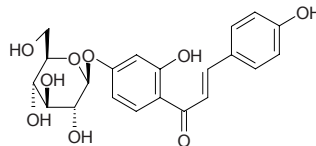
$C_{20}H_{30}O_2$  (302.46). Pharm: Antibacterial; cytotoxic (inhibition of TPA-induced ornithine decarboxylase activity with cultured mouse epidermal 308 cells)<sup>[5038]</sup>. Source: BEI MEI YA BAI *Thuja occidentalis*, DU SONG SHI *Juniperus rigida*, AN CI BAI *Juniperus conferta*. Ref: 658, 5038.

**15413 Neoisopulegol**

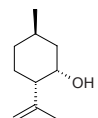
$C_{10}H_{18}O$  (154.25). Source: YU XIANG CAO *Mentha rotundifolia*. Ref: 6.

**15414 Neoisoliquiritin**

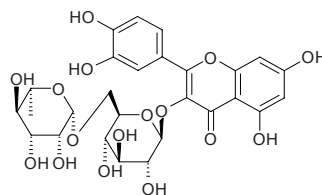
Isoliquirittigenin-4- $\beta$ -glucoside [59122-93-9]  $C_{21}H_{22}O_9$  (418.40). mp 228~230°C. Source: GAN CAO *Glycyrrhiza uralensis*. Ref: 2.

**15415 Neoisopulegol**

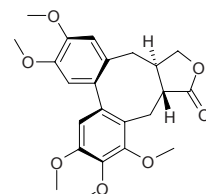
[20549-46-6]  $C_{10}H_{18}O$  (154.25). bp (+) 95°C/17mmHg. Source: YU XIANG CAO *Mentha rotundifolia*. Ref: 6.

**15416 Neisorutin**

[36535-79-2]  $C_{27}H_{30}O_{16}$  (610.53). Source: LUO BU MA *Apocynum venetum*, PAO NANG CAO *Physochlaina physaloides*. Ref: 6.

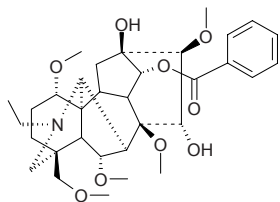
**15417 Neoistegane**

[87084-98-8]  $C_{23}H_{26}O_7$  (414.46). Pharm: Antineoplastic; cytotoxic (KB, ED<sub>50</sub> = 6.6 $\mu$ g/mL). Source: WU JIA QIAN HU *Steganotaenia araliacea*. Ref: 658, 1729.

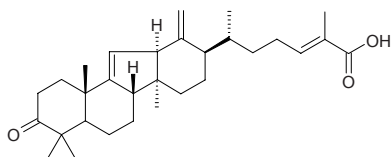


**15418 Neojiangyouaconitine**

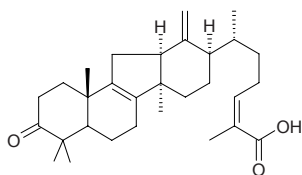
Aconitane-13,14,15-trihydroxyl,20-ethyl-1,6,8,16-tetramethoxy-4-(methoxymethyl)-14-benzoate(1 $\alpha$ ,6 $\alpha$ ,14 $\alpha$ ,15 $\alpha$ ,16 $\beta$ ) C<sub>33</sub>H<sub>47</sub>NO<sub>9</sub> (601.74). White lamellar crystals, mp 201–204°C, [ $\alpha$ ]<sub>D</sub><sup>14.4</sup> = –9.46° (c = 0.22, methanol). Source: FU ZI *Aconitum carmichaeli*. Ref: 239.

**15419 Neokadsuranic acid A**

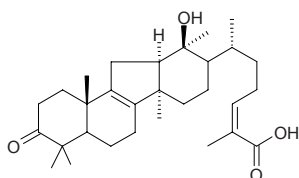
[123929-80-6] C<sub>30</sub>H<sub>44</sub>O<sub>3</sub> (452.68). Colorless oil, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = –35.0° (c = 0.1, CHCl<sub>3</sub>). Pharm: Antihypercholesterolemic (inhibits biosynthesis of cholesterol); antineoplastic<sup>[2523]</sup>; anti-HIV<sup>[2523]</sup>. Source: YI XING NAN WU WEI ZI *Kadsura heteroclita* [Syn. *Uvaria heteroclita*], CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*]. Ref: 1034, 2436, 2523, 2628.

**15420 Neokadsuranic acid B**

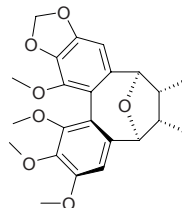
[123828-59-1] C<sub>30</sub>H<sub>44</sub>O<sub>3</sub> (452.68). [ $\alpha$ ]<sub>D</sub><sup>18</sup> = +37.4° (c = 0.11, chloroform). Pharm: Antihypercholesterolemic (inhibits biosynthesis of cholesterol). Source: CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*]. Ref: 1034, 1150.

**15421 Neokadsuranic acid C**

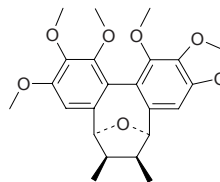
[123828-60-4] C<sub>30</sub>H<sub>46</sub>O<sub>4</sub> (470.69). Amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>29</sup> = +42.0° (c = 0.07, ethanol). Pharm: Antihypercholesterolemic (inhibits biosynthesis of cholesterol). Source: CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*]. Ref: 1034, 1150.

**15422 Neokadsuranin**

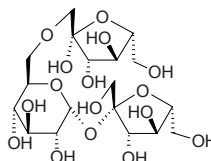
[115181-68-5] C<sub>23</sub>H<sub>26</sub>O<sub>7</sub> (414.46). Pharm: Antineoplastic (screened as potential antitumor promoters, EBV-EA induced by TPA, mol ratio/TPA = 1000, relative percentage of EBV-EA = (4.7±0.4)% (positive control value 32pmol, 20ng TPA = 100%), viability of Raji cells = 70%)<sup>[4644]</sup>. Source: LENG FAN TUAN *Kadsura coccinea* [syn. *Kadsura chenensis*; *Kadsura hainanensis*], NEI NAN WU WEI ZI *Kadsura interior* (stem). Ref: 2436, 4644.

**15423 Neokadsuranin**

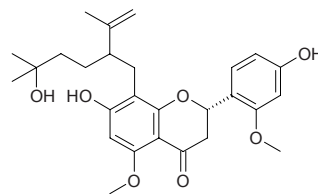
[115181-68-5] C<sub>23</sub>H<sub>26</sub>O<sub>7</sub> (414.46). Crystals (Et<sub>2</sub>O), mp 157–159°C, [ $\alpha$ ]<sub>D</sub> = 0° (CHCl<sub>3</sub>). Source: LENG FAN TUAN *Kadsura coccinea* [syn. *Kadsura chenensis*; *Kadsura hainanensis*]. Ref: 2629.

**15424 Neokestose**

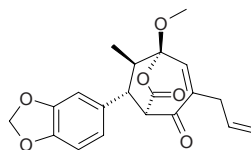
[3688-75-3] C<sub>18</sub>H<sub>32</sub>O<sub>16</sub> (504.45). Source: GE CONG *Allium victorialis*. Ref: 6.

**15425 Neokurarinol**

C<sub>27</sub>H<sub>34</sub>O<sub>7</sub> (470.57). Source: KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. Ref: 2, 1521.

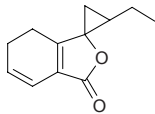
**15426 Neolignan in Magnolia denudata**

C<sub>20</sub>H<sub>20</sub>O<sub>6</sub> (356.38). Source: YU LAN *Magnolia denudata* [Syn. *Magnolia heptapata*]. Ref: 4439.

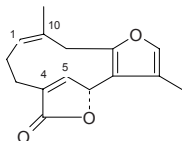


**15427 Neoligustilide**

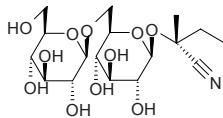
$C_{12}H_{14}O_2$  (190.24). Colorless massive crystals, mp 58–60°C. Source: LIAO GAO BEN *Ligusticum jeholense*. Ref: 343.

**15428 Neolinderalactone**

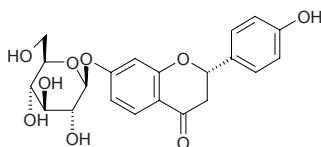
[26379-18-0]  $C_{15}H_{16}O_3$  (244.29). Prisms (MeOH), mp 116–118°C,  $[\alpha]_D^{25} = +100^\circ$  ( $c = 1.09$ , EtOH).660. Source: WU YAO *Lindera strychnifolia* [Syn. *Lindera aggregata*]. Ref: 1521.

**15429 Neolinustatin**

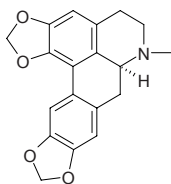
$C_{17}H_{29}NO_{11}$  (423.42). Pharm: Toxin. Source: YA MA *Linum usitatissimum*. Ref: 658.

**15430 Neoliquiritin**

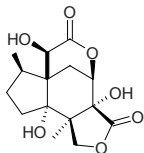
[5088-75-5]  $C_{21}H_{22}O_9$  (418.40). mp 164–166°C. Source: GAN CAO *Glycyrrhiza uralensis*. Ref: 2.

**15431 Neolitsine**

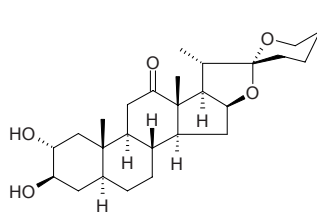
[2466-42-4]  $C_{19}H_{17}NO_4$  (323.35). Needles (Me<sub>2</sub>CO), mp 149–150°C,  $[\alpha]_D = +56.5^\circ$  ( $c = 1.57$ , CHCl<sub>3</sub>). Source: MEI LI XIN MU JIANG ZI *Neolitsia pulchella*, WU YE TENG *Cassutha filiformis*, YUE GUI YE *Laurus nobilis*. Ref: 1521, 2601.

**15432 Neomajucin**

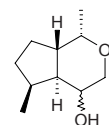
[114687-98-8]  $C_{15}H_{20}O_7$  (312.32). Colorless octahedron (EtOAc), mp 220–222°C,  $[\alpha]_D^{24} = -75^\circ$  ( $c = 0.25$ , dioxane). Pharm: Spasm action (picrotoxin-like); LD<sub>50</sub> = 12.2mg/kg. Source: DA BA JIAO *Illicium majus* (peel), JIA DI FENG PI *Illicium jiadifengpi* (pericarp: yield = 0.00014%dw)<sup>[4621]</sup>. Ref: 2631, 2751, 4621.

**15433 Neomanogenin**

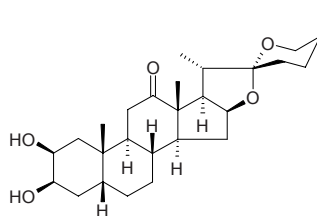
$C_{27}H_{42}O_5$  (446.63). mp 242°C. Source: TIAO WEN LONG SHE LAN *Agave striata*. Ref: 2503.

**15434 Neomatatabiol**

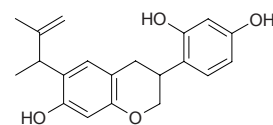
Dihydronepetalactol [21699-53-6]  $C_{10}H_{18}O_2$  (170.25). bp 95°C/5mmHg. Pharm: Attracts adult male dayfly (*Chrysopa septempunctata*). Source: MU TIAN LIAO *Actinidia polygama*. Ref: 6, 658.

**15435 Neomexogenin**

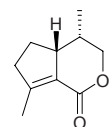
$C_{27}H_{42}O_5$  (446.63). mp 221°C. Source: *Agave roezliana*. Ref: 2503.

**15436 Neomillinol**

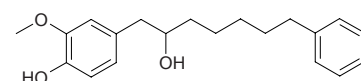
$C_{20}H_{22}O_4$  (326.40). Semisolid,  $[\alpha]_D^{25} = -6^\circ$  ( $c = 0.1$ , MeOH). Pharm: Antibacterial. Source: ZONG ZHUANG JI XUE TENG *Milletia racemosa*. Ref: 2734.

**15437 Neonepetalactone**

[24190-25-8]  $C_{10}H_{14}O_2$  (166.22). Source: MU TIAN LIAO *Actinidia polygama*. Ref: 6.

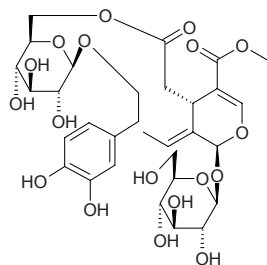
**15438 Neonootkatol**

$C_{20}H_{26}O_3$  (314.43). Yellow oil Source: YI ZHI REN *Alpinia oxyphylla*. Ref: 796.

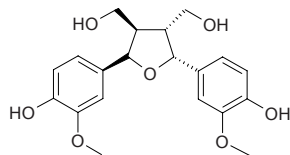


**15439 Neoneuzhenide**

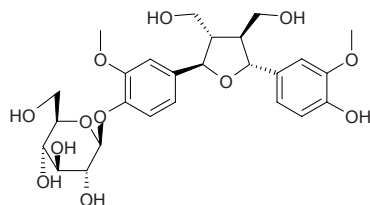
[96382-91-1]  $C_{31}H_{42}O_{18}$  (702.67). Crystals (as nona-Ac compound), mp 85–86°C (nona-Ac compound),  $[\alpha]_D = -93.5^\circ$  ( $CHCl_3$ , nona-Ac compound). **Pharm:** Antiviral (Help2 cells, Para-3,  $IC_{50} = 72.9\mu g/mL$ , TI = 2.0; MDCK cells, Flu-A, inactive; Vero cells, SV-1, inactive)<sup>[4141]</sup>; anti-hemolysis (rat, red blood cell *in vitro*, 2,2'-azo-bis-(2-amidinopropane)dihydrochloride induced,  $IC_{50} = 35.0\mu mol/L$ , control Trolox,  $IC_{50} = 55.0\mu mol/L$ )<sup>[4141]</sup>; anti-hemolysis (against hemolysis of red blood cells induced by AAPH free radicals,  $IC_{50} = 9.3\text{--}37.5\mu mol/L$ )<sup>[3545]</sup>. **Source:** NV ZHEN ZI *Ligustrum lucidum*, RI BEN NV ZHEN *Ligustrum japonicum*, **Ref:** 2633, 3545, 4141.

**15440 Neolivil**

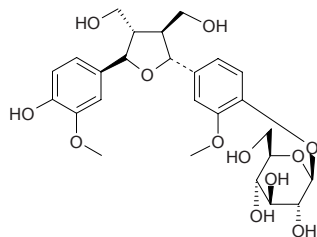
[77790-55-7]  $C_{20}H_{24}O_7$  (376.41). Oil. **Source:** YI ZHU QIAN MA *Urtica dioica*, *Thymus longiflorus*. **Ref:** 2634, 2635.

**15441 7R,7'R,8S,8'S-(+)-Neo-olivil-4-O-β-D-glucopyranoside**

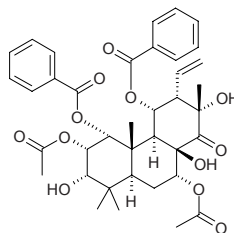
$C_{26}H_{34}O_{12}$  (538.55). Amorphous powder,  $[\alpha]_D^{24} = +6.4^\circ$  ( $c = 0.110$ , MeOH). **Source:** RI BEN ZHANG YA CAI *Swertia japonica*. **Ref:** 2528.

**15442 Neolivil-4-O-β-D-glucoside**

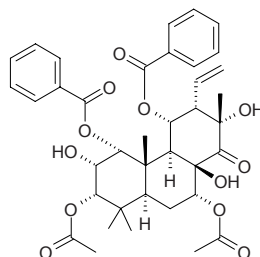
$C_{26}H_{34}O_{12}$  (538.55). **Source:** YI ZHU QIAN MA *Urtica dioica*. **Ref:** 2636.

**15443 Neoorthosiphol A**

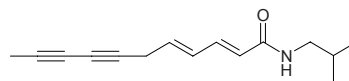
$C_{38}H_{44}O_{12}$  (692.77). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 40.7\mu mol/L$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu mol/L$ , Polymixin B,  $IC_{50} = 27.8\mu g/mL$ , Dexamethasone  $IC_{50} = 170\mu mol/L$ )<sup>[4322]</sup>; cytotoxic (antiproliferative, Colon26-L5,  $ED_{50} = 38.3\mu g/mL$ , control 5-Fluorouracil,  $ED_{50} = 0.015\mu g/mL$ ; HT1080,  $ED_{50} = 96.3\mu g/mL$ , 5-Fluorouracil,  $ED_{50} = 0.48\mu g/mL$ )<sup>[3053]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0133%dw). **Ref:** 4322, 3053.

**15444 Neoorthosiphol B**

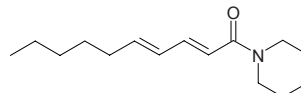
$C_{38}H_{44}O_{12}$  (692.77). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 14.0\mu mol/L$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu mol/L$ , Polymixin B,  $IC_{50} = 27.8\mu g/mL$ , Dexamethasone  $IC_{50} = 170\mu mol/L$ )<sup>[4322]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0023%dw). **Ref:** 4322, 4741.

**15445 Neopellitorine A**

Undeca-2*E*,4*Z*-dien-7,9-diynoic acid isobutylamide  $C_{15}H_{19}NO$  (229.32). Yellow oil. **Pharm:** Insecticidal (*Sitophilus oryzae*, *Rhyzopertha dominica*, 200 $\mu g/mL$ , after 3 days mortality = 100%). **Source:** XIA YE QING HAO *Artemisia dracunculus* (aerial parts). **Ref:** 5218.

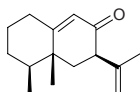
**15446 Neopellitorine B**

Deca-2*E*,4*Z*-dienoic acid piperidide  $C_{15}H_{25}NO$  (235.37). Yellow oil. **Pharm:** Insecticidal (*Sitophilus oryzae*, 200 $\mu g/mL$ , after 3 days, mortality = 70%; *Rhyzopertha dominica*, 200 $\mu g/mL$ , after 3 days, mortality = 50%)<sup>[5218]</sup>. **Source:** HU JIAO *Piper nigrum* (root: yield = 0.000029%dw), XIA YE QING HAO *Artemisia dracunculus* (aerial parts). **Ref:** 4753, 5218.



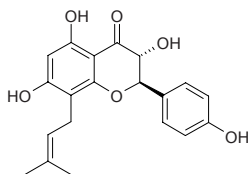
**15447 Neopetasone**

$C_{15}H_{22}O$  (218.34). Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13.

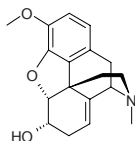
**15448 Neophellamuretin**

$C_{20}H_{20}O_6$  (356.38). Pharm: Antioxidant (DPPH radical scavenger,  $250\mu\text{mol/L}$ ,  $\text{InRt} = 20.9\%$ ; control Vitamin E,  $\text{IC}_{50} = 8.3\mu\text{mol/L}$ )<sup>[4722]</sup>. Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.050%dw).

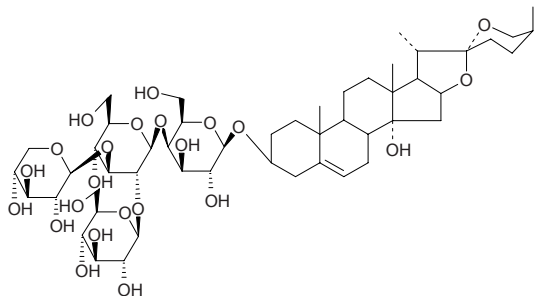
Ref: 4722.

**15449 Neopine**

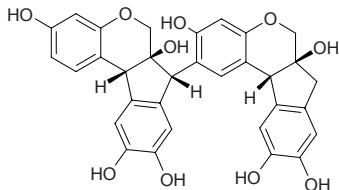
[467-14-1]  $C_{18}H_{21}NO_3$  (299.37). mp 127.0~127.5°C. Pharm: Analgesic and antispasmodic (similar action with codeine). Source: DA HONG YING SU *Papaver bracteatum*, YA PIAN *Papaver somniferum*, YING SU *Papaver somniferum*. Ref: 6, 658.

**15450 Neoprazerigenin A 3-O-β-D-lycotetraoside**

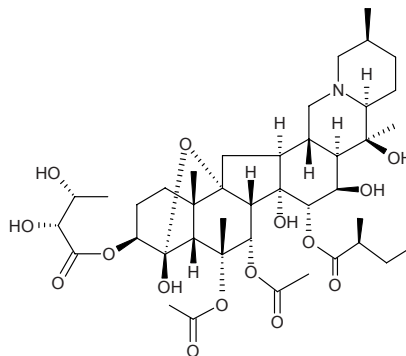
$C_{50}H_{80}O_{23}$  (1049.18). Source: XI BO LI YA LIAO *Polygonum sibiricum* [syn. *Persicaria sibirica*], HUANG JING *Polygonatum sibiricum*. Ref: 2637.

**15451 Neoprotosappanin**

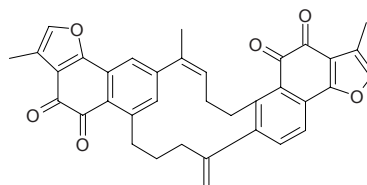
$C_{32}H_{26}O_{10}$  (570.56). Yellow amorphous solid,  $[\alpha]_D^{25} = -239.0^\circ$  ( $c = 0.3$ , MeOH). Pharm: Xanthine oxidase inhibitor (noncompetitive inhibitory activity in concentration-dependent manner,  $\text{IC}_{50} = 38.3\mu\text{mol/L}$ ,  $K_i = 29.2\mu\text{mol/L}$ , control Allopurinol, competitive type,  $\text{IC}_{50} = 2.5\mu\text{mol/L}$ ,  $K_i = 1.80\mu\text{mol/L}$ ). Source: SU MU *Caesalpinia sappan* (heartwood). Ref: 4494.

**15452 Neoprotoveratrine**

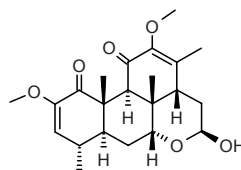
Protoveratrine B [124-97-0]  $C_{41}H_{63}NO_{15}$  (809.96). mp 269~270°C,  $[\alpha]_D = -39^\circ$  (pyridine). Pharm: Antihypertensive (strong, but with high toxicity); emetic; toxin. Source: BAI LI LU *Veratrum album*, LV LI LU *Veratrum viride*. Ref: 658, 1521.

**15453 Neo-przewaquinone A**

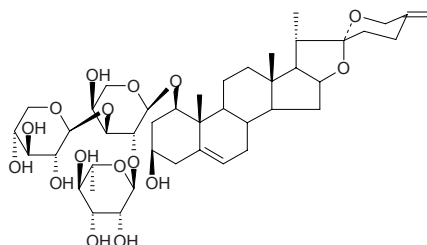
$C_{36}H_{28}O_6$  (556.62). Amaranth needles, mp 188~189°C. Source: GAN XI SHU WEI CAO *Salvia przewalskii*. Ref: 2464.

**15454 Neoquassin**

Nigakihemiacetal B  $C_{22}H_{30}O_6$  (390.48). Pharm: Extremely bitter. Source: CHU BAI PI *Ailanthus altissima*, KU MU *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], MEI ZHOU KU MU *Quassia amara*, *Picrasma* sp. Ref: 12, 658, 660.

**15455 Neoruscogenin 1-O-{O-α-L-rhamnopyranosyl-(1→2)-O-[β-D-xylopyranosyl-(1→3)]-α-L-arabinopyranoside}**

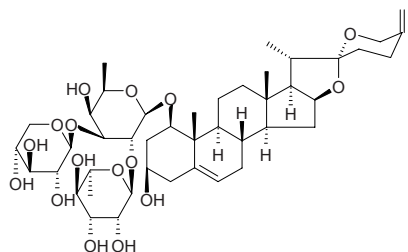
[180161-85-7]  $C_{43}H_{66}O_{16}$  (839.00). Amorphous solid,  $[\alpha]_D^{27} = -63.8^\circ$  ( $c = 0.26$ , MeOH). Pharm: cAMP phosphodiesterase inhibitor ( $\text{IC}_{50} = 92\mu\text{mol/L}$ ). Source: XIA WAN NUO LI *Nolina recurvata*. Ref: 1131.



**15456 Neoruscogenin 1-O-[O- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-O- $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 3)]- $\beta$ -D-fucopyranoside}**

[180161-87-9] C<sub>44</sub>H<sub>68</sub>O<sub>16</sub> (853.02). Amorphous solid,  $[\alpha]_D^{27} = -45^\circ$  ( $c = 0.44$ , MeOH). **Pharm:** cAMP phosphodiesterase inhibitor (IC<sub>50</sub> = 161  $\mu$ mol/L).

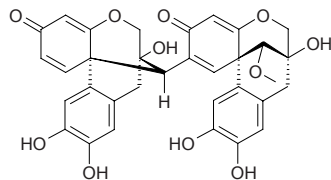
**Source:** XIA WAN NUO LI *Nolina recurvata*. **Ref:** 1131.



**15457 Neosappanone A**

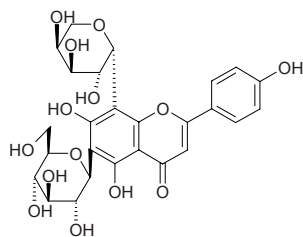
C<sub>32</sub>H<sub>28</sub>O<sub>11</sub> (600.58). **Pharm:** Xanthine oxidase inhibitor (competitive inhibitory activity in concentration-dependent manner, IC<sub>50</sub> = 29.7  $\mu$ mol/L, K<sub>i</sub> = 16.3  $\mu$ mol/L, control Allopurinol, IC<sub>50</sub> = 2.5  $\mu$ mol/L, K<sub>i</sub> = 1.80  $\mu$ mol/L).

**Source:** SU MU *Caesalpinia sappan* (heartwood). **Ref:** 4494.



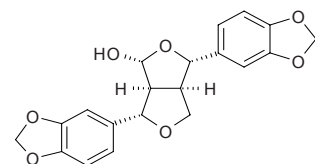
**15458 Neoschaftoside**

[61328-41-4] C<sub>26</sub>H<sub>28</sub>O<sub>14</sub> (564.50). **Pharm:** Insect phagostimulant (*Plant hoppers*). **Source:** JING MI *Oryza sativa*. **Ref:** 658.



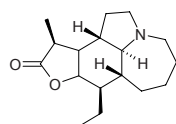
**15459 Neosesamin**

C<sub>20</sub>H<sub>18</sub>O<sub>7</sub> (370.36). Colorless acicular crystals mp 157~158°C. **Source:** TU SI ZI *Cuscuta chinensis*. **Ref:** 816.



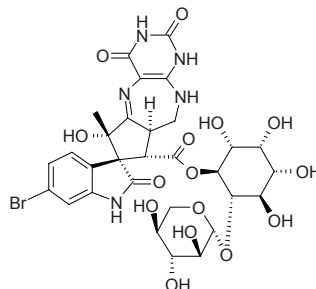
**15460 Neostenine**

C<sub>17</sub>H<sub>27</sub>NO<sub>2</sub> (277.41). mp 90~92°C,  $[\alpha]_D^{20} = +73.6^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Antitussive (guinea pig cough model, 133  $\mu$ mol/kg ip, cough InRt = 77%,  $p < 0.001$ ). **Source:** BAI BU *Stemona tuberosa*. **Ref:** 5463.



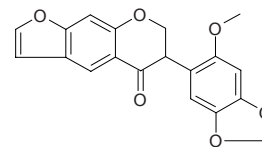
**15461 Neosurugatoxin**

[80680-43-9] C<sub>30</sub>H<sub>34</sub>BrN<sub>5</sub>O<sub>15</sub> (784.53). **Pharm:** Mydriatic (mus, 0.03  $\mu$ g); toxin. **Source:** RI BEN DONG FENG LUO *Babylonia japonica*. **Ref:** 658, 1521.



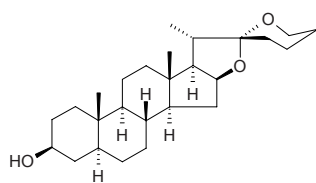
**15462 Neotenone**

Neorautenone C<sub>19</sub>H<sub>14</sub>O<sub>6</sub> (338.32). **Pharm:** Antiviral (HSV-1, 50  $\mu$ g/mL, InRt = 26.1%; HSV-2, 50  $\mu$ g/mL, InRt = 23.7%). **Source:** DI GUA ZI *Pachyrhizus erosus*. **Ref:** 4180.



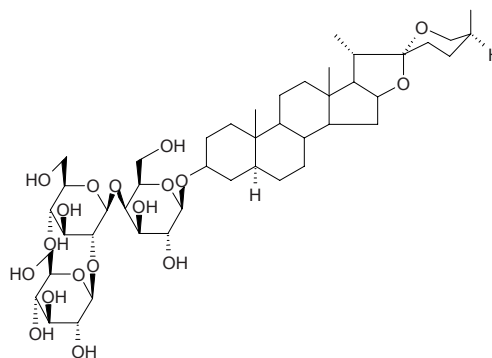
**15463 Neotigogenin**

[470-01-9] C<sub>27</sub>H<sub>44</sub>O<sub>3</sub> (416.65). mp 202~203°C. **Source:** JIAN MA *Agave sisalana*, NIAN YU XU *Smilax sieboldii*, WU CI FAN MA *Agave americana* var. *marginata* [Syn. *Agave americana* var. *variegata*], XIA YE LONG SHE LAN *Agave cantala*. **Ref:** 6, 10.



**15464 Neotigogenin-3-O- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)- $\beta$ -D-galactopyranoside**

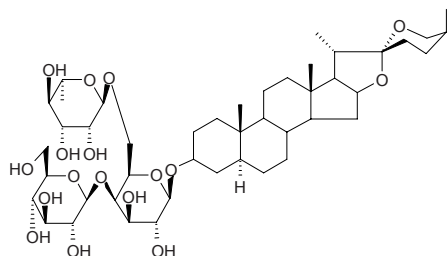
C<sub>45</sub>H<sub>74</sub>O<sub>18</sub> (903.08). **Source:** BAI MAO TENG *Solanum lyratum*. **Ref:** 2638.





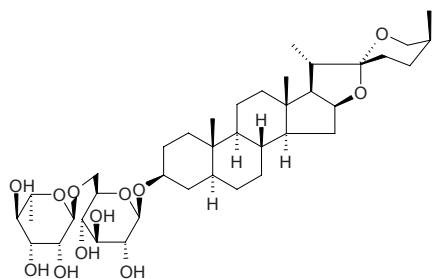
**15465 Neotigogenin-3-O- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)-O-[ $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 6)]- $\beta$ -D-galactopyranoside**

C<sub>45</sub>H<sub>74</sub>O<sub>17</sub> (887.08). Source: BA QIA *Smilax china* [Syn. *Smilax japonica*], NIU WEI CAI *Smilax riparia*. Ref: 2639.



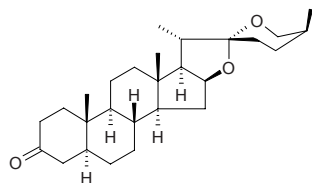
**15466 Neotigogenin-3-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside**

C<sub>39</sub>H<sub>64</sub>O<sub>12</sub> (724.94). Source: BA QIA *Smilax china* [Syn. *Smilax japonica*], NIU WEI CAI *Smilax riparia*. Ref: 2639.



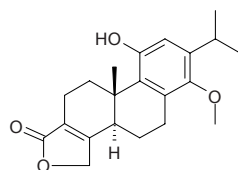
**15467 Neotigogenone**

C<sub>27</sub>H<sub>42</sub>O<sub>3</sub> (414.63). Source: JIAN MA *Agave sisalana*. Ref: 10.



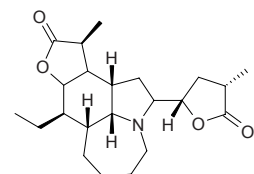
**15468 Neotriptophenolide**

[81827-74-9] C<sub>21</sub>H<sub>26</sub>O<sub>4</sub> (342.44). Source: LEI GONG TENG *Tripterygium wilfordii*. Ref: 2.



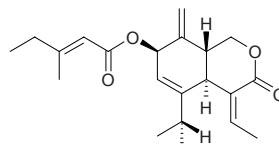
**15469 Neotuberostemonine**

C<sub>22</sub>H<sub>33</sub>NO<sub>4</sub> (375.51). [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +83.0° (*c* = 0.1, MeOH). Pharm: Antitussive (guinea pig cough model, 133  $\mu$ mol/kg ip, cough InRt = 85%, *p* < 0.001). Source: BAI BU *Stemona tuberosa*. Ref: 5463.



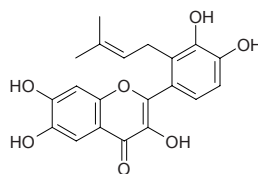
**15470 Neotussilagolactone**

[168482-85-7] C<sub>21</sub>H<sub>28</sub>O<sub>4</sub> (344.45). Colorless jelly, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = -37.2° (*c* = 0.1, CHCl<sub>3</sub>). Pharm: Platelet aggregation inhibitor (PAF trial, IC<sub>50</sub> = 26.7  $\mu$ mol/L). Source: KUAN DONG HUA *Tussilago farfara*. Ref: 2640, 2641.



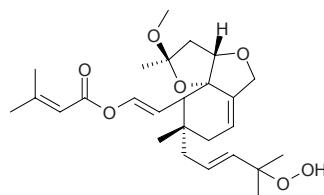
**15471 Neouralenol**

3,6,7,3',4'-Pentahydroxy-2'-isoprenylflavone [139163-16-9] C<sub>20</sub>H<sub>18</sub>O<sub>7</sub> (370.36). Dark yellow acicular crystals, mp 229~231°C. Source: GAN CAO *Glycyrrhiza uralensis*. Ref: 171, 660.



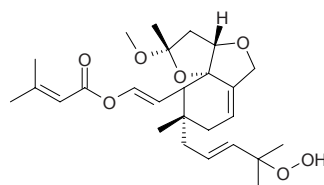
**15472 Neovibsanin D**

C<sub>26</sub>H<sub>38</sub>O<sub>7</sub> (462.59). Colorless paste, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = -66.1° (*c* = 0.30, CHCl<sub>3</sub>). Source: RI BEN JIA MI *Viburnum awabuki*. Ref: 2530.



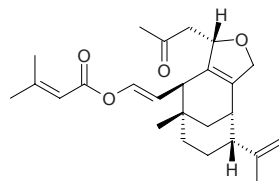
**15473 7-epi-Neovibsanin D**

C<sub>26</sub>H<sub>38</sub>O<sub>7</sub> (462.59). Colorless paste, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = +24.2° (*c* = 0.70, CHCl<sub>3</sub>). Source: RI BEN JIA MI *Viburnum awabuki*. Ref: 2530.



**15474 Neovibsanin G**

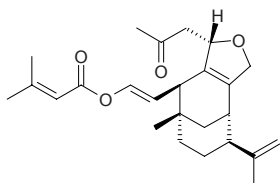
C<sub>25</sub>H<sub>34</sub>O<sub>4</sub> (398.55). Colorless paste, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = +96.2° (*c* = 0.32, alcohol). Source: RI BEN JIA MI *Viburnum awabuki*. Ref: 2530.



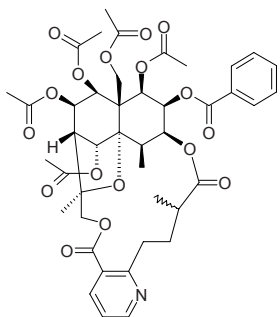
**15475 14-epi-Neovibsanin G**

$C_{25}H_{34}O_4$  (398.55). Colorless paste,  $[\alpha]_D^{23} = +136.2^\circ$  ( $c = 0.09$ , alcohol).

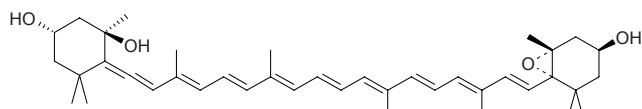
Source: RI BEN JIA MI *Viburnum awabuki*. Ref: 2530.

**15476 Neowilforine**

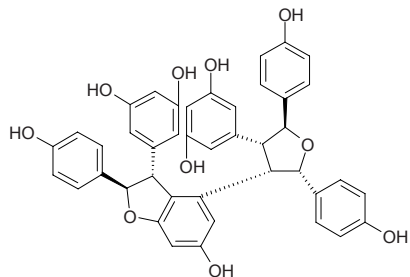
[121880-18-0]  $C_{43}H_{49}NO_{17}$  (851.87). Source: LEI GONG TENG *Tripterygium wilfordii*. Ref: 2.

**15477 Neoxanthin**

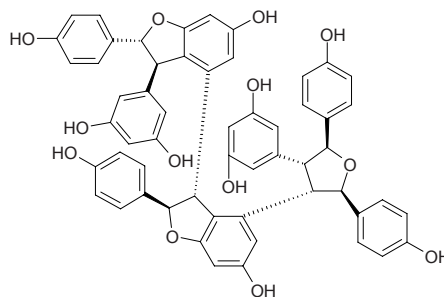
[30743-41-0]  $C_{40}H_{56}O_4$  (600.89). mp  $134^\circ C$ . Pharm: Yellow pigment. Source: DAO CAO *Oryza sativa*, HONG HAI JIAO *Capsicum annuum*, JIN QUE ER *Cytisus scoparius* [Syn. *Spartium scoparium*], JING MI *Oryza sativa*, MA TI YE *Caltha palustris*, SUAN SHUI CAO *Potamogeton perfoliatus*, TAO *Prunus persica*, YANG LI *Prunus domestica*, *Forsythia* sp., *Geum* sp., *Malus* sp. Ref: 6, 658.

**15478 Nepalensinol D**

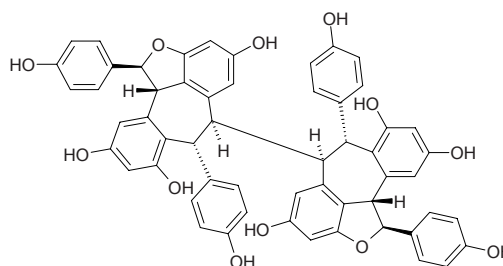
$C_{42}H_{34}O_{10}$  (698.73). Reddish brown powder, mp  $230^\circ C$  (dec),  $[\alpha]_D = -82.0^\circ$  ( $c = 0.3$ , MeOH). Pharm: Topoisomerase II inhibitor (hmn,  $IC_{50} = 14.8 \mu mol/L$ , control Daunorubicin,  $IC_{50} = 9.1 \mu mol/L$ ). Source: NI BO ER SONG CAO *Kobresia nepalensis* (stem: yield = 0.0003%dw). Ref: 1783.

**15479 Nepalensinol E**

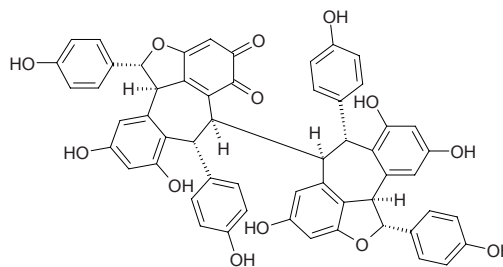
$C_{56}H_{44}O_{13}$  (924.97). Brown powder, mp  $250^\circ C$  (dec),  $[\alpha]_D = -307.8^\circ$  ( $c = 0.5$ , MeOH). Pharm: Topoisomerase II inhibitor (hmn,  $IC_{50} = 11.7 \mu mol/L$ , control Daunorubicin,  $IC_{50} = 9.1 \mu mol/L$ ). Source: NI BO ER SONG CAO *Kobresia nepalensis* (stem: yield = 0.0007%dw). Ref: 1783.

**15480 Nepalensinol F**

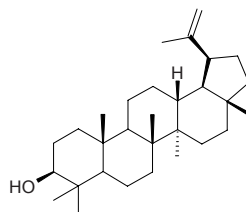
$C_{56}H_{42}O_{12}$  (906.95). Brown powder, mp  $> 300^\circ C$  (dec),  $[\alpha]_D = +26.3^\circ$  ( $c = 0.4$ , MeOH). Pharm: Topoisomerase II inhibitor (hmn,  $IC_{50} = 5.5 \mu mol/L$ , control Daunorubicin,  $IC_{50} = 9.1 \mu mol/L$ ). Source: NI BO ER SONG CAO *Kobresia nepalensis* (stem: yield = 0.0005%dw). Ref: 1783.

**15481 Nepalensinol G**

$C_{56}H_{40}O_{13}$  (920.94). Reddish brown powder, mp  $> 300^\circ C$  (dec),  $[\alpha]_D = +66^\circ$  ( $c = 0.1$ , MeOH). Pharm: Topoisomerase II inhibitor (hmn,  $IC_{50} > 50 \mu mol/L$  inactive, control Daunorubicin,  $IC_{50} = 9.1 \mu mol/L$ ). Source: NI BO ER SONG CAO *Kobresia nepalensis* (stem: yield = 0.0008%dw). Ref: 1783.

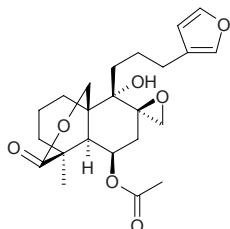
**15482 Nephinol**

$3\beta$ -Hydroxy-18 $\beta$ ,19 $\alpha$ H-lup-20(29)-ene  $C_{30}H_{50}O$  (426.73). Source: BO TE LAN DA JI *Euphorbia portlandica* (whole herb). Ref: 5019.

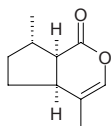


**15483 Nepetaefuran**

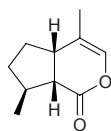
[29461-24-3]  $C_{22}H_{28}O_7$  (404.46). **Pharm:** Cytotoxic (leukemia cells L<sub>1210</sub> in tissue culture, IC<sub>50</sub> = 50-60 μg/mL)<sup>[4328]</sup>. **Source:** JING JIE YE SHI ER CAO *Leonotis nepetaefolia*, XI YE YI MU CAO *Leonurus sibiricus* (aerial parts). **Ref:** 1521, 4328.

**15484 Nepetalactone**

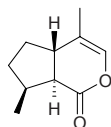
[21651-62-7]  $C_{10}H_{14}O_2$  (166.22). Oil,  $[\alpha]_D^{21} = +37^\circ$  (CHCl<sub>3</sub>). **Source:** HONG CHE ZHOU CAO *Trifolium pratense*, JIA JING JIE *Nepeta cataria*, MU TIAN LIAO *Actinidia polygama*. **Ref:** 660, 1521.

**15485 cis-Nepetalactone**

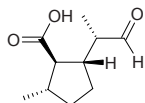
[21651-62-7]  $C_{10}H_{14}O_2$  (166.22). Oil,  $[\alpha]_D^{21} = +37^\circ$ . **Pharm:** Anthelmintic; stimulant (animals of family Felidae). **Source:** JIA JING JIE *Nepeta cataria*. **Ref:** 658, 1521.

**15486 trans-Nepetalactone**

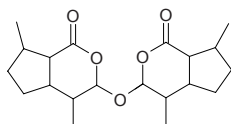
[17257-15-7]  $C_{10}H_{14}O_2$  (166.22). Oil,  $[\alpha]_D^{21} = -24.4^\circ$  ( $c = 6.2$ , CHCl<sub>3</sub>). **Pharm:** Anthelmintic; stimulant (animals of family Felidae). **Source:** JIA JING JIE *Nepeta cataria*. **Ref:** 658, 1521.

**15487 Nepetalic acid**

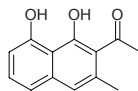
[21651-54-7]  $C_{10}H_{16}O_3$  (184.24). mp 75~76°C. **Source:** JIA JING JIE *Nepeta cataria*. **Ref:** 6.

**15488 Nepetalic anhydride**

$C_{21}H_{32}O_5$  (364.49). mp 139~140°C. **Source:** JIA JING JIE *Nepeta cataria*. **Ref:** 6.

**15489 Nepodin**

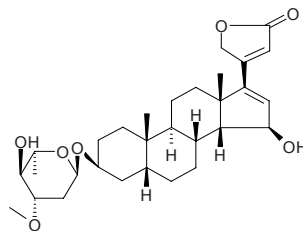
2-Acetyl-1,8-dihydroxy-3-methyl naphthalene; Musizin [3785-24-8]  $C_{13}H_{12}O_3$  (216.24). mp 162~163°C. **Pharm:** Antibacterial (*Bacillus subtilis*, MIC = 25 μg/mL; *Sarcina* sp., MIC = 100 μg/mL); antifungal (*Trichophyton rubrum*, MIC = 50 μg/mL; *Candida albicans*, MIC = 100 μg/mL). **Source:** DUN YE SUAN MO *Rumex obtusifolius*, NI BO ER YANG TI *Rumex nepalensis*, NIU SHE CAO *Rumex dentatus* (root: mean content = 0.143%), NIU XI XI *Rumex patientia* (root: mean content = 0.0055%)<sup>[5508]</sup>, OU SHU LI *Rhamnus frangula* [Syn. *Frangula alnus*], SUAN MO *Rumex acetosa* (root: mean content = 0.0108%)<sup>[5508]</sup>, YANG TI *Rumex japonicus* (root: mean content = 0.354%)<sup>[5508]</sup>. **Ref:** 6, 658, 1521, 5508.

**15490 Nereistoxin**

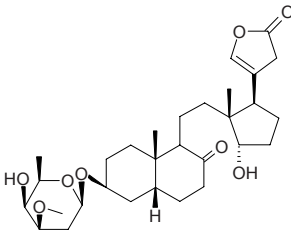
[1631-58-9]  $C_5H_{11}NS_2$  (149.28). **Pharm:** Neurotoxin (mammal, bird, reptile and fish); pesticide (*Musca domestica*, LD = 144 mg/kg; American cockroach, LD = 68 mg/kg); LD<sub>50</sub> (mus, iv, oxalate) = 33 mg/kg. **Source:** YI ZU SUO SHA CAN *Lumbriconeis heteropoda*. **Ref:** 658.

**15491 Neriantin**

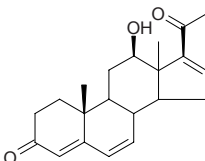
$C_{30}H_{44}O_7$  (516.68). mp 206~208°C. **Source:** JIA ZHU TAO *Nerium indicum*, OU ZHOU JIA ZHU TAO *Nerium oleander*. **Ref:** 6, 1521.

**15492 Neriaside**

[68165-55-9]  $C_{30}H_{46}O_8$  (534.70). Amorphous,  $[\alpha]_D = -17.6^\circ$ . **Source:** *Nerium odorum*. **Ref:** 2642.

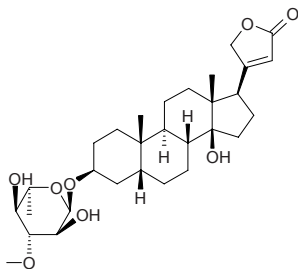
**15493 Neridienone A**

[53823-05-5]  $C_{21}H_{26}O_3$  (326.44). Crystals (Me<sub>2</sub>CO-Hexane), mp 210~211°C,  $[\alpha]_D = +71.5^\circ$  (MeOH). **Source:** SHAN TENG *Anodendron affine*, XIANG JIA PI *Periploca sepium*, *Nerium odorum*. **Ref:** 2643, 2644, 2645.

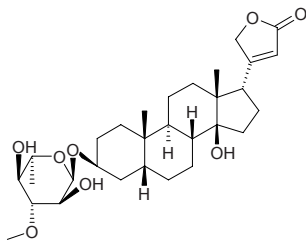


**15494 17 $\beta$ -Neriifolin**

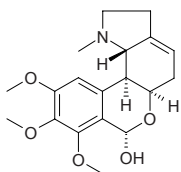
Neriifolin [466-07-9] C<sub>30</sub>H<sub>46</sub>O<sub>8</sub> (534.70). mp 218~225°C. **Pharm:** Cytotoxic (KB, ED<sub>50</sub> = 0.017 $\mu$ g/mL; BC, ED<sub>50</sub> = 0.048 $\mu$ g/mL; NCI-H187, ED<sub>50</sub> = 0.076 $\mu$ g/mL; control Ellipticine, ED<sub>50</sub> = 0.3~0.6 $\mu$ g/mL)<sup>[3777]</sup>; cytotoxic (antiproliferative hmn colon cancer assay)<sup>[5038]</sup>. **Source:** AO DAO LA MU HAI MANG GUO *Cerbera odollam* (seed), HUANG HUA JIA ZHU TAO *Thevetia neriifolia* [Syn. *Thevetia peruviana*] (seed: mean content = 2.00%<sup>[5508]</sup>), NIU XIN QIE ZI *Cerbera manghas*. **Ref:** 4, 5, 2594, 2782, 3777, 5038, 5508.

**15495 17 $\alpha$ -Neriifolin**

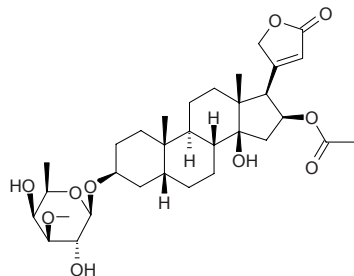
C<sub>30</sub>H<sub>46</sub>O<sub>8</sub> (534.70). **Pharm:** Cytotoxic (KB, ED<sub>50</sub> = 0.078 $\mu$ g/mL; BC, ED<sub>50</sub> = 0.049 $\mu$ g/mL; NCI-H187, ED<sub>50</sub> = 0.032 $\mu$ g/mL; control Ellipticine, ED<sub>50</sub> = 0.3~0.6 $\mu$ g/mL). **Source:** AO DAO LA MU HAI MANG GUO *Cerbera odollam* (seed). **Ref:** 3777.

**15496 Nerinine**

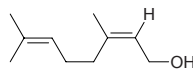
[481-44-7] C<sub>19</sub>H<sub>25</sub>NO<sub>5</sub> (347.41). mp 209~210°C. **Source:** GAN FENG CAO *Zephyranthes candida*. **Ref:** 6, 1521.

**15497 Neritaloside**

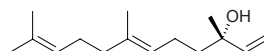
[465-13-4] C<sub>32</sub>H<sub>48</sub>O<sub>10</sub> (592.73). Fine needles (MeOH), mp 138~140°C. **Pharm:** Inhibits CNS (mus, ip 25mg/kg). **Source:** OU ZHOU JIA ZHU TAO *Nerium oleander*, PENG TE MAN DE MU *Mandevilla pentlandiana*, SHA MO QIANG WEI *Adenium obesum*. **Ref:** 2646, 2647, 2648.

**15498 Nerol**

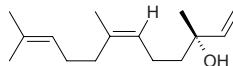
(Z)-3,7-Dimethyl-2,6-octadien-1-ol [106-25-2] C<sub>10</sub>H<sub>18</sub>O (154.25). bp 224~227°C. **Pharm:** Flavorant. **Source:** DAI DAI HUA *Citrus aurantium* var. *amara*, GUI HUA *Osmanthus fragrans*, JU PI *Citrus reticulata*, MEI GUI HUA *Rosa rugosa*, PI PA *Eriobotrya japonica*, SHENG JIANG *Zingiber officinale*, XIANG QING LAN *Dracocephalum moldavicum*. **Ref:** 2, 658.

**15499 E-Nerolidol**

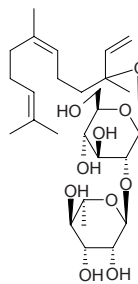
(+)-Nerolidol [7212-44-4] C<sub>15</sub>H<sub>26</sub>O (222.37). bp (+) 276°C. **Pharm:**  $\beta$ -Hexosaminidase inhibitor (RBL-2H3 cells, 100 $\mu$ mol/L, InRt = (11.8 $\pm$ 1.3)%,  $p < 0.05$ )<sup>[4221]</sup>. **Source:** SHENG JIANG *Zingiber officinale*, TU QIANG HUO *Hedychium coronarium* (rhizome). **Ref:** 2, 4221.

**15500 Z-Nerolidol**

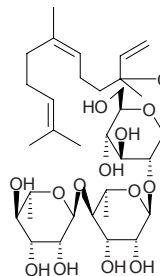
3,7,11-Trimethyl-1,6,10-dodecatrien-3-ol C<sub>15</sub>H<sub>26</sub>O (222.37). **Pharm:** Flavorant. **Source:** BI LU XIANG JIAO *Myroxylon pereirae*, DAI DAI HUA *Citrus aurantium* var. *amara*, DIAO ZHANG GEN PI *Lindera umbellata* [Syn. *Lindera erythrocarpa*], DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*], BI LU XIANG JIAO *Myroxylon pereirae*, PI PA *Eriobotrya japonica*, SHA REN *Amomum villosum*, SHENG JIANG *Zingiber officinale*, TIAN CHENG *Citrus sinensis*, ZHANG MU *Cinnamomum camphora*, ZHANG MU *Cinnamomum camphora*, ZHI ZHU XIANG *Valeriana jatamansii* [Syn. *Valeriana wallichii*]. **Ref:** 2, 658.

**15501 Nerolidol-3-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside**

C<sub>27</sub>H<sub>46</sub>O<sub>10</sub> (530.66). **Source:** PI PA YE *Eriobotrya japonica*. **Ref:** 2649.

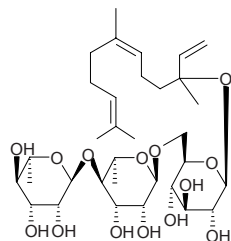
**15502 Nerolidol-3-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 4)- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside**

C<sub>33</sub>H<sub>56</sub>O<sub>14</sub> (676.81). **Source:** PI PA YE *Eriobotrya japonica*. **Ref:** 2649.



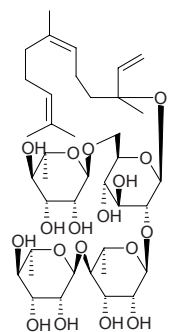
**15503 Nerolidol-3-*O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside**

C<sub>33</sub>H<sub>56</sub>O<sub>14</sub> (676.81). Source: PI PA YE *Eriobotrya japonica*. Ref: 2649.



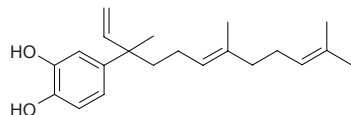
**15504 Nerolidol-3-*O*-{ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 6)]- $\beta$ -D-glucopyranoside}**

C<sub>39</sub>H<sub>66</sub>O<sub>18</sub> (822.95). Source: PI PA YE *Eriobotrya japonica*. Ref: 2649.



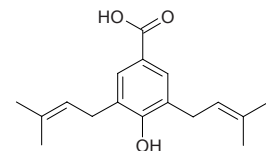
**15505 4-Nerolidylcatechol**

C<sub>21</sub>H<sub>30</sub>O<sub>2</sub> (314.47). Pharm: Myotoxic phospholipase A<sub>2</sub> (PLA<sub>2</sub>) inhibitor (*Bothrops asper*, IC<sub>50</sub> = 987 μmol/L). Source: SAN XING HU JIAO *Piper umbellatum* (branch), DUN YE HU JIAO *Piper peltatum* (branch). Ref: 5274.



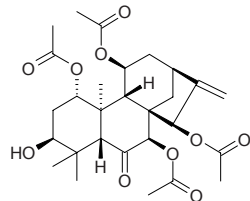
**15506 Nervogenic acid**

[17622-86-5] C<sub>17</sub>H<sub>22</sub>O<sub>3</sub> (274.36). Colorless acicular crystals, mp 94–96°C. Pharm: Antibacterial (*Bacillus subtilis* and *Micrococcus Luteus* on TLC plate, MIC = 2.0 nmol/L). Source: JIAN XUE QING *Liparis nervosa*. Ref: 900.



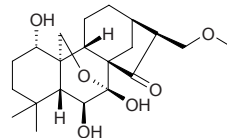
**15507 Nervosanin**

C<sub>28</sub>H<sub>38</sub>O<sub>10</sub> (534.61). mp 260–262°C, [α]<sub>D</sub><sup>20</sup> = +37.11° (c = 0.54, C<sub>5</sub>H<sub>5</sub>N). Source: XIAN MAI XIANG CHA CAI *Rabdosia nervosa*, XIAN HUA XIANG CHA CAI *Rabdosia adenantha* (leaf; yield = 0.0018% dw). Ref: 4067, 4640.



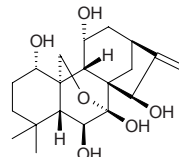
**15508 Nervosanin A**

C<sub>21</sub>H<sub>32</sub>O<sub>6</sub> (380.49). mp 200–202°C, [α]<sub>D</sub><sup>25</sup> = –82.09° (c = 0.2, MeOH). Source: XIAN MAI XIANG CHA CAI *Rabdosia nervosa*. Ref: 4067.



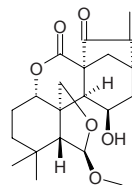
**15509 Nervosanin B**

C<sub>20</sub>H<sub>30</sub>O<sub>6</sub> (366.46). mp 258–260°C, [α]<sub>D</sub><sup>25</sup> = –54.73° (c = 0.33, C<sub>5</sub>H<sub>5</sub>N). Source: XIAN MAI XIANG CHA CAI *Rabdosia nervosa*. Ref: 4067.



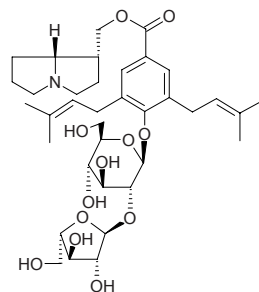
**15510 Nervosin**

C<sub>21</sub>H<sub>28</sub>O<sub>6</sub> (376.45). mp 266–268°C, [α]<sub>D</sub><sup>23</sup> = –149.8° (c = 0.27, C<sub>5</sub>H<sub>5</sub>N). Source: XIAN MAI XIANG CHA CAI *Rabdosia nervosa*. Ref: 2650, 4067.



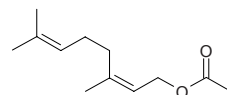
**15511 Nervosine**

[23179-26-2] C<sub>36</sub>H<sub>53</sub>NO<sub>12</sub> (691.82). Crystals +1H<sub>2</sub>O (as picrate), mp 130–131°C (picrate). Source: JIAN XUE QING *Liparis nervosa* (in 1969, the compound was isolated from the plant by K. Nishikawa et al.)<sup>[5505]</sup>. Ref: 1521, 2651, 5505.



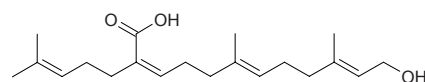
**15512 Neryl acetate**

[141-12-8] C<sub>12</sub>H<sub>20</sub>O<sub>2</sub> (196.29). bp 134°C/25mmHg. Source: PEI LAN *Eupatorium fortunei*. Ref: 6.



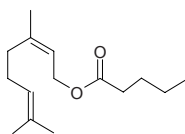
**15513 Nerylgeraniol-18-oic acid**

C<sub>20</sub>H<sub>32</sub>O<sub>3</sub> (320.48). Source: TAI WAN CUI BAI *Calocedrus macrolepis* var. *formosana* (leaf). Ref: 4297.

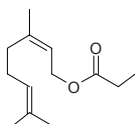


**15514 Neryl pentanoate**

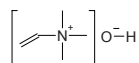
$C_{15}H_{26}O_2$  (238.37). Source: YUAN HUA *Daphne genkwa*. Ref: 2652.

**15515 Neryl propionate**

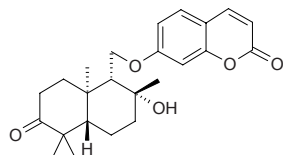
$C_{13}H_{22}O_2$  (210.32). Source: AI YE *Artemisia argyi*, DA MA YE ZE LAN *Eupatorium cannabinum*, LIAO GAO BEN *Ligusticum jeholense*, MING DANG SHEN *Changium smyrnioides*. Ref: 2653, 2654, 2655, 2656.

**15516 Neurine**

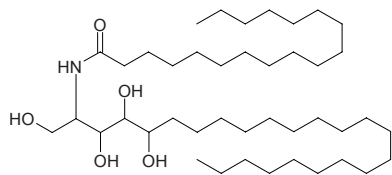
[463-88-7]  $C_5H_{13}NO$  (103.17). Sol.  $H_2O$ , EtOH. Source: MA GEN *Cannabis sativa*. Ref: 1521, 2657.

**15517 Neveskone**

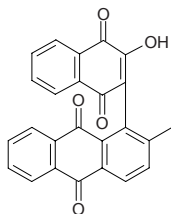
$C_{24}H_{30}O_5$  (398.50). Source: A WEI *Ferula assafoetida* (root). Ref: 5243.

**15518 Newbouldiamide**

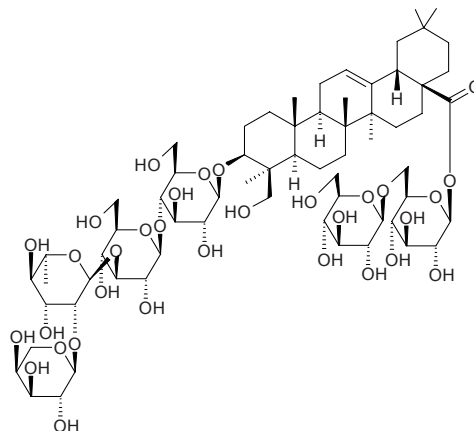
$C_{42}H_{85}NO_5$  (684.15). Colorless powder, mp 129°C,  $[\alpha]_D^{20} = +12^\circ$  ( $c = 0.001$ ). Pharm: Herbicide inactive (*Chlorella fysca*); antifungal inactive (*Ustilago violacea*); antibacterial inactive (gram-positive bacteria *Bacillus megaterium*). Source: FEI ZHOU ZI WEI *Newbouldia laevis* (seed, root cortex and stem cortex). Ref: 4467.

**15519 Newbouldiaquinone**

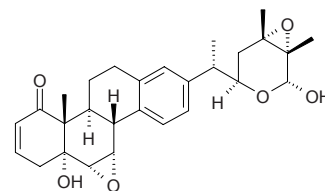
$C_{25}H_{14}O_5$  (394.39). Yellow powder, mp 206°C. Pharm: Antibacterial (gram-positive bacteria *Bacillus megaterium*); herbicide inactive (*Chlorella fysca*). Source: FEI ZHOU ZI WEI *Newbouldia laevis* (seed, root cortex and stem cortex). Ref: 4467.

**15520 New triterpenoid glycoside**

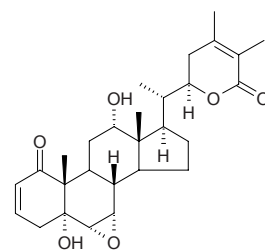
3-*O*-β-*D*-Glucopyranosyl(1→3)-α-*L*-rhamnopyranosyl-(1→2)-α-*L*-arabinopyranosyl-hederagenin-28-*O*-β-*D*-glucopyranosyl (1→6)-β-*D*-glucopyranosyl ester  $C_{65}H_{106}O_{32}$  (1399.55). White powder, mp 223~225°C. Source: JIN YIN HUA *Lonicera japonica*. Ref: 895.

**15521 Nicandrenone II**

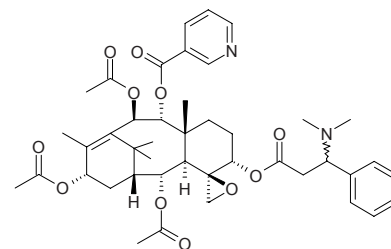
[40071-64-5]  $C_{28}H_{34}O_6$  (466.58). Crystals (benzene-chloroform), mp 117°C. Pharm: Insect antifeedant and Insecticidal. Source: JIA SUAN JIANG *Nicandra physaloides*. Ref: 6, 900, 1521, 2783.

**15522 Nicandrin B**

[92070-79-6]  $C_{28}H_{38}O_6$  (470.61). Crystals (MeOH), mp 246~248°C,  $[\alpha]_D = +110.7^\circ$  ( $c = 0.24$ ,  $CHCl_3$ ). Source: JIA SUAN JIANG *Nicandra physaloides*. Ref: 2658, 2659.

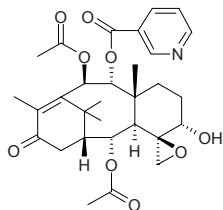
**15523 Nicaustrine**

[127211-02-3]  $C_{43}H_{54}N_2O_{11}$  (774.92). Source: AO DA LI YA HONG DOU SHAN *Austrotaxus spicata*. Ref: 662.

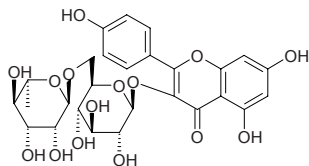


**15524 Nicotaxine**

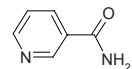
[126585-94-2] C<sub>30</sub>H<sub>37</sub>NO<sub>9</sub> (555.63). Source: AO DA LI YA HONG DOU SHAN *Austrotaxus spicata*. Ref: 662.

**15525 Nicotiflorin**

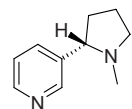
Kaempferol-3-*O*- $\beta$ -rutinoside; Kaempferol 3-*O*-(6''-*O*- $\alpha$ -rhamonpyranosyl)- $\beta$ -glucopyranoside [17650-84-9] C<sub>27</sub>H<sub>30</sub>O<sub>15</sub> (594.53). mp 224°C. Pharm: Antioxidant (DPPH scavenger, IC<sub>50</sub> > 100 $\mu$ g/mL, control Gallic acid, IC<sub>50</sub> = 3.6 $\mu$ g/mL; Cytochrome-C reduction, IC<sub>50</sub> > 50 $\mu$ g/mL, control Gallic acid, IC<sub>50</sub> = 3.0 $\mu$ g/mL)<sup>[5239]</sup>. Source: BAI GUO YE *Ginkgo biloba*, BI MA YE *Ricinus communis*, CI JI LI *Tribulus terrestris*, HUAI *Sophora japonica* (pericarp)<sup>[3080]</sup>, JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (dried leaf, flower and twig: yield = 0.0011%dw)<sup>[3014]</sup>, LAO YA SHI *Diospyros rhombifolia* (leaf), MIAN TOU YE *Kleinhovia hospita*, WU CI FAN MA *Agave americana* var. *marginata* [Syn. *Agave americana* var. *variegata*], YI ZHU QIAN MA *Urtica dioica*, *Glycyrrhiza* sp. Ref: 6, 660, 2431, 3014, 3080, 4464, 5239.

**15526 Nicotinamide**

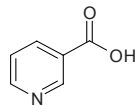
Niacin [98-92-0] C<sub>6</sub>H<sub>6</sub>N<sub>2</sub>O (122.13). Pharm: Tyrosinase inhibitor (333.3 $\mu$ mol/L, InRt = 13.5%; control Kojic acid, 333.3 $\mu$ mol/L, InRt = 59.8%)<sup>[4233]</sup>; antiarrhythmic; component of coenzyme I and II (coenzyme of many dehydrogenases); used in treatment of pellagrosis, stomatitis and glossitis. Source: TAI WAN PU GONG YING *Taraxacum formosanum* (fresh root), ZANG HONG HUA *Crocus sativus* (pollen), ZHI MU *Anemarrhena asphodeloides*. Ref: 2, 658, 4233, 4488.

**15527 (-)-Nicotine**

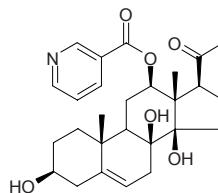
3-Pyridinecarboxamide [54-11-5] C<sub>10</sub>H<sub>14</sub>N<sub>2</sub> (162.24). bp 246.1°C/730.5mmHg. Pharm: Anti-fertility agent (male mus); pesticide; LD (hmn, orl) = 50mg. Source: DANG SHEN *Codonopsis pilosula*, GU JIE CAO *Equisetum palustre*, HUANG HUA YAN CAO *Nicotiana rustica*, KU DOU ZI *Sophora alopecuroides*, MA TI YE *Caltha palustris*, MO HAN LIAN *Eclipta prostrata* [Syn. *Eclipta alba*], PU DI WU GONG *Lycopodium cernuum*, WEN JING *Equisetum arvense*, XU LI YA MA LI JIN *Asclepias syriaca*, YAN CAO *Nicotiana tabacum*. Ref: 2, 593, 658, 5507.

**15528 Nicotinic acid**

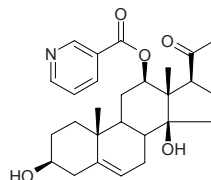
3-(1-Methyl-2-pyrrolidinyl)pyridine [59-67-6] C<sub>6</sub>H<sub>5</sub>NO<sub>2</sub> (123.11). mp 236°C. Pharm: Antihypercholesterolemic; vasodilator (peripheral). Source: DA ZAO *Ziziphus jujuba*, DANG GUI *Angelica sinensis*, DANG SHEN *Codonopsis pilosula*, DONG GUA PI *Benincasa hispida*, GOU QI ZI *Lycium chinense*, JI ZI HUANG *Gallus gallus domesticus*, JIANG *Glycine max*, LI YU *Cyprinus carpio*, MAO SHU *Dioscorea alata*, NIU RU *Bos taurus domesticus*; *Bubalus bubalis*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], TAI WAN JIN GU CAO *Ajuga taiwanensis* (whole herb), YANG RU *Capra hircus*; *Ovis aries*, YUAN CAN E *Bombyx mori*, ZHI MU *Anemarrhena asphodeloides*, ZI CAI *Porphyra tenera*. Ref: 2, 658, 660, 1521, 4483.

**15529 12-O-Nicotinoylisolineolone**

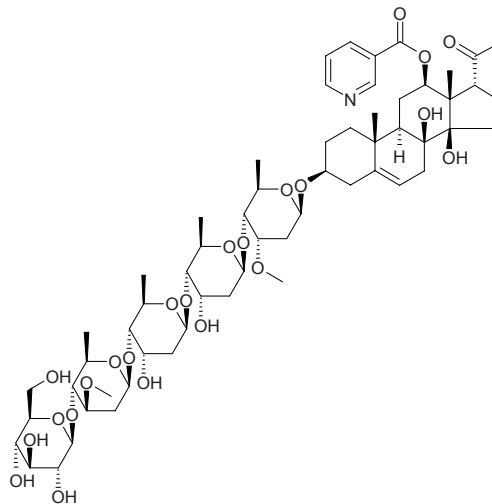
C<sub>27</sub>H<sub>35</sub>NO<sub>6</sub> (469.58). mp 250–254°C. Source: FU SHOU CAO *Adonis amurensis*. Ref: 6.

**15530 Nicotinoylisoramanone**

C<sub>27</sub>H<sub>35</sub>NO<sub>5</sub> (453.58). Source: FU SHOU CAO *Adonis amurensis*. Ref: 6, 2784.

**15531 12-O-Nicotinoyllineolon 3-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-oleandropyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-cymaropyranoside**

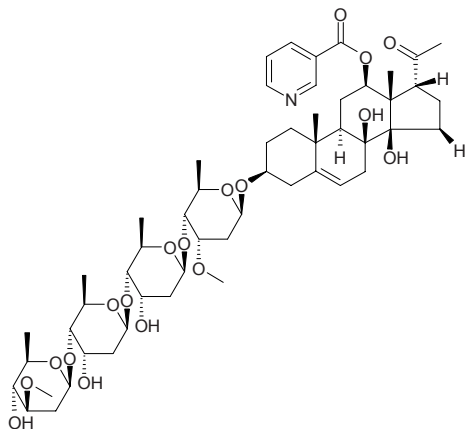
C<sub>59</sub>H<sub>89</sub>NO<sub>23</sub> (1180.36). Amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>27</sup> = -12.1° (c = 0.45, MeOH). Source: ROU HONG MA LI JIN *Asclepias incarnata* (aerial parts). Ref: 3925.





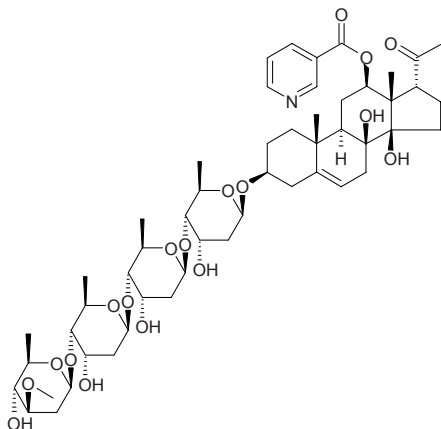
**15532 12-O-Nicotinoylneolon 3-O- $\beta$ -D-oleandropyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-cymaropyranoside**

C<sub>53</sub>H<sub>79</sub>NO<sub>18</sub> (1018.22). Amorphous powder,  $[\alpha]_D^{21} = -14.4^\circ$  ( $c = 0.33$ , MeOH). Source: ROU HONG MA LI JIN *Asclepias incarnata* (aerial parts). Ref: 3925.



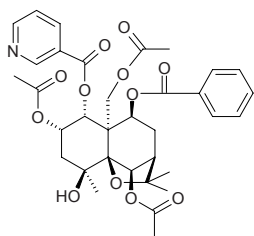
**15533 12-O-Nicotinoylneolon 3-O- $\beta$ -D-oleandropyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitoxopyranoside**

C<sub>52</sub>H<sub>77</sub>NO<sub>18</sub> (1004.19). Amorphous powder,  $[\alpha]_D^{24} = -19.1^\circ$  ( $c = 0.57$ , MeOH). Source: ROU HONG MA LI JIN *Asclepias incarnata* (aerial parts). Ref: 3925.



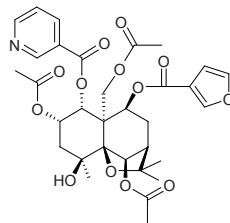
**15534 1 $\alpha$ -Nicotinoyloxy-2 $\alpha$ -acetoxy-6 $\beta$ -acetoxy-9 $\beta$ -benzyloxy-11-acetoxy-4 $\beta$ -hydroxydihydro- $\beta$ -agarofuran**

[130774-23-1] C<sub>34</sub>H<sub>39</sub>NO<sub>12</sub> (653.69). Amorphous solid,  $[\alpha]_D^{20} = +43.9^\circ$  ( $c = 0.5$ , MeOH). Pharm: Insect antifeedant. Source: DIAO GAN MA *Celastrus angulatus*. Ref: 2660.



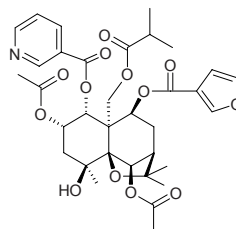
**15535 1 $\alpha$ -Nicotinoyloxy-2 $\alpha$ -acetoxy-6 $\beta$ -acetoxy-9 $\beta$ -furoyloxy-11-acetoxy-4 $\beta$ -hydroxydihydro- $\beta$ -agarofuran**

[130774-22-0] C<sub>32</sub>H<sub>37</sub>NO<sub>13</sub> (643.65). Amorphous solid,  $[\alpha]_D^{20} = +23.9^\circ$  ( $c = 0.5$ , MeOH). Pharm: Insect antifeedant. Source: DIAO GAN MA *Celastrus angulatus*. Ref: 2660.



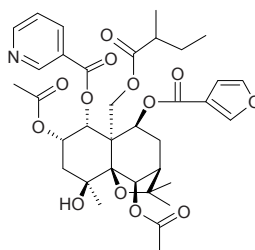
**15536 1 $\alpha$ -Nicotinoyloxy-2 $\alpha$ -acetoxy-6 $\beta$ -acetoxy-9 $\beta$ -furoyloxy-11-isobutyryloxy-4 $\beta$ -hydroxydihydro- $\beta$ -agarofuran**

[130774-20-8] C<sub>34</sub>H<sub>41</sub>NO<sub>13</sub> (671.70). mp 127~128°C,  $[\alpha]_D^{20} = +34.5^\circ$  ( $c = 0.5$ , MeOH). Pharm: Insect antifeedant. Source: DIAO GAN MA *Celastrus angulatus*. Ref: 2660.



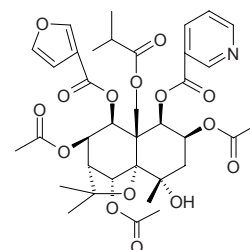
**15537 1 $\alpha$ -Nicotinoyloxy-2 $\alpha$ -acetoxy-6 $\beta$ -acetoxy-9 $\beta$ -furoyloxy-11-(2-methyl)butyryloxy-4 $\beta$ -hydroxydihydro- $\beta$ -agarofuran**

[130774-21-9] C<sub>35</sub>H<sub>43</sub>NO<sub>13</sub> (685.73). Amorphous solid,  $[\alpha]_D^{20} = +30.1^\circ$  ( $c = 0.5$ , MeOH). Pharm: Insect antifeedant. Source: DIAO GAN MA *Celastrus angulatus*. Ref: 2660.



**15538 1 $\beta$ -Nicotinoyl-2 $\beta$ ,5 $\alpha$ ,7 $\beta$ -triacetoxy-4 $\alpha$ -hydroxy-11-isobutyryloxy-8 $\alpha$ -furanoyl-dihydroagarofuran**

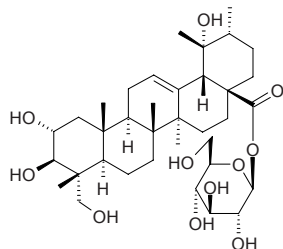
C<sub>36</sub>H<sub>43</sub>NO<sub>15</sub> (729.74). Amorphous powder,  $[\alpha]_D^{25} = +9.2^\circ$  ( $c = 1.2$ , MeOH). Pharm: Immunosuppressant (inhibits lymphocyte transformation, 80 $\mu$ g/mL, InRt = 28%, control Dexamethasone, 50 $\mu$ g/mL, InRt = 61%). Source: LEI GONG TENG *Tripterygium wilfordii* (xylem). Ref: 4466.



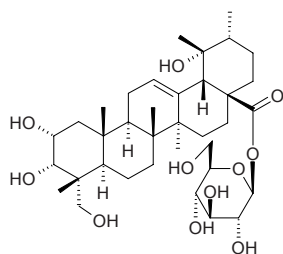


**15539 Niga-ichigoside F<sub>1</sub>**

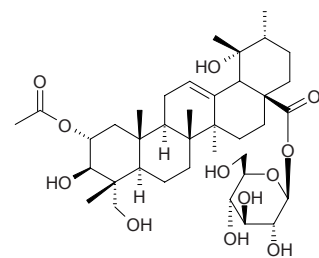
$C_{36}H_{58}O_{11}$  (666.86). Amorphous powder or needles (MeOH aq.), mp 230–231°C, 229–233°C.  $[\alpha]_D^{23} = +11.2^\circ$  ( $c = 0.93$ , MeOH). Source: CU YE XUAN GOU ZI *Rubus alceaefolius*, MAO MEI *Rubus parvifolius*, SHUI YANG MEI *Geum japonicum*, DUO CI DI SHI MU *Desfontainia spinosa*, XIA KU CAO *Prunella vulgaris*, XIAO YE XUAN GOU ZI *Rubus taiwanicolus*. Ref: 509, 606, 660, 1521, 2508.

**15540 Niga-ichigoside F<sub>2</sub>**

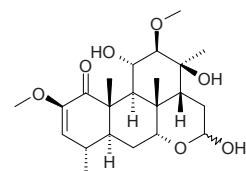
$C_{36}H_{58}O_{11}$  (666.86). White needles (MeOH), mp 214–216°C. Source: GUANG LIANG YANG TONG *Adinandra nitida*, XIA KU CAO *Prunella vulgaris*, XIAO YE XUAN GOU ZI *Rubus taiwanicolus*. Ref: 660, 2508, 2518.

**15541 Niga-ichigoside F<sub>3</sub>**

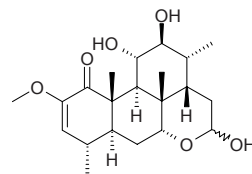
$C_{38}H_{60}O_{12}$  (708.89). Source: XIAO YE XUAN GOU ZI *Rubus taiwanicolus*. Ref: 660.

**15542 Nigakihemiacetal A**

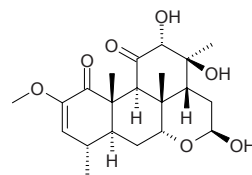
[30248-05-6]  $C_{22}H_{34}O_7$  (410.51). mp 262–263°C. Pharm: Extremely bitter. Source: KU MU *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 6, 658.

**15543 Nigakihemiacetal C**

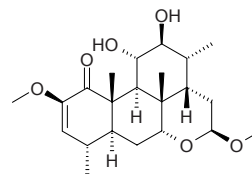
[30760-22-6]  $C_{21}H_{32}O_6$  (380.49). mp 265.0–265.5°C. Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 1521.

**15544 Nigakihemiacetal E**

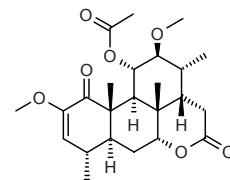
[57576-45-1]  $C_{21}H_{30}O_7$  (394.47). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**15545 Nigakihemiacetal F**

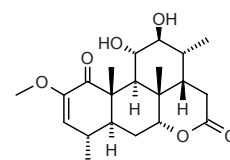
[57576-46-2]  $C_{22}H_{34}O_6$  (394.51). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**15546 Nigakilactone C**

Nigakilactone [24148-78-5]  $C_{24}H_{34}O_7$  (434.53). mp 252.5–253.0°C. Source: KU MU *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 660.

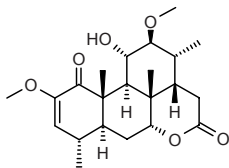
**15547 Nigakilactone A**

[24148-76-3]  $C_{21}H_{30}O_6$  (378.47). mp 237.5–238.0°C. Pharm: Antihypertensive. Source: KU MU *Picrasma quassioides* [Syn. *Picrasma ailanthoides*] (dried branch and leaf), KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 5501.

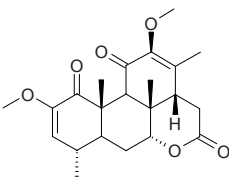


**15548 Nigakilactone B**

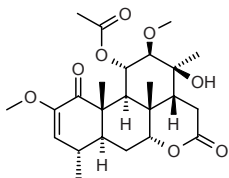
Simalikalactone A [24148-77-4]  $C_{22}H_{32}O_6$  (392.50). mp 278.5°C. Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**15549 Nigakilactone D**

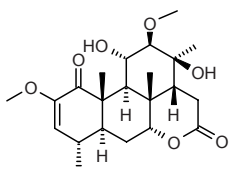
[76-78-8]  $C_{22}H_{28}O_6$  (388.46). Crystals (MeOH aq.), mp 221~222°C,  $[\alpha]_D^{20} = +34.5^\circ$  ( $c = 5.09$ ,  $CHCl_3$ ). Pharm: Insecticidal. Source: MEI ZHOU KU MU *Quassia amara*, YA MAI JIA KU MU *Picrasma excelsa*. Ref: 1521.

**15550 Nigakilactone E**

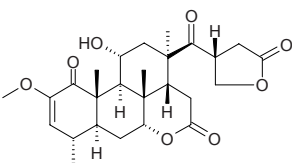
[28360-79-4]  $C_{24}H_{34}O_8$  (450.53). mp 280°C. Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**15551 Nigakilactone F**

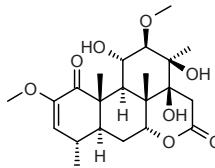
[28387-43-1]  $C_{22}H_{32}O_7$  (408.50). mp 265.0~265.5°C. Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**15552 Nigakilactone G**

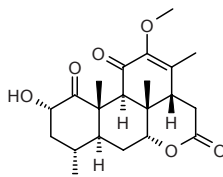
Picrasin A [27368-79-2]  $C_{26}H_{34}O_8$  (474.56). Crystals (MeOH), mp 297~299°C. Source: KU MU *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 2994.

**15553 Nigakilactone H**

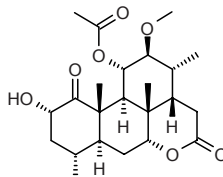
[30248-06-7]  $C_{22}H_{32}O_8$  (424.50). mp 274.0~275.5°C. Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**15554 Nigakilactone I**

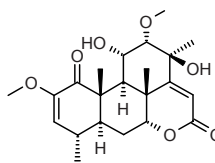
Picrasin B [26121-56-2]  $C_{21}H_{28}O_6$  (376.45). Crystals (MeOH), mp 255~257°C,  $[\alpha]_D = +16.4^\circ$  ( $CHCl_3$ ). Source: FEI ZHOU KU MU *Quassia africana*, KU MU *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 1521, 2994.

**15555 Nigakilactone J**

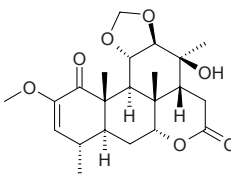
Picrasin C [33804-89-6]  $C_{23}H_{34}O_7$  (422.52). Crystals ( $CHCl_3$ -pet. ether), mp 240~241°C, 250~252°C,  $[\alpha]_D = +42^\circ$  (EtOH). Pharm: Bitter principle. Source: KU MU *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], DU DOU *Laburnum anagyroides*, *Picea* sp., *Pinus* sp. Ref: 6, 12, 658, 2994.

**15556 Nigakilactone K**

[35334-39-5]  $C_{22}H_{30}O_7$  (406.48). mp 226~227°C. Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

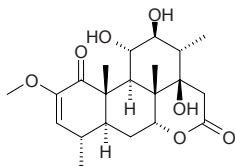
**15557 Nigakilactone L**

[35334-40-8]  $C_{22}H_{30}O_7$  (406.48). mp 296°C. Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

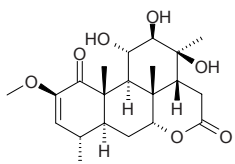


**15558 Nigakilactone M**

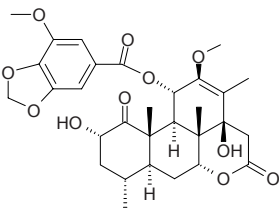
[37812-54-7] C<sub>21</sub>H<sub>30</sub>O<sub>7</sub> (394.47). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**15559 Nigakilactone N**

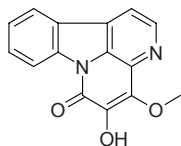
[37812-55-8] C<sub>21</sub>H<sub>30</sub>O<sub>7</sub> (394.47). mp 207~211°C. Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**15560 Nigakilactone O**

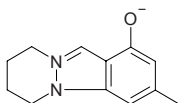
C<sub>30</sub>H<sub>36</sub>O<sub>11</sub> (572.61). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**15561 Nigakinone**

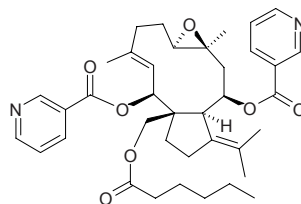
4-Methoxy-5-hydroxycanthin-6-one [18110-86-6] C<sub>15</sub>H<sub>10</sub>N<sub>2</sub>O<sub>3</sub> (266.26). Pharm: Antibacterial (*Diplococcus pneumoniae*, hemolytic  $\beta$ -streptococcus and *Bacillus subtilis*); LD<sub>50</sub> (mus ip) = 210mg/kg. Source: KU MU *Picrasma quassioides* [Syn. *Picrasma ailanthoides*] (dried branch and leaf: content scope of 5 origins = 0.03%~0.288%, mean content = 0.147%<sup>[5508]</sup>), KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], YA MAI JIA KU MU *Picrasma excelsa*, MEI ZHOU KU MU *Quassia amara* (the compound was isolated from the plant by Yushiro Kimura et al. in 1961)<sup>[5505]</sup>. Ref: 6, 12, 658, 5501, 5505, 5508.

**15562 Nigeglanine**

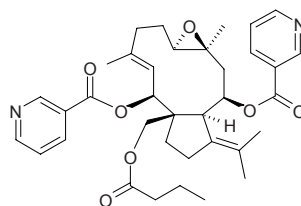
C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>O<sup>-</sup> (203.27). White solid, mp 289~290°C. Source: XIAN MAO HEI ZHONG CAO *Nigella glandulifera* (seed). Ref: 4277.

**15563 Nigellamine A<sub>3</sub>**

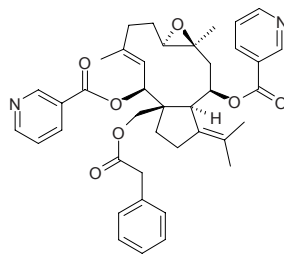
C<sub>38</sub>H<sub>48</sub>N<sub>2</sub>O<sub>7</sub> (644.82). White powder, [α]<sub>D</sub><sup>27</sup> = -11.3° (c = 0.50, CHCl<sub>3</sub>). Pharm: Promotes lipid metabolism (inhibits stored triglyceride in primary cultured mouse hepatocytes, 1μmol/L, stored triglyceride = (85±6)% of control, p<0.05). Source: ZAI PEI HEI ZHONG CAO *Nigella sativa* (seed). Ref: 4281.

**15564 Nigellamine A<sub>4</sub>**

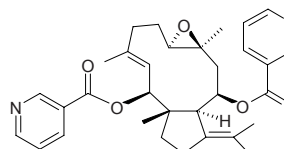
C<sub>36</sub>H<sub>44</sub>N<sub>2</sub>O<sub>7</sub> (616.76). White powder, [α]<sub>D</sub><sup>26</sup> = -13.4° (c = 0.20, CHCl<sub>3</sub>). Pharm: Promotes lipid metabolism (inhibits stored triglyceride in primary cultured mouse hepatocytes, 1μmol/L, stored triglyceride = (82±3)% of control, p<0.01). Source: ZAI PEI HEI ZHONG CAO *Nigella sativa* (seed). Ref: 4281.

**15565 Nigellamine A<sub>5</sub>**

C<sub>40</sub>H<sub>44</sub>N<sub>2</sub>O<sub>7</sub> (664.81). White powder, [α]<sub>D</sub><sup>28</sup> = -14.8° (c = 0.20, CHCl<sub>3</sub>). Pharm: Promotes lipid metabolism (inhibits stored triglyceride in primary cultured mouse hepatocytes, 1μmol/L, stored triglyceride = (66±2)% of control, p<0.01). Source: ZAI PEI HEI ZHONG CAO *Nigella sativa* (seed). Ref: 4281.

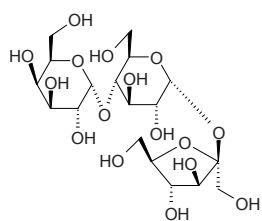
**15566 Nigellamine C**

C<sub>32</sub>H<sub>38</sub>N<sub>2</sub>O<sub>5</sub> (530.67). White powder, [α]<sub>D</sub><sup>27</sup> = -23.6° (c = 0.30, CHCl<sub>3</sub>). Pharm: Promotes lipid metabolism (inhibits stored triglyceride in primary cultured mouse hepatocytes, 1μmol/L, stored triglyceride = (81±1)% of control, p<0.01). Source: ZAI PEI HEI ZHONG CAO *Nigella sativa* (seed). Ref: 4281.

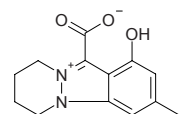


**15567 Nigellamose**

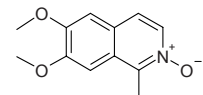
$C_{18}H_{32}O_{16}$  (504.45). White cubic crystals, mp 132–134°C,  $[\alpha]_D^{20} = +94.5^\circ$  ( $c = 0.046$ , MeOH). [Source](#): XIAN MAO HEI ZHONG CAO *Nigella glandulifera* (seed). [Ref](#): 4820.

**15568 Nigellicine**

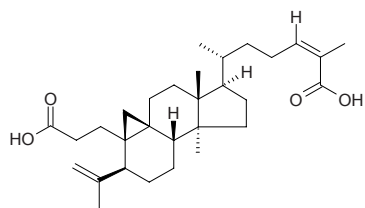
[98063-20-8]  $C_{13}H_{14}N_2O_3$  (246.27). Yellow crystals (EtOH), decomposition over a wide temperature range. [Source](#): ZAI PEI HEI ZHONG CAO *Nigella sativa*. [Ref](#): 2661.

**15569 Nigellimine N-oxide**

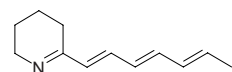
$C_{12}H_{13}NO_3$  (219.24). Amorphous. [Source](#): ZAI PEI HEI ZHONG CAO *Nigella sativa*. [Ref](#): 2662.

**15570 Nigranoic acid**

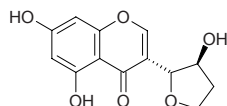
[39111-07-4]  $C_{30}H_{46}O_4$  (470.70). [Pharm](#): Anti-HIV (HIV-RT inhibitor and HIV polyase inhibitor); antineoplastic<sup>[2523]</sup>; anti-HIV<sup>[2523]</sup>. [Source](#): HUA ZHONG WU WEI ZI *Schisandra sphenanthera*, NEI FENG XIAO WU WEI ZI *Schisandra nigra*, QIU RUI WU WEI ZI *Schisandra sphaerandra*. [Ref](#): 1521, 2268, 2523.

**15571 Nigrifactin**

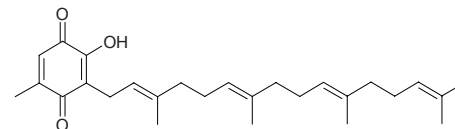
[23943-03-5]  $C_{12}H_{17}N$  (175.28). [Pharm](#): Antihistamine. [Source](#): unsteadiness mould's metabolite. [Ref](#): 658.

**15572 Nigrolineaisoflavone A**

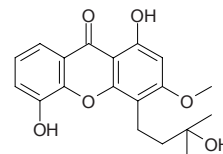
$C_{13}H_{12}O_6$  (264.24). Pale yellow crystals, mp 186–187°C,  $[\alpha]_D^{29} = -62.5^\circ$  ( $c = 0.016$ , MeOH). [Source](#): HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield = 0.000394%dw). [Ref](#): 4735.

**15573 Nigrolineaquinone A**

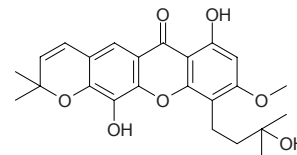
$C_{27}H_{38}O_3$  (410.6). Orange-red gum. [Source](#): HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield = 0.0001%dw). [Ref](#): 4735.

**15574 Nigrolineaxanthone A**

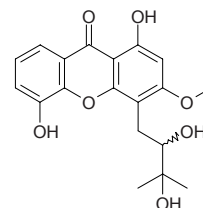
1,5-Dihydroxy-3-methoxy-4-(3-hydroxy-3-methylbutyl)xanthone  $C_{19}H_{20}O_6$  (344.37). Yellow solid, mp 142.8–144.6°C. [Source](#): HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (stam bark). [Ref](#): 3482.

**15575 Nigrolineaxanthone B**

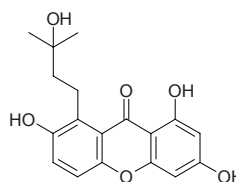
1,5-Dihydroxy-3-methoxy-4-(3-hydroxy-3-methylbutyl)-6',6'-dimethylpyrano-(2',3':6,7) xanthone  $C_{24}H_{26}O_7$  (426.47). Yellow crystals, mp 165.0–167.2°C. [Source](#): HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (stam bark). [Ref](#): 3482.

**15576 Nigrolineaxanthone C**

1,5-Dihydroxy-3-methoxy-4-(2,3-dihydroxy-3-methylbutyl)xanthone  $C_{19}H_{20}O_7$  (360.37). Pale yellow solid, mp 104.5–105.8°C,  $[\alpha]_D^{29} = -43.5^\circ$  ( $c = 0.023$ , EtOH). [Source](#): HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (stam bark). [Ref](#): 3482.

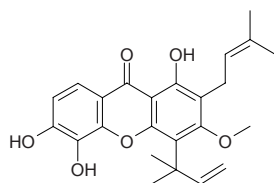
**15577 Nigrolineaxanthone D**

1,3,7-Trihydroxy-8-(3-hydroxy-3-methylbutyl)xanthone  $C_{18}H_{18}O_6$  (330.34). Pale yellow solid, mp 196.0–197.8°C. [Source](#): HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (stam bark). [Ref](#): 3482.

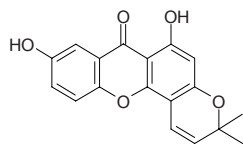


**15578 Nigrolineaxanthone E**

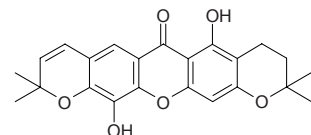
1,5,6-Trihydroxy-3-methoxy-2-(3-methyl-2-butenyl)-4-(1,1-dimethylallyl)xan-  
thone C<sub>24</sub>H<sub>26</sub>O<sub>6</sub> (410.47). Pale yellow solid, mp 102.5–103.8°C. Source: HEI  
XIAN TIAO TENG HUANG *Garcinia nigrolineata* (stam bark). Ref: 3482.

**15579 Nigrolineaxanthone F**

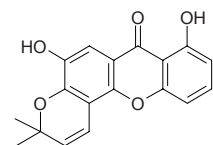
1,7-Dihydroxy-6',6'-dimethylpyrano(2',3':3,4)xan-  
thone C<sub>18</sub>H<sub>14</sub>O<sub>5</sub> (310.31).  
Yellow solid, mp 235.9–236.5°C. Source: HEI XIAN TIAO TENG HUANG  
*Garcinia nigrolineata* (stam bark). Ref: 3482.

**15580 Nigrolineaxanthone G**

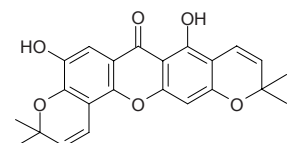
1,5-Dihydroxy-6',6'-dimethyldihydropyrano(2',3':3,2)-  
6'',6''-dimethylpyrano-(2'',3'':6,7)xan-  
thone C<sub>23</sub>H<sub>22</sub>O<sub>6</sub> (394.43). Yellow solid,  
mp 205.8–207.2°C. Source: HEI XIAN TIAO TENG HUANG *Garcinia*  
*nigrolineata* (stam bark). Ref: 3482.

**15581 Nigrolineaxanthone H**

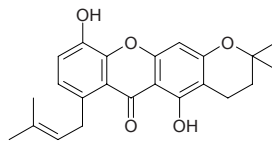
1,7-Dihydroxy-6',6'-dimethylpyrano(2',3':6,5)xan-  
thone C<sub>18</sub>H<sub>14</sub>O<sub>5</sub> (310.31).  
Yellow crystals, mp 220.1–222.5°C. Source: HEI XIAN TIAO TENG  
HUANG *Garcinia nigrolineata* (stam bark). Ref: 3482.

**15582 Nigrolineaxanthone I**

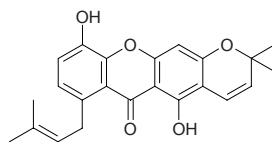
1,7-Dihydroxy-6',6'-dimethylpyrano(2',3':3,2)-6'',6''-dimethylpyrano(2'',3'':6,5)  
xan-  
thone C<sub>23</sub>H<sub>20</sub>O<sub>6</sub> (392.41). Yellow solid, mp 241.7–243.5°C. Source: HEI  
XIAN TIAO TENG HUANG *Garcinia nigrolineata* (stam bark). Ref: 3482.

**15583 Nigrolineaxanthone J**

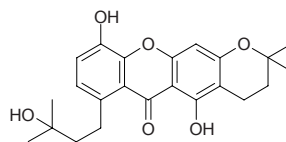
C<sub>23</sub>H<sub>24</sub>O<sub>5</sub> (380.44). Pale yellow gum. Pharm: Antibacterial inactive (MRSA).  
Source: HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield  
= 0.000136%dw). Ref: 4735.

**15584 Nigrolineaxanthone K**

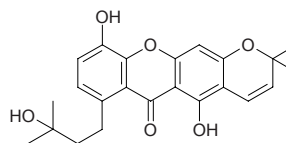
C<sub>23</sub>H<sub>22</sub>O<sub>5</sub> (378.43). Yellow gum. Pharm: Antibacterial inactive (MRSA).  
Source: HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield  
= 0.00011%dw). Ref: 4735.

**15585 Nigrolineaxanthone L**

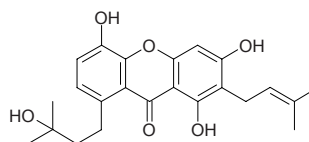
C<sub>23</sub>H<sub>26</sub>O<sub>6</sub> (398.46). Yellow gum. Pharm: Antibacterial inactive (MRSA).  
Source: HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield  
= 0.0001%dw). Ref: 4735.

**15586 Nigrolineaxanthone M**

C<sub>23</sub>H<sub>24</sub>O<sub>6</sub> (396.44). Yellow solid, mp 161–162°C. Pharm: Antibacterial  
inactive (MRSA). Source: HEI XIAN TIAO TENG HUANG *Garcinia*  
*nigrolineata* (leaf: yield = 0.000056%dw). Ref: 4735.

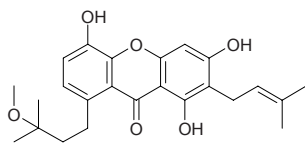
**15587 Nigrolineaxanthone N**

C<sub>23</sub>H<sub>26</sub>O<sub>6</sub> (398.46). Yellow solid, mp 199–200°C. Pharm: Antibacterial  
(MRSA, MIC = 4µg/mL; control Vancomycin, MIC = 2µg/mL). Source: HEI  
XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield =  
0.00062%dw). Ref: 4735.

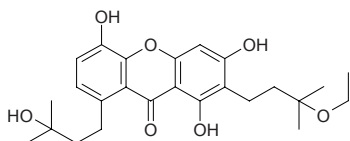


**15588 Nigrolineaxanthone O**

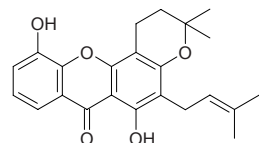
$C_{24}H_{28}O_6$  (412.49). Pale yellow gum. **Pharm:** Antibacterial inactive (MRSA). **Source:** HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield = 0.00017%dw). **Ref:** 4735.

**15589 Nigrolineaxanthone P**

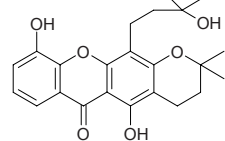
$C_{25}H_{32}O_7$  (444.53). Pale yellow gum. **Pharm:** Antibacterial inactive (MRSA). **Source:** HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield = 0.00025%dw). **Ref:** 4735.

**15590 Nigrolineaxanthone Q**

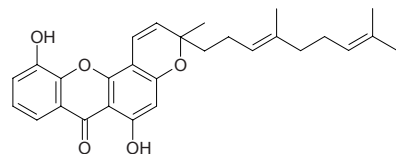
$C_{23}H_{24}O_5$  (380.44). Yellow gum. **Pharm:** Antibacterial inactive (MRSA). **Source:** HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield = 0.000072%dw). **Ref:** 4735.

**15591 Nigrolineaxanthone R**

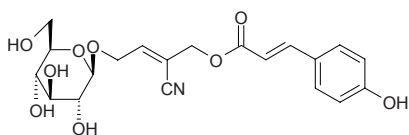
$C_{23}H_{26}O_6$  (398.46). Yellow gum. **Pharm:** Antibacterial inactive (MRSA). **Source:** HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield = 0.000104%dw). **Ref:** 4735.

**15592 Nigrolineaxanthone S**

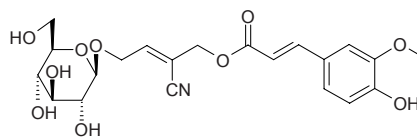
$C_{28}H_{30}O_5$  (446.55). Yellow gum,  $[\alpha]_D^{29} = +58.8^\circ$  ( $c = 0.017$ , MeOH). **Pharm:** Antibacterial inactive (MRSA). **Source:** HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (leaf: yield = 0.000104%dw). **Ref:** 4735.

**15593 Nigrumin-5-p-coumarate**

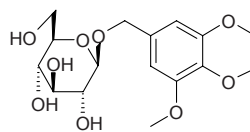
(2-*trans*-*p*-coumaroyloxymethyl-4- $\beta$ -D-glucopyranosyloxy-2(*E*)-butenenitrile)  $C_{20}H_{23}NO_9$  (421.41). **Source:** HEI CHA BIAO *Ribes nigrum*. **Ref:** 2000.

**15594 Nigrumin-5-ferulate**

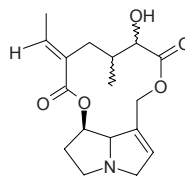
(2-*trans*-Feruloyloxymethyl-4- $\beta$ -D-glucopyranosyloxy-2(*E*)-butenenitrile)  $C_{21}H_{25}NO_{10}$  (451.43). **Source:** HEI CHA BIAO *Ribes nigrum*. **Ref:** 2000.

**15595 Nikoenoside**

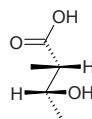
$C_{16}H_{24}O_9$  (360.36). White powder,  $[\alpha]_D^{22} = -57.7^\circ$  ( $c = 0.20$ , EtOH). **Source:** MAO GUO QI *Acer nikoense* (stem cortex: yield = 0.0015%). **Ref:** 4304.

**15596 Nilgirine**

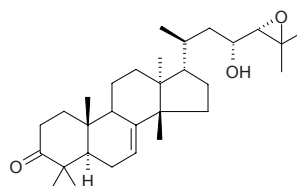
[21009-05-2]  $C_{17}H_{23}NO_5$  (321.38). mp 127–128°C. **Source:** XIANG LING CAO *Crotalaria ferruginea*. **Ref:** 6.

**15597 Nilic acid**

[473-86-9]  $C_5H_{10}O_3$  (118.13). **Source:** QIAN NIU ZI *Pharbitis nil*. **Ref:** 6.

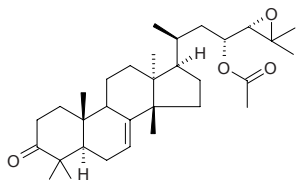
**15598 Niloticin**

[115404-57-4]  $C_{30}H_{48}O_3$  (456.72). Needles, mp 147°C,  $[\alpha]_D = -62^\circ$  ( $c = 0.08$ ,  $CHCl_3$ ); colorless needles, mp 149–151°C,  $[\alpha]_D^{25} = -82.6^\circ$  ( $c = 1.0$ , MeOH). **Pharm:** Cytotoxic ( $P_{388}$ ,  $ED_{50} = 1.5\mu g/mL$ ; KB,  $ED_{50} = 8.3\mu g/mL$ ). **Source:** BAI YE MI ZI LAN *Aglaiia leucophylla*, HUANG BAI *Phellodendron amurense*, HUANG PI SHU *Phellodendron chinense*, CHANG YE KUAN MU *Eurycoma longifolia*, NI LUO HE JIN YIN LIAN *Turraea nilotica*. **Ref:** 2663, 2664, 2665, 2666, 2667, 2668.

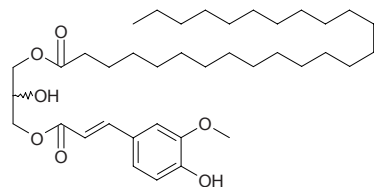


**15599 Niloticin acetate**

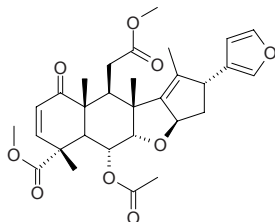
[116425-97-9] C<sub>32</sub>H<sub>50</sub>O<sub>4</sub> (498.75). Needles, mp 157grade, [ $\alpha$ ]<sub>D</sub> = -75gree (c = 0.035, CHCl<sub>3</sub>). Source: HUANG PI SHU *Phellodendron chinense*, CHANG YE KUAN MU *Eurycoma longifolia*. Ref: 2663, 2664, 2665.

**15600 Nilotical**

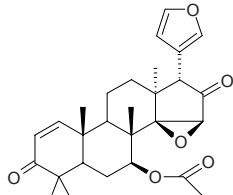
[110037-32-6] C<sub>38</sub>H<sub>64</sub>O<sub>7</sub> (632.93). Crystals (acetone, di-Ac compound), mp 68°C (di-Ac compound). Source: NI LUO HE CHENG LIU *Tamarix nilotica* (root). Ref: 2774.

**15601 Nimbin**

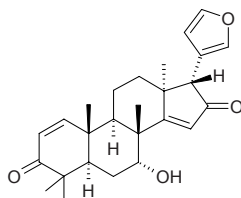
[5945-86-8] C<sub>30</sub>H<sub>36</sub>O<sub>9</sub> (540.62). Crystals (MeOH), mp 205°C, [ $\alpha$ ]<sub>D</sub> = +170°. Source: YIN JIAN *Melia indica*, *Melia azadirachta*. Ref: 2669.

**15602 Nimbinin**

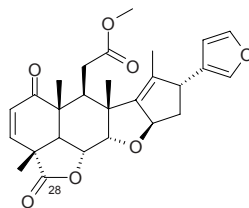
[18385-59-6] C<sub>28</sub>H<sub>34</sub>O<sub>6</sub> (466.58). Crystals (MeOH), mp 202~204°C, [ $\alpha$ ]<sub>D</sub> = +45° (CHCl<sub>3</sub>). Source: YIN JIAN *Melia indica*, *Melia azadirachta*. Ref: 2670.

**15603 Nimbocinol**

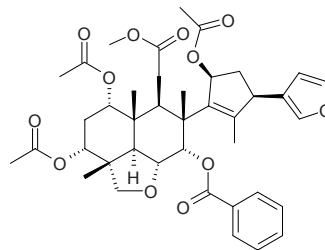
[101509-58-4] C<sub>26</sub>H<sub>32</sub>O<sub>4</sub> (408.54). mp 160~161°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -14.28° (CHCl<sub>3</sub>). Pharm: Pesticide (inhibits growth of *Heliothis virescens*, EC<sub>50</sub> = 1600mg/L). Source: KU LIAN PI *Melia azedarach*. Ref: 1521, 2671.

**15604 Nimbolide**

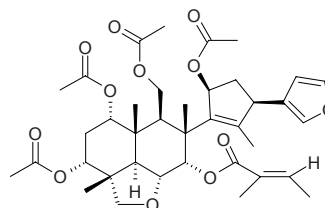
[25990-37-8] C<sub>27</sub>H<sub>30</sub>O<sub>7</sub> (466.54). Crystals (MeOH), mp 245~247°C, 228~230°C, [ $\alpha$ ]<sub>D</sub> = +206°. Source: *Melia azadirachta*. Ref: 2672.

**15605 Nimbolidin A**

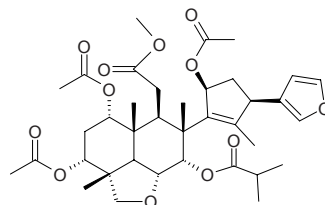
C<sub>40</sub>H<sub>48</sub>O<sub>12</sub> (720.82). Source: KU LIAN SHI *Melia azedarach* (ripe fruit). Ref: 4528.

**15606 Nimbolidin B**

[76689-94-6] C<sub>38</sub>H<sub>50</sub>O<sub>12</sub> (698.81). Amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = -7° (c = 0.15, methanol). Pharm: Insect antifeedant (larva of night moth, 500mg/L). Source: KU LIAN PI *Melia azedarach*, CHUAN LIAN ZI *Melia toosendan*. Ref: 939, 1113.

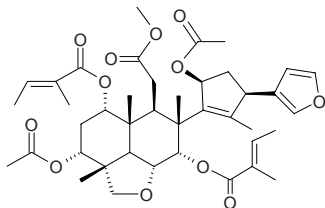
**15607 Nimbolidin C**

[169056-26-2] C<sub>37</sub>H<sub>50</sub>O<sub>12</sub> (686.80). Amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = +14° (c = 0.3, methanol). Pharm: Insect antifeedant (larva of night moth, 500mg/L). Source: CHUAN LIAN ZI *Melia toosendan*. Ref: 1113.

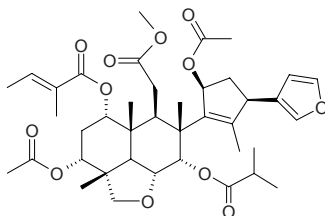


**15608 Nimbolidin D**

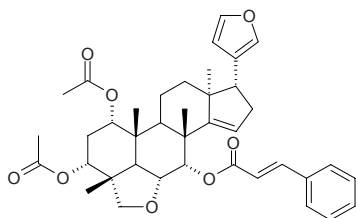
[169056-28-4] C<sub>41</sub>H<sub>54</sub>O<sub>12</sub> (738.87). Amorphous powder,  $[\alpha]_D^{22} = -55^\circ$  ( $c = 0.6$ , methanol). Pharm: Insect antifeedant (larva of night moth, 500mg/L). Source: CHUAN LIAN ZI *Melia toosendan*. Ref: 1113.

**15609 Nimbolidin E**

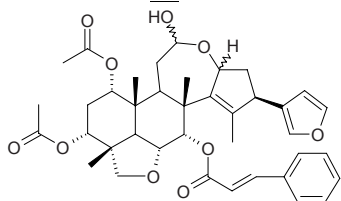
[169056-27-3] C<sub>40</sub>H<sub>54</sub>O<sub>12</sub> (726.86). Amorphous powder,  $[\alpha]_D^{22} = +4^\circ$  ( $c = 0.4$ , methanol). Pharm: Insect antifeedant (larva of night moth, 500mg/L). Source: CHUAN LIAN ZI *Melia toosendan*. Ref: 1113.

**15610 Nimbolin A**

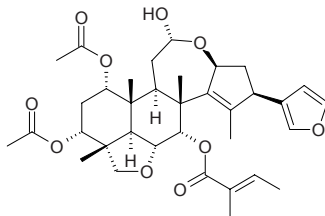
[24480-41-9] C<sub>39</sub>H<sub>46</sub>O<sub>8</sub> (642.80). mp 180–183°C. Source: KU LIAN PI *Melia azedarach*. Ref: 6.

**15611 Nimbolin B**

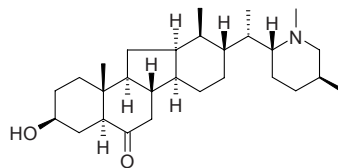
[24480-42-0] C<sub>39</sub>H<sub>46</sub>O<sub>10</sub> (674.80). mp 243–245°C. Source: KU LIAN PI *Melia azedarach*. Ref: 6.

**15612 Nimbolin B**

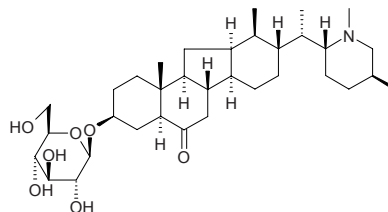
C<sub>35</sub>H<sub>46</sub>O<sub>10</sub> (626.75). Amorphous powder,  $[\alpha]_D = -42^\circ$  ( $c = 0.095$ ). Source: CHUAN LIAN PI *Melia toosendan*. Ref: 2374.

**15613 Ningpeisine**

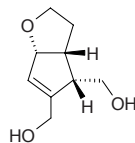
*N*-Methyl-3β-hydroxy-5α-veratranine-6-one [117695-02-0] C<sub>28</sub>H<sub>47</sub>NO<sub>2</sub> (429.69). Colorless acicular clustered crystals, mp 228–230°C,  $[\alpha]_D^{20} = +20^\circ$  ( $c = 0.5$ , anhydrous ethanol). Source: NING GUO BEI MU *Fritillaria ningguoensis*. Ref: 105.

**15614 Ningpeisinoid**

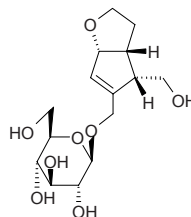
*N*-Methyl-5α-veratranine-6-oxo-3β-*O*-β-*D*-glucoside [139742-29-3] C<sub>34</sub>H<sub>57</sub>NO<sub>7</sub> (591.84). Thin acicular crystals, mp 284–286°C,  $[\alpha]_D^{20} = +24^\circ$  ( $c = 0.4$ , chloroform:ethanol = 4:1). Pharm: Antitussive (dispels phlegm). Source: NING GUO BEI MU *Fritillaria ningguoensis*. Ref: 205.

**15615 Ningpogenin**

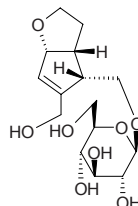
C<sub>9</sub>H<sub>14</sub>O<sub>3</sub> (170.21). Oil,  $[\alpha]_D = +16.0^\circ$  ( $c = 1$ , MeOH). Source: XUAN SHEN *Scrophularia ningpoensis*. Ref: 2673.

**15616 Ningpogoside A**

C<sub>15</sub>H<sub>24</sub>O<sub>8</sub> (332.35). Source: XUAN SHEN *Scrophularia ningpoensis*. Ref: 2674.

**15617 Ningpogoside B**

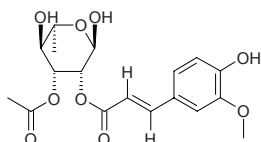
C<sub>15</sub>H<sub>24</sub>O<sub>8</sub> (332.35). Source: XUAN SHEN *Scrophularia ningpoensis*. Ref: 2674.



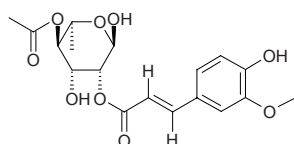


**15618 Ningposide A**

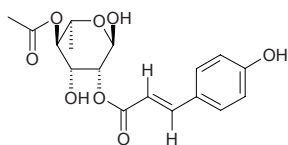
3-*O*-Acetyl-2-*O*-feruloyl- $\alpha$ -*L*-rhamnopyranose C<sub>18</sub>H<sub>22</sub>O<sub>9</sub> (382.37). Oil,  $[\alpha]_D^{20}$  = 116.29° ( $c$  = 0.63, acetone). Source: XUAN SHEN *Scrophularia ningpoensis*. Ref: 674, 741.

**15619 Ningposide B**

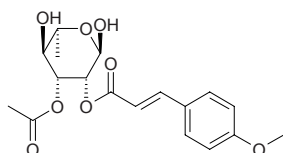
4-*O*-Acetyl-2-*O*-feruloyl- $\alpha$ -*L*-rhamnopyranose C<sub>18</sub>H<sub>22</sub>O<sub>9</sub> (382.37). Oil,  $[\alpha]_D^{20}$  = 87.23° ( $c$  = 0.241, acetone). Source: XUAN SHEN *Scrophularia ningpoensis*. Ref: 741.

**15620 Ningposide C**

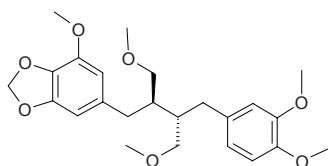
C<sub>17</sub>H<sub>20</sub>O<sub>8</sub> (352.34). Source: XUAN SHEN *Scrophularia ningpoensis*. Ref: 741.

**15621 Ningposide D**

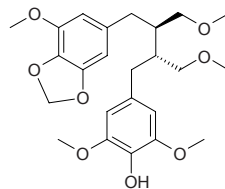
3-*O*-Acetyl-2-*O*-*p*-methoxycinnamoyl- $\alpha$ ( $\beta$ )-*L*-rhamnopyranose C<sub>18</sub>H<sub>22</sub>O<sub>8</sub> (366.37). Oil,  $[\alpha]_D^{25}$  = +42.0° ( $c$  = 0.2, CHCl<sub>3</sub>). Pharm: Cytotoxic inactive (MCF7, IC<sub>50</sub> > 100 μmol/L, control Adriamycin, IC<sub>50</sub> = (1.5±0.2) μmol/L; K562, IC<sub>50</sub> > 100 μmol/L, Adriamycin, IC<sub>50</sub> = (0.45±0.01) μmol/L; Bowes, IC<sub>50</sub> > 100 μmol/L, Adriamycin, IC<sub>50</sub> = (0.45±0.01) μmol/L; T24S, IC<sub>50</sub> > 100 μmol/L, Adriamycin, IC<sub>50</sub> = (5.8±0.6) μmol/L; A549, IC<sub>50</sub> > 100 μmol/L, Adriamycin, IC<sub>50</sub> = (15.8±6.7) μmol/L). Source: XUAN SHEN *Scrophularia ningpoensis*. Ref: 5288.

**15622 Niranthin**

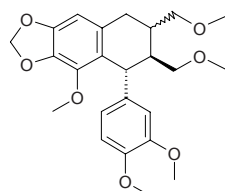
[50656-77-4] C<sub>24</sub>H<sub>32</sub>O<sub>7</sub> (432.52). Crystals (hexane), mp 67–69°C,  $[\alpha]_D^{30}$  = +28° ( $c$  = 1.29, CHCl<sub>3</sub>). Source: ZHU ZI CAO *Phyllanthus niruri*. Ref: 2675, 2676.

**15623 Nirphyllin**

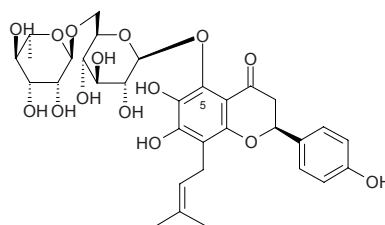
[120396-54-5] C<sub>24</sub>H<sub>32</sub>O<sub>8</sub> (448.52). Pharm: Antihepatotoxin. Source: ZHU ZI CAO *Phyllanthus niruri*. Ref: 2677.

**15624 Nirtetralin**

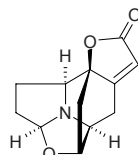
[50656-78-5] C<sub>24</sub>H<sub>30</sub>O<sub>7</sub> (430.50). Crystals (hexane), mp 55°C,  $[\alpha]_D$  = +14.39° ( $c$  = 1.39, CHCl<sub>3</sub>). Source: ZHU ZI CAO *Phyllanthus niruri*. Ref: 2675, 2676.

**15625 Nirurin**

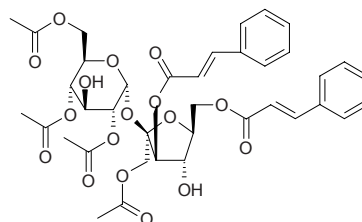
[96253-68-8] C<sub>32</sub>H<sub>40</sub>O<sub>15</sub> (664.67). Crystals (MeOH), mp 298–299°C (dec). Source: ZHU ZI CAO *Phyllanthus niruri*. Ref: 2678.

**15626 Nirurine**

[105801-14-7] C<sub>12</sub>H<sub>13</sub>NO<sub>3</sub> (219.24). Crystals (CHCl<sub>3</sub>–2-propanol), mp 205–209°C,  $[\alpha]_D$  = +196°. Source: ZHU ZI CAO *Phyllanthus niruri*. Ref: 2679.

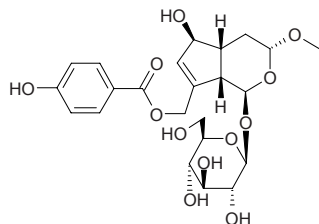
**15627 Niruriside**

[173268-90-1] C<sub>38</sub>H<sub>42</sub>O<sub>17</sub> (770.75). White amorphous powder. Pharm: Anti-HIV. Source: ZHU ZI CAO *Phyllanthus niruri*. Ref: 2680.

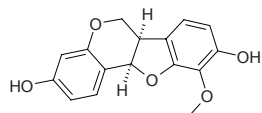


**15628 Nishindaside**

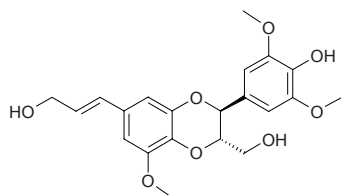
[88204-92-6] C<sub>23</sub>H<sub>30</sub>O<sub>12</sub> (498.49). Amorphous powder,  $[\alpha]_D^{25} = -83.5^\circ$  ( $c = 1$ , MeOH). Source: HUANG JING YE *Vitex negundo*. Ref: 2681.

**15629 (-)-Nissolin**

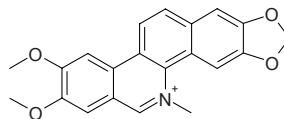
[73340-42-8] C<sub>16</sub>H<sub>14</sub>O<sub>5</sub> (286.29). Pharm: Antifungal. Source: HE CAO XIANG WAN DOU *Lathyrus nissolia*. Ref: 658, 2785.

**15630 7S,8S-Nitidanin**

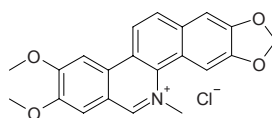
C<sub>21</sub>H<sub>24</sub>O<sub>8</sub> (404.42). Colorless oil,  $[\alpha]_D^{20} = -16.0^\circ$  ( $c = 0.5$ , MeOH). Source: TAN XIANG *Santalum album* (heartwood). Ref: 4468.

**15631 Nitidine**

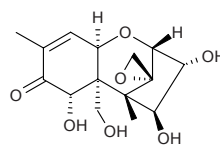
[76872-57-7] C<sub>21</sub>H<sub>18</sub>NO<sub>4</sub><sup>+</sup> (348.38). mp 215~218°C. Pharm: Antineoplastic (mus P<sub>388</sub>, 4mg/(kg·d), biotic prolonged rate = 109%; mus L<sub>1210</sub>, 4mg/(kg·d), biotic prolonged rate = 36%; showing unacceptable toxicity profile for clinical use); reverse transcriptase inhibitor (carcinogen RNA virus); antineoplastic (mus, L<sub>1210</sub> leukemia, P<sub>388</sub> leukemia, Lewis lung carcinoma, and B16 melanoma)<sup>[5369]</sup>; antineoplastic (increases life span of mouse inoculated with Ehrlich ascites tumor, causes decrease in mitotic index and size of tumor cells, and inhibits DNA and RNA synthesis in tumors)<sup>[5369]</sup>; antineoplastic (chloride is used in clinical treatment of chronic myelocytic leukemia)<sup>[5369]</sup>; cytotoxic (binds to calf thymus DNA by intercalation and to be toxic to topoisomerases I and II)<sup>[5369]</sup>; topoisomerases inhibitor (exhibits strong stabilization of covalent binary complex formed between topoisomerase I and DNA)<sup>[5369]</sup>. Source: CHU YE HUA JIAO *Zanthoxylum ailanthoides*, CHU YE HUA JIAO PI *Zanthoxylum ailanthoides*, CHU YE HUA JIAO GEN *Zanthoxylum ailanthoides*, CI KE HUA JIAO *Zanthoxylum echinocarpum*, DA YE CHOU HUA JIAO *Zanthoxylum myriacanthum*, DA YE HUA JIAO *Zanthoxylum dissitum*, DA YE HUA JIAO GEN *Zanthoxylum dissitum*, HUA JIAO *Zanthoxylum bungeanum*, HUA JIAO LE *Zanthoxylum cuspidatum*, HUANG XIN HUA JIAO *Zanthoxylum flavum*, MEI GUO CI JIAO *Zanthoxylum clava-hercules*, MEI ZHOU HUA JIAO *Zanthoxylum americanum* [Syn. *Xanthoxylum americanum*], RU DI JIN NIU *Zanthoxylum nitidum* (dried root: content = 0.15%<sup>[5508]</sup>), YING BU BO *Zanthoxylum avicennae*. Ref: 4, 5, 6, 658, 660, 1521, 5369, 5501, 5508.

**15632 Nitidine chloride**

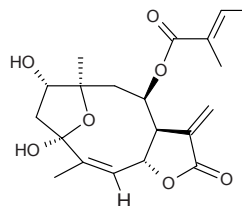
C<sub>21</sub>H<sub>18</sub>ClNO<sub>4</sub> (383.83). Yellow needles (MeOH or EtOH), mp 220°C, 238~240°C, 277~278°C (monohydrate), 284~286°C (dihydrate, dec). Source: HUA JIAO LE *Zanthoxylum cuspidatum*, RU DI JIN NIU *Zanthoxylum nitidum*. Ref: 660, 1521.

**15633 Nivalenol**

Nivalenone [23282-20-4] C<sub>15</sub>H<sub>20</sub>O<sub>7</sub> (312.33). Pharm: Antibacterial; antifungal; causes bleeding; toxin (mammal). Source: *Fusarium nivale*. Ref: 658, 1521.

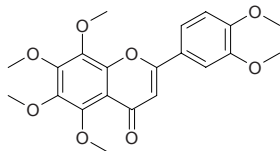
**15634 Niveusin C**

[75680-27-2] C<sub>20</sub>H<sub>26</sub>O<sub>7</sub> (378.43). Pharm: Antineoplastic; cytotoxic. Source: HUI BAI XIANG RI KUI *Helianthus canescens*, MA SHI XIANG RI KUI *Helianthus maximiliani*, XIANG RI KUI ZI *Helianthus annuus*, XUE BAI XIANG RI KUI *Helianthus niveus*. Ref: 658, 1521.

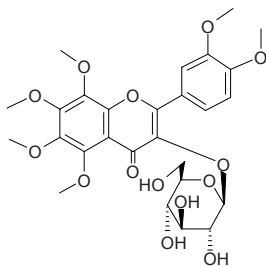


**15635 Nobiletin**

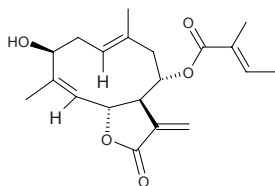
Nobiletin [10236-47-2]  $C_{21}H_{22}O_8$  (402.40). Light yellow acicular crystals ( $CHCl_3$ ), mp 127~129°C; mp 137~138°C. **Pharm:** Antineoplastic (mus, *in vivo*, Lewis lung cancer and  $W_{256}$ ); cytotoxic (KB *in vitro*,  $ED_{50} = 3\sim 28\mu g/mL$ ); cytotoxic (HeLa,  $IC_{50} = 30.4\mu g/mL$ , control Mitomycin C,  $IC_{50} = 1.7\mu g/mL$ )<sup>[4092]</sup>; cytotoxic (number of tumor cell lines, antiproliferative, induces differentiation of HL-60 cells *in vitro* in a concentration-dependent manner)<sup>[5369]</sup>; cytotoxic (inhibits invasion of mus MO4 cells into embryonic chick heart fragments *in vitro*)<sup>[5369]</sup>; antifungal (*Deuterophoma tracheiphila*); antithrombotic; platelet aggregation inhibitor (rat, orl, *in vivo*); anti-inflammatory (Ungar method,  $ED_{25} = 20mg/kg$ , intensity of anti-inflammation 50u/g); anti-inflammatory (modulator of cytokine network: modulator of cytokine network: effectively inhibits production of  $PGE_2$  and proMMP-9 in rabbit synovial fibroblasts)<sup>[4416]</sup>; anti-inflammatory (suppresses IL-1 $\beta$ -induced production of  $PGE_2$  in hmn synovial fibroblasts,  $IC_{50} < 4\mu mol/L$ ; decreases expression of IL-1 $\alpha$ , IL-1 $\beta$ , TNF- $\alpha$  and IL-6 mRNAs in J774A.1 macrophages at 32 $\mu mol/L$ ; a suggested lead compound to develop novel anti-inflammatory or immunomodulatory drugs)<sup>[4416]</sup>. **Source:** CHUAN JU *Citrus nobilis*, ZHI KE *Citrus aurantium*, JIAO GAN *Citrus tankan*, JU PI *Citrus reticulata*, JIN GAN *Fortunella japonica*, JIAO GAN PI *Citrus tankan*, JIN JU  $\dagger$  *Fortunella margarita*, LEI GONG TENG *Tripterygium wilfordii*, TUAN JI AI NA XIANG *Blumea glomerata*. **Ref:** 4, 5, 658, 660, 683, 4092, 4416, 5369, 5501.

**15636 Nobiletin-3-O- $\beta$ -D-glucoside**

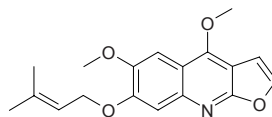
$C_{27}H_{32}O_{14}$  (580.55). **Source:** JU PI *Citrus reticulata* (dried ripe pericarp: content scope = 0.051%~0.51%, mean content = 0.24%)<sup>[5508]</sup>, TIAN CHENG *Citrus sinensis*<sup>[2682]</sup>. **Ref:** 2682, 5508.

**15637 Nobilinin**

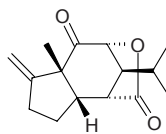
[31824-11-0]  $C_{20}H_{26}O_5$  (346.43). **Pharm:** Antineoplastic; cytotoxic. **Source:** GAO GUI CHUN HUANG JU *Anthemis nobilis*. **Ref:** 658, 1521.

**15638 Nobiline**

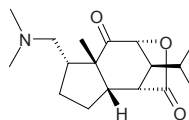
$C_{18}H_{19}NO_4$  (313.36). Brown plates, mp 125~126°C. **Source:** GAO GUI YOU MU YUN XIANG *Tecllea nobilis* (aerial parts). **Ref:** 3503.

**15639 Nobilomethylene**

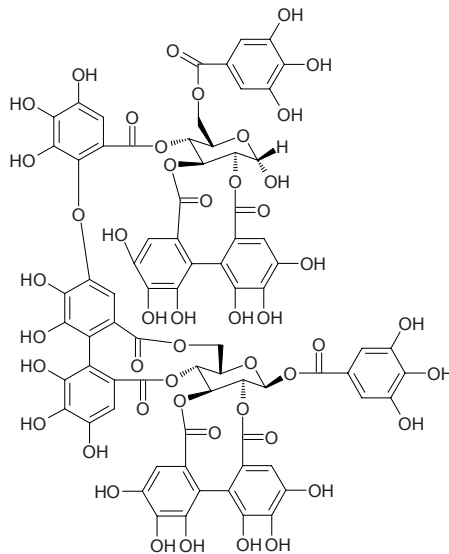
[38750-01-5]  $C_{15}H_{20}O_3$  (248.32). Crystals (hexane), mp 159.5~160.5°C. **Source:** SHI HU<sup>(4)</sup> *Dendrobium nobile*. **Ref:** 2683.

**15640 Nobilonine**

[4684-24-6]  $C_{17}H_{27}NO_3$  (293.41). mp 86°C. **Source:** SHI HU<sup>(4)</sup> *Dendrobium nobile*. **Ref:** 6, 1521.

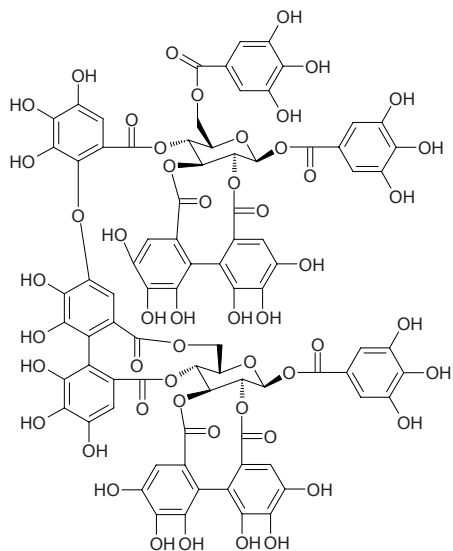
**15641 Nobotanin A**

[98725-99-6]  $C_{75}H_{52}O_{48}$  (1721.22). White-like amorphous powder,  $[\alpha]_D = +88^\circ$  ( $c = 1.0$ , MeOH). **Pharm:** Antineoplastic ( $S_{180}$ , 10mg/kg ip, biotic prolonged rate = 126.6%). **Source:** HONG MAO YE HAI TANG *Bredia tuberculata*, HONG WEI SUAN JIAO GAN *Medinilla magnifica*, *Tibouchina semidecandra*. **Ref:** 2684, 2685, 2686, 2687.

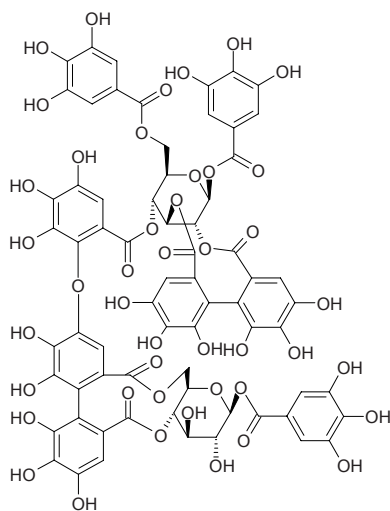


**15642 Nobotanin F**

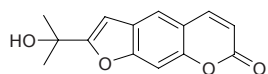
[104669-05-8] C<sub>82</sub>H<sub>56</sub>O<sub>52</sub> (1873.33). White-like amorphous powder, [ $\alpha$ ]<sub>D</sub> = +60° (c = 0.5, MeOH). **Pharm:** Antineoplastic (S<sub>180</sub>, 5mg/kg ip, biotic prolonged rate = 76.4%). **Source:** HONG MAO YE HAI TANG *Bredia tuberculata*, HONG WEI SUAN JIAO GAN *Medinilla magnifica*, *Heterocentron roseum*, *Tibouchina semidecandra*. **Ref:** 2684, 2685, 2686, 2687, 2688.

**15643 Nobotanin R**

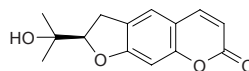
C<sub>68</sub>H<sub>50</sub>O<sub>44</sub> (1571.13). Off-white amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>27</sup> = +86.5° (c = 1.0, MeOH). **Source:** *Monochaetum multiflorum* (leaf). **Ref:** 3758.

**15644 Nodachenetin**

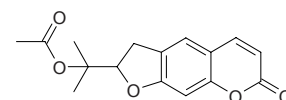
C<sub>14</sub>H<sub>12</sub>O<sub>4</sub> (244.25). **Source:** AO PA CAO *Oppopanax chironium* (root). **Ref:** 4071.

**15645 Nodakenetin**

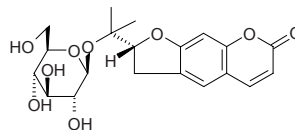
Prangeferol [495-32-9] C<sub>14</sub>H<sub>14</sub>O<sub>4</sub> (246.27). Colorless rhombic crystals (ethyl acetate–petroleum ether), mp 190–192°C, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = –22.3° (c = 0.634, chloroform). **Pharm:** Calcium antagonist; cytotoxic (P<sub>388</sub>); platelet aggregation inhibitor (hmn, *in vitro*). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*, DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*], KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*], QIAN HUO *Angelica decursiva* [Syn. *Peucedanum decursivum*], QIANG HUO *Notopterygium incisum*, CHAO XIAN DANG GUI *Angelica gigas*, *Ptelea* sp. **Ref:** 297, 566, 658, 660, 900.

**15646 Nodakenetin acetate**

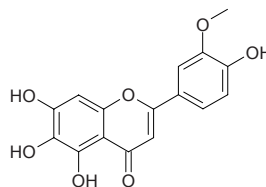
C<sub>16</sub>H<sub>16</sub>O<sub>5</sub> (288.30). mp 134–135°C. **Source:** YAN JIAO CAO *Boeninghausenia albiflora*. **Ref:** 2495.

**15647 Nodakenin**

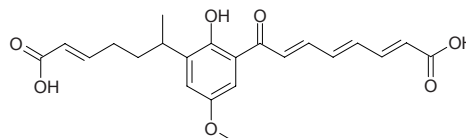
(+)-Marmesinin [495-31-8] C<sub>20</sub>H<sub>24</sub>O<sub>9</sub> (408.41). Lobulette form solid (ethanol), mp 217–219°C, [ $\alpha$ ]<sub>D</sub> = +24° (c = 0.9, ethanol:water = 1:1). **Pharm:** Cytotoxic (L<sub>1210</sub>); platelet aggregation inhibitor (hmn, due to ADP, 1.0mmol/L, InRt = 70%); AChE inhibitor (*in vitro*, IC<sub>50</sub> = 68μmol/L)<sup>[3058]</sup>. **Source:** BAI HUA QIAN HUO *Peucedanum praeruptorum*, BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*], E SHEN *Anthriscus sylvestris*, KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*], QIAN HUO *Angelica decursiva* [Syn. *Peucedanum decursivum*] (in 1973, the compound was isolated from the plant)<sup>[5505]</sup>, QIANG HUO *Notopterygium incisum*, CHAO XIAN DANG GUI *Angelica gigas* (underground part)<sup>[3058]</sup>. **Ref:** 2, 566, 660, 900, 3058, 5501, 5505.

**15648 Nodifloretin**

[23494-48-6] C<sub>16</sub>H<sub>12</sub>O<sub>7</sub> (316.27). mp 250–253°C. **Source:** PENG LAI CAO *Lippia nodiflora*. **Ref:** 6, 1521.

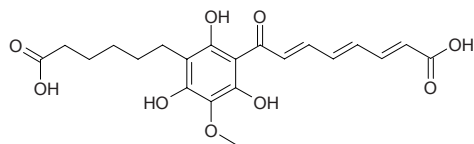
**15649 Nodifloridin A**

C<sub>22</sub>H<sub>24</sub>O<sub>7</sub> (400.43). **Source:** PENG LAI CAO *Lippia nodiflora*. **Ref:** 6.

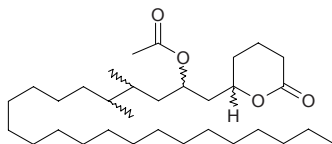


**15650 Nodifloridin B**

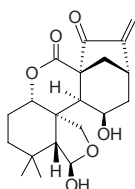
$C_{21}H_{24}O_9$  (420.42). Source: PENG LAI CAO *Lippia nodiflora*. Ref: 6.

**15651 Nodolidate**

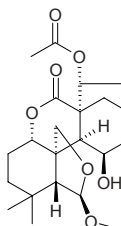
[37577-42-7]  $C_{32}H_{60}O_4$  (508.83). Crystals (MeOH- $CHCl_3$ ), mp 69~70°C,  $[\alpha]_D^{27} = -12.3^\circ$ . Source: SHEN HUANG DOU *Cassia nodosa*. Ref: 6, 1521.

**15652 Nodosin**

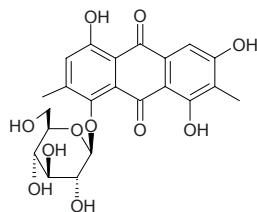
[10391-09-0]  $C_{20}H_{26}O_6$  (362.43). Crystals, mp 275~280°C (dec),  $[\alpha]_D^{17} = -203^\circ$ ,  $[\alpha]_D^{20} = -225.3^\circ$  ( $c = 0.38$ ,  $C_5H_5N$ ). Pharm: Bitter principle; antibacterial (gram-positive bacteria); insect growth inhibitor; cytotoxic (K562 cells, MTT method,  $IC_{50} = 1.43\mu g/mL$ , control *cis*-Platin,  $IC_{50} = 0.53\mu g/mL$ )<sup>[3808]</sup>. Source: MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosia japonica*], HEI HUA YAN MING CAO *Isodon trichocarpus*, SHAN DI XIANG CHA CAI *Isodon oresbia* (aerial parts). Ref: 1521, 3808, 4067.

**15653 Nodosinin**

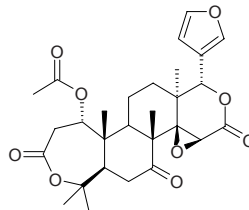
$C_{23}H_{32}O_7$  (420.51). mp 281~284°C,  $[\alpha]_D^{26} = -211^\circ$  ( $c = 0.11$ ,  $CHCl_3$ ). Source: MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosia japonica*]. Ref: 4067.

**15654 Nodososide**

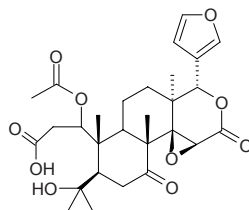
$C_{22}H_{22}O_{11}$  (462.41). Source: SHEN HUANG DOU *Cassia nodosa*. Ref: 6.

**15655 Nomilin**

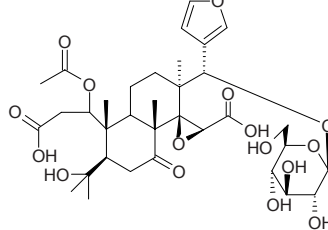
[1063-77-0]  $C_{28}H_{34}O_9$  (514.58). mp 278~279°C. Pharm: Bitter principle; insect antifeedant; anti-HIV-1 (40 $\mu$ mol/L, InRt = (77 $\pm$ 11)%, control Indinavir, 100nmol/L, InRt = 100%)<sup>[5462]</sup>. Source: CHENG ZI *Citrus junos*, CHENG ZI HE *Citrus junos*, FU JU *Citrus tangemna*, JU HE *Citrus reticulata*, YIN DU LIAN *Azadiractica indica*, ZHU JU *Citrus erythroa*. Ref: 6, 658, 5462.

**15656 Nomilinic acid**

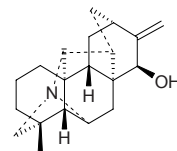
[35930-20-2]  $C_{28}H_{36}O_{10}$  (532.59). Noncrystal. Source: CHENG ZI *Citrus junos*, ZHI SHI *Citrus aurantium*. Ref: 660, 1521.

**15657 Nomilinic acid glucoside**

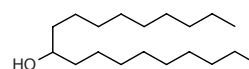
$C_{34}H_{48}O_{16}$  (712.75). Source: ZHI SHI *Citrus aurantium*. Ref: 2689.

**15658 Nominine**

[79808-87-0]  $C_{12}H_{31}NO$  (123.49). Colorless wedge-shape crystals ( $Et_2O$ -MeOH), mp 258~260°C,  $[\alpha]_D = +71.8^\circ$  ( $c = 1.26$ , methanol). Pharm: Antiarrhythmic (rat, induced by aconitine,  $ED_{50} = 5mg/kg$ );  $LD_{50}$  (rat) = 68.0mg/kg). Source: GAN WAN WU TOU *Aconitum finetianum*, SHAN YANG WU TOU *Aconitum sanyoense*, ZE WU TOU *Aconitum zeravschanicum*. Ref: 2690, 2691, 2692, 2693, 2694.

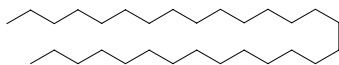
**15659 Nonacasyll alcohol-10**

Celidoniol [16840-84-9]  $C_{19}H_{40}O$  (284.53). mp 82.5°C. Source: BAI GUO *Ginkgo biloba*, BAI GUO YE *Ginkgo biloba*, BAI QU CAI *Chelidonium majus*, JU HUA HUANG LIAN *Corydalis pallida*. Ref: 2, 6.

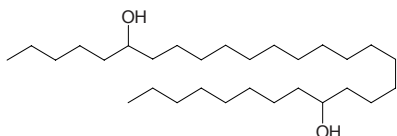


**15660 Nonacosane**

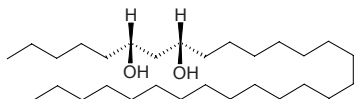
[630-03-5] C<sub>29</sub>H<sub>60</sub> (408.80). Source: DU ZHONG *Eucommia ulmoides*, HONG HUA *Carthamus tinctorius*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SHUANG BIAN GUA LOU *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*], XIAN HE CAO *Agrimonia pilosa* var. *japonica*, ZHI ZI *Gardenia jasminoides* [Syn. *Gardenia florida*], ZHONG MA HUANG *Ephedra intermedia*. Ref: 2, 660.

**15661 Nonacosanediol-6,21**

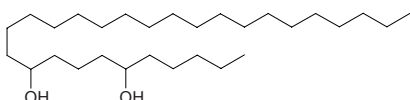
[96850-31-6] C<sub>29</sub>H<sub>60</sub>O<sub>2</sub> (440.80). Source: PU HUANG *Typha angustata*. Ref: 2, 1521, 2779.

**15662 Nonacosanediol-6,8**

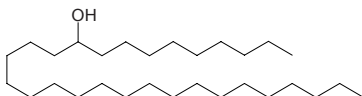
[96850-33-8] C<sub>29</sub>H<sub>60</sub>O<sub>2</sub> (440.80). Crystals (Me<sub>2</sub>CO–MeOH), mp 72–74°C. Source: HONG HUA *Carthamus tinctorius*, PU HUANG *Typha angustata*. Ref: 2, 1521, 2779.

**15663 Nonacosanediol-6,10**

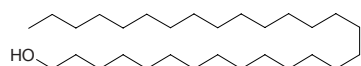
6,10-Nonacosanediol [71418-30-9] C<sub>29</sub>H<sub>60</sub>O<sub>2</sub> (440.80). Source: FU SHE SONG *Pinus radiata*, PU HUANG *Typha angustata*. Ref: 2, 1521, 2779.

**15664 10-Nonacosanol**

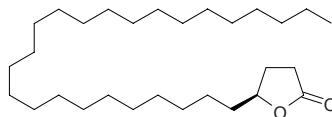
[2606-50-0] C<sub>29</sub>H<sub>60</sub>O (424.80). Crystals (EtOH, Me<sub>2</sub>CO or hexane), mp 83–84°C. Source: BAI GUO *Ginkgo biloba*, BAI QU CAI *Chelidonium majus*, CE BAI YE *Thuja orientalis* [Syn. *Platyclusus orientalis*; *Biota orientalis*], HE YE *Nelumbo nucifera*, SU TIE SHU GUO *Cycas revoluta*, TU CHUANG HUA *Dicranostigma franchetianum* [Syn. *Dicranostigma leptopodum*], WU WEI CAO *Corydalis taliensis*, YA PIAN *Papaver somniferum*, YU JIN XIANG *Tulipa gesneriana*, ZI SHAN *Taxus cuspidata*, *Chamaecyparis* spp. Ref: 660, 1521.

**15665 Nonacosanol**

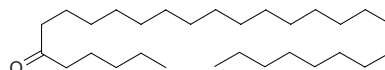
[25154-56-7] C<sub>29</sub>H<sub>60</sub>O (424.80). Source: ZHONG MA HUANG *Ephedra intermedia*, HUANG HUA HAO *Artemisia annua*. Ref: 2, 660.

**15666 Nonacosan-4-olide**

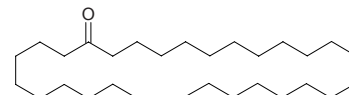
C<sub>29</sub>H<sub>56</sub>O<sub>2</sub> (436.77). Source: FU CHUI FE LAO JU *Flourensia cernua*. Ref: 3433.

**15667 6-Nonacosanone**

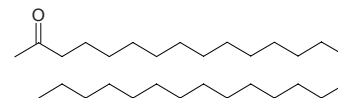
C<sub>29</sub>H<sub>58</sub>O (422.79). Source: KU LANG SHU *Clerodendrum inerme*. Ref: 3382.

**15668 10-Nonacosanone**

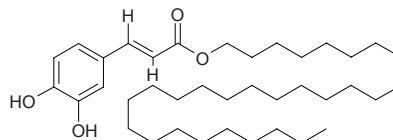
C<sub>29</sub>H<sub>58</sub>O (422.79). mp 74–75°C. Source: BAI GUO YE *Ginkgo biloba*, JI MAO SONG *Podocarpus imbricatus*. Ref: 6, 544.

**15669 2-Nonacosanone**

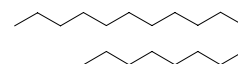
C<sub>29</sub>H<sub>58</sub>O (422.79). Source: ROU CONG RONG *Cistanche deserticola*. Ref: 2.

**15670 Nonacosanyl caffeate**

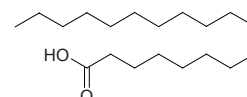
3,4-Dihydroxy-*trans*-cinnamic acid nonacosanylester C<sub>38</sub>H<sub>66</sub>O<sub>4</sub> (586.95). Pharm: Anti-inflammatory (COX-1 inhibitor, 1000μmol/L, InRt = (52±2)%, positive control Indomethacin, 1.7μmol/L, InRt = (43±3)%). Source: LUO YE SONG YE JIN SI TAO *Hypericum laricifolium* (aerial parts). Ref: 4413.

**15671 n-Nonadecane**

Nonadecane [629-92-5] C<sub>19</sub>H<sub>40</sub> (268.53). Source: DANG SHEN *Codonopsis pilosula*, ROU CONG RONG *Cistanche deserticola*, SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 2.

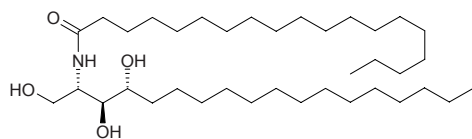
**15672 Nonadecanoic acid**

Nonadecylic acid [646-30-0] C<sub>19</sub>H<sub>38</sub>O<sub>2</sub> (298.51). Source: GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. Ref: 2.

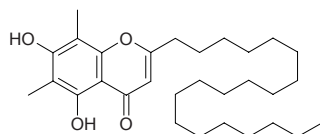


**15673 (2S,3S,4R)-2-Nonadecanoylamino-octadecane-1,3,4-triol**

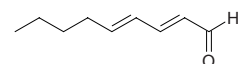
$C_{37}H_{75}NO_4$  (598.01). Colorless solid, mp 122~124°C,  $[\alpha]_D^{28} = +19.2^\circ$  (c = 0.5,  $CHCl_3$ ). Source: *Lobophytum* sp. Ref: 4432.

**15674 2-n-Nonadecyl-5,7-dihydroxy-6,8-dimethyl chromone**

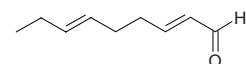
$C_{30}H_{48}O_4$  (472.71). Source: KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. Ref: 2695.

**15675 2,4-Nonadienal**

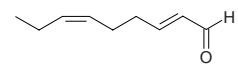
$C_9H_{14}O$  (138.21). Source: DANG SHEN *Codonopsis pilosula*. Ref: 2696.

**15676 2,6-Nonadienal**

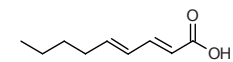
[17587-33-6]  $C_9H_{14}O$  (138.21). bp 85~87°C/11 mmHg. Pharm: Main odiferous component in cucumber *Cucumis sativus* HUANG GUA. Source: HUANG GUA *Cucumis sativus*. Ref: 6, 658.

**15677 2E,6Z-Nonadienal**

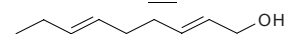
[557-48-2]  $C_9H_{14}O$  (138.21). Liquid with cucumber odour, bp 94~98°C/11mmHg. Source: HUANG GUA *Cucumis sativus*. Ref: 660, 1521.

**15678 2,4-Nonadienic acid**

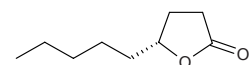
$C_9H_{14}O_2$  (154.21). Source: DANG SHEN *Codonopsis pilosula*. Ref: 2.

**15679 2,6-Nonadienol**

$C_9H_{16}O$  (140.23). bp 95.5~100.0°C/11mmHg. Source: HUANG GUA *Cucumis sativus*. Ref: 6.

**15680 γ-Nonalactone**

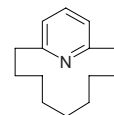
[104-61-0]  $C_9H_{16}O_2$  (156.23). Pharm: Component of coconut flavorant. Source: YE ZI RANG *Cocos nucifera*. Ref: 658, 1521.

**15681 Nonaldehyde**

Nonylaldehyde [124-19-6]  $C_9H_{18}O$  (142.24). bp 190~192°C. Source: CAO MEI *Fragaria ananassa*, CHENG GAN CAO *Eupatorium japonicum*, DA MA YE ZE LAN *Eupatorium cannabinum*, DONG LING CAO *Rabdosia rubescens*, GAN JIANG *Zingiber officinale*, HUA ZE LAN *Eupatorium chinense*. Ref: 2, 660.

**15682 2,6-Nonamethylene pyridine**

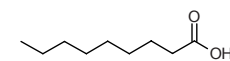
$C_{14}H_{21}N$  (203.33). Source: SHE XIANG *Moschus moschiferus*; *Moschus berezovskii*; *Moschus sifanicus*. Ref: 2.

**15683 n-Nonane**

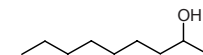
Nonane [111-84-2]  $C_9H_{20}$  (128.26). Source: SHENG JIANG *Zingiber officinale*, DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*]. Ref: 2.

**15684 Nonanoic acid**

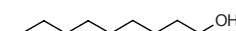
Pelargonic acid [112-05-0]  $C_9H_{18}O_2$  (158.24). Source: CHAI HU *Bupleurum chinense*, DANG SHEN *Codonopsis pilosula*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], GUA LOU *Trichosanthes kirilowii*, SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], SHUANG BIAN GUA LOU *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*], XI YANG SHEN *Panax quinquefolium*. Ref: 2, 660.

**15685 2-Nonanol**

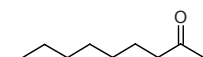
[628-99-9]  $C_9H_{20}O$  (144.26). Source: GAN JIANG *Zingiber officinale*. Ref: 2.

**15686 n-Nonanol**

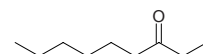
Nonyl alcohol [143-08-8]  $C_9H_{20}O$  (144.26). bp 215°C. Source: SHENG JIANG *Zingiber officinale*. Ref: 2.

**15687 2-Nonanone**

Methylheptyl-ketone [821-55-6]  $C_9H_{18}O$  (142.24). Source: SHENG JIANG *Zingiber officinale*, YIN CHEN HAO *Artemisia capillaris*. Ref: 2.

**15688 3-Nonanone**

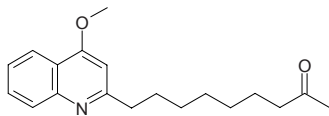
[925-78-0]  $C_9H_{18}O$  (142.24). Liquid, fp -8°C, bp 190°C, bp 86°C/20mmHg. Pharm: Alarm pheromone of insect. Source: BEI AI *Artemisia vulgaris*. Ref: 1521, 2697.



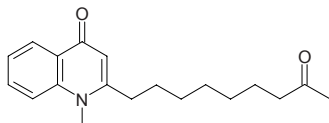


**15689 2-(Nonan-8-one)-4-methoxy-quinoline**

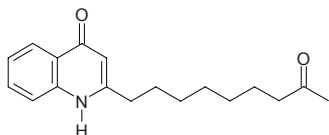
$C_{19}H_{25}NO_2$  (299.42). Source: MENG DA NA YUN XIANG *Ruta Montana* (whole herb). Ref: 3910.

**15690 2-(Nonan-8-one)-N-methyl-4-quinolone**

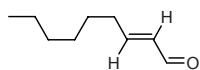
$C_{19}H_{25}NO_2$  (299.42). Source: MENG DA NA YUN XIANG *Ruta Montana* (whole herb). Ref: 3910.

**15691 2-(Nonan-8-one)-(1H)-4-quinolone**

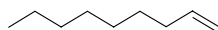
$C_{18}H_{23}NO_2$  (285.39). Source: MENG DA NA YUN XIANG *Ruta Montana* (whole herb). Ref: 3910.

**15692 (E)-2-Nonenal**

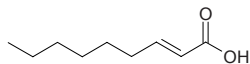
[18829-56-6]  $C_9H_{16}O$  (140.23). Source: XING REN *Prunus armeniaca*. Ref: 2.

**15693 1-Nonene**

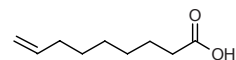
[124-11-8]  $C_9H_{18}$  (126.24). bp 146°C. Source: FENG DOU CAI *Petasites japonicus*. Ref: 6.

**15694 2-Nonenoic acid**

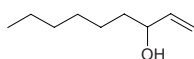
$C_9H_{16}O_2$  (156.23). Source: CHAI HU *Bupleurum chinense*. Ref: 2.

**15695 8-Nonenoic acid**

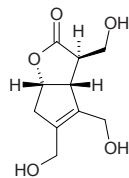
[31642-67-8]  $C_9H_{16}O_2$  (156.23). Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*]. Ref: 2.

**15696 1-Nonen-3-ol**

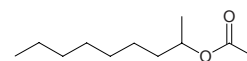
Hexylvinylcarbinol [21964-44-3]  $C_9H_{18}O$  (142.24). bp 193~194°C. Source: FENG DOU CAI *Petasites japonicus*. Ref: 6.

**15697 Non-glycosidic iridoid**

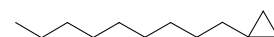
$C_{10}H_{14}O_5$  (214.22). Viscous syrup,  $[\alpha]_D^{28} = -30.6^\circ$  ( $c = 0.72$ , MeOH). Source: XIE JI CU YE MU *Lasianthus wallichii* (leaf). Ref: 4238.

**15698 2-Nonyl acetate**

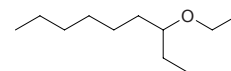
[14936-66-4]  $C_{11}H_{22}O_2$  (186.30). Source: CHOU CAO *Ruta graveolens*. Ref: 6.

**15699 Nonyl cyclopropane**

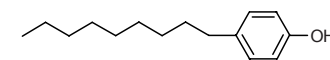
$C_{12}H_{24}$  (168.33). Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*]. Ref: 2.

**15700 Nonyl ethyl ether**

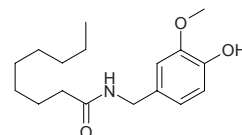
Ethyl nonyl ether [16979-32-1]  $C_{11}H_{24}O$  (172.31). bp 88°C/21mmHg. Source: WEN PO *Cydonia oblonga*. Ref: 6.

**15701 Nonylphenol**

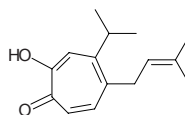
4-Nonylphenol [25154-52-3]  $C_{15}H_{24}O$  (220.36). Source: WU WEI ZI *Schisandra chinensis*. Ref: 2.

**15702 Nonyl vanillylamide**

[2444-46-4]  $C_{17}H_{27}NO_3$  (293.41). Source: LA JIAO *Capsicum frutescens*. Ref: 6.

**15703 Nootkatin**

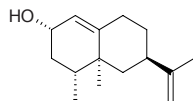
[4431-03-2]  $C_{15}H_{20}O_2$  (232.33). mp 95°C. Source: SHAN CI BAI *Juniperus taiwaniana*. Ref: 6.



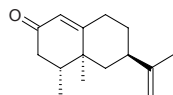


**15704 Nootkatol**

[50763-67-2] C<sub>15</sub>H<sub>24</sub>O (220.36). Colorless needles (hexane), mp 78–80°C, [ $\alpha$ ]<sub>D</sub> = +208° (*c* = 1.1, CHCl<sub>3</sub>). **Pharm:** Calcium antagonist (rbt, 30μmol antagonizes calcium ion absorption induced by KCl in artery, inhibits artery contraction; dog, 0.3μmol antagonizes calcium ion absorption induced by KCl in artery, inhibits evidently aorta contraction); vasodilator. **Source:** YI ZHI REN *Alpinia oxyphylla*. **Ref:** 657, 1207, 2698, 2699, 5501.

**15705 Nootkatone**

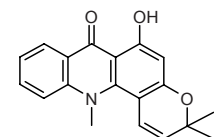
1(10),11-Eremophiladien-2-one; 4,4 $\alpha$ ,5,6,7,8-Hexahydro-4,4 $\alpha$ -dimethyl-6-(1-methylethenyl)-2(3*H*)-naphthalene [4674-50-4] C<sub>15</sub>H<sub>22</sub>O (218.34). Crystals (pet. ether), mp 36–37°C, [ $\alpha$ ]<sub>D</sub> = +195.5° (*c* = 1.5, CHCl<sub>3</sub>). **Pharm:** Na<sup>+</sup>,K<sup>+</sup>-ATP inhibitor (3μg/mL, reduces Na<sup>+</sup>,K<sup>+</sup>-ATPase activity 5%, 30μg/mL, reduces Na<sup>+</sup>,K<sup>+</sup>-ATPase activity 35%); prostaglandin synthetase inhibitor (0.5μmol/L, reduces prostaglandin synthetase activity 5%); vasodilator; antiulcerative (rat, induced by oral 1.5mL 0.15mol/L HCl 60% alcohol solution, before treatment 1h, 20mL/kg InRt = 69.8%; 50mL/kg InRt = 82.8%, *P* < 0.01); NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, IC<sub>50</sub> = 34μmol/L; control *L*-NMMA, IC<sub>50</sub> = 28μmol/L)<sup>[4655]</sup>;  $\beta$ -hexosaminidase release inhibitor (RBL-2H3 Cells, 100μmol/L, InRt = 25.8%; control Curcumin, InRt = 62.6%)<sup>[4655]</sup>; 12(*S*)-LOX inhibitor inactive (hmn Platelets, 100μg/mL, 12(*S*)-HETE Production inhibitor inactive)<sup>[4980]</sup>; flavorant; food additive. **Source:** CHAI HU *Bupleurum chinense*, CHAI SHOU *Bupleurum chaishouii*, CHUAN MU XIANG *Vladimiria souliei* [Syn. *Jurinea souliei*], CI GUI *Juniperus oxycedrus*, HONG CHAI HU *Bupleurum scorzonerifolium*, HUANG BIAN BAI *Chamaecyparis nootkatensis*, HUANG HUA HAO *Artemisia annua*, OU ZHOU CI BAI *Juniperus communis*, PU TAO YOU *Citrus paradisi*, SHI HU<sup>(4)</sup> *Dendrobium nobile*, WU WEI ZI *Schisandra chinensis*, YE JU *Chrysanthemum indicum*, YI YE BAI JIANG *Patrinia heterophylla*, YI ZHI REN *Alpinia oxyphylla* (fruit: yield = 0.17%dw)<sup>[4655]</sup>, ZHAI ZHU YE CHAI HU *Bupleurum marginatum* var. *stenophyllum*. **Ref:** 2, 660, 1207, 1521, 2698, 2700, 2702, 4655, 4980, 5501.

**15706 Nopinone**

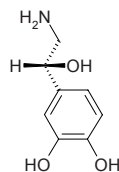
C<sub>9</sub>H<sub>14</sub>O (138.21). **Source:** RU XIANG *Boswellia carterii*. **Ref:** 660.

**15707 Noracronycine**

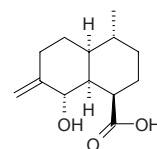
[13161-79-0] C<sub>19</sub>H<sub>17</sub>NO<sub>3</sub> (307.35). **Source:** JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. **Ref:** 11.

**15708 Noradrenaline**

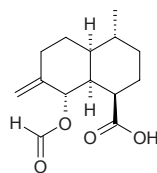
(*R*)-4-(2-Amino-1-hydroxyethyl)-1,2-benzenediol [51-41-2] C<sub>8</sub>H<sub>11</sub>NO<sub>3</sub> (169.18). mp (+) 215–217°C (dec), (–) 216.5–218.0°C, (±) 191°C (dec). **Pharm:** A hormone secreted by medulla of adrenal gland; neurotransmitter (released by sympathetic nerve endings); contracts blood vessels; increases blood pressure and blood flow through the coronary arteries; slows heart rate; increases the rate and depth of breathing; intestinal smooth muscle relaxant. **Source:** DA GUO XI FAN LIAN *Passiflora quadrangularis*, HAN XIU CAO *Mimosa pudica*, HE HUAN PI *Albizia julibrissin*, HONG HUA CAI DOU *Phaseolus multiflorus*, JIN YU *Carassius auratus*, MA CHI XIAN *Portulaca oleracea*, NIU SHEN *Bos taurus domesticus*; *Bubalus bubalis*, WAN DOU *Pisum sativum*, WEI NAO *Erinaceus europaeus*; *Hemiechinus dauuricus*; *Hemiechinus auritus*, WEI XIN GAN *Erinaceus europaeus*; *Hemiechinus dauuricus*; *Hemiechinus auritus*, XIANG JIAO *Musa paradisiaca* var. *sapientum* [Syn. *Musa sapientum*], YU SHU *Samanea saman*. **Ref:** 6, 658.

**15709 Norannuic acid**

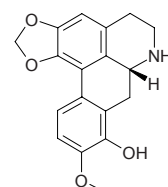
C<sub>13</sub>H<sub>20</sub>O<sub>3</sub> (224.30). Crystals, mp 180–182°C, [ $\alpha$ ]<sub>D</sub> = –104° (*c* = 1, MeOH). **Source:** HUANG HUA HAO *Artemisia annua*. **Ref:** 2704.

**15710 Norannuic acid formyl ester**

C<sub>14</sub>H<sub>20</sub>O<sub>4</sub> (252.31). Colorless oil. [ $\alpha$ ]<sub>D</sub> = –14.1° (*c* = 0.3, CHCl<sub>3</sub>). **Source:** HUANG HUA HAO *Artemisia annua* (seed). **Ref:** 3435.

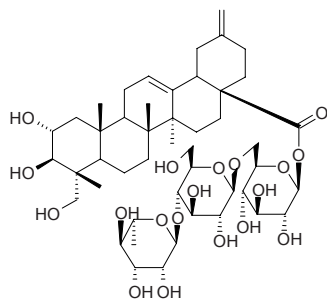
**15711 Norannuradhapurine**

[83694-79-5] C<sub>18</sub>H<sub>17</sub>NO<sub>4</sub> (311.34). Amorphous. **Source:** BAI YE GUA FU MU *Fissistigma glaucescens* [Syn. *Melodorum glaucescens*], GUA FU MU *Fissistigma oldhamii* [Syn. *Melodorum oldhamii*], *Polyalthia acuminata*. **Ref:** 2705, 2706.



**15712 Norarjunolic acid-28-O- $\alpha$ -L-rhamnosyl(1 $\rightarrow$ 4)- $\beta$ -D-glucosyl (1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside**

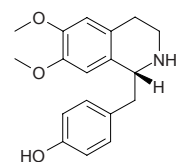
C<sub>47</sub>H<sub>74</sub>O<sub>19</sub> (943.10). Source: YU ZHI ZI *Akebia quinata*. Ref: 2707.



**15713 N-Norarmepavine**

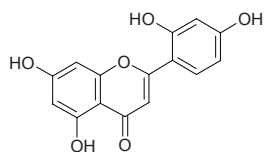
Norarmepavine C<sub>18</sub>H<sub>21</sub>NO<sub>3</sub> (299.37). mp D(+) 157~158°C, L(-) 157~158°C.

Source: HE YE *Nelumbo nucifera*, HONG NAN PI *Machilus thunbergii*, LIAN ZI *Nelumbo nucifera*. Ref: 6, 660.



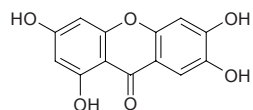
**15714 Norartocarpetin**

C<sub>15</sub>H<sub>10</sub>O<sub>6</sub> (286.24). Pale-yellow needles (Me<sub>2</sub>CO, EtOH or AcOH), mp 332~335°C. Pharm: Cytotoxic (cyclooxygenase-1 inhibitor, IC<sub>50</sub> = 4.0 μg/mL)<sup>[5038]</sup>; cytotoxic (mouse mammary organ culture assay, 85% at 10 μg/mL)<sup>[5038]</sup>. Source: BO LUO MI *Artocarpus heterophyllus*, DA DA HE MIAN BAO GUO *Artocarpus dadah*. Ref: 1521, 5038.



**15715 Norathyriol**

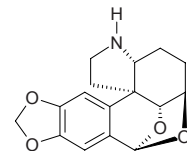
1,3,6,7-Tetrahydroxyxanthone [3542-72-1] C<sub>13</sub>H<sub>8</sub>O<sub>6</sub> (260.21). Pharm: Antibacterial (*Mycobacterium tuberculosis*); xanthinoxidase inhibitor. Source: AO SHI JIN SI TAO *Hypericum aucheri*, DAO NIAN ZI *Garcinia mangostana*, KU DING CHA *Cratoxylum prunifolium*, SANG CHENG *Maclura pomifera*, SHAN ZHU ZI *Garcinia multiflora*, TU SAN JIN SI TAO *Hypericum androsaemum*, *Chlorophora* sp., *Mammea* sp. Ref: 6, 658.



**15716 Noraugustamine**

C<sub>16</sub>H<sub>17</sub>NO<sub>4</sub> (287.32). mp 149~151°C, [α]<sub>D</sub><sup>20</sup> = -50.0° (c = 0.87, MeOH).

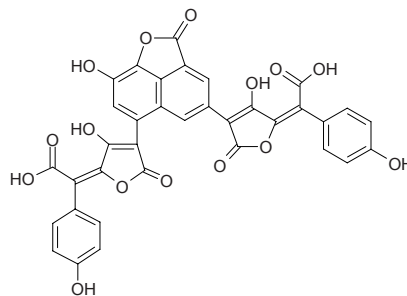
Pharm: Antitrypanosomal (*Trypanosoma brucei*, IC<sub>50</sub> = 18.7 μg/mL); antiprotozoal inactive (*Plasmodium falciparum*, *Leishmania donovani*, *Trypanosoma cruzi*). Source: KEN NI YA WEN SHU LAN *Crinum kirkii* (bulb). Ref: 3892.



**15717 Norbadione A**

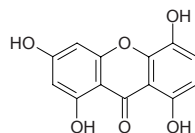
C<sub>35</sub>H<sub>18</sub>O<sub>15</sub> (678.52). Red needles, mp > 300°C. Source: DOU BAO JUN

*Pisolithus tinctorius* [Syn. *Lycoperdon capitatum*; *Scleroderma tinctorium*], HE RONG GAI NIU GAN JUN *Xerocomus badius*. Ref: 2708, 2709.



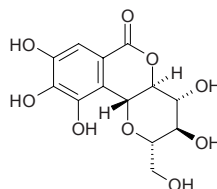
**15718 Norbellidifodin**

1,3,5,8-Tetrahydroxyxanthone C<sub>13</sub>H<sub>8</sub>O<sub>6</sub> (260.21). Yellow powder, mp 276~278°C. Pharm: AChE inhibitor (MIC = 0.04 μg = 0.15 nmol, control Galanthamine MIC = 0.01 μg = 0.03 nmol, Physostigmine MIC = 0.005 μg = 0.002 nmol, Huperzine A MIC = 0.002 μg = 0.0008 nmol)<sup>[5039]</sup>. Source: BAO E ZHANG YA CAI *Swertia calycina*, TIAN YE LONG DAN *Gentiana campestris* (leaf). Ref: 634, 5039.



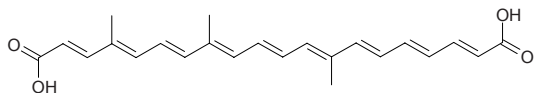
**15719 Norbergenin**

[79595-97-4] C<sub>13</sub>H<sub>14</sub>O<sub>9</sub> (314.25). Prisms or needles (H<sub>2</sub>O, dimorphism), mp 277~278°C (275~277°C, dec), (Prisms), mp 178~180°C (needles), [α]<sub>D</sub><sup>17</sup> = -22.0° (c = 0.393, H<sub>2</sub>O). Pharm: DPPH scavenger (IC<sub>50</sub> = (13.4±1.1) μmol/L, control Trolox, IC<sub>50</sub> = (25.4±0.8) μmol/L)<sup>[4244]</sup>; cytotoxic inactive (murine breast cancer cell line FM3A, 100 μmol/L)<sup>[4244]</sup>. Source: HU ER CAO *Saxifraga stolonifera*, XIA ZI HUA *Woodfordia fruticosa*, YOU SE ZI JIN NIU *Ardisia colorata* (fruit), ZHU SHA GEN *Ardisia crenata*. Ref: 2710, 2711, 2712, 4244.

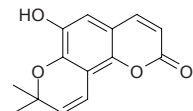


**15720 Norbixin**

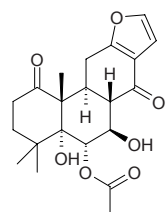
$C_{24}H_{28}O_4$  (380.49). Source: HONG MU *Bixa orellana*. Ref: 658, 1521.

**15721 Norbraylin**

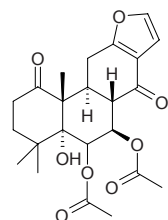
$C_{14}H_{12}O_4$  (244.25). Source: *Cedrelopsis grevei* (trunk bark). Ref: 5368.

**15722 Norcaesalpinin F**

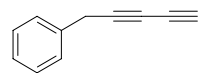
$C_{21}H_{26}O_7$  (390.44). Colorless amorphous solid,  $[\alpha]_D^{22} = +80.4^\circ$  ( $c = 0.091$ ,  $CHCl_3$ ). Pharm: Antimalarial (antiplasmodial *Plasmodium falciparum* FCR-3/A2 clone,  $IC_{50} = 0.14 \mu\text{mol/L}$ ). Source: CI GUO SU MU *Caesalpinia crista* (seed kernel: yield = 0.0004%dw). Ref: 1126.

**15723 Norcaesalpinin MD**

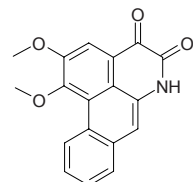
$C_{23}H_{28}O_8$  (432.47). Colorless amorphous solid,  $[\alpha]_D^{25} = +163.3^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ). Source: CI GUO SU MU *Caesalpinia crista* (seed kernel). Ref: 4434.

**15724 Norcapillene**

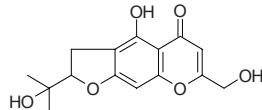
1,3-Pentadiynylbenzene  $C_{11}H_8$  (140.19). Oil, bp 45–50°C/0.001mmHg,  $n_D^{22} = 1.5726$ . Source: NAN TONG HAO *Chrysanthemum segetum*, XIA YE QING HAO *Artemisia dracunculus*, YIN CHEN HAO *Artemisia capillaris*. Ref: 2, 1521.

**15725 Norcepharadione B**

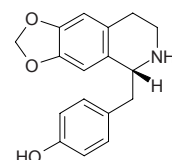
[57576-41-7]  $C_{18}H_{13}NO_4$  (307.31). mp 304–307°C (dec). Source: YU XING CAO *Houttuynia cordata*, BAI YAO ZI *Stephania cepharantha*, ZHU YE JU *Piper boehmeriaefolium*. Ref: 1521, 2428, 2713.

**15726 Norcimifugin**

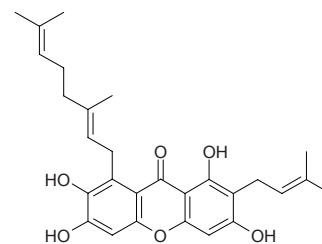
[64519-22-8]  $C_{15}H_{16}O_6$  (292.29). Source: NAN CHUAN SHENG MA *Cimicifuga nanchuanensis*. Ref: 2714.

**15727 Norcinnamolaureine**

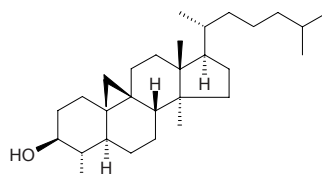
[34168-00-8]  $C_{17}H_{17}NO_3$  (283.33). Source: SHAN HU JIAO YE *Lindera glauca*. Ref: 2715.

**15728 Norcowanin**

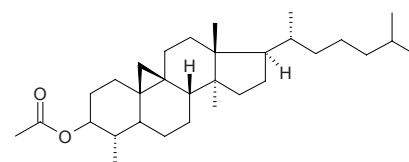
[158511-56-9]  $C_{28}H_{32}O_6$  (464.56). Yellow needles (acetone– $CH_2Cl_2$ ) mp 162–163°C. Pharm: Antibacterial (*Staphylococcus aureus*). Source: YUN NAN SHAN ZHU ZI *Garcinia cowa*. Ref: 2716.

**15729 29-Norcycloartan-3β-ol**

$C_{29}H_{50}O$  (414.72). mp 128–132°C. Source: DONG BEI DUO ZU JUE *Polypodium virginianum*, DUO ZU JUE *Polypodium vulgare*, GOU QI ZI *Lycium chinense*, SHUI LONG GU *Polypodium niponicum*, SUI BA QIA *Smilax aspera*. Ref: 6, 660.

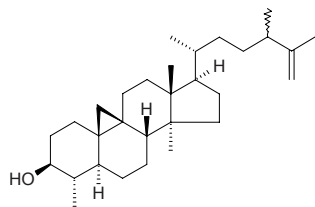
**15730 31-Norcycloartanyl acetate**

29-Norcycloartanyl acetate [17320-16-0]  $C_{31}H_{52}O_2$  (454.76). Source: DONG BEI DUO ZU JUE *Polypodium virginianum*, DUO ZU JUE *Polypodium vulgare*, SHUI LONG GU *Polypodium niponicum*. Ref: 660.

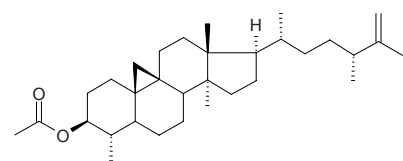


**15731 31-Norcyclolaudenol**

$C_{30}H_{50}O$  (426.73). Source: SHUI LONG GU *Polypodium niponicum*. Ref: 6, 1521.

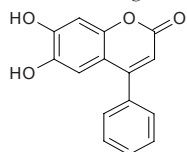
**15732 31-Norcyclolaudenyl acetate**

$C_{32}H_{52}O_2$  (468.77). Source: SHUI LONG GU *Polypodium niponicum*. Ref: 660.

**15733 Nordalbergin**

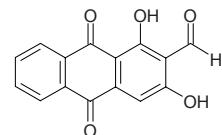
[482-82-6]  $C_{15}H_{10}O_4$  (254.24). mp 274~276°C. Source: JIANG ZHEN

XIANG *Dalbergia odorifera*. Ref: 6.

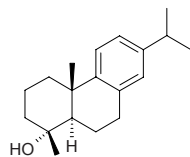
**15734 Nordamnacanthal**

[3736-59-2]  $C_{15}H_8O_5$  (268.23). Orange-yellow crystals ( $Me_2CO$ ), mp 220°C.

Source: GUANG JING QIAN CAO *Rubia wallichiana* (stem), GUANG ZE BA JI *Morinda lucida*, HAI BA JI *Morinda citrifolia*, HU CI *Damnacanthus indicus*, QIAN CAO GEN *Rubia cordifolia*, RAN SE JI YAN TENG *Morinda tinctoria*, TU LIAN QIAO *Hymenodictyon excelsum*, *Damnacanthus major*, *Rubia ibérica*, *Coprosma linearifolia*. Ref: 6, 1521, 2717, 4369.

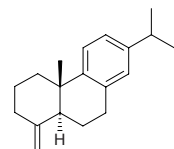
**15735 18-Nordehydroabietan-4 $\alpha$ -ol**

$C_{19}H_{28}O$  (272.43). Source: HAI SONG ZI *Pinus koraiensis*. Ref: 6.

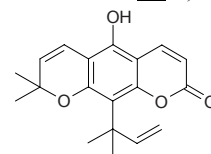
**15736 19-Nordehydroabiet-4(18)-ene**

18-Nor-4(19),8,11,13-abietatetraene  $C_{19}H_{26}$  (254.42). Source: HAI SONG ZI

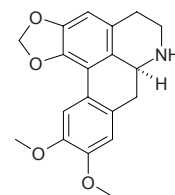
*Pinus koraiensis*. Ref: 6.

**15737 Nordentatin**

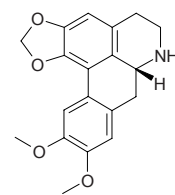
[17820-07-4]  $C_{19}H_{20}O_4$  (312.37). mp 182°C. Pharm: Antibacterial (*Mycobacterium tuberculosis*, MIC = 100  $\mu g/mL$ , control Isoniazide, MIC = 0.040~0.090  $\mu g/mL$ , kanamycin sulfate, MIC = 2.0~5.0  $\mu g/mL$ )<sup>[5367]</sup>; antifungal inactive (*Candida albicans*, control Amphotericin,  $IC_{50}$  = 0.01  $\mu g/mL$ )<sup>[5367]</sup>; antineoplastic (Raji cells, antitumor promotor, *in vivo*, inhibits TPA-induced EBV-EA activation, compound concentration = 500(mol ratio/32pmol TPA)), EBV-EA-positive cells = (47.3 $\pm$ 1.9)% (viability >80%),  $\beta$ -Carotene, EBV-EA-positive cells = (34.3 $\pm$ 1.1)% (viability = 60%), Curcumin, EBV-EA-positive cells = (22.8 $\pm$ 1.8)% (viability > 80%);  $IC_{50}$  = 473(mol ratio/32pmol TPA),  $\beta$ -Carotene,  $IC_{50}$  = 400(mol ratio/32pmol TPA), Curcumin  $IC_{50}$  = 341(mol ratio/32 pmol TPA))<sup>[5048]</sup>. Source: SHAN HUANG PI *Clausena excavata*, YE HUANG PI *Clausena dentata*, *Citrus medica* var. *etrog*, *Citrus jambhiri*, CHENG ZI *Citrus junos*, *Citrus tamurana*, *Citrus hassaku*. Ref: 6, 1521, 5048, 5367.

**15738 (+)-Nordicentrine**

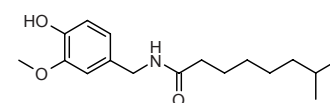
[25394-59-6]  $C_{19}H_{19}NO_4$  (325.37). mp 254~255°C (dec),  $[\alpha]_D^{31}$  = +31° ( $c$  = 0.65, MeOH). Source: HEI KE NAN *Lindera megaphylla*, *Litsea salicifolia*. Ref: 1521, 2718.

**15739 (-)-Nordicentrine**

[151601-88-6]  $C_{19}H_{19}NO_4$  (325.37). mp 248°C (dec),  $[\alpha]_D^{20}$  = -34° ( $c$  = 0.2, MeOH). Pharm: Cytotoxic (BCA-1  $ED_{50}$  = 2.0  $\mu g/mL$ ; HT1080  $ED_{50}$  = 1.7  $\mu g/mL$ ; LUC-1  $ED_{50}$  = 13.2  $\mu g/mL$ ; MEL-2  $ED_{50}$  = 3.3  $\mu g/mL$ ; COL-1  $ED_{50}$  = 1.7  $\mu g/mL$ ; KB  $ED_{50}$  = 0.8  $\mu g/mL$ ; KB-V1  $ED_{50}$  = 0.7  $\mu g/mL$ ; P<sub>388</sub>  $ED_{50}$  = 0.6  $\mu g/mL$ ; A-431  $ED_{50}$  = 0.8  $\mu g/mL$ ; LNCaP  $ED_{50}$  = 1.5  $\mu g/mL$ ; ZR-75-1  $ED_{50}$  = 1.7  $\mu g/mL$ ; U373  $ED_{50}$  = 0.6  $\mu g/mL$ ); antimalarial (*Plasmodium falciparum*, chloroquine-sensitive strain D6,  $ED_{50}$  = 470 ng/mL; chloroquine-endured strain W2,  $ED_{50}$  = 1030 ng/mL). Source: ZHI LI QIAN JIN TENG *Stephania erecta*. Ref: 2719.

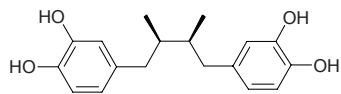
**15740 Nordihydrocapsaicin**

Nordihydrocapsaicin  $C_{17}H_{27}NO_3$  (293.41). Source: HONG HAI JIAO *Capsicum annuum*, LA JIAO *Capsicum frutescens*. Ref: 15, 2786.

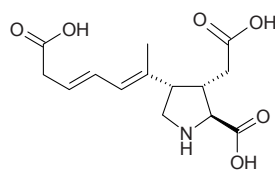


**15741 Nordihydroguaiaretic acid**

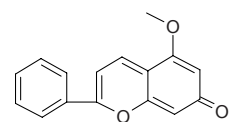
NDGA  $C_{18}H_{22}O_4$  (302.37). **Pharm:** Antineoplastic; antifungal; antimicrobial. **Source:** WU WEI ZI *Schisandra chinensis*, YU CHUANG MU *Guajacum officinale*, *Larrea* sp. **Ref:** 658, 1733.

**15742 Nordomoic acid**

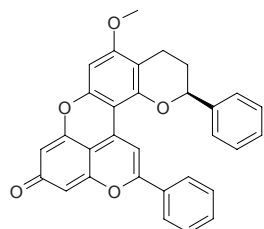
$C_{14}H_{19}NO_6$  (297.31). **Source:** RUAN GU ZAO *Chondria armata* [Syn. *Lophura armata*]. **Ref:** 2720.

**15743 Nordracorhodin**

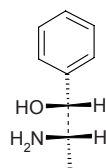
[35290-21-2]  $C_{16}H_{12}O_3$  (252.27). Red, mp 120~125°C. **Source:** QI LIN JIE *Daemonorops draco*. **Ref:** 2721.

**15744 Nordracorubin**

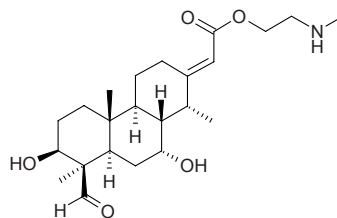
[35290-22-3]  $C_{31}H_{22}O_5$  (474.52). Red solid, mp 255~260°C,  $[\alpha]_D^{20} = -77.5^\circ$  ( $c = 0.024$ , MeOH). **Source:** QI LIN JIE *Daemonorops draco*. **Ref:** 2721.

**15745 Norephedrine**

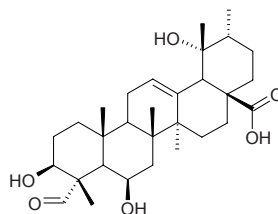
[492-41-1]  $C_9H_{13}NO$  (151.21). mp (-) 50°C. **Source:** BAN ZI MA HUANG *Ephedra lepidosperma* (herbaceous twigs: content = 0.006%)<sup>[5508]</sup>, DAN ZI MA HUANG *Ephedra monosperma* (herbaceous twigs: content = 0.152%)<sup>[5508]</sup>, LI JIANG MA HUANG *Ephedra likiangensis* (herbaceous twigs: mean content of 3 origins = 0.058%)<sup>[5508]</sup>, MA HUANG *Ephedra sinica* (herbaceous twigs: mean content of 5 origins = 0.047%)<sup>[5508]</sup>, MO GUO MA HUANG *Ephedra przewalskii* (herbaceous twigs: mean content of 2 origins = 0.007%)<sup>[5508]</sup>, MU ZEI MA HUANG *Ephedra equisetina* (herbaceous twigs: mean content of 2 origins = 0.108%)<sup>[5508]</sup>, SHAN LING MA HUANG *Ephedra gerardiana* (herbaceous twigs: content = 0.085%)<sup>[5508]</sup>, SHU ZHUANG MA HUANG *Ephedra procera* (herbaceous twigs: content = 0.0004%)<sup>[5508]</sup>, SHUANG SUI MA HUANG *Ephedra distachya* (herbaceous twigs: content = 0.0022%)<sup>[5508]</sup>, XI ZANG ZHONG MA HUANG *Ephedra intermedia* var. *tibetica* (herbaceous twigs: content = 0.037%)<sup>[5508]</sup>, XI ZI MA HUANG *Ephedra regeliana* (herbaceous twigs: content = 0.0012%)<sup>[5508]</sup>, YI ZHU AI MA HUANG *Ephedra minuta* var. *dioeca* (herbaceous twigs: mean content of 2 origins = 0.050%)<sup>[5508]</sup>, ZANG MA HUANG *Ephedra saxatilis* (herbaceous twigs: content = 0.059%)<sup>[5508]</sup>, ZHONG MA HUANG *Ephedra intermedia* (herbaceous twigs: mean content of 3 origins = 0.051%)<sup>[5508]</sup>, *Ephedra tweediana* (herbaceous twigs: content = 0.0005%)<sup>[5508]</sup>. **Ref:** 2, 660, 1521, 5508.

**15746 Norerythrochaldine**

[55729-25-4]  $C_{23}H_{37}O_5$  (407.56). **Pharm:** Cytotoxic (KB). **Source:** LU SUI GE MU *Erythrophleum chlorostachyum*. **Ref:** 658, 1521.

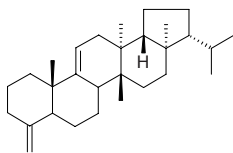
**15747 23-Nor-24-esomethylene-3,6,19-thihydroxyurs-12-en-28 oic acid**

$C_{30}H_{46}O_6$  (502.70). **Source:** BI LU GOU TENG *Uncaria tomentosa*. **Ref:** 5341.

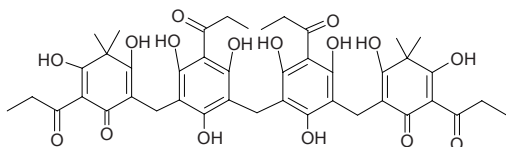


**15748 24-Nor-4(23),9(11)-fernadiene**

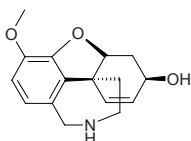
[70588-09-9] C<sub>29</sub>H<sub>46</sub> (394.69). Source: DA YE GU SUI BU *Davallia divaricata* [Syn. *Davallia formosana*; *Davallia orientalis*]. Ref: 2722.

**15749 Norflavaspidic acid**

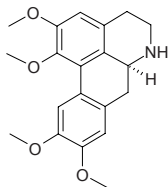
C<sub>43</sub>H<sub>48</sub>O<sub>16</sub> (820.85). Source: AO DI LI LIN MAO JUE *Dryopteris austriaca*. Ref: 1522.

**15750 Norgalanthamine**

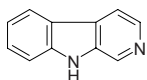
[41303-74-6] C<sub>16</sub>H<sub>19</sub>NO<sub>3</sub> (273.33). White needles (acetone), mp 152.5~153°C, colorless prisms (CHCl<sub>3</sub>-MeOH), mp 171~173°C, [α]<sub>D</sub><sup>22</sup> = -74.0° (c = 0.277, CHCl<sub>3</sub>), [α]<sub>D</sub><sup>28</sup> = -45.3° (c = 0.24, MeOH). Pharm: Cytotoxic (hmn lymphoma cell Molt4 ED<sub>50</sub> = 0.6μg/mL, mouse alveolus non-cancer fibrocyte LMTK ED<sub>50</sub> = 0.5μg/mL). Source: DA XUE HUA LIAN *Galanthus elwelii*, FU ZHUANG SHUI GUI JIAO *Hymenocallis rotata*, GUANG XI SHI SUAN *Lycoris Guangxiensis*, JIA SHUI XIAN *Narcissus pseudonarcissus* ssp. *pseudonarcissus*, RI BEN WEN SHU LAN *Crinum asiaticum* var. *japonicum*, SAI LA LIANG SHUI XIAN *Narcissus leonensis*, XUE SHENG SHUI XIAN *Narcissus nivalis*. Ref: 1207.

**15751 Norglaucine**

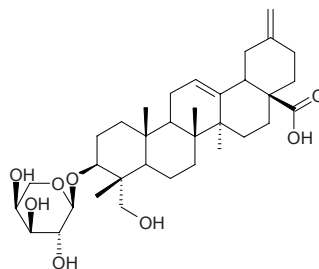
[21848-62-4] C<sub>20</sub>H<sub>23</sub>NO<sub>4</sub> (341.41). Source: *Alphonsea* spp., *Pseuduvaria* spp., *Magnolia* spp., *Liriodendron* spp., *Colubrina* spp., *Monimia* spp., *Duguetia* spp., *Chasmanthera* spp. Ref: 1521.

**15752 Norharman**

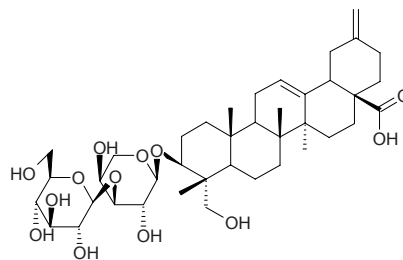
9*H*-Pyrido[3,4-*b*]indole [244-63-3] C<sub>11</sub>H<sub>8</sub>N<sub>2</sub> (168.20). mp 197°C. Source: YUAN ZHI *Polygala tenuifolia*. Ref: 538.

**15753 30-Norhederagenin-3-O-α-L-arabinopyranoside**

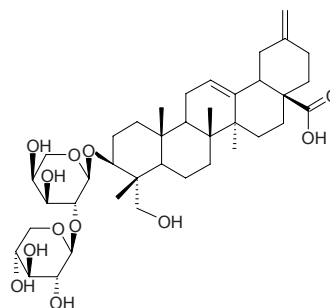
C<sub>34</sub>H<sub>52</sub>O<sub>8</sub> (588.79). Source: MU TONG *Akebia quinata*. Ref: 2723.

**15754 30-Norhederagenin-3-O-β-D-glucosyl(1→3)-α-L-arabinopyranoside**

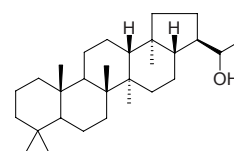
C<sub>40</sub>H<sub>62</sub>O<sub>13</sub> (750.93). Source: MU TONG *Akebia quinata*. Ref: 2723.

**15755 30-Norhederagenin-3-O-β-D-xylosyl(1→2)-α-L-arabinopyranoside**

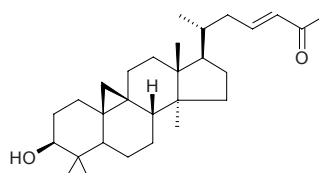
C<sub>39</sub>H<sub>60</sub>O<sub>12</sub> (720.91). Source: MU TONG *Akebia quinata*. Ref: 2723.

**15756 29-Nor-22-hopanol**

C<sub>29</sub>H<sub>50</sub>O (414.72). Source: BIAN YE TIE XIAN JUE *Adiantum caudatum*. Ref: 2724.

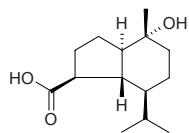
**15757 (23*E*)-27-Nor-3β-hydroxycycloart-23-en-25-one**

C<sub>29</sub>H<sub>46</sub>O<sub>2</sub> (426.69). Source: RONG SHU *Ficus microcarpa* (aerial root). Ref: 3524.

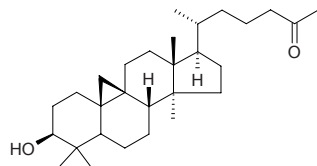


**15758 15-Nor-10-hydroxy-oplopan-4-oic acid**

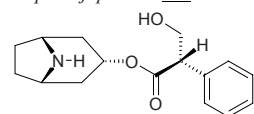
$C_{14}H_{24}O_3$  (240.35). Colorless oil. Source: HUANG HUA HAO *Artemisia annua* (seed). Ref: 3435.

**15759 27-nor-3β-Hydroxy-25-oxocycloartane**

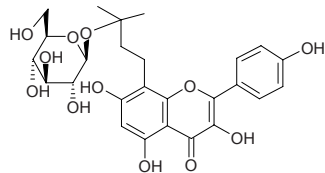
$C_{29}H_{48}O_2$  (428.70). mp 127~129°C,  $[\alpha]_D^{25} = +38.0^\circ$  ( $c = 0.3$ ,  $CHCl_3$ ). Source: RONG SHU *Ficus microcarpa* (aerial root). Ref: 3524.

**15760 Norhyoscyamine**

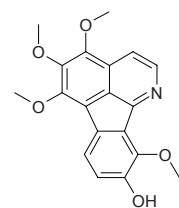
$C_{16}H_{21}NO_3$  (275.35). mp (-) 140.5°C. Source: DONG LANG DANG *Scopolia japonica*. Ref: 6.

**15761 Noricariside**

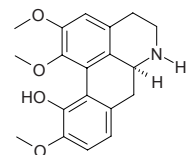
[20194-37-0]  $C_{26}H_{30}O_{12}$  (534.52). mp 271~273°C. Source: HUANG BAI *Phellodendron amurense*, *Phellodendron* spp. Ref: 2725.

**15762 Norimelutin**

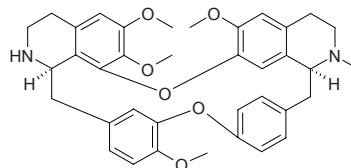
[152606-56-9]  $C_{19}H_{17}NO_5$  (339.35). Yellow powder Pharm: Cytotoxic ( $P_{388}$  *in vitro*). Source: XI SHENG TENG *Cissampelos pareira*. Ref: 2726.

**15763 Norisocorydine**

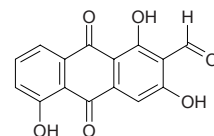
(+)-Norisocorydine  $C_{19}H_{21}NO_4$  (327.38). Source: YAN HU SUO *Corydalis yanhusuo* [Syn. *Corydalis turtchaninovii* f. *yanhusuo*], YOU GOU YING ZHAO *Artabotrys uncinatus* (root and stem)<sup>[3083]</sup>. Ref: 6, 3083.

**15764 (+)-2-Norisotetrandrine**

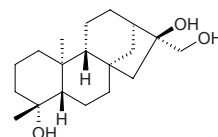
[123930-96-1]  $C_{37}H_{40}N_2O_6$  (608.74).  $[\alpha]_D = +100^\circ$  ( $c = 0.16$ ,  $CHCl_3$ ). Pharm: Cytotoxic (many cell strains); antimalarial (*Plasmodium falciparum*, chloroquine-sensitive strain D6,  $ED_{50} = 66.1$  ng/mL, chloroquine-endured strain W2,  $ED_{50} = 45.3$  ng/mL). Source: ZHI LI QIAN JIN TENG *Stephania erecta*. Ref: 2727, 2728.

**15765 Norjuzunal**

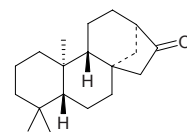
$C_{15}H_8O_6$  (284.23). mp 265°C. Source: HU CI *Damnacanthus indicus*. Ref: 6.

**15766 19-Nor-ent-kaurane-4α,16β,17-triol**

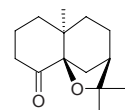
$C_{19}H_{32}O_3$  (308.47). Pharm: Antioxidant (inhibits superoxide anion generation, fMLP/CB,  $IC_{50} = (3.43 \pm 0.31) \mu\text{g/mL}$ ,  $p < 0.001$ , control DPI,  $IC_{50} = (0.13 \pm 0.06) \mu\text{g/mL}$ ,  $p < 0.001$ ). Source: FAN LI ZHI *Annona squamosa* (stem). Ref: 4950.

**15767 ent-17-Norkauran-16-one**

[1224-42-6]  $C_{19}H_{30}O$  (274.45). mp 117~118°C,  $[\alpha]_D^{20.3} = -29.0^\circ$  ( $c = 1.8$ ,  $CHCl_3$ ). Source: ZHE BEI MU *Fritillaria verticillata* var. *thunbergii* [*Fritillaria thunbergii*]. Ref: 2182.

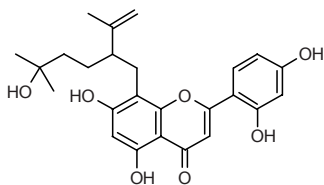
**15768 Norketoagarofuran**

$C_{14}H_{22}O_2$  (222.33). mp 56~57°C. Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13, 2788.

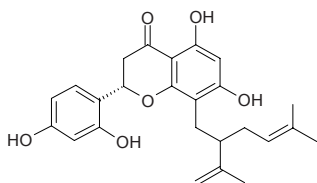


**15769 Norkurarinol**

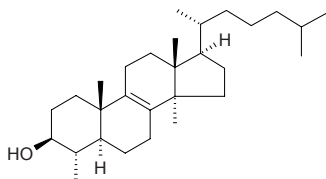
$C_{25}H_{28}O_7$  (440.50). **Pharm:** Tyrosinase inhibitor ( $IC_{50} = 2.1\mu\text{mol/L}$ , control Kojic acid,  $IC_{50} = 11.3\mu\text{mol/L}$ )<sup>[5409]</sup>. **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 2, 5409.

**15770 Norkurarinone**

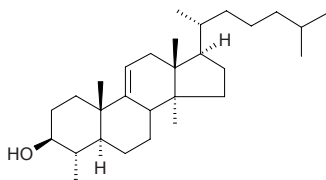
[34981-24-3]  $C_{25}H_{28}O_6$  (424.50). Crystals ( $C_6H_6$ ), mp 133°C,  $R_i[17, D] = +8^\circ$  (EtOH). **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 1521, 2729.

**15771 29-Norlanost-8-enol**

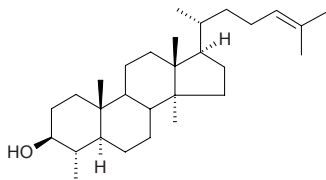
$C_{29}H_{50}O$  (414.72). **Source:** MAN TUO LUO ZI *Datura metel*, GOU QI ZI *Lycium chinense*. **Ref:** 2730.

**15772 29-Norlanost-9(11)-enol**

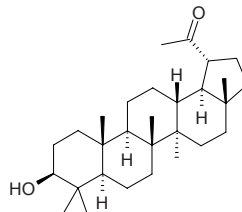
$C_{29}H_{50}O$  (414.72). **Source:** MAN TUO LUO ZI *Datura metel*, GOU QI ZI *Lycium chinense*, WAN TAO HUA ZI *Datura stramonium*. **Ref:** 2730.

**15773 29-Norlanosterol**

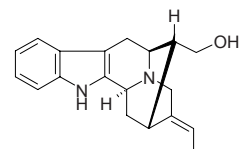
$C_{29}H_{50}O$  (414.72). **Source:** WAN TAO HUA ZI *Datura stramonium*. **Ref:** 2730.

**15774 30-Nor-lupan-3β-ol-20-one**

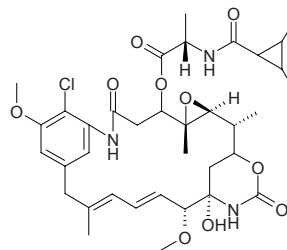
$C_{29}H_{48}O_2$  (428.70). mp 238~239°C, 237~239°C,  $[\alpha]_D^{25} = -10.2^\circ$ . **Source:** XIE WEI JU *Koelpinia linearis* (aerial parts). **Ref:** 3912.

**15775 Normacusine B**

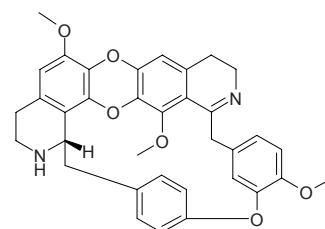
[604-99-9]  $C_{19}H_{22}N_2O$  (294.40). **Source:** MA QIAN ZI *Strychnos nux-vomica*. **Ref:** 2, 1521.

**15776 Normaytancyprine**

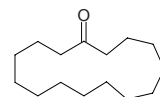
[84123-43-3]  $C_{36}H_{48}ClN_3O_{10}$  (718.25). Dark-green-brown microcrystals ( $CHCl_3$ -hexane), mp 143~145°C. **Pharm:** Antineoplastic (mus, *in vivo*,  $P_{88}$ , 0.4~12.5 $\mu\text{g/kg}$ , T/C = 145%~300%); cytotoxic (KB *in vitro*,  $ED_{50} = 10^{-6}$ ~ $10^{-5}\mu\text{g/mL}$ ). **Source:** DUO ZHI PU TE MU *Putterlickia verrucosa*. **Ref:** 2731.

**15777 Normenisarine**

$C_{35}H_{32}N_2O_6$  (576.66). mp 223°C. **Source:** MU FANG JI *Cocculus trilobus* [Syn. *Cocculus sarmentosus*]. **Ref:** 6.

**15778 Normuscone**

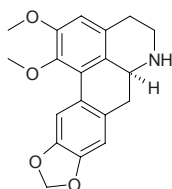
[502-72-7]  $C_{15}H_{28}O$  (224.39). **Source:** SHE XIANG *Moschus moschiferus*; *Moschus berezovskii*; *Moschus sifanicus*. **Ref:** 2, 1521.



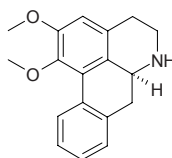


**15779 N-Nornantenine**

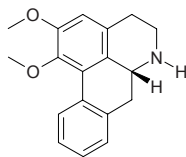
(S)-Nornantenine [15401-66-8] C<sub>19</sub>H<sub>19</sub>NO<sub>4</sub> (325.37). [ $\alpha$ ]<sub>D</sub><sup>22</sup> = +85c° (c = 0.75, EtOH). **Pharm:** Antileishmanial (*Leishmania panamensis*, IC<sub>50</sub> = (15±0.45)μmol/L, control Amphotericin B, IC<sub>50</sub> = (0.1±0.01)μmol/L; *Leishmania mexicana*, IC<sub>50</sub> = (24±0.03)μmol/L, Amphotericin B, IC<sub>50</sub> = (0.1±0.01)μmol/L; macrophage, IC<sub>50</sub> > 40μmol/L; HFF, IC<sub>50</sub> > 40μmol/L)<sup>[5424]</sup>. **Source:** JING JI GUA TAI MU *Guatteria dumetorum*, NAN TIAN ZHU ZI *Nandina domestica*, NAN TIAN ZHU GENG *Nandina domestica*. **Ref:** 2732, 2733, 5424.

**15780 (S)-Nornuciferine**

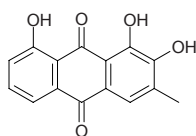
C<sub>18</sub>H<sub>19</sub>NO<sub>2</sub> (281.36). [ $\alpha$ ]<sub>D</sub><sup>22</sup> = +138c° (c = 0.22, EtOH). **Pharm:** Antileishmanial (*Leishmania panamensis*, IC<sub>50</sub> = (28±11)μmol/L, control Amphotericin B, IC<sub>50</sub> = (0.1±0.01)μmol/L; *Leishmania mexicana*, IC<sub>50</sub> = (14±1)μmol/L, Amphotericin B, IC<sub>50</sub> = (0.1±0.01)μmol/L; macrophage, IC<sub>50</sub> > 40μmol/L; HFF, IC<sub>50</sub> > 40μmol/L). **Source:** DA YE GUA TAI MU *Guatteria amplifolia*. **Ref:** 5424.

**15781 N-Nornuciferine**

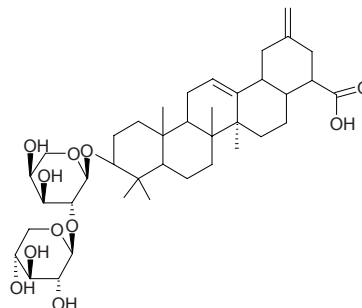
C<sub>18</sub>H<sub>19</sub>NO<sub>2</sub> (281.36). mp (-) 128~129°C. **Pharm:** Diuretic; LD<sub>50</sub> (mus, ip) = 323μmol/kg. **Source:** HE HUA YU LAN *Magnolia grandiflora*, HE YE *Nelumbo nucifera*, JIN HUANG LIAN *Nelumbo lutea*, LIAN ZI *Nelumbo nucifera*, YUAN HUA FAN LI ZHI *Annona glabra*. **Ref:** 6, 658.

**15782 Norobtusifolin**

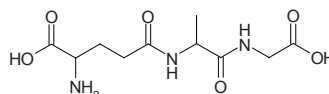
C<sub>15</sub>H<sub>10</sub>O<sub>5</sub> (270.24). **Pharm:** Cytotoxic (hmn cancer cell line). **Source:** TIE ZI *Myrsine africana*. **Ref:** 658.

**15783 30-Noroleanolic acid-3-O-β-D-xylosyl(1→2)-α-L-arabinopyranoside**

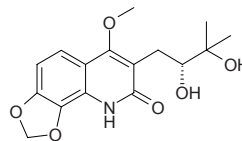
C<sub>39</sub>H<sub>60</sub>O<sub>11</sub> (704.91). **Source:** MU TONG *Akebia quinata*. **Ref:** 2723.

**15784 Norophthalmic acid**

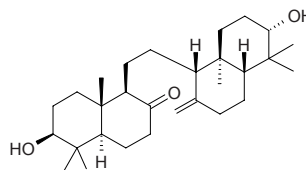
[16305-88-7] C<sub>10</sub>H<sub>17</sub>N<sub>3</sub>O<sub>6</sub> (275.26). **Source:** QUN DAI CAI *Undaria pinnatifida*. **Ref:** 2735.

**15785 Nor-orixine**

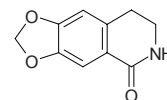
C<sub>16</sub>H<sub>19</sub>NO<sub>6</sub> (321.33). mp 199~200°C. **Source:** CHOU SHAN YANG *Orixa japonica*. **Ref:** 6.

**15786 26-Nor-8-oxo-α-onocerin**

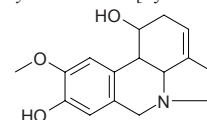
C<sub>29</sub>H<sub>48</sub>O<sub>3</sub> (444.70). **Source:** YU BAI SHI SONG *Lycopodium obscurum*. **Ref:** 2736.

**15787 Noroxyhydrastinine**

[21796-14-5] C<sub>10</sub>H<sub>9</sub>NO<sub>3</sub> (191.19). Crystals (MeOH or C<sub>6</sub>H<sub>6</sub>), mp 182~183°C, 187~187.5°C. **Source:** GAO SHAN TANG SONG CAO *Thalictrum alpinum*, MA WEI LIAN *Thalictrum foliolosum*, TIE XIAN JUE YE TANG SONG CAO *Thalictrum minus* var. *adiantifolium*, ZOU WEN TANG SONG CAO *Thalictrum rugosum*. **Ref:** 1521, 2737, 2738.

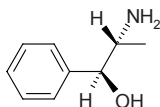
**15788 Norpluviine**

C<sub>16</sub>H<sub>19</sub>NO<sub>3</sub> (273.33). mp 239~241°C (dec), 274~275°C. **Source:** SHI SUAN *Lycoris radiata* [Syn. *Amaryllis radiata*]. **Ref:** 6.

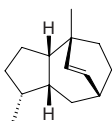


**15789 D-Norpseudoephedrine**

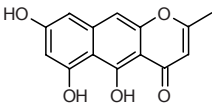
*D*-Cathine [37577-07-4] C<sub>9</sub>H<sub>13</sub>NO (151.21). Plates (MeOH), mp 77°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +33.14° (EtOH). **Pharm:** Anorexic; CNS stimulant. **Source:** BAN ZI MA HUANG *Ephedra lepidosperma* (herbaceous twigs: content = 0.011%)<sup>[5508]</sup>, DAN ZI MA HUANG *Ephedra monosperma* (herbaceous twigs: content = 0.245%)<sup>[5508]</sup>, KE SHI MEI DENG MU *Maytenus krukovii*, LI JIANG MA HUANG *Ephedra likiangensis* (herbaceous twigs: mean content of 3 origins = 0.160%)<sup>[5508]</sup>, MA HUANG *Ephedra sinica* (herbaceous twigs: mean content of 5 origins = 0.076%)<sup>[5508]</sup>, MO GUO MA HUANG *Ephedra przewalskii* (herbaceous twigs: mean content of 2 origins = 0.013%)<sup>[5508]</sup>, MU ZEI MA HUANG *Ephedra equisetina* (herbaceous twigs: mean content of 2 origins = 0.321%)<sup>[5508]</sup>, QIAO CHA *Catha edulis*, SHAN LING MA HUANG *Ephedra gerardiana* (herbaceous twigs: content = 0.075%)<sup>[5508]</sup>, SHU ZHUANG MA HUANG *Ephedra procera* (herbaceous twigs: content = 0.0012%)<sup>[5508]</sup>, SHUANG SUI MA HUANG *Ephedra distachya* (herbaceous twigs: content = 0.0017%)<sup>[5508]</sup>, XI ZANG ZHONG MA HUANG *Ephedra intermedia* var. *tibetica* (herbaceous twigs: content = 0.026%)<sup>[5508]</sup>, XI ZI MA HUANG *Ephedra regeliana* (herbaceous twigs: content = 0.0015%)<sup>[5508]</sup>, YI ZHU AI MA HUANG *Ephedra minuta* var. *dioeca* (herbaceous twigs: mean content of 2 origins = 0.065%)<sup>[5508]</sup>, ZANG MA HUANG *Ephedra saxatilis* (herbaceous twigs: content = 0.028%)<sup>[5508]</sup>, ZHONG MA HUANG *Ephedra intermedia* (herbaceous twigs: mean content of 3 origins = 0.110%)<sup>[5508]</sup>, *Ephedra tweediana* (herbaceous twigs: content = 0.0003%)<sup>[5508]</sup>, *Ephedra* sp. **Ref:** 2, 6, 658, 660, 1521, 5508.

**15790 (-)-Norrotundene**

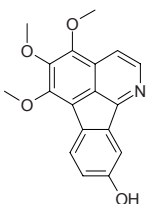
C<sub>14</sub>H<sub>22</sub> (190.33). **Source:** XIANG FU *Cyperus rotundus* (essential oil). **Ref:** 5210.

**15791 Nor-rubrofusarin**

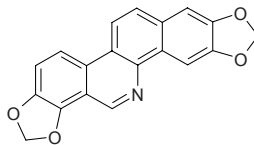
C<sub>14</sub>H<sub>10</sub>O<sub>5</sub> (258.23). **Source:** JUE MING ZI *Cassia tora*. **Ref:** 2.

**15792 Norrufescine**

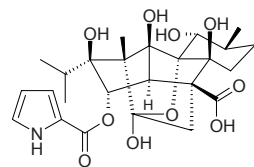
[58189-34-7] C<sub>18</sub>H<sub>15</sub>NO<sub>4</sub> (309.32). Yellow needles, mp 236–238°C. **Pharm:** Cytotoxic (P<sub>388</sub>). **Source:** HONG A BU TA CAO *Abuta rufescens*, XI SHENG TENG *Cissampelos pareira*, YI MEI NI A BU TA CAO *Abuta imene*, *Telitoxicum peruvianum*. **Ref:** 2739, 2740, 2741.

**15793 Norsanguinarine**

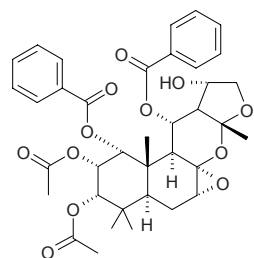
C<sub>19</sub>H<sub>11</sub>NO<sub>4</sub> (317.30). **Source:** YING SU KE *Papaver somniferum*. **Ref:** 6.

**15794 20-Norspiganthine-5-carboxylic acid**

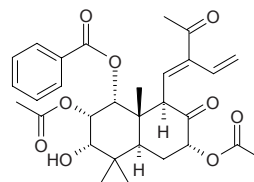
C<sub>25</sub>H<sub>33</sub>NO<sub>10</sub> (507.54). Crystals (CHCl<sub>3</sub>:MeOH = 1:1), mp > 300°C, [ $\alpha$ ]<sub>D</sub> = +15° (c = 0.4). **Source:** QU CHONG CAO *Spigelia anthelmia* (aerial parts). **Ref:** 5139.

**15795 Norstaminol A**

C<sub>37</sub>H<sub>42</sub>O<sub>12</sub> (678.74). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells, IC<sub>50</sub> = 44.4 μmol/L; control *L*-NMMA, IC<sub>50</sub> = 26.0 μmol/L, Polymixin B, IC<sub>50</sub> = 27.8 μg/mL, Dexamethasone IC<sub>50</sub> = 170 μmol/L). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts). **Ref:** 4322.

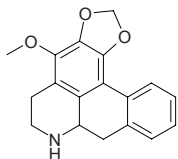
**15796 Norstaminone A**

C<sub>30</sub>H<sub>36</sub>O<sub>9</sub> (540.62). Colorless amorphous solid, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +28.9° (c = 0.10, CHCl<sub>3</sub>). **Pharm:** Cytotoxic (antiproliferative, Colon26-L5, ED<sub>50</sub> = 12.8 μg/mL, control 5-Fluorouracil, ED<sub>50</sub> = 0.015 μg/mL; HT1080, ED<sub>50</sub> = 23.2 μg/mL, 5-Fluorouracil, ED<sub>50</sub> = 0.48 μg/mL). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0029% dw). **Ref:** 3053.

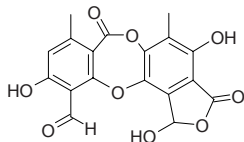


**15797 Norstephalagine**

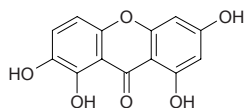
(-)-Norstephalagine [80151-82-2]  $C_{18}H_{17}NO_3$  (295.34). Crystals (isopropyl ether), mp 94–95°C,  $[\alpha]_D = -35^\circ$  ( $c = 0.98$ , alcohol). **Pharm:** Inhibits  $^3H$ -dopamine absorption by synapse of rat striatum; smooth muscle relaxant (rat uterus, contraction induced by KCl). **Source:** FEI ZHOU FAN LI ZHI *Hexalobus crispiflorus*, HUANG YANG YE MU BAN SHU *Xylopiya buxifolia*, JI XIANG YING ZHAO *Artabotrys odoratissimus*, MAN GE YING ZHAO *Artabotrys maingayi*, XIU LI YING ZHAO *Artabotrys venustus*, *Isolona maitlandii*, YOU GOU YING ZHAO *Artabotrys uncinatus* (root and stem)<sup>[3083]</sup>. **Ref:** 2742, 2743, 2744, 2745, 2746, 2747, 2748, 2749, 3083.

**15798 Norstictic acid**

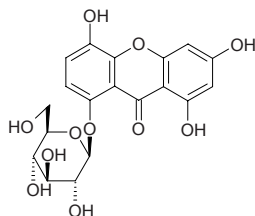
[571-67-5]  $C_{18}H_{12}O_9$  (372.29). Needles (Me<sub>2</sub>CO aq.), mp 286–287°C. **Source:** JIN SI SHUA *Lethariella cladonioides*, XIAO LA BA *Cladonia verticillata*. **Ref:** 660, 1521.

**15799 Norswertianin**

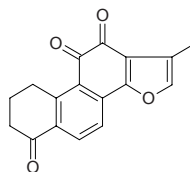
$C_{13}H_8O_6$  (260.21). **Pharm:** Mutagen (*Salmonella typhimurium*). **Source:** PU TONG ZHANG YA CAI *Swertia swertiopsis*, RI BEN ZHANG YA CAI *Swertia japonica*, SU GEN ZHANG YA CAI *Swertia perennis*. **Ref:** 658.

**15800 Norswertianol**

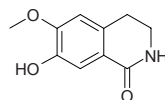
Bellidin 8-*O*-β-glucopyranoside  $C_{19}H_{18}O_{11}$  (422.35). **Pharm:** Antibacterial (*Mycobacterium tuberculosis*); AChE inhibitor (MIC = 0.50 μg = 1.20 nmol; control Galanthamine MIC = 0.01 μg = 0.03 nmol, Physostigmine MIC = 0.005 μg = 0.002 nmol, Huperzine A MIC = 0.002 μg = 0.0008 nmol). **Source:** LUAN DA SHAN ZHANG YA CAI *Swertia randainensis*, RI BEN ZHANG YA CAI *Swertia japonica*, ZI SE ZHANG YA CAI *Swertia purpurascens*, TIAN YE LONG DAN *Gentiana campestris* (leaf). **Ref:** 658, 5039.

**15801 Nortanshinone**

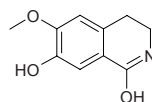
$C_{17}H_{12}O_4$  (280.28). **Pharm:** Cytotoxic. **Source:** DAN SHEN *Salvia miltiorrhiza*. **Ref:** 2, 1521.

**15802 Northalifoline (tautomeric structure 1)**

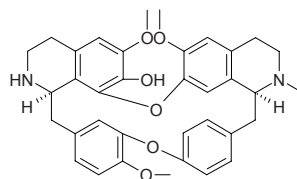
$C_{10}H_{11}NO_3$  (193.20). **Source:** BIAN FU GE GEN *Menispermum dauricum*, HEI KE NAN *Lindera megaphylla* (pedicels). **Ref:** 1521, 3792.

**15803 Northalifoline (tautomeric structure 2)**

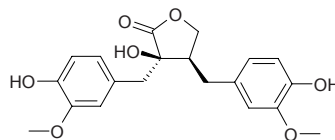
$C_{10}H_{11}NO_3$  (193.20). **Source:** BIAN FU GE GEN *Menispermum dauricum*, HEI KE NAN *Lindera megaphylla* (pedicels). **Ref:** 1521, 3792.

**15804 (+)-2-Northalrugosine**

[65995-42-8]  $C_{36}H_{38}N_2O_6$  (594.71).  $[\alpha]_D = +209^\circ$  ( $c = 0.16$ , CHCl<sub>3</sub>). **Pharm:** Cytotoxic (non-selective); antimalarial (*Plasmodium falciparum*, chloroquine-sensitive strain D6, ED<sub>50</sub> = 68.6 ng/mL; chloroquine-endured strain W2, ED<sub>50</sub> = 125.1 ng/mL). **Source:** ZHI LI QIAN JIN TENG *Stephania erecta*, *Pycnarrhena ozantha*. **Ref:** 2750, 2728.

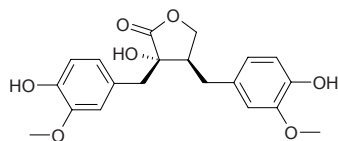
**15805 (+)-Nortrachelogenin**

(+)-Wikstromol [61521-74-2]  $C_{20}H_{22}O_7$  (374.39). **Pharm:** DPPH scavenger (IC<sub>50</sub> = 90.1 μmol/L); inhibits nitric oxide (NO) production inactive (IC<sub>50</sub> > 200 μmol/L). **Source:** LIAO GE WANG GEN *Wikstroemia indica*, CHANG YE SONG *Pinus palustris*. **Ref:** 1521, 4526.

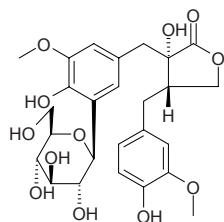


**15806 (-)-Nortrachelogenin**

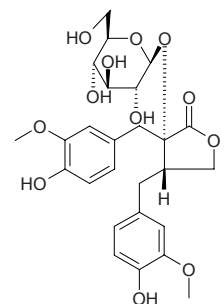
(-)-Wikstromol [34444-37-6]  $C_{20}H_{22}O_7$  (374.39). **Pharm:** Antineoplastic (leukemia); anti-HIV. **Source:** AI JI JIA HU CI *Carissa edulis*, CHANG YE SONG *Pinus palustris*, DI ZHONG HAI JU *Cnicus benedictu*, RI BEN LUO SHI *Trachelospermum asiaticum*, WU ZHAO LONG *Ipomoea cairica* [Syn. *Ipomoea palmata*]. **Ref:** 1521.

**15807 Nortrachelogenin-5'-C-β-D-glucopyranoside**

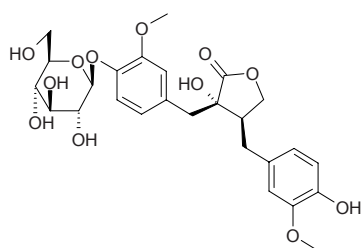
$C_{26}H_{32}O_{12}$  (536.54). White amorphous solid,  $[\alpha]_D^{25} = -38^\circ$  ( $c = 0.62$ , MeOH). **Source:** LUO SHI TENG *Trachelospermum jasminoides* (stem and leaf). **Ref:** 5051.

**15808 Nortrachelogenin-8'-O-β-D-glucopyranoside**

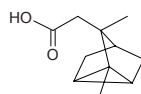
$C_{26}H_{32}O_{12}$  (536.54). White amorphous solid,  $[\alpha]_D^{25} = -58^\circ$  ( $c = 0.57$ , MeOH). **Source:** LUO SHI TENG *Trachelospermum jasminoides* (stem and leaf). **Ref:** 5051.

**15809 Nortracheloside**

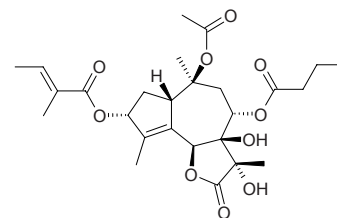
$C_{26}H_{32}O_{12}$  (536.54). mp 95~100°C. **Pharm:** DPPH scavenger ( $IC_{50} = 84.2 \mu\text{mol/L}$ )<sup>[4526]</sup>; NO production inhibitor inactive ( $IC_{50} > 200 \mu\text{mol/L}$ )<sup>[4526]</sup>. **Source:** DI ZHONG HAI JU *Cnicus benedictu*, LIAO GE WANG GEN *Wikstroemia indica*, LUO SHI TENG *Trachelospermum jasminoides*. **Ref:** 6, 1521, 4526.

**15810 Nortricycloekasantalic acid**

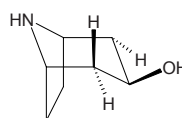
[59300-52-6]  $C_{11}H_{16}O_2$  (180.25). Crystals (EtOH), mp 93°C,  $[\alpha]_D = -33.3^\circ$  (EtOH). **Source:** TAN XIANG *Santalum album*. **Ref:** 2752.

**15811 Nortrilobolide**

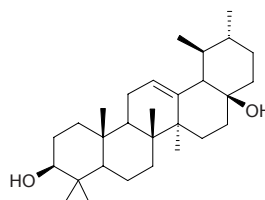
[136051-63-3]  $C_{26}H_{36}O_{10}$  (508.57).  $[\alpha]_D^{25} = -49^\circ$  ( $c = 0.05$ ,  $\text{CHCl}_3$ ). **Pharm:** Histamine secretion promotor. **Source:** DU HU LUO BO *Thapsia garganica*. **Ref:** 2753.

**15812 Nor-ψ-tropine**

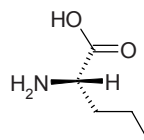
$C_7H_{13}NO$  (127.19). **Pharm:** α-Glucosidase inhibitor inactive (control 1-Deoxynojirimucin,  $IC_{50} = 0.98 \text{mmol/L}$ , Fagoming,  $IC_{50} = 15 \text{mmol/L}$ ). **Source:** SANG BAI PI *Morus alba*. **Ref:** 4161.

**15813 28-Nor-urs-12-ene-3β-,17β-diol**

$C_{29}H_{48}O_2$  (428.70). Amorphous solid,  $[\alpha]_D^{20} = +26^\circ$  ( $c = 0.02$ ,  $\text{CHCl}_3$ ). **Pharm:** Cytotoxic (HL-60 cells,  $IC_{50} = (51 \pm 1) \mu\text{mol/L}$ ). **Source:** ZHI ZHUANG E AN *Eucalyptus cladocalyx* (leaf). **Ref:** 5259.

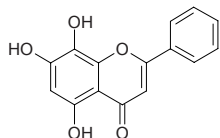
**15814 Norvaline**

$C_5H_{11}NO_2$  (117.15). **Source:** DENG XIN CAO *Juncus effusus*, PING GUO *Malus pumila*. **Ref:** 660.

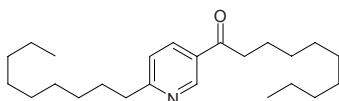


**15815 Norwogonin**

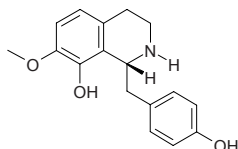
[4443-09-8] C<sub>15</sub>H<sub>10</sub>O<sub>5</sub> (270.24). **Pharm:** Mutagen (*Salmonella typhimurium* TA100, with no action in TA98). **Source:** DIAN HUANG QIN *Scutellaria amoena*, HUANG QIN *Scutellaria baicalensis*, LIU YE CAI HUANG QIN *Scutellaria epilobifolia*, ZI BEI HUANG QIN *Scutellaria discolor*. **Ref:** 2, 658, 660.

**15816 2-Noryl-5-decanoylpyridine**

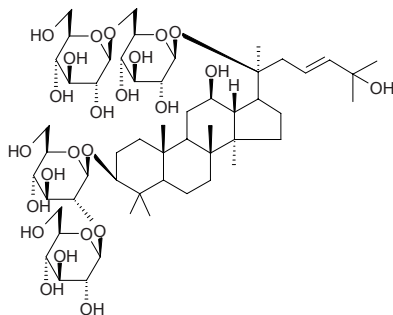
C<sub>24</sub>H<sub>41</sub>NO (359.60). **Source:** YU XING CAO *Houttuynia cordata*. **Ref:** 2428.

**15817 Noryzaphine**

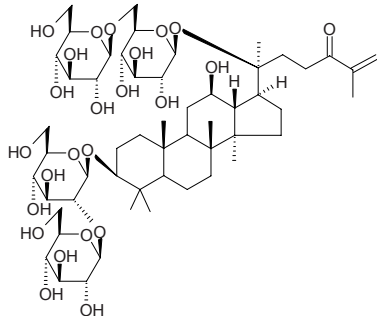
C<sub>17</sub>H<sub>19</sub>NO<sub>3</sub> (285.35). **Source:** KU DI DING *Corydalis bungeana*. **Ref:** 2761.

**15818 Notoginsenoside A**

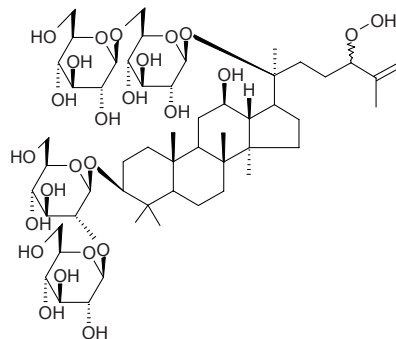
C<sub>54</sub>H<sub>92</sub>O<sub>24</sub> (1125.32). **Pharm:** Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level). **Source:** SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. **Ref:** 4139.

**15819 Notoginsenoside B**

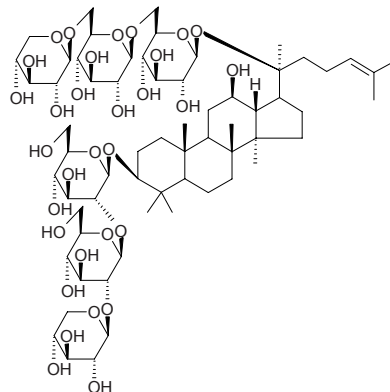
[193895-26-0] C<sub>54</sub>H<sub>90</sub>O<sub>24</sub> (1123.31). Crystals (MeOH aq.), mp 201~204 °C, [α]<sub>D</sub><sup>23</sup> = +17.8° (c = 0.1, MeOH). **Source:** SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. **Ref:** 1521.

**15820 Notoginsenoside C**

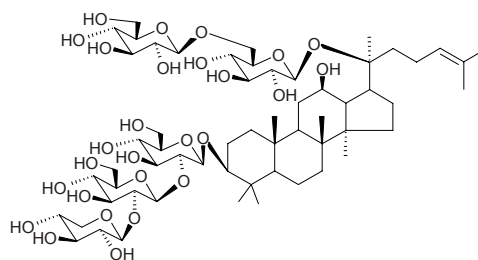
C<sub>54</sub>H<sub>92</sub>O<sub>25</sub> (1141.32). **Pharm:** Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level). **Source:** SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. **Ref:** 4139.

**15821 Notoginsenoside D**

C<sub>64</sub>H<sub>108</sub>O<sub>31</sub> (1373.56). **Pharm:** Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level)<sup>[4139]</sup>. **Source:** SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.009%dw)<sup>[4702]</sup>. **Ref:** 4139, 4702.

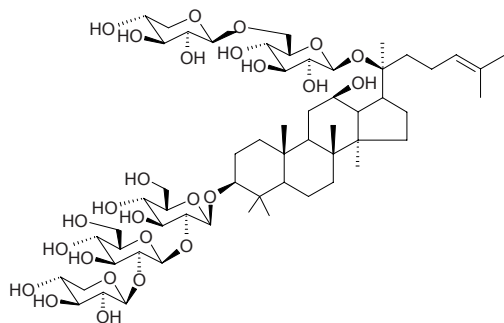
**15822 Notoginsenoside Fa**

C<sub>59</sub>H<sub>100</sub>O<sub>27</sub> (1241.44). **Pharm:** Neurite outgrowth enhancer (hmn neuroblastoma SK-N-SH cells, 100 μmol/L, total length of neurites = 112.5 μm, number of varicosity per cell = 0.53, p < 0.05; control, total length of neurites = 45.3 μm, number of varicosity per cell = 0.10)<sup>[4647]</sup>. **Source:** SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.41%dw), ZHU JIE SAN QI *Panax pseudo-ginseng* var. *japonicus* (underground part: yield = 0.011%dw). **Ref:** 4647, 4702.

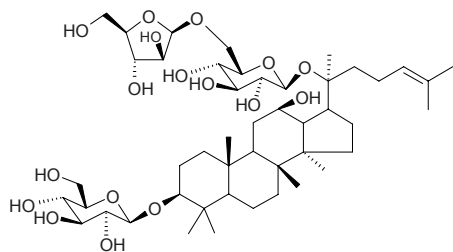


**15823 Notoginsenoside Fc**

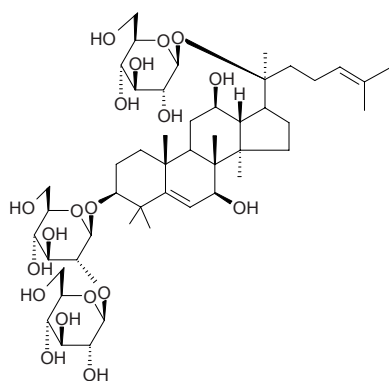
$C_{58}H_{98}O_{26}$  (1211.41). Source: ZHU JIE SAN QI *Panax pseudo-ginseng* var. *japonicus* (underground part: yield = 0.0048%dw). Ref: 4647.

**15824 Notoginsenoside Fe**

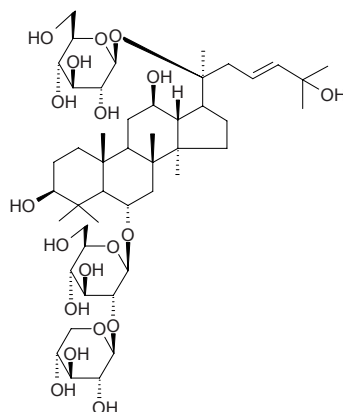
$C_{47}H_{80}O_{17}$  (917.15). Source: SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower: mean content of 8 origins = 1.15%)<sup>[5525]</sup>, ZHU JIE SAN QI *Panax pseudo-ginseng* var. *japonicus* (underground part: yield = 0.0008%dw)<sup>[4647]</sup>. Ref: 4647, 5525.

**15825 Notoginsenoside G**

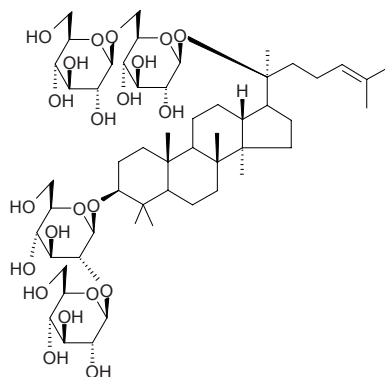
$C_{48}H_{80}O_{19}$  (961.16). Pharm: Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level)<sup>[4139]</sup>. Source: SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], ZHU JIE SAN QI *Panax pseudo-ginseng* var. *japonicus* (underground part: yield = 0.0008%dw)<sup>[4647]</sup>. Ref: 4139, 4647.

**15826 Notoginsenoside H**

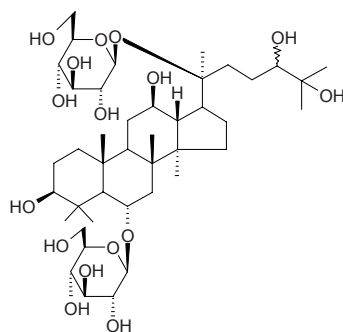
$C_{47}H_{80}O_{19}$  (949.15). Pharm: Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level). Source: SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 4139.

**15827 Notoginsenoside I**

$C_{54}H_{92}O_{22}$  (1093.32). Pharm: Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level). Source: SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 4139.

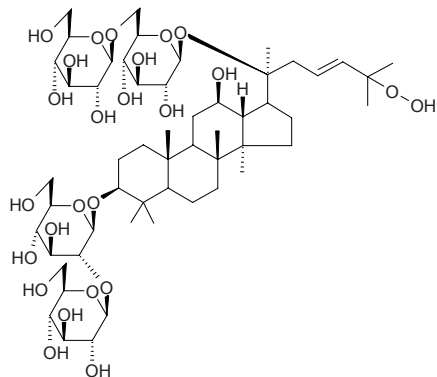
**15828 Notoginsenoside J**

$C_{42}H_{74}O_{16}$  (835.05). Source: SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 4139.

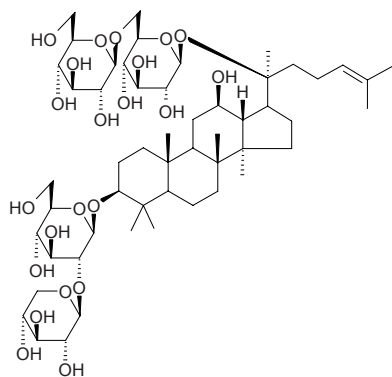


**15829 Notoginsenoside K**

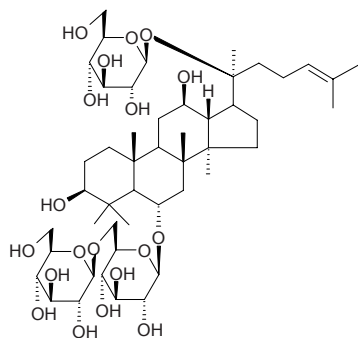
$C_{54}H_{92}O_{25}$  (1141.32). **Pharm:** Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level). **Source:** SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. **Ref:** 4139.

**15830 Notoginsenoside L**

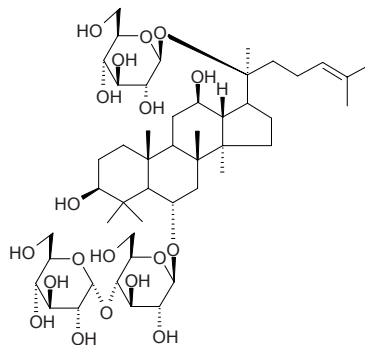
$C_{53}H_{90}O_{22}$  (1079.30). Colorless fine crystals (aqueous MeOH), mp 195–197°C,  $[\alpha]_D^{28} = +20.4^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level). **Source:** SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. **Ref:** 4139.

**15831 Notoginsenoside M**

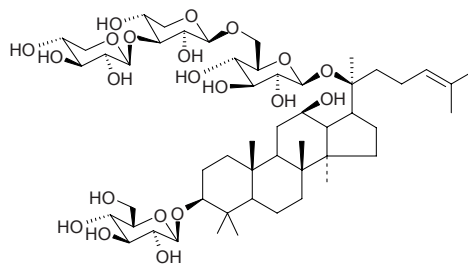
$C_{48}H_{82}O_{19}$  (963.18). Colorless fine crystals (aqueous MeOH), mp 187–189°C,  $[\alpha]_D^{28} = +24.7^\circ$  ( $c = 0.3$ , MeOH). **Source:** SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. **Ref:** 4139.

**15832 Notoginsenoside N**

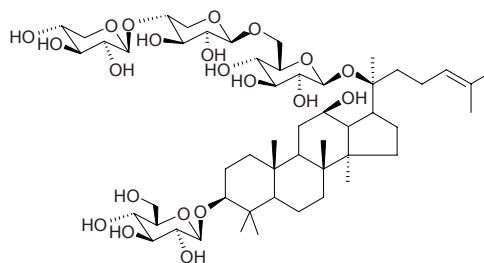
$C_{48}H_{82}O_{19}$  (936.18). Colorless fine crystals (aqueous MeOH), mp 186–188°C,  $[\alpha]_D^{28} = +50.0^\circ$  ( $c = 0.3$ , MeOH). **Pharm:** Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level). **Source:** SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. **Ref:** 4139.

**15833 Notoginsenoside O**

3-*O*- $\beta$ -*D*-Glucopyranosyl-20(*S*)-protopanaxadiol 20-*O*- $\beta$ -*D*-xylopyranosyl (1→3)- $\beta$ -*D*-xylopyranosyl(1→6)- $\beta$ -*D*-glucopyranoside  $C_{52}H_{88}O_{21}$  (1049.27). Colorless fine crystals, mp 196–198°C (CHCl<sub>3</sub>–MeOH),  $[\alpha]_D^{28} = +0.3^\circ$  ( $c = 1.30$ , MeOH). **Source:** SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.010%dw). **Ref:** 4702.

**15834 Notoginsenoside P**

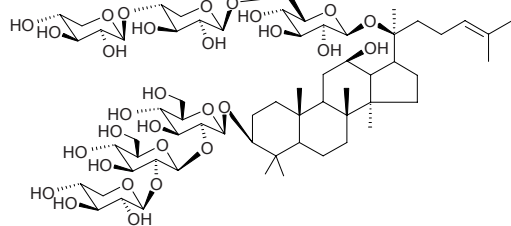
3-*O*- $\beta$ -*D*-Glucopyranosyl-20(*S*)-protopanaxadiol 20-*O*- $\beta$ -*D*-xylopyranosyl(1→4)- $\beta$ -*D*-xylopyranosyl(1→6)- $\beta$ -*D*-glucopyranoside  $C_{52}H_{88}O_{21}$  (1049.27). Colorless fine crystals, mp 194–196°C (CHCl<sub>3</sub>–MeOH),  $[\alpha]_D^{28} = +2.1^\circ$  ( $c = 1.00$ , MeOH). **Source:** SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.011%dw). **Ref:** 4702.



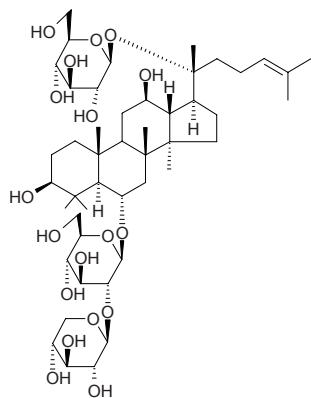


**15835 Notoginsenoside Q**

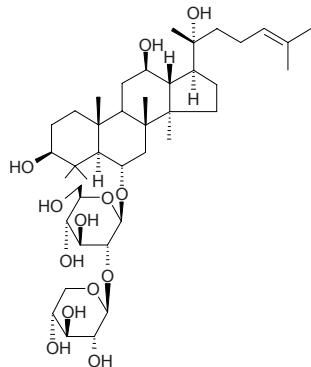
3-*O*- $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl-20(*S*)-protopanaxadiol 20-*O*- $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 4)- $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>63</sub>H<sub>106</sub>O<sub>30</sub> (1343.53). Colorless fine crystals, mp 194~196°C (CHCl<sub>3</sub>-MeOH), [ $\alpha$ ]<sub>D</sub><sup>28</sup> = -0.6° (c = 0.70, MeOH). [Source](#): SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.014%dw). [Ref](#): 4702.

**15836 Notoginsenoside R<sub>1</sub>**

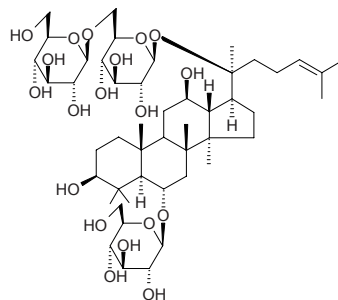
C<sub>47</sub>H<sub>80</sub>O<sub>18</sub> (933.15). [Pharm](#): Anti-inflammatory (total saponins of SAN QI, *Panax pseudoginseng* var. *notoginseng*); hepatoprotective (inhibits activation of macrophages, inhibits increase in sALT and sAST levels, *in vivo*, D-GalN/LPS-induced liver injury in mouse, 100mg/kg ip for sALT, InRt = 87%; 100mg/kg ip for sAST, InRt = 89%; control Hydrocortisone, 20mg/kg ip for sALT, InRt = 99%; 20mg/kg ip for sAST, InRt = 97%)<sup>[4702]</sup>. [Source](#): REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], ZHU JIE SAN QI *Panax pseudo-ginseng* var. *japonicus* (underground part: yield = 0.023%dw)<sup>[4610]</sup>. [Ref](#): 2, 658, 4610, 4702.

**15837 Notoginsenoside R<sub>2</sub>**

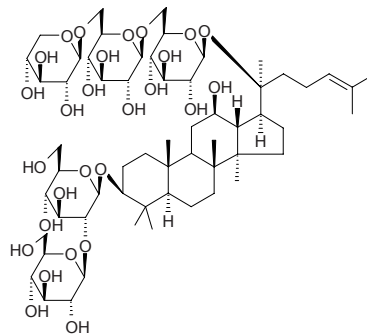
[80418-25-3] C<sub>41</sub>H<sub>70</sub>O<sub>13</sub> (771.01). [Source](#): SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. [Ref](#): 2, 1521.

**15838 Notoginsenoside R<sub>3</sub>**

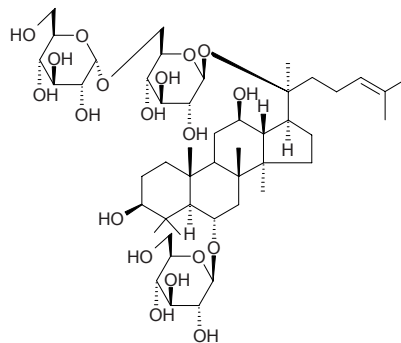
C<sub>48</sub>H<sub>82</sub>O<sub>19</sub> (963.18). [Source](#): SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. [Ref](#): 2.

**15839 Notoginsenoside R<sub>4</sub>**

C<sub>59</sub>H<sub>100</sub>O<sub>27</sub> (1241.44). [Pharm](#): Neurite outgrowth enhancer (hmn neuroblastoma SK-N-SH cells, 100μmol/L, total length of neurites = 116.1μm, number of varicosity per cell = 0.68, p<0.05; control, total length of neurites = 45.3μm, number of varicosity per cell = 0.10)<sup>[4647]</sup>. [Source](#): REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], ZHU JIE SAN QI *Panax pseudo-ginseng* var. *japonicus* (underground part: yield = 0.0143%dw)<sup>[4647]</sup>. [Ref](#): 2, 1521, 4647.

**15840 Notoginsenoside R<sub>6</sub>**

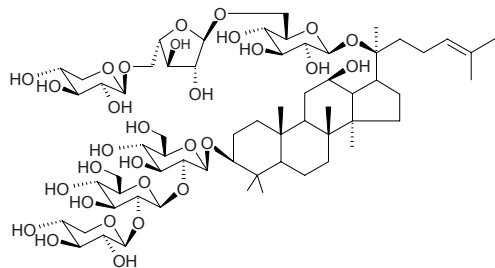
C<sub>48</sub>H<sub>82</sub>O<sub>19</sub> (936.18). [Pharm](#): Hepatoprotective (inhibits activation of macrophages, inhibits increase in sALT and sAST levels, *in vivo*, D-GalN/LPS-induced liver injury in mouse, 100mg/kg ip for sALT, InRt = 32%; 100mg/kg ip for sAST, InRt = 44%; control Hydrocortisone, 20mg/kg ip for sALT, InRt = 99%; 20mg/kg ip for sAST, InRt = 97%)<sup>[4702]</sup>. [Source](#): SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], ZHU JIE SAN QI *Panax pseudo-ginseng* var. *japonicus* (underground part: yield = 0.0058%dw)<sup>[4610]</sup>. [Ref](#): 2, 1521, 4610, 4702.



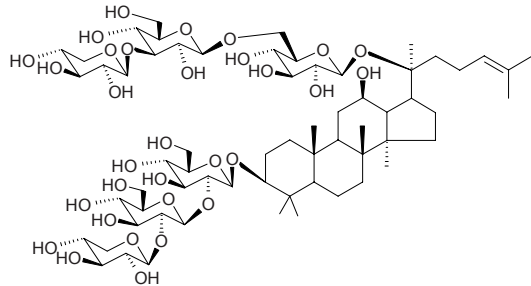


**15841 Notoginsenoside S**

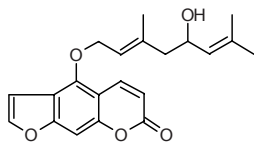
3-*O*- $\beta$ -*D*-Xylopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl-20(*S*)-protopanaxadiol 20-*O*- $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 5)- $\alpha$ -*L*-arabinofuranosyl(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>63</sub>H<sub>106</sub>O<sub>30</sub> (1343.53). Colorless fine crystals, mp 186–188°C (CHCl<sub>3</sub>–MeOH),  $[\alpha]_D^{28} = -8.7^\circ$  ( $c = 1.40$ , MeOH). **Source:** SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.029%dw). **Ref:** 4702.

**15842 Notoginsenoside T**

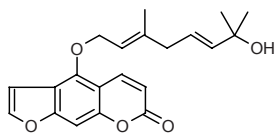
3-*O*- $\beta$ -*D*-Xylopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl-20(*S*)-protopanaxadiol 20-*O*- $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 3)- $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>64</sub>H<sub>108</sub>O<sub>31</sub> (1373.56). Colorless fine crystals, mp 196–198°C (CHCl<sub>3</sub>–MeOH),  $[\alpha]_D^{28} = +6.8^\circ$  ( $c = 1.20$ , MeOH). **Source:** SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.008%dw). **Ref:** 4702.

**15843 Notopterol**

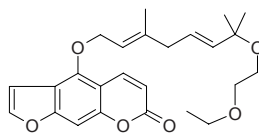
[88206-46-6] C<sub>21</sub>H<sub>22</sub>O<sub>5</sub> (354.41). **Pharm:** Analgesic (mus, orl, acetate acid-induced tail-swing model, presents dose-response relationship); sedative (mus, orl, 10–30mg/kg, extends sleeping time induced by pentobarbital); anti-inflammatory (mouse, orl, 100mg/kg, inhibits increase of vaso-permeability). **Source:** QIANG HUO *Notopterygium incisum*, KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*]. **Ref:** 2, 325, 507, 566, 660, 1826.

**15844 Notoptol**

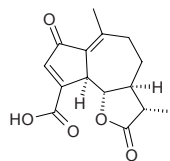
[88206-49-9] C<sub>21</sub>H<sub>22</sub>O<sub>5</sub> (354.41). **Source:** QIANG HUO *Notopterygium incisum*. **Ref:** 2, 507.

**15845 Notoptolide**

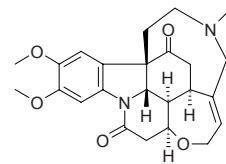
5-(2*E*)-3,7-dimethyl-5-ethoxy-2,6-octadienyloxy psoralen C<sub>25</sub>H<sub>30</sub>O<sub>6</sub> (426.51). Colorless oleaginous substance. **Source:** QIANG HUO *Notopterygium incisum*. **Ref:** 325.

**15846 Notoserolide**

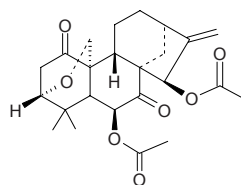
C<sub>15</sub>H<sub>16</sub>O<sub>5</sub> (276.29). Yellowish prismatic crystals, mp 238–240°C,  $[\alpha]_D^{20} = -11^\circ$  (MeOH). **Source:** LING YE ZI JU *Notoseris rhombiformis*. **Ref:** 2217.

**15847 Novacine**

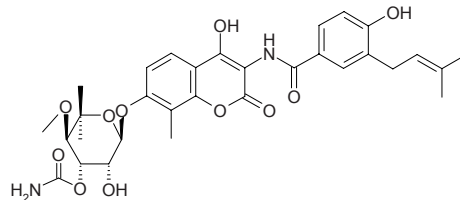
[466-64-8] C<sub>24</sub>H<sub>28</sub>N<sub>2</sub>O<sub>5</sub> (424.50). mp 231–232°C. **Source:** MA QIAN ZI *Strychnos nux-vomica*. **Ref:** 6, 542.

**15848 Novelrabdosin**

[92627-27-5] C<sub>24</sub>H<sub>30</sub>O<sub>7</sub> (430.50). mp 230–232°C,  $[\alpha]_D^{13} = -175.5^\circ$  ( $c = 0.98$ , C<sub>5</sub>H<sub>5</sub>N). **Source:** XIAN MAI XIANG CHA CAI *Rabdosia nervosa*, **Ref:** 2763, 2764, 4067.

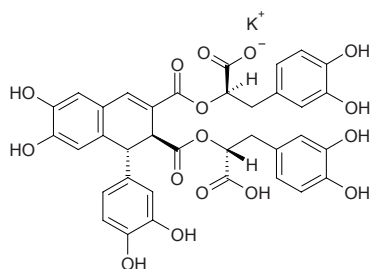
**15849 Novobiocin**

[303-81-1] C<sub>31</sub>H<sub>36</sub>N<sub>2</sub>O<sub>11</sub> (612.64). **Pharm:** Antibacterial; antimicrobial (veterinary); antiviral; plasma protein binder. **Source:** Ray-fungus *Streptomyces spheroids*, Ray-fungus *Streptomyces niveus*. **Ref:** 658.

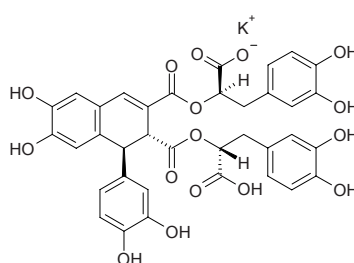


**15850 NP02140176-38-K**

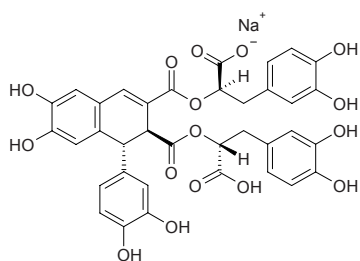
$C_{36}H_{29}KO_{16}$  (756.72). **Pharm:** Anti-HIV. **Source:** ZI CAO *Lithospermum erythrorhizon*, XIN ZANG JIA ZI CAO *Arnebia euchroma*. **Ref:** 2193.

**15854 NP02140176-42-K**

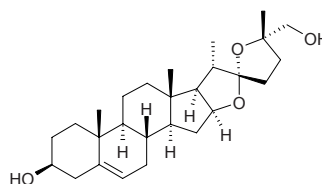
$C_{36}H_{29}KO_{16}$  (756.72). **Pharm:** Anti-HIV. **Source:** ZI CAO *Lithospermum erythrorhizon*, XIN ZANG JIA ZI CAO *Arnebia euchroma*. **Ref:** 2193.

**15851 NP02140176-39-Na**

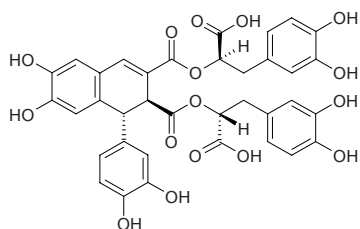
$C_{36}H_{29}NaO_{16}$  (740.61). **Pharm:** Anti-HIV. **Source:** ZI CAO *Lithospermum erythrorhizon*, XIN ZANG JIA ZI CAO *Arnebia euchroma*. **Ref:** 2193.

**15855 Nuatigenin**

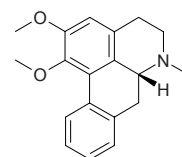
[6811-35-4]  $C_{27}H_{42}O_4$  (430.63). **Pharm:** Antifungal. **Source:** YAN MAI *Avena sativa*, DING QIE *Solanum aculeatissimum*. **Ref:** 658.

**15852 NP02140176-40**

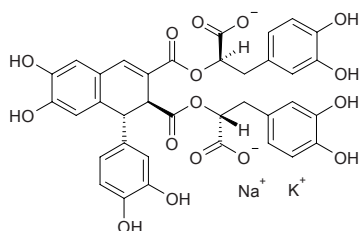
$C_{36}H_{30}O_{16}$  (718.63). **Pharm:** Anti-HIV. **Source:** ZI CAO *Lithospermum erythrorhizon*, XIN ZANG JIA ZI CAO *Arnebia euchroma*. **Ref:** 2193.

**15856 Nuciferine**

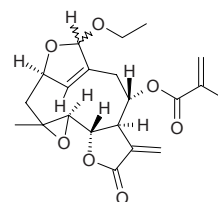
[475-83-2]  $C_{19}H_{21}NO_2$  (295.38). mp (-) 165.5°C, (±) 136–137°C. **Source:** HE YE *Nelumbo nucifera*, HE YE DI *Nelumbo nucifera*, LIAN ZI *Nelumbo nucifera*, LIAN ZI XIN *Nelumbo nucifera*. **Ref:** 6.

**15853 NP02140176-41-KNa**

$C_{36}H_{28}KNaO_{16}$  (778.70). **Pharm:** Anti-HIV. **Source:** ZI CAO *Lithospermum erythrorhizon*, XIN ZANG JIA ZI CAO *Arnebia euchroma*. **Ref:** 2193.

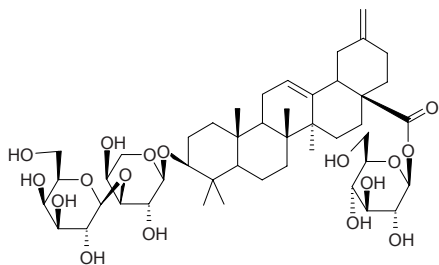
**15857 Nudaphantin**

[96627-10-0]  $C_{21}H_{26}O_7$  (390.44). Colorless oil,  $[\alpha]_D = -16^\circ$  ( $c = 0.5$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic (KB,  $IC_{50} = 0.31 \mu g/mL$ ). **Source:** LUO DI DAN CAO *Elephantus nudatus*. **Ref:** 2765.

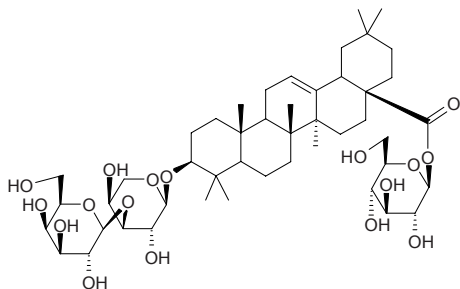


**15858 Nudicaucin A**

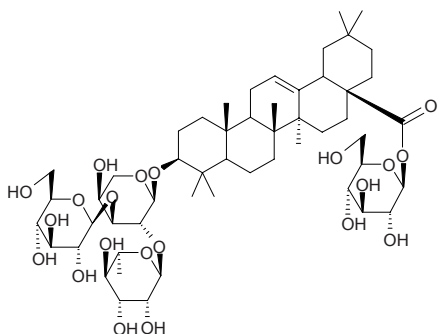
[211815-97-3]  $C_{46}H_{72}O_{17}$  (897.08). White lamellar crystals, mp 291.5–293°C (dec),  $[\alpha]_D = +71.3^\circ$  ( $c = 0.44$ , MeOH), TLC: Rf = 0.25 (75% MeOH), 0.15 (CHCl<sub>3</sub>: MeOH = 2:1). **Pharm:** Antibacterial (*Bacillus subtilis* M45 and H17, weak activity). **Source:** LUO JING ER CAO *Hedyotis nudicaulis*. **Ref:** 2766.

**15859 Nudicaucin B**

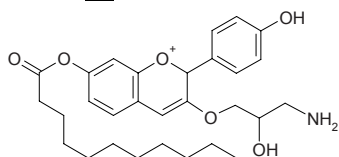
[211557-36-7]  $C_{47}H_{76}O_{17}$  (913.12). mp 256–259°C (dec);  $[\alpha]_D = +34.5^\circ$  ( $c = 0.22$ , MeOH), TLC: Rf = 0.17 (75% MeOH), 0.15 (CHCl<sub>3</sub>: MeOH = 2:1). **Pharm:** Antibacterial (*Bacillus subtilis* M45 and H17, weak activity). **Source:** LUO JING ER CAO *Hedyotis nudicaulis*. **Ref:** 2766.

**15860 Nudicaucin C**

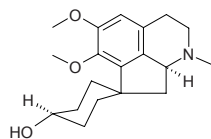
[211815-98-4]  $C_{53}H_{86}O_{21}$  (1059.26). mp 257–260°C (dec);  $[\alpha]_D = -4.9^\circ$  ( $c = 0.41$ , MeOH), TLC: Rf = 0.17 (75% MeOH), 0.04 (CHCl<sub>3</sub>: MeOH = 2:1). **Pharm:** Antibacterial (*Bacillus subtilis* M45 and H17, weak activity). **Source:** LUO JING ER CAO *Hedyotis nudicaulis*. **Ref:** 2766.

**15861 Nudicaulin**

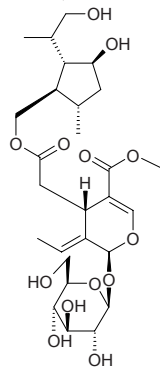
$C_{29}H_{40}NO_6^+$  (498.65). **Source:** LIE YE YE YING SU *Papaver nudicaule* var. *chinense*. **Ref:** 2767.

**15862 Nudicaulonol**

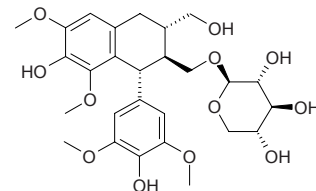
$C_{19}H_{27}NO_3$  (317.43). **Source:** LIE YE YE YING SU *Papaver nudicaule* var. *chinense*. **Ref:** 2768.

**15863 Nudifloside D**

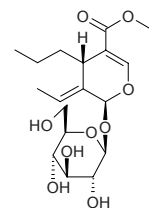
$C_{27}H_{42}O_{13}$  (574.63). Colorless amorphous powder,  $[\alpha]_D^{24} = -161^\circ$  ( $c = 0.41$ , MeOH). **Source:** YING CHUN HUA *Jasminum nudiflorum* (leaf). **Ref:** 4169.

**15864 Nudiposide**

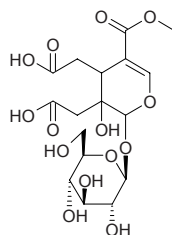
[62058-46-2]  $C_{27}H_{36}O_{12}$  (552.58). Crystals (Me<sub>2</sub>CO–C<sub>6</sub>H<sub>6</sub>), mp 175–178°C,  $[\alpha]_D^{29.5} = -67.1^\circ$  ( $c = 1.43$ , EtOH). **Source:** HONG NAN PI *Machilus thunbergii*, JIA MI *Viburnum dilatatum*, *Enkianthus nudipes*. **Ref:** 660, 2769.

**15865 Nuezhengalaside**

$C_{18}H_{28}O_9$  (388.42). Colorless powder, mp 144–147°C. **Source:** NV ZHEN ZI *Ligustrum lucidum*. **Ref:** 386.

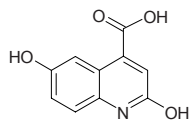
**15866 Nuezhenidic acid**

$C_{17}H_{24}O_{14}$  (452.37). mp 232–233°C. **Source:** NV ZHEN ZI *Ligustrum lucidum*. **Ref:** 8.

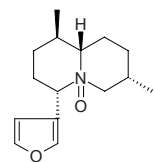


**15867 Nukagenin**

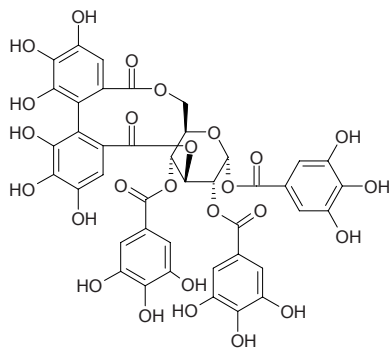
$C_{10}H_7NO_4$  (205.17). Source: MI PI KANG *Oryza sativa*. Ref: 660.

**15868 Nupharidine**

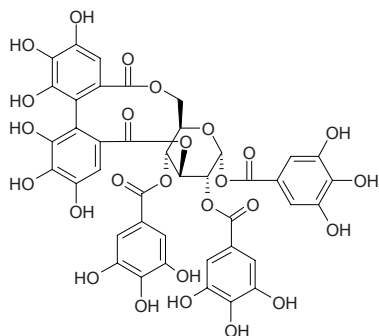
[468-89-3]  $C_{15}H_{23}NO_2$  (249.36). mp 222°C,  $[\alpha]_D = +14.5^\circ$  (H<sub>2</sub>O). Source: PING PENG CAO *Nuphar pumilum*, RI BEN PING PENG CAO *Nuphar japonicum*. Ref: 2770.

**15869 Nupharin A(S)**

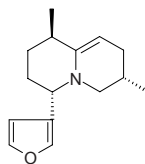
[81956-07-2]  $C_{41}H_{30}O_{26}$  (938.68). White powder (H<sub>2</sub>O), mp 243~245°C (dec),  $[\alpha]_D^{24} = -51.4^\circ$  ( $c = 1.2$ , acetone). Pharm: Antibacterial (*Staphylococcus aureus*, *Saccharomyces cerevisiae*); topoisomerase II inhibitor (IC<sub>100</sub> = 0.2 μmol/L). Source: BAN YE PING PENG CAO *Nuphar variegatum*, RI BEN PING PENG CAO *Nuphar japonicum*. Ref: 2771, 2772, 2773.

**15870 Nupharin B(R)**

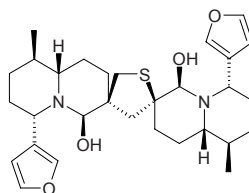
[121916-42-5]  $C_{41}H_{30}O_{26}$  (938.68). Colorless needles (H<sub>2</sub>O), mp 258°C,  $[\alpha]_D^{24} = +38.5^\circ$  ( $c = 0.8$ , acetone). Pharm: Antibacterial (*Staphylococcus aureus*, *Saccharomyces cerevisiae*). Source: BAN YE PING PENG CAO *Nuphar variegatum*, RI BEN PING PENG CAO *Nuphar japonicum*. Ref: 2771, 2772.

**15871 Nupharopumiline**

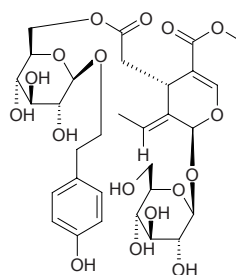
[63947-66-0]  $C_{15}H_{21}NO$  (231.34). Crystals (CCl<sub>4</sub>), mp 195~197°C,  $[\alpha]_D^{20} = +27^\circ$  (CHCl<sub>3</sub>). Source: PING PENG CAO *Nuphar pumilum*. Ref: 2770.

**15872 Nuphleine**

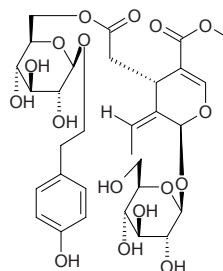
[30343-70-5]  $C_{30}H_{42}N_2O_4S$  (526.74). Glassy mass,  $[\alpha]_D^{25} = +44.5^\circ$  ( $c = 1.2$ , chloroform). Pharm: Antibacterial (*Staphylococcus aureus*, chloride 0.24~7.8 μg/mL); antifungal (*Blastomyces* sp., *Microsporium* sp., and *Trichophyton mentagrophytes*, IC = 100 μg/mL); toxin (mus, ip, 400 mg/(kg·d) for 30d, 4/6 death, 100 and 200 mg/(kg·d) for 30d, no death observed). Source: PING PENG CAO *Nuphar pumilum*. Ref: 661, 1521.

**15873 (8E)-Nüzhenide**

Nuezhenide; Specnuezhenide  $C_{31}H_{42}O_{17}$  (686.67). Amorphous powder, mp 152~155°C,  $[\alpha]_D^{26} = -140.0^\circ$  ( $c = 0.6$ , MeOH). Source: BAO MA ZI *Syringa amurensis* [Syn. *Syringa reticulata* var. *amurensis*] (leaf), NV ZHEN ZI *Ligustrum lucidum* (ripe fruit: content scope of 6 origins = 0.68%~1.18%; mean content = 0.90%<sup>[5508]</sup>). Ref: 386, 2789, 3545, 4175, 5508.

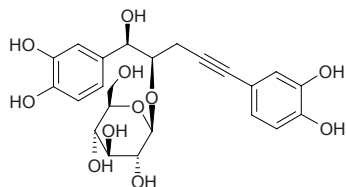
**15874 (8Z)-Nüzhenide**

$C_{31}H_{42}O_{17}$  (686.67). Amorphous powder,  $[\alpha]_D^{26} = -101.1^\circ$  ( $c = 1.0$ , MeOH). Source: BAO MA ZI *Syringa amurensis* [Syn. *Syringa reticulata* var. *amurensis*] (leaf). Ref: 4175.

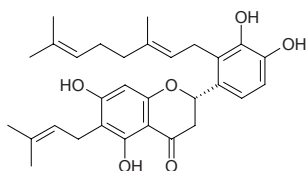


**15875 Nyasicoside**

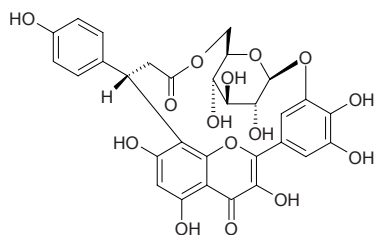
[111518-94-6] C<sub>23</sub>H<sub>26</sub>O<sub>11</sub> (478.46). mp 120~122°C (EtOH-EtOAc), [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +14.7° (c = 0.9, MeOH). **Pharm:** Antiarrhythmic (gpg, arrhythmia induced by uabain, for arrhythmia induced by 6 $\mu$ mol/L uabain, 3 $\mu$ mol/L returns normal rhythm for over 10min); contracts blood vessels (*in vitro*, rabbit aorta, facilitating effect on adrenaline evoked contractions, 1~30 $\mu$ mol/L)<sup>[5095]</sup>. **Source:** DA YE XIAN MAO *Curculigo capitulata* [Syn. *Leucojum capitulata*], MAO XIAN MAO *Curculigo pilosa* (rhizome). **Ref:** 2775, 2776, 2777, 5095.

**15876 (-)-Nymphaeol C**

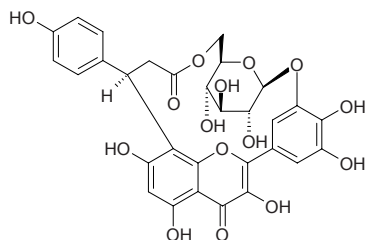
C<sub>30</sub>H<sub>36</sub>O<sub>6</sub> (492.62). **Source:** XUE TONG *Macaranga tanarius* (fallen leave). **Ref:** 3062.

**15877 Nympholide A**

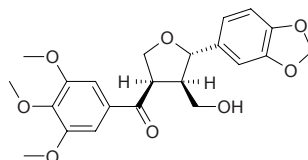
C<sub>30</sub>H<sub>26</sub>O<sub>15</sub> (626.53). Brown amorphous solid, mp 174~178°C (dec). **Source:** CHI YE SHUI LIAN *Nymphaea lotus*. **Ref:** 3405.

**15878 Nympholide B**

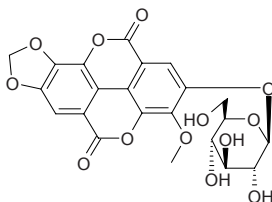
C<sub>30</sub>H<sub>26</sub>O<sub>15</sub> (626.53). Brown amorphous solid, mp 198°C (dec., softens at 168°C). **Source:** CHI YE SHUI LIAN *Nymphaea lotus*. **Ref:** 3405.

**15879 Nymphone**

[194026-36-3] C<sub>22</sub>H<sub>24</sub>O<sub>8</sub> (416.43). Colorless prisms (CH<sub>2</sub>Cl<sub>2</sub>-acetone), mp 123~125°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -47.4° (c = 0.08, CHCl<sub>3</sub>). **Pharm:** Cytotoxic (A549 ED<sub>50</sub> = 3.024 $\mu$ g/mL; HT29 ED<sub>50</sub> = 0.740 $\mu$ g/mL; KB15 ED<sub>50</sub> = 0.639 $\mu$ g/mL; P388 ED<sub>50</sub> = 0.321 $\mu$ g/mL). **Source:** SHUI LIAN YE TONG *Hernandia nymphaeifolia*. **Ref:** 2778.

**15880 Nyssoside**

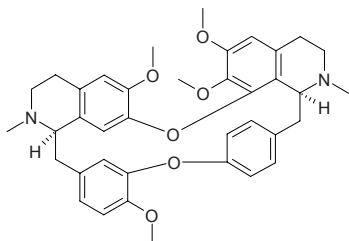
3'-O-Methyl-3,4-O-methylideneellagic acid-4'-O- $\beta$ -D-glucopyranoside C<sub>22</sub>H<sub>18</sub>O<sub>13</sub> (490.38). White acicular crystals (MeOH), mp 273~275°C, soluble in pyridine, slightly soluble in methanol, water. **Source:** ZI SHU *Nyssa sinensis*, XI SHU *Camptotheca acuminata*. **Ref:** 492, 4097.



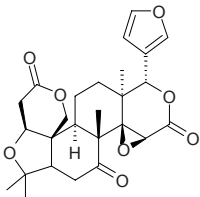
## O

**15881 Obaberine**

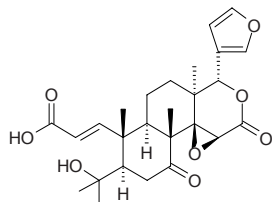
[1263-80-5] C<sub>38</sub>H<sub>42</sub>N<sub>2</sub>O<sub>6</sub> (622.77). mp 139~140°C. **Pharm:** Antibacterial (*Staphylococcus aureus* and *Mycobacterium smegmatis*, MIC = 1mg/mL; *Mycobacterium tuberculosis*, active concentration without serum = 7.8µg/mL, with serum = 62.5µg/mL); antifungal (*Candida albicans*, MIC = 1mg/mL); antihypertensive (dog, 2mg/kg, lowers of blood pressure by 5.3328kPa); antitrypanosomal; antiviral (influenza virus, 1mg/mL). **Source:** HUANG XIAO BO *Berberis tschonoskiana*, PU FU SHI DA GONG LAO *Mahonia repens*, SAN RUI LIAN GUI *Dehaasia triandra*, TOU MING TANG SONG CAO *Thalictrum lucidum*, XIA YE TANG SONG CAO *Thalictrum incidum*, XIAO TANG SONG CAO *Thalictrum minus*. **Ref:** 4, 658.

**15882 Obaculactone**

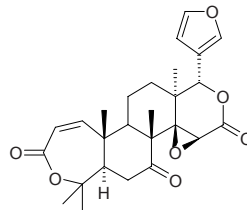
Dictamnolactone [1180-71-8] C<sub>26</sub>H<sub>30</sub>O<sub>8</sub> (470.52). mp 297~298°C (dec). **Pharm:** Anthelmintic; antiulcerative (rat, induced by aspirin, *in vivo*); hypoglycemic (rbt, *in vivo*); inhibits intestinal movement (rbt, *in vivo*). **Source:** BAI SE BAI XIAN *Dictamnus albus*, BAI XIAN PI *Dictamnus dasycarpus*, CHENG ZI *Citrus junos*, CHENG ZI HE *Citrus junos*, FU JU *Citrus tangemna*, GOU JU *Poncirus trifoliata*, HUANG BAI *Phellodendron amurense*, HUANG LIAN *Coptis chinensis*, JU HE *Citrus reticulata*, JU YUAN *Citrus medica*, LIAN YE WU ZHU YU *Evodia meliifolia*, SU DA QI GAN JU *Citrus sudachii*, TIAN CHENG *Citrus sinensis*, WU ZHU YU *Evodia rutaecarpa*, XIANG YUAN *Citrus wilsonii*, YOU<sup>(4)</sup> *Citrus grandis*, YOU HE *Citrus grandis*, YU KE GAN JU *Citrus yuko*, ZHI KE *Citrus aurantium*. **Ref:** 2, 6, 658.

**15883 Obacunoic acid**

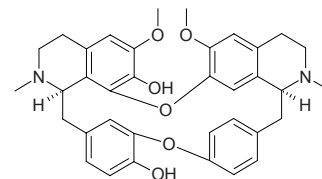
Obacunoic acid C<sub>26</sub>H<sub>32</sub>O<sub>8</sub> (472.54). mp 205~206°C. **Source:** BAI XIAN PI *Dictamnus dasycarpus*, HUANG BAI *Phellodendron amurense*. **Ref:** 2, 660.

**15884 Obacunone**

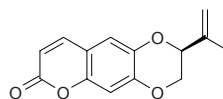
[751-03-1] C<sub>26</sub>H<sub>30</sub>O<sub>7</sub> (454.52). Crystals (MeOH), mp 229~230°C, [α]<sub>D</sub> = -50° (CHCl<sub>3</sub>). **Pharm:** Promotes intestinal motion (rbt, *in vitro*). **Source:** HUANG BAI *Phellodendron amurense*. **Ref:** 2, 658, 660, 1521.

**15885 (+)-Obamegine**

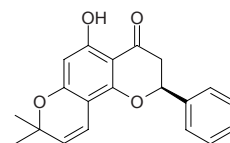
[479-37-8] C<sub>36</sub>H<sub>38</sub>N<sub>2</sub>O<sub>6</sub> (594.71). Colorless acicular crystals (ether), mp 164~166°C, [α]<sub>D</sub><sup>11</sup> = +98.9° (c = 0.2022, methanol). **Pharm:** Mitochondrial respiratory chain complex I inhibitor (IC<sub>50</sub> = (1.41±0.13)µmol/L, Rolliniastatin-1, IC<sub>50</sub> = (0.6±0.04)nmol/L, Rotenone, IC<sub>50</sub> = (5.10±0.90)nmol/L)<sup>[4954]</sup>; antibacterial (*Staphylococcus aureus*, *Bacillus coli*, *Salmonella gallinarum* and *Bacillus pneumoniae*, MIC = 100µg/mL; *Mycobacterium smegmatis*, MIC = 50µg/mL); antifungal (*Candida albicans*, MIC = 100µg/mL); antihypertensive (dog, dose of 0.5mg/kg, 1.0mg/kg and 2.0mg/kg, lowers blood pressure by 7.71kPa, 8.65kPa and 9.98kPa, respectively). **Source:** GE LUN BI YA MU BAN SHU *Xylopia columbiana* (fruit), HUANG GEN SHU *Xanthorhiza simplicissima*, HUANG XIAO BO *Berberis tschonoskiana*, PU FU SHI DA GONG LAO *Mahonia repens*, QIAN JIN TENG *Stephania japonica*, TOU MING TANG SONG CAO *Thalictrum lucidum*, ZOU WEN TANG SONG CAO *Thalictrum rugosum*. **Ref:** 6, 661, 4954.

**15886 Obliquin**

C<sub>14</sub>H<sub>12</sub>O<sub>4</sub> (244.25). **Pharm:** Anti-Inflammatory (anti-oedema, control oedema = (7.8±0.3)mg, 100µg/cm<sup>2</sup>, oedema = (3.9±0.5)mg, p<0.05, reduction = 50%, Indomethacin oedema = (3.4±0.3)mg, p<0.05, reduction = 56%). **Source:** GAO SHAN HUO RONG CAO *Leontopodium alpinum* (root). **Ref:** 4985.

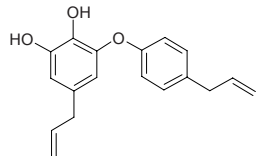
**15887 Obovatin**

C<sub>20</sub>H<sub>18</sub>O<sub>4</sub> (322.36). **Source:** DU HUI MAO DOU *Tephrosia toxicaria* (stem; yield = 0.0026%dw). **Ref:** 4718.

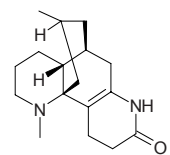


**15888 Obovatol**

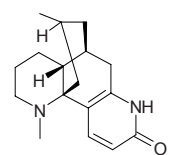
[83864-78-2] C<sub>18</sub>H<sub>18</sub>O<sub>3</sub> (282.34). Pharm: Antibacterial. Source: HOU PO *Magnolia officinalis*. Ref: 2860, 2861.

**15889 α-Obscurine**

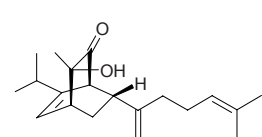
[596-55-4] C<sub>17</sub>H<sub>26</sub>N<sub>2</sub>O (274.41). mp 322~323°C. Source: GUO JIANG LONG *Lycopodium complanatum*, XIAO JIE JIN CAO *Huperzia selago* [Syn. *Lycopodium selago*]. Ref: 6.

**15890 β-Obscurine**

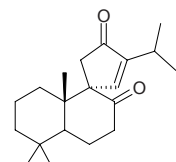
[467-79-8] C<sub>17</sub>H<sub>24</sub>N<sub>2</sub>O (272.39). mp 322~323°C (dec). Source: XIAO JIE JIN CAO *Huperzia selago* [Syn. *Lycopodium selago*]. Ref: 6.

**15891 Obtunone**

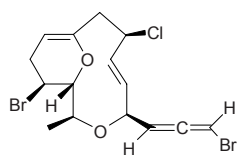
C<sub>20</sub>H<sub>30</sub>O<sub>2</sub> (302.46). Source: TAI WAN CUI BAI *Calocedrus macrolepis* var. *formosana* (leaf). Ref: 4298.

**15892 Obtusadione**

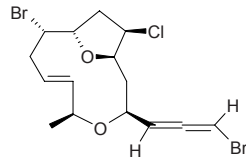
C<sub>20</sub>H<sub>30</sub>O<sub>2</sub> (302.46). mp 178~179°C, [α]<sub>D</sub><sup>19</sup> = -79.1° (c = 0.30, CHCl<sub>3</sub>). Source: TAI WAN CUI BAI *Calocedrus macrolepis* var. *formosana* (leaf). Ref: 4298.

**15893 Obtusallene I**

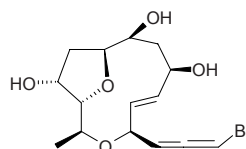
[81920-18-5] C<sub>15</sub>H<sub>17</sub>Br<sub>2</sub>ClO<sub>2</sub> (424.56). Crystals (Et<sub>2</sub>O-petroleum ether), mp 165~167°C, [α]<sub>D</sub><sup>17</sup> = -257.6° (c = 0.53, CHCl<sub>3</sub>). Source: DUN XING AO DING ZAO *Laurencia obtusa*. Ref: 2894, 2895.

**15894 Obtusallene II**

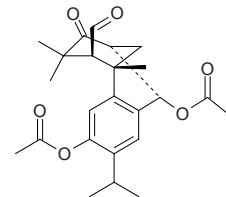
[133485-41-3] C<sub>15</sub>H<sub>19</sub>Br<sub>2</sub>ClO<sub>2</sub> (426.58). Crystals (hexane-C<sub>6</sub>H<sub>6</sub>), mp 147~149°C, [α]<sub>D</sub><sup>23</sup> = -272° (c = 0.35, CHCl<sub>3</sub>). Source: DUN XING AO DING ZAO *Laurencia obtusa*. Ref: 2795.

**15895 Obtusallenetriol**

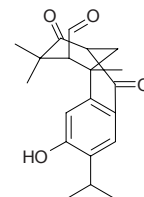
[133462-32-5] C<sub>15</sub>H<sub>21</sub>BrO<sub>5</sub> (361.24). Crystals (CHCl<sub>3</sub>), mp 78~80°C (dec), [α]<sub>D</sub><sup>24</sup> = -141.5° (c = 0.245, Me<sub>2</sub>CO). Source: DUN XING AO DING ZAO *Laurencia obtusa*. Ref: 2795.

**15896 Obtusanal A**

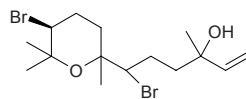
C<sub>24</sub>H<sub>30</sub>O<sub>6</sub> (414.50). Source: TAI WAN CUI BAI *Calocedrus macrolepis* var. *formosana* (leaf). Ref: 4298.

**15897 Obtusanal B**

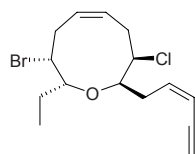
C<sub>20</sub>H<sub>24</sub>O<sub>4</sub> (328.41). mp 192~194°C, [α]<sub>D</sub><sup>28</sup> = -195.9° (c = 0.41, CHCl<sub>3</sub>). Source: TAI WAN CUI BAI *Calocedrus macrolepis* var. *formosana* (leaf). Ref: 4298.

**15898 Obtusenol**

[79406-07-8] C<sub>15</sub>H<sub>26</sub>Br<sub>2</sub>O<sub>2</sub> (398.18). Oil, [α]<sub>D</sub><sup>16</sup> = -50.2° (c = 1.7, CHCl<sub>3</sub>). Source: DUN XING AO DING ZAO *Laurencia obtusa*. Ref: 2911, 2912.

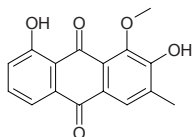
**15899 Obtusenyne**

[71939-43-0] C<sub>15</sub>H<sub>20</sub>BrClO (331.68). Oil, [α]<sub>D</sub><sup>20</sup> = +111.4° (c = 2.8, CHCl<sub>3</sub>). Source: *Laurencia* sp. Ref: 2934, 2935, 4002.

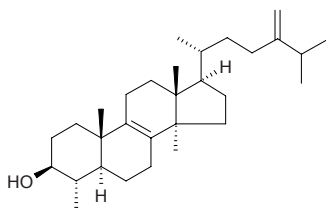


**15900 Obtusifolin**

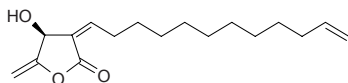
2,8-Dihydroxy-1-methoxy-3-methylantraquinone [477-85-0] C<sub>16</sub>H<sub>12</sub>O<sub>5</sub> (284.27). mp 237~238°C. Source: JUE MING ZI *Cassia tora*. Ref: 2.

**15901 Obtusifolioside**

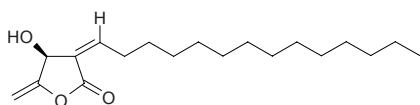
[16910-32-0] C<sub>30</sub>H<sub>50</sub>O (423.73). mp 144°C. Source: SHI LA HONG *Pelargonium hortorum*, MAN TUO LUO ZI *Datura metel*, GOU QI ZI *Lycium chinense*. Ref: 2907, 1372.

**15902 Obtusilactone**

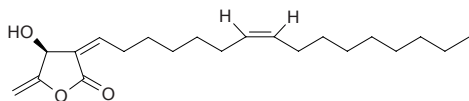
[56799-51-0] C<sub>17</sub>H<sub>16</sub>O<sub>3</sub> (278.39). Viscous liquid, [α]<sub>D</sub><sup>23</sup> = -53° (c = 0.35, MeOH). Pharm: Cytotoxic (hmn A549, ED<sub>50</sub> = 3.32 μg/mL, MCF7, ED<sub>50</sub> = 4.58 μg/mL, HT29, ED<sub>50</sub> = 3.26 μg/mL, BST, LC<sub>50</sub> = 0.035 mg/L, InRt of potato culture dish PD test = 64.2%). Source: GUI PI DIAO ZHANG *Lindera benzoin*, SAN ZUAN FENG *Lindera obtusiloba*, ZHANG SHU PI *Cinnamomum camphora*. Ref: 1053, 1119.

**15903 Obtusilactone A**

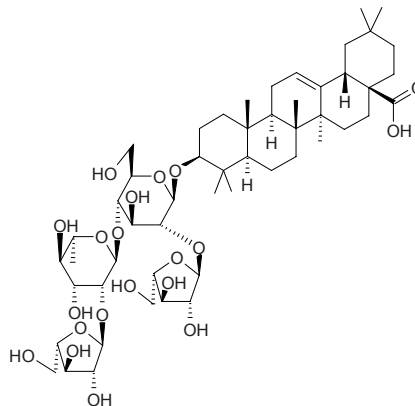
[56522-15-7] C<sub>19</sub>H<sub>32</sub>O<sub>3</sub> (308.47). Colorless ropy liquid, [α]<sub>D</sub><sup>23</sup> = -46° (c = 0.45, CHCl<sub>3</sub>). Pharm: Cytotoxic (hmn MCF7, ED<sub>50</sub> = 5.12 μg/mL, HT29, ED<sub>50</sub> = 2.93 μg/mL, BST, LC<sub>50</sub> = 0.89 mg/L). Source: GUI PI DIAO ZHANG *Lindera benzoin*, SAN ZUAN FENG *Lindera obtusiloba*, *Persea borbonia*, *Persea* spp. Ref: 2875, 2876, 1053.

**15904 Obtusilactone B**

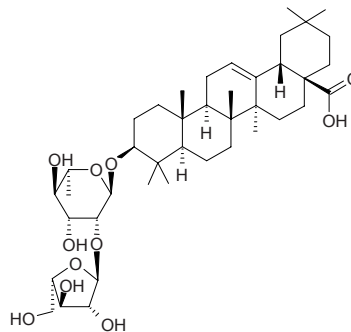
[58940-65-1] C<sub>21</sub>H<sub>34</sub>O<sub>3</sub> (334.50). Oil. Source: SAN ZUAN FENG *Lindera obtusiloba*. Ref: 2881.

**15905 Obtusilobicinin**

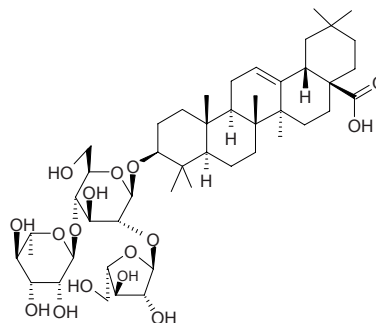
[76016-61-0] C<sub>52</sub>H<sub>84</sub>O<sub>20</sub> (1029.24). mp 226°C. Source: DUN LIE YIN LIAN HUA *Anemone obtusiloba*. Ref: 660, 1521.

**15906 Obtusilobin**

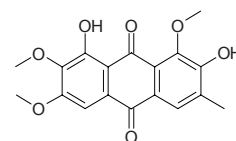
[73519-18-3] C<sub>41</sub>H<sub>66</sub>O<sub>11</sub> (734.98). Crystals (MeOH), mp 190°C. Source: DUN LIE YIN LIAN HUA *Anemone obtusiloba*. Ref: 660, 1521.

**15907 Obtusilobinin**

[73519-19-4] C<sub>47</sub>H<sub>76</sub>O<sub>16</sub> (897.12). Crystals (MeOH), mp 220°C. Source: DUN LIE YIN LIAN HUA *Anemone obtusiloba*. Ref: 660, 1521.

**15908 Obtusin**

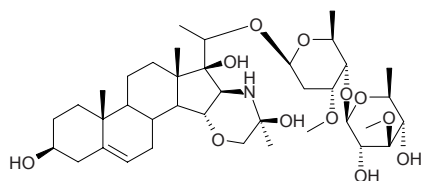
1,7-Dihydroxy-2,3,8-trimethoxy-6-methylantraquinone [70588-05-5] C<sub>18</sub>H<sub>16</sub>O<sub>7</sub> (344.32). mp 242~243°C. Source: JUE MING ZI *Cassia tora* (in 1960, the compound was isolated from the plant). Ref: 5505.



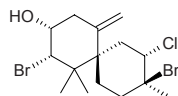


**15909 Obtusine-20(R)-O-[β-thevetopyranosyl-(1→4)-β-cymaropyranoside]**

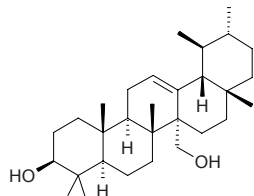
$C_{38}H_{63}NO_{12}$  (725.93). White powder. Source: DUN XING BAI YE TENG *Cryptolepis obtusa* (root). Ref: 3920.

**15910 Obtusol**

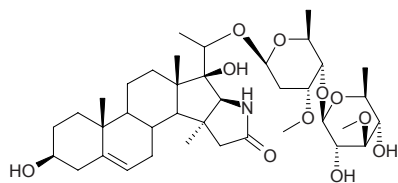
[73494-22-1]  $C_{15}H_{23}Br_2ClO$  (414.61). White needles (MeOH-H<sub>2</sub>O), mp 145~146°C,  $[\alpha]_D = +12^\circ$  ( $c = 0.2$ , CHCl<sub>3</sub>). Pharm: Cytotoxic (HeLa, IC<sub>50</sub> = 50 μg/mL); antibacterial (*Staphylococcus aureus*, *Bacillus globisporus*, *Bacillus pyocyaneus*, *Streptococcus faecalis*, 5mg/mL, circle of inhibiting bacterium = 12~18mm). Source: CU SHENG AO DING ZAO *Laurencia caespitosa*, DUN XING AO DING ZAO *Laurencia obtusa*, LUE DA AO DING ZAO *Laurencia majuscula*. Ref: 2801, 2802, 2803, 2804.

**15911 Obtusol**

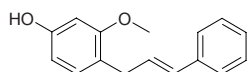
12-Ursene-3β,27-diol [260392-01-6]  $C_{30}H_{50}O_2$  (442.73).  $[\alpha]_D^{27} = +4^\circ$  ( $c = 0.2$ , CHCl<sub>3</sub>). Source: DUN XING JI DAN HUA *Plumeria obtusa* (leaf). Ref: 2385.

**15912 Obtusolactam-20(R)-O-[β-thevetopyranosyl-(1→4)-β-cymaropyranoside]**

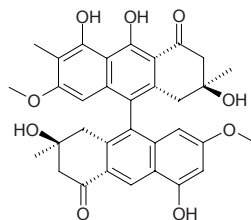
$C_{38}H_{61}NO_{11}$  (707.91). White powder. Source: DUN XING BAI YE TENG *Cryptolepis obtusa* (root). Ref: 3920.

**15913 Obtustyrene**

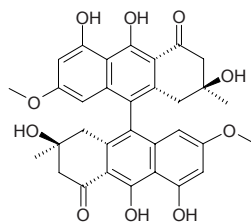
[21148-31-2]  $C_{16}H_{16}O_2$  (240.30). Oil, bp 140°C/0.1mmHg (bath). Source: JIANG ZHEN XIANG *Dalbergia odorifera*, *Dalbergia obtusa*, *Dalbergia retusa*. Ref: 1521, 1266.

**15914 Occidentalol I**

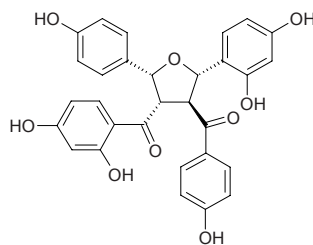
[118528-51-1]  $C_{33}H_{32}O_9$  (572.62). Yellow-brown prisms (C<sub>6</sub>H<sub>6</sub>), mp 280°C (dec). Source: WANG JIANG NAN *Cassia occidentalis*. Ref: 2913.

**15915 Occidentalol II**

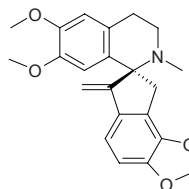
[118528-52-2]  $C_{32}H_{30}O_{10}$  (574.59). Yellow-brown prisms (C<sub>6</sub>H<sub>6</sub>), mp 270°C (dec). Source: WANG JIANG NAN *Cassia occidentalis*. Ref: 2913.

**15916 Ochnone**

*rel-4α*-(2,4-Dihydroxybenzoyl)-3β-(4-hydroxybenzoyl)-2α-(2,4-dihydroxyphenyl)-5α-(4-hydroxyphenyl)tetrahydrofuran  $C_{30}H_{24}O_9$  (528.52). White solid, mp 164~166°C,  $[\alpha]_D^{23.1} = -96.7^\circ$  ( $c = 0.21$ , MeOH). Pharm: Cytotoxic (MCF7 breast cancer cells, MTT method, IC<sub>50</sub> = (7±0.5) μmol/L, control Doxorubicin, IC<sub>50</sub> = (0.1±0.01) μmol/L); antibacterial inactive (MDR *Staphylococcus aureus*: RN4220 strain, 64 μg/mL, control Erythromycin, MIC = 128 μg/mL; XU212 strain, 64 μg/mL, control Tetracycline, MIC = 128 μg/mL; SA-1199-B strain, 64 μg/mL, control Norfloxacin, MIC = 32 μg/mL). Source: CHANG E JIN LIAN MU PI *Ochna macrocalyx*, SANG DAO BU SHI MU *Brackenridgea zanguebarica*. Ref: 5372.

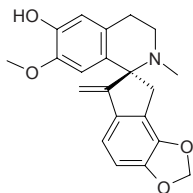
**15917 Ochotensimine**

[4829-36-1]  $C_{22}H_{23}NO_4$  (365.43). Syrup,  $[\alpha]_D^{20} = +46.3^\circ$  ( $c = 0.54$ , MeOH). Source: HUANG ZI JIN *Corydalis ochotensis*, SHAN YAN HU SUO *Corydalis bulbosa* [Syn. *Corydalis solida*], XIAO HUANG ZI JIN *Corydalis ochotensis* var. *raddeana*. Ref: 1521, 2920.

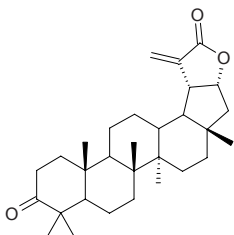


**15918 Ochotensine**

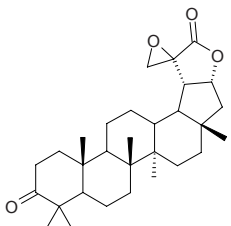
[4959-88-0] C<sub>21</sub>H<sub>21</sub>NO<sub>4</sub> (351.41). Prisms (CHCl<sub>3</sub>), mp 252°C, [α]<sub>D</sub><sup>24</sup> = +51.7° (c = 0.2, CHCl<sub>3</sub>), [α]<sub>D</sub><sup>23</sup> = +63.9° (c = 2.0, 0.1M HCl). Source: BEI ZI JIN *Corydalis sibirica*, DOU ZHUANG HE BAO MU DAN *Dicentra cucullaria*, HUANGZI JIN *Corydalis ochotensis*, SHAN YAN HU SUO *Corydalis bulbosa* [Syn. *Corydalis solida*], XIAO HUANG ZI JIN *Corydalis ochotensis* var. *raddeana*, *Corydalis vaginans*. Ref: 1521, 2964.

**15919 Ochraceolide A**

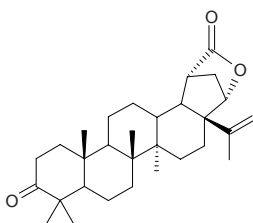
[138913-61-8] C<sub>30</sub>H<sub>44</sub>O<sub>3</sub> (452.68). Colorless crystals (CHCl<sub>3</sub>-MeOH), mp 223~225°C, [α]<sub>D</sub><sup>25</sup> = +31° (c = 0.1, MeOH). Pharm: Cytotoxic (P<sub>388</sub> *in vitro*, ED<sub>50</sub> = 0.26μg/mL; BC1, HT, Lu1, KB-V, LNCaP, ZR-75-1, U373: ED<sub>50</sub> = 4.5~17.2μg/mL). Source: WO LI HE GUAN BAN *Lophopetalum wallichii*, ZHE HUANG KAO GU NA *Kokoona ochracea*. Ref: 2892, 2957.

**15920 Ochraceolide B**

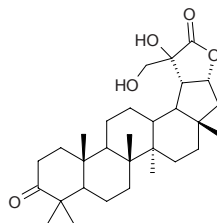
[138913-62-9] C<sub>30</sub>H<sub>44</sub>O<sub>4</sub> (468.68). Colorless crystals (Et<sub>2</sub>O), mp 236~238°C, [α]<sub>D</sub><sup>25</sup> = +10° (c = 0.1, MeOH). Pharm: Cytotoxic (P<sub>388</sub> ED<sub>50</sub> = 7.8μg/mL, KB3 ED<sub>50</sub> = 5.2μg/mL). Source: ZHE HUANG KAO GU NA *Kokoona ochracea*. Ref: 2892.

**15921 Ochraceolide C**

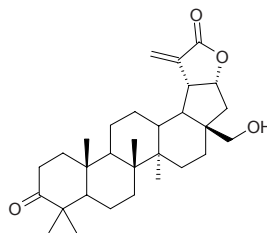
[138913-63-0] C<sub>30</sub>H<sub>44</sub>O<sub>3</sub> (452.68). Colorless crystals (toluene-pet. ether), mp 236~238°C, [α]<sub>D</sub><sup>25</sup> = -25° (c = 0.1, MeOH). Pharm: Cytotoxic (P<sub>388</sub> *in vitro*, ED<sub>50</sub> = 0.53μg/mL). Source: ZHE HUANG KAO GU NA *Kokoona ochracea*. Ref: 2892.

**15922 Ochraceolide D**

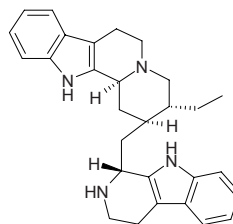
[152221-16-4] C<sub>30</sub>H<sub>46</sub>O<sub>5</sub> (486.70). Colorless crystals (CHCl<sub>3</sub>-MeOH), mp 253~256°C, [α]<sub>D</sub><sup>25</sup> = +10° (c = 0.1, MeOH). Pharm: Cytotoxic (hmn malignant glioma cell U373 *in vitro*, ED<sub>50</sub> = 3.9μg/mL; HT1080, A-431, LNCaP: weak activity). Source: ZHE HUANG KAO GU NA *Kokoona ochracea*. Ref: 2892.

**15923 Ochraceolide E**

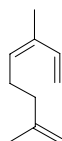
[152231-40-8] C<sub>30</sub>H<sub>44</sub>O<sub>4</sub> (468.68). Colorless crystals (CHCl<sub>3</sub>), mp 233~235°C, [α]<sub>D</sub><sup>25</sup> = +29° (c = 0.1, MeOH). Pharm: Cytotoxic (HT1080 ED<sub>50</sub> = 12.2μg/mL, Mel-2 ED<sub>50</sub> = 11.9μg/mL, ZR-75-1 ED<sub>50</sub> = 18.8μg/mL, U373 ED<sub>50</sub> = 8.6μg/mL). Source: ZHE HUANG KAO GU NA *Kokoona ochracea*. Ref: 2892.

**15924 Ochrolifuanine A**

[35527-46-9] C<sub>29</sub>H<sub>34</sub>N<sub>4</sub> (438.62). Pharm: Toxin. Source: YI SI MEI GUI SHU *Ochrosia confusa*. Ref: 658.

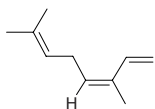
**15925 Ocimene**

α-Ocimene [502-99-8] C<sub>10</sub>H<sub>16</sub> (136.24). Source: JU PI *Citrus reticulata*, WU ZHU YU *Evodia rutaecarpa* (in 1915, the compound was isolated from the plant). Ref: 5505.

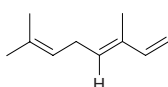


**15926  $\beta$ -cis-Ocimene**

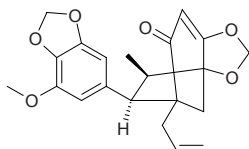
$C_{10}H_{16}$  (136.24). bp 81°C/30mmHg. Source: GUI HUA *Osmanthus fragrans*, HONG NAN PI *Machilus thunbergii*, HU TAO YE *Juglans regia*, JI DAN GUO *Passiflora edulis*, LIAN QIAO *Forsythia suspensa*, MEI GUI HUA *Rosa rugosa*, QIANG HUO *Notopterygium incisum*, SHENG JIANG *Zingiber officinale*, SHI JI NING *Mosla scabra* [Syn. *Mosla punctata*], YA ER QIN *Cryptotaenia japonica*, YU XIANG CAO *Mentha rotundifolia*, ZHONG BIN JU *Tithonia diversifolia*. Ref: 2, 660.

**15927  $\beta$ -trans-Ocimene**

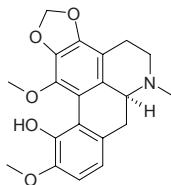
$C_{10}H_{16}$  (136.24). bp 81°C/30mmHg. Source: LIAN QIAO *Forsythia suspensa*, QIANG HUO *Notopterygium incisum*. Ref: 2.

**15928 Ocobullenone**

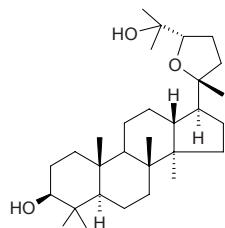
$C_{21}H_{22}O_6$  (370.41). Pharm: Anti-inflammatory (5-LOX inhibitor,  $IC_{50}$  = 100  $\mu$ mol/L; COX-1 inhibitor, > 500  $\mu$ mol/L, inactive, control Indomethacin,  $IC_{50}$  = 3.1  $\mu$ mol/L, COX-2 inhibitor, > 500  $\mu$ mol/L, inactive, Indomethacin,  $IC_{50}$  = 188  $\mu$ mol/L). Source: NAN FEI ZHANG GUI *Ocotea bullata* (stem cortex). Ref: 3971.

**15929 Ocokryptine**

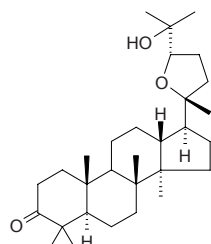
N-Methylhernandine  $C_{20}H_{21}NO_5$  (355.39). Pharm: Anti-HIV-1 inactive (HIV-1 IN inhibitor,  $IC_{50}$  > 100  $\mu$ mol/L, positive control Suramin,  $IC_{50}$  = 2.4  $\mu$ mol/L). Source: DING HU DIAO ZHANG *Lindera chunii* (root). Ref: 4224.

**15930 Ocotillo II**

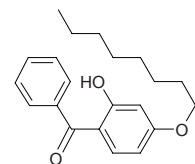
[19942-0-42]  $C_{30}H_{52}O_3$  (460.75). Crystals (EtOH), mp 198~200°C,  $[\alpha]_D^{25}$  = +28.3° ( $c$  = 2.4,  $CHCl_3$ ). Source: LONG NAO GAO XIANG *Dryobalanops aromatica*, HUA LAI CI SHU *Fouquieria splendens*, *Neolloydia texensis*. Ref: 1521, 2439.

**15931 Ocotillone**

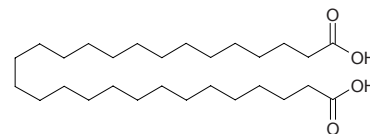
[22549-21-9]  $C_{30}H_{50}O_3$  (458.73). Crystals,  $[\alpha]_D$  = +50° (dioxane). Pharm: Cytotoxic (leukemia cells L<sub>1210</sub>,  $IC_{50}$  = 20  $\mu$ g/mL)<sup>[3786]</sup>. Source: LONG NAO GAO XIANG *Dryobalanops aromatica*, *Dipterus hispidus*, *Juliania adstringens* (bark), *Dryanobalanops* spp. Ref: 1521, 2449, 3786.

**15932 Octabenzone**

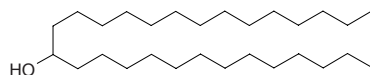
$C_{21}H_{26}O_3$  (326.44). Source: FENG YA JUE *Coniogramme japonica* [Syn. *Hemionitis japonica*]. Ref: 2942.

**15933 Octacosanedioic acid**

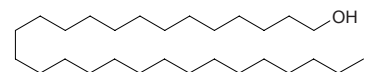
$C_{28}H_{54}O_4$  (454.74). Source: WEN JING *Equisetum arvense*. Ref: 6.

**15934 14-Octacosanol**

[138967-02-9]  $C_{28}H_{58}O$  (410.77). mp 79~80°C. Pharm: Aromatase inhibitor (29.6  $\mu$ mol/L, InRt = (24.3±8.9)%). Source: YI ZHU QIAN MA *Urtica dioica*. Ref: 900.

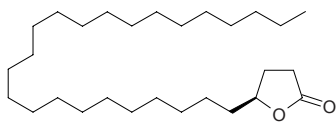
**15935 1-Octacosanol**

[557-61-9]  $C_{28}H_{58}O$  (410.77). mp 83.2~83.4°C. Source: BAI GUO *Ginkgo biloba*, HAI HONG DOU *Adenantha pavonina*, HE SHUO YAO HUA *Wikstroemia chamaedaphne*, HUI BAO HAO *Artemisia roxburgiana*, JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], LAO SHU LE *Acanthus ilicifolius*, MU JIN PI *Hibiscus syriacus*, PEI LAN *Eupatorium fortunei*, SU MU *Caesalpinia sappan*, WU TONG BAI PI *Firmiana simplex*, XIANG MAO *Cymbopogon citratus*, ZE QI *Euphorbia helioscopia*. Ref: 2, 503, 519, 660, 1521.



**15936 Octacosan-4-olide**

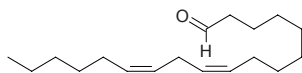
$C_{28}H_{54}O_2$  (422.74). White powder, mp 70°C (Hexane:EtOAc = 9:1). **Pharm:** Phytotoxin inactive (doesn't inhibit radicle growth of *Amaranthus hypochondriacus* and *Echinochloa crusgalli*); CaM interactor inactive. **Source:** FU CHUI FE LAO JU *Flourensia cernua*. **Ref:** 3433.

**15937 Octacosyl lignocerate**

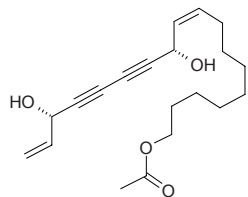
$C_{52}H_{104}O_2$  (761.41). **Source:** CHONG BAI LA *Ericerus pela*. **Ref:** 6.

**15938 9,12-Octadecadienal**

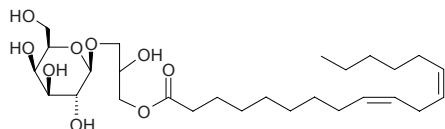
[2541-61-9]  $C_{18}H_{32}O$  (264.46). mp -32.3°C. **Source:** SHAN NAI *Kaempferia galanga*, *Hyphantria cunea*. **Ref:** 1344, 1521.

**15939 9,17-Octadecadiene-12,14-diyne-1,11,16-triol, 1-acetate**

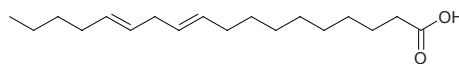
[52691-49-3]  $C_{20}H_{28}O_4$  (332.44). Oil,  $[\alpha]_D^{25} = +178.3^\circ$  ( $c = 8.9$ ,  $CHCl_3$ ), RI[20, 589nm] = +107° ( $c = 0.7$ , alcohol). **Pharm:** Antibacterial (*Staphylococcus aureus* RN4220 MIC = 50.0µg/mL; *Bacillus subtilis* MIC = 25.0µg/mL; *Mycobacterium tuberculosis*; isoniazid-resistant *Mycobacterium tuberculosis avium*). **Source:** JIE JIE LEI A WEI *Ferulago nodosa*, MEI ZHOU CI SHEN *Oplonanax horridus*. **Ref:** 2830, 2831.

**15940 (2S)-1-O-(9Z,12Z-Octadeca-dien-oyl)-3-O-β-D-galactopyranosyl-glycerol**

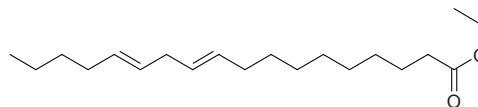
$C_{27}H_{48}O_9$  (516.68). Colorless oil,  $[\alpha]_D = -24^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** PAF antagonist. **Source:** XI LAN ROU GUI *Cinnamomum zeylanicum*. **Ref:** 2199.

**15941 10,13-Octadecadienoic acid**

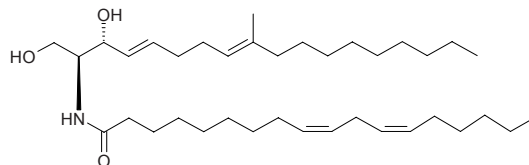
$C_{18}H_{32}O_2$  (280.45). **Source:** BIAN JING HUANG QI *Astragalus complanatus*. **Ref:** 2882.

**15942 10,13-Octadecadienoic acid ethyl ester**

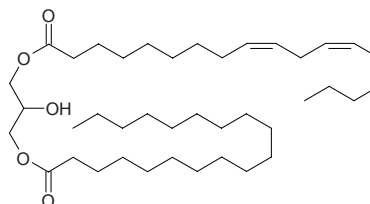
$C_{20}H_{36}O_2$  (308.51). **Source:** CI WU JIA *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*]. **Ref:** 2883.

**15943 (2S,3R,4E,8E,9'Z,12'Z)-N-9',12'-Octadecadienoyl-2-amino-9-methyl-4,8-octadecadiene-1,3-diol**

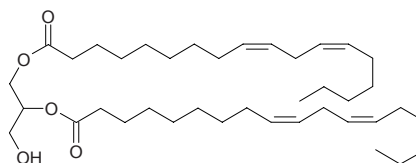
$C_{37}H_{67}NO_3$  (573.95). Amorphous powder,  $[\alpha]_D^{30} = -13.3^\circ$  ( $c = 0.08$ ,  $CHCl_3$ ). **Source:** HOU SHU SHAN GU *Panellus serotinus*, *Lyophyllum connatum*. **Ref:** 4195.

**15944 1-O-(9Z,12Z-Octadecadienoyl)-3-O-nonadecanoyl glycerol**

$C_{40}H_{74}O_5$  (635.03). **Pharm:** Cytotoxic inactive (*in vitro*, LNCaP,  $IC_{50} > 100\mu\text{mol/L}$ ). **Source:** LANG DANG ZI *Hyoscyamus niger* (seed: yield = 0.0004%dw). **Ref:** 4607.

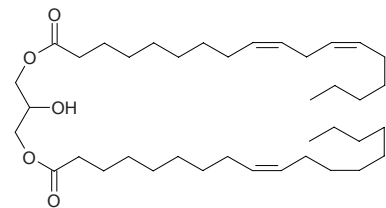
**15945 1-O-(9Z,12Z-Octadecadienoyl)-2-O-(9Z,12Z-octadecadienoyl) glycerol**

$C_{39}H_{68}O_5$  (616.97). **Pharm:** Cytotoxic inactive (*in vitro*, LNCaP,  $IC_{50} > 100\mu\text{mol/L}$ ). **Source:** LANG DANG ZI *Hyoscyamus niger* (seed: yield = 0.018%dw). **Ref:** 4607.

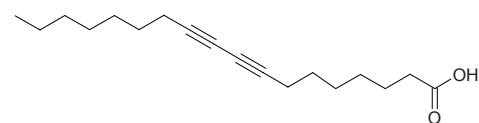


**15946 1-O-(9Z,12Z-Octadecadienoyl)-3-O-(9Z-octadecenoyl) glycerol**

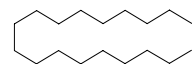
$C_{39}H_{70}O_5$  (628.99). **Pharm:** Cytotoxic inactive (*in vitro*, LNCaP,  $IC_{50} > 100\mu\text{mol/L}$ ). **Source:** LANG DANG ZI *Hyoscyamus niger* (seed: yield = 0.0012%dw). **Ref:** 4607.

**15947 Octadeca-8,10-dienoic acid**

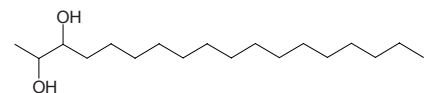
$C_{18}H_{28}O_2$  (276.42). **Pharm:** Inhibits cancer cell invasion (MM1 cells, *in vitro*,  $10\mu\text{g/mL}$ , InRt = 61.1%). **Source:** HEI ZI LI GUO JI SHENG *Scurrura atropurpurea* (yield = 0.0042%). **Ref:** 4329.

**15948 n-Octadecane**

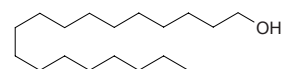
Octadecane [593-45-3]  $C_{18}H_{38}$  (254.50). **Source:** DANG SHEN *Codonopsis pilosula*. **Ref:** 2.

**15949 erythro-2,3-Octadecane-diol**

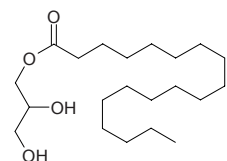
$C_{18}H_{38}O_2$  (286.50). **Source:** ZHI Phasianus *colchicus*. **Ref:** 6.

**15950 Octadecanol**

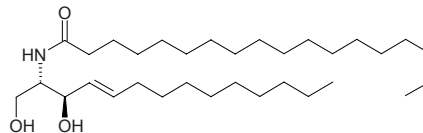
Stearyl alcohol [112-92-5]  $C_{18}H_{38}O$  (270.50). **Source:** BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], SHUI LIU DOU *Pongamia pinnata* (stem cortex: yield = 0.00035%). **Ref:** 2, 4721.

**15951 1-O-Octadecanoyl glycerol**

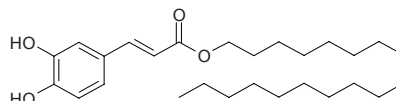
Octadecanoic acid-2,3-dihydroxypropyl ester  $C_{21}H_{42}O_4$  (358.57). **Pharm:** Cytotoxic inactive (*in vitro*, LNCaP,  $IC_{50} > 100\mu\text{mol/L}$ )<sup>[4607]</sup>. **Source:** LANG DANG ZI *Hyoscyamus niger* (seed: yield = 0.0017%dw), TIAN SHAN ZHU ZI *Garcinia dulcis* (fruit). **Ref:** 4607, 5319.

**15952 (4E,2S,3R)-2-N-Octadecanoyl-4-tetradecasphingenine**

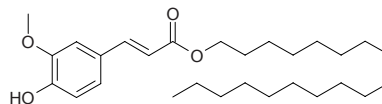
$C_{32}H_{63}NO_3$  (509.86). White powder,  $[\alpha]_D^{20} = -3.5^\circ$  ( $c = 0.012$ ,  $CHCl_3$ ). **Source:** BAI JIANG CAN *Bombyx mori*. **Ref:** 4684.

**15953 Octadecanyl caffeate**

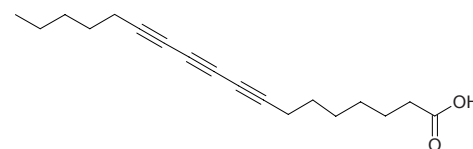
$C_{27}H_{44}O_4$  (432.65). **Source:** ZI CAO *Lithospermum erythrorhizon*. **Ref:** 2193.

**15954 Octadecanyl-3-methoxy-4-hydroxy benzeneacrylate**

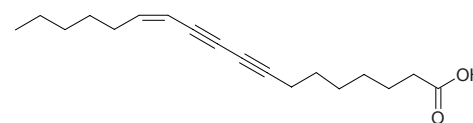
Octadecanyl 3-(4-hydroxy-3-methoxy-phenyl)-acrylate ester  $C_{28}H_{46}O_4$  (446.68). White acicular crystals, mp 67.5~69.0°C; white powder, mp 86~89°C. **Pharm:** Inhibitory activity against NFAT Transcription ( $IC_{50} = (25.7 \pm 1.7)\mu\text{mol/L}$ , positive control Cyclosporin A,  $IC_{50} = (0.29 \pm 0.01)\mu\text{mol/L}$ )<sup>[2536]</sup>. **Source:** DA JI<sup>(3)</sup> *Euphorbia pekinensis*, HUA CHA BIAO *Ribes fasciculatum* var. *chinense*, SANG HUANG *Phellinus igniarius* (sporocarp: yield = 0.0011%dw). **Ref:** 360, 2536, 4747.

**15955 Octadeca-8,10,12-trienoic acid**

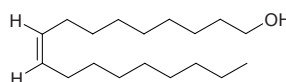
$C_{18}H_{24}O_2$  (272.39). **Pharm:** Inhibits cancer cell invasion (MM1 cells, *in vitro*,  $10\mu\text{g/mL}$ , InRt = 99.4%,  $5\mu\text{g/mL}$ , InRt = 94.9%). **Source:** HEI ZI LI GUO JI SHENG *Scurrura atropurpurea* (yield = 0.0170%). **Ref:** 4329.

**15956 (Z)-Octadec-12-ene-8,10-dienoic acid**

$C_{18}H_{26}O_2$  (274.41). **Pharm:** Inhibits cancer cell invasion (MM1 cells, *in vitro*,  $10\mu\text{g/mL}$ , InRt = 89.8%). **Source:** HEI ZI LI GUO JI SHENG *Scurrura atropurpurea* (yield = 0.0082%). **Ref:** 4329.

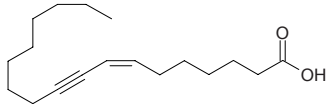
**15957 9(Z)-Octadecen-1-ol**

Oleyl alcohol [143-28-2]  $C_{18}H_{36}O$  (268.49). bp 205~210°C/15mmHg. **Source:** BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], LI *Chenopodium album*. **Ref:** 2, 6.

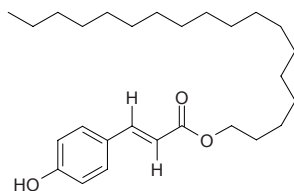


**15958 (Z)-7-Octadecen-9-ynoic acid**

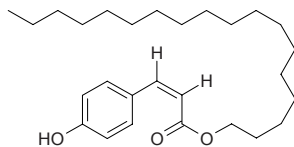
$C_{18}H_{30}O_2$  (278.44). Colorless oil. Source: *Lettowianthus stellatus* (root cortex). Ref: 3944.

**15959 Octadecyl (E)-p-coumarate**

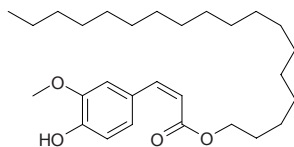
$C_{27}H_{44}O_3$  (416.65). Source: ZHAI YE NAN YANG SHAN *Araucaria angustifolia* (seeding root). Ref: 5098.

**15960 Octadecyl (Z)-p-coumarate**

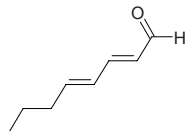
$C_{27}H_{44}O_3$  (416.65). Source: ZHAI YE NAN YANG SHAN *Araucaria angustifolia* (seeding root). Ref: 5098.

**15961 Octadecyl (Z)-ferulate**

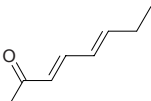
$C_{28}H_{46}O_4$  (446.68). Source: ZHAI YE NAN YANG SHAN *Araucaria angustifolia* (seeding root). Ref: 5098.

**15962 (E,E)-2,4-Octadienal**

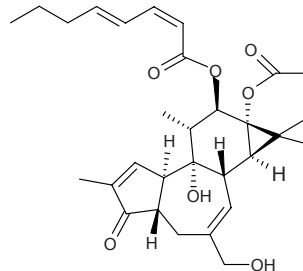
$C_8H_{12}O$  (124.18). Source: KUN BU *Laminaria japonica*. Ref: 1252.

**15963 3,5-Octadiene-2-one**

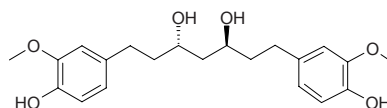
$C_8H_{12}O$  (124.18). Source: CHA YE *Camellia sinensis* [Syn. *Thea sinensis*]. Ref: 660.

**15964 12-O-2Z,4E-Octadienoyl-4-deoxyphorbol-13-acetate**

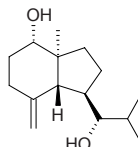
$C_{30}H_{40}O_7$  (512.65). Pharm: Irritant. Source: LU YU SHU *Euphorbia tirucalli*. Ref: 658.

**15965 Octahydrocurcumin**

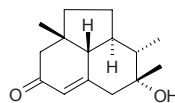
$C_{21}H_{28}O_6$  (376.45). Source: GAO LIANG JIANG *Alpinia officinarum*. Ref: 660.

**15966 Octahydro-4-hydroxy-3α-methyl-7-methylene-α-(1-methylethyl)-1H-indene-1-methanol**

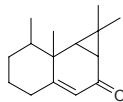
$C_{15}H_{26}O_2$  (238.37). White powder,  $[\alpha]_D^{20} = -60.8^\circ$  ( $c = 0.36$ ,  $CHCl_3$ ). Pharm: Anti-HIV-1 inactive (*in vitro*, HOG.R5). Source: DIE DA LAO *Litsea verticillata* (leaf and twig; yield = 0.00012%dw). Ref: 4688.

**15967 1,2,2a,3,6,7,8,8a-Octahydro-7-hydroxy-2a,7,8-trimethylacena-phthalen-4(4H)-one**

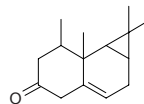
$C_{15}H_{22}O_2$  (234.34). Colorless oil,  $[\alpha]_D^{25} = +27.1^\circ$  ( $c = 0.02$ ,  $CHCl_3$ ). Source: PA KE YE XIANG SHU *Cestrum parqui* (fresh leaf). Ref: 5327.

**15968 1,1a,4,5,6,7,7a,7β-Octahydro-1,1,7a-tetramethyl-2H-cyclopropa(α)-naphthalen-2-one**

$C_{15}H_{22}O$  (218.34). Source: WU WEI ZI *Schisandra chinensis*. Ref: 2.

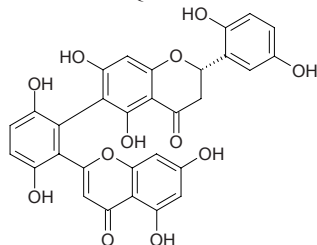
**15969 1,1a,2,4,6,7,7a,7β-Octahydro-1,1,7a-tetramethyl-5H-cyclopropa(α)-naphthalen-5-one**

$C_{15}H_{22}O$  (218.34). Source: WU WEI ZI *Schisandra chinensis*. Ref: 2.

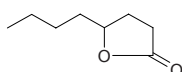


**15970 (1-2*S*)-1-*S*,11-*S*,1-*L*,11-*L*,1-*L*,1-*L*,1-*S*,11-*S*'-Octahydroxy-[1-*L*,11-*L*]-flavanonylflavone**

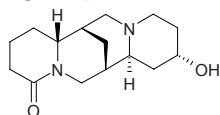
$C_{30}H_{20}O_{12}$  (572.49). Yellow needles (MeOH), mp 229–230°C (dec). Source: KE AI HUANG QIN *Scutellaria amabilis* (root: yield = 0.0051%dw). Ref: 2072.

**15971  $\gamma$ -Octalactone**

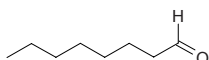
4-*n*-Butyl-4-hydroxybutyric acid lactone [104-50-7]  $C_8H_{14}O_2$  (142.20). bp 132–133°C/20mmHg. Source: CHAI HU *Bupleurum chinense*, XING ZI *Prunus armeniaca*. Ref: 2, 6.

**15972 Octalupine**

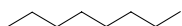
13-Hydroxylupanine [15358-48-2]  $C_{15}H_{24}N_2O_2$  (264.37). Pharm: Antiarrhythmic; antihypertensive. Source: JIN QUE ER *Cytisus scoparius* [Syn. *Spartium scoparium*], HUI HUANG HUA *Thermopsis cinerea*. Ref: 658.

**15973 Octanal**

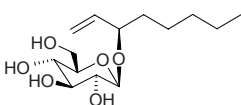
Caprylic aldehyde [124-13-0]  $C_8H_{16}O$  (128.22). Source: FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*], JU PI *Citrus reticulata*, KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*], REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SHENG JIANG *Zingiber officinale*. Ref: 2, 660.

**15974 *n*-Octane**

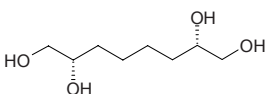
[111-65-9]  $C_8H_{18}$  (114.23). Source: DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*], SHENG JIANG *Zingiber officinale*. Ref: 2.

**15975 (3*R*)-1-Octan-3-enyl- $\beta$ -*D*-glucopyranoside**

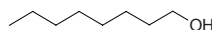
$C_{14}H_{26}O_6$  (390.36). Source: JIA MA CHI XIAN *Bacopa monniera* (whole herb: yield = 0.0041%fw). Ref: 4664.

**15976 (2*S*\*,7*S*\*)-(2)-Octane-1,2,7,8-tetrol**

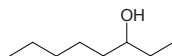
$C_8H_{18}O_4$  (178.23). Source: SUO SHA MI *Amomum xanthioides* (seed). Ref: 4365.

**15977 Octanol**

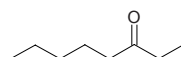
1-Octanol [111-87-5]  $C_8H_{18}O$  (130.23). Source: FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*], JU PI *Citrus reticulata*, XI YANG SHEN *Panax quinquefolium*. Ref: 2.

**15978 3-Octanol**

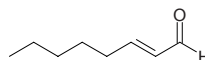
Ethylamylcarbinol  $C_8H_{18}O$  (130.23). Source: HUO XIANG *Agastache rugosus*, JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*]. Ref: 2.

**15979 3-Octanone**

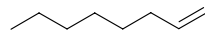
Amyl ethyl ketone [106-68-3]  $C_8H_{16}O$  (128.22). bp (+) 178.0–179.5°C, (–) 82°C/24mmHg; bp 165–166°C. Source: HUO XIANG *Agastache rugosus*, JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*], XIANG XUN *Lentinus edodes*. Ref: 2, 6.

**15980 (*E*)-2-Octenal**

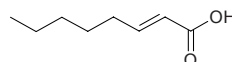
$C_8H_{14}O$  (136.20). mp 125–126°C. Source: BING CHI XIAN *Tetraplodon mnioides* [Syn. *Tetraplodon bryoides*; *Splachnum mnioides*], KUN BU *Laminaria japonica*. Ref: 2845, 1252.

**15981 1-Octene**

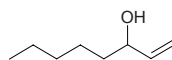
$C_8H_{16}$  (112.22). Source: BAN XIA *Pinellia ternata*. Ref: 1401.

**15982 2-Octenic acid**

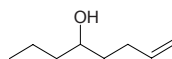
[53907-72-5]  $C_8H_{14}O_2$  (142.20). Source: CHAI HU *Bupleurum chinense*. Ref: 2.

**15983 1-Octen-3-ol**

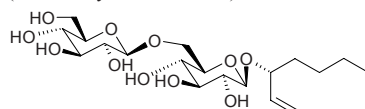
Matsutake alcohol  $C_8H_{16}O$  (128.22). bp 165–175°C. Source: BAI SU ZI *Perilla frutescens*, JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*], SONG XUN *Tricholoma matsutake* [Syn. *Armillaria matsutake*]. Ref: 2, 6.

**15984 7-Octen-4-ol**

3-Hydroxy-1-octene [3391-86-4]  $C_8H_{16}O$  (128.22). Source: FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*]. Ref: 2.

**15985 (*R*)-Oct-1-en-3-yl *O*- $\alpha$ -*L*-arabinopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside**

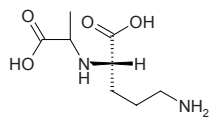
$C_{20}H_{36}O_{11}$  (452.5). Pharm: Bone resorption inhibitor (PTH-induced in a bone organ culture system). Source: HAI JIN BI XIE *Dioscorea spongiosa* (Rhizome: yield = 0.0017%). Ref: 4692.



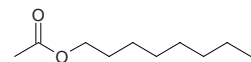


**15986 Octopinic acid**

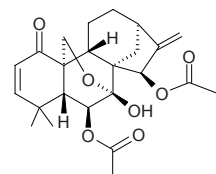
$C_8H_{16}N_2O_4$  (204.23). Source: DI JIN *Parthenocissus tricuspidata*. Ref: 6.

**15987 n-Octyl acetate**

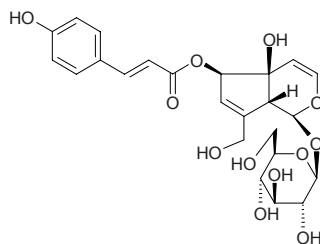
$C_{10}H_{20}O_2$  (172.27). Source: DA LIANG JIANG *Alpinia galanga*. Ref: 660.

**15988 Odonicin**

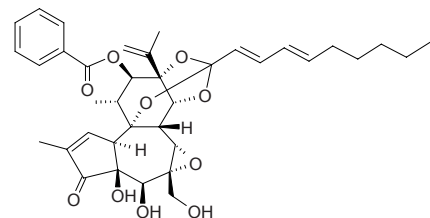
[51419-51-3]  $C_{24}H_{30}O_7$  (430.50). Crystals (MeOH), mp 193–195°C,  $[\alpha]_D^{26} = -193^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ); mp 197–199°C,  $[\alpha]_D^{29} = -195.9^\circ$  ( $c = 0.15$ ,  $C_5H_5N$ ). Source: CHANG GUAN XIANG CHA CAI *Rabdosia longituba*, MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosia japonica*], XIAN MAI XIANG CHA CAI *Rabdosia nervosa*. Ref: 2819, 2820, 2821, 4067.

**15989 Odontoside**

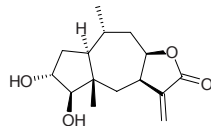
[30358-89-5]  $C_{24}H_{28}O_{12}$  (508.48). Source: CHI YE CAO *Odonites serotina*. Ref: 6.

**15990 Odoracin**

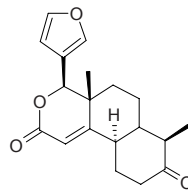
[60195-70-2]  $C_{37}H_{44}O_{10}$  (648.76). mp 204–206°C,  $[\alpha]_D^{32} = +61.7^\circ$  ( $CHCl_3$ ). Pharm: Antineoplastic (leukemia). Source: CAO WU JIU *Stillingia sylvatica* [Syn. *Sapium sylvatica*], RUI XIANG GEN *Daphne odora*, YUAN HUA *Daphne genkwa*, KUAN YE GE NI DI MU *Gnidia latifolia*. Ref: 1521, 2862.

**15991 Odoratin I\***

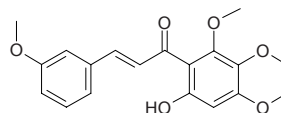
Hymenoratin [19908-77-1]  $C_{15}H_{22}O_4$  (266.34). Thin acicular crystals (acetone), mp 165–167°C. Pharm: Cytotoxic (KB,  $ED_{50} = 4\mu g/mL$ ). Source: BAI LAI SHI JU *Baileya multiradiata*, SHAO BIAN HUA BAI LAI SHI JU *Baileya pauciradiata*, XIANG MO ZHI JU *Hymenoxys odorata*. Ref: 5, 661.

**15992 Odoratin II\***

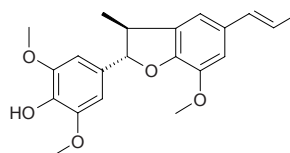
[10245-15-5]  $C_{19}H_{22}O_4$  (314.38). Crystals (EtOAc), mp 216–223°C,  $[\alpha]_D = +155^\circ$  ( $c = 0.74$ ,  $CHCl_3$ ). Source: YAN YANG CHUN *Cedrela odorata*. Ref: 2958.

**15993 Odoratin III\***

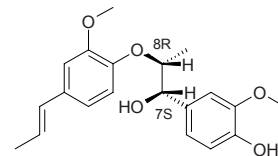
6'-Hydroxy-2',3',4,4'-tetramethoxychalcon [41929-26-4]  $C_{19}H_{20}O_6$  (344.37). Source: KUN MING JI XUE TENG *Milletia dielsiana*, FEI JI CAO *Eupatorium odoratum*. Ref: 2896, 2897.

**15994 Odoratisol A**

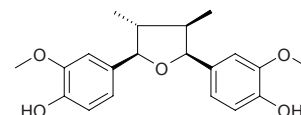
$C_{21}H_{24}O_5$  (356.42). Oil,  $[\alpha]_D^{25} = -35.1^\circ$  ( $c = 1.22$ ,  $CHCl_3$ ). Source: JI XIANG RUN NAN *Machilus odoratissima* (bark: yield = 0.0004%dw). Ref: 2070.

**15995 Odoratisol B**

$C_{20}H_{24}O_5$  (344.41). Oil,  $[\alpha]_D^{25} = +18.6^\circ$  ( $c = 1.22$ ,  $CHCl_3$ ). Source: JI XIANG RUN NAN *Machilus odoratissima* (bark: yield = 0.00035%dw). Ref: 2070.

**15996 Odoratisol C**

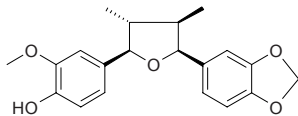
$C_{20}H_{24}O_5$  (344.41). Oil,  $[\alpha]_D^{25} = -26.0^\circ$  ( $c = 2.79$ ,  $CHCl_3$ ). Source: JI XIANG RUN NAN *Machilus odoratissima* (bark: yield = 0.0014%dw). Ref: 2070.



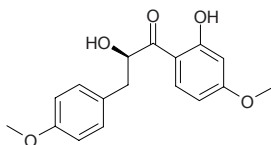


**15997 Odoratisol D**

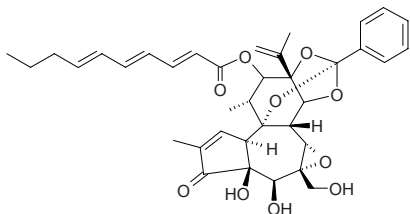
$C_{20}H_{22}O_5$  (342.40). Oil,  $[\alpha]_D^{25} = -12.8^\circ$  ( $c = 4.0$ ,  $CHCl_3$ ). Source: JI XIANG RUN NAN *Machilus odoratissima* (bark: yield = 0.0020%dw). Ref: 2070.

**15998 Odoratosol**

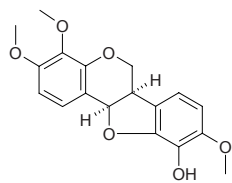
[94943-12-1]  $C_{17}H_{18}O_5$  (302.33). Pharm: Antifungal. Source: AN GE LA ZI TAN *Pterocarpus angolensis*. Ref: 658.

**15999 Odoratratin**

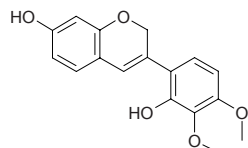
Gniditrin  $C_{37}H_{42}O_{10}$  (646.74). Source: LIANG HUA GE NI DI MU *Gnidia lamprantha*, RUI XIANG GEN *Daphne odora*. Ref: 1521, 2862.

**16000 Odoricarpan**

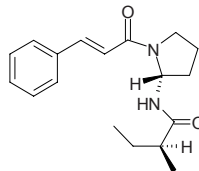
[101153-42-8]  $C_{18}H_{18}O_6$  (330.34). Source: JIANG ZHEN XIANG *Dalbergia odorifera*. Ref: 1266.

**16001 Odoriflavene**

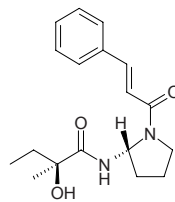
[101153-41-7]  $C_{17}H_{16}O_5$  (300.31). Prisms (EtOAc-hexane), mp 177.5~179°C. Pharm: Prostaglandin synthetase inhibitor ( $IC_{50} = 4.8\mu\text{mol/L}$ ). Source: JIANG ZHEN XIANG *Dalbergia odorifera*. Ref: 1266.

**16002 Odorine**

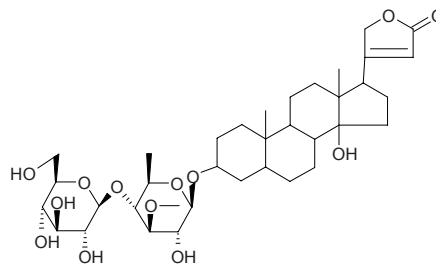
Roxburghiline; Roxburghilin [72755-20-5]  $C_{18}H_{24}N_2O_2$  (300.40). Needles (benzene), mp 218~219°C,  $[\alpha]_D^{25} = +72.6^\circ$  ( $c = 0.03$ ,  $CHCl_3$ ). Pharm: Promoter of cytotoxic effects of vincleucoblastine (inhibits vinblastine-resistant KB cells, odorine with 1 $\mu\text{g/mL}$  vinblastine, KB-V1 cell,  $ED_{50} = 6.4\mu\text{g/mL}$ ). Source: LUO KE SI BAO MI ZI LAN *Aglaia roxburghiana*, MI ZI LAN *Aglaia odorata*, TUE YUAN MI ZI LAN *Aglaia elliptica* (leaf), YIN SE MI ZI LAN *Aglaia argentea*. Ref: 2814, 2815, 2816, 2817, 2818, 4127.

**16003 (+)-Odorinol**

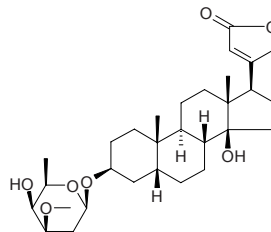
[72755-22-7]  $C_{18}H_{24}N_2O_3$  (316.40). Needles (pet. ether-benzene), mp 166~168°C,  $[\alpha]_D^{25} = +40.5^\circ$  ( $c = 0.01$ ,  $CHCl_3$ ). Pharm: Antiviral (inhibits markedly infection from RDV virus in young chicken embryo). Source: LUO KE SI BAO MI ZI LAN *Aglaia roxburghiana*, MI ZI LAN *Aglaia odorata*. Ref: 2814, 2952.

**16004 Odorobioside G**

[560-70-3]  $C_{36}H_{56}O_{13}$  (696.84). Prisms (MeOH-Me<sub>2</sub>CO-H<sub>2</sub>O), mp 240~242°C,  $[\alpha]_D^{18} = -8.1^\circ$  (MeOH). Source: MAO DI HUANG *Digitalis purpurea*, MAO HUA MAO DI HUANG *Digitalis lanata*. Ref: 1521.

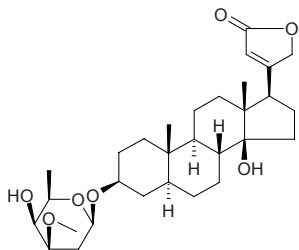
**16005 Odoroside A**

[12738-19-1]  $C_{30}H_{46}O_7$  (518.70). mp 180~185°C, 200~206°C. Source: JIA ZHU TAO *Nerium indicum*. Ref: 6.

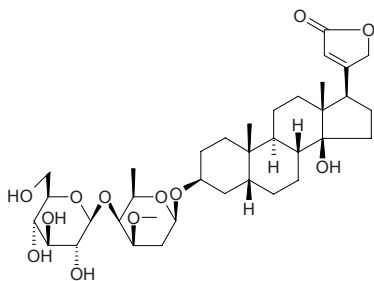


**16006 Odoroside B**

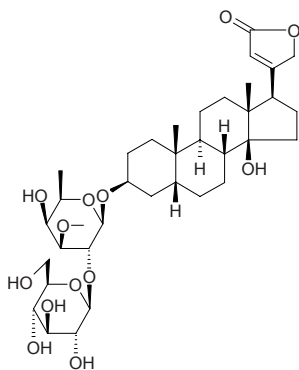
[58407-69-5]  $C_{30}H_{46}O_7$  (518.70). mp 220°C. Source: JIA ZHU TAO *Nerium indicum*. Ref: 6.

**16007 Odoroside D**

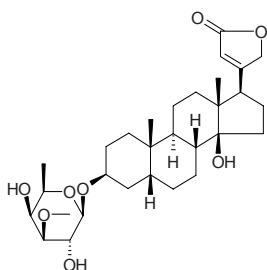
[In DNP]  $C_{36}H_{56}O_{12}$  (680.84). mp 254–256°C. Source: JIA ZHU TAO *Nerium indicum*. Ref: 6.

**16008 Odoroside F**

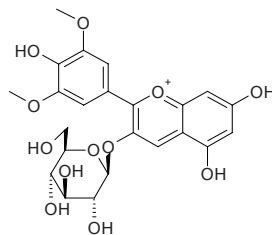
[In DNP]  $C_{36}H_{56}O_{13}$  (696.84). mp 298–302°C (dec). Source: JIA ZHU TAO *Nerium indicum*. Ref: 6.

**16009 Odoroside H**

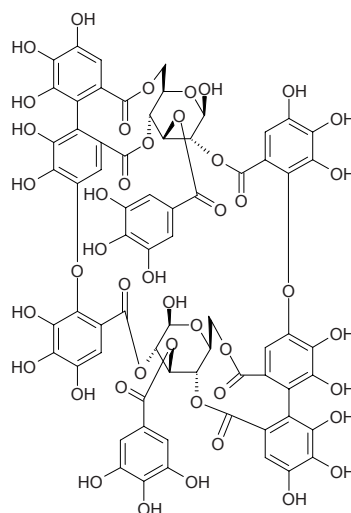
[18810-25-8]  $C_{30}H_{46}O_8$  (534.70). mp 228–232°C. Pharm: CNS depressant (mus, ip, 25mg/kg). Source: JIA ZHU TAO *Nerium indicum*. Ref: 6, 1845.

**16010 Oenin**

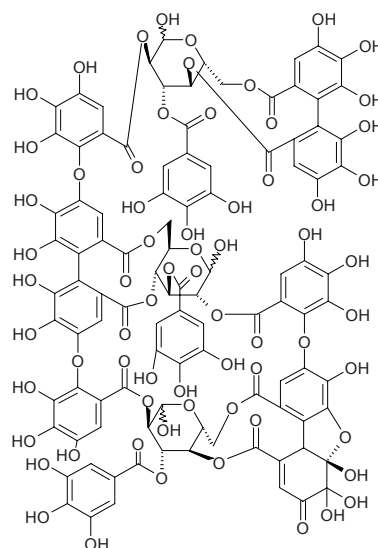
[7728-78-6]  $C_{23}H_{25}O_{12}^+$  (493.45). Source: JIU Liquor, PU<sup>(2)</sup> TAO *Vitis vinifera*. Ref: 6.

**16011 Oenothin B**

$C_{68}H_{48}O_{44}$  (1569.11). Pharm: ACE inhibitor ( $IC_{50}$  = 250  $\mu$ mol/L, control Lisinopril,  $IC_{50}$  = 1 nmol/L); NEP inhibitor ( $IC_{50}$  = 20  $\mu$ mol/L, control Phosphoramidon,  $IC_{50}$  = 9 nmol/L); APN inhibitor inactive. Source: HONG KUAI ZI *Chamaenerion angustifolium* [Syn. *Epilobium angustifolium*]. Ref: 5034.

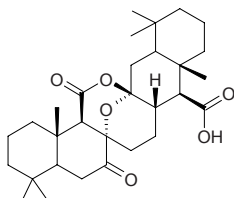
**16012 Oenotherin T<sub>1</sub>**

$C_{102}H_{72}O_{67}$  (2369.67). Pale yellow powder,  $[\alpha]_D = +130^\circ$  ( $c = 0.4$ , MeOH). Source: SI CHI YUE JIAN CAO *Oenothera tetraptera*. Ref: 1979.

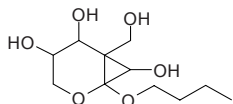


**16013 Officinalic acid**

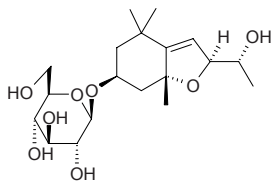
[23983-77-9] C<sub>30</sub>H<sub>44</sub>O<sub>6</sub> (500.68). Crystals, mp 272°C, [α]<sub>D</sub> = -60° (c = 0.5, dioxane). Source: A LI HONG *Fomes officinalis*. Ref: 2962.

**16014 Officinalisin**

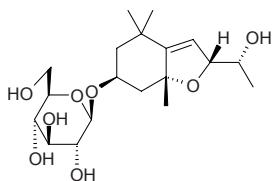
C<sub>11</sub>H<sub>20</sub>O<sub>6</sub> (248.28). Colorless acicular crystals, mp 149~151°C Source: BA JI TIAN *Morinda officinalis*. Ref: 810.

**16015 Officinoside A**

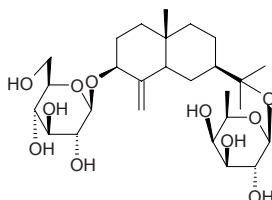
(3*S*,5*R*,8*S*,9*R*)-5,8-Epoxy-6-megastigmene-3,9-diol 3-*O*-β-*D*-glucopyranoside C<sub>19</sub>H<sub>32</sub>O<sub>8</sub> (388.46). White powder, [α]<sub>D</sub><sup>22</sup> = +13.0° (c = 0.6, MeOH). Source: JIN ZHAN JU *Calendula officinalis* (flower). Ref: 4107.

**16016 Officinoside B**

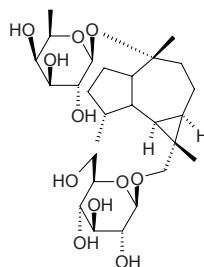
(3*S*,5*R*,8*R*,9*R*)-5,8-Epoxy-6-megastigmene-3,9-diol 3-*O*-β-*D*-glucopyranoside C<sub>19</sub>H<sub>32</sub>O<sub>8</sub> (388.46). White powder, [α]<sub>D</sub><sup>26</sup> = +1.2° (c = 0.5, MeOH). Source: JIN ZHAN JU *Calendula officinalis* (flower). Ref: 4107.

**16017 Officinoside C**

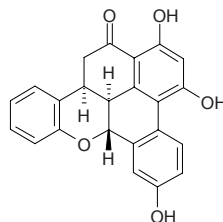
12-*O*-β-*D*-Fucopyranosyl selin-4(15)-en-3β,11-diol 3-*O*-β-*D*-glucopyranoside C<sub>27</sub>H<sub>46</sub>O<sub>11</sub> (546.66). White powder, [α]<sub>D</sub><sup>27</sup> = -7.0° (c = 0.7, MeOH). Source: JIN ZHAN JU *Calendula officinalis* (flower). Ref: 4107.

**16018 Officinoside D**

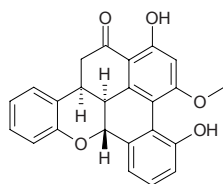
12-*O*-β-*D*-Fucopyranosyl flourensadiol 10-*O*-β-*D*-glucopyranoside C<sub>27</sub>H<sub>46</sub>O<sub>11</sub> (546.66). White powder, [α]<sub>D</sub><sup>26</sup> = -14.5° (c = 0.3, MeOH). Source: JIN ZHAN JU *Calendula officinalis* (flower). Ref: 4107.

**16019 Ohioensin A**

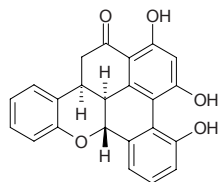
C<sub>23</sub>H<sub>16</sub>O<sub>5</sub> (372.38). Pharm: Antineoplastic; cytotoxic. Source: DUO XING JIN FA XIAN *Polytrichum ohioense*. Ref: 658.

**16020 Ohioensin B**

[145399-60-6] C<sub>24</sub>H<sub>18</sub>O<sub>5</sub> (386.41). Yellow needles, mp 246~247°C (dec), [α]<sub>D</sub><sup>27</sup> = -47° (c = 0.1, CHCl<sub>3</sub>). Pharm: Cytotoxic (KB ED<sub>50</sub> = 9.7μg/mL, MCF7 ED<sub>50</sub> = 3.4μg/mL, HT29 ED<sub>50</sub> = 4.3μg/mL). Source: DUO XING JIN FA XIAN *Polytrichum ohioense*. Ref: 2835.

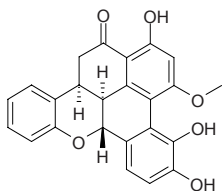
**16021 Ohioensin C**

[145399-61-7] C<sub>23</sub>H<sub>16</sub>O<sub>5</sub> (372.38). Yellow crystals, mp 230~231°C (dec), [α]<sub>D</sub><sup>27</sup> = -18° (c = 0.1, MeOH). Pharm: Cytotoxic (9PS ED<sub>50</sub> = 1.0μg/mL, A549 ED<sub>50</sub> = 8.7μg/mL, MCF7 ED<sub>50</sub> = 6.7μg/mL). Source: DUO XING JIN FA XIAN *Polytrichum ohioense*. Ref: 2835.

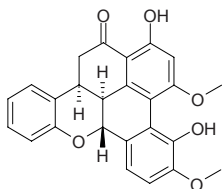


**16022 Ohioensin D**

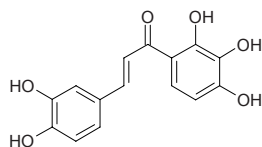
[145399-62-8] C<sub>24</sub>H<sub>18</sub>O<sub>6</sub> (402.41). Yellowish crystals (MeOH), mp 244~245°C (dec),  $[\alpha]_D^{27} = -59^\circ$  ( $c = 0.1$ , CHCl<sub>3</sub>). Pharm: Cytotoxic (9PS ED<sub>50</sub> = 1.0 μg/mL). Source: DUO XING JIN FA XIAN *Polytrichum ohioense*. Ref: 2835.

**16023 Ohioensin E**

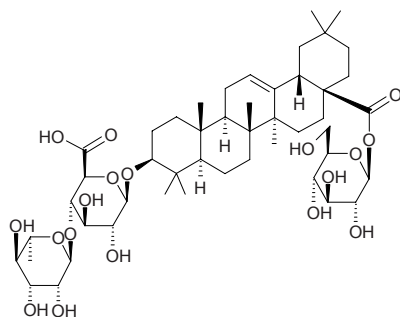
[145399-63-9] C<sub>25</sub>H<sub>20</sub>O<sub>6</sub> (416.43). Yellowish needles (MeOH), mp 226~228°C (dec),  $[\alpha]_D^{27} = -42^\circ$  ( $c = 0.1$ , CHCl<sub>3</sub>). Pharm: Cytotoxic (9PS ED<sub>50</sub> = 1.6 μg/mL, A549 ED<sub>50</sub> = 6.2 μg/mL). Source: DUO XING JIN FA XIAN *Polytrichum ohioense*. Ref: 2835.

**16024 Okanin**

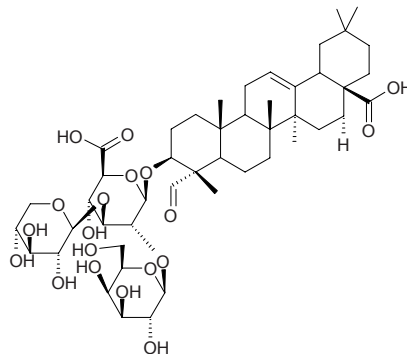
[484-76-4] C<sub>15</sub>H<sub>12</sub>O<sub>6</sub> (288.26). Pharm: Uncoupling action (*Solanum tuberosum*, oxidative phosphorylation in cytoblast). Source: *Bidens* sp., *Coreopsis* sp. Ref: 658.

**16025 Olaxoside**

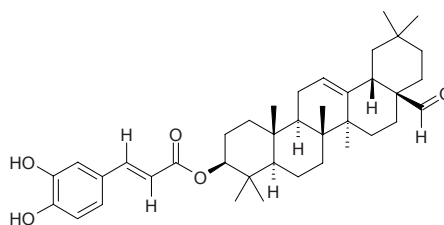
Saponin C C<sub>48</sub>H<sub>76</sub>O<sub>18</sub> (941.13). Pharm: Anti-inflammatory. Source: *Olax* sp. Ref: 658.

**16026 Oldhamianoside**

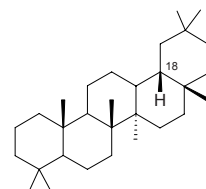
3-O-β-D-Xylopyranosyl-(1→3)-[β-D-galactopyranosyl-(1→2)]-β-D-glucopyranosyl gypsogenin C<sub>47</sub>H<sub>72</sub>O<sub>19</sub> (941.09). Yellowish powder (C<sub>2</sub>H<sub>5</sub>OH with H<sub>2</sub>O). Source: XIA CAO *Gypsophila oldhamiana* (root). Ref: 4803.

**16027 Olean-28-al-3β-yl-caffeate**

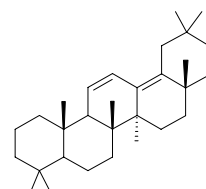
C<sub>39</sub>H<sub>54</sub>O<sub>5</sub> (602.86). Brown amorphous powder,  $[\alpha]_D^{25} = +25^\circ$  ( $c = 1.0$ , MeOH). Source: NAN SHE TENG GEN *Celastrus orbiculatus* [Syn. *Celastrus articulatus*], *Celastrus stephanotifolius*. Ref: 2310, 2511.

**16028 18α-Oleanane**

[30759-92-3] C<sub>30</sub>H<sub>53</sub> (412.75). Crystals (EtOH-hexane), mp 210°C,  $[\alpha]_D^{20} = +40.3^\circ$  ( $c = 0.5$ , CHCl<sub>3</sub>). Source: LUO DI SHENG GEN *Bryophyllum pinnatum*. Ref: 1521, 2915.

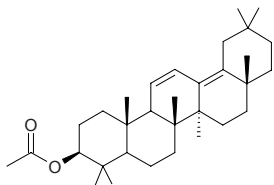
**16029 Olean-11,13(18)-diene**

C<sub>30</sub>H<sub>48</sub> (408.72). Source: SHUI LONG GU *Polypodium niponicum*. Ref: 1414.

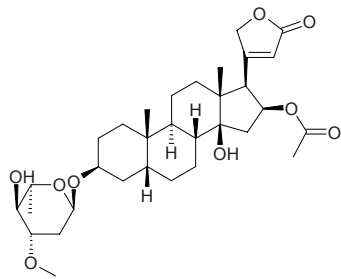


**16030 Olean-11,13(18)-diene-3 $\beta$ -yl acetate**

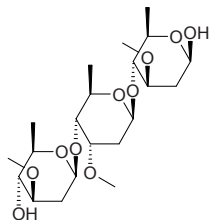
$C_{32}H_{50}O_2$  (466.75). Source: SHUI LONG GU *Polypodium niponicum*. Ref: 1414.

**16031 Oleandrin**

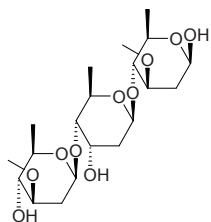
[465-16-7]  $C_{32}H_{48}O_9$  (576.73). mp 250°C (dec). Pharm: Cardiotonic (frog heart, MED = 0.02mg/kg, pigeon heart, MED = 0.368mg/kg, cat heart, MED = 0.27mg/kg); diuretic; anti-inflammatory (NF- $\kappa$ B pathway)<sup>[4415]</sup>; LD (mus) = 2.5mg/kg; LD<sub>50</sub> (rat, iv) = 0.3mg/kg. Source: OU ZHOU JIA ZHU TAO *Nerium oleander*, QING MING HUA *Beaumontia grandiflora*. Ref: 6, 658, 4415.

**16032 O- $\beta$ -D-Oleandropyranosyl-(1 $\rightarrow$ 4)-O- $\beta$ -D-cymaropyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-oleandropyranose**

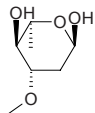
Royleose [205488-06-8]  $C_{21}H_{38}O_{10}$  (450.53).  $[\alpha]_D = +12^\circ$  ( $c = 0.34$ ,  $CHCl_3$ ). Source: ROU LEI NIU NAI CAI *Marsdenia roylei*. Ref: 2372.

**16033 O- $\beta$ -D-Oleandropyranosyl-(1 $\rightarrow$ 4)-O- $\beta$ -D-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-oleandropyranose**

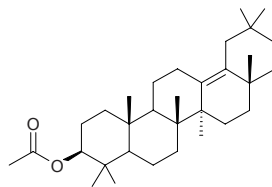
$C_{20}H_{36}O_{10}$  (436.50). Source: ROU LEI NIU NAI CAI *Marsdenia roylei*. Ref: 2372.

**16034 Oleandrose**

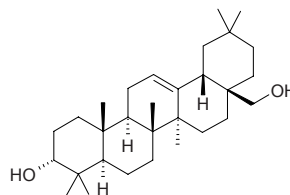
$C_7H_{14}O_4$  (162.19). mp 68~70°C. Source: FU SHOU CAO *Adonis amurensis*, LUO MO ZI *Metaplexis japonica*. Ref: 6.

**16035 Olean-13(18)-en-3-acetate**

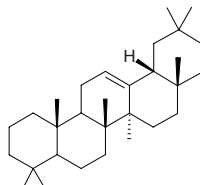
$C_{32}H_{52}O_2$  (468.77). Source: DA HUA XUAN FU HUA CAO *Inula britannica*. Ref: 1388.

**16036 Olean-12-en-3 $\beta$ ,28-diol**

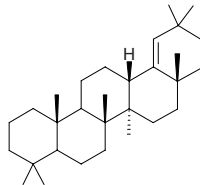
$C_{30}H_{50}O_2$  (442.73). Source: XIA KU CAO *Prunella vulgaris*. Ref: 2508.

**16037 Olean-12-ene**

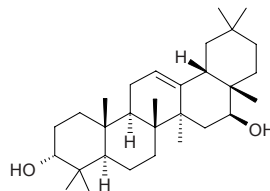
[471-68-1]  $C_{30}H_{50}$  (410.73). Crystals ( $CHCl_3$ -MeOH), mp 162~164°C,  $[\alpha]_D = +97.1^\circ$  ( $CHCl_3$ ). Source: SHUI LONG GU *Polypodium niponicum*. Ref: 1414.

**16038 Olean-18-ene**

[432-11-1]  $C_{30}H_{50}$  (410.73). Crystals ( $Me_2CO$ ), mp 174~175°C,  $[\alpha]_D = +6.2^\circ$  ( $CHCl_3$ ). Source: SHUI LONG GU *Polypodium niponicum*. Ref: 1414.

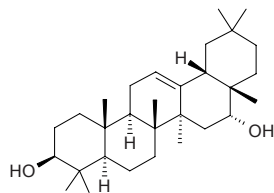
**16039 Olean-12-ene-3 $\alpha$ ,16 $\beta$ -diol**

[122564-89-0]  $C_{30}H_{50}O_2$  (442.73). mp 290~292°C,  $[\alpha]_D^{23} = +51^\circ$  ( $c = 1.0$ , chloroform). Pharm: Antihepatotoxin (liver damage caused by *D*-galactosamine). Source: QING GUO *Canarium album*. Ref: 1147.

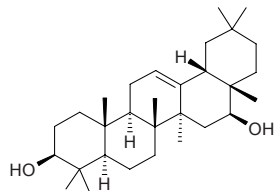


**16040 Olean-12-ene-3 $\beta$ ,16 $\alpha$ -diol**

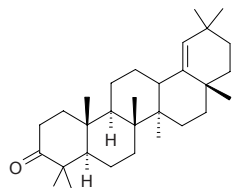
$C_{30}H_{50}O_2$  (442.73). Source: *Malina elemi*. Ref: 1521.

**16041 Olean-12-ene-3 $\beta$ ,16 $\beta$ -diol**

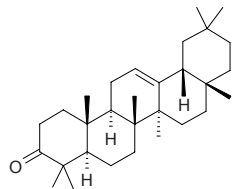
Maniladiol  $C_{30}H_{50}O_2$  (442.73). Source: JIN ZHAN JU *Calendula officinalis*, *Malina elemi*, *Baccharis* spp. Ref: 2272.

**16042 Olean-12-en-3-one**

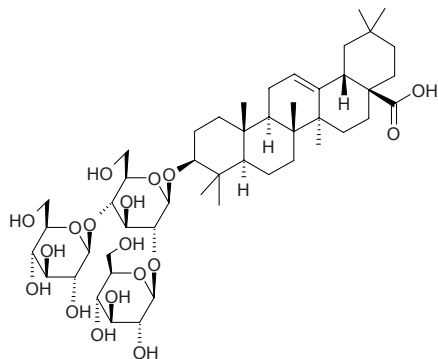
$C_{30}H_{48}O$  (424.72). Source: ZHU ZONG CAO *Adiantum capillus-veneris* (fresh frond). Ref: 4230.

**16043 Olean-18-en-3-one**

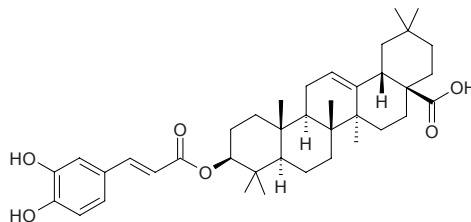
$C_{30}H_{48}O$  (424.72). Source: ZHU ZONG CAO *Adiantum capillus-veneris* (fresh frond). Ref: 4230.

**16044 Oleanoglycotoxin A**

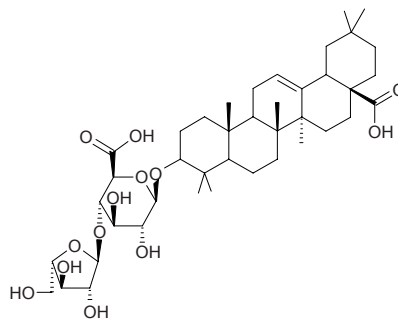
$C_{48}H_{78}O_{18}$  (943.15). Pharm: Spermaticidal (hmn sperm, 50mg/L); molluscicide (*Biomphalaria glabrata*,  $LD_{100}$  = 6mg/L). Source: SHI ER RUI SHANG LU *Phytolacca dodecandra*. Ref: 658.

**16045 Olean-28-oi-3 $\beta$ -yl caffeate**

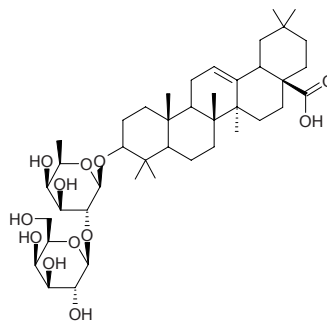
$C_{39}H_{54}O_6$  (618.86). Source: NAN SHE TENG GEN *Celastrus orbiculatus* [Syn. *Celastrus articulatus*]. Ref: 2511.

**16046 Oleanolic acid-3- $\alpha$ -L-arabinofuranosyl(1 $\rightarrow$ 4)- $\beta$ -D-glucuronopyranoside**

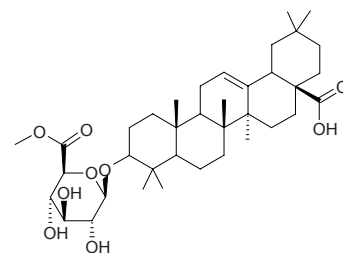
$C_{41}H_{64}O_{13}$  (764.96). Source: TONG HUA GEN *Tetrapanax papyriferus*. Ref: 2916.

**16047 Oleanolic acid-3- $\beta$ -D-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-fucopyranoside**

$C_{42}H_{68}O_{12}$  (765.00). Source: TONG HUA GEN *Tetrapanax papyriferus*. Ref: 2916.

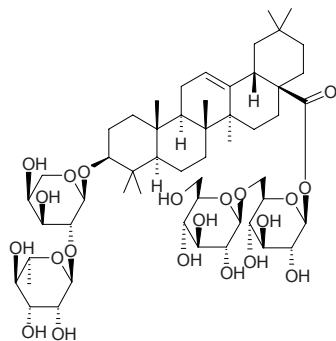
**16048 Oleanolic acid-3-O- $\beta$ -D-(6'-O-methyl)-glucuronoside**

$C_{37}H_{58}O_9$  (646.87). Source: QIN LING ZHU ZI SHEN *Panax japonicus* var. *major*. Ref: 2948.



**16049 Oleanolic acid 3-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranosyl- 28-O- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside**

C<sub>53</sub>H<sub>86</sub>O<sub>21</sub> (1059.26). Source: LIAO DONG CONG MU YE *Aralia elata*, REN DONG TENG *Lonicera japonica*. Ref: 2791, 2863.

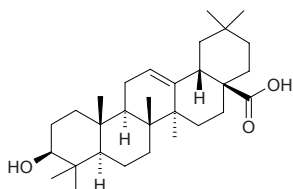


**16050 Oleanolic acid**

3-Hydroxy-12-oleanen-28-oic acid [508-02-1] C<sub>30</sub>H<sub>48</sub>O<sub>5</sub> (456.72). White acicular crystals (ethanol), mp 306~310°C; white needles (MeOH), mp 306~308°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +75.2° (*c* = 1.0, pyridine). Pharm: Cytotoxic (A2780, IC<sub>50</sub> = (20.4±0.4)μg/mL; control Actinomycin D, IC<sub>50</sub> = 2~5ng/mL)<sup>[5397]</sup>; cytotoxic (K562, ED<sub>50</sub> > 20μmol/L, control Adriamycin, ED<sub>50</sub> = (0.09±0.03)μmol/L; B16(F-10), ED<sub>50</sub> > 20μmol/L, Adriamycin, ED<sub>50</sub> = (0.06±0.10)μmol/L; SK-MEL-2, ED<sub>50</sub> > 20μmol/L, Adriamycin, ED<sub>50</sub> = (0.09±0.30)μmol/L; PC3, ED<sub>50</sub> = (15±2)μmol/L, Adriamycin, ED<sub>50</sub> = (0.83±0.18)μmol/L; LOX-IMVI, ED<sub>50</sub> > 20μmol/L, Adriamycin, ED<sub>50</sub> = (0.38±0.33)μmol/L; A549, ED<sub>50</sub> > 20μmol/L, Adriamycin, ED<sub>50</sub> = (0.67±0.21)μmol/L)<sup>[5479]</sup>; antineoplastic (S<sub>180</sub>); anti-inflammatory (rat, swollen foot model caused by carrageenan, experimental chronic arthritis); cardiotoxic; diuretic; hypoglycemic; alanine aminopherase inhibitor (serum); reduces blood capillary permeability (mus); promotes hepatic cell recondition and regeneration (animal liver injury model); antitrypanosomal (epimastigotes of *Trypanosoma cruzi*, MLC = 6.2μmol/L, control Gentian violet, MLC = 6.2μmol/L)<sup>[2579]</sup>; antioxidant (superoxide anion scavenger, fMLP/CB or PMA-stimulated hmn Neutrophils); tissue factor inhibitor inactive<sup>[5387]</sup>; antitubercular (*Mycobacterium tuberculosis*, MIC = 28.7μg/mL, cytotoxic, Vero cells, IC<sub>50</sub> = 82.9μg/mL, SI (IC<sub>50</sub>/MIC) = 2.89, positive control Rifampin, MIC = 0.03μg/mL, IC<sub>50</sub> = 98.3μg/mL, SI = 3277)<sup>[4986]</sup>; platelet aggregation inhibitor (2~5mg/mL collagen-induced, IC<sub>50</sub> > 1000μmol/L, control ASA, IC<sub>50</sub> = (420±3)μmol/L; 1~4μmol/L epinephrine-induced with 0.8~1.0mg/mL collagen, IC<sub>50</sub> = (45.3±5.1)μmol/L, ASA, IC<sub>50</sub> = (53.0±4.5)μmol/L; 10~40μmol/L Sodium arachidonate-induced with 0.8~1.0mg/mL collagen, IC<sub>50</sub> > 1000μmol/L, ASA, IC<sub>50</sub> = (66.0±2.1)μmol/L; 1~5μmol/L PGH<sub>2</sub>/TXA<sub>2</sub> receptor agonist U46619-induced with 0.8~1.0mg/mL collagen, IC<sub>50</sub> > 1000μmol/L, ASA, IC<sub>50</sub> = (340±12)μmol/L)<sup>[4994]</sup>; cytotoxic (HL-60, IC<sub>50</sub> > 100μmol/L, control Taxol, IC<sub>50</sub> = (4.1×10<sup>-4</sup>±1.1×10<sup>-4</sup>)μmol/L; MCF7, IC<sub>50</sub> > 100μmol/L, Taxol, IC<sub>50</sub> = (15.3±2.6)μmol/L; Bel7402, IC<sub>50</sub> > 100μmol/L, Taxol, IC<sub>50</sub> = (0.3±0.1)μmol/L; BGC823, IC<sub>50</sub> = (30.7±1.8)μmol/L; HeLa, IC<sub>50</sub> > 100μmol/L, Taxol, IC<sub>50</sub> = (33.0±6.1)μmol/L; KB, > 100μmol/L, Taxol, IC<sub>50</sub> > 100μmol/L)<sup>[5015]</sup>; apoptosis inducer (HL-60 cells, 15μmol/L, sub-G1 population = (8.7±4.7)%, control sub-G1 population = (5.6±0.2)%, positive control Taxol, sub-G1 population = (40.5±0.2)%)<sup>[5015]</sup>; COX-2 enzyme selective inhibitor (mean IC<sub>50</sub> of isomers = 295μmol/L)<sup>[4415]</sup>; TGF- $\beta$ 1 antagonist (inhibits the binding of <sup>125</sup>I-TGF- $\beta$ 1 to its receptor in Balb/c 3T3

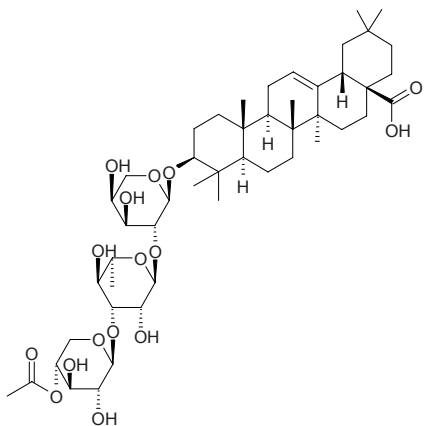
cell, IC<sub>50</sub> = (21.0±2.3)μmol/L, suggests TGF- $\beta$ 1 antagonistic activity is responsible, at least in part, for therapeutic efficacy of *Clerodendranthus spicatus* to treat humans with renal disease)<sup>[5496]</sup>; antiplasmodial (moderate *in vitro*, causes transformation of erythrocytes into stomatocytes)<sup>[5447]</sup>; cytotoxic (leukemia cells L<sub>1210</sub>, IC<sub>50</sub> = 40μg/mL)<sup>[3786]</sup>; antimalarial (*Plasmodium falciparum* FcB1, IC<sub>50</sub> = (9.8±3.1)μg/mL, control Chloroquine, IC<sub>50</sub> = (0.05±0.002)μg/mL)<sup>[4419]</sup>; low toxin. Source: BAI HUA SHE SHE CAO *Oldenlandia diffusa* [Syn. *Hedyotis diffusa*] (whole herb: mean content of 9 batch samples = 1.68%)<sup>[5508]</sup>, BIAN ZHI HU JI SHENG *Viscum articulatum*, BING PIAN *Dryobalanops aromatica*, CHE QIAN *Plantago asiatica* (whole herb: mean content = 0.227%)<sup>[5508]</sup>, CHUAN XI ZHANG YA CAI *Swertia mussoitii*, CI WU JIA YE *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*], CONG MU *Aralia chinensis* (root: content = 3.31%)<sup>[5508]</sup>, DA CHE QIAN *Astrantia major*, DA XING QIN *Plantago major*, DA ZAO *Ziziphus jujuba* (ripe fruit: mean content = 0.021%)<sup>[5508]</sup>, DING XIANG *Syzygium aromaticum* [Syn. *Eugenia caryophyllata*], DONG LING CAO *Rabdosia rubescens* (whole herb: mean content = 0.466%)<sup>[5508]</sup>; leaf: mean content = 0.613%)<sup>[5508]</sup>, DUAN TING SHAN MAI DONG *Liriope muscari* (tuber)<sup>[4772]</sup>, FENG XIANG JI SHENG *Viscum articulatum*, GUAN MU TONG *Aristolochia manshuriensis*, HEI REN DONG *Lonicera nigra*, HONG KUAI ZI *Chamaenerion angustifolium* [Syn. *Epilobium angustifolium*], HU JI SHENG *Viscum coloratum* (stem-leaf: content = 1.49%)<sup>[5508]</sup>, HUANG HUA BAI JIANG *Patrinia scabiosaefolia*, HUANG QI II *Engelhardia roxburghiana* (root), HUO XIANG *Agastache rugosus*, JI SHI TENG GUO *Paederia scandens*, LIAN QIAO *Forsythia suspensa* (2.28%), LIAO DONG CONG MU *Aralia elata* (root: content = 4.98%, root cortex: content = 5.59%, stem cortex: content = 3.69%)<sup>[5508]</sup>, MAI DONG *Ophiopogon japonicus* (tuber: yield = 0.00016%)<sup>[4772]</sup>, MAO CAO LONG *Ludwigia octovalvis* (whole herb: yield = 0.00016%dw), MAO XU CAO *Clerodendranthus spicatus*, MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*], MU BIE ZI *Momordica cochinchinensis*, MU GUA *Chaenomeles sinensis*, MU TONG *Akebia quinata*, NIU XI *Achyranthes bidentata* (root: content scope = 0.186%~2.190%)<sup>[5501]</sup>, mean content = 1.23%)<sup>[5508]</sup>, NV ZHEN ZI *Ligustrum lucidum* (ripe fruit: content scope of 6 origins = 8.83%~15.16%; mean content = 10.79%), PING CHE QIAN *Plantago depressa* (whole herb: mean content = 0.204%)<sup>[5508]</sup>, QING YE DAN *Swertia mileensis*, QIU MU GUA *Chaenomeles lagenaria* [Syn. *Chaenomeles speciosa*] (fruit: content scope of 3 origins = 0.46%~1.72%, mean content = 1.03%)<sup>[5508]</sup>, RI BEN LU TI CAO *Pyrola japonica*, SANG JI SHENG *Loranthus parasiticus* [Syn. *Loranthus chinensis*; *Taxillus chinensis*], SHA ZAO *Elaeagnus angustifolia* (fruit: content = 0.014%)<sup>[5508]</sup>, SHAN ZHU YU *Cornus officinalis* [Syn. *Macrocarpium officinale*] (dried ripe fruit: mean content of 3 origins = 0.066%)<sup>[5508]</sup>, SHI DI *Diospyros kaki*, SHI NAN *Photinia serrulata* (leaf: mean content = 0.653%)<sup>[5508]</sup>, SHI YE *Diospyros kaki* (dried leaf: mean content = 0.430%)<sup>[5508]</sup>, SHU HUA JIE CAO *Valeriana laxiflora* (aerial parts and root), SUAN ZAO *Ziziphus jujuba* var. *spinosa* (ripe fruit: content = 0.038%)<sup>[5508]</sup>, TIAN CAI *Beta vulgaris*, TU DANG GUI *Aralia cordata* (root: content = 0.42%)<sup>[5508]</sup>, WU GENG WU JIA PI *Acanthopanax sessiliflorus* (fruit), XIA KU CAO *Prunella vulgaris* (dried spike: content = 0.233%)<sup>[5508]</sup>, XIU QIU SHU WEI CAO *Salvia hydrangea* (flower), YI LANG QING LAN *Dracocephalum kotschyi*, YOU GAN LAN *Olea europaea*, YU ZHI ZI *Akebia quinata*, ZAO JIA *Gleditsia sinensis* [Syn. *Gleditsia horrida*] (fruit), ZI WEI *Campsis grandiflora* (dried flower: mean

content = 0.176%)<sup>[5501, 5508]</sup>, *Juliania adstringens* (bark)<sup>[3786]</sup>, *Nuxia sphaerocephala* (leaf)<sup>[4419]</sup>, occurs in many plants (very widely distributed aglycone). Ref: 4, 6, 439, 453, 455, 462, 471, 472, 592, 600, 622, 658, 660, 2579, 3005, 3786, 4415, 4418, 4419, 4772, 4986, 4994, 5015, 5059, 5387, 5397, 5447, 5479, 5496, 5501, 5508.



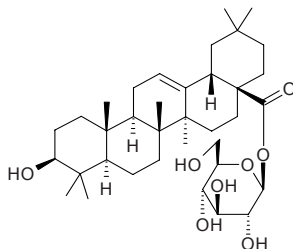
**16051 Oleanolic acid 3-O-(4-O-acetyl-β-D-xylopyranosyl)-(1→3)-α-L-rhamnopyranosyl-(1→2)-α-L-arabinopyranoside**

C<sub>48</sub>H<sub>76</sub>O<sub>16</sub> (909.13). White amorphous powder, [α]<sub>D</sub><sup>22</sup> = -20.2° (c = 3.8, MeOH). Source: AO TOU WU HUAN ZI *Sapindus emarginatus* (pericarp). Ref: 4123.



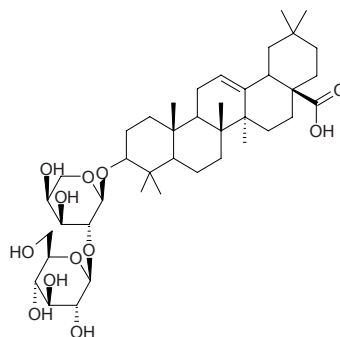
**16052 Oleanolic acid-28-O-β-D-glucopyranoside**

C<sub>36</sub>H<sub>58</sub>O<sub>8</sub> (618.86). White crystalline powder, mp 218–220°C, [α]<sub>D</sub><sup>20</sup> = +25.59° (c = 0.104, MeOH). Pharm: Molluscicide (kills genus *Oncomelania*). Source: KONG XIN XIAN *Alternanthera philoxeroides*, TAI BAI CONG MU *Aralia taibaiensis*. Ref: 470, 700.



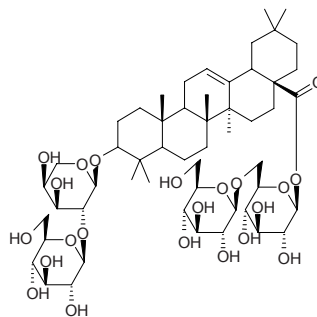
**16053 Oleanolic acid-3-O-β-D-glucopyranosyl(1→2)-α-L-arabinopyranoside**

C<sub>41</sub>H<sub>66</sub>O<sub>12</sub> (750.98). Source: HONG MAO WU JIA PI *Acanthopanax giraldii* [Syn. *Acanthopanax giraldii* var. *inermis*; *Eleutherococcus giraldii*], REN DONG TENG *Lonicera japonica*. Ref: 2791, 2954.



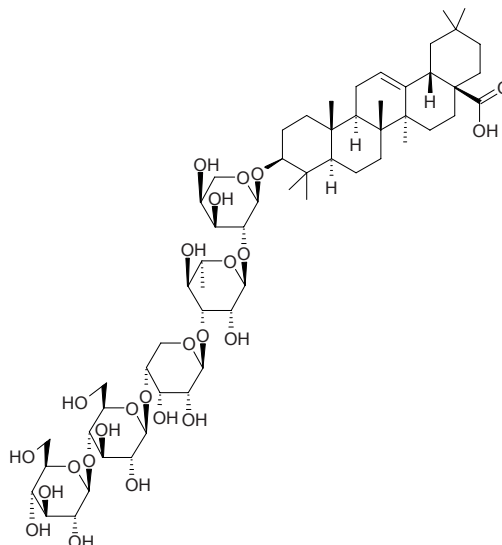
**16054 Oleanolic acid-3-O-β-D-glucopyranosyl(1→2)-α-L-arabinopyranosyl-28-O-β-D-glucopyranosyl(1→6)-β-D-glucopyranoside**

C<sub>53</sub>H<sub>86</sub>O<sub>22</sub> (1075.26). Source: REN DONG TENG *Lonicera japonica*. Ref: 2791.



**16055 Oleanolic acid-3-O-β-D-glucopyranosyl(1→4)-β-D-glucopyranosyl(1→4)-β-D-ribosepyranosyl(1→3)-α-L-rhamnopyranosyl(1→2)-α-L-arabinopyranoside**

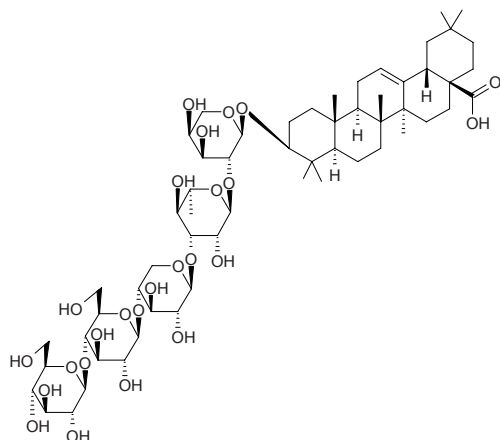
Prosapogenin CP<sub>9</sub> C<sub>58</sub>H<sub>94</sub>O<sub>25</sub> (1191.38). Source: WEI LING XIAN *Clematis chinensis*. Ref: 2854.





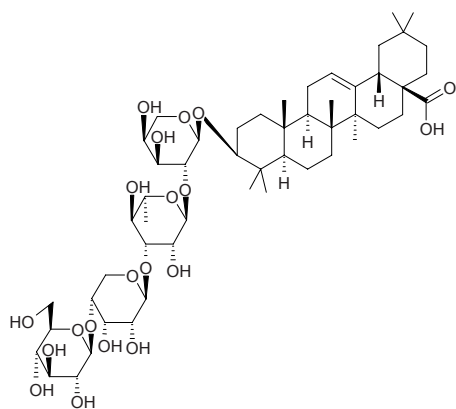
**16056 Oleanolic acid-3-O- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)- $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 3)- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranoside**

Prosapogenin CP<sub>9a</sub> C<sub>58</sub>H<sub>94</sub>O<sub>25</sub> (1191.38). Source: WEI LING XIAN *Clematis chinensis*. Ref: 2854.



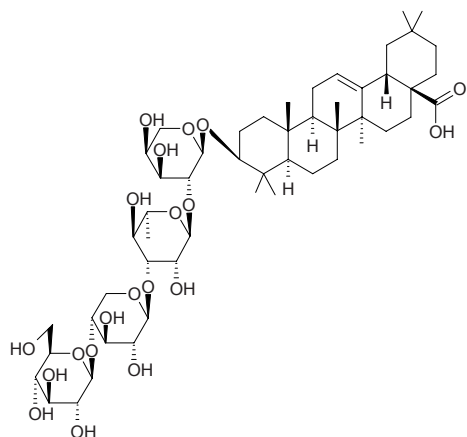
**16057 Oleanolic acid 3-O- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)- $\beta$ -D-ribosepyranosyl(1 $\rightarrow$ 3)- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranoside**

Prosapogenin CP<sub>7</sub> C<sub>52</sub>H<sub>84</sub>O<sub>20</sub> (1029.24). Source: WEI LING XIAN *Clematis chinensis*. Ref: 2854.



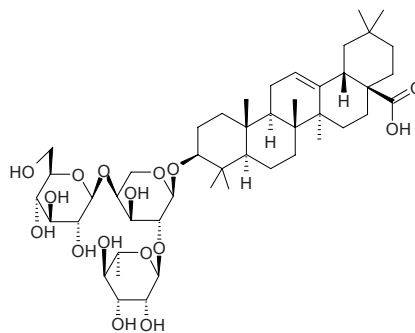
**16058 Oleanolic acid-3-O- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)- $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 3)- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranoside**

Prosapogenin CP<sub>7a</sub> C<sub>52</sub>H<sub>84</sub>O<sub>20</sub> (1029.24). Source: WEI LING XIAN *Clematis chinensis*. Ref: 2854.



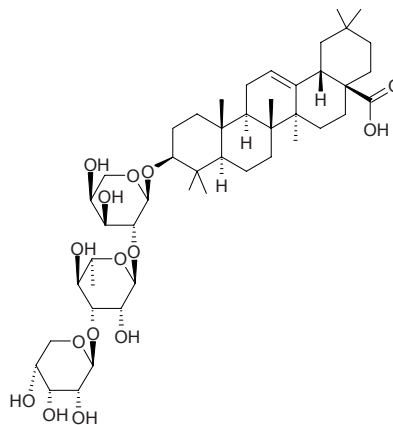
**16059 Oleanolic acid-3-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)-[ $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)]- $\alpha$ -L-arabinopyranoside**

C<sub>47</sub>H<sub>76</sub>O<sub>16</sub> (897.12). White needles (MeOH-H<sub>2</sub>O), mp 253~255°C. Source: DUO BEI YIN LIAN HUA *Anemone raddeana*. Ref: 2240.



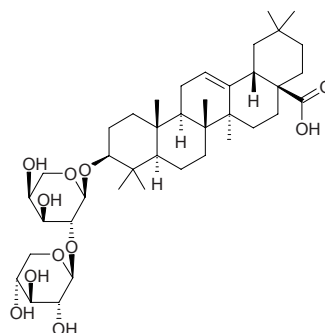
**16060 Oleanolic acid 3-O- $\beta$ -D-ribosepyranosyl(1 $\rightarrow$ 3)- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranoside**

Prosapogenin CP<sub>4</sub> [75799-18-7] C<sub>46</sub>H<sub>74</sub>O<sub>15</sub> (867.09). Source: HU ZHANG CAO *Anemone rivularis*, WEI LING XIAN *Clematis chinensis*. Ref: 1521, 2854.



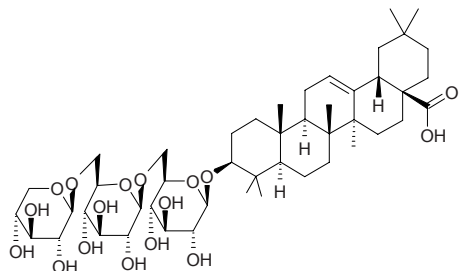
**16061 Oleanolic acid 3-O- $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranoside**

Prosapogenin CP<sub>2b</sub> C<sub>40</sub>H<sub>64</sub>O<sub>11</sub> (720.95). Source: WEI LING XIAN *Clematis chinensis*. Ref: 2854.



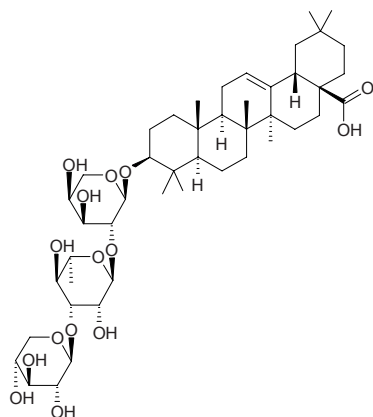
**16062 Oleanolic acid 3-O- $\beta$ -D-xylopyranosyl (1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside**

C<sub>47</sub>H<sub>76</sub>O<sub>17</sub> (913.12). Amorphous powder, mp 202~204°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -3.2° (c = 0.15, MeOH). Source: CHI GENG TENG *Gymnema sylvestre*. Ref: 766.



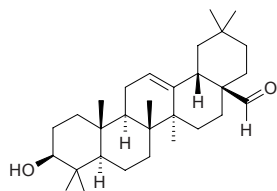
**16063 Oleanolic acid 3-O- $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 3)- $\alpha$ -L-rhamnopyranosyl (1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranoside**

Prosapogenin CP<sub>3</sub> C<sub>46</sub>H<sub>74</sub>O<sub>15</sub> (867.09). Source: WEI LING XIAN *Clematis chinensis*. Ref: 2854.



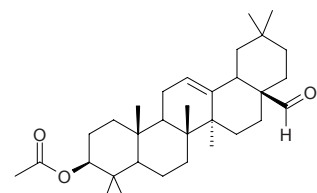
**16064 Oleanolic aldehyde**

C<sub>30</sub>H<sub>48</sub>O<sub>2</sub> (440.72). mp 230~231°C; 168~172°C. Source: MANG GUO SHU PI *Mangifera indica*. Ref: 6.



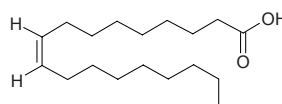
**16065 Oleanolic aldehyde acetate**

C<sub>32</sub>H<sub>50</sub>O<sub>3</sub> (482.75). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 1364.



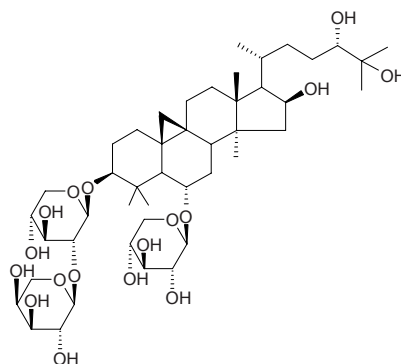
**16066 Oleic acid**

*cis*-Oleic acid [112-80-1] C<sub>18</sub>H<sub>34</sub>O<sub>2</sub> (282.47). mp 16°C, bp 285.5~286.0°C/100mmHg. Pharm: Increases absorption through skin; dermatitic (stimulant to skin); inhibits cancer cell invasion (MM1 cells, *in vitro*, 10 $\mu$ g/mL, InRt = 13.0%)<sup>[4329]</sup>. Source: HEI ZHI MA *Sesamum indicum* (black seed) [Syn. *Sesamum orientale* (black seed)] (seed: content scope = 21.6%~28.8%)<sup>[5501]</sup>, HEI ZI LI GUO JI SHENG *Scurrula atropurpurea*, JI GUAN ZI *Celosia cristata* (seed), LANG DANG ZI *Hyoscyamus niger* (dried ripe seed: content = 35.2%)<sup>[5508]</sup>, MAN JING ZI *Vitex trifolia*, MAN TUO LUO ZI *Datura metel*, MAO MAN TUO LUO ZI *Datura innoxia*, QIANG HUO *Notopterygium incisum*, YA DAN ZI *Brucea javanica* [Syn. *Brucea sumatrana*; *Rhus javanica*], YAO YONG PU GONG YING *Taraxacum officinale*, YI ZHI REN *Alpinia oxyphylla* (fruit: yield = 0.082%dw)<sup>[4655]</sup>, YIN CHEN HAO *Artemisia capillaris*. Ref: 2, 500, 658, 660, 4329, 4655, 5501, 5508.



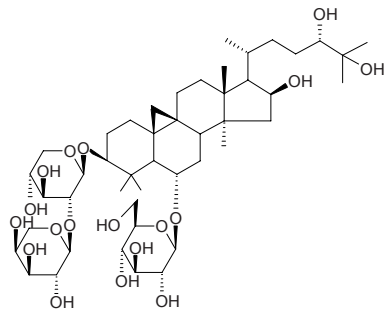
**16067 Oleifolioside A**

3-O-[ $\beta$ -Xylopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -arabinopyranosyl]-6-O- $\beta$ -xylopyranosyl-3 $\beta$ ,6 $\alpha$ ,16 $\beta$ ,24(S),25-pentahydroxycycloartane C<sub>45</sub>H<sub>76</sub>O<sub>17</sub> (889.10). Amorphous white powder, [ $\alpha$ ]<sub>D</sub><sup>27</sup> = +18.9° (c = 0.1, MeOH). Pharm: Antitrypanosomal (*Trypanosoma brucei rhodesiense*, IC<sub>50</sub> > 90 $\mu$ g/mL, control Melarsoprol, IC<sub>50</sub> = 0.0032 $\mu$ g/mL; *Trypanosoma cruzi*, IC<sub>50</sub> > 30 $\mu$ g/mL, Benznidazole, IC<sub>50</sub> = 0.50 $\mu$ g/mL); antileishmanial (*Leishmania donovani*, IC<sub>50</sub> = 13.2 $\mu$ g/mL, control Miltefosine, IC<sub>50</sub> = 0.087 $\mu$ g/mL); antimalarial (*Plasmodium falciparum*, IC<sub>50</sub> > 5 $\mu$ g/mL, Chloroquine, IC<sub>50</sub> = 0.086 $\mu$ g/mL); cytotoxic (L6 cells, IC<sub>50</sub> > 90 $\mu$ g/mL, control Podophyllotoxin, IC<sub>50</sub> = 0.008 $\mu$ g/mL). Source: YOU YE HUANG QI *Astragalus oleifolius* (lower stem part). Ref: 5285.

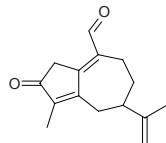


**16068 Oleifolioside B**

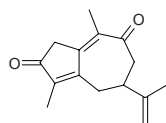
3-*O*-[ $\beta$ -Xylopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -arabinopyranosyl]-6-*O*- $\beta$ -glucopyranosyl-3 $\beta$ ,6 $\alpha$ ,16 $\beta$ ,24(*S*),25-pentahydroxycycloartane C<sub>46</sub>H<sub>78</sub>O<sub>18</sub> (919.12). Amorphous white powder,  $[\alpha]_D^{27} = +21.9^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Antitrypanosomal (*Trypanosoma brucei rhodesiense*, IC<sub>50</sub> > 90 $\mu$ g/mL, control Melarsoprol, IC<sub>50</sub> = 0.0032 $\mu$ g/mL; *Trypanosoma cruzi*, IC<sub>50</sub> > 30 $\mu$ g/mL, Benznidazole, IC<sub>50</sub> = 0.50 $\mu$ g/mL); antileishmanial (*Leishmania donovani*, IC<sub>50</sub> = 13.7 $\mu$ g/mL, control Miltefosine, IC<sub>50</sub> = 0.087 $\mu$ g/mL); antimalarial (*Plasmodium falciparum*, IC<sub>50</sub> > 5 $\mu$ g/mL, Chloroquine, IC<sub>50</sub> = 0.086 $\mu$ g/mL); cytotoxic (L6 cells, IC<sub>50</sub> > 90 $\mu$ g/mL, control Podophyllotoxin, IC<sub>50</sub> = 0.008 $\mu$ g/mL). **Source:** YOU YE HUANG QI *Astragalus oleifolius* (lower stem part). **Ref:** 5285.

**16069 Oleodaphnal**

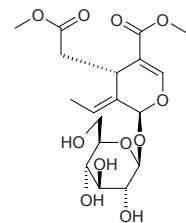
4,10,11-Guaiatriene-3-one-15-al; 3-Oxo-1(10),4,11-guaiatrien-14-al [260991-41-1] C<sub>15</sub>H<sub>18</sub>O<sub>2</sub> (230.31). Oil,  $[\alpha]_D^{25} = +5.0^\circ$  ( $c = 2.25$ , CHCl<sub>3</sub>). **Source:** YOU RUI XIANG *Daphne oleoides*. **Ref:** 2410.

**16070 Oleodaphnone**

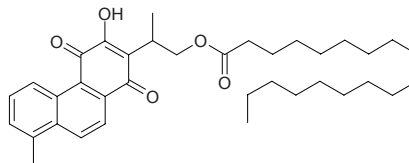
1(10),4,11-Guaiatrien-3,9-dione [260991-44-4] C<sub>15</sub>H<sub>18</sub>O<sub>2</sub> (230.31). Oil,  $[\alpha]_D^{25} = +4.1^\circ$  ( $c = 0.93$ , CHCl<sub>3</sub>). **Source:** YOU RUI XIANG *Daphne oleoides*. **Ref:** 2410.

**16071 Oleoside dimethyl ester**

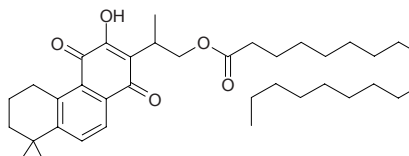
[30164-95-5] C<sub>18</sub>H<sub>26</sub>O<sub>11</sub> (418.40). **Pharm:** Antiviral (Hep2 cells, Para-3, IC<sub>50</sub> = 20.8 $\mu$ g/mL, TI = 6.0; MDCK cells, Flu-A, inactive; Vero cells, HSV-1, IC<sub>50</sub> = 83.3 $\mu$ g/mL)<sup>[4141]</sup>; anti-hemolysis (rat, red blood cell *in vitro*, 2,2'-azo-bis-(2-amidinopropane)dihydrochloride induced, IC<sub>50</sub> = 65.0 $\mu$ mol/L, control Trolox, IC<sub>50</sub> = 55.0 $\mu$ mol/L)<sup>[4141]</sup>; anti-hemolysis (against hemolysis of red blood cells induced by AAPH free radicals, weaker activity than trolox)<sup>[3545]</sup>. **Source:** NV ZHEN ZI *Ligustrum lucidum*. **Ref:** 3545, 4141.

**16072 Oleoyl danshenxinkun A**

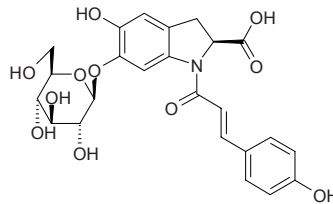
C<sub>36</sub>H<sub>48</sub>O<sub>5</sub> (560.78). Reddish oil,  $[\alpha]_D^{25} = -78.88^\circ$  ( $c = 0.25$ , CHCl<sub>3</sub>). **Pharm:** Platelet aggregation inhibitor (*in vitro*, selectively inhibits rabbit platelet aggregation, induced by 100 $\mu$ mol/L arachidonic acid, IC<sub>50</sub> = (25.5 $\pm$ 1.9) $\mu$ mol/L, control Aspirin, IC<sub>50</sub> = (27.0 $\pm$ 1.1) $\mu$ mol/L; induced by 10 $\mu$ mol/L collagen, IC<sub>50</sub> = (60.5 $\pm$ 2.6) $\mu$ mol/L; induced by 0.1U/mL thrombin, IC<sub>50</sub> > 100 $\mu$ mol/L). **Source:** DAN SHEN *Salvia miltiorrhiza*. **Ref:** 3056.

**16073 Oleoyl neocryptotanshinone**

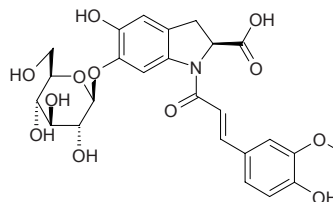
C<sub>37</sub>H<sub>54</sub>O<sub>5</sub> (578.84). Yellow oil (CHCl<sub>3</sub>),  $[\alpha]_D^{25} = +14.38^\circ$  ( $c = 0.35$ , CHCl<sub>3</sub>). **Pharm:** Platelet aggregation inhibitor (*in vitro*, selectively inhibits rabbit platelet aggregation, induced by 100 $\mu$ mol/L arachidonic acid, IC<sub>50</sub> = (5.1 $\pm$ 0.8) $\mu$ mol/L, control Aspirin, IC<sub>50</sub> = (27.0 $\pm$ 1.1) $\mu$ mol/L; induced by 10 $\mu$ mol/L collagen, IC<sub>50</sub> = (50.4 $\pm$ 1.4) $\mu$ mol/L; induced by 0.1U/mL thrombin, IC<sub>50</sub> > 100 $\mu$ mol/L). **Source:** DAN SHEN *Salvia miltiorrhiza*. **Ref:** 3056.

**16074 Oleracein A**

5-Hydroxy-1-*p*-coumaric acyl-2,3-dihydro-1*H*-indole-2-carboxylic acid-6-*O*- $\beta$ -*D*-glucopyranoside C<sub>24</sub>H<sub>25</sub>NO<sub>11</sub> (503.47). Yellow powder. **Source:** MA CHI XIAN *Portulaca oleracea*. **Ref:** 5325.

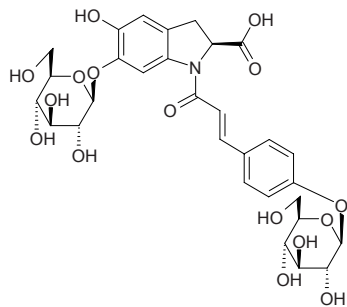
**16075 Oleracein B**

5-Hydroxy-1-ferulic acyl-2,3-dihydro-1*H*-indole-2-carboxylic acid-6-*O*- $\beta$ -*D*-glucopyranoside C<sub>25</sub>H<sub>27</sub>NO<sub>12</sub> (533.49). Yellow powder. **Source:** MA CHI XIAN *Portulaca oleracea*. **Ref:** 5325.

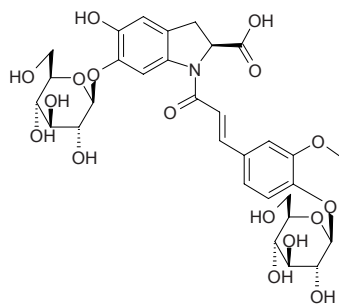


**16076 Oleracein C**

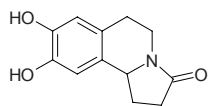
5-Hydroxy-1-(*p*-coumaric acyl-7'-*O*- $\beta$ -*D*-glucopyranose)-2,3-dihydro-1*H*-indole-2-carboxylic acid-6-*O*- $\beta$ -*D*-glucopyranoside C<sub>30</sub>H<sub>35</sub>NO<sub>16</sub> (665.61). Yellow powder,  $[\alpha]_D^{26} = -83.70^\circ$  ( $c = 0.35$ , H<sub>2</sub>O). Source: MA CHI XIAN *Portulaca oleracea*. Ref: 5325.

**16077 Oleracein D**

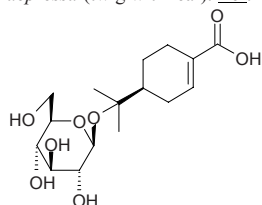
5-Hydroxy-1-(ferulic acyl-7'-*O*- $\beta$ -*D*-glucopyranose)-2,3-dihydro-1*H*-indole-2-carboxylic acid-6-*O*- $\beta$ -*D*-glucopyranoside C<sub>31</sub>H<sub>37</sub>NO<sub>17</sub> (695.64). Yellow powder,  $[\alpha]_D^{26} = +263.85^\circ$  ( $c = 0.15$ , H<sub>2</sub>O). Source: MA CHI XIAN *Portulaca oleracea*. Ref: 5325.

**16078 Oleracein E**

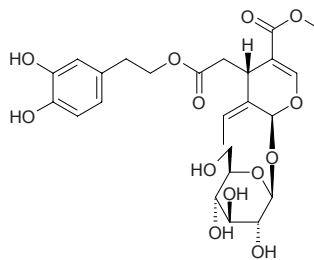
8,9-Dihydroxy-1,5,6,10*b*-tetrahydro-2*H*-pyrrolo[2,1-*a*]-isoquinolin-3-one C<sub>12</sub>H<sub>13</sub>NO<sub>3</sub> (219.24). Pale-white powder (MeOH), mp 238~240°C,  $[\alpha]_D^{26} = +61.12^\circ$  ( $c = 0.32$ , MeOH). Source: MA CHI XIAN *Portulaca oleracea*. Ref: 5325.

**16079 (-)-Oleuropeic acid 8-*O*- $\beta$ -*D*-glucopyranoside**

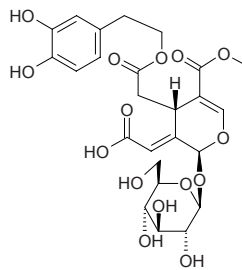
(4*S*)-4-(1- $\beta$ -*D*-Glucopyranosyloxy-1-methyl)ethyl-1-cyclohexene-1-carboxylic acid C<sub>16</sub>H<sub>26</sub>O<sub>8</sub> (346.38). White powder,  $[\alpha]_D = -36.3^\circ$  ( $c = 0.54$ , MeOH). Pharm: Antibacterial (*Helicobacter pylori* NCTC11637, MIC = 100 $\mu$ g/mL; NCTC11916, MIC = 100 $\mu$ g/mL; OCO1, MIC = 100 $\mu$ g/mL; control Hinokitilol (Nat. or Syn.), MIC = 100 $\mu$ g/mL, 100 $\mu$ g/mL, 50 $\mu$ g/mL, respectively). Source: OU ZHOU CI BAI BIAN ZHONG *Juniperus communis* var. *depressa* (twig with leaf). Ref: 4477.

**16080 Oleuropein**

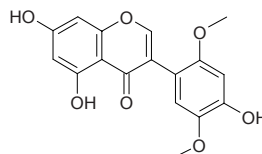
Oleuropein [32619-42-4] C<sub>25</sub>H<sub>32</sub>O<sub>13</sub> (540.53). Amorphous powder, mp 87~89°C,  $[\alpha]_D^{22} = -128.4^\circ$  ( $c = 0.61$ , ethanol); crystals (EtOAc), mp 89~91°C,  $[\alpha]_D^{26} = -168^\circ$  ( $c = 0.67$ , MeOH). artifact. Pharm: Antiarrhythmic; antibacterial (*Lactobacillus* spp.); antihypertensive (anesthetic cat with normal blood pressure, 30mg/kg, lowers blood pressure by 30%, induced hypertensive dog, 10mg/kg and 30mg/kg iv, lowers systolic pressure by 60%, lowers diastolic pressure by 70%); anti-inflammatory (100mg/kg, orl, mus swollen foot model caused by carrageenan, 3 hours later, InRt = 32.1%, edema in mus ears caused by TPA, 1mg/ear external use, InRt = 43.5%); anti-hemolysis (rat, red blood cell *in vitro*, 2,2'-azo-bis-(2-amidinopropane)dihydrochloride induced, IC<sub>50</sub> = 25.0 $\mu$ mol/L, control Trolox, IC<sub>50</sub> = 55.0 $\mu$ mol/L)<sup>[4141]</sup>; antispasmodic (duodenum, jejunum, ileum); coronary vasodilator; antiviral (Hep2 cells, Para-3, IC<sub>50</sub> = 11.7 $\mu$ g/mL, TI = 48.0; MDCK cells, Flu-A, inactive; Vero cells, HSV-1, inactive; Hep2 cells, RSV, IC<sub>50</sub> = 23.4 $\mu$ g/mL, TI = 24.0)<sup>[4141]</sup>; molluscicide (kills snails in 24 hours, LD<sub>50</sub> = 250mg/L); bitter principle (in olives); low toxin. Source: BAI LA SHU *Fraxinus chinensis*, NV ZHEN ZI *Ligustrum lucidum*, RI BEN BAI LA SHU *Fraxinus japonica*, RI BEN NV ZHEN *Ligustrum japonicum*, YOU GAN LAN *Olea europaea*. Ref: 4, 660, 1521, 900, 4141.

**16081 Oleuropeinic acid**

[96382-90-0] C<sub>25</sub>H<sub>30</sub>O<sub>15</sub> (570.51). Amorphous,  $[\alpha]_D = -120.3^\circ$  (CHCl<sub>3</sub>). Source: NV ZHEN ZI *Ligustrum lucidum*, RI BEN NV ZHEN *Ligustrum japonicum*. Ref: 2870, 2633.

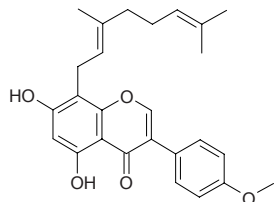
**16082 Olibergin A**

C<sub>17</sub>H<sub>14</sub>O<sub>7</sub> (330.30). Colorless oil. Pharm: EBV-EA activation inhibitor (Raji cells *in vitro*, TPA-induced, IC<sub>50</sub> = 462(mol ratio/32pmol TPA), control  $\beta$ -Carotene, IC<sub>50</sub> = 400(mol ratio/32pmol TPA)). Source: AO LI FO HUANG *Dalbergia oliveri* (stam bark). Ref: 3483.

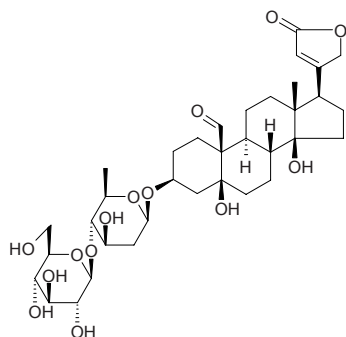


**16083 Olibergin B**

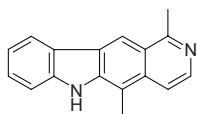
$C_{26}H_{28}O_5$  (420.51). Colorless oil. **Pharm:** EBV-EA activation inhibitor (Raji cells *in vitro*, TPA-induced,  $IC_{50} = 281$  (mol ratio/32pmol TPA), control  $\beta$ -Carotene,  $IC_{50} = 400$  (mol ratio/32pmol TPA)). **Source:** AO LI FO HUANG TAN *Dalbergia oliveri* (stam bark). **Ref:** 3483.

**16084 Olitoriside**

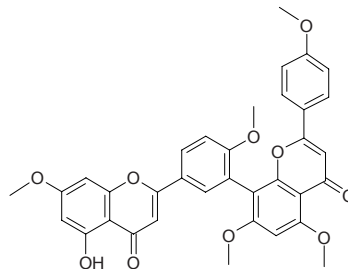
Olitorin [13289-20-8]  $C_{35}H_{52}O_{14}$  (696.80). mp 204~206°C (dec). **Pharm:** Cardiotonic (*in vivo*, pigeon method iv, LD = 2.66 $\mu$ g/kg, frog, rbt, dog and cat); inhibits gastric acid secretion (10~100 $\mu$ mol/L, *in vitro*); LD<sub>50</sub> (mus, iv) = 5.2mg/kg. **Source:** CHANG SHUO HUANG MA *Corchorus olitorius*, HUANG MA YE *Corchorus capsularis*, HUANG MA ZI *Corchorus capsularis*, MENG GU CE JIN ZHAN HUA *Adonis mongolica*. **Ref:** 4, 6, 658.

**16085 Olivacine**

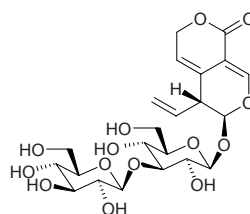
Guatambuine [484-49-1]  $C_{17}H_{14}N_2$  (246.31). mp 317~325°C. **Pharm:** Antineoplastic (hmn tumor, strong; mus L<sub>1210</sub>, ip, 25mg/kg *quaque die* or 50mg/kg *alternis diebus*, biotic prolonged rate = 89%~229%); anthelmintic, inhibits biosynthesis of protein (epimastigotes of *Trypanosoma cruzi*); antirheumatic; antiulcerative. **Source:** BAI JIAN MU *Aspidosperma campus-belus*, HE LU BAI JIAN MU *Aspidosperma olivaceum*, HEI BAI JIAN MU *Aspidosperma nigricans*. **Ref:** 5, 658.

**16086 Oliveriflavone**

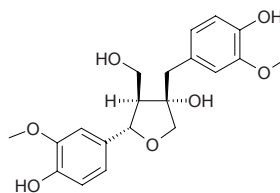
[107392-32-5]  $C_{35}H_{28}O_{10}$  (608.61). **Source:** BI ZI CU FEI *Cephalotaxus oliveri*. **Ref:** 2945.

**16087 Olivioside**

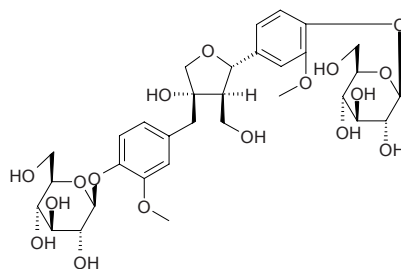
$C_{22}H_{30}O_{14}$  (518.48). **Source:** LONG DAN *Gentiana scabra* (dried rhizome and root). **Ref:** 3097.

**16088 (-)-Olivil**

[2955-23-9]  $C_{20}H_{24}O_7$  (376.41). Crystals + 1H<sub>2</sub>O (H<sub>2</sub>O), mp 127°C, 105°C, 142~143°C (anhyd.),  $[\alpha]_D^{20} = -127^\circ$ . **Source:** DU ZHONG *Eucommia ulmoides*, FEI ZHOU GAN LAN *Olea africana*, JIAN YE YIN YANG HUO *Epimedium sagittatum*, YOU GAN LAN *Olea europaea*, *Abies tsaotana*. **Ref:** 2, 660, 1521.

**16089 (-)-Olivil-4',4''-di-O-β-D-glucopyranoside**

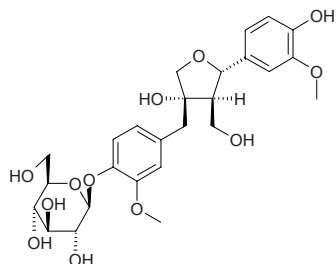
$C_{32}H_{44}O_{17}$  (700.70). **Source:** DU ZHONG *Eucommia ulmoides*. **Ref:** 2, 2793.



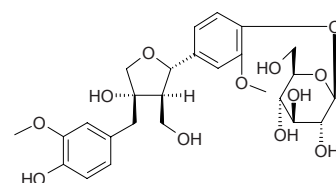
**16090 (-)-Olivil-4''-O-β-D-glucopyranoside**

$C_{26}H_{34}O_{12}$  (538.55). Amorphous powder,  $[\alpha]_D^{26} = -61.3^\circ$  ( $c = 0.37$ , MeOH).

Source: DU ZHONG *Eucommia ulmoides*, LAN SHAI PIAO *Sambucus sieboldiana* (leaf). Ref: 2, 4192.

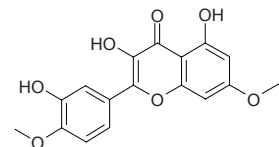
**16091 (-)-Olivil-4'-O-β-D-glucopyranoside**

$C_{26}H_{34}O_{12}$  (538.55). Source: DU ZHONG *Eucommia ulmoides*. Ref: 2.

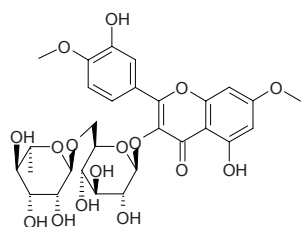
**16092 Ombuin**

3,5,3'-Trihydroxy-7,4'-dimethoxyflavone [529-40-8]  $C_{17}H_{14}O_7$  (330.30).

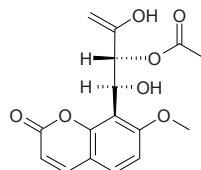
Source: GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*], JIAO GU LAN *Gynostemma pentaphyllum*. Ref: 2, 660.

**16093 Ombuoside**

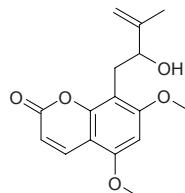
[20188-85-6]  $C_{29}H_{34}O_{16}$  (638.58). Pale yellow crystals, mp 195~196°C,  $[\alpha]_D = -43^\circ$  (pyridine). Source: A GEN TING SHANG LU *Phytolacca dioica*, JIAO GU LAN *Gynostemma pentaphyllum*, *Flyriella parryi*. Ref: 2944.

**16094 Omphalocarpinol**

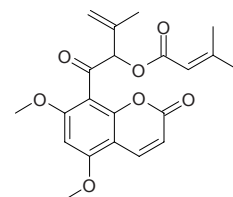
$C_{16}H_{16}O_7$  (320.30). Colorless prisms (CHCl<sub>3</sub>), mp 153~154°C,  $[\alpha]_D^{24} = -24.7^\circ$  ( $c = 0.05$ , MeOH). Pharm: Platelet aggregation inhibitor (washed rabbit platelets, induced by thrombin, AA, collagen and PAF, 100μg/mL: thrombin = 0.1U/mL, AggRt = (79.3±1.7)%, control, AggRt = (80.0±1.1)%; AA = 100μmol/L, AggRt = (58.0±3.6)%,  $p < 0.001$ , control, AggRt = (77.0±1.5)%; collagen = 10μg/mL, AggRt = (0±0)%,  $p < 0.001$ , control, AggRt = (78.3±1.3)%); PAF = 1ng/mL, AggRt = (79.7±2.4)%, control, AggRt = (82.5±1.5)%). Source: QI GUO JIU LI XIANG *Murraya omphalocarpa* (leaf). Ref: 5417.

**16095 Omphamurin**

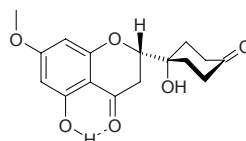
$C_{16}H_{18}O_5$  (290.32).  $[\alpha]_D^{24} = +41.4^\circ$  ( $c = 0.1$ , MeOH). Pharm: Platelet aggregation inhibitor (washed rabbit platelets, induced by thrombin, AA, collagen and PAF, 100μg/mL: thrombin = 0.1U/mL, AggRt = (84.7±1.4)%,  $p < 0.05$ , control, AggRt = (80.0±1.1)%); AA = 100μmol/L, AggRt = (0±0)%,  $p < 0.001$ , control, AggRt = (77.0±1.5)%; collagen = 10μg/mL, AggRt = (0±0)%,  $p < 0.001$ , control, AggRt = (78.3±1.3)%); PAF = 1ng/mL, AggRt = (57.3±7.8)%,  $p < 0.01$ , control, AggRt = (82.5±1.5)%). Source: QI GUO JIU LI XIANG *Murraya omphalocarpa* (leaf). Ref: 5417.

**16096 Omphamurrayin**

5,7-Dimethoxy-8-(1-oxo-2-senecioidyl-3-methyl-3-butenyl)-2*H*-1-benzopyran-2-one  $C_{21}H_{22}O_7$  (386.41).  $[\alpha]_D^{25} = -6.0^\circ$  ( $c = 0.269$ , MeOH). Source: QI GUO QIAN LI XIANG *Murraya paniculata* var. *omphalocarpa* (leaf). Ref: 4157.

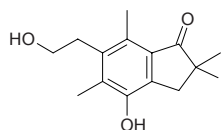
**16097 (2*S*)-Ongokein-4'-one**

(2*S*)-5-Hydroxy-2-(1'-hydroxy-4'-oxocyclohexyl)-7-methoxychroman-4-one  $C_{16}H_{18}O_6$  (306.32). White crystals, mp 165~168°C,  $[\alpha]_D = +36^\circ$  ( $c = 0.13$ ). Source: EN GE MU *Ongokea gore* (stem cortex and root). Ref: 5308.

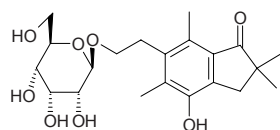


**16098 Onitin**

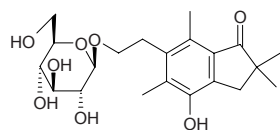
2,2,5,7-Tetramethyl-4-hydroxy-6-(2-hydroxyethyl)-indanone [53823-02-2]  $C_{15}H_{20}O_3$  (248.32). Crystals (MeOH), mp 212–214°C. **Pharm:** Ileal smooth muscle relaxant (gpg, *in vitro*, contraction induced by 5-HT or histamine); 5-HT inhibitor (D and M receptor). **Source:** JIN FEN JUE *Onychium siliculosum*, JIN MAO GOU *Cibotium barometz* [Syn. *Polypodium barometz*], JI JUE *Hypolepis punctata* [Syn. *Polypodium punctatum*], WEN JING *Equisetum arvense*, *Onychium auratum*, *Dicksonia gigantean*. **Ref:** 660, 1521, 2932, 2930, 2933.

**16099 Onitin-2'-O-β-D-alloside**

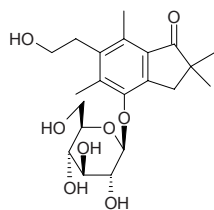
$C_{21}H_{30}O_8$  (410.47). **Source:** JIN MAO GOU *Cibotium barometz* [Syn. *Polypodium barometz*]. **Ref:** 2932.

**16100 Onitin-2'-O-β-D-glucoside**

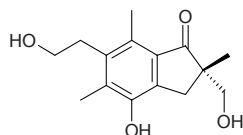
$C_{21}H_{30}O_8$  (410.47). **Source:** JIN MAO GOU *Cibotium barometz* [Syn. *Polypodium barometz*]. **Ref:** 2932.

**16101 Onitinoside**

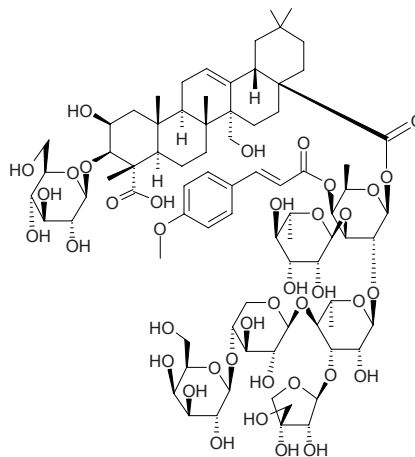
[78415-48-2]  $C_{21}H_{30}O_8$  (410.47). Colorless crystals (EtOAc), mp 172–174°C. **Pharm:** Ileal smooth muscle relaxant (gpg, *in vitro*). **Source:** JIN FEN JUE *Onychium siliculosum*. **Ref:** 2937, 2930.

**16102 (S)-Onitisin**

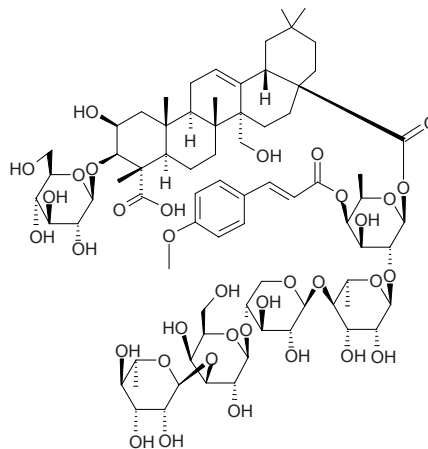
(S)-4-Hydroxypterosin A [53823-03-3]  $C_{15}H_{20}O_4$  (264.32). Needles (MeOH), mp 184°C,  $[\alpha]_D^{25} = -31.16^\circ$  ( $c = 1$ , MeOH). **Pharm:** Ileal smooth muscle relaxant (gpg, *in vitro*). **Source:** JIN FEN JUE *Onychium siliculosum*, WAN JUE *Dennstaedtia scabra* [Syn. *Dicksonia scabra*]. **Ref:** 1521, 2929, 2930, 2931.

**16103 Onjisaponin A**

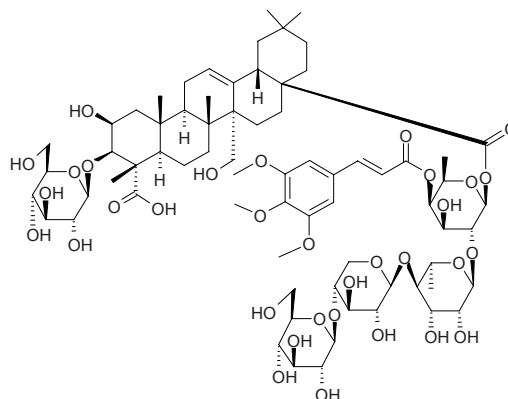
[82410-33-1]  $C_{80}H_{120}O_{39}$  (1705.83). Powder (EtOH), mp 253–254°C (dec),  $[\alpha]_D^{17} = -18.4^\circ$  ( $c = 1.24$ , MeOH). **Source:** YUAN ZHI *Polygala tenuifolia*. **Ref:** 2914.

**16104 Onjisaponin B**

[35906-36-6]  $C_{75}H_{112}O_{35}$  (1573.71). Powder (EtOH aq.), mp 249–251°C (dec),  $[\alpha]_D^{17} = -10.2^\circ$  ( $c = 1.08$ , MeOH). **Source:** MEI YUAN ZHI *Polygala senega*, YUAN ZHI *Polygala tenuifolia*. **Ref:** 2914.

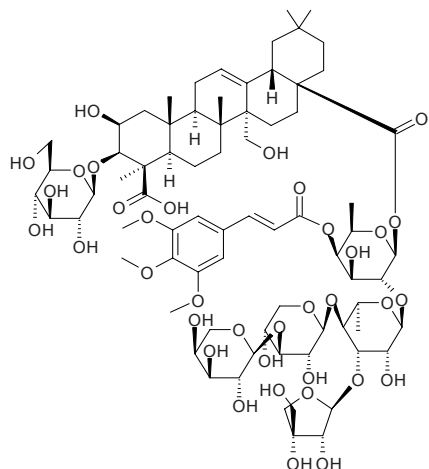
**16105 Onjisaponin E**

[82410-35-3]  $C_{71}H_{106}O_{33}$  (1487.62). Needles + 4H<sub>2</sub>O (EtOH aq.), mp 245–247°C (dec),  $[\alpha]_D^{17} = -6.5^\circ$  ( $c = 1$ , MeOH). **Source:** YUAN ZHI *Polygala tenuifolia*. **Ref:** 2914.

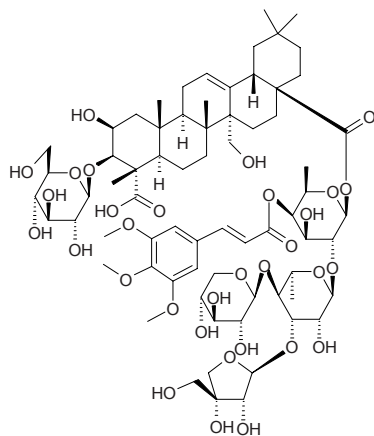


**16106 Onjisaponin F**

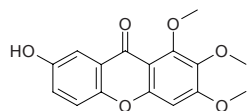
[79103-90-5] C<sub>75</sub>H<sub>112</sub>O<sub>36</sub> (1589.71). Source: LIAN QIAO *Forsythia suspensa*.  
Ref: 1521.

**16107 Onjisaponin G**

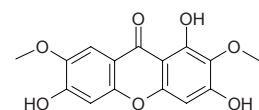
[In DNP] C<sub>70</sub>H<sub>104</sub>O<sub>32</sub> (1457.59). Source: LIAN QIAO *Forsythia suspensa*.  
Ref: 1521.

**16108 Onjixanthone I**

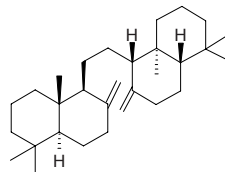
7-Hydroxy-1,2,3-trimethoxyxanthone C<sub>16</sub>H<sub>14</sub>O<sub>6</sub> (302.29). Source: HONG HUA *Carthamus tinctorius*, YUAN ZHI *Polygala tenuifolia* (cortex). Ref: 1521, 4507.

**16109 Onjixanthone II**

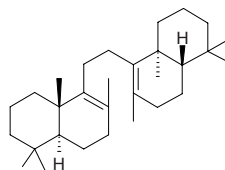
1,3,6-Trihydroxy-2,7-dimethoxyxanthone [136083-93-7] C<sub>15</sub>H<sub>12</sub>O<sub>7</sub> (304.26).  
Source: CHAN YI TENG *Securidaca inappendiculata* (stem), HONG HUA *Carthamus tinctorius*, JIA HUANG HUA YUAN ZHI *Polygala fallax* [Syn. *Polygala aureocauda*] (root and stem: yield = 0.00041%)<sup>[4683]</sup>. Ref: 2, 4683, 5238.

**16110 α-Onoceradiene**

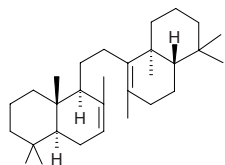
8(26),14(27)-Onoceradiene [6713-91-3] C<sub>30</sub>H<sub>50</sub> (410.73). Crystals, mp 209–210°C, [α]<sub>D</sub> = +22.4°. Source: KUAN YU XIAN JUE *Colysis pothifolia* [Syn. *Hemionitis pothifolia*], LUO YAN CAO *Lemmaphyllum microphyllum*, DAO LUAN YE FU SHI JUE *Lemmaphyllum microphyllum* var. *obovatum*.  
Ref: 2836, 2837, 2838.

**16111 β-Onoceradiene**

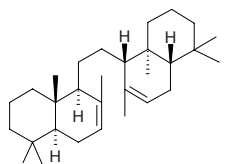
C<sub>30</sub>H<sub>50</sub> (410.73). Source: LUO YAN CAO *Lemmaphyllum microphyllum*. Ref: 2838.

**16112 Onocera-7,13-diene**

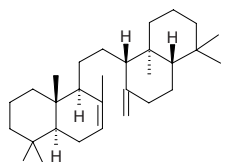
C<sub>30</sub>H<sub>50</sub> (410.73). Source: LUO YAN CAO *Lemmaphyllum microphyllum*. Ref: 2838.

**16113 Onocera-7,14-diene**

C<sub>30</sub>H<sub>50</sub> (410.73). Source: LUO YAN CAO *Lemmaphyllum microphyllum*. Ref: 2838.

**16114 Onocera-7,14(27)-diene**

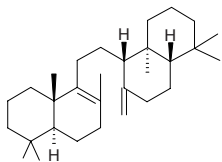
C<sub>30</sub>H<sub>50</sub> (410.73). Source: LUO YAN CAO *Lemmaphyllum microphyllum*. Ref: 2838.



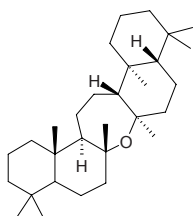


**16115 Onocera-8,14(27)-diene**

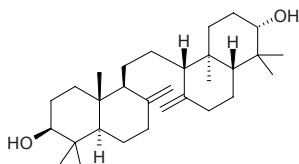
$C_{30}H_{50}$  (410.73). Source: LUO YAN CAO *Lemmaphyllum microphyllum*. Ref: 2838.

**16116 Onoceranoxide**

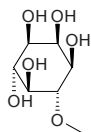
[83013-85-8]  $C_{30}H_{52}O$  (428.75). Crystals, mp 226~227°C,  $[\alpha]_D = +7.9^\circ$ . Source: DAO LUAN YE FU SHI JUE *Lemmaphyllum microphyllum* var. *obovatum*, DUO ZU JUE *Polypodium vulgare*. Ref: 2837, 2839.

**16117  $\alpha$ -Onocerin**

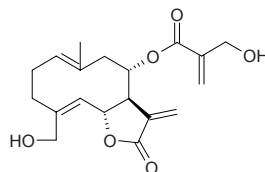
3 $\beta$ -21 $\alpha$ -Dihydroxy-14-sekogrammasera-8(26),14(27)-diene [511-01-3]  $C_{30}H_{50}O_2$  (442.73). mp 232°C; 202~203°C. Pharm: AChE inhibitor<sup>[5380]</sup>. Source: CI MANG BING HUA *Ononis spinosa* (in 1962, the compound was isolated from the plant by Hiroyuki Ageta et al.)<sup>[5505]</sup>, PU DI WU GONG *Lycopodium cernuum*, SHEN JIN CAO *Lycopodium japonicum* [Syn. *Lycopodium clavatum*], TENG SHI SONG *Lycopodium casuarinoides*, YU BAI SHI SONG *Lycopodium obscurum*, *Lycopodium sitchense*, *Lycopodium inundatum*. Ref: 6, 5380, 5505.

**16118 Ononitol**

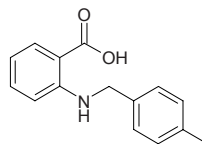
$C_7H_{14}O_6$  (194.19). mp 173°C. Source: MU XU *Medicago sativa*. Ref: 6.

**16119 Onopordopicrin**

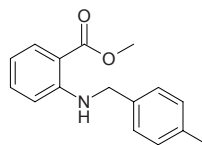
[19889-00-0]  $C_{19}H_{24}O_6$  (348.40). Crystals (CHCl<sub>3</sub>-Et<sub>2</sub>O), mp 55~58°C,  $[\alpha]_D^{25} = +16.2$  ( $c = 0.5$  MeOH). Pharm: Cytotoxic (KB, ED<sub>50</sub> = 0.85 $\mu$ g/mL; culture tumor cells); insect antifeedant; antibacterial (*Staphylococcus aureus*). Source: A ER JI ER DA CHI JI *Onopordum algeriense*, AI JI DA CHI JI *Onopordum alexandrinum*, DA CHI JI *Onopordum acanthium*, NIU BANG YE *Arctium lappa*, YI LI LI YA DA CHI JI *Onopordum illyricum*. Ref: 5, 658, 1207, 1521.

**16120 Onosmin A**

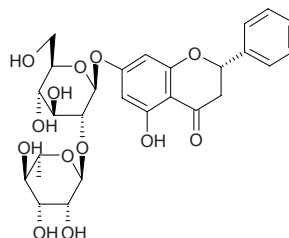
$C_{15}H_{15}NO_2$  (241.29). White amorphous solid, mp 185~187°C. Pharm: Lipoxygenase inhibitor (LOX, EC1.13.11.12, IC<sub>50</sub> = (24.2 $\pm$ 0.04) $\mu$ mol/L, non-competitive type,  $K_i$  = (22.0 $\pm$ 0.1) $\mu$ mol/L, positive control Baicalein, IC<sub>50</sub> = (22.0 $\pm$ 0.05) $\mu$ mol/L, mixed type,  $K_i$  = (18.0 $\pm$ 0.02) $\mu$ mol/L). Source: CU YING MAO DIAN ZI CAO *Onosma hispidum* (whole herb). Ref: 4490.

**16121 Onosmin B**

$C_{16}H_{17}NO_2$  (255.32). White amorphous solid, mp 137~140°C. Pharm: Lipoxygenase inhibitor (LOX, EC1.13.11.12, IC<sub>50</sub> = (36.0 $\pm$ 0.03) $\mu$ mol/L, non-competitive type,  $K_i$  = (31.1 $\pm$ 0.05) $\mu$ mol/L, positive control Baicalein, IC<sub>50</sub> = (22.0 $\pm$ 0.05) $\mu$ mol/L, mixed type,  $K_i$  = (18.0 $\pm$ 0.02) $\mu$ mol/L). Source: CU YING MAO DIAN ZI CAO *Onosma hispidum* (whole herb). Ref: 4490.

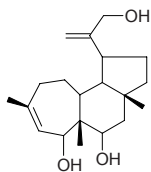
**16122 Onychin**

Sarotanoside [13241-31-1]  $C_{27}H_{32}O_{13}$  (564.55). Colorless needles, mp 277~279°C,  $[\alpha]_D^{26} = -104^\circ$  ( $c = 0.56$ , pyridine). Pharm: Cytotoxic (P<sub>388</sub>, IC<sub>50</sub> = 2.58 $\mu$ g/mL). Source: MA ZHUANG SAI YA MA *Nierembergia hippomanica*, XIAO YE JI WEI *Onychium japonicum* [Syn. *Tricomanes japonicum*]. Ref: 2826, 2827, 2828.

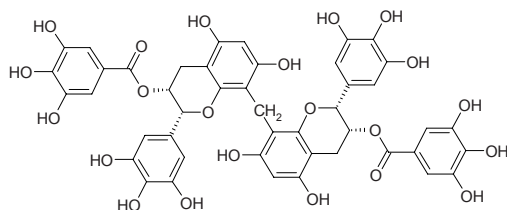


**16123 Onychiol C**

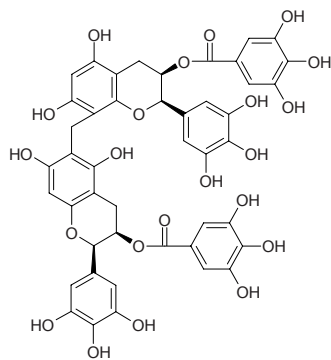
$C_{20}H_{32}O_3$  (320.48). Source: XIAO YE JI WEI *Onychium japonicum* [Syn. *Tricomanes japonicum*]. Ref: 2919.

**16124 Oolonghomobisflavan A**

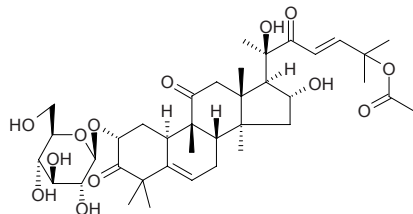
[126737-60-8]  $C_{45}H_{36}O_{22}$  (928.78). Brown amorphous powder +4H<sub>2</sub>O,  $[\alpha]_D^{26} = -271.0^\circ$  ( $c = 1.0$ , acetone). Pharm: NADH dehydrogenase inhibitor (rat liver SMP, *Bacillus subtilis* etc.). Source: WU LONG CHA *Camellia sinensis* var. *viridis*. Ref: 2823, 2824.

**16125 Oolonghomobisflavan B**

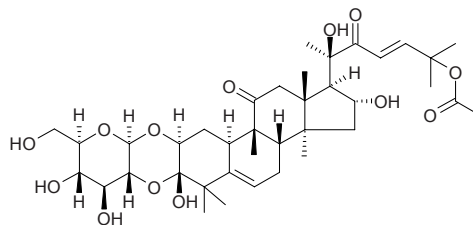
[126715-88-6]  $C_{45}H_{36}O_{22}$  (928.78). Brown amorphous powder +3H<sub>2</sub>O,  $[\alpha]_D^{26} = -205.0^\circ$  ( $c = 1.0$ , acetone). Source: WU LONG CHA *Camellia sinensis* var. *viridis*. Ref: 2823.

**16126 Opercurin A**

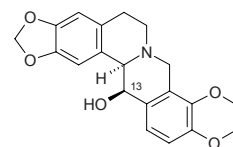
$C_{38}H_{56}O_{13}$  (720.86). Colorless amorphous powder,  $[\alpha]_D^{20} = -3.73^\circ$  ( $c = 0.51$ , acetone). Source: NANG GAI SI GUA *Luffa operculata*. Ref: 2593.

**16127 Opercurin B**

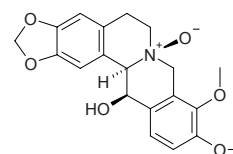
$C_{38}H_{56}O_{13}$  (720.86). Colorless amorphous powder,  $[\alpha]_D = +45.4^\circ$  ( $c = 1.42$ , acetone). Source: NANG GAI SI GUA *Luffa operculata*. Ref: 2593.

**16128 Ophiocarpine**

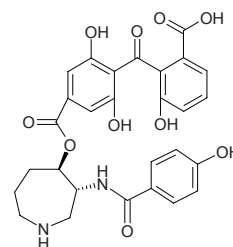
[478-13-7]  $C_{20}H_{21}NO_5$  (355.39). Prisms (MeOH), mp 188°C,  $[\alpha]_D^{24} = -283^\circ$  ( $c = 1$ , CHCl<sub>3</sub>). Pharm: Cytotoxic; antimicrobial. Source: HUA ZI JIN *Corydalis cheilanthifolia*, KU MANG HUANG JIN *Corydalis govaniiana*, SHE GUO HUANG JIN *Corydalis ophiocarpa*, *Corydalis campulicarpa*. Ref: 1521, 2898.

**16129 Ophiocarpine N-oxide**

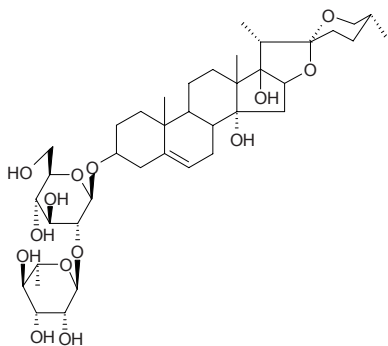
Carpoxidine [66408-19-3]  $C_{20}H_{21}NO_6$  (371.39). Crystals (MeOH), mp 213–215°C, 207–108°C,  $[\alpha]_D = -110^\circ$  ( $c = 0.5$ , CHCl<sub>3</sub>),  $[\alpha]_D^{25} = -185^\circ$  ( $c = 0.77$ , C<sub>6</sub>H<sub>6</sub>:MeOH = 2:1). Source: SHE GUO HUANG JIN *Corydalis ophiocarpa*. Ref: 1521, 2898.

**16130 Ophiocordin**

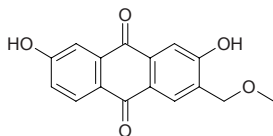
[63590-19-2]  $C_{28}H_{26}N_2O_{10}$  (550.53). Pale-yellow amorphous powder, mp > 175°C (dec). Pharm: Antifungal. Source: DA TUAN NANG CHONG CAO *Cordyceps ophioglossoides*. Ref: 2843, 2844.



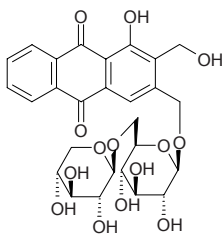
**16131 Ophiogenin-3-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside**  
 $C_{39}H_{62}O_{14}$  (754.92). Source: MAI DONG *Ophiopogon japonicus*. Ref: 2865.



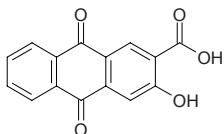
**16132 Ophiohayatone A**  
 $C_{16}H_{12}O_5$  (284.27). Yellow powder, mp 164–166°C. Source: XIA YE SHE GEN CAO *Ophiorrhiza hayatana*. Ref: 4516.



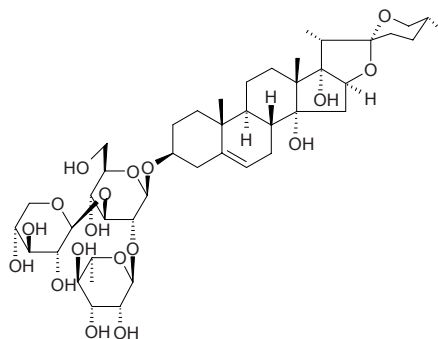
**16133 Ophiohayatone B**  
 $C_{27}H_{30}O_{14}$  (578.53). Yellow powder, mp 209–210°C,  $[\alpha]_D = -50.8^\circ$  ( $c = 0.024$ , MeOH). Source: XIA YE SHE GEN CAO *Ophiorrhiza hayatana*. Ref: 4516.



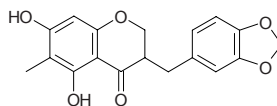
**16134 Ophiohayatone C**  
 $C_{15}H_8O_5$  (268.23). Yellow powder, mp 191–193°C. Source: XIA YE SHE GEN CAO *Ophiorrhiza hayatana*. Ref: 4516.



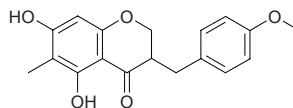
**16135 Ophiopogon A**  
 Ophiopogenin-3-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2) [ $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 3)]- $\beta$ -D-giucopyranoside  $C_{44}H_{70}O_{18}$  (887.04). White amorphous powder, mp 250–255°C,  $[\alpha]_D^{25} = -39.09^\circ$  ( $c = 0.55$ , MeOH). Source: MAI DONG *Ophiopogon japonicus*. Ref: 890.



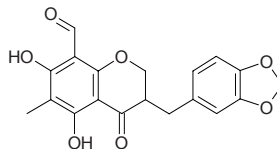
**16136 Ophiopogonanone A**  
 [75239-63-3]  $C_{18}H_{16}O_6$  (328.32). Needles (EtOH), mp 175–176°C,  $[\alpha]_D = -13.0^\circ$  ( $c = 1$ , dioxane). Source: MAI DONG *Ophiopogon japonicus*. Ref: 1397, 2796.



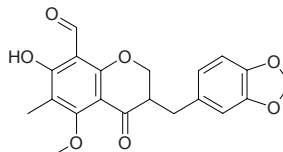
**16137 Ophiopogonanone B**  
 $C_{18}H_{18}O_5$  (314.34). Source: MAI DONG *Ophiopogon japonicus*. Ref: 1397.



**16138 Ophiopogonanone C**  
 $C_{19}H_{16}O_7$  (356.34). Colorless needles ( $CHCl_3$ ), mp 171–172°C. Source: MAI DONG *Ophiopogon japonicus* (tuber). Ref: 4663.

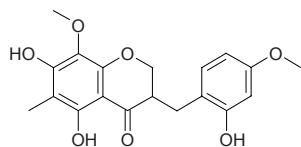


**16139 Ophiopogonanone D**  
 $C_{20}H_{18}O_7$  (370.36). Yellow glue-like solid, mp 65–68°C,  $[\alpha]_D^{20} = -10.0^\circ$  ( $c = 0.2$ , MeOH). Source: MAI DONG *Ophiopogon japonicus* (tuber). Ref: 4663.

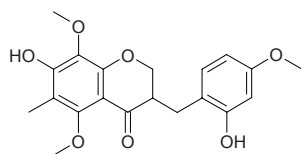


**16140 Ophiopogonone E**

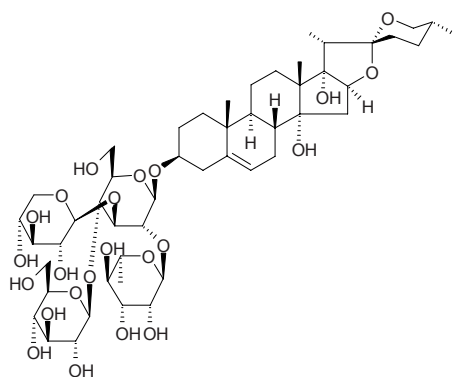
5,7-Dihydroxy-8-methoxy-6-methyl-3-(2'-hydroxy-4'-methoxybenzyl)chroman-4-one C<sub>19</sub>H<sub>20</sub>O<sub>7</sub> (360.37). Colorless glue-like solid, mp 62–64°C; amorphous powder,  $[\alpha]_D^{22} = -12.6^\circ$  ( $c = 0.29$ , CHCl<sub>3</sub>:MeOH = 1:2). Source: MAI DONG *Ophiopogon japonicus* (tuber). Ref: 2044, 4663.

**16141 Ophiopogonone F**

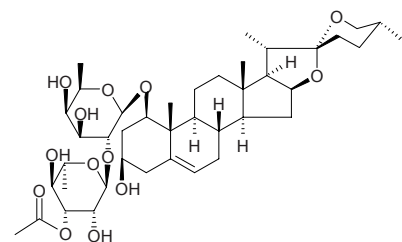
7-Hydroxy-5,8-dimethoxy-6-methyl-3-(2'-hydroxy-4'-methoxybenzyl)chroman-4-one C<sub>20</sub>H<sub>22</sub>O<sub>7</sub> (374.39). Dark red glue-like solid, mp 75–78°C,  $[\alpha]_D^{20} = +300^\circ$  ( $c = 0.01$ , MeOH)<sup>[4663]</sup>;  $[\alpha]_D^{22} = -7.74^\circ$  ( $c = 0.97$ , MeOH)<sup>[2044]</sup>. Source: MAI DONG *Ophiopogon japonicus* (tuber). Ref: 2044, 4663.

**16142 Ophiopogon B**

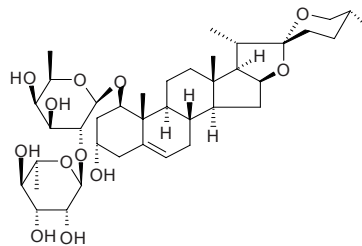
Ophiopogonin-3-*O*- $\alpha$ -L-rhamnopyranosyl (1→2) [ $\beta$ -*D*-xylopyranosyl(1→3)] [ $\beta$ -*D*-glucopyranosyl(1→4)]- $\beta$ -*D*-glucopyranoside C<sub>50</sub>H<sub>80</sub>O<sub>23</sub> (1049.18). White Amorphous powder, mp 218–222°C,  $[\alpha]_D^{25} = -57.82^\circ$  ( $c = 0.31$ , MeOH). Source: MAI DONG *Ophiopogon japonicus*. Ref: 890.

**16143 Ophiopogonin A**

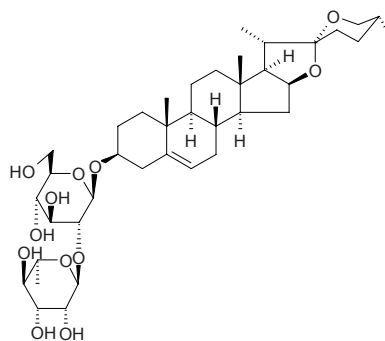
[11054-24-3] C<sub>41</sub>H<sub>64</sub>O<sub>13</sub> (764.96). Crystals (EtOH aq.), mp 182–184°C,  $[\alpha]_D^{18} = -89.7^\circ$  ( $c = 0.27$ , pyridine). Source: MAI DONG *Ophiopogon japonicus*. Ref: 660, 1521.

**16144 Ophiopogonin B**

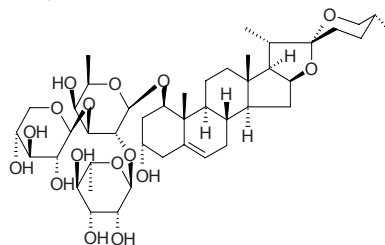
[38971-41-4] C<sub>39</sub>H<sub>62</sub>O<sub>12</sub> (722.92). mp 269–271°C. Source: MAI DONG *Ophiopogon japonicus* (dried tuberoid: mean content = 0.14%<sup>[5508]</sup>). Ref: 1521, 5508.

**16145 Ophiopogonin C'**

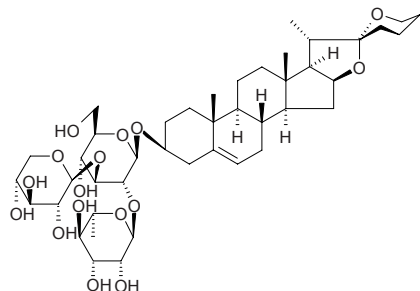
C<sub>39</sub>H<sub>62</sub>O<sub>12</sub> (722.92). Source: MAI DONG *Ophiopogon japonicus*. Ref: 660.

**16146 Ophiopogonin D**

[41753-55-3] C<sub>44</sub>H<sub>70</sub>O<sub>16</sub> (855.04). mp 263–265°C. Source: MAI DONG *Ophiopogon japonicus* (dried tuberoid: mean content = 0.15%<sup>[5508]</sup>). Ref: 660, 1521, 5508.

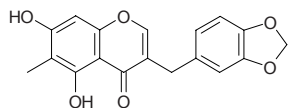
**16147 Ophiopogonin D'**

[65604-80-0] C<sub>44</sub>H<sub>70</sub>O<sub>16</sub> (855.04). Crystals (EtOH aq.), mp 255–257°C (dec),  $[\alpha]_D^{18} = -41.34^\circ$  ( $c = 0.17$ , pyridine). Source: KUO YE SHAN MAI DONG *Liriope platyphylla*, MAI DONG *Ophiopogon japonicus*. Ref: 1521, 2965, 2938.

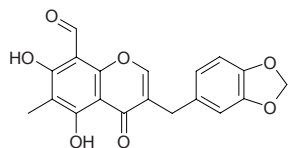


**16148 Ophiopogonone A**

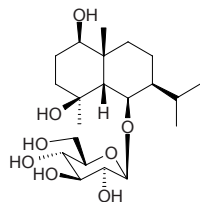
[75239-62-2] C<sub>18</sub>H<sub>14</sub>O<sub>6</sub> (326.31). Pale-yellow needles (EtOH), mp 235~236°C. Source: MAI DONG *Ophiopogon japonicus*. Ref: 2796, 2797.

**16149 Ophiopogonone C**

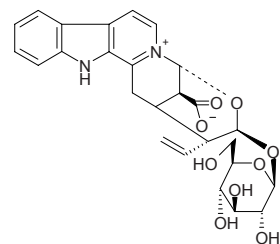
C<sub>19</sub>H<sub>14</sub>O<sub>7</sub> (354.32). Red powder, mp 147~149°C. Source: MAI DONG *Ophiopogon japonicus* (tuber). Ref: 4663.

**16150 Ophiopogonoside A**

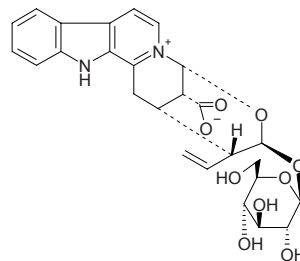
1β,4β,6β-Trihydroxy-*cis*-eudesmane-6-*O*-β-*D*-glucopyranoside C<sub>21</sub>H<sub>38</sub>O<sub>8</sub> (418.53). White amorphous powder, mp 217~219°C, [α]<sub>D</sub><sup>25</sup> = -3.4° (*c* = 0.30, MeOH). Source: MAI DONG *Ophiopogon japonicus* (tuber: yield = 0.000018%). Ref: 4772.

**16151 Ophiorine A**

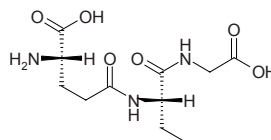
[99615-91-5] C<sub>26</sub>H<sub>28</sub>N<sub>2</sub>O<sub>9</sub> (512.52). Pale-yellow needles, mp 217~219°C, [α]<sub>D</sub> = +51°. Source: LIU QIU SHE GEN CAO *Ophiorrhiza liukuensis* (whole herb), RI BEN SHE GEN CAO *Ophiorrhiza japonica*, HEI YAN SHE GEN CAO *Ophiorrhiza kuroiwai*. Ref: 2966, 4527.

**16152 Ophiorine B**

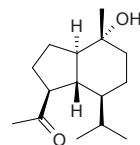
[99631-26-2] C<sub>26</sub>H<sub>28</sub>N<sub>2</sub>O<sub>9</sub> (512.52). Pale-yellow needles, mp 188~191°C, [α]<sub>D</sub> = +18.2°. Pharm: Ileal smooth muscle relaxant (gpg, *in vitro*, contraction caused by electrostimulation, ED<sub>50</sub> = 53 μmol/L). Source: HEI YAN SHE GEN CAO *Ophiorrhiza kuroiwai*, LIU QIU SHE GEN CAO *Ophiorrhiza liukuensis* (whole herb), RAN LIAO SI SHI MU *Sickingia tinctoria*, RI BEN SHE GEN CAO *Ophiorrhiza japonica*, WEI LIAN SI SHI MU *Sickingia williamsii*. Ref: 2966, 2967, 2968, 4527.

**16153 Ophthalmic acid**

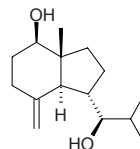
*γ*-*L*-Glutamyl-*L*-α-aminobutyryl glycine [495-27-2] C<sub>11</sub>H<sub>19</sub>N<sub>3</sub>O<sub>6</sub> (289.29). mp 179~180°C (dec), [α]<sub>D</sub><sup>20</sup> = -29° (*c* = 2.4, H<sub>2</sub>O). Source: QUN DAI CAI *Undaria pinnatifida*. Ref: 1521, 2735.

**16154 Oplopanone**

C<sub>15</sub>H<sub>26</sub>O<sub>2</sub> (238.37). Colorless prisms (*n*-hexane-EtOAc), mp 95-97°C. Pharm: Antiplasmodial inactive (*Plasmodium falciparum* strains, IC<sub>50</sub> > 50.00 μg/mL, control Chloroquine, IC<sub>50</sub> = 0.0028 μg/mL)<sup>[2383]</sup>. Source: HUANG PI GEN *Clausena lansium*, *Reneilimia cincinnata* (fruits), ZHOU YE MU LAN *Magnolia praecocissima* (seed). Ref: 2383, 2959, 4181.

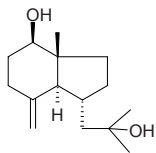
**16155 (7*R*\*)-Opposit-4(15)-ene-1β,7-diol**

C<sub>15</sub>H<sub>26</sub>O<sub>2</sub> (238.37). Colorless amorphous solid, [α]<sub>D</sub><sup>26</sup> = +36.8° (*c* = 0.3, CHCl<sub>3</sub>). Source: YI NIAN PENG *Erigeron annuus* (aerial parts), SU MEN BAI JIU CAO *Erigeron sumatrensis* (aerial parts). Ref: 4338.

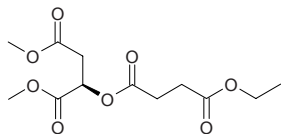


**16156 Opposit-4(15)-ene-1 $\beta$ ,11-diol**

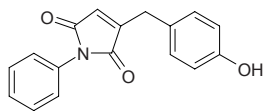
C<sub>15</sub>H<sub>26</sub>O<sub>2</sub> (238.37). Source: YI NIAN PENG *Erigeron annuus* (aerial parts), SU MEN BAI JIU CAO *Erigeron sumatrensis* (aerial parts). Ref: 4338.

**16157 Opuntiaester**

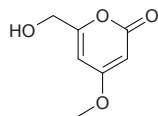
Dimethyl (2*R*)-2-[(4-ethoxy-4-oxobutanoyl)oxy]succinate C<sub>12</sub>H<sub>18</sub>O<sub>8</sub> (290.27). Colorless oil. Source: XIAN REN ZHANG *Opuntia dillenii* (stem). Ref: 4808.

**16158 Opuntin B**

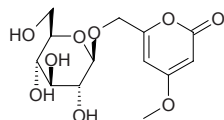
C<sub>17</sub>H<sub>13</sub>NO<sub>3</sub> (279.30). Yellowish crystals (acetone), mp 213°C. Source: XIAN REN ZHANG *Opuntia dillenii*. Ref: 2473.

**16159 Opuntiol**

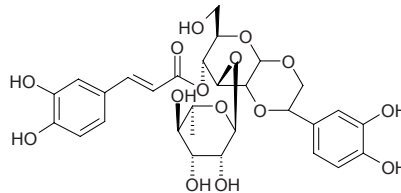
C<sub>7</sub>H<sub>8</sub>O<sub>4</sub> (156.14). Colorless needles, mp 180~181°C. Pharm: DPPH scavenger (SC<sub>50</sub> > 100 μmol/L)<sup>[4247]</sup>; antioxidant (superoxide anion radical scavenger, superoxide dismutase method, IC<sub>50</sub> for Formazan formation activity > 100 μmol/L)<sup>[4247]</sup>. Source: XIAN REN ZHANG *Opuntia dillenii* (fresh stem; yield = 0.0032%). Ref: 4247, 4826.

**16160 Opuntioside**

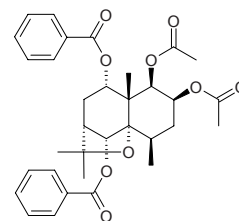
Opuntioside I; 4-Methoxy-6-( $\beta$ -D-glucopyranoxymethyl)-2*H*-pyran-2-one C<sub>13</sub>H<sub>18</sub>O<sub>9</sub> (318.28). Colorless cubic crystals, mp 145~147°C, [ $\alpha$ ]<sub>D</sub><sup>26</sup> = -42.0° (*c* = 1.0, MeOH); colorless fine crystals, mp 128.2~131.3°C, [ $\alpha$ ]<sub>D</sub><sup>26</sup> = -42.0° (*c* = 1.0, MeOH). Pharm: DPPH scavenger (SC<sub>50</sub> > 100 μmol/L)<sup>[4247]</sup>; antioxidant (superoxide anion radical scavenger, superoxide dismutase method, IC<sub>50</sub> for Formazan formation activity > 100 μmol/L)<sup>[4247]</sup>. Source: XIAN REN ZHANG *Opuntia dillenii* (fresh stem; yield = 0.0078%). Ref: 4247, 4826.

**16161 Oroposide‡**

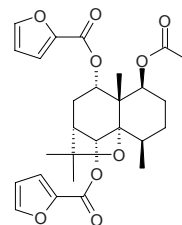
Orobanchoside; 2-(3,4-Dihydroxy) phenyl ethanol (1→1) (2→2)-[(1→3)-rhamnopyranosyl-4-*O*-caffeoyl] glucoside C<sub>29</sub>H<sub>34</sub>O<sub>15</sub> (622.59). Yellowish amorphous powder. Source: GUANG FANG FENG *Anisomeles indica* [Syn. *Epimeredi indica*] (whole herb). Ref: 4592. ‡Note: see compound 4225.

**16162 Orbiculin A**

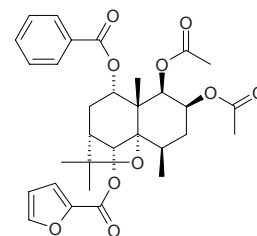
C<sub>33</sub>H<sub>38</sub>O<sub>9</sub> (578.67). Pharm: Anti-inflammatory inactive (*in vitro*, NF- $\kappa$ B inhibitor, IC<sub>50</sub> > 300 μmol/L; NO production inhibitor, IC<sub>50</sub> > 300 μmol/L; control Aminoguanidine, IC<sub>50</sub> = (16.3±0.4) μmol/L). Source: NAN SHE TENG GEN *Celastrus orbiculatus* [Syn. *Celastrus articulatus*] (root; yield = 0.0025%dw). Ref: 4604.

**16163 Orbiculin D**

C<sub>27</sub>H<sub>32</sub>O<sub>9</sub> (500.55). Pharm: Anti-inflammatory (*in vitro*, NF- $\kappa$ B inhibitor, IC<sub>50</sub> = (36.7±1.4) μmol/L; NO production inhibitor, IC<sub>50</sub> = (43.6±1.2) μmol/L; control Aminoguanidine, IC<sub>50</sub> = (16.3±0.4) μmol/L). Source: NAN SHE TENG GEN *Celastrus orbiculatus* [Syn. *Celastrus articulatus*] (root; yield = 0.0086%dw). Ref: 4604.

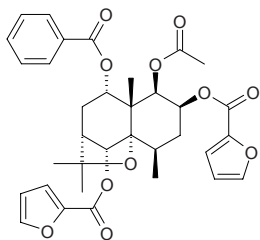
**16164 Orbiculin E**

C<sub>31</sub>H<sub>36</sub>O<sub>10</sub> (568.63). Pharm: Anti-inflammatory inactive (*in vitro*, NF- $\kappa$ B inhibitor, IC<sub>50</sub> > 300 μmol/L; NO production inhibitor, IC<sub>50</sub> > 300 μmol/L; control Aminoguanidine, IC<sub>50</sub> = (16.3±0.4) μmol/L). Source: NAN SHE TENG GEN *Celastrus orbiculatus* [Syn. *Celastrus articulatus*] (root; yield = 0.001%dw). Ref: 4604.

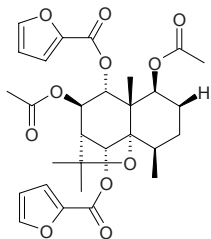


**16165 Orbiculin F**

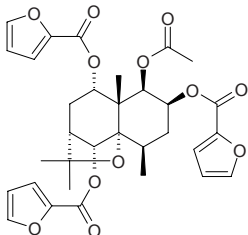
$C_{34}H_{36}O_{11}$  (620.66). **Pharm:** Anti-inflammatory inactive (*in vitro*, NF- $\kappa$ B inhibitor,  $IC_{50} > 300\mu\text{mol/L}$ ; NO production inhibitor,  $IC_{50} > 300\mu\text{mol/L}$ ; control Aminoguanidine,  $IC_{50} = (16.3\pm 0.4)\mu\text{mol/L}$ ). **Source:** NAN SHE TENG GEN *Celastrus orbiculatus* [Syn. *Celastrus articulatus*] (root: yield = 0.0027%dw). **Ref:** 4604.

**16166 Orbiculin H**

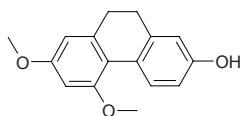
1 $\beta$ ,8 $\beta$ -Diacetoxy-6 $\alpha$ ,9 $\alpha$ -difuroyloxydihydro- $\beta$ -agarofuran  $C_{29}H_{34}O_{11}$  (558.59). White amorphous powder, mp 111~113°C,  $[\alpha]_D^{25} = -19.5^\circ$  ( $c = 1.00$ , MeOH). **Pharm:** Anti-inflammatory (*in vitro*, NF- $\kappa$ B inhibitor,  $IC_{50} = (33.5\pm 1.1)\mu\text{mol/L}$ ; NO production inhibitor,  $IC_{50} = (50.4\pm 0.8)\mu\text{mol/L}$ ; control Aminoguanidine,  $IC_{50} = (16.3\pm 0.4)\mu\text{mol/L}$ ). **Source:** NAN SHE TENG GEN *Celastrus orbiculatus* [Syn. *Celastrus articulatus*] (root: yield = 0.0047%dw). **Ref:** 4604.

**16167 Orbiculin I**

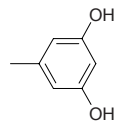
1 $\beta$ -Acetoxy-2 $\beta$ ,6 $\alpha$ ,9 $\alpha$ -trifuroyloxydihydro- $\beta$ -agarofuran  $C_{32}H_{34}O_{12}$  (610.62). White needles, mp 253~255°C,  $[\alpha]_D^{25} = +39.2^\circ$  ( $c = 0.63$ , MeOH). **Pharm:** Anti-inflammatory (*in vitro*, NF- $\kappa$ B inhibitor,  $IC_{50} = (61.5\pm 1.4)\mu\text{mol/L}$ ; NO production inhibitor,  $IC_{50} = (51.2\pm 1.3)\mu\text{mol/L}$ ; control Aminoguanidine,  $IC_{50} = (16.3\pm 0.4)\mu\text{mol/L}$ ). **Source:** NAN SHE TENG GEN *Celastrus orbiculatus* [Syn. *Celastrus articulatus*] (root: yield = 0.001%dw). **Ref:** 4604.

**16168 Orchinol**

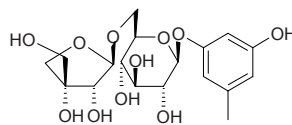
[41060-20-2]  $C_{16}H_{16}O_3$  (256.30). **Pharm:** Antifungal; plant antitoxin. **Source:** AO SHE LAN *Coeloglossum viride* [Syn. *Coeloglossum viride* var. *bracteatum*], BAI SHOU SHEN *Gymnadenia albida*, *Orchis* sp. **Ref:** 658.

**16169 Orcinol**

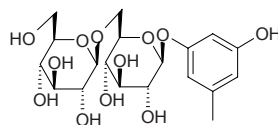
5-Methyl-1,3-benzenediol [504-15-4]  $C_7H_8O_2$  (124.14). White acicular crystals (water), monohydrate crystals: mp 59°C, anhydrite mp 107°C; bp 290°C, 147°C/5mmHg. **Pharm:** Antifungal; spermicidal (4mg/mL); antioxidant inactive (DPPH radical scavenger assay)<sup>[5232]</sup>; cytotoxic inactive (MCF, HM02, HepG2)<sup>[5232]</sup>; antihistamine inactive (rat peritoneal mast cells, compound 48/80-induced)<sup>[4755]</sup>; LD<sub>50</sub> (mus, iv) = (290±30)mg/kg, (mus, ip) = (405±14)mg/kg, (rat, orl) = 33.8mg/kg. **Source:** MAN SHAN HONG *Rhododendron dauricum* (twig and leaf: yield = 0.00046%)<sup>[4755]</sup> MEI YI *Parmelia tinctorum*, NIU XI XI *Rumex patientia*, OU SHI NAN *Erica arborea*, SAN XING OU SHI NAN *Erica umbellata*. **Ref:** 658, 661, 4755, 5232.

**16170 Orcinol-1-O- $\beta$ -D-apiofuranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside**

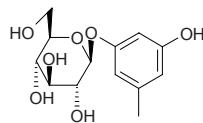
$C_{18}H_{26}O_{11}$  (418.40). Colorless amorphous powder. **Pharm:** Antioxidant (hydroxyl radical scavenger,  $IC_{50} = 1.17\mu\text{mol/L}$ , control EGCG,  $IC_{50} = 0.43\mu\text{mol/L}$ , superoxide anion radical scavenger,  $IC_{50} = 1.84\mu\text{mol/L}$ , control EGCG,  $IC_{50} = 0.53\mu\text{mol/L}$ ). **Source:** XIAN MAO *Curculigo orchioides* (rhizome). **Ref:** 4499.

**16171 Orcinol-1-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside**

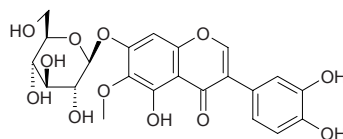
$C_{19}H_{28}O_{12}$  (448.43). **Pharm:** Antioxidant (hydroxyl radical scavenger,  $IC_{50} = 0.87\mu\text{mol/L}$ , control EGCG,  $IC_{50} = 0.43\mu\text{mol/L}$ , superoxide anion radical scavenger,  $IC_{50} = 1.56\mu\text{mol/L}$ , control EGCG,  $IC_{50} = 0.53\mu\text{mol/L}$ ). **Source:** XIAN MAO *Curculigo orchioides* (rhizome). **Ref:** 4499.

**16172 Orcinol glucoside**

$C_{13}H_{18}O_7$  (286.28). **Pharm:** Antioxidant (hydroxyl radical scavenger,  $IC_{50} = 1.39\mu\text{mol/L}$ , control EGCG,  $IC_{50} = 0.43\mu\text{mol/L}$ , superoxide anion radical scavenger,  $IC_{50} = 2.49\mu\text{mol/L}$ , control EGCG,  $IC_{50} = 0.53\mu\text{mol/L}$ )<sup>[4499]</sup>. **Source:** XIAN MAO *Curculigo orchioides*. **Ref:** 2859, 4499.

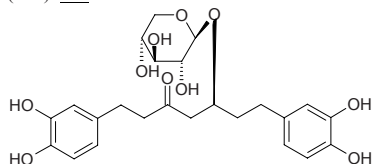
**16173 Ordoritin-glucoside**

$C_{22}H_{22}O_{12}$  (478.41). **Source:** *Glycyrrhiza* sp. **Ref:** 2431.

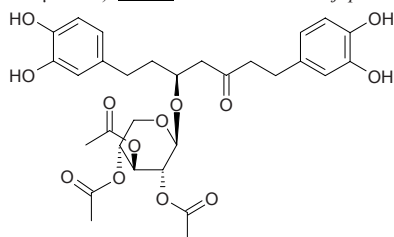


**16174 Oregonin**

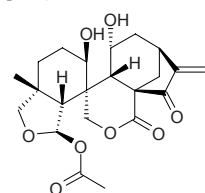
$C_{24}H_{30}O_{10}$  (478.50). Pale yellow viscous liquid,  $[\alpha]_D = -16.9^\circ$  ( $c = 0.12$ , MeOH). **Pharm:** Antioxidant (superoxide radical scavenger,  $IC_{50} = 2.2\mu\text{mol/L}$ ; DPPH scavenger,  $IC_{50} = 4.6\mu\text{mol/L}$ ). **Source:** CHI YANG *Alnus japonica* (leaf). **Ref:** 4535.

**16175 Oregonin peracetate**

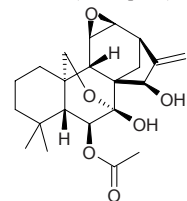
$C_{30}H_{36}O_{13}$  (604.61). **Pharm:** Antioxidant (superoxide radical scavenger,  $IC_{50} = 31.0\mu\text{mol/L}$ ). **Source:** CHI YANG *Alnus japonica* (leaf). **Ref:** 4535.

**16176 Oreskaurin A**

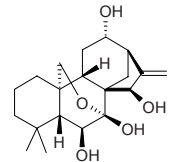
1 $\beta$ ,11 $\alpha$ -Dihydroxy-6 $\beta$ -acetoxo-6,7-seco-6,19-epoxy-7,20-olide-ent-kaur-16-en-15-one  $C_{22}H_{28}O_8$  (420.46). White amorphous powder,  $[\alpha]_D^{20} = -75.0^\circ$  ( $c = 0.1$ , MeOH). **Source:** SHAN DI XIANG CHA CAI *Isodon oresbia* (aerial parts). **Ref:** 3808.

**16177 Oreskaurin B**

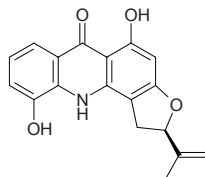
7 $\beta$ ,15 $\beta$ -Dihydroxy-6 $\beta$ -acetoxo-7 $\alpha$ ,20-epoxy-11 $\beta$ ,12 $\beta$ -epoxy-ent-kaur-16-ene  $C_{22}H_{30}O_6$  (390.48). Colorless cubic crystals, mp 167~169 $^\circ$ ,  $[\alpha]_D^{20} = -72.7^\circ$  ( $c = 0.06$ , MeOH). **Pharm:** Cytotoxic inactive (K562 cells, MTT method, control *cis*-Platin,  $IC_{50} = 0.53\mu\text{g/mL}$ ). **Source:** SHAN DI XIANG CHA CAI *Isodon oresbia* (aerial parts). **Ref:** 3808.

**16178 Oreskaurin C**

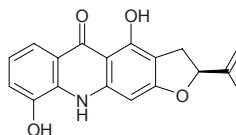
6 $\beta$ ,12 $\alpha$ ,15 $\beta$ -Trihydroxy-7 $\alpha$ ,20-epoxy-ent-kaur-16-ene  $C_{20}H_{30}O_5$  (350.46). White amorphous powder,  $[\alpha]_D^{20} = -22.2^\circ$  ( $c = 0.08$ , MeOH). **Source:** SHAN DI XIANG CHA CAI *Isodon oresbia* (aerial parts). **Ref:** 3808.

**16179 Oriciacidone C**

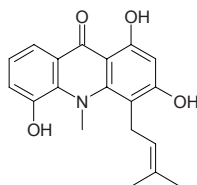
$C_{18}H_{15}NO_4$  (309.32). Yellow needles (MeOH), mp 253~254 $^\circ\text{C}$ ,  $[\alpha]_D^{25} = +21.8^\circ$  ( $c = 0.39$ , MeOH). **Pharm:**  $\alpha$ -Glucosidase inhibitor ( $IC_{50} = (56\pm 5)\mu\text{mol/L}$ , control Deoxynojirimycin,  $IC_{50} = (330\pm 8)\text{mmol/L}$ ); antioxidant (DPPH Scavenger,  $IC_{50} = (60.79\pm 1.23)\mu\text{mol/L}$ , control BHA,  $IC_{50} = (44.20\pm 0.02)\mu\text{mol/L}$ ). **Source:** *Oriciopsis glaberrima* (stem cortex: yield = 0.00075%dw). **Ref:** 1590.

**16180 Oriciacidone D**

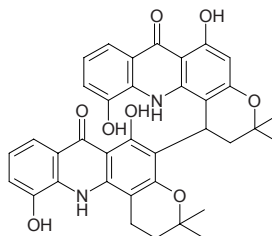
$C_{18}H_{15}NO_4$  (309.32). Yellow crystals (MeOH), mp 265~266 $^\circ\text{C}$ ,  $[\alpha]_D^{25} = +87.4^\circ$  ( $c = 0.50$ , MeOH). **Pharm:** Antioxidant (DPPH Scavenger,  $IC_{50} = (194.10\pm 1.72)\mu\text{mol/L}$ , control BHA,  $IC_{50} = (44.20\pm 0.02)\mu\text{mol/L}$ ). **Source:** *Oriciopsis glaberrima* (stem cortex: yield = 0.0005%dw). **Ref:** 1590.

**16181 Oriciacidone E**

$C_{19}H_{19}NO_4$  (325.37). Yellow amorphous powder (MeOH),  $[\alpha]_D^{25} = +63.6^\circ$  ( $c = 0.70$ , MeOH). **Source:** *Oriciopsis glaberrima* (stem cortex: yield = 0.00024%dw). **Ref:** 1590.

**16182 Oriciacidone F**

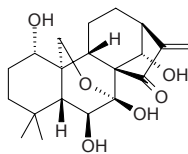
$C_{36}H_{32}N_2O_8$  (620.67). Yellow powder (MeOH), mp 187~189 $^\circ\text{C}$ ,  $[\alpha]_D^{25} = +35.6^\circ$  ( $c = 0.62$ , MeOH). **Pharm:**  $\alpha$ -Glucosidase inhibitor ( $IC_{50} = (34\pm 17)\mu\text{mol/L}$ , control Deoxynojirimycin,  $IC_{50} = (330\pm 8)\text{mmol/L}$ ); antioxidant (DPPH Scavenger,  $IC_{50} = (482\pm 2)\mu\text{mol/L}$ , control BHA,  $IC_{50} = (44.20\pm 0.02)\mu\text{mol/L}$ ). **Source:** *Oriciopsis glaberrima* (stem cortex: yield = 0.00075%dw). **Ref:** 1590.



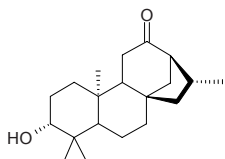


**16183 Oridonin**

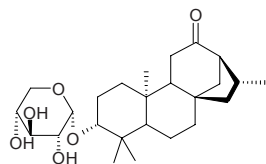
Rubescensine; Rubescensin A; Isodonol [28957-04-2] C<sub>20</sub>H<sub>28</sub>O<sub>6</sub> (364.44). Colorless presms (EtOH), mp 254–260°C, [α]<sub>D</sub><sup>25</sup> = –51° (c = 0.1, EtOH); mp 250–252°C, [α]<sub>D</sub> = –54.6° (c = 0.097, EtOH); mp 247–250°C; mp 248–250°C, [α]<sub>D</sub><sup>17</sup> = –46°, (c = 1.0, C<sub>5</sub>H<sub>5</sub>N). **Pharm:** Anti-angiogenic (*in vitro*, 2.5 μg/mL)<sup>[3001]</sup>; cytotoxic (K562, IC<sub>50</sub> = 4.37 μmol/L, control Cisplatin IC<sub>50</sub> = 3.84 μmol/L; Bcap37, IC<sub>50</sub> = 8.32 μmol/L, Cisplatin IC<sub>50</sub> = 1.54 μmol/L; BIU87, IC<sub>50</sub> = 55.91 μmol/L, Cisplatin IC<sub>50</sub> = 4.34 μmol/L; CA, IC<sub>50</sub> = 0.06 μmol/L, Cisplatin IC<sub>50</sub> = 0.88 μmol/L; CNE, IC<sub>50</sub> = 16.50 μmol/L, Cisplatin IC<sub>50</sub> = 6.54 μmol/L; HeLa, IC<sub>50</sub> = 28.67 μmol/L, Cisplatin IC<sub>50</sub> = 3.60 μmol/L)<sup>[4353]</sup>; antibacterial (gram-positive bacteria with strong effects, *staphylococcus aureus*, MIC = 31 μg/mL; gram-negative bacteria, MIC = 62.5–500 μg/mL); inhibits biosynthesis of DNA, RNA and protein; larvacide (inhibits growth of order Lepidoptera larva); synergist of antineoplastic bleomycin A5; antineoplastic (hmn and animal, *in vitro* and *in vivo*, used in treatment of cancer of esophagus, pancreas and liver)<sup>[2631]</sup>; cytotoxic (MGc803 hmn gastric adenocarcinoma cell line, CaEs-17 esophageal cancer cell line, *in vitro*, effective at concentrations below 15 mg/mL; Ehrlich ascites carcinoma, *in vitro*; mechanism was postulated to be due to covalent binding of oridonin to a specific site of enzymes in tumor cells)<sup>[5369]</sup>; cytotoxic (L<sub>1210</sub> cells *in vitro*, inhibits DNA, RNA, and protein syntheses in a concentration-dependent manner)<sup>[5369]</sup>; antineoplastic (mus, L<sub>1210</sub> leukemia, *in vivo*)<sup>[5369]</sup>; LD<sub>50</sub> (mus ip) = 37.5 mg/kg, 35–40 mg/kg, and 55.8 mg/kg. **Source:** DONG LING CAO *Rabdosia rubescens* (whole herb: mean content = 0.575%<sup>[5508]</sup>; leaf: mean content = 0.775%<sup>[5508]</sup>), LU SHAN XIANG CHA CAI *Isodon rubescens* var. *lushanensis* (leaf), MAO GUO XIANG CHA CAI *Isodon trichocarpa*, MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosia japonica*], MIAN MAO GUO XIANG CHA CAI *Isodon lasiocarpus*, XIAN MAI XIANG CHA CAI *Rabdosia nervosa*, ZHOU YE XIANG CHA CAI *Isodon rugosus* [Syn. *Rabdosia rugosa*]. **Ref:** 2, 4, 504, 658, 2631, 3001, 4067, 4353, 5348, 5369, 5508.

**16184 Oriediterpenol**

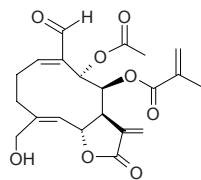
C<sub>20</sub>H<sub>32</sub>O<sub>2</sub> (304.48). Colorless crystals (Petroleum ether–EtOAc), mp 214–216°C, [α]<sub>D</sub><sup>20</sup> = –5.17° (c = 0.5, MeOH). **Source:** ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*]. **Ref:** 2246.

**16185 Oriediterpenoside**

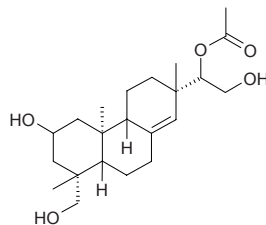
C<sub>25</sub>H<sub>40</sub>O<sub>6</sub> (436.59). White powder, (Petroleum ether–EtOAc), mp 218°C, [α]<sub>D</sub><sup>20</sup> = –27.53° (c = 0.5, MeOH). **Source:** ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*]. **Ref:** 2246.

**16186 Orientalide**

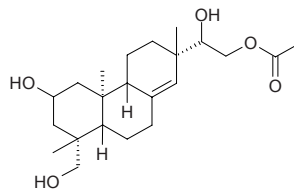
[72704-05-3] C<sub>21</sub>H<sub>24</sub>O<sub>8</sub> (404.42). Noncrystal, [α]<sub>D</sub><sup>25</sup> = +41.2° (c = 0.034, CHCl<sub>3</sub>). **Source:** XI XIAN *Siegesbeckia orientalis*. **Ref:** 2906.

**16187 Orientalin A**

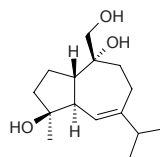
C<sub>22</sub>H<sub>36</sub>O<sub>5</sub> (380.53). mp 158–159°C, [α]<sub>D</sub><sup>25</sup> = 57.5° (c = 0.348, MeOH). **Source:** XI XIAN *Siegesbeckia orientalis*. **Ref:** 9.

**16188 Orientalin B**

C<sub>22</sub>H<sub>36</sub>O<sub>5</sub> (380.53). mp 92.5–94°C. **Source:** XI XIAN *Siegesbeckia orientalis*. **Ref:** 9.

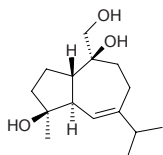
**16189 Orientalol A**

[147368-34-1] C<sub>15</sub>H<sub>26</sub>O<sub>3</sub> (254.37). Oil, [α]<sub>D</sub><sup>20</sup> = 0° (c = 0.83, MeOH). **Pharm:** Bladder smooth muscle relaxant (gpg, *in vitro*, induced by carbacholine, 100 μmol/L, contractive rate = 44.3%). **Source:** ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*]. **Ref:** 2879, 2880, 5501.

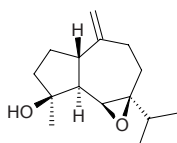


**16190 Orientalol B**

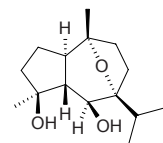
[147368-35-2] C<sub>15</sub>H<sub>26</sub>O<sub>3</sub> (254.37). Oil, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = 0° (c = 0.83, MeOH). **Pharm:** Bladder smooth muscle relaxant (gpg, *in vitro*, induced by carbacholine, 100 $\mu$ mol/L, contractive rate = 39.4%). **Source:** ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*]. **Ref:** 2879, 2880, 5501.

**16191 Orientalol C**

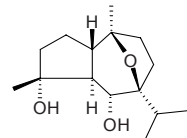
6,7-Epoxy-10(14)-guaien-4-ol [147511-74-8] C<sub>15</sub>H<sub>24</sub>O<sub>2</sub> (236.36). Oil, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +2.5° (c = 0.56, MeOH). **Pharm:** Bladder smooth muscle relaxant (gpg, *in vitro*, induced by carbacholine, 100 $\mu$ mol/L, contractive rate = 52.1%). **Source:** ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*]. **Ref:** 2880, 5501.

**16192 Orientalol E**

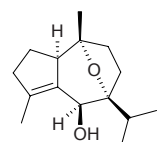
(1*R*\*, 4*S*\*, 5*R*\*, 6*S*\*, 7*R*\*, 10*R*\*)-4,6-Dihydroxy-7,10-epoxy-1,5-*trans*-guaiane C<sub>15</sub>H<sub>27</sub>O<sub>3</sub> (254.37). Colorless prisms, mp 140–142°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +5.2° (c = 0.5, MeOH). **Source:** ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*]. **Ref:** 3416.

**16193 Orientalol E**

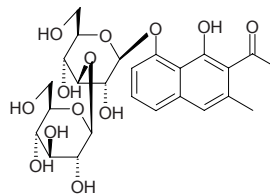
1,4-*trans*-7 $\beta$ ,10 $\beta$ -Epoxy-4 $\alpha$ ,6 $\alpha$ -dihydroxyguaiane C<sub>15</sub>H<sub>26</sub>O<sub>3</sub> (254.37). Oil. **Source:** ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*]. **Ref:** 2149.

**16194 Orientalol F**

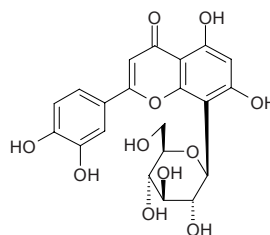
6 $\beta$ -Hydroxy-7 $\alpha$ ,10 $\alpha$ -epoxyguaiane-4,5-ene C<sub>15</sub>H<sub>24</sub>O<sub>2</sub> (236.36). Pale yellow oil, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +4.3° (c = 0.5, MeOH). **Source:** ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*]. **Ref:** 3416.

**16195 Orientaloside**

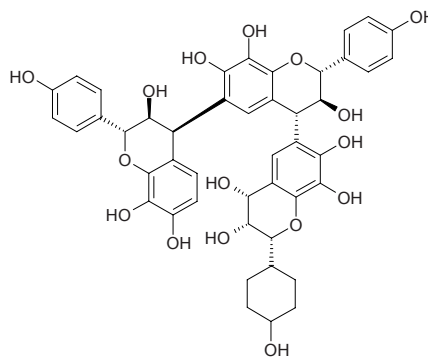
2-Acetyl-3-methyl-1,8-dihydroxynaphthalene-8-*O*- $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 3)- $\beta$ -D-glucopyranoside C<sub>25</sub>H<sub>32</sub>O<sub>13</sub> (540.53). Amorphous. **Source:** NIU XI XI *Rumex patientia*. **Ref:** 5138.

**16196 Oritin**

Luteolin-8-*C*- $\beta$ -D-glucopyranoside [28608-75-5] C<sub>21</sub>H<sub>20</sub>O<sub>11</sub> (448.39). mp 265–270°C (dec). **Pharm:** Thyroid peroxidase inhibitor; Phytoalexin<sup>[4727]</sup>. **Source:** CHANG BAN JIN LIAN HUA *Trollius macropetalus*, HONG CAO *Polygonum orientale*, HU LU BA *Trigonella foenum-graecum* (dried ripe seed: content scope of 18 origins = 0.0089%–0.0259%, mean content = 0.0168%)<sup>[5508]</sup>, HU ZHI ZI *Lespedeza bicolor*, HUANG GUA *Cucumis sativus* (leaf)<sup>[4727]</sup>, JIN LIAN HUA *Trollius chinensis* [Syn. *Trollius asiaticus* var. *chinensis*], QIAO MAI JIE *Fagopyrum esculentum*, QIAN QU CAI *Lythrum salicaria*, SUAN JIAO *Tamarindus indica*, XI XIAN *Siegesbeckia orientalis*, YA MA *Linum usitatissimum*. **Ref:** 2, 6, 245, 658, 660, 4727, 5508.

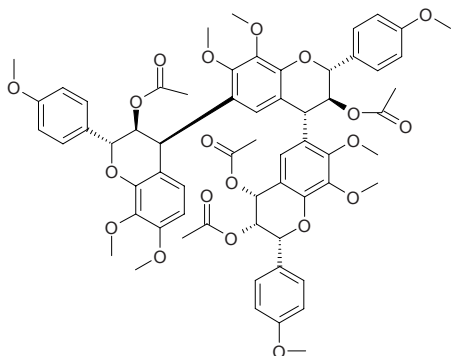
**16197 Oritin-(4 $\beta$  $\rightarrow$ 6)-oritin-(4 $\alpha$  $\rightarrow$ 6)-epioritin-4 $\alpha$ -ol**

C<sub>45</sub>H<sub>44</sub>O<sub>16</sub> (840.84). **Source:** *Acacia galpinii* (heartwood), *Acacia caffra* (heartwood). **Ref:** 3753.



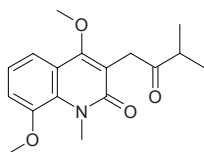
**16198 Oritin-(4 $\beta$ →6)-oritin-(4 $\alpha$ →6)-epioritin-4 $\alpha$ -ol nona-*O*-methylether tetra-acetate**

C<sub>62</sub>H<sub>64</sub>O<sub>20</sub> (1129.19). Source: *Acacia galepinii* (heartwood). Ref: 3753.



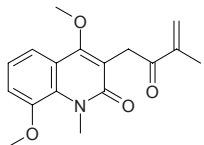
**16199 Orixalone A**

C<sub>17</sub>H<sub>21</sub>NO<sub>4</sub> (303.36). Colorless oil. Pharm: NO production inhibitor (RAW264.7 cells, LPS/IFN- $\gamma$ -induced, 10 $\mu$ mol/L, InRt = 47.3%, 50 $\mu$ mol/L, InRt = 54.8%; no significantly cytotoxic to RAW264.7 cells at the effective concentration). Source: CHOU SHAN YANG *Orixia japonica* (stem: yield = 0.0031%dw). Ref: 4774.



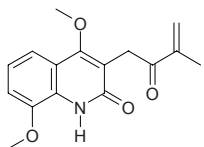
**16200 Orixalone B**

C<sub>17</sub>H<sub>19</sub>NO<sub>4</sub> (301.35). Colorless oil. Source: CHOU SHAN YANG *Orixia japonica* (stem: yield = 0.00034%dw). Ref: 4774.



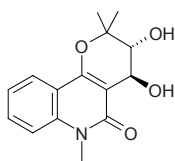
**16201 Orixalone C**

C<sub>16</sub>H<sub>17</sub>NO<sub>4</sub> (287.32). Colorless oil. Source: CHOU SHAN YANG *Orixia japonica* (stem: yield = 0.00019%dw). Ref: 4774.



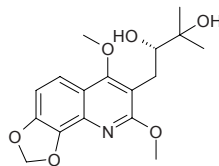
**16202 Orixalone D**

C<sub>15</sub>H<sub>17</sub>NO<sub>4</sub> (275.31). Colorless oil, [ $\alpha$ ]<sub>D</sub><sup>24</sup> = +3.1° (*c* = 0.064, MeOH). Source: CHOU SHAN YANG *Orixia japonica* (stem: yield = 0.00032%dw). Ref: 4774.



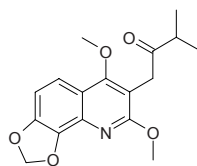
**16203 Orixine**

[17232-53-0] C<sub>17</sub>H<sub>21</sub>NO<sub>6</sub> (335.36). mp 152.5°C. Source: CHOU SHAN YANG *Orixia japonica* (stem: yield = 0.0028%dw). Ref: 6, 4774.



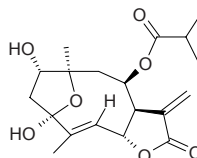
**16204 Orixinone**

[39027-00-4] C<sub>17</sub>H<sub>19</sub>NO<sub>5</sub> (317.34). mp 102~103°C. Pharm: NO production inhibitor inactive (RAW264.7 cells, LPS/IFN- $\gamma$ -induced, 30 $\mu$ mol/L; weak cytotoxic to RAW264.7 cells). Source: CHOU SHAN YANG *Orixia japonica* (stem: yield = 0.031%dw). Ref: 6, 4774.



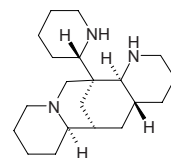
**16205 Orizabin**

[34367-14-1] C<sub>19</sub>H<sub>26</sub>O<sub>7</sub> (366.41). Pharm: Antineoplastic; cytotoxic. Source: MO XI GE XIANG RI KUI *Tithonia tagiliflora*. Ref: 658.



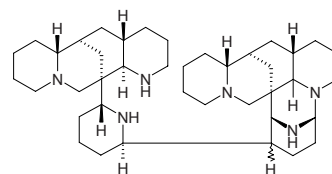
**16206 Ormosanine**

Piptanthine [7344-67-4] C<sub>20</sub>H<sub>35</sub>N<sub>3</sub> (317.52). mp 183~184°C, mp 142~146°C, 136~137°C, [ $\alpha$ ]<sub>D</sub> = -24°. Source: HONG DOU *Ormosia hosiei*, SHA DONG QING *Ammopiptanthus mongolicus* [Syn. *Piptanthus mongolicus*], XIAO SHA DONG QING *Piptanthus nanus*. Ref: 6, 1521, 2972, 2973.



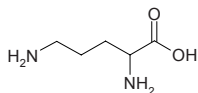
**16207 Ormosinine**

[14350-67-5] C<sub>40</sub>H<sub>66</sub>N<sub>6</sub> (631.01). Needles (EtOAc), mp 219~220°C, 203~205°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +8.9° (CHCl<sub>3</sub>). Source: *Ormosia dasycarpa*, *Ormosia panamensis*, *Ormosia jamaicensis*. Ref: 660, 1521.

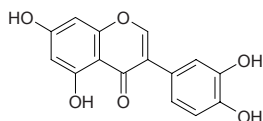


**16208 Ornithine**

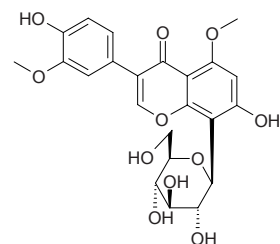
2,5-Diaminopentanoic acid  $C_5H_{12}N_2O_2$  (132.16). mp L(+) 140°C. Source: LIE DANG *Orobancha coerulescens*. Ref: 6.

**16209 Orobol**

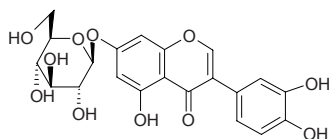
Santol; 5,7,3',4'-Tetrahydroxyisoflavone [480-23-9]  $C_{15}H_{10}O_6$  (286.24). Pale-yellow crystals (AcOH), mp 212°C; Pale yellow powder, mp 267~268°C. Pharm: Anti-gonadotropin; hepatoprotective (mus primary cultured hepatocytes, antihepatotoxin induced by *D*-galactosamine (GalN),  $IC_{50} = 36\mu\text{mol/L}$ , control Silybin  $IC_{50} = 41\mu\text{mol/L}$ )<sup>[4095]</sup>. Source: DIAN NAN HONG HOU KE *Calophyllum polyanthum* (seed: yield = 0.0089%dw), GUANG BU DING GONG TENG *Erycibe expansa*, JIN QUE ER *Cytisus scoparius* [Syn. *Spartium scoparium*], SHAN DI XIANG WAN DOU *Lathyrus montanus*, *Bolusanthus speciosus*, *Baptisia* spp., *Lathyrus* spp., *Thermopsis* spp. Ref: 658, 2925, 4095, 4767.

**16210 Orobol 5,3'-di-O-methyl-8-C-glucoside**

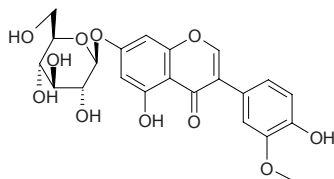
$C_{23}H_{24}O_{11}$  (476.44). Fine pale yellow needles, mp 233~237°C (MeOH/H<sub>2</sub>O). Source: ZHUO SE SANG CHENG *Maclura tinctoria*. Ref: 2353.

**16211 Oroboside**

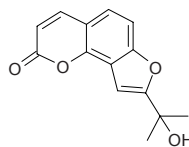
[20486-33-3]  $C_{21}H_{20}O_{11}$  (448.39). Source: FO JIA CAO *Sedum lineare* [Syn. *Sedum obtuso-lineare*]. Ref: 2917.

**16212 Oroboside-3'-methylether**

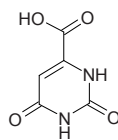
$C_{22}H_{22}O_{11}$  (462.41). Source: FO JIA CAO *Sedum lineare* [Syn. *Sedum obtuso-lineare*]. Ref: 2917.

**16213 Oroselol**

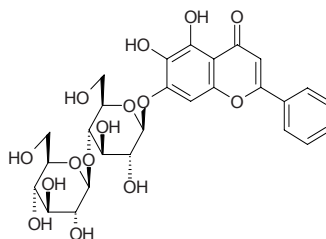
[1891-25-4]  $C_{14}H_{12}O_4$  (244.25). mp 148~151°C. Source: GAN SONG *Nardostachys chinensis*. Ref: 6.

**16214 Orotic acid**

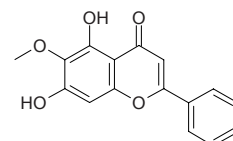
2,6-Dioxo-1,2,3,6-tetrahydro-4-pyrimidinecarboxylic acid [65-86-1]  $C_5H_4N_2O_4$  (156.10). mp 345~346°C; 322~325°C. Source: NIU RU *Bos taurus domesticus*; *Bubalus bubalis*. Ref: 6.

**16215 Oroxin B**

$C_{27}H_{30}O_{15}$  (594.53). mp 155~157°C. Source: MU HU DIE *Oroxylum indicum*. Ref: 6.

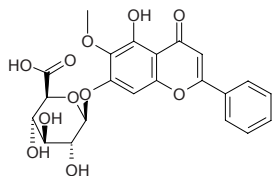
**16216 Oroxylin A**

Oroxylin [480-11-5]  $C_{16}H_{12}O_5$  (284.27). mp 231~232°C. Pharm: Anti-inflammatory (hmn platelets 12-LOX inhibitor, without affecting level of cyclooxygenase)<sup>[4415]</sup>; cytotoxic (hmn peripheral blood T cells, dose = 2.0μg/mL, T cell survival rate = 72%)<sup>[3498]</sup>; immunosuppressant (inhibits IL-2 secretion costimulated by CD28, dose = 2.0μg/mL, InRt = 49%)<sup>[3498]</sup>. Source: CHUAN HUANG QIN *Scutellaria hypericifolia*, DIAN HUANG QIN *Scutellaria amoena* (dried root: content scope of 10 samples = 0.07%~0.46%, mean content = 0.21%<sup>[5508]</sup>), GAN SU HUANG QIN *Scutellaria rehderiana*, HONG CHAI HU *Bupleurum scorzonerifolium* (root), HUANG QIN *Scutellaria baicalensis*, LI JIANG HUANG QIN *Scutellaria likiangensis*, MU HU DIE SHU PI *Oroxylum indicum*, NIAN MAO HUANG QIN *Scutellaria viscidula*. Ref: 6, 660, 1521, 3498, 4415, 5508.

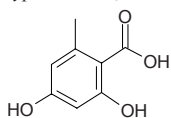


**16217 Oroxylin A 7-O-glucuronide**

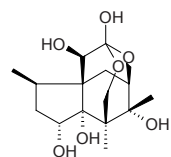
$C_{22}H_{20}O_{11}$  (460.40). Source: HUANG QIN *Scutellaria baicalensis* (dry root: content scope of 10 samples = 0.33%~1.83%, mean content = 1.29%<sup>[5508]</sup>). Ref: 2946, 5508.

**16218 Orsellinic acid**

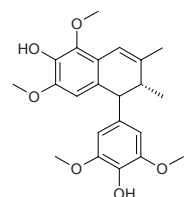
[480-64-8]  $C_8H_8O_4$  (168.15). Source: HONG SHI ER *Umbilicaria hypococcinea*, ZHOU MU ER *Auricularia delicata*. Ref: 2807, 2808.

**16219 (11)7,14-Ortholactone-3 $\alpha$ -hydroxyfloridanolide**

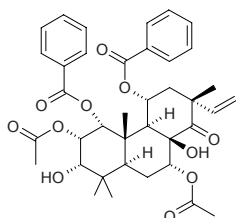
$C_{15}H_{24}O_7$  (316.35). Colorless amorphous powder,  $[\alpha]_D^{20} = -9^\circ$  ( $c = 0.40$ ,  $CH_3OH$ ). Source: *Illicium merrillianum* (pericarp: yield = 0.00013%dw). Ref: 3046.

**16220 Orthosilignin**

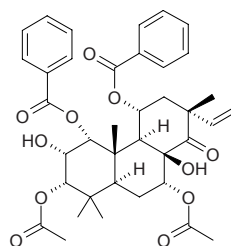
$C_{22}H_{26}O_6$  (386.45). Colorless cubical crystals ( $CHCl_3$ ). Source: JI JIAO SHEN *Orthosiphon wulfenioides* [Syn. *Coleus wulfenioides*]. Ref: 2258.

**16221 Orthosiphol A**

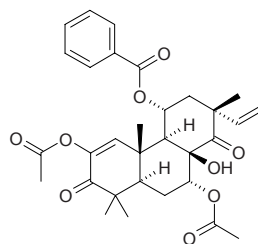
[142741-25-1]  $C_{38}H_{44}O_{11}$  (676.77). Colorless lamellar crystals ( $Et_2O$ ), mp  $210^\circ C$ ,  $[\alpha]_D^{26} = -127^\circ$  ( $c = 1.0$ ,  $CHCl_3$ ). Pharm: Anti-inflammatory (inhibits inflammation induced by cancer promotor TPA); cytotoxic (antiproliferative, Colon26-L5,  $ED_{50} = 63.8 \mu g/mL$ , control 5-Fluorouracil,  $ED_{50} = 0.015 \mu g/mL$ ; HT1080,  $ED_{50} > 100 \mu g/mL$ , 5-Fluorouracil,  $ED_{50} = 0.48 \mu g/mL$ )<sup>[3053]</sup>; NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 11.5 \mu mol/L$ ; control *L*-NMMA,  $IC_{50} = 26.0 \mu mol/L$ ; Polymixin B,  $IC_{50} = 27.8 \mu g/mL$ )<sup>[4677]</sup>. Source: XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.002%dw). Ref: 2926, 2927, 3053, 4677, 4741.

**16222 Orthosiphol B**

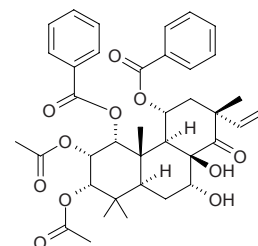
[144078-08-0]  $C_{38}H_{44}O_{11}$  (676.77). Colorless lamellar crystals ( $Et_2O$ ), mp  $240^\circ C$ ,  $[\alpha]_D^{11} = -82^\circ$  ( $c = 1.0$ ,  $CHCl_3$ ). Pharm: Anti-inflammatory (inhibits inflammation induced by cancer promotor TPA); cytotoxic (antiproliferative, Colon26-L5,  $ED_{50} = 28.1 \mu g/mL$ , control 5-Fluorouracil,  $ED_{50} = 0.015 \mu g/mL$ ; HT1080,  $ED_{50} = 57.9 \mu g/mL$ , 5-Fluorouracil,  $ED_{50} = 0.48 \mu g/mL$ )<sup>[3053]</sup>; NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 20.5 \mu mol/L$ ; control *L*-NMMA,  $IC_{50} = 26.0 \mu mol/L$ ; Polymixin B,  $IC_{50} = 27.8 \mu g/mL$ )<sup>[4677]</sup>. Source: XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0014%~0.0033%dw). Ref: 2926, 2927, 3053, 4677, 4741.

**16223 Orthosiphol D**

$C_{31}H_{36}O_9$  (552.63). Pharm: NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 14.4 \mu mol/L$ ; control *L*-NMMA,  $IC_{50} = 26.0 \mu mol/L$ ; Polymixin B,  $IC_{50} = 27.8 \mu g/mL$ )<sup>[4677]</sup>. Source: XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00032%dw<sup>[4677]</sup>; yield = 0.00019%dw<sup>[4741]</sup>). Ref: 4677, 4741.

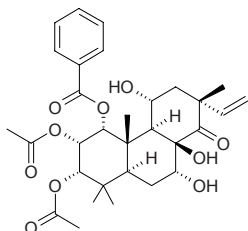
**16224 Orthosiphol F**

$C_{38}H_{44}O_{11}$  (676.77). Pharm: NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 34.5 \mu mol/L$ ; control *L*-NMMA,  $IC_{50} = 26.0 \mu mol/L$ ; Polymixin B,  $IC_{50} = 27.8 \mu g/mL$ ). Source: XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0106%dw). Ref: 4677.

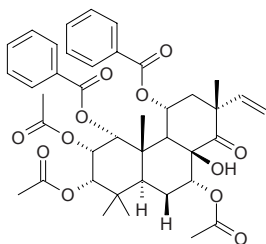


**16225 Orthosiphol G**

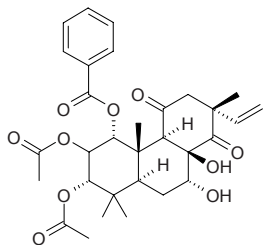
$C_{31}H_{40}O_{10}$  (572.66). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 145\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ ; Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0010%dw). **Ref:** 4677.

**16226 Orthosiphol H**

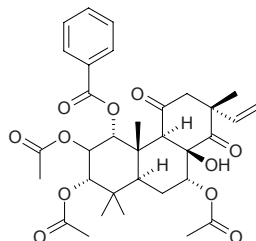
$C_{40}H_{46}O_{12}$  (718.81). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 24.1\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ , Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ , Dexamethasone  $IC_{50} = 170\mu\text{mol/L}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts). **Ref:** 4322.

**16227 Orthosiphol I**

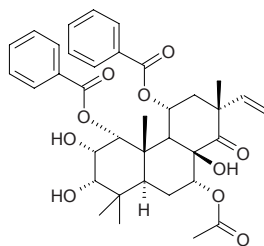
$C_{31}H_{38}O_{10}$  (570.64). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 102\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ ; Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00036%dw). **Ref:** 4677.

**16228 Orthosiphol J**

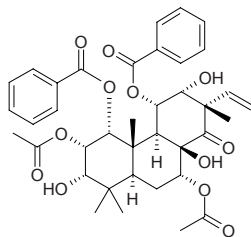
$C_{33}H_{40}O_{11}$  (612.68). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 66.3\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ ; Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00014%dw). **Ref:** 4677.

**16229 Orthosiphol K**

2-*O*-Deacetylorthosiphol A; 3-*O*-Deacetylorthosiphol B  $C_{36}H_{42}O_{10}$  (634.73). Colorless amorphous solid,  $[\alpha]_D^{25} = -18.8^\circ$  ( $c = 0.08$ ,  $\text{CHCl}_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 27.3\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ , Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ , Dexamethasone  $IC_{50} = 170\mu\text{mol/L}$ )<sup>[4322]</sup>; Cytotoxic (antiproliferative, Colon26-L5,  $ED_{50} = 13.8\mu\text{g/mL}$ , control 5-Fluorouracil,  $ED_{50} = 0.015\mu\text{g/mL}$ ; HT1080,  $ED_{50} = 21.8\mu\text{g/mL}$ , 5-Fluorouracil,  $ED_{50} = 0.48\mu\text{g/mL}$ )<sup>[3053]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0016%dw<sup>[3053]</sup>, yield = 0.00032%dw<sup>[4741]</sup>). **Ref:** 4322, 3053, 4741.

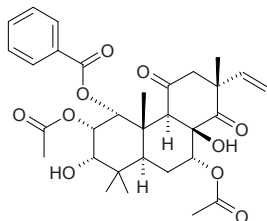
**16230 Orthosiphol L**

12-Hydroxyorthosiphol A  $C_{38}H_{44}O_{12}$  (692.77). Colorless amorphous solid,  $[\alpha]_D^{25} = -68.1^\circ$  ( $c = 0.11$ ,  $\text{CHCl}_3$ ). **Pharm:** Cytotoxic (antiproliferative, Colon26-L5,  $ED_{50} = 24.7\mu\text{g/mL}$ , control 5-Fluorouracil,  $ED_{50} = 0.015\mu\text{g/mL}$ ; HT1080,  $ED_{50} = 20.6\mu\text{g/mL}$ , 5-Fluorouracil,  $ED_{50} = 0.48\mu\text{g/mL}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0033%dw). **Ref:** 3053.

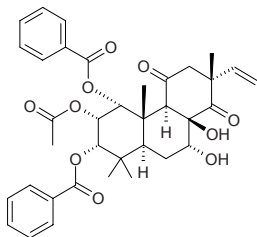


**16231 Orthosiphol M**

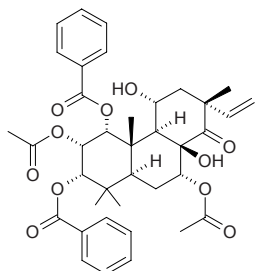
3-*O*-Deacetylorthosiphol J C<sub>31</sub>H<sub>38</sub>O<sub>10</sub> (570.64). Colorless amorphous solid,  $[\alpha]_D^{25} = -50.0^\circ$  ( $c = 0.06$ , CHCl<sub>3</sub>). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells, IC<sub>50</sub> > 200 μmol/L; control *L*-NMMA, IC<sub>50</sub> = 26.0 μmol/L, Polymixin B, IC<sub>50</sub> = 27.8 μg/mL, Dexamethasone IC<sub>50</sub> = 170 μmol/L)<sup>[4322]</sup>; Cytotoxic (antiproliferative, Colon26-L5, ED<sub>50</sub> = 31.3 μg/mL, control 5-Fluorouracil, ED<sub>50</sub> = 0.015 μg/mL; HT1080, ED<sub>50</sub> = 81.7 μg/mL, 5-Fluorouracil, ED<sub>50</sub> = 0.48 μg/mL)<sup>[3053]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0037%dw<sup>[3053]</sup>; yield = 0.0022%dw<sup>[4741]</sup>). **Ref:** 4322, 3053, 4741.

**16232 Orthosiphol N**

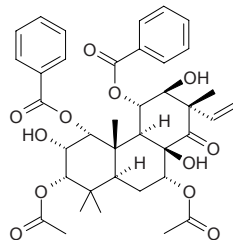
3-*O*-Benzoyl-7-*O*-deacetylorthosiphol M C<sub>36</sub>H<sub>40</sub>O<sub>10</sub> (632.71). Colorless amorphous solid,  $[\alpha]_D^{25} = -67.3^\circ$  ( $c = 0.38$ , CHCl<sub>3</sub>). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells, IC<sub>50</sub> = 35.9 μmol/L; control *L*-NMMA, IC<sub>50</sub> = 26.0 μmol/L, Polymixin B, IC<sub>50</sub> = 27.8 μg/mL, Dexamethasone IC<sub>50</sub> = 170 μmol/L)<sup>[4322]</sup>; Cytotoxic (antiproliferative, Colon26-L5, ED<sub>50</sub> = 35.1 μg/mL, control 5-Fluorouracil, ED<sub>50</sub> = 0.015 μg/mL; HT1080, ED<sub>50</sub> = 18.6 μg/mL, 5-Fluorouracil, ED<sub>50</sub> = 0.48 μg/mL)<sup>[3053]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0073%dw<sup>[3053]</sup>; yield = 0.0020%dw<sup>[4741]</sup>). **Ref:** 4322, 3053, 4741.

**16233 Orthosiphol O**

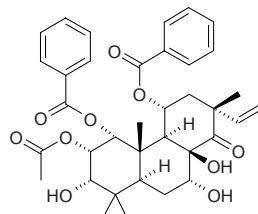
C<sub>38</sub>H<sub>44</sub>O<sub>11</sub> (676.77). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells, IC<sub>50</sub> = 27.7 μmol/L; control *L*-NMMA, IC<sub>50</sub> = 26.0 μmol/L; Polymixin B, IC<sub>50</sub> = 27.8 μg/mL)<sup>[4677]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0028%dw<sup>[4677]</sup>; yield = 0.00036%dw<sup>[4741]</sup>). **Ref:** 4677, 4741.

**16234 Orthosiphol R**

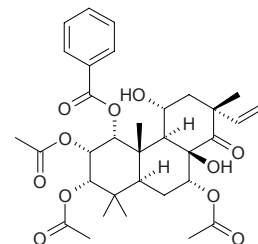
C<sub>38</sub>H<sub>44</sub>O<sub>12</sub> (692.77). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells, IC<sub>50</sub> = 35.7 μmol/L; control *L*-NMMA, IC<sub>50</sub> = 26.0 μmol/L; Polymixin B, IC<sub>50</sub> = 27.8 μg/mL). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00008%dw). **Ref:** 4677.

**16235 Orthosiphol T**

C<sub>36</sub>H<sub>42</sub>O<sub>10</sub> (634.73). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells, IC<sub>50</sub> = 35.9 μmol/L; control *L*-NMMA, IC<sub>50</sub> = 26.0 μmol/L; Polymixin B, IC<sub>50</sub> = 27.8 μg/mL). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00039%dw). **Ref:** 4677.

**16236 Orthosiphol U**

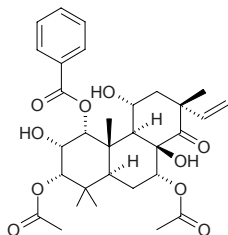
C<sub>33</sub>H<sub>42</sub>O<sub>11</sub> (614.7). Colorless amorphous solid,  $[\alpha]_D^{25} = -170.0^\circ$  ( $c = 0.161$ , CHCl<sub>3</sub>). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells, IC<sub>50</sub> = 59.7 μmol/L; control *L*-NMMA, IC<sub>50</sub> = 26.0 μmol/L; Polymixin B, IC<sub>50</sub> = 27.8 μg/mL). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00079%dw). **Ref:** 4677.



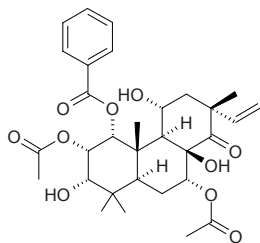


**16237 Orthosiphol V**

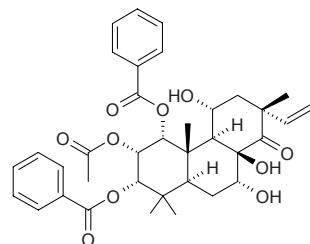
$C_{31}H_{40}O_{10}$  (572.66). Colorless amorphous solid,  $[\alpha]_D^{25} = -63.4^\circ$  ( $c = 0.028$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 54.5\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ ; Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00004%dw). **Ref:** 4677.

**16238 Orthosiphol W**

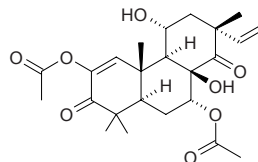
$C_{31}H_{40}O_{10}$  (572.66). Colorless amorphous solid,  $[\alpha]_D^{25} = -99.2^\circ$  ( $c = 0.025$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 57.6\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ ; Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00010%dw). **Ref:** 4677.

**16239 Orthosiphol X**

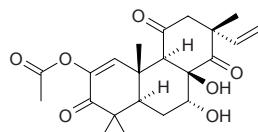
$C_{36}H_{42}O_{10}$  (634.73). Colorless amorphous solid,  $[\alpha]_D^{25} = -376.8^\circ$  ( $c = 0.029$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 6.4\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ ; Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ )<sup>[4677]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00054%dw<sup>[4677]</sup>; yield = 0.0015%dw<sup>[4741]</sup>). **Ref:** 4677, 4741.

**16240 Orthosiphol Y**

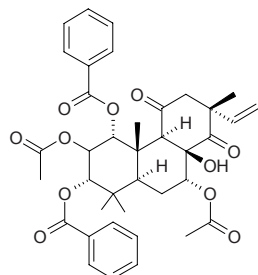
$C_{24}H_{32}O_8$  (448.52). Colorless amorphous solid,  $[\alpha]_D^{25} = -55.54^\circ$  ( $c = 0.033$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 37.9\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ ; Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ )<sup>[4677]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00005%dw<sup>[4677]</sup>; yield = 0.000068%dw<sup>[4741]</sup>). **Ref:** 4677, 4741.

**16241 Orthosiphol Z**

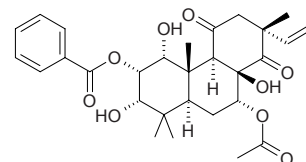
$C_{22}H_{28}O_7$  (404.46). Colorless amorphous solid,  $[\alpha]_D^{25} = -120.7^\circ$  ( $c = 0.025$ ,  $CHCl_3$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00002%dw). **Ref:** 4677.

**16242 Orthosiphonone A**

$C_{38}H_{42}O_{11}$  (674.75). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 32.1\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ ; Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ )<sup>[4677]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0018%dw<sup>[4677]</sup>; yield = 0.00038%dw<sup>[4741]</sup>). **Ref:** 4677, 4741.

**16243 Orthosiphonone C**

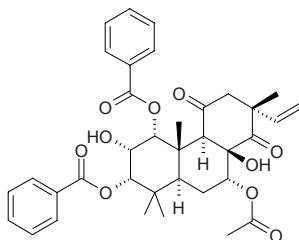
$C_{29}H_{36}O_9$  (528.6). Colorless amorphous solid,  $[\alpha]_D^{25} = -117.7^\circ$  ( $c = 0.093$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 81.8\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 35.7\mu\text{mol/L}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00011%dw). **Ref:** 4741.



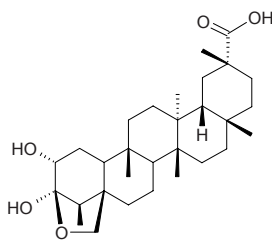


**16244 Orthosiphonone D**

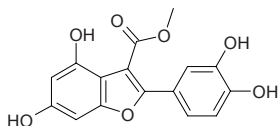
$C_{36}H_{40}O_{10}$  (632.71). Colorless amorphous solid,  $[\alpha]_D^{25} = -105.3^\circ$  ( $c = 0.393$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 35.0\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 35.7\mu\text{mol/L}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00018%dw). **Ref:** 4741.

**16245 Orthosphenic acid**

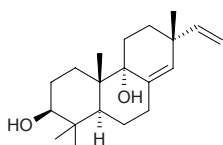
[86632-20-4]  $C_{30}H_{48}O_5$  (488.71). Pale yellow crystals, mp 298~300°C, mp 330°C (double mp). **Pharm:** DPPH free radical scavenger inactive (for 40 $\mu\text{mol/L}$  DPPH radical,  $SC_{50} > 40\mu\text{mol/L}$ )<sup>[4378]</sup>. **Source:** HEI MAN *Tripterygium regelii*, LEI GONG TENG *Tripterygium wilfordii*, SUO LA MU *Salacia prinoides* [Syn. *Salacia chinensis*] (stem), *Orthosphenia mexicana*. **Ref:** 1572, 2798, 2799, 4378.

**16246 Oryzafuran**

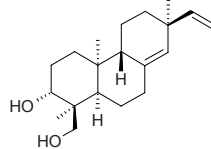
2-(3,4-Dihydroxyphenyl)-4,6-dihydroxybenzofuran-3-carboxylic acid methyl ester  $C_{16}H_{12}O_7$  (316.27). Pale brown needles (MeOH), mp 251~252°C. **Pharm:** Antioxidant (DPPH scavenger,  $EC_{50} = (1.58 \pm 0.01)\mu\text{g/mL}$ , control Ascorbic acid,  $EC_{50} = (3.35 \pm 0.01)\mu\text{g/mL}$ ). **Source:** HEI SE MI PI KANG *Oryza sativa* cv. **Ref:** 2565.

**16247 Oryzalexin E**

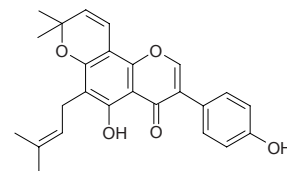
[150943-96-7]  $C_{20}H_{32}O_2$  (304.48). Needles, mp 123~124°C,  $[\alpha]_D^{25} = -26^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Antifungal (*Pyricularia oryzae*,  $ED_{50} = 62.5\text{mg/L}$ , plant antitoxin). **Source:** DAO CAO *Oryza sativa*. **Ref:** 2842.

**16248 Oryzalexin F**

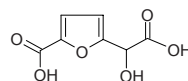
[156551-07-4]  $C_{20}H_{32}O_2$  (304.48). Needles, mp 144~146°C,  $[\alpha]_D^{20} = +16.4^\circ$  ( $c = 0.61$ ,  $CHCl_3$ ). **Pharm:** Antifungal (*Pyricularia oryzae*,  $ED_{50} = 103\text{mg/L}$ , plant antitoxin). **Source:** DAO CAO *Oryza sativa*. **Ref:** 2842.

**16249 Osajin**

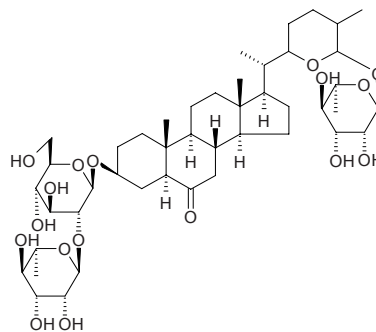
[482-53-1]  $C_{25}H_{24}O_5$  (404.47). Lemon-yellow crystals (xylene or pet. ether), mp 194~195°C. **Source:** CI TONG *Erythrina variegata* [Syn. *Erythrina indica*], FU MAO SHAN DOU GEN *Euchresta strigillosa*, PAN YUAN YU TENG *Derris scandens*, SANG CHENG *Maclura pomifera*, *Euchresta* spp. **Ref:** 1521, 2873.

**16250 Osbeckic acid**

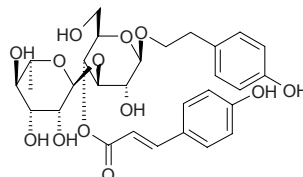
[112923-64-5]  $C_7H_6O_6$  (186.12). Oil,  $[\alpha]_D^{25} = +83.5^\circ$  ( $c = 0.2$ , MeOH). **Source:** JIN JIN XIANG *Osbeckia chinensis*. **Ref:** 2857.

**16251 Osladin**

[33650-66-7]  $C_{45}H_{74}O_{17}$  (887.08). mp 198~199°C. **Source:** SHUI LONG GU *Polypodium niponicum*. **Ref:** 6.

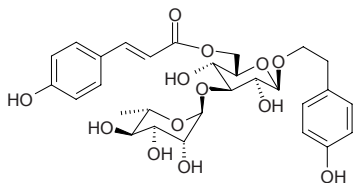
**16252 Osmanthuside B**

$C_{29}H_{36}O_{13}$  (592.60). **Pharm:** Antioxidant (antihemolysis, *in vitro*, AAPH-induced hemolysis of RBC,  $IC_{50} = 159.6\mu\text{mol/L}$ ; control Trolox,  $IC_{50} = 101\mu\text{mol/L}$ )<sup>[4698]</sup>. **Source:** CU ZHUANG NV ZHEN *Ligustrum robustum* (leaf: yield = 0.0056%dw)<sup>[4698]</sup>, ROU CONG RONG *Cistanche deserticola*. **Ref:** 2448, 4698.

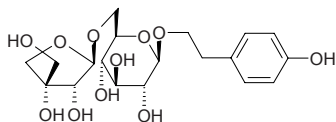


**16253 Osmanthuside B<sub>6</sub>**

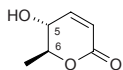
C<sub>29</sub>H<sub>36</sub>O<sub>13</sub> (592.6). **Pharm:** Antioxidant (antihemolysis, *in vitro*, AAPH-induced hemolysis of RBC, IC<sub>50</sub> = 91.7 μmol/L; control Trolox, IC<sub>50</sub> = 101 μmol/L). **Source:** CU ZHUANG NV ZHEN *Ligustrum robustum* (leaf: yield = 0.0092%dw). **Ref:** 4698.

**16254 Osmanthuside H**

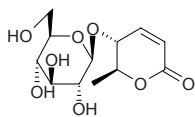
2-(4-Hydroxyphenyl)ethyl-*O*-β-*D*-apiofuranosyl-(1"→6')-β-*D*-glucopyranoside  
C<sub>19</sub>H<sub>28</sub>O<sub>11</sub> (432.43). **Source:** DA XUE TENG *Sargentodoxa cuneata* (stem). **Ref:** 5337.

**16255 5*R*,6*S*-Osmundalactone**

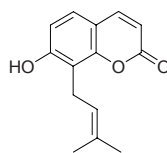
[69308-39-0] C<sub>6</sub>H<sub>8</sub>O<sub>3</sub> (128.13). Plates (C<sub>6</sub>H<sub>6</sub>) or needles, mp 82~82.5°C, [α]<sub>D</sub><sup>22</sup> = -70.6° (c = 2.0, H<sub>2</sub>O). **Source:** ZI QI *Osmunda japonica*. **Ref:** 1521, 2886.

**16256 Osmundalin**

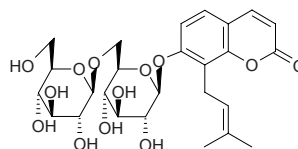
[54835-71-1] C<sub>12</sub>H<sub>18</sub>O<sub>8</sub> (290.27). **Source:** OU ZI QI *Osmunda ragalis*, ZI QI *Osmunda japonica*. **Ref:** 1521, 2887.

**16257 Osthenol**

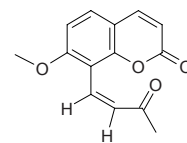
[484-14-0] C<sub>14</sub>H<sub>14</sub>O<sub>3</sub> (230.27). **Pharm:** Antifungal (*Aspergillus niger*, *Colletotrichum gloeosporioides*, *Curvularia* sp., and *Penicillium* sp.); antineoplastic (Raji cells, antitumor promotor, *in vivo*, inhibits TPA-induced EBV-EA activation, compound concentration = 500mol ratio/32 pmol TPA, EBV-EA-positive cells = (12.8±2.0)% (viability = 70%), β-Carotene, EBV-EA-positive cells = (34.3±1.1)% (viability >80), Curcumin, EBV-EA-positive cells = (22.8±1.8)% (viability >80%); IC<sub>50</sub> = 131mol ratio/32 pmol TPA, β-Carotene, IC<sub>50</sub> = 400mol ratio/32 pmol TPA, Curcumin IC<sub>50</sub> = 341mol ratio/32 pmol TPA)<sup>[5048]</sup>. **Source:** QIANG HUO *Notopterygium incisum*, TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.00013%dw)<sup>[4722]</sup>, *Citrus rugulosa*, *Citrus sulcata*, *Citrus tamurana*, *Citrus hassaku*. **Ref:** 2, 1846, 4722, 5048.

**16258 Osthenol-7-*O*-β-gentiobioside**

C<sub>26</sub>H<sub>34</sub>O<sub>13</sub> (554.55). Amorphous powder, [α]<sub>D</sub><sup>24</sup> = -48°. **Pharm:** Antioxidant (DPPH scavenger, EC<sub>50</sub> = 16.3 μg/mL = 29.4 μmol/L, control Ascorbic acid, EC<sub>50</sub> = 1.6 μg/mL = 9.1 μmol/L)<sup>[4154]</sup>. **Source:** BEI SHA SHEN *Glehnia littoralis* (fruit), BEI SHA SHEN *Glehnia littoralis* (underground part). **Ref:** 2846, 3525, 4154.

**16259 cis-Osthenone**

C<sub>14</sub>H<sub>12</sub>O<sub>4</sub> (244.25). **Oil.** **Source:** JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. **Ref:** 2810.

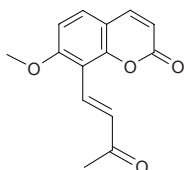


**16260 trans-Osthenone**

Osthenon [112789-90-9] C<sub>14</sub>H<sub>12</sub>O<sub>4</sub> (244.25). Prisms (Et<sub>2</sub>O), mp 134–136°C.

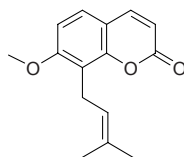
**Pharm:** Antineoplastic (Raji cells, antitumor promotor, *in vivo*, inhibits TPA-induced EBV-EA activation, compound concentration = 500mol ratio/32 pmol TPA: EBV-EA-positive cells = (13.3±1.3)% (viability > 80%), β-Carotene, EBV-EA-positive cells = (34.3±1.1)% (viability > 80%), Curcumin, EBV-EA-positive cells = (22.8±1.8)% (viability > 80%), compound IC<sub>50</sub> = 173mol ratio/32 pmol TPA, β-Carotene, IC<sub>50</sub> = 400mol ratio/32 pmol TPA, Curcumin, IC<sub>50</sub> = 341mol ratio/32 pmol TPA)<sup>[5048]</sup>.

**Source:** CHENG ZI *Citrus junos*, LI HUA JU *Citrus tachibana*, ZHONG HUA JIU LI XIANG *Murraya exotica*, *Citrus rugulosa*, *Citrus sulcata*, *Citrus taurana*, *Citrus hassaku*. **Ref:** 2809, 5048.

**16261 Osthol**

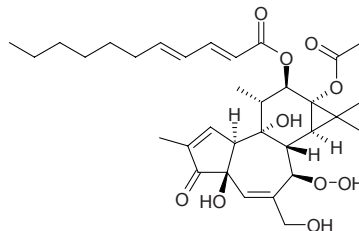
7-Methoxy-8-(3-methyl-2-butenyl)-2H-1-benzopyran-2-one [484-12-8]

C<sub>15</sub>H<sub>16</sub>O<sub>3</sub> (244.29). mp 83–84°C, bp 145–150°C. **Pharm:** Antibacterial (broad spectrum); antihypertensive (cat, 10mg/kg and 20mg/kg, lowers arterial pressure by 30% in 1h and 50% in 2h); antimalarial; antimutagenic; increases blood pressure and enhances myocardial contractility (rat, 1–2mg/kg); cytotoxic (24h: HL-60, IC<sub>50</sub> = 14.9μg/mL, control Adriamycin IC<sub>50</sub> < 0.10μg/mL; P<sub>388</sub>, IC<sub>50</sub> = 9.3μg/mL, Adriamycin IC<sub>50</sub> < 0.10μg/mL; Colon205, IC<sub>50</sub> = 29.9μg/mL, Adriamycin IC<sub>50</sub> = 0.63μg/mL; HeLa, IC<sub>50</sub> = 31.7μg/mL, Adriamycin IC<sub>50</sub> = 0.15μg/mL)<sup>[5486]</sup>; cytotoxic (12h: HL-60, IC<sub>50</sub> = 24.4μg/mL, control Adriamycin IC<sub>50</sub> = 0.18μg/mL; primary culture hmn PBMCs, IC<sub>50</sub> = 40.1μg/mL, SI = 1.6, Adriamycin IC<sub>50</sub> = 0.54μg/mL, SI = 3.3)<sup>[5486]</sup>; LD<sub>50</sub> (mus, sc) = 16mg/kg. **Source:** BA JIAO HUANG PI *Clausena anisata*, DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*] (root: content scope of 34 batch samples = 0.02%–3.26%, mean content = 0.88%<sup>[5508]</sup>), JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], OU QIAN HU *Peucedanum ostruthium*, SHE CHUANG ZI *Cnidium monnieri* (ripe seed: content scope = 2.0%–3.0%<sup>[5501]</sup>, mean content of 26 origins = 1.53%<sup>[5508]</sup>), SHUAN CHI QIN *Prangos pabularia*, XIAN HE CAO *Agrimonia pilosa* var. *japonica*, YUAN DANG GUI *Angelica archangelica*, YUN QIAN HU *Peucedanum rubricaulae*, *Citrus* sp., *Clausena* sp. **Ref:** 4, 6, 11, 177, 344, 658, 5486, 5501, 5508.

**16262 Ostodin**

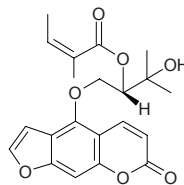
[85527-84-0] C<sub>33</sub>H<sub>46</sub>O<sub>10</sub> (602.73). Resin, [α]<sub>D</sub><sup>25</sup> = +21.4° (c = 0.14, CHCl<sub>3</sub>).

**Pharm:** Cytotoxic (P<sub>388</sub> *in vitro*, ED<sub>50</sub> = 0.055μg/mL). **Source:** YUAN ZHUI HUA YE LUN MU *Ostodes paniculata*. **Ref:** 2918.

**16263 Ostruhol**

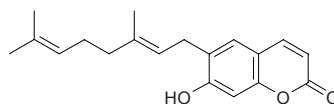
[642-08-0] C<sub>21</sub>H<sub>22</sub>O<sub>7</sub> (386.41). Crystals (C<sub>6</sub>H<sub>6</sub>), mp 136–137°C, [α]<sub>D</sub><sup>15</sup> = –18.3°

(pyridine); [α]<sub>D</sub><sup>20</sup> = +5.9° (c = 0.509, CHCl<sub>3</sub>). **Pharm:** Calcium channel blocker; vasodilator (rbt main artery, with Ca, inhibits contraction caused by KCl). **Source:** E SHEN *Anthriscus sylvestris*, GAO SHAN YAN SHEN *Cicerbita alpina*, HOU GUO DANG GUI *Angelica pachycarpa*, LIN BAI ZHI *Angelica sylvestris*, OU QIAN HU *Peucedanum ostruthium*, YUAN DANG GUI *Angelica archangelica*, ZHAO ZE QIAN HU *Peucedanum palustre*, *Peucedanum hispanicum*. **Ref:** 1035, 2847, 2848, 2849, 2850, 2851, 2852, 2853, 2855.

**16264 Ostruthin**

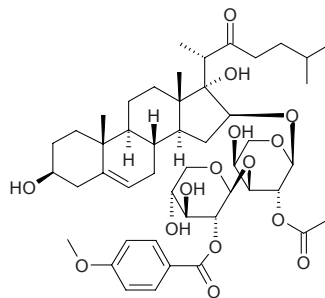
[148-83-4] C<sub>19</sub>H<sub>22</sub>O<sub>3</sub> (298.39). **Pharm:** Antibacterial (*Staphylococcus aureus*);

antifungal (*Saccharomyces cerevisiae*). **Source:** OU QIAN HU *Peucedanum ostruthium*. **Ref:** 658.

**16265 OSW-1**

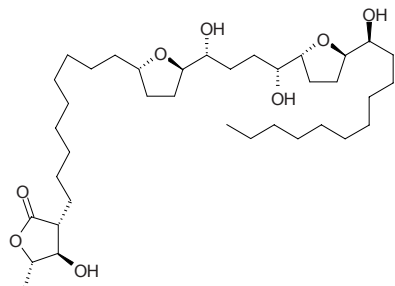
C<sub>47</sub>H<sub>68</sub>O<sub>15</sub> (873.06). **Pharm:** Cytotoxic (specific activity for cancer cells).

**Source:** *Ornithogalum saundersiae*. **Ref:** 2165.

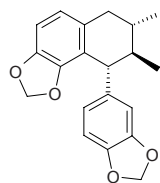


**16266 Otivarin**

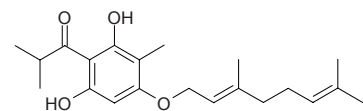
Dihydrocherimolin [92280-15-4]  $C_{37}H_{68}O_8$  (640.95).  $[\alpha]_D = +13^\circ$  ( $c = 0.15$ , MeOH). **Pharm:** Antiparasite (*Molinema dessetoe* infectivity larvae); cytotoxic (KB  $ED_{50} = 0.001\text{--}0.0001\mu\text{g/mL}$ , Vero  $ED_{50} = 0.01\text{--}0.001\mu\text{g/mL}$ ); NADH ubiquinone reductase inhibitor (mitochondria, with bigger protein-dependent titre). **Source:** MAO YE FAN LI ZHI *Annona cherimolia*. **Ref:** 2813, 1548.

**16267 Otobain**

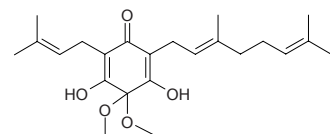
[3738-01-0]  $C_{20}H_{20}O_4$  (324.38). **Pharm:** Antifungal. **Source:** AO TUO ROU DOU KOU *Myristica otoba*, FEI LV BIN ROU DOU KOU *Myristica simiarum*. **Ref:** 658.

**16268 Otogirin**

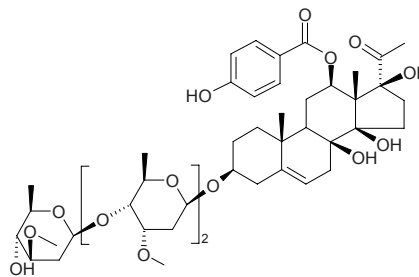
[137251-97-9]  $C_{21}H_{30}O_4$  (346.47). Crystals, mp 66–68°C. **Pharm:** Antibacterial; Antiallergic (gpg, leukotriene  $D_4$  antagonist, at 100  $\mu\text{mol/L}$  inhibits tracheal smooth muscle contraction induced by leukotriene  $D_4$ , InRt = 50%;  $TXA_2$  antagonist, at 100  $\mu\text{mol/L}$  inhibits tracheal smooth muscle contraction induced by  $TXA_2$ , InRt = 50.9%); antiviral (herpetic stomatitis RNA virus, herpes simplex virus 1 DNA virus). **Source:** XIAO LIAN QIAO *Hypericum erectum* (root and flowers). **Ref:** 2877, 2878.

**16269 Otogirone**

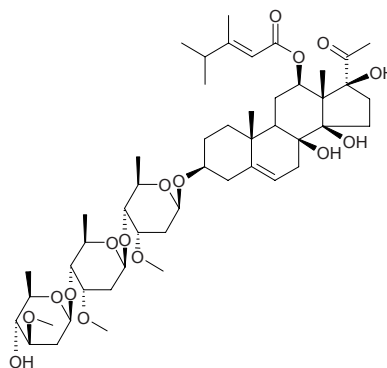
[137201-18-4]  $C_{23}H_{34}O_5$  (390.52). **Oil. Pharm:** Antibacterial; Antiallergic (gpg, leukotriene  $D_4$  antagonist, at 20  $\mu\text{mol/L}$  inhibits tracheal smooth muscle contraction induced by leukotriene  $D_4$ , InRt = 94.9%;  $TXA_2$  antagonist, at 20  $\mu\text{mol/L}$  inhibits tracheal smooth muscle contraction induced by  $TXA_2$ , InRt = 63.6%). **Source:** XIAO LIAN QIAO *Hypericum erectum* (flowers). **Ref:** 2877, 2878.

**16270 Otophyllside A**

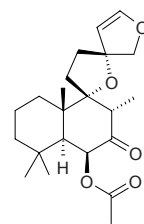
$C_{49}H_{72}O_{17}$  (933.11). **Source:** QING YANG SHEN *Cynanchum otophyllum*. **Ref:** 2902.

**16271 Otophyllside B**

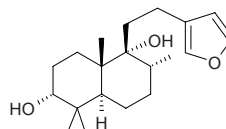
$C_{49}H_{78}O_{16}$  (923.16). **Source:** QING YANG SHEN *Cynanchum otophyllum*. **Ref:** 2902.

**16272 Otostegin A**

$C_{22}H_{32}O_5$  (376.50). Colorless needles (ether), mp 216.2–217.2°C,  $[\alpha]_D^{22} = -117^\circ$  ( $c = 0.08$ ,  $CHCl_3$ ). **Source:** GUAN MU AO TUO SI TE CAO *Otostegia fruticosa* (aerial parts). **Ref:** 3984.

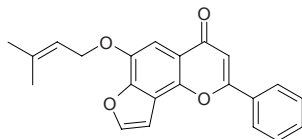
**16273 Otostegindiol**

15,16-Epoxy-3 $\alpha$ ,9 $\alpha$ -dihydroxy-labda-13(16),14-diene  $C_{20}H_{32}O_3$  (320.48). White crystals (hexane), mp 124–125°C,  $[\alpha]_{589nm}^{20} = +25^\circ$  ( $c = 0.01$ , methanol). **Source:** QUAN YUAN YE AO TUO SI TE CAO *Otostegia integrifolia* (leaf). **Ref:** 3823.

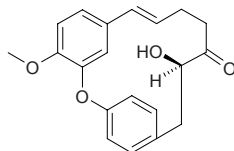


**16274 Ovalifolin**

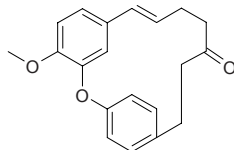
$C_{22}H_{18}O_4$  (346.39). Source: HONG E JI XUE TENG *Milletia erythrocalyx* (stem cortex: yield = 0.00030%dw). Ref: 4624.

**16275 Ovalifoliolatin A**

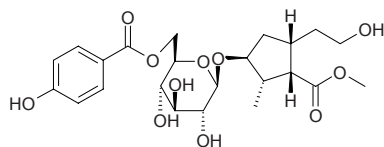
$C_{20}H_{20}O_4$  (324.38). Semisolid,  $[\alpha]_D^{25} = -8.88^\circ$  ( $c = 0.65$ , MeOH). Pharm: Antibacterial (disk susceptibility tests, standard NCCLS method, 50 $\mu$ g/disk (control 30 $\mu$ g/disk), gram-positive bacteria: *Staphylococcus aureus*, DIZ = 9mm, positive control Kanamycin, DIZ = 10mm; *Bacillus subtilis*, DIZ = 11mm, Kanamycin, DIZ = 18mm; *Bacillus sphaericus*, DIZ = 11mm, Kanamycin, DIZ = 20mm; gram-negative bacteria: *Chromobacterium violaceum*, DIZ = 7mm, Kanamycin, DIZ = 17mm; *Klebsiella aerogenes*, DIZ = 8mm, Kanamycin, DIZ = 15mm; *Pseudomonas aeruginosa*, DIZ = 9mm, Kanamycin, DIZ = 27mm). Source: TUO YUAN YE RU XIANG SHU *Boswellia ovalifoliolata* (stem). Ref: 4380.

**16276 Ovalifoliolatin B**

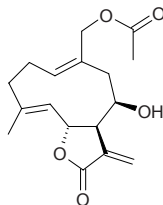
$C_{20}H_{20}O_3$  (308.38). Semisolid,  $[\alpha]_D^{25} = 0^\circ$  ( $c = 0.15$ , MeOH). Source: TUO YUAN YE RU XIANG SHU *Boswellia ovalifoliolata* (stem). Ref: 4380.

**16277 Ovatic acid methyl ester 7-O-(6'-O-p-hydroxybenzoyl)- $\beta$ -D-glucopyranoside**

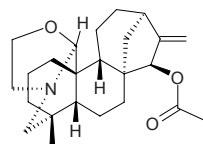
$C_{23}H_{32}O_{11}$  (484.50). Amorphous powder,  $[\alpha]_D^{25} = -0^\circ$  ( $c = 0.3$ , MeOH). Source: ZI YE *Catalpa ovata* (leaf, fallen leaf). Ref: 3536, 4290.

**16278 Ovatifolin**

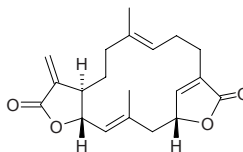
[50886-56-1]  $C_{17}H_{22}O_5$  (306.36). Pharm: Antineoplastic; cytotoxic. Source: BING HUA JU *Podanthus ovatifolius*, MI TI BING HUA JU *Podanthus mitiqui*. Ref: 658.

**16279 Ovatine**

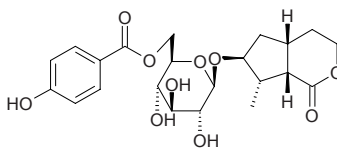
[68719-14-2]  $C_{24}H_{35}NO_3$  (385.55). Pharm: Antineoplastic. Source: *Garrya ovata* var. *lindheimeri*. Ref: 658.

**16280 Ovatodiolide**

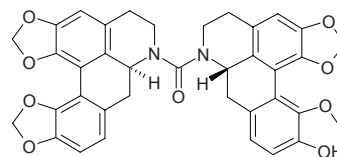
[3484-37-5]  $C_{20}H_{24}O_4$  (328.41). Colorless prisms, mp 150–151°C,  $[\alpha]_D^{23} = +21.8^\circ$  ( $c = 1.0$ ,  $CHCl_3$ ). Pharm: Cytotoxic (KB,  $IC_{50} = 0.6\mu$ g/mL); antihypertensive (dig, action in short time, not inhibits ACE); inhibits myocardial contraction and calcium antagonist. Source: GUANG FANG FENG *Anisomeles indica* [Syn. *Epimeredi indica*]. Ref: 2899, 2866, 2900.

**16281 Ovatolactone 7-O-(6'-O-p-hydroxybenzoyl)- $\beta$ -D-glucopyranoside**

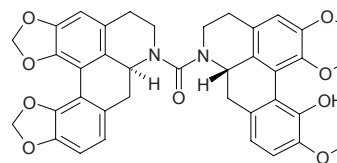
$C_{22}H_{28}O_{10}$  (452.46). Amorphous powder,  $[\alpha]_D^{25} = -17.9^\circ$  ( $c = 0.6$ , MeOH). Source: ZI YE *Catalpa ovata* (leaf, fallen leaf). Ref: 3536, 4290.

**16282 (+)-Ovihernangerine**

[187530-46-7]  $C_{37}H_{30}N_2O_9$  (646.66). Colorless prisms (MeOH), mp 194–196°C,  $[\alpha]_D^{24} = +310^\circ$  ( $c = 0.08$ ,  $CHCl_3$ ). Pharm: Cytotoxic ( $P_{388}$ ,  $ED_{50} = 1.000\mu$ g/mL, A549,  $ED_{50} = 1.570\mu$ g/mL, HT29,  $ED_{50} = 10.227\mu$ g/mL, KB16,  $ED_{50} = 0.239\mu$ g/mL). Source: SHUI LIAN YE TONG *Hernandia nymphaeifolia*. Ref: 2858.

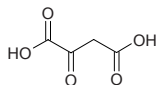
**16283 (+)-Oviisocorydine**

[187669-80-3]  $C_{38}H_{34}N_2O_9$  (662.70). Colorless prisms (MeOH), mp 168–170°C,  $[\alpha]_D^{24} = +254^\circ$  ( $c = 0.08$ ,  $CHCl_3$ ). Pharm: Cytotoxic ( $P_{388}$ ,  $ED_{50} = 1.489\mu$ g/mL, A549,  $ED_{50} = 2.146\mu$ g/mL, HT29,  $ED_{50} = 4.152\mu$ g/mL). Source: SHUI LIAN YE TONG *Hernandia nymphaeifolia*. Ref: 2858.

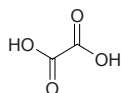


**16284 Oxalacetic acid**

2-Oxobutanedioic acid [328-42-7] C<sub>4</sub>H<sub>4</sub>O<sub>5</sub> (132.07). mp 189.5°C. Source: GUI JIAN YU *Euonymus alatus*. Ref: 6.

**16285 Oxalic acid**

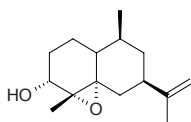
[144-62-7] C<sub>2</sub>H<sub>2</sub>O<sub>4</sub> (90.04). mp 189.5°C. Pharm: Toxin (paralysis of nervous system). Source: BAI BU *Stemona tuberosa*, BO CAI *Spinacia oleracea*, CU LIU GUO *Hippophae rhamnoides*, HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*], MU ZEI MA HUANG *Ephedra equisetina*, *Ephedra equisetina*, SHAN ZHA *Crataegus pinnatifida*, SHI YONG DA HUANG *Rheum raphaniticum*, YI ZHU QIAN MA *Urtica dioica*, *Oxalis* sp. Ref: 2, 6, 658, 660.

**16286 2-Oxazolidinethione**

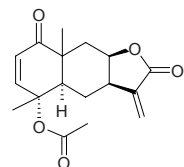
[5840-81-3] C<sub>3</sub>H<sub>5</sub>NOS (103.14). Source: MA BING LANG *Capparis masaiikai*. Ref: 2943.

**16287 4α,5α-Oxidoeudesm-11-en-3α-ol**

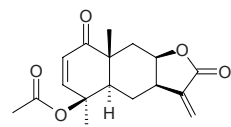
C<sub>15</sub>H<sub>24</sub>O<sub>2</sub> (236.36). Source: XIANG FU *Cyperus rotundus*. Ref: 2840.

**16288 1-Oxo-4α-acetoxyeudesma-2,1(13)-dien-12,8β-olide**

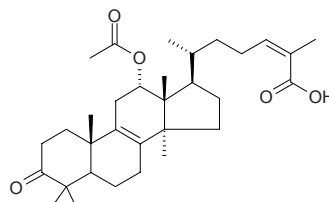
C<sub>17</sub>H<sub>20</sub>O<sub>5</sub> (304.35). Source: AI YE *Artemisia argyi*. Ref: 1288.

**16289 1-Oxo-4β-acetoxyeudesma-2,1(13)-dien-12,8β-olide**

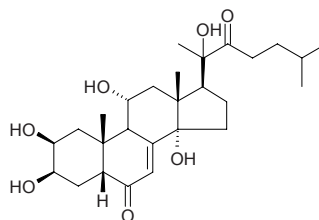
C<sub>17</sub>H<sub>20</sub>O<sub>5</sub> (304.35). Source: AI YE *Artemisia argyi*. Ref: 1288.

**16290 (24Z)-3-Oxo-12α-acetoxylanosta-8,24-dien-26-oic acid**

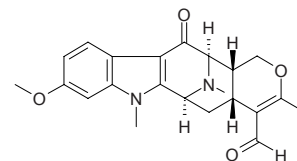
C<sub>32</sub>H<sub>48</sub>O<sub>5</sub> (512.74). Pharm: Antineoplastic; anti-HIV. Source: CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*]. Ref: 2523.

**16291 22-Oxo-ajugasterone C**

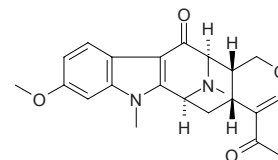
2β,3β,11β,14β,20-Pentahydroxy-cholest-7-en-6,22-dione C<sub>27</sub>H<sub>42</sub>O<sub>7</sub> (478.63). White crystals (MeOH), mp 213°C. Source: ZHEN ZHU LU SHUI CAO *Cyanotis arachnoidea* [Syn. *Cyanotis bodinieri*]. Ref: 2475.

**16292 6-Oxoalstophyllal**

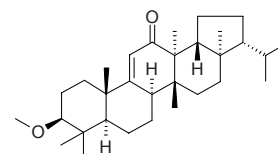
C<sub>22</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub> (380.45). Light yellowish oil, [α]<sub>D</sub> = +31° (c = 0.08, CHCl<sub>3</sub>). Source: DA YE TANG JIAO SHU *Alstonia macrophylla* (leaf: yield = 0.0003%). Ref: 3020.

**16293 6-Oxoalstophylline**

C<sub>22</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub> (380.45). Light yellowish oil, [α]<sub>D</sub> = +31° (c = 0.08, CHCl<sub>3</sub>). Source: DA YE TANG JIAO SHU *Alstonia macrophylla* (leaf: yield = 0.00005%). Ref: 3020.

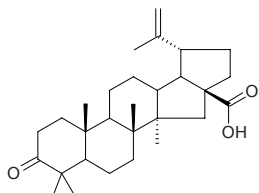
**16294 12-Oxoarundoin**

[In DNP] C<sub>31</sub>H<sub>50</sub>O<sub>2</sub> (454.74). Source: MAO CAO YE *Imperata cylindrica* var. *major*. Ref: 6.

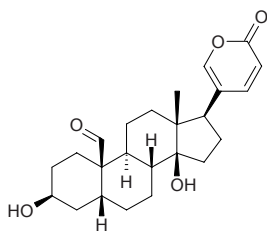


**16295 3-Oxobetulinic acid**

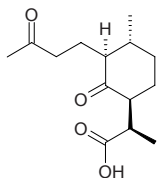
$C_{29}H_{44}O_3$  (440.67). Source: BAI TOU WENG *Pulsatilla chinensis*. Ref: 660.

**16296 19-Oxobufalin**

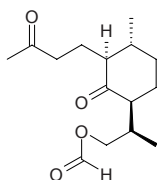
$C_{24}H_{32}O_5$  (400.52). Colorless solid,  $[\alpha]_D^{21} = +7.0^\circ$  ( $c = 0.1$ ,  $CH_3OH$ ). Pharm: Cytotoxic (*in vitro*, HL-60,  $IC_{50} < 0.01 \mu g/mL$ ; MH-60,  $IC_{50} > 25 \mu g/mL$ ; BXPC3,  $IC_{50} = 0.014 \mu g/mL$ ; MCF7,  $IC_{50} = 0.0072 \mu g/mL$ ; SF268,  $IC_{50} = 0.0047 \mu g/mL$ ; NCI-H460,  $IC_{50} = 0.018 \mu g/mL$ ; KM20L2,  $IC_{50} = 0.0082 \mu g/mL$ ; DU145,  $IC_{50} = 0.0046 \mu g/mL$ ). Source: CHAN SU *Bufo bufo gargarizans*; *Bufo melanostictus*. Ref: 3082.

**16297 1-Oxo-2β-[3-butanone]-3α-methyl-6β-[2-propanoic acid]-cyclohexane**

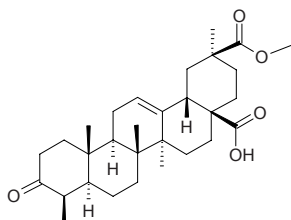
$C_{14}H_{22}O_4$  (254.33). Colorless oil,  $[\alpha]_D = -36.7^\circ$  ( $c = 1.2$ ,  $CHCl_3$ ). Source: HUANG HUA HAO *Artemisia annua* (seed). Ref: 3435.

**16298 1-Oxo-2β-[3-butanone]-3α-methyl-6β-[2-propanol formylester]-cyclohexane**

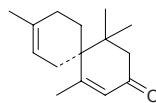
$C_{15}H_{24}O_4$  (268.36). Source: HUANG HUA HAO *Artemisia annua* (seed). Ref: 3435.

**16299 3-Oxo-30-carbomethoxy-23-norolean-12-en-28-oic acid**

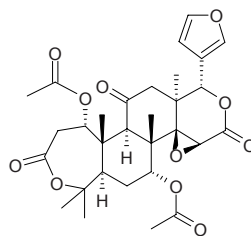
$C_{30}H_{44}O_5$  (484.68). Source: MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*]. Ref: 2960.

**16300 ent-9-Oxo-α-chamigrene**

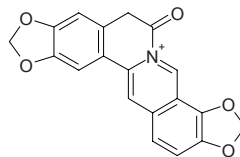
Laurenconone C [61661-47-0]  $C_{15}H_{22}O$  (218.34). Oil,  $[\alpha]_D = -43^\circ$  ( $c = 1$ ,  $CHCl_3$ ). Source: DI SUO LUO *Marchantia polymorpha*, DUN XING AO DING ZAO *Laurencia obtusa*. Ref: 1521, 1244.

**16301 11-Oxocneorin G**

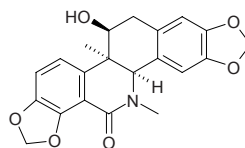
$C_{30}H_{36}O_{11}$  (572.61). Colorless prisms ( $CHCl_3$ -MeOH), mp 274–276°C,  $[\alpha]_D^{23} = +126^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ). Source: ZHONG GUO YANG CHUN *Cedrela sinensis* (leaf). Ref: 3883.

**16302 8-Oxocoptisine**

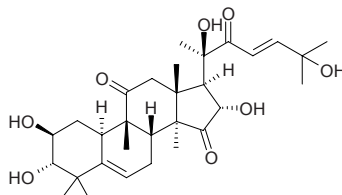
$C_{19}H_{12}NO_5$  (334.31). Source: BAI QU CAI *Chelidonium majus*. Ref: 2901.

**16303 6-Oxocorynoline**

[55739-71-4]  $C_{21}H_{19}NO_6$  (381.39). mp > 295°C. Source: ZI HUA YU DENG CAO *Corydalis incisa*. Ref: 2829.

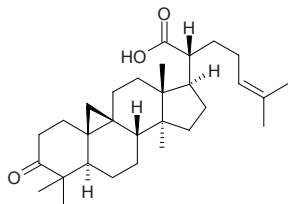
**16304 15-Oxo-cucurbitacin F**

[154346-63-1]  $C_{30}H_{44}O_8$  (532.68). Colorless needles (MeOH), mp 223–226°C,  $[\alpha]_D^{26} = +57.5^\circ$  ( $c = 0.43$ ,  $CHCl_3$ ). Pharm: Inhibits promotor of cancer (inhibits activity of EBV early antigen EBV-EA induced by TPA); anti-HIV-1 (inhibits reproduction of HIV-1 in H9 cell,  $ED_{50} = 0.3 \mu g/mL$ , therapy index = 17.0). Source: XUAN YA MEI GUI *Cowania mexicana*. Ref: 2922, 2923, 2924.

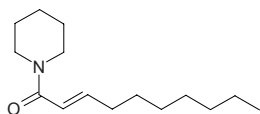


**16305 3-Oxo-24-cycloarten-21-oic acid**

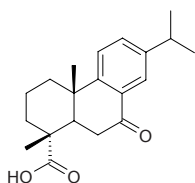
[125292-53-7] C<sub>30</sub>H<sub>46</sub>O<sub>3</sub> (454.70). Colorless crystals, mp 185~186°C, [ $\alpha$ ]<sub>D</sub><sup>21</sup> = +18.7° (*c* = 1.16, CHCl<sub>3</sub>). **Pharm:** Inhibits promotor of cancer (inhibits activity of EBV early antigen EBV-EA induced by TPA). **Source:** ZAI ZHONG LANG SE MU *Lansium domesticum*. **Ref:** 2874.

**16306 1-(1-Oxo-2E-decaenyl) piperidine**

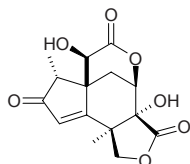
C<sub>15</sub>H<sub>27</sub>NO (237.39). **Source:** HU JIAO *Piper nigrum* (root: yield = 0.00024%dw). **Ref:** 4753.

**16307 7-Oxodehydroabietic acid**

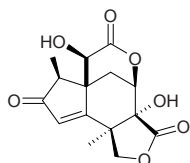
C<sub>20</sub>H<sub>26</sub>O<sub>3</sub> (314.43). **Source:** TAI WAN YUN SHAN *Picea morrisonicola* (heartwood). **Ref:** 4054.

**16308 (1R)-2-Oxo-3,4-dehydroneomajucin**

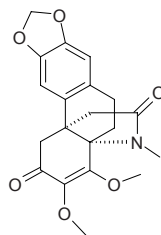
C<sub>15</sub>H<sub>16</sub>O<sub>7</sub> (308.29). **Source:** JIA DI FENG PI *Illicium jiadifengpi* (pericarp: yield = 0.0011%dw). **Ref:** 4621.

**16309 (1S)-2-Oxo-3,4-dehydroneomajucin**

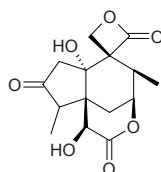
C<sub>15</sub>H<sub>16</sub>O<sub>7</sub> (308.29). **Source:** JIA DI FENG PI *Illicium jiadifengpi* (pericarp: yield = 0.0015%dw). **Ref:** 4621.

**16310 16-Oxodelavaine**

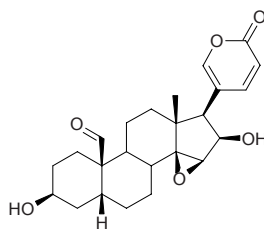
[38146-58-6] C<sub>20</sub>H<sub>21</sub>NO<sub>6</sub> (371.39). **Source:** DI BU RONG *Stephania delavayi* [Syn. *Stephania epigaea*]. **Ref:** 6.

**16311 3-Oxo-6-deoxyneoisatin**

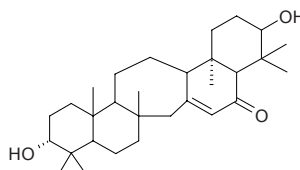
C<sub>15</sub>H<sub>18</sub>O<sub>7</sub> (310.31). **Source:** YUN NAN BA JIAO *Illicium simonsii*. **Ref:** 649.

**16312 19-Oxodesacetylcinobufagin**

C<sub>24</sub>H<sub>30</sub>O<sub>6</sub> (414.5). Colorless solid, [ $\alpha$ ]<sub>D</sub><sup>21</sup> = +17.3° (*c* = 0.1, CH<sub>3</sub>OH). **Pharm:** Cytotoxic (*in vitro*, KB, IC<sub>50</sub> = 0.65µg/mL; HL-60, IC<sub>50</sub> = 3µg/mL; MH-60, IC<sub>50</sub> > 25µg/mL; BXPC3, IC<sub>50</sub> > 1µg/mL; MCF7, IC<sub>50</sub> > 1µg/mL; SF268, IC<sub>50</sub> > 1µg/mL; NCI-H460, IC<sub>50</sub> > 1µg/mL; KM20L2, IC<sub>50</sub> > 1µg/mL; DU145, IC<sub>50</sub> > 1µg/mL). **Source:** CHAN SU *Bufo bufo gargarizans*; *Bufo melanostictus*. **Ref:** 3082.

**16313 16-Oxidiepiserratenediol**

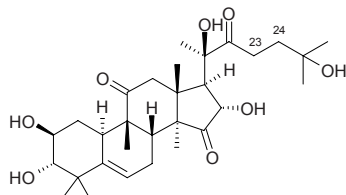
C<sub>30</sub>H<sub>48</sub>O<sub>3</sub> (456.72). **Source:** QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*], SHEN JIN CAO *Lycopodium japonicum* [Syn. *Lycopodium clavatum*]. **Ref:** 109, 1410, 2811.



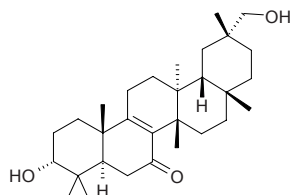


**16314 15-Oxo-23,24-dihydrocucurbitacin F**

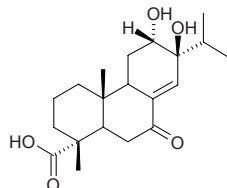
[154346-64-2] C<sub>30</sub>H<sub>46</sub>O<sub>8</sub> (534.70). Colorless needles (MeOH), mp 207~209°C, [ $\alpha$ ]<sub>D</sub><sup>26</sup> = +65.2° (c = 0.54, MeOH). **Pharm:** Inhibits promotor of cancer (inhibits activity of EBV early antigen EBV-EA induced by TPA); anti-HIV-1 (inhibits reproduction of HIV-1 in H9 cell, ED<sub>50</sub> = 2.5 µg/mL, therapy index = 15.2). **Source:** XUAN YA MEI GUI *Cowania mexicana*. **Ref:** 2922, 2923, 2924.

**16315 7-Oxodihydro karoundiol**

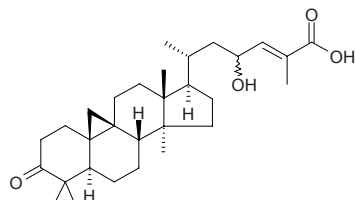
[143183-47-5] C<sub>30</sub>H<sub>48</sub>O<sub>3</sub> (456.72). mp 287~289°C (methanol-acetone). **Pharm:** Inhibits promotor of cancer (mus, inflammation caused by TPA, ID<sub>50</sub> = 0.3mg/ear) **Source:** GUA LOU *Trichosanthes kirilowii*. **Ref:** 933, 998.

**16316 7-Oxo-12α,13β-dihydroxyabie-8(14)-en-18-oic acid**

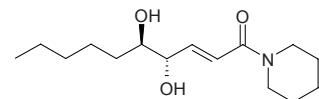
C<sub>20</sub>H<sub>30</sub>O<sub>5</sub> (350.46). White needles, mp 275~277°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +1.5° (c = 0.39, MeOH). **Source:** HUA SHAN SONG *Pinus armandii* (fruit). **Ref:** 4867.

**16317 3-Oxo-23-dihydroxycycloart-24-en-26-oic acid**

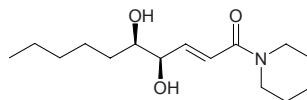
C<sub>30</sub>H<sub>46</sub>O<sub>4</sub> (470.70). It is a mixture of a known 3α, (R or S) Dihydroxycycloart-24-en-26-oic acid. **Source:** MANG GUO *Mangifera indica*. **Ref:** 1868.

**16318 (±)-erythro-1-(1-Oxo-4,5-dihydroxy-2E-decaenyl)piperidine**

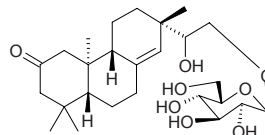
C<sub>15</sub>H<sub>27</sub>NO<sub>3</sub> (269.39). Colorless oil, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = 0° (c = 0.8, CHCl<sub>3</sub>). **Source:** HU JIAO *Piper nigrum* (root: yield = 0.00027%dw). **Ref:** 4753.

**16319 (±)-threo-1-(1-Oxo-4,5-dihydroxy-2E-decaenyl)piperidine**

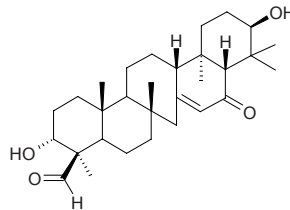
C<sub>15</sub>H<sub>27</sub>NO<sub>3</sub> (269.39). Colorless oil, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = 0° (c = 0.9, CHCl<sub>3</sub>). **Source:** HU JIAO *Piper nigrum* (root: yield = 0.00017%dw). **Ref:** 4753.

**16320 ent-2-Oxo-15,16-dihoxypimar-8(14)-en-16-O-β-glucopyranoside**

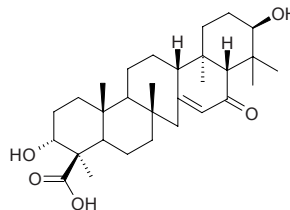
C<sub>26</sub>H<sub>42</sub>O<sub>8</sub> (482.62). White amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -51.7° (c = 1.58, MeOH). **Source:** XI XIAN *Siegesbeckia orientalis* (aerial parts: yield = 0.0027%). **Ref:** 4764.

**16321 16-Oxo-3α,21β-dihydroxserrat-14-en-24-al**

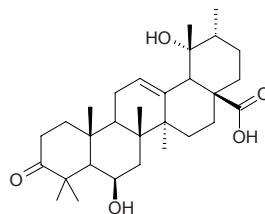
C<sub>30</sub>H<sub>46</sub>O<sub>4</sub> (470.7). Colorless prisms (CHCl<sub>3</sub>-CH<sub>3</sub>OH), mp 270~272°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -23.7° (c = 0.35, C<sub>5</sub>D<sub>5</sub>N). **Source:** QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*] (whole herb: yield = 0.000056%dw). **Ref:** 4729.

**16322 16-Oxo-3α,21β-dihydroxserrat-14-en-24-oic acid**

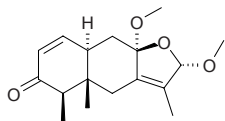
C<sub>30</sub>H<sub>46</sub>O<sub>5</sub> (486.7). White powder (CHCl<sub>3</sub>-CH<sub>3</sub>OH), mp 298~300°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +10.5° (c = 0.55, C<sub>5</sub>D<sub>5</sub>N). **Source:** QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*] (whole herb: yield = 0.000072%dw). **Ref:** 4729.

**16323 3-Oxo-6β,19α-dihydroxyurs-12-en-28-oic acid**

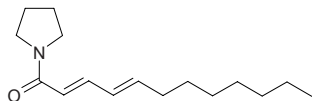
C<sub>30</sub>H<sub>46</sub>O<sub>5</sub> (486.70). **Source:** BI LU GOU TENG *Uncaria tomentosa*. **Ref:** 5341.



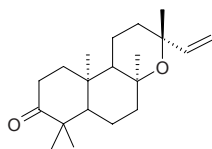
**16324 3-Oxo-8 $\alpha$ ,12 $\alpha$ -dimethoxy-8,12-dihydro-10 $\alpha$ H-furanoeremophil-1-ene**  
 C<sub>17</sub>H<sub>24</sub>O<sub>4</sub> (292.38). Colorless oil. [Source](#): HUANG SE QIAN LI GUANG  
*Senecio flavus*. [Ref](#): 2409.



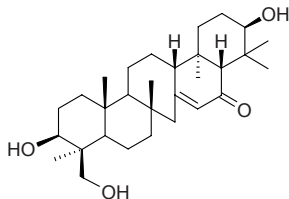
**16325 1-(1-Oxo-2E,4E-dodadienyl)pyrrolidine**  
 C<sub>16</sub>H<sub>27</sub>NO (249.40). [Source](#): HU JIAO *Piper nigrum* (root: yield =  
 0.0012%dw). [Ref](#): 4753.



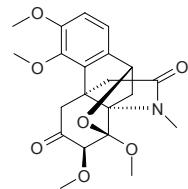
**16326 ent-3-Oxo-13-epi-manoyl oxide**  
 C<sub>20</sub>H<sub>32</sub>O<sub>2</sub> (304.48). Colorless needles (MeOH), mp 122~124°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> =  
 -36.0° (c = 0.36, CHCl<sub>3</sub>). [Source](#): HAI QI *Excoecaria agallocha* (root). [Ref](#): 5114.



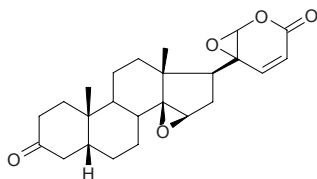
**16327 16-Oxo-21-episerratrilol**  
 C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). [Source](#): PU DI WU GONG *Lycopodium cernuum*. [Ref](#): 1410.



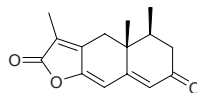
**16328 Oxoepistephamsine**  
 [51804-68-3] C<sub>21</sub>H<sub>25</sub>NO<sub>7</sub> (403.44). Light-yellow prisms (MeOH), mp 228°C,  
 [ $\alpha$ ]<sub>D</sub><sup>13</sup> = +104.88° (c = 1.0, CHCl<sub>3</sub>). [Source](#): QIAN JIN TENG *Stephania*  
*japonica*. [Ref](#): 2872.



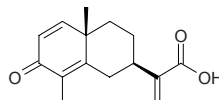
**16329 3-Oxo-20S,21-epoxyresibufogenin**  
 C<sub>24</sub>H<sub>30</sub>O<sub>5</sub> (398.5). Colorless needles, mp 180~182°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +30.8° (c = 0.1,  
 CHCl<sub>3</sub>). [Pharm](#): Cytotoxic (*in vitro*, KB, IC<sub>50</sub> = 18.51  $\mu$ g/mL; MH-60, IC<sub>50</sub> =  
 8.54  $\mu$ g/mL). [Source](#): CHAN SU *Bufo bufo gargarizans*; *Bufo melanostictus*  
 (dried secretion of skin glands: yield = 0.0048%dw). [Ref](#): 4634.



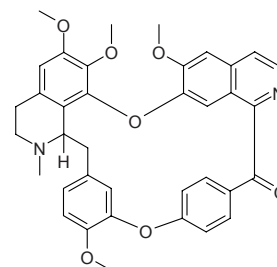
**16330 2-Oxo-eremophil-1(10),7(11),8(9)-trien-12,8-olide**  
 C<sub>15</sub>H<sub>16</sub>O<sub>3</sub> (244.29). Yellowish needles (acetone), mp 149~150°C. [Source](#):  
 KUAN SHE DU WU *Ligularia platyglossa* (root and rhizome). [Ref](#): 4911.



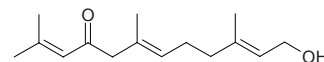
**16331 3-Oxo-1,4,11(13)-trien-7 $\alpha$ H-12-oic acid**  
 [135594-80-8] C<sub>15</sub>H<sub>18</sub>O<sub>3</sub> (246.31). Gum, [ $\alpha$ ]<sub>D</sub> = -80° (c = 0.36, CHCl<sub>3</sub>).  
[Source](#): BEI AI *Artemisia vulgaris*. [Ref](#): 2856.



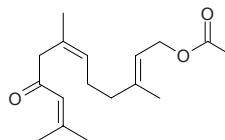
**16332 Oxofangchirine**  
 [102516-53-0] C<sub>37</sub>H<sub>34</sub>N<sub>2</sub>O<sub>7</sub> (618.69). Yellowish square crystals (acetone), mp  
 184~186°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +47° (c = 0.42, chloroform). [Source](#): FANG JI *Stephania*  
*tetrandra*. [Ref](#): 44.



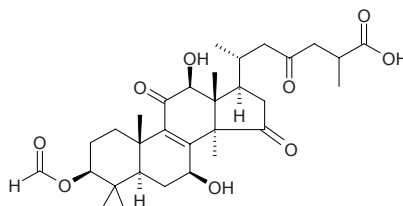
**16333 9-Oxofarnesol**  
 C<sub>15</sub>H<sub>24</sub>O<sub>2</sub> (236.36). [Source](#): GAN SHU *Ipomoea batatas* [Syn. *Convolvulus*  
*batatas*], ZHANG SHU YE *Cinnamomum camphora*. [Ref](#): 6.



**16334 9-Oxofarnesyl acetate**  
 C<sub>17</sub>H<sub>26</sub>O<sub>3</sub> (278.39). [Source](#): ZHANG SHU YE *Cinnamomum camphora*. [Ref](#): 6.

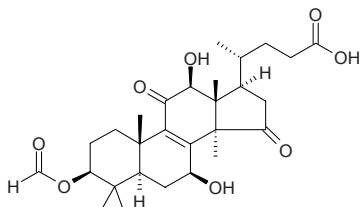


**16335 3 $\beta$ -Oxo-formyl-7 $\beta$ ,12 $\beta$ -dihydroxy-5 $\alpha$ -lanost-11,15,23-trioxo-8-en(E)-26-oic acid**  
 C<sub>31</sub>H<sub>44</sub>O<sub>9</sub> (560.69). White acicular crystals, mp 196~197°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +108° (c  
 = 0.01, Me<sub>2</sub>CO). [Source](#): LING ZHI *Ganoderma lucidum*. [Ref](#): 2163.



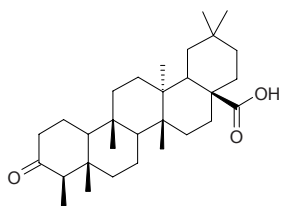
**16336 3 $\beta$ -Oxo-formyl-7 $\beta$ ,12 $\beta$ -dihydroxy-4,4,14 $\alpha$ -trimethyl-5 $\alpha$ -chol-11,15-dioxo-8-en(*E*)-24-oic acid**

C<sub>28</sub>H<sub>40</sub>O<sub>8</sub> (504.63). White acicular crystals, mp 130~131°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +96° (c = 0.01, Me<sub>2</sub>CO). Source: LING ZHI *Ganoderma lucidum*. Ref: 2163.



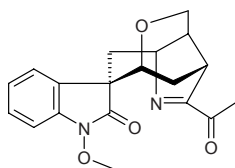
**16337 3-Oxfriedelan-28-oic acid**

C<sub>30</sub>H<sub>48</sub>O<sub>3</sub> (456.72). Pharm: Cytotoxic (*in vitro*, HONE-1 cell, IC<sub>50</sub> = (9.4±2.8)μmol/L, control Etoposide, IC<sub>50</sub> = (0.5±0.2)μmol/L, *cis*-Platin, IC<sub>50</sub> = (3.2±0.5)μmol/L; KB cell, IC<sub>50</sub> = (8.3±2.4)μmol/L, Etoposide, IC<sub>50</sub> = (0.9±0.3)μmol/L, *cis*-Platin, IC<sub>50</sub> = (4.4±0.9)μmol/L; HT29 cell, IC<sub>50</sub> > 10μmol/L, Etoposide, IC<sub>50</sub> = (2.4±0.5)μmol/L, *cis*-Platin, IC<sub>50</sub> = (5.7±1.1)μmol/L). Source: RONG SHU *Ficus microcarpa* (aerial root). Ref: 5254.



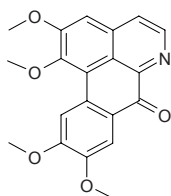
**16338 19-Oxo-gelsenicine**

19-Oxo-humantenmine C<sub>19</sub>H<sub>20</sub>N<sub>2</sub>O<sub>4</sub> (340.38). mp 226~227°C. Source: GOU WEN *Gelsemium elegans*. Ref: 14.



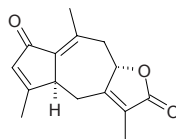
**16339 Oxoglauicine**

*O*-Methylatheroline; Noraporphine [5574-24-3] C<sub>20</sub>H<sub>17</sub>NO<sub>5</sub> (351.36). mp 225~227°C. Pharm: Antifungal (*Candida albicans*); cytotoxic (KB, ED<sub>50</sub> = 5.1μg/kg). Source: BEI MEI E ZHANG QIU *Liriodendron tulipifera*, JIAN LIE HAI YING SU *Glaucium oxylobum*, ZI FAN LI ZHI *Annona purpurea*. Ref: 5, 658.



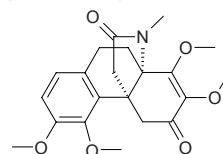
**16340 (5 $\alpha$ ,8 $\alpha$ )-2-Oxo-1(10),3,7(11)-guaiatrien-12,8-olide**

C<sub>15</sub>H<sub>16</sub>O<sub>3</sub> (244.29). Yellow amorphous solid, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +127.5° (c = 0.4, CHCl<sub>3</sub>). Pharm: CYP3A4 inhibitor and CYP2D6 inhibitor (*in vitro*, CYP3A4, IC<sub>50</sub> = 8.8μmol/L; CYP2D6, IC<sub>50</sub> > 100μmol/L; control Ketoconazole, CYP3A4, IC<sub>50</sub> = 0.72μmol/L; control Quinidine, CYP2D6, IC<sub>50</sub> = 0.082μmol/L). Source: BI CHENG QIE *Piper cubeba* (fruit; yield = 0.00023%dw). Ref: 4797.



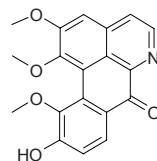
**16341 16-Oxohasubanonine**

[51804-70-7] C<sub>21</sub>H<sub>25</sub>NO<sub>6</sub> (387.44). Prisms (C<sub>6</sub>H<sub>6</sub>-Et<sub>2</sub>O), mp 161°C, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = -105.2° (c = 0.5, CHCl<sub>3</sub>). Source: QIAN JIN TENG *Stephania japonica*. Ref: 2939.



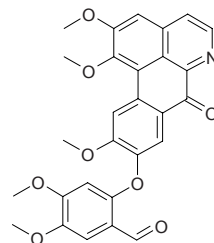
**16342 7-Oxohernagine**

C<sub>19</sub>H<sub>15</sub>NO<sub>5</sub> (337.34). Pharm: Anti-HIV-1 inactive (HIV-1 IN inhibitor, IC<sub>50</sub> > 100μmol/L, positive control Suramin, IC<sub>50</sub> = 2.4μmol/L). Source: DING HU DIAO ZHANG *Lindera chunii* (root). Ref: 4224.



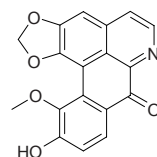
**16343 Oxohernandaline**

[187530-48-9] C<sub>28</sub>H<sub>23</sub>NO<sub>8</sub> (501.50). Yellowish prisms (alcohol), mp 197~199°C. Pharm: Cytotoxic (P<sub>388</sub>, ED<sub>50</sub> = 12.569μg/mL, A549, ED<sub>50</sub> = 27.134μg/mL, KB16, ED<sub>50</sub> = 5.300μg/mL). Source: SHUI LIAN YE TONG *Hernandia nymphaeifolia*. Ref: 2858.



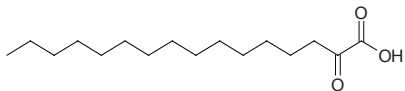
**16344 7-Oxohernangerine**

C<sub>18</sub>H<sub>11</sub>NO<sub>5</sub> (321.29). Pharm: Anti-HIV-1 (HIV-1 IN inhibitor, IC<sub>50</sub> = 18.2μmol/L, positive control Suramin, IC<sub>50</sub> = 2.4μmol/L). Source: DING HU DIAO ZHANG *Lindera chunii* (root). Ref: 4224.

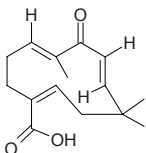


**16345 2-Oxohexadecanoic acid**

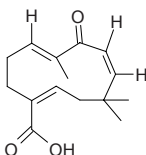
2-Oxopalmitic acid [2570-24-3] C<sub>16</sub>H<sub>30</sub>O<sub>3</sub> (270.42). Needles (petrol), mp 69.5°C. [Source](#): KONG SHI CHUN *Ulva pertusa*, *Porphyra* sp. [Ref](#): 2921.

**16346 8-Oxo- $\alpha$ -humula-6E,9E-dien-12-oic acid**

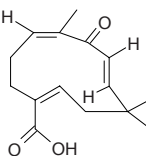
C<sub>15</sub>H<sub>20</sub>O<sub>3</sub> (248.32). [Source](#): *Asteriscus vogelii* (aerial parts). [Ref](#): 5123.

**16347 8-Oxo- $\alpha$ -humula-6E,9Z-dien-12-oic acid**

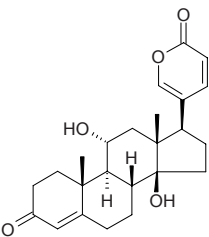
C<sub>15</sub>H<sub>20</sub>O<sub>3</sub> (248.32). [Source](#): *Asteriscus vogelii* (aerial parts). [Ref](#): 5123.

**16348 8-Oxo- $\alpha$ -humula-6Z,9Z-dien-12-oic acid**

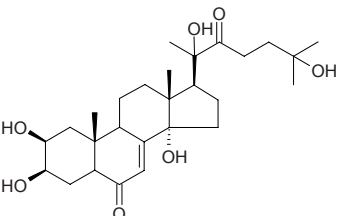
C<sub>15</sub>H<sub>20</sub>O<sub>3</sub> (248.32). [Source](#): *Asteriscus vogelii* (aerial parts). [Ref](#): 5123.

**16349 3-Oxo-11 $\alpha$ -hydroxy-12-dehydroxy-scilliphaeosidin\***

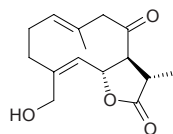
C<sub>24</sub>H<sub>30</sub>O<sub>5</sub> (398.50). Amorphous powder,  $[\alpha]_D^{24} = +32.0^\circ$  ( $c = 0.28$ , MeOH). [Source](#): HAI CONG *Urginea maritima* (bulb). [Ref](#): 3513.

**16350 22-Oxo-20-hydroxyecdysone**

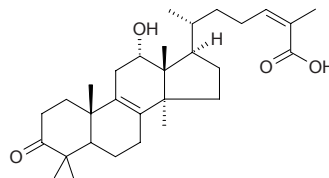
2 $\beta$ ,3 $\beta$ ,14 $\alpha$ ,20,25-Pentahydroxy-cholest-7-en-6,22-dione C<sub>27</sub>H<sub>42</sub>O<sub>7</sub> (478.63). White powder (MeOH), mp 102–106°C. [Source](#): ZHEN ZHU LU SHUI CAO *Cyanotis arachnoidea* [Syn. *Cyanotis bodinieri*]. [Ref](#): 2475.

**16351 8-Oxo-15-hydroxygermacra-1(10),E,4Z-dien-11 $\beta$ H-12,6 $\alpha$ -olide**

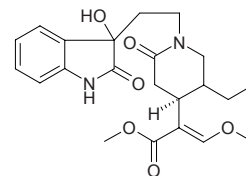
C<sub>15</sub>H<sub>20</sub>O<sub>4</sub> (264.32). Colorless oil,  $[\alpha]_D = -393^\circ$  ( $c = 2.76$ , CHCl<sub>3</sub>). [Source](#): CU CAO SHI CHE JU *Centaurea aspera* ssp. *aspera* (aerial parts), XIA YE CU CAO SHI CHE JU *Centaurea aspera* subsp. *stenophylla* (aerial parts). [Ref](#): 5300.

**16352 (2Z)-3-Oxo-12 $\alpha$ -hydroxylanosta-8,24-dien-26-oic acid**

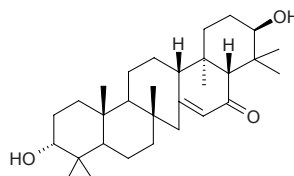
C<sub>30</sub>H<sub>46</sub>O<sub>4</sub> (470.70). [Pharm](#): Antineoplastic; anti-HIV. [Source](#): CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*]. [Ref](#): 2523.

**16353 3-Oxo-7-hydroxy-3,7-secorhynchophylline**

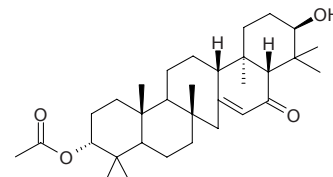
C<sub>22</sub>H<sub>28</sub>N<sub>2</sub>O<sub>6</sub> (416.48). [Source](#): XIA GOU TENG *Uncaria attenuata*. [Ref](#): 5341.

**16354 16-Oxo-3 $\alpha$ -hydroxyserrat-14-en-21 $\beta$ -ol**

C<sub>30</sub>H<sub>48</sub>O<sub>3</sub> (456.72). White powder (CHCl<sub>3</sub>-CH<sub>3</sub>OH), mp 314–316°C. [Source](#): QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*] (whole herb: yield = 0.000144%dw). [Ref](#): 4729.

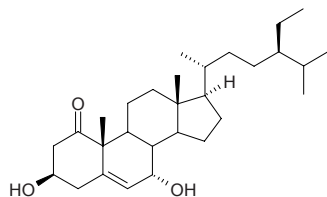
**16355 16-Oxo-21 $\beta$ -hydroxyserrat-14-en-3 $\alpha$ -yl acetate**

C<sub>32</sub>H<sub>50</sub>O<sub>4</sub> (498.75). Colorless needles (CHCl<sub>3</sub>), mp 270–274°C,  $[\alpha]_D^{20} = -24.1^\circ$  ( $c = 0.47$ , CHCl<sub>3</sub>). [Source](#): QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*] (whole herb: yield = 0.000092%dw). [Ref](#): 4729.

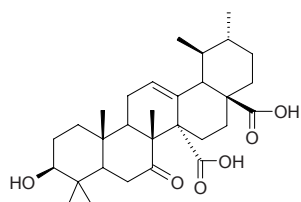


**16356 1-Oxo-7 $\alpha$ -hydroxysitosterol**

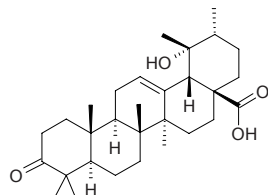
[194089-22-0] C<sub>29</sub>H<sub>48</sub>O<sub>3</sub> (444.70). [ $\alpha$ ]<sub>D</sub> = +5.3° (*c* = 0.8, CHCl<sub>3</sub>). **Pharm:** Cytotoxic (P<sub>388</sub>, KB, edge activity) **Source:** JIAO ZHI SHU WEI CAO *Salvia glutinosa*. **Ref:** 2832.

**16357 7-Oxo-3 $\beta$ -hydroxyurs-12-en-27,28-dioic acid**

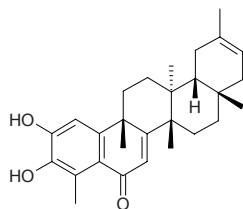
C<sub>30</sub>H<sub>44</sub>O<sub>6</sub> (500.68). **Source:** BI LU GOU TENG *Uncaria tomentosa*. **Ref:** 5341.

**16358 3-Oxo-19 $\alpha$ -hydroxyurs-12-en-28-oic acid**

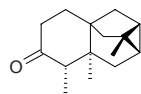
Pomonic acid C<sub>30</sub>H<sub>46</sub>O<sub>4</sub> (470.70). **Pharm:** Anti-androgenic (testosterone 5 $\alpha$ -reductase inhibitor, 50 $\mu$ g/mL, InRt = 35.60%, control Glabridine, 50 $\mu$ g/mL, InRt = 48.20%)<sup>[4106]</sup>. **Source:** DI YU *Sanguisorba officinalis*, DUO SUI PO BU MU *Cordia multispicata* (leaf). **Ref:** 2955, 4106.

**16359 6-Oxo-iguesterol**

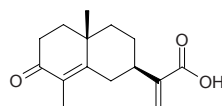
[182324-66-9] C<sub>28</sub>H<sub>36</sub>O<sub>3</sub> (420.60). Yellow paint-like amorphous solid, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +75.0° (*c* = 0.24, CHCl<sub>3</sub>). **Pharm:** Antibacterial (*Bacillus subtilis*, MIC = 25 $\mu$ g/mL). **Source:** JIA NA LI MEI DENG MU *Maytenus canariensis*. **Ref:** 2800.

**16360 3-Oxoishwarane**

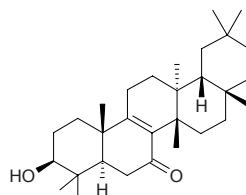
[41756-76-7] C<sub>15</sub>H<sub>22</sub>O (218.34). Crystals (pentane), mp 45~46°C. **Source:** QING MU XIANG *Aristolochia debilis* [Syn. *Aristolochia longa*]. **Ref:** 1521, 2951.

**16361 3-Oxoisocostic acid**

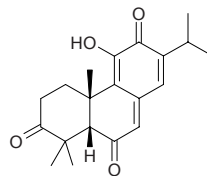
C<sub>15</sub>H<sub>20</sub>O<sub>3</sub> (248.32). **Source:** LIU LENG JU *Laggetra alata* (aerial parts: yield = 0.00021%dw). **Ref:** 4709.

**16362 7-Oxoismultiflorenol**

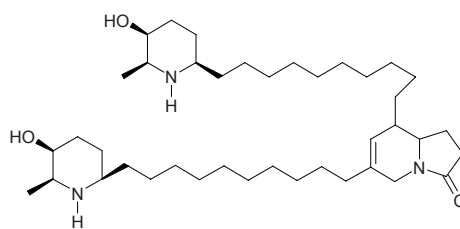
[142449-68-1] C<sub>30</sub>H<sub>48</sub>O<sub>2</sub> (440.72). mp 214~216°C, mp 202~205°C (MeOH-CHCl<sub>3</sub>), [ $\alpha$ ]<sub>D</sub><sup>23</sup> = +35° (*c* = 0.26). **Pharm:** Anti-inflammatory (inflammation caused by TPA in mus, 0.5mg/ear, InRt = 96%, ID<sub>50</sub> = 0.2mg/ear). **Source:** BAN YE DI JIN *Euphorbia supina*, GUA LOU *Trichosanthes kirilowii*, MAO GUO DI JIN *Euphorbia chamaesyce*. **Ref:** 2903, 2904, 2905.

**16363 3-Oxoisotaxodione**

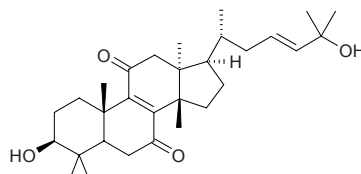
C<sub>20</sub>H<sub>24</sub>O<sub>4</sub> (328.41). Yellow gum, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -108.9° (*c* = 0.44, CHCl<sub>3</sub>). **Source:** TAI WAN SHAN *Taiwania cryptomerioides*. **Ref:** 2526.

**16364 3''''-Oxo-juliprosopine**

C<sub>40</sub>H<sub>73</sub>N<sub>3</sub>O<sub>3</sub> (644.05). Colorless gum, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = +4.0° (*c* = 1.0, MeOH). **Source:** MU DOU SHU *Prosopis juliflora* (leaf). **Ref:** 3778.

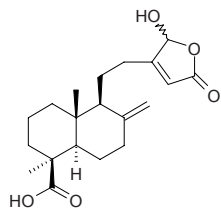
**16365 11-Oxo-kansenonol**

(23*E*)-Eupha-8,23-diene-3 $\beta$ ,25-diol-7,11-dione C<sub>30</sub>H<sub>46</sub>O<sub>4</sub> (470.7). Colorless gum, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = +6.6° (*c* = 0.15, MeOH). **Pharm:** Cell division arrester (cultured individual *Xenopus laevis* cells at blastular stage, 10 $\mu$ g/mL, >50% cleavage arrest). **Source:** GAN SUI *Euphorbia kansui* (dried root: yield = 0.000013%). **Ref:** 4690.

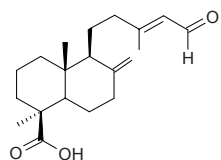


**16366 16-Oxo-8(17),13-labdadiene-15,19-dioic acid**

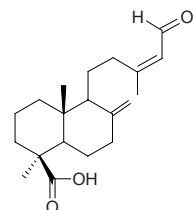
$C_{20}H_{28}O_5$  (348.44). Colorless oil,  $[\alpha]_D^{25} = +38^\circ$  ( $c = 1.03$ ,  $CHCl_3$ ). **Pharm:** Antimalarial (*in vitro*, *Plasmodium falciparum* strain 3D7,  $IC_{50} = (29.3 \pm 0.8) \mu\text{g/mL} = (84.1 \pm 2.3) \mu\text{mol/L}$ ). **Source:** CE BAI YE *Thuja orientalis* [Syn. *Platycladus orientalis*; *Biota orientalis*]. **Ref:** 3022.

**16367 15-Oxolabda-8(17),13E-dien-19-oic acid**

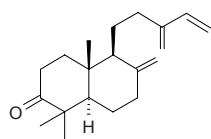
$C_{20}H_{30}O_3$  (318.46).  $[\alpha]_D^{25} = +45.2^\circ$  ( $c = 0.12$ ,  $CHCl_3$ );  $[\alpha]_D = +47.5^\circ$ . **Source:** RI BEN XIANG BAI JING PI *Thuja standishii*. **Ref:** 5352.

**16368 15-Oxolabda-8(17),13Z-dien-19-oic acid**

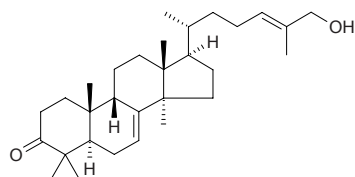
$C_{20}H_{30}O_3$  (318.46). Colorless oil,  $[\alpha]_D^{25} = +27.3^\circ$  ( $c = 0.28$ ,  $CHCl_3$ ). **Source:** RI BEN XIANG BAI JING PI *Thuja standishii*. **Ref:** 5352.

**16369 3-Oxo-labda-8(17),13(16),14-triene**

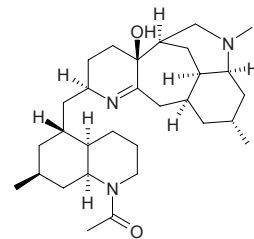
$C_{20}H_{30}O$  (286.46).  $[\alpha]_D^{20} = +34.5^\circ$  ( $c = 2.0$ ,  $CHCl_3$ ). **Source:** YUAN YE TAI *Jamesoniella colorata*. **Ref:** 3375.

**16370 24(E)-3-Oxo-9βH-lanosta-7,24-dien-26-ol**

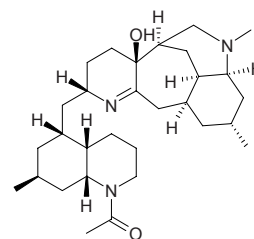
$C_{30}H_{48}O_2$  (440.72). Pale-yellow amorphous powder, mp 130~132 °C,  $[\alpha]_D^{20} = +37.8^\circ$  ( $c = 0.2$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic (marginal activity: A549,  $ED_{50} = 4.1 \mu\text{g/mL}$ ; SK-OV-3,  $ED_{50} = 23.0 \mu\text{g/mL}$ ; SK-MEL-2,  $ED_{50} = 9.2 \mu\text{g/mL}$ ; HCT15,  $ED_{50} = 7.9 \mu\text{g/mL}$ ). **Source:** CHAO XIAN LENG SHAN *Abies koreana* (root cortex). **Ref:** 3854.

**16371 Oxolucidine A**

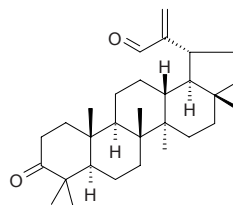
$C_{30}H_{49}N_3O_2$  (483.74).  $[\alpha]_D^{21.5} = -29.1^\circ$  ( $c = 0.74$ ,  $CHCl_3$ ). **Source:** GUANG LIANG SHI SONG *Lycopodium lucidulum*. **Ref:** 3927.

**16372 Oxolucidine B**

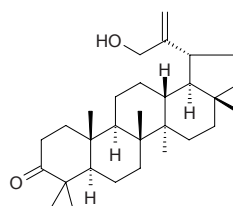
$C_{30}H_{49}N_3O_2$  (483.74).  $[\alpha]_D^{21.5} = -30.7^\circ$  ( $c = 0.55$ ,  $CHCl_3$ ). **Source:** GUANG LIANG SHI SONG *Lycopodium lucidulum*. **Ref:** 3927.

**16373 3-Oxolup-20(29)-en-30-al**

$C_{30}H_{46}O_2$  (438.70). Colorless needles,  $[\alpha]_D^{20} = +22.3^\circ$  ( $c = 1.0$ ,  $CHCl_3$ ). **Pharm:** Antimalarial (*Plasmodium falciparum* FcB1,  $IC_{50} = (1.55 \pm 0.06) \mu\text{g/mL}$ , control Chloroquine,  $IC_{50} = (0.05 \pm 0.002) \mu\text{g/mL}$ ; *Plasmodium falciparum* FcM29,  $IC_{50} = (4.67 \pm 0.09) \mu\text{g/mL}$ )<sup>[4419]</sup>; cytotoxic inactive (NSCLC-N6 cell line)<sup>[3806]</sup>. **Source:** JU MI JIN HE HUAN *Acacia mellifera* (stem cortex), *Nuxia sphaerocephala* (leaf). **Ref:** 3806, 4419.

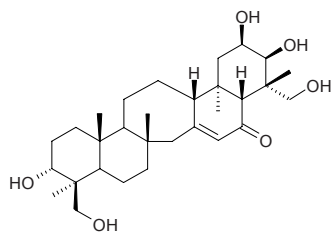
**16374 3-Oxolupenol**

30-Hydroxylup-20(29)-en-3-one  $C_{30}H_{48}O_2$  (440.72). **Pharm:** Antimalarial (*Plasmodium falciparum* FcB1,  $IC_{50} = (9.05 \pm 1.06) \mu\text{g/mL}$ , control Chloroquine,  $IC_{50} = (0.05 \pm 0.002) \mu\text{g/mL}$ ; *Plasmodium falciparum* FcM29,  $IC_{50} = (15.56 \pm 2.11) \mu\text{g/mL}$ ). **Source:** *Nuxia sphaerocephala* (leaf). **Ref:** 4419.

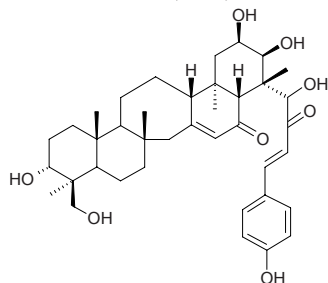


**16375 16-Oxolyclanitin**

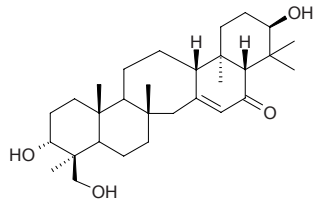
[140701-70-8] C<sub>30</sub>H<sub>48</sub>O<sub>6</sub> (504.71). Source: SHEN JIN CAO *Lycopodium japonicum* [Syn. *Lycopodium clavatum*], YU BAI SHI SONG *Lycopodium obscurum*. Ref: 1410, 2811, 2812.

**16376 16-Oxolyclanitin 30-(4-hydroxycinnamoyl)**

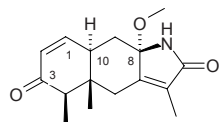
[140701-70-8] C<sub>39</sub>H<sub>54</sub>O<sub>8</sub> (650.85). Source: SHEN JIN CAO *Lycopodium japonicum* [Syn. *Lycopodium clavatum*], YU BAI SHI SONG *Lycopodium obscurum*. Ref: 1410, 2811, 2812.

**16377 16-Oxolycoclanivan**

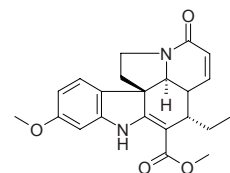
[53800-21-8] C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). Crystals (CHCl<sub>3</sub>-MeOH), mp 245-247°C. Source: GUO JIANG LONG *Lycopodium complanatum*, SHEN JIN CAO *Lycopodium japonicum* [Syn. *Lycopodium clavatum*], PU DI WU GONG *Lycopodium cernuum*. Ref: 2936, 1410, 2811.

**16378 3-Oxo-8α-methoxy-10αH-eremophila-1,7(11)-dien-12,8β-lactam**

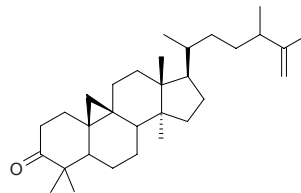
C<sub>16</sub>H<sub>21</sub>NO<sub>3</sub> (275.35). Colorless oil. Source: HUANG SE QIAN LI GUANG *Senecio flavus*. Ref: 2409.

**16379 3-Oxo-11-methoxytabersonine**

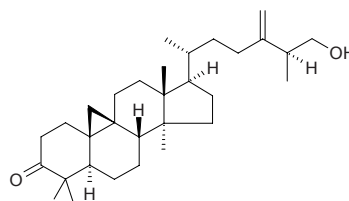
C<sub>22</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub> (380.45). Yellowish transparent bits, [α]<sub>D</sub><sup>30</sup> = -67.4° (chloroform). Source: DIAN JI GU CHANG SHAN *Alstonia yunnanensis*. Ref: 49.

**16380 3-Oxo-24-methylenecycloartane**

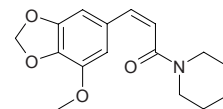
C<sub>31</sub>H<sub>50</sub>O (438.74). Yellowish oily residue. Source: WAI LAI CAI ZONG *Sabal peregrina* (leaf). Ref: 3805.

**16381 25(R)-3-Oxo-24-methylenecycloartan-26-ol**

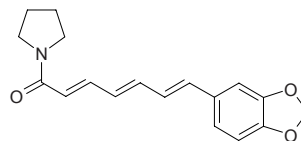
C<sub>31</sub>H<sub>50</sub>O<sub>2</sub> (454.74). Colorless needles (CHCl<sub>3</sub>-MeOH), mp 145-146°C, [α]<sub>D</sub><sup>30</sup> = +175° (c = 0.6, CHCl<sub>3</sub>). Source: MANG GUO *Mangifera indica*. Ref: 1868.

**16382 1-[1-Oxo-3(3,4-methylenedioxy-5-methoxyphenyl)-2Z-propenyl]piperidine**

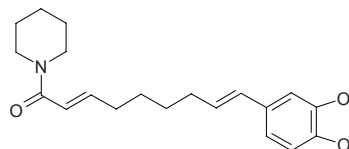
C<sub>16</sub>H<sub>19</sub>NO<sub>4</sub> (289.33). Colorless oil. Source: HU JIAO *Piper nigrum* (root: yield = 0.0001%dw). Ref: 4753.

**16383 1-[1-Oxo-7(3,4-methylenedioxyphenyl)-2E,4E,6E-heptatrienyl]pyrrolidine**

C<sub>18</sub>H<sub>19</sub>NO<sub>3</sub> (297.36). Source: HU JIAO *Piper nigrum* (root: yield = 0.000057%dw). Ref: 4753.

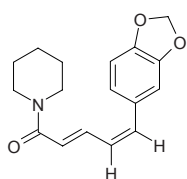
**16384 1-[1-Oxo-9(3,4-methylenedioxyphenyl)-2E,8E-nonadienyl]piperidine**

Piperonaline C<sub>21</sub>H<sub>27</sub>NO<sub>3</sub> (341.45). Colorless crystals. Pharm: Protective gastric lesions (rat, ethanol-induced, 25mg/kg orl, length = (31.7±11.8)mm, control, length = (118.6±16.2)mm, InRt = 73.3%; indomethacin-induced in rats, dose, 25mg/kg orl, length = (28.3±10.8)mm, control, length = (89.5±9.8)mm, InRt = 68.4%)<sup>[4935]</sup>. Source: HU JIAO *Piper nigrum* (root: yield = 0.00031%dw), *Piper chaba* (fruit). Ref: 4753, 4935.



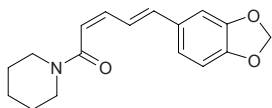
**16385 1-[1-Oxo-5(3,4-methylenedioxyphenyl)-2E,4Z-pentadienyl]piperidine**

$C_{17}H_{19}NO_3$  (285.35). Source: HU JIAO *Piper nigrum* (root: yield = 0.00134%dw). Ref: 4753.



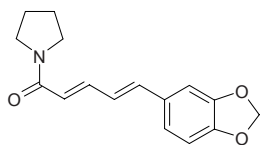
**16386 1-[1-Oxo-5(3,4-methylenedioxyphenyl)-2Z,4E-pentadienyl]piperidine**

$C_{17}H_{19}NO_3$  (285.35). Source: HU JIAO *Piper nigrum* (root: yield = 0.00051%dw). Ref: 4753.



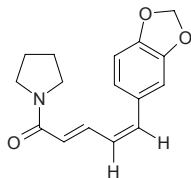
**16387 1-[1-Oxo-5(3,4-methylenedioxyphenyl)-2E,4E-pentadienyl]pyrrolidine**

Piperidine; Piperamide-C 5:2(*E,E*) [25924-78-1]  $C_{16}H_{17}NO_3$  (271.32). Crystals (EtOAc-hexane or  $C_6H_6$ -pet. ether), mp 143~145°C. Source: HU JIAO *Piper nigrum* (root: yield = 0.00056%dw), JI NEI YA HU JIAO *Piper guineense*. Ref: 1521, 3240, 4753.



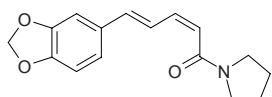
**16388 1-[1-Oxo-5(3,4-methylenedioxyphenyl)-2E,4Z-pentadienyl]pyrrolidine**

*N*-[10-(13,14-Methylenedioxyphenyl)-7(*E*),9(*Z*)-pentadienyl]-pyrrolidine  $C_{16}H_{17}NO_3$  (271.32). Amorphous solid. Pharm: Antifungal activity as determined by direct bioautography against *Cladosporium sphaerospermum*. Source: HU JIAO *Piper nigrum* (root: yield = 0.00039%dw), LIU TU HU JIAO *Piper tuberculatum*, QIAO MU HU JIAO *Piper arboreum*. Ref: 2016, 4753.



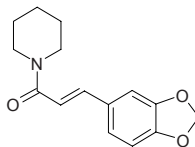
**16389 1-[1-Oxo-5(3,4-methylenedioxyphenyl)-2Z,4E-pentadienyl]pyrrolidine**

$C_{16}H_{17}NO_3$  (271.32). Colorless oil. Source: HU JIAO *Piper nigrum* (root: yield = 0.000057%dw). Ref: 4753.



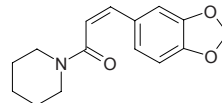
**16390 1-[1-Oxo-3(3,4-methylenedioxyphenyl)-2E-propenyl]piperidine**

$C_{15}H_{17}NO_3$  (259.31). Source: HU JIAO *Piper nigrum* (root: yield = 0.000046%dw). Ref: 4753.



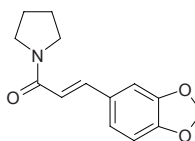
**16391 1-[1-Oxo-3(3,4-methylenedioxyphenyl)-2Z-propenyl]piperidine**

$C_{15}H_{17}NO_3$  (259.31). Source: HU JIAO *Piper nigrum* (root: yield = 0.00036%dw). Ref: 4753.



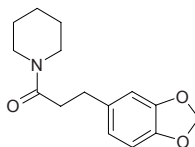
**16392 1-[1-Oxo-3(3,4-methylenedioxyphenyl)-2E-propenyl]pyrrolidine**

$C_{14}H_{15}NO_3$  (245.28). Source: HU JIAO *Piper nigrum* (root: yield = 0.000086%dw). Ref: 4753.



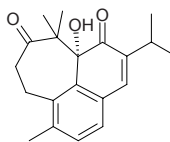
**16393 1-[1-Oxo-3(3,4-methylenedioxyphenyl)propyl]piperidine**

$C_{15}H_{19}NO_3$  (261.32). Source: HU JIAO *Piper nigrum* (root: yield = 0.0007%dw). Ref: 4753.



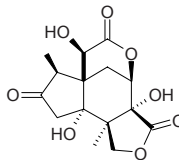
**16394 3-Oxomicrostegiol**

$C_{20}H_{24}O_3$  (312.41). Yellow solid, mp 77~78°C,  $[\alpha]_D^{25} = +402.2^\circ$  ( $c = 0.08$ ,  $CHCl_3$ ). Source: TAI WAN SHAN *Taiwania cryptomerioides*. Ref: 2526.



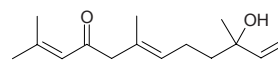
**16395 2-Oxoneomajucin**

$C_{15}H_{18}O_8$  (326.31). Source: JIA DI FENG PI *Illicium jiadifengpi* (pericarp). Ref: 4621.



**16396 9-Oxonerolidol**

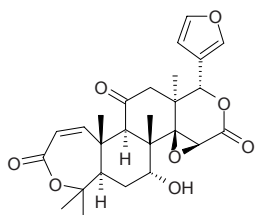
$C_{15}H_{24}O_2$  (236.36). Source: NAN MU *Phoebe nanmu*. Ref: 6.



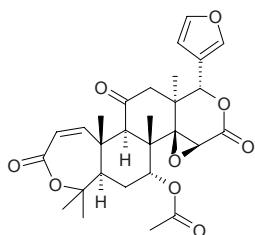


**16397 11-Oxo-7 $\alpha$ -obacunol**

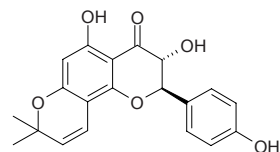
$C_{26}H_{30}O_8$  (470.52). Colorless prisms ( $CHCl_3$ -MeOH), mp 243~245°C,  $[\alpha]_D^{23} = -25.8^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ). Source: ZHONG GUO YANG CHUN *Cedrela sinensis* (leaf). Ref: 3883.

**16398 11-Oxo-7 $\alpha$ -obacunyl acetate**

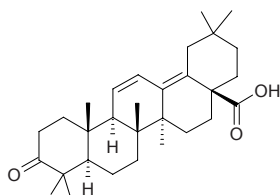
$C_{28}H_{32}O_9$  (512.56). Colorless prisms ( $CHCl_3$ -MeOH), mp 280~283°C,  $[\alpha]_D^{23} = -52.2^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ). Source: ZHONG GUO YANG CHUN *Cedrela sinensis* (leaf). Ref: 3883.

**16399 4-Oxoobovatachromene**

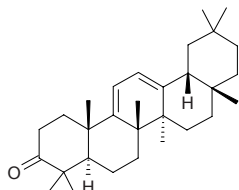
$C_{20}H_{18}O_6$  (354.36). Pharm: Antioxidant (DPPH radical scavenger, 250 $\mu$ mol/L, InRt = -1.8%; control Vitamin E, IC<sub>50</sub> = 8.3 $\mu$ mol/L). Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf; yield = 0.00053%dw). Ref: 4722.

**16400 3-Oxo-11,13(18)-oleanadien-28-oic acid**

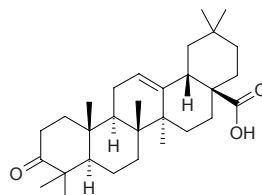
$C_{30}H_{44}O_3$  (452.68). Colorless prisms, mp 223~225°C,  $[\alpha]_D^{20} = -68^\circ$  ( $c = 0.24$ ,  $CHCl_3$ ). Source: XUAN CHUI JIA MI *Viburnum suspensum*. Ref: 1966.

**16401 3-Oxo-olean-9(11),12-diene**

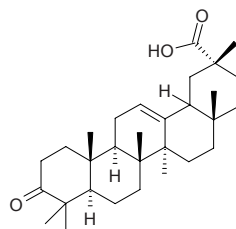
$C_{30}H_{46}O$  (422.70). Amorphous powder (acetone), easily soluble in  $CHCl_3$  and MeOH. Source: SI CHUAN QING FENG TENG *Sabia schumanniana* (aerial parts). Ref: 4883.

**16402 3-Oxo-olean-12-en-28-oic acid**

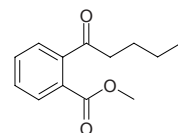
Oleanonic acid [17990-42-0]  $C_{30}H_{46}O_3$  (454.70). White powder, mp 226~229°C,  $[\alpha]_D^{20} = +101^\circ$  ( $c = 1.63$ , pyridine),  $[\alpha]_D^{25} = +76.9^\circ$  ( $c = 0.06$ ,  $CHCl_3$ ). Pharm: Cytotoxic (*in vitro*, HONE-1 cell, IC<sub>50</sub> = (7.2 $\pm$ 1.9) $\mu$ mol/L, control Etoposide, IC<sub>50</sub> = (0.5 $\pm$ 0.2) $\mu$ mol/L, *cis*-Platin, IC<sub>50</sub> = (3.2 $\pm$ 0.5) $\mu$ mol/L; KB cell, IC<sub>50</sub> = (6.3 $\pm$ 1.6) $\mu$ mol/L, Etoposide, IC<sub>50</sub> = (0.9 $\pm$ 0.3) $\mu$ mol/L, *cis*-Platin, IC<sub>50</sub> = (4.4 $\pm$ 0.9) $\mu$ mol/L; HT29 cell, IC<sub>50</sub> > 10 $\mu$ mol/L, Etoposide, IC<sub>50</sub> = (2.4 $\pm$ 0.5) $\mu$ mol/L, *cis*-Platin, IC<sub>50</sub> = (5.7 $\pm$ 1.1) $\mu$ mol/L)<sup>[5254]</sup>; cytotoxic inactive (K562, ED<sub>50</sub> > 20 $\mu$ mol/L, control Adriamycin, ED<sub>50</sub> = (0.09 $\pm$ 0.03) $\mu$ mol/L; B16(F-10), ED<sub>50</sub> > 20 $\mu$ mol/L, Adriamycin, ED<sub>50</sub> = (0.06 $\pm$ 0.10) $\mu$ mol/L; SK-MEL-2, ED<sub>50</sub> > 20 $\mu$ mol/L, Adriamycin, ED<sub>50</sub> = (0.09 $\pm$ 0.30) $\mu$ mol/L; PC3, ED<sub>50</sub> > 20 $\mu$ mol/L, Adriamycin, ED<sub>50</sub> = (0.83 $\pm$ 0.18) $\mu$ mol/L; LOX-IMVI, ED<sub>50</sub> > 20 $\mu$ mol/L, Adriamycin, ED<sub>50</sub> = (0.38 $\pm$ 0.33) $\mu$ mol/L; A549, ED<sub>50</sub> > 20 $\mu$ mol/L, Adriamycin, ED<sub>50</sub> = (0.67 $\pm$ 0.21) $\mu$ mol/L)<sup>[5479]</sup>; cytotoxic (MCF7, IC<sub>50</sub> = (4.6 $\pm$ 0.1) $\mu$ mol/L, control Adriamycin, IC<sub>50</sub> = (1.5 $\pm$ 0.2) $\mu$ mol/L; K562, IC<sub>50</sub> = (4.2 $\pm$ 0.3) $\mu$ mol/L, Adriamycin, IC<sub>50</sub> = (0.07 $\pm$ 0.01) $\mu$ mol/L; Bowes, IC<sub>50</sub> = (14.8 $\pm$ 0.5) $\mu$ mol/L, Adriamycin, IC<sub>50</sub> = (0.45 $\pm$ 0.01) $\mu$ mol/L; T24S hmn bladder cancer, IC<sub>50</sub> = (24.9 $\pm$ 0.5) $\mu$ mol/L, Adriamycin, IC<sub>50</sub> = (5.8 $\pm$ 0.6) $\mu$ mol/L; A549, IC<sub>50</sub> = (61.3 $\pm$ 1.2) $\mu$ mol/L, Adriamycin, IC<sub>50</sub> = (15.8 $\pm$ 6.7) $\mu$ mol/L)<sup>[5288]</sup>. Source: AN HUI CONG MU *Aralia subcapitata*, LONG NAO GAO XIANG *Dryobalanops aromatica*, MU TONG *Akebia quinata*, RONG SHU *Ficus microcarpa* (aerial root), SU HE XIANG *Liquidambar orientalis*, TAI WAN FU RONG *Hibiscus taiwanensis*, DA ZAO *Ziziphus jujuba*, XUAN SHEN *Scrophularia ningpoensis*, *Juliania adstringens* (bark)<sup>[3786]</sup>. Ref: 622, 660, 2529, 3786, 5254, 5288, 5479.

**16403 3-Oxo-olean-12-en-29-oic acid**

[76094-29-6]  $C_{30}H_{46}O_3$  (454.70). Colorless needles (acetone), mp 255~256°C,  $[\alpha]_D^{23} = +85.3^\circ$  ( $c = 0.59$ ,  $CHCl_3$ ). Pharm: Cytotoxic (culture P<sub>388</sub>, ED<sub>50</sub> = 0.61 $\mu$ g/mL). Source: KUN MING SHAN HAI TANG *Tripterygium hypoglaucum*. Ref: 2888, 2889.

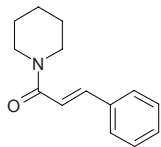
**16404 2-(1-Oxopentyl)-benzoic acid methyl ester**

$C_{13}H_{16}O_3$  (220.27). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 2805.

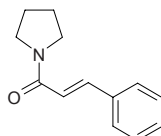


**16405 1-(1-Oxo-3-phenyl-2E-propenyl)piperidine**

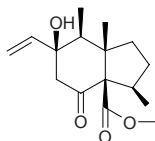
$C_{14}H_{17}NO$  (215.30). Source: HU JIAO *Piper nigrum* (root: yield = 0.00027%dw). Ref: 4753.

**16406 (1-Oxo-3-phenyl-2E-propenyl)pyrrolidine**

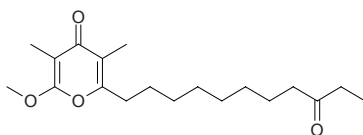
$C_{13}H_{15}NO$  (201.27). Source: HU JIAO *Piper nigrum* (root: yield = 0.000057%dw). Ref: 4753.

**16407 7-Oxopinguinol-12-methyl ester**

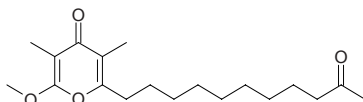
$C_{16}H_{24}O_4$  (280.37). Source: SHANG ZUO JIAN YE GUANG E TAI *Porella acutifolia* ssp. *tosana*. Ref: 3932.

**16408 9'-Oxopodopyrone**

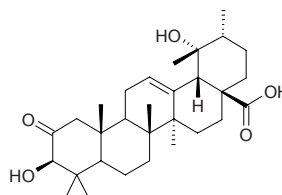
[193352-77-1]  $C_{19}H_{30}O_4$  (322.45). Colorless oil. Pharm: Bone resorption inhibitor (calvaria of baby mus, inhibits Ca release induced by bPTH, more effective than calcitonin and ipriflavone). Source: KAI TE LENG ZHU MU *Gonystylus keithii*. Ref: 2869.

**16409 10'-Oxopodopyrone**

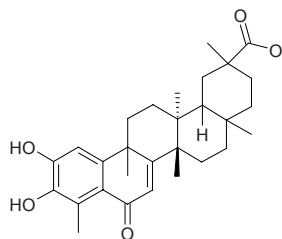
[126622-71-7]  $C_{19}H_{30}O_4$  (322.45). Colorless oil. Pharm: Bone resorption inhibitor (calvaria of baby mus, inhibits Ca release induced by bPTH, more effective than calcitonin and ipriflavone, 1.0 $\mu$ g/mL InRt = 109%). Source: KAI TE LENG ZHU MU *Gonystylus keithii*, *Podolepis longipedata*. Ref: 2868, 2869.

**16410 2-Oxopomolic acid**

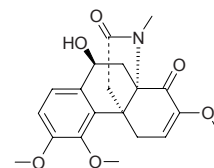
3 $\alpha$ ,19 $\alpha$ -Dihydroxy-2-oxo-12-ursen-28-oic acid  $C_{30}H_{46}O_5$  (486.70). Pharm: Immunosuppressant (hmn mononuclear cells antiproliferation, involving T lymphocytes, B lymphocytes, and macrophages isolated from peripheral blood,  $IC_{50}$  = 38.1 $\mu$ mol/L; control Cyclosporine A,  $IC_{50}$  = 0.012 $\mu$ mol/L). Source: TAI WAN PI PA *Eriobotrya deflexa* (leaf). Ref: 3064.

**16411 6-Oxopristimerol**

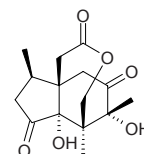
[161127-55-5]  $C_{30}H_{40}O_5$  (480.65). Colorless amorphous solid, mp 173~178°C,  $[\alpha]_D = -80.4^\circ$  ( $c$  = 0.48, pyridine). Pharm: Cytotoxic ( $L_{1210}$   $IC_{50}$  = 2.8 $\mu$ g/mL, KB  $IC_{50}$  = 2.8 $\mu$ g/mL, P<sub>388</sub>  $IC_{50}$  = 1.5 $\mu$ g/mL). Source: QIU SHI MEI DENG *Maytenus chuchuhuasca*. Ref: 2891.

**16412 16-Oxoprometaphanine**

[58738-31-1]  $C_{20}H_{23}NO_6$  (373.41). The structure is one of two tautomers. Prisms (MeOH), mp 195°C,  $[\alpha]_D^{20} = -52.3^\circ$  ( $c$  = 0.5,  $CHCl_3$ ). Source: QIAN JIN TENG *Stephania japonica*. Ref: 660, 1521.

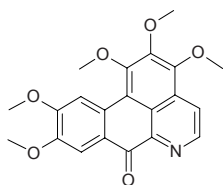
**16413 3-Oxopseudoanisatin**

$C_{15}H_{20}O_6$  (296.32).  $[\alpha]_D^{23} = -181.2^\circ$  ( $c$  = 0.17, EtOH). Source: MIN WAN BA JIAO *Illicium minwanense* (pericarp: yield = 0.00004%dw). Ref: 4697.

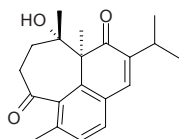


**16414 Oxopurpureine**

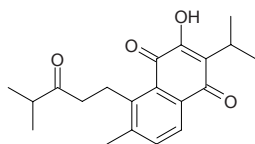
[32845-27-5] C<sub>21</sub>H<sub>19</sub>NO<sub>6</sub> (381.39). Nacarat columnar crystals (MeOH), mp 198–200°C, yellow needles (alcohol), mp 192–194°C. Pharm: Cytotoxic (S180 *in vitro*, 9KB ED<sub>50</sub> = 5.8mg/mL). Source: NIAN ZHI LUO LIN *Rollinia mucosa*, XIAO GUO TANG SONG CAO *Thalictrum microgynum* (root: content = 0.040%<sup>[5508]</sup>), YU GUO XIAO YE NAN *Phoebe cinnamomifolia*, ZI FAN LI ZHI *Annona purpurea*. Ref: 2822, 5508.

**16415 1-Oxo-salvibretol**

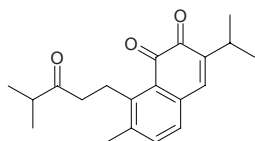
C<sub>20</sub>H<sub>24</sub>O<sub>3</sub> (312.41). [α]<sub>D</sub><sup>25</sup> = +17° (c = 0.1, CHCl<sub>3</sub>). Pharm: Cytotoxic (A2780, IC<sub>50</sub> = 22.3μg/mL, control Actinomycin D, IC<sub>50</sub> = 0.001μg/mL; P<sub>388</sub>, IC<sub>50</sub> > 20μg/mL; LNCaP, IC<sub>50</sub> > 20μg/mL; KB, IC<sub>50</sub> > 20μg/mL; Col2, IC<sub>50</sub> > 20μg/mL; LU1, IC<sub>50</sub> > 20μg/mL). Source: XIONG RUI ZHUANG SHU WEI CAO *Salvia staminea*. Ref: 5400.

**16416 3-Oxosapriparaquinone**

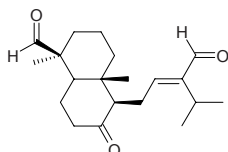
C<sub>20</sub>H<sub>24</sub>O<sub>4</sub> (328.41). Source: TAI WAN SHAN *Taiwania cryptomerioides*. Ref: 2526.

**16417 3-Oxosaprorthoquinone**

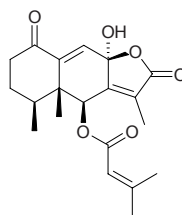
C<sub>20</sub>H<sub>24</sub>O<sub>3</sub> (312.41). Red needles, mp 72–73°C. Source: TAI WAN SHAN *Taiwania cryptomerioides*. Ref: 2526.

**16418 8-Oxo-8,14-seco-abiet-12-en-14,19-dial**

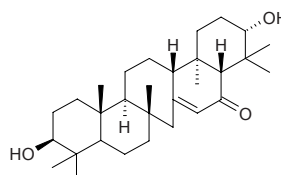
C<sub>20</sub>H<sub>30</sub>O<sub>3</sub> (318.46). Oil, [α]<sub>D</sub><sup>29</sup> = +7.1° (c = 0.42, MeOH). Source: LONG BAI *Juniperus chinensis* var. *kaizuka* (leaf: yield = 0.000067%dw). Ref: 3050.

**16419 1-Oxo-6β-seneciolyloxy-8α-hydroxyeremophil-7(11),9-(10)-dien-8β(12)-olide**

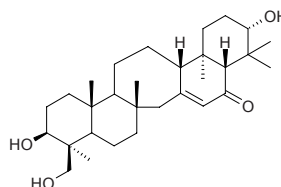
C<sub>20</sub>H<sub>24</sub>O<sub>6</sub> (360.41). Colorless gum, [α]<sub>D</sub><sup>25</sup> = –120° (c = 0.10, acetone). Source: JIA TUO WU *Ligulariopsis shichuana* (whole herb: 00020%dw). Ref: 4627.

**16420 16-Oxoserratenediol**

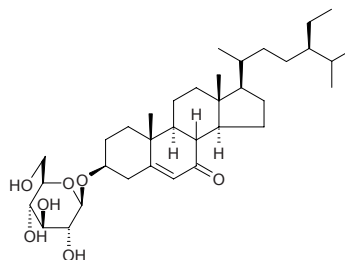
[24513-52-8] C<sub>30</sub>H<sub>48</sub>O<sub>3</sub> (456.72). mp 294–297°C. Source: SHEN JIN CAO *Lycopodium japonicum* [Syn. *Lycopodium clavatum*]. Ref: 6.

**16421 16-Oxoserratriol**

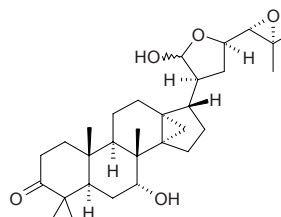
[44428-10-2] C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). mp 294–298°C. Source: QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*], GUO JIANG LONG *Lycopodium complanatum*. Ref: 2947, 2936, 1410.

**16422 7-Oxositosteryl-β-O-glucopyranoside**

C<sub>35</sub>H<sub>58</sub>O<sub>7</sub> (590.85). Source: JIN YING ZI *Rosa laevigata*. Ref: 1326.

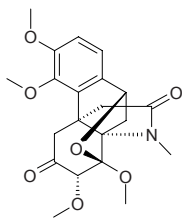
**16423 3-Oxo-skimmiarepin**

C<sub>30</sub>H<sub>46</sub>O<sub>5</sub> (486.70). Source: *Zanthoxylum* sp. Ref: 2176.

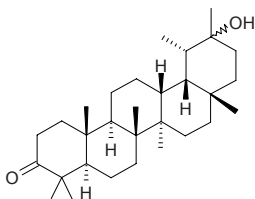


**16424 Oxostephamiersine**

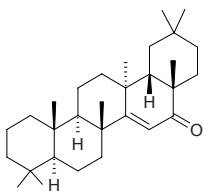
[52466-83-8] C<sub>21</sub>H<sub>25</sub>NO<sub>7</sub> (403.44). Prisms (MeOH), mp 256°C, 290°C (dimorphism), [α]<sub>D</sub><sup>27</sup> = +88.25° (c = 1.87, CHCl<sub>3</sub>). Source: AO DA LI YA QIAN JIN TENG *Stephania japonica* var. *australis*, QIAN JIN TENG *Stephania japonica*. Ref: 2872.

**16425 3-Oxo taraxastan-20(R or S)-ol**

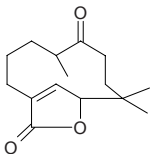
C<sub>30</sub>H<sub>50</sub>O<sub>2</sub> (442.73). Shining needles (CHCl<sub>3</sub>-MeOH) mp 275~278°C, [α]<sub>D</sub><sup>30</sup> = -9.0°. Source: MANG GUO *Mangifera indica*. Ref: 1868.

**16426 16-Oxotaraxer-14-ene**

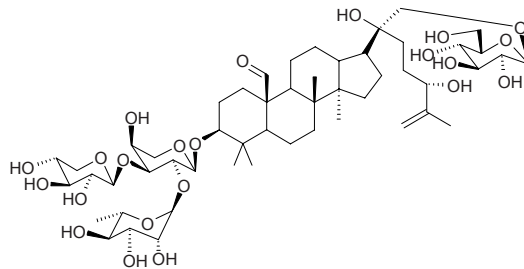
C<sub>30</sub>H<sub>48</sub>O (424.72). Source: SHUI LONG GU *Polypodium niponicum*. Ref: 1414.

**16427 8-Oxo-6,7,9,10-tetrahydrohumulen-1,12-olide**

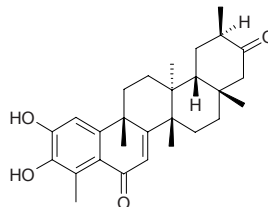
C<sub>15</sub>H<sub>22</sub>O<sub>3</sub> (250.34). Crystals, mp 112~115°C. Pharm: Phytotoxin (6mg/mL: *S. acutus*, mortality = 3%, *L. paucicostata*, mortality = 50%)<sup>[5123]</sup>; cytotoxic (P<sub>388</sub>, IC<sub>50</sub> = 40μmol/L, control *cis*-Platin, IC<sub>50</sub> = 8μmol/L; A549, IC<sub>50</sub> > 40μmol/L, *cis*-Platin, IC<sub>50</sub> = 8μmol/L; HT29, IC<sub>50</sub> > 40μmol/L, *cis*-Platin, IC<sub>50</sub> = 16μmol/L; MEL-28, IC<sub>50</sub> > 40μmol/L, *cis*-Platin, IC<sub>50</sub> = 8μmol/L)<sup>[5123]</sup>. Source: *Asteriscus vogelii* (aerial parts). Ref: 5123.

**16428 19-Oxo-3β,20S,21,24S-tetrahydrodammar-25-ene 3-O-[[α-L-rhamnopyranosyl(1→2)][β-D-xylopyranosyl(1→3)]-α-L-arabinopyranosyl]-21-O-β-D-glucopyranoside**

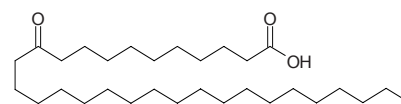
C<sub>52</sub>H<sub>86</sub>O<sub>22</sub> (1063.25). Amorphous powder, [α]<sub>D</sub><sup>20</sup> = 0° (c = 0.63, MeOH). Source: JIAO GU LAN *Gynostemma pentaphyllum* (aerial parts: yield = 0.0015%dw). Ref: 4751.

**16429 6-Oxotingenol**

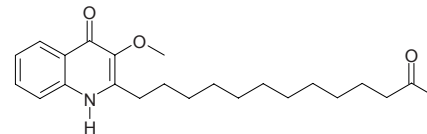
[161127-54-4] C<sub>28</sub>H<sub>36</sub>O<sub>4</sub> (436.60). White powder, mp > 300°C, [α]<sub>D</sub> = -151.8° (c = 0.11, pyridine). Pharm: Cytotoxic (L<sub>1210</sub> IC<sub>50</sub> = 6.0μg/mL; KB IC<sub>50</sub> = 30μg/mL; P<sub>388</sub> IC<sub>50</sub> = 2.6μg/mL); antibacterial (*Staphylococcus aureus* MIC = 40~50μg/mL; *Bacillus subtilis* MIC = 12~14μg/mL). Source: DONG QING YE MEI DENG MU *Maytenus ilicifolia*, JIA NA LI MEI DENG MU *Maytenus canariensis*. Ref: 2891, 2800.

**16430 11-Oxotriacontanoic acid**

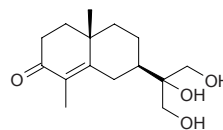
C<sub>30</sub>H<sub>58</sub>O<sub>3</sub> (466.79). mp 99~101°C. Source: YING SU *Papaver somniferum*. Ref: 6.

**16431 2-(12-Oxo-tridecanyl)-3-methoxy-4-quinolone**

C<sub>23</sub>H<sub>33</sub>NO<sub>3</sub> (371.52). White gum. Source: *Spathelia excelsa* (leaf). Ref: 5297.

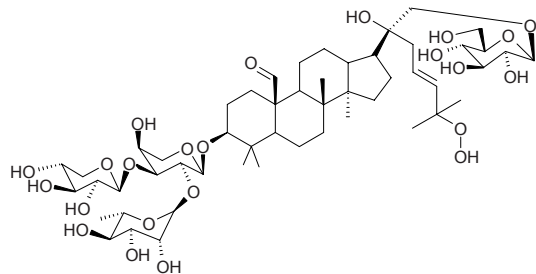
**16432 3-Oxo-11,12,13-trihydroxy-eudesm-4-ene**

C<sub>15</sub>H<sub>24</sub>O<sub>4</sub> (268.36). [α]<sub>D</sub><sup>25</sup> = +21.8° (c = 0.17, CHCl<sub>3</sub>). Source: XI LA SI MAO SHI *Achillea holosericea*. Ref: 2008.



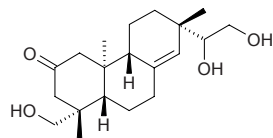
**16433 19-Oxo-3 $\beta$ ,20S,21-trihydroxy-25-hydroperoxydammar-23-ene 3-O-[[ $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)][ $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 3)]- $\alpha$ -L-arabinopyranosyl]-21-O- $\beta$ -D-glucopyranoside**

C<sub>52</sub>H<sub>86</sub>O<sub>23</sub> (1079.25). Amorphous powder,  $[\alpha]_D^{20} = -3.6^\circ$  ( $c = 0.91$ , MeOH). **Source:** JIAO GU LAN *Gynostemma pentaphyllum* (aerial parts: yield = 0.0014%dw). **Ref:** 4751.



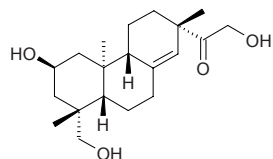
**16434 ent-2-Oxo-15,16,19-trihydroxypimar-8(14)-ene**

C<sub>20</sub>H<sub>32</sub>O<sub>4</sub> (336.48). White amorphous powder,  $[\alpha]_D^{20} = -29.9^\circ$  ( $c = 1.55$ , MeOH). **Source:** XI XIAN *Siegesbeckia orientalis* (aerial parts: yield = 0.0007%). **Ref:** 4764.



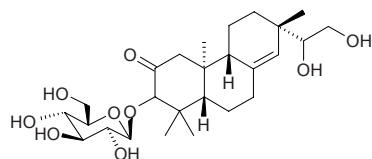
**16435 ent-15-Oxo-2 $\beta$ ,16,19-trihydroxypimar-8(14)-ene**

C<sub>20</sub>H<sub>32</sub>O<sub>4</sub> (336.48). White amorphous powder,  $[\alpha]_D^{20} = -15.1^\circ$  ( $c = 0.55$ , MeOH). **Source:** XI XIAN *Siegesbeckia orientalis* (aerial parts: yield = 0.00037%). **Ref:** 4764.



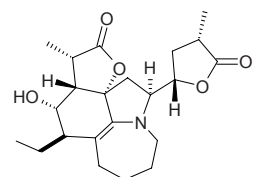
**16436 ent-2-Oxo-3 $\beta$ ,15,16-trihydroxypimar-8(14)-en-3-O- $\beta$ -glucopyranoside**

C<sub>26</sub>H<sub>42</sub>O<sub>9</sub> (498.62). Pale gum,  $[\alpha]_D^{20} = -22.2^\circ$  ( $c = 1.35$ , MeOH). **Source:** XI XIAN *Siegesbeckia orientalis* (aerial parts: yield = 0.00073%). **Ref:** 4764.



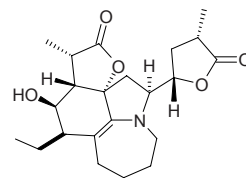
**16437 Oxotuberostemonine**

[20675-62-1] C<sub>22</sub>H<sub>31</sub>NO<sub>5</sub> (389.50). Needles (MeOH), mp 222°C, 217°C. **Source:** BAI BU *Stemona tuberosa*, ZHI LI BAI BU *Stemona sessilifolia*. **Ref:** 6, 1521.



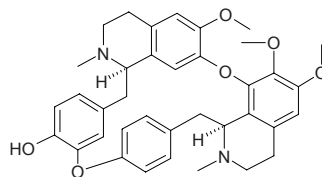
**16438 Oxotuberostemonine II**

C<sub>22</sub>H<sub>31</sub>NO<sub>5</sub> (389.50). White solid, mp 90~91°C. **Source:** BAI BU *Stemona tuberosa*. **Ref:** 673.



**16439 Oxyacanthine**

Oxyacanthine; 6,6',7-Trimethoxy-2,2'-dimethoxyacanthan-12'-ol [548-40-3] C<sub>37</sub>H<sub>40</sub>N<sub>2</sub>O<sub>6</sub> (608.74). Crystals (pet. ether), mp 212~214°C,  $[\alpha]_D^{29} = +285.6^\circ$  ( $c = 0.5$ , CHCl<sub>3</sub>); mp 208~214°C, 216~217°C. **Pharm:** Adrenaline antagonist; antibacterial (*Mycobacterium tuberculosis*, *Staphylococcus aureus* and *Mycobacterium smegmatis*, MIC = 1 mg/mL); antifungal (*Candida albicans*, MIC = 1 mg/mL); antineoplastic (hmn HeLa-S<sub>3</sub>, ED<sub>50</sub> = 3 $\mu$ g/mL, mus ascites carcinoma, 40mg/mL); choleric; vasodilator; LD<sub>50</sub> (mus, ip) = 50mg/kg. **Source:** BAN RUI TANG SONG CAO *Thalictrum petaloideum* (root: content = 0.23%)<sup>[5508]</sup>, CHANG YUAN YE XIAO BO *Berberis oblonga*, CI YE SHI DA GONG LAO *Mahonia acanthifolia*, DA YE TANG SONG CAO *Thalictrum faberi* (root: content < 0.001%)<sup>[5508]</sup>, DUO HUA XIAO BO *Berberis floribunda*, GE LI FEI SI SHI DA GONG LAO *Mahonia griffithii*, HUANG GEN SHU *Xanthorhiza simplicissima*, HUANG XIAO BO *Berberis tschonoskiana*, JIAN YE SHI DA GONG LAO *Mahonia aquifolium*, JIN SI MA WEI LIAN *Thalictrum glandulosissimum* (root: content < 0.001%)<sup>[5508]</sup>, LAI SHI NA TE SHI DA GONG LAO *Mahonia leschenaultii*, LAN BO TE XIAO BO *Berberis lambertii*, MA WEI LIAN *Thalictrum foliolosum* (root: content < 0.001%)<sup>[5508]</sup>, MAN NI PU ER SHI DA GONG LAO *Mahonia manipurensis*, OU ZHOU XIAO BO *Berberis vulgaris*, PA LI BEI FANG SHI DA GONG LAO *Mahonia borealis*, PU FU SHI DA GONG LAO *Mahonia repens*, QUAN YUAN YE XIAO BO *Berberis integerrima*, RI BEN XIAO BO *Berberis thunbergii*, TOU MING TANG SONG CAO *Thalictrum lucidum*, TU HUANG LIAN *Berberis julianae*, XI JIN SHI DA GONG LAO *Mahonia sikkimensis*, XI MENG SI SHI DA GONG LAO *Mahonia simonsii*, XI YE GONG LAO MU *Mahonia fortunei*, XIA XU TANG SONG CAO *Thalictrum atriplex* (root: content < 0.001%)<sup>[5508]</sup>, XIAO BO *Berberis amurensis*, XIAO GUO TANG SONG CAO *Thalictrum microgynum* (root: content < 0.001%)<sup>[5508]</sup>, YAN GUO CAO *Thalictrum thunbergii* (root: content < 0.001%)<sup>[5508]</sup>, YING SHUI HUANG LIAN *Thalictrum simplex* [Syn. *Thalictrum simplex* var. *brevipes*] (root: content = 0.12%)<sup>[5508]</sup>, ZHI ZONG ZHUANG HUA XU XIAO BO *Berberis orthobotrys*, *Albertisia papuana*, *Cocculus leaebe*, *Magnolia compressa*, *Berberis* spp., *Mahonia* spp., occurs in many plants. **Ref:** 4, 6, 658, 660, 1521, 5508.

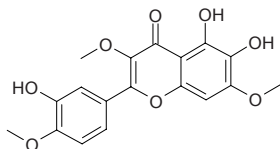


**16440 Oxyyanin B**

5,6,3'-Trihydroxy-3,7,4'-trimethoxyflavone [548-74-3] C<sub>18</sub>H<sub>16</sub>O<sub>8</sub> (360.33).

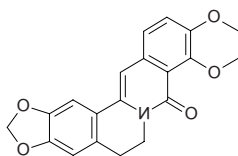
**Pharm:** Allergenic. **Source:** NI RI LI YA LIANG RUI SU MU

*Distemonanthus benthamianus*. **Ref:** 658.

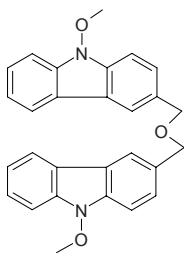
**16441 Oxyberberine**

[549-21-3] C<sub>20</sub>H<sub>17</sub>NO<sub>5</sub> (351.36). mp 198~200°C. **Source:** XIAO BO *Berberis*

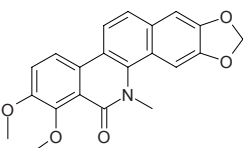
*amurensis*, MA WEI LIAN *Thalictrum foliolosum*. **Ref:** 6.

**16442 3,3'-[Oxybis(methylene)]bis(9-methoxy-9H-carbazole)**

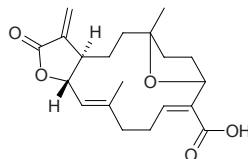
C<sub>28</sub>H<sub>24</sub>N<sub>2</sub>O<sub>3</sub> (436.52). Brown gum. **Pharm:** Antibacterial (*Staphylococcus aureus*, MIC = 50µg/mL, MIC = 0.115µmol/L, control Kanamycin, MIC = 3.13µg/mL; *Escherichia coli*, MIC = 25µg/mL, MIC = 0.057µmol/L, Kanamycin, MIC = 12.5µg/mL; *Proteus vulgaris*, MIC = 6.25µg/mL, MIC = 0.014µmol/L, Kanamycin, MIC = 12.5µg/mL); antifungal (*Aspergillus niger*, MIC = 25µg/mL, MIC = 0.057µmol/L; *Candida albicans*, MIC = 25µg/mL, MIC = 0.057µmol/L, control Fluconazole, MIC = 25µg/mL, MIC = 0.082µmol/L). **Source:** YIN DU JIU LI XIANG *Murraya koenigii* (stem cortex). **Ref:** 5299.

**16443 Oxychelerythrine**

C<sub>21</sub>H<sub>17</sub>NO<sub>5</sub> (363.37). **Source:** FEI LONG ZHANG XUE *Toddalia asiatica* [Syn. *Toddalia aculeata*; *Paullinia asiatica*], RU DI JIN NIU *Zanthoxylum nitidum*, YE HUA JIAO PI *Zanthoxylum simulans*. **Ref:** 2949, 1290, 2950.

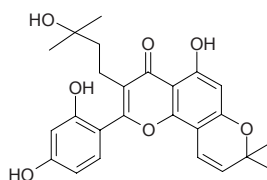
**16444 4,7-Oxycycloanisomelic acid**

[102567-16-8] C<sub>20</sub>H<sub>26</sub>O<sub>5</sub> (346.43). White powder, mp 213~215°C, [α]<sub>D</sub><sup>23</sup> = -22.4° (c = 1.0, CHCl<sub>3</sub>). **Pharm:** Cytotoxic (KB, *in vitro*, IC<sub>50</sub> = 1.6µg/mL). **Source:** GUANG FANG FENG *Anisomeles indica* [Syn. *Epimeredi indica*]. **Ref:** 2866.

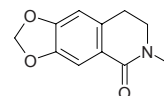
**16445 Oxydihydromorusin**

Morusinol [62949-93-3] C<sub>25</sub>H<sub>26</sub>O<sub>7</sub> (438.48). Crystals (MeOH), mp 215~216°C.

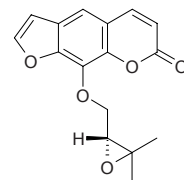
**Source:** SANG BAI PI *Morus alba*, *Morus* spp. **Ref:** 2961.

**16446 Oxyhydrastinine**

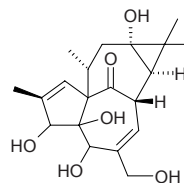
[552-29-4] C<sub>11</sub>H<sub>11</sub>NO<sub>3</sub> (205.22). Crystals (pet. Ether), mp 98°C. **Source:** JI YING SU *Argemone mexicana*, XI GUO JIAO HUI XIANG *Hypecoum leptocarpum*, YAN JIN *Fumaria schleicheri*, *Papaver dubium* var. *glabrum*. **Ref:** 1521, 2909, 37.

**16447 Oxyimperatorin‡**

Heraclenin; Epoxyimperatorin; Prangenin; Imperatorin oxide C<sub>16</sub>H<sub>14</sub>O<sub>5</sub> (286.29). **Source:** CHOU SHAN YANG *Orixa japonica* (stem: yield = 0.0014%dw). **Ref:** 4774. ‡Note: see compound 9419.

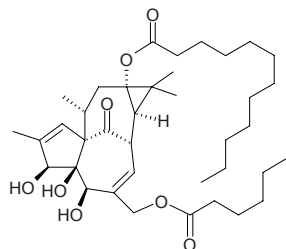
**16448 13-Oxyingenol**

C<sub>20</sub>H<sub>28</sub>O<sub>6</sub> (364.44). **Source:** GAN SUI *Euphorbia kansui*. **Ref:** 2953.

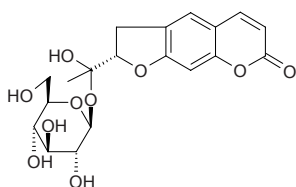


**16449 13-Oxyingenol-13-dodecanoate-20-hexanoate**

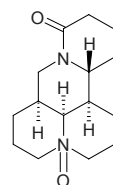
$C_{38}H_{60}O_8$  (644.90). Source: GAN SUI *Euphorbia kansui*. Ref: 2953.

**16450 Oxymarmesinin 5'-O-β-D-glucopyranoside**

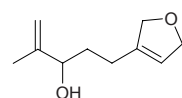
$C_{20}H_{24}O_{10}$  (424.41). mp 184–188°C,  $[\alpha]_D^{22} = -48^\circ$ . Source: BEI SHA SHEN *Glehnia littoralis* (fruit). Ref: 3525.

**16451 Oxymatrine**

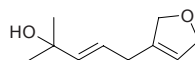
Matrine *N*-oxide [6837-52-8]  $C_{15}H_{24}N_2O_2$  (264.37). mp 206–208°C. Pharm: Analgesic (mus, chemical and heat stimulation models); antiarrhythmic (animal, induced by aconitine, chloroform-adrenalin, ouabain,  $CaCl_2$  and coronary ligation); antineoplastic; antihypertensive (anesthetic dog, iv); anti-inflammatory (acute exudative); benzedrine antagonist; caffeine antagonist; CNS activity (increases contractility of atrium, rbt, *in vitro*, 0.03–90 μmol/L, presents dose-response relationship); antipyretic (normal rat); sedative (inhibits autonomic movement in mus); strengthens CNS inhibition induced by chlorpromazine. Source: BAI CI HUA *Sophora viciifolia*, KU DOU ZI *Sophora alopecuroides* (seed: content = 2.16%<sup>[5508]</sup>), KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*] (dried root: content scope of 7 origins = 0.79%–3.60%, mean content = 1.34%<sup>[5508]</sup>), SHA SHENG HUAI *Sophora moorcroftiana*, SHAN DOU GEN *Sophora subprostrata* [Syn. *Sophora tonkinensis*] (root and rhizome: mean content of 16 origins = 0.906%<sup>[5508]</sup>). Ref: 4, 546, 564, 593, 658, 5501, 5508.

**16452 1,10-Oxy-α-myrcene hydroxide**

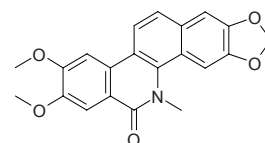
$C_{10}H_{16}O_2$  (168.24). Colorless oil,  $[\alpha]_D = -4.7^\circ$  ( $c = 0.4$ ,  $CHCl_3$ ). Source: HUANG HUA HAO *Artemisia annua* (seed). Ref: 3435.

**16453 1,10-Oxy-β-myrcene hydroxide**

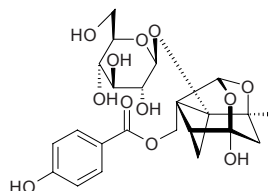
$C_{10}H_{16}O_2$  (168.24). Colorless oil,  $[\alpha]_D = -22.2^\circ$  ( $c = 0.3$ ,  $CHCl_3$ ). Source: HUANG HUA HAO *Artemisia annua* (seed). Ref: 3435.

**16454 Oxynitidine**

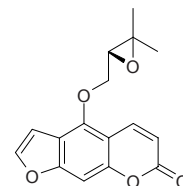
[548-31-2]  $C_{21}H_{17}NO_5$  (363.37). mp 284–285°C. Source: RU DI JIN NIU *Zanthoxylum nitidum*. Ref: 6.

**16455 Oxypaeoniflorin**

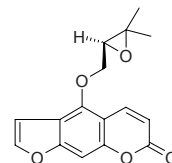
[39011-91-1]  $C_{23}H_{28}O_{12}$  (496.47). Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*], CHI SHAO *Paeonia lactiflora* wild, CHUAN CHI SHAO *Paeonia veitchii*, CAO SHAO YAO *Paeonia obovata*, MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*]. Ref: 2, 660.

**16456 (S)-(-)-Oxypeucedanin**

$C_{16}H_{14}O_5$  (286.29). Pharm: NO Production inhibitor (LPS-activated mouse peritoneal macrophages,  $IC_{50} = 57 \mu\text{mol/L}$ , control *L*-NMMA,  $IC_{50} = 28 \mu\text{mol/L}$ )<sup>[4454]</sup>. Source: FEN CHA DANG GUI *Angelica furcijuga* (flower). Ref: 4454.

**16457 (+)-Oxypeucedanin**

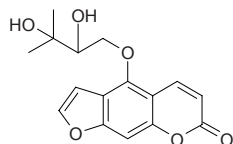
[3172-02-2]  $C_{16}H_{14}O_5$  (286.29). Pharm: Antimicrobial; piscicide. Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], SHUAN CHI QIN *Prangos pabularia*, YUAN DANG GUI *Angelica archangelica*, ZHAO ZE QIAN HU *Peucedanum palustre*. Ref: 4, 658.



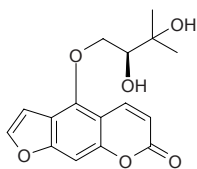


**16458 Oxypeucedanin hydrate**

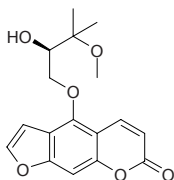
$C_{16}H_{16}O_6$  (304.30). Source: *Niphogeton ternata*. Ref: 4156.

**16459 (S)-(-)-Oxypeucedanin hydrate**

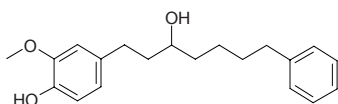
$C_{16}H_{16}O_6$  (304.30). Pharm: NO Production inhibitor (LPS-activated mouse peritoneal macrophages, 100 $\mu$ mol/L, InRt = (15.1 $\pm$ 3.0)%, control *L*-NMMA, 100 $\mu$ mol/L, InRt = (79.2 $\pm$ 0.9)%). Source: FEN CHA DANG GUI *Angelica furcijuga* (flower). Ref: 4454.

**16460 Oxypeucedanin methanolate**

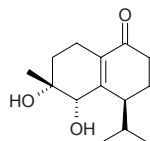
$C_{17}H_{18}O_6$  (318.33). Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*]. Ref: 5392.

**16461 Oxyphyllacinol**

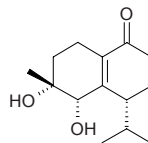
1-(4'-Hydroxy-3'-methoxyphenyl)-7-phenyl-3-heptanol  $C_{20}H_{26}O_3$  (314.43). Green liquid. Source: YI ZHI REN *Alpinia oxyphylla*. Ref: 845.

**16462 Oxyphyllenodiol A**

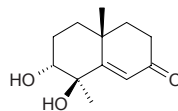
$C_{14}H_{22}O_3$  (238.33). Pharm: NO production Inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages,  $IC_{50}$  = 28 $\mu$ mol/L; control *L*-NMMA,  $IC_{50}$  = 28 $\mu$ mol/L);  $\beta$ -hexosaminidase release inhibitor (RBL-2H3 Cells, 100 $\mu$ mol/L, InRt = 1.7%; control Curcumin, InRt = 62.6%). Source: YI ZHI REN *Alpinia oxyphylla* (fruit: yield = 0.020%dw). Ref: 4655.

**16463 Oxyphyllenodiol B**

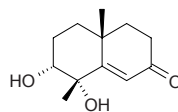
$C_{14}H_{22}O_3$  (238.33). Pharm: NO production Inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages,  $IC_{50}$  > 100 $\mu$ mol/L; control *L*-NMMA,  $IC_{50}$  = 28 $\mu$ mol/L);  $\beta$ -hexosaminidase release inhibitor (RBL-2H3 Cells, 100 $\mu$ mol/L, InRt = -3.1%; control Curcumin, InRt = 62.6%). Source: YI ZHI REN *Alpinia oxyphylla* (fruit: yield = 0.0031%dw). Ref: 4655.

**16464 Oxyphyllenone A**

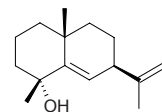
$C_{12}H_{18}O_3$  (210.28). Pharm: NO production Inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages,  $IC_{50}$  = 35 $\mu$ mol/L; control *L*-NMMA,  $IC_{50}$  = 28 $\mu$ mol/L);  $\beta$ -hexosaminidase release inhibitor (RBL-2H3 Cells, 100 $\mu$ mol/L, InRt = -4.7%; control Curcumin, InRt = 62.6%). Source: YI ZHI REN *Alpinia oxyphylla* (fruit: yield = 0.0063%dw). Ref: 4655.

**16465 Oxyphyllenone B**

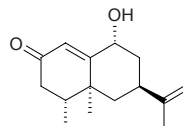
$C_{12}H_{18}O_3$  (210.28). Pharm: NO production Inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages,  $IC_{50}$  > 100 $\mu$ mol/L; control *L*-NMMA,  $IC_{50}$  = 28 $\mu$ mol/L);  $\beta$ -hexosaminidase release inhibitor (RBL-2H3 Cells, 100 $\mu$ mol/L, InRt = -1.8%; control Curcumin, InRt = 62.6%). Source: YI ZHI REN *Alpinia oxyphylla* (fruit: yield = 0.0021%dw). Ref: 4655.

**16466 Oxyphyllol A**

$C_{15}H_{24}O$  (220.36). Colorless oil,  $[\alpha]_D^{26}$  = +17.7° ( $c$  = 0.30,  $CHCl_3$ ). Pharm: NO production Inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages,  $IC_{50}$  = 42 $\mu$ mol/L; control *L*-NMMA,  $IC_{50}$  = 28 $\mu$ mol/L);  $\beta$ -hexosaminidase release inhibitor (RBL-2H3 Cells, 100 $\mu$ mol/L, InRt = -24.0%; control Curcumin, InRt = 62.6%). Source: YI ZHI REN *Alpinia oxyphylla* (fruit: yield = 0.0038%dw). Ref: 4655.

**16467 Oxyphyllol B**

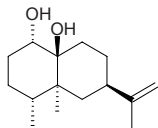
$C_{15}H_{22}O_2$  (234.34). Colorless oil,  $[\alpha]_D^{28}$  = +10.4° ( $c$  = 0.10,  $CHCl_3$ ). Source: YI ZHI REN *Alpinia oxyphylla* (fruit: yield = 0.030%dw). Ref: 4655.



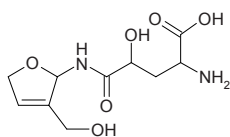


**16468 Oxyphyllol C**

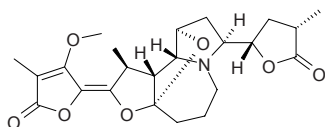
$C_{15}H_{26}O_2$  (238.37). Colorless oil,  $[\alpha]_D^{29} = +6.5^\circ$  ( $c = 1.60$ ,  $CHCl_3$ ). **Pharm:**  $\beta$ -hexosaminidase release inhibitor (RBL-2H3 Cells,  $100\mu\text{mol/L}$ ,  $\text{InRt} = 8.2\%$ ; control Curcumin,  $\text{InRt} = 62.6\%$ ). **Source:** YI ZHI REN *Alpinia oxyphylla* (fruit: yield =  $0.027\%$ dw). **Ref:** 4655.

**16469 Oxypinnatanine**

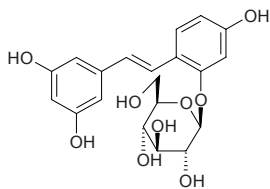
[52329-55-2]  $C_{10}H_{16}N_2O_6$  (260.25). Crystals (EtOH aq.), mp  $182\sim 185^\circ\text{C}$  (dec),  $[\alpha]_D^{24} = +5.5^\circ$  ( $c = 0.8$ ,  $H_2O$ ). **Source:** XUAN CAO GEN *Hemerocallis fulva*, OU ZHOU SHENG GU YOU *Staphylea pinnata*. **Ref:** 2833.

**16470 Oxyprotostemonine**

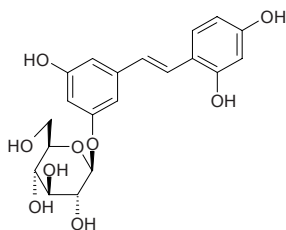
$C_{23}H_{29}NO_7$  (431.49). Amorphous,  $[\alpha]_D^{20} = +142^\circ$  ( $c = 0.2$ , MeOH). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $LC_{50} = 159\text{mg/L}$ ,  $EC_{50} = 47\text{mg/L}$ ). **Source:** DI TANG BAI BU *Stemona kerrii*, *Stemona curtisii*. **Ref:** 3409.

**16471 Oxyresveratrol 2-O-β-D-glucopyranoside**

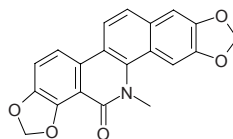
$C_{20}H_{22}O_9$  (406.39). Amorphous powder.  $[\alpha]_D^{21} = -59.1^\circ$  ( $c = 2.13$ , MeOH). **Source:** WEI JING BAI HE *Schoenocaulon officinale* (rhizome). **Ref:** 4210.

**16472 Oxyresveratrol 3'-O-β-D-glucopyranoside**

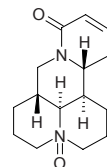
$C_{20}H_{22}O_9$  (406.39). **Source:** WEI JING BAI HE *Schoenocaulon officinale* (rhizome). **Ref:** 4210.

**16473 Oxysanguinarine**

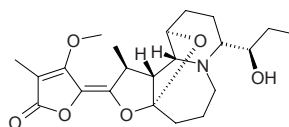
Hydroxysanguinarine [548-30-1]  $C_{20}H_{13}NO_5$  (347.33). mp  $360\sim 361^\circ\text{C}$ . **Source:** BAI QU CAI *Chelidonium majus*, BO LUO HUI *Macleaya cordata*, JU HUA HUANG LIAN *Corydalis pallida*, YING SU KE *Papaver somniferum*. **Ref:** 6.

**16474 N-Oxysophocarpine**

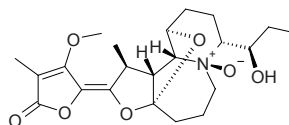
[548-30-1]  $C_{15}H_{22}N_2O_2$  (262.35). mp  $198\sim 199^\circ\text{C}$ ,  $206\sim 208^\circ\text{C}$ . **Source:** BAI QU CAI *Sophora viciifolia*, BAI CI HUA YE *Sophora viciifolia*, KU DOU GEN *Sophora alopecuroides*, KU DOU ZI *Sophora alopecuroides* (seed: content =  $0.906\%$ <sup>[5508]</sup>), KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*] (dried root: content scope of 3 origins =  $0.73\%\sim 2.12\%$ , mean content =  $1.59\%$ <sup>[5508]</sup>), KU SHEN SHI *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 2, 546, 564, 593, 660, 5508.

**16475 Oxytemokerrin**

4-Methoxy-3-methyl-5-[(2Z,11aS)-3at,11t-epoxy-8t-((1R)-1-hydroxypropyl)-1c-methyl-(11ar,11bc)-dodecahydro-furo[3,2-c]pyrido[1,2-a]azepin-2-ylidene]-5H-furan-2-one  $C_{22}H_{31}NO_6$  (405.50). Amorphous,  $[\alpha]_D^{20} = +289^\circ$  ( $c = 0.4$ , MeOH). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $LC_{50} = 5.9\text{mg/L}$ ,  $EC_{50} = 0.7\text{mg/L}$ ). **Source:** DI TANG BAI BU *Stemona kerrii*, *Stemona curtisii*, *Stemona* sp.(HG915). **Ref:** 3409.

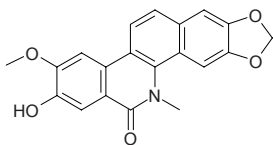
**16476 Oxytemokerrin-N-oxide**

4-Methoxy-3-methyl-5-[(2Z,11aS)-3at,11t-epoxy-8t-((1R)-1-hydroxypropyl)-1c-methyl-(11ar,11bc)-dodecahydro-furo[3,2-c]pyrido[1,2-a]azepin-2-ylidene]-5H-furan-2-one-N-oxide  $C_{22}H_{31}NO_7$  (421.49). Amorphous,  $[\alpha]_D^{20} = +247^\circ$  ( $c = 0.3$ , MeOH). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $LC_{50} = 12.5\text{mg/L}$ ,  $EC_{50} = 0.4\text{mg/L}$ ). **Source:** DI TANG BAI BU *Stemona kerrii*, *Stemona curtisii*, *Stemona* sp.(HG915). **Ref:** 3409.

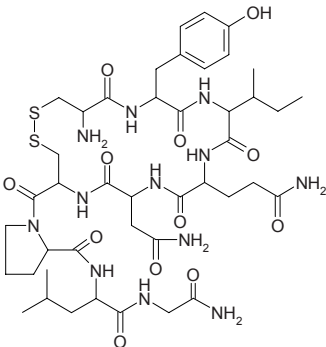


**16477 Oxyterihanine**

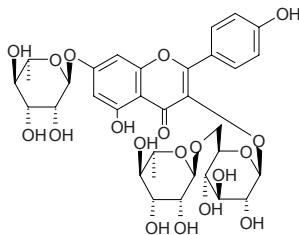
[95-66-54-9] C<sub>20</sub>H<sub>15</sub>NO<sub>5</sub> (349.35). mp > 300°C. Source: RU DI JIN NIU *Zanthoxylum nitidum*. Ref: 1290, 2841.

**16478 Oxytocin**

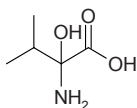
Pitocin; Syntocinon; Synpitan; Oxystin [50-56-6] C<sub>43</sub>H<sub>66</sub>N<sub>12</sub>O<sub>12</sub>S<sub>2</sub> (1007.21). White powder, [α]<sub>D</sub><sup>22</sup> = -26.2° (c = 0.53), soluble in water, *n*-butanal.<sup>[5507]</sup>  
Source: NIU NAO *Bos taurus domesticus*; *Bubalus bubalis*. Ref: 6, 5507.

**16479 Oxytroside**

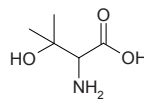
C<sub>33</sub>H<sub>40</sub>O<sub>19</sub> (740.68). Source: DUO YE JI DOU *Oxytropis myriophylla*. Ref: 2864.

**16480 α-Oxyvaline**

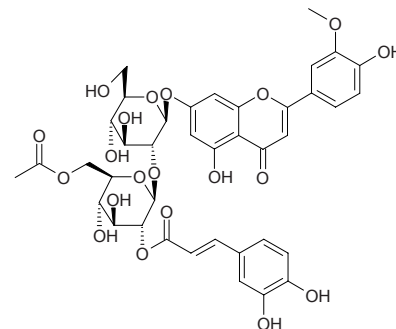
α-Hydroxyvaline C<sub>5</sub>H<sub>11</sub>NO<sub>3</sub> (133.15). mp L(+) 205°C, D(-) 205°C, (dl) 240°C (dec). Source: XIONG ZHANG *Selenarctos thibetanus*; *Ursus arctos*. Ref: 6, 660.

**16481 β-Oxyvaline**

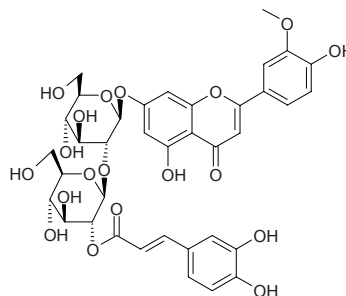
β-Hydroxyvaline C<sub>5</sub>H<sub>11</sub>NO<sub>3</sub> (133.15). mp L(+) 205°C, D(-) 205, (dl) 240°C (dec). Source: XIONG ZHANG *Selenarctos thibetanus*; *Ursus arctos*. Ref: 6, 660.

**16482 Ozturkoside A**

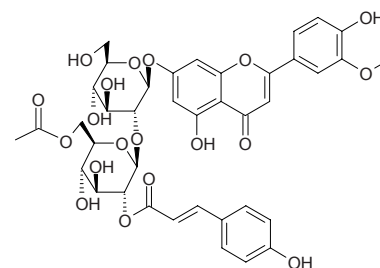
Chrysoeriol 7-*O*-[2'''-*O*-caffeoyl-6'''-*O*-acetyl-β-*D*-glucopyranosyle-(1→2)-β-*D*-glucopyranoside] C<sub>39</sub>H<sub>40</sub>O<sub>20</sub> (828.74). Yellow amorphous powder (MeOH). Source: *Sideritis ozturkii* (aerial parts). Ref: 3827.

**16483 Ozturkoside B**

Chrysoeriol 7-*O*-[2'''-*O*-caffeoyl-β-*D*-glucopyranosyl-(1→2)-β-*D*-glucopyranoside] C<sub>37</sub>H<sub>38</sub>O<sub>19</sub> (786.70). Yellow amorphous powder (MeOH). Source: *Sideritis ozturkii* (aerial parts). Ref: 3827.

**16484 Ozturkoside C**

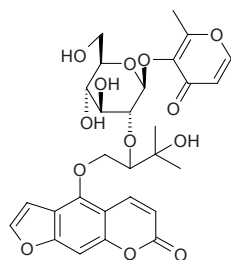
Chrysoeriol 7-*O*-[2'''-*O*-*p*-coumaroyl-6'''-β-*O*-acetyl-*D*-glucopyranosyl-(1→2)-β-*D*-glucopyranoside] C<sub>39</sub>H<sub>40</sub>O<sub>19</sub> (812.74). Yellow amorphous powder (MeOH). Source: *Sideritis ozturkii* (aerial parts). Ref: 3827.



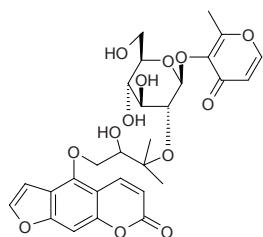
## P

**16485 Pabularin A**

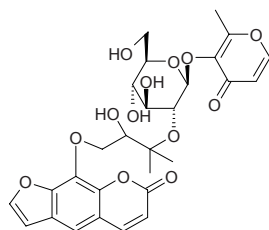
$C_{28}H_{30}O_{13}$  (574.54).  $[\alpha]_D^{25} = -166.7^\circ$  ( $c = 0.09$ , MeOH). Source: SHUAN CHI QIN *Prangos pabularia*. Ref: 2004.

**16486 Pabularin B**

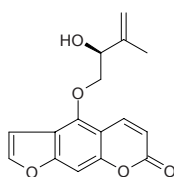
$C_{28}H_{30}O_{13}$  (574.54).  $[\alpha]_D^{25} = -211.4^\circ$  ( $c = 0.035$ , MeOH). Source: SHUAN CHI QIN *Prangos pabularia*. Ref: 2004.

**16487 Pabularin C**

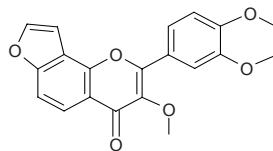
$C_{28}H_{30}O_{13}$  (574.54).  $[\alpha]_D^{25} = -33.3^\circ$  ( $c = 0.09$ , MeOH). Source: SHUAN CHI QIN *Prangos pabularia*. Ref: 2004.

**16488 Pabulenol**

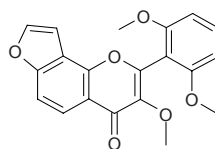
5-[2''(R)-Hydroxy-3''-methyl-3''-butenyloxy]furocoumarin [37551-62-5]  
 $C_{16}H_{14}O_5$  (286.29). mp 122~123°C; Colorless amorphous solid,  $[\alpha]_D^{23} = +63.5^\circ$  ( $c = 0.126$ ,  $CHCl_3$ ). Pharm: Antimycobacterial (*Mycobacterium fortuitum* ATCC6841, MIC = 128µg/mL, control Isoniazide, MIC = 0.5µg/mL; *Mycobacterium smegmatis* ATCC14486, MIC = 64µg/mL, Isoniazide, MIC = 2µg/mL; *Mycobacterium phlei* ATCC11758, MIC = 64µg/mL, Isoniazide, MIC = 2µg/mL; *Mycobacterium aurum* Pasteur Institute 104482, MIC = 64µg/mL, Isoniazide, MIC = 2µg/mL)<sup>[5469]</sup>. Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], CHOU CAO *Ruta graveolens*, *Niphogeton ternata*, *Ducrosia anethifolia* (aerial parts). Ref: 2, 6, 4156, 5469.

**16489 Pachycarin A**

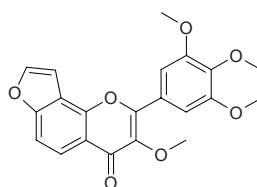
$C_{20}H_{16}O_6$  (352.35). Acicular crystals (acetone), mp 138°C. Source: KU TAN ZI *Milletia pachycarpa*. Ref: 821.

**16490 Pachycarin B**

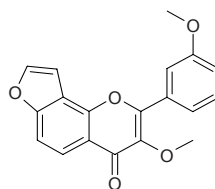
$C_{20}H_{16}O_6$  (352.35). Colorless acicular crystals, mp 187~188°C. Source: KU TAN ZI *Milletia pachycarpa*. Ref: 831.

**16491 Pachycarin C**

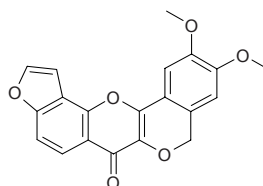
3,3',4',5'-Tetramethoxyfuran[4'',5'':8,7]foavone  $C_{21}H_{18}O_7$  (382.37). Yellowish powder, mp 156~158°C. Source: KU TAN ZI *Milletia pachycarpa*. Ref: 2147.

**16492 Pachycarin D**

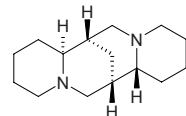
3,3'-Dimethoxyfuran[4'',5'':8,7]foavone  $C_{19}H_{14}O_5$  (322.32). White crystals, mp 170~171°C. Source: KU TAN ZI *Milletia pachycarpa*. Ref: 2147.

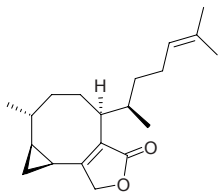
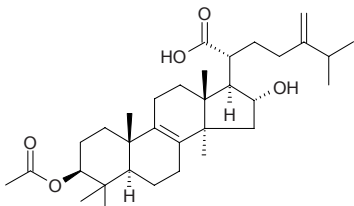
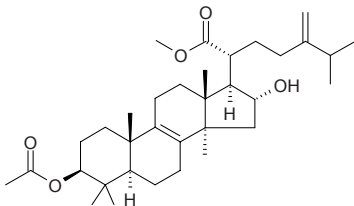
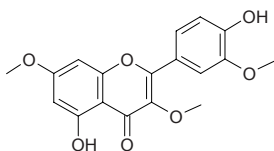
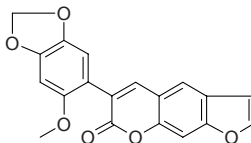
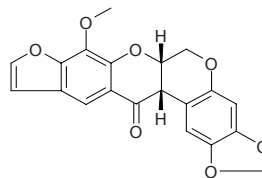
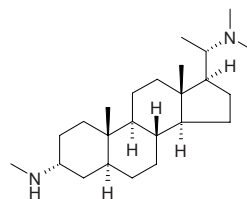
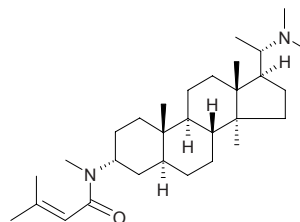
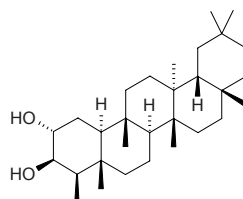
**16493 Pachycarin E**

2,3-Dimethoxyfuran[4'',5'':11,10]-7-oxo-[2]benzopyrano[4',3-b][1]benzopyran  $C_{20}H_{14}O_6$  (350.33). Palm yellow crystals, mp 218~221°C. Source: KU TAN ZI *Milletia pachycarpa*. Ref: 2147.

**16494 Pachycarpine**

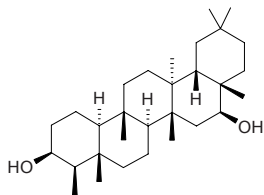
[492-08-0]  $C_{15}H_{26}N_2$  (234.39). bp 173~174°C/8mmHg. Source: YE JUE MING *Thermopsis lupinoides*. Ref: 6.



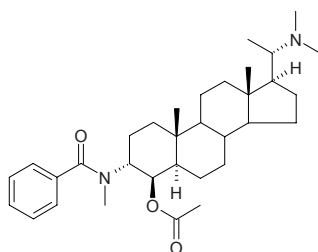
**16495 Pachylactone**[89199-96-2] C<sub>20</sub>H<sub>30</sub>O<sub>2</sub> (302.46). Oil, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -23.3° (c = 0.18, CHCl<sub>3</sub>).**Pharm:** Cytotoxic (P<sub>388</sub> ED<sub>50</sub> = 1.1 μg/mL, P<sub>388</sub>/DOX ED<sub>50</sub> = 1.8 μg/mL, KB ED<sub>50</sub> = 3.7 μg/mL, non-cellule lung cancer NSCLCN6-L16 ED<sub>50</sub> = 1.0 μg/mL).**Source:** DI ZHONG HAI ZONG HAI ZAO *Dilophus ligulatus*, HOU WANG ZAO *Pachydictyon coriaceum*. **Ref:** 3720, 3721.**16496 Pachymic acid**[29070-92-6] C<sub>33</sub>H<sub>52</sub>O<sub>5</sub> (528.78). White acicular crystals, mp 295–296°C.**Source:** FU LING *Poria cocos*. **Ref:** 2, 403.**16497 Pachymic acid methyl ester**C<sub>35</sub>H<sub>54</sub>O<sub>5</sub> (542.81). **Source:** FU LING *Poria cocos*. **Ref:** 660.**16498 Pachypodol**[33708-72-4] C<sub>18</sub>H<sub>16</sub>O<sub>7</sub> (344.32). mp 164–166°C. **Pharm:** Cytotoxic (quinone reductase induction assay in cultured Hepa1c1c7 mouse hepatoma cells)<sup>[5038]</sup>; antiviral; anti-androgenic inactive<sup>[4106]</sup>. **Source:** DUO SUI PO BU MU *Cordia multispicata* (leaf), GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*], GUANG JIE QIU HAI TANG *Begonia glabra*, HUO XIANG *Agastache rugosus*, NAN CHUAN GUAN CHUN HUA *Microtoena prainiana* (stem: yield = 0.00004%dw)<sup>[4752]</sup>, ROU MAO QIE *Solanum pubescens*, SAN LIE XUE TONG *Macaranga triloba*, *Miliusa balansae* (branch and leaf: yield = 0.052%dw). **Ref:** 2, 505, 658, 660, 3016, 4106, 4752, 5038.**16499 Pachyrrhizin**[10091-01-7] C<sub>19</sub>H<sub>12</sub>O<sub>6</sub> (336.30). Yellow-green needles, mp 207–209°C.**Pharm:** Antiviral (HSV-1, 50 μg/mL, InRt = 26.1%; HSV-2, 50 μg/mL, InRt = 23.7%)<sup>[4180]</sup>. **Source:** DOU SHU *Pachyrrhizus erosus* (seed), *Neorautanenia edulis*, *Neorautanenia pseudopachyrrhiza*. **Ref:** 6, 660, 1521, 4180.**16500 Pachyrrhizone**C<sub>20</sub>H<sub>14</sub>O<sub>7</sub> (366.33). mp 232–240°C (dec). **Pharm:** Pesticide; antiviral (HSV-1, 50 μg/mL, inactive; HSV-2, 50 μg/mL, InRt = 15.5%)<sup>[4180]</sup>. **Source:** DOU SHU *Pachyrrhizus erosus* (seed). **Ref:** 6, 658, 4180.**16501 Pachysamine A**[6801-29-2] C<sub>24</sub>H<sub>44</sub>N<sub>2</sub> (360.63). Colorless lamellar crystals(dichloromethane–acetone), mp 167–168°C, [ $\alpha$ ]<sub>D</sub><sup>10</sup> = +20° (c = 1.24). **Pharm:** Sedative (mus, LD<sub>50</sub> = 89.0 mg/kg, CD<sub>50</sub> = 75.3 mg/kg). **Source:** HAI NAN YE SHAN HUA *Sarcococca vagans*, JIN GANG DA *Croomia japonica*, XUE SHAN LIN *Pachysandra terminalis*. **Ref:** 6, 261, 399, 900.**16502 Pachysamine B**[6792-14-9] C<sub>29</sub>H<sub>50</sub>N<sub>2</sub>O (442.73). mp 171–173°C. **Source:** XUE SHAN LIN *Pachysandra terminalis*. **Ref:** 6.**16503 Pachysandiol A**[17946-96-2] C<sub>30</sub>H<sub>52</sub>O<sub>2</sub> (444.75). mp 278–280°C. **Source:** XUE SHAN LIN *Pachysandra terminalis*. **Ref:** 6.

**16504 Pachysandiol B**

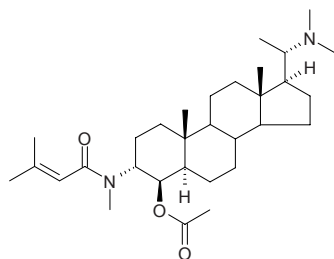
[33465-90-6] C<sub>30</sub>H<sub>52</sub>O<sub>2</sub> (444.75). mp 280~282°C. Source: XUE SHAN LIN  
*Pachysandra terminalis*. Ref: 6.

**16505 Pachysandrine A**

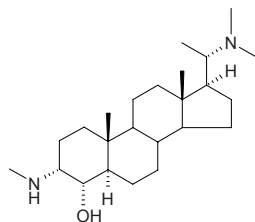
[6879-28-3] C<sub>33</sub>H<sub>50</sub>N<sub>2</sub>O<sub>3</sub> (522.78). mp 235~236°C. Pharm: Sedative;  
antiulcerative (mus, sc, 50mg/kg, gastric ulcer induced by leach stress); LD<sub>50</sub>  
(mus, ip) > 200mg/kg. Source: XUE SHAN LIN *Pachysandra terminalis* (in  
1967, the compound was isolated from the plant)<sup>[5505]</sup>. Ref: 6, 1141, 5505.

**16506 Pachysandrine B**

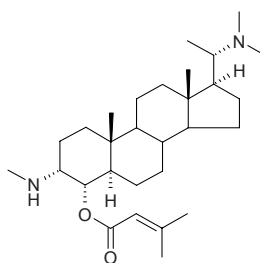
[6879-29-4] C<sub>31</sub>H<sub>52</sub>N<sub>2</sub>O<sub>3</sub> (500.77). mp 187~189°C. Source: XUE SHAN LIN  
*Pachysandra terminalis*. Ref: 6.

**16507 Pachysandrine C**

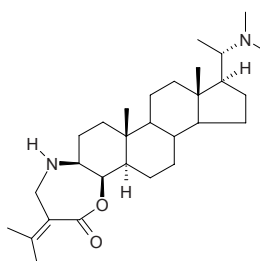
[6801-30-5] C<sub>24</sub>H<sub>44</sub>N<sub>2</sub>O (376.63). mp 212~214°C. Source: XUE SHAN LIN  
*Pachysandra terminalis*. Ref: 6.

**16508 Pachysandrine D**

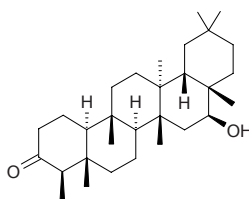
[6911-18-8] C<sub>29</sub>H<sub>50</sub>N<sub>2</sub>O<sub>2</sub> (458.73). mp 184~185°C. Source: XUE SHAN LIN  
*Pachysandra terminalis*. Ref: 6.

**16509 Pachysantermine A**

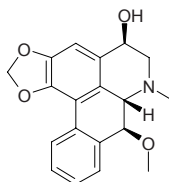
[15027-63-1] C<sub>29</sub>H<sub>48</sub>N<sub>2</sub>O<sub>2</sub> (456.72). mp 260~263°C. Source: XUE SHAN LIN  
*Pachysandra terminalis*. Ref: 6.

**16510 Pachysonol**

[33465-91-7] C<sub>30</sub>H<sub>50</sub>O<sub>2</sub> (442.73). mp 278~280°C. Source: XUE SHAN LIN  
*Pachysandra terminalis*. Ref: 6.

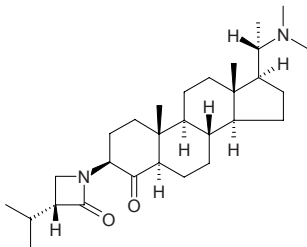
**16511 Pachystaudine**

[67627-76-3] C<sub>19</sub>H<sub>19</sub>NO<sub>4</sub> (325.37). mp 157°C, [α]<sub>D</sub> = +34° (c = 0.5, CHCl<sub>3</sub>).  
Pharm: Antiviral (HSV-1, 50% cytotoxic concentration CC<sub>50</sub> = 68.0 μmol/L,  
effective concentration of inhibiting 50% cell pathological changes ED<sub>50</sub> =  
47.5 μmol/L, selective index CC<sub>50</sub>/ED<sub>50</sub> = 1.4). Source: SI TUO HOU BING  
HUA *Pachypodanthium staudii*, Ref: 3674, 3675, 3676.

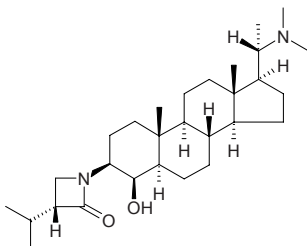


**16512 Pachystermine A**

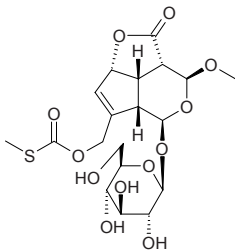
[6156-99-6] C<sub>29</sub>H<sub>48</sub>N<sub>2</sub>O<sub>2</sub> (456.72). Colorless acicular crystals (dichloromethane–acetone), mp 220–224°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +24° (*c* = 1.5). **Pharm:** Prevents ulcer (mus, sc, 50mg/kg); sedative (mus, ip, 100mg/kg); LD<sub>50</sub> (mus) = 365.0mg/kg, CD<sub>50</sub> (mus) = 148.0mg/kg. **Source:** XUE SHAN LIN *Pachysandra terminalis*. **Ref:** 6, 900.

**16513 Pachystermine B**

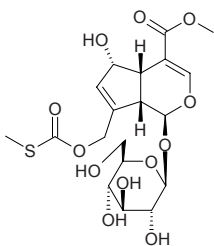
[6157-00-2] C<sub>29</sub>H<sub>50</sub>N<sub>2</sub>O<sub>2</sub> (458.73). mp 256–258°C. **Source:** XUE SHAN LIN *Pachysandra terminalis*. **Ref:** 6.

**16514 Paederia glucoside 1\***

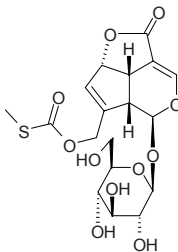
C<sub>19</sub>H<sub>26</sub>O<sub>12</sub>S (478.48). Brown powder, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = –8.6° (*c* = 1.16, MeOH). **Source:** JI SHI TENG *Paederia scandens*. **Ref:** 1963.

**16515 Paederia glucoside 3\***

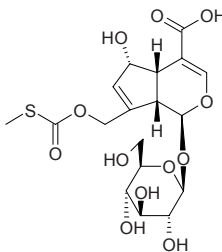
Paederosidic acid methyl ester C<sub>19</sub>H<sub>26</sub>O<sub>12</sub>S (478.48). White powder, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +12.4° (*c* = 0.90, MeOH). **Source:** JI SHI TENG *Paederia scandens*. **Ref:** 1963, 2561.

**16516 Paederoside**

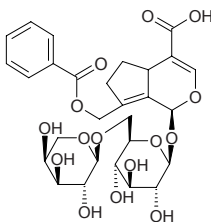
[20547-45-9] C<sub>18</sub>H<sub>22</sub>O<sub>11</sub>S (446.43). mp 122–123°C. **Pharm:** Laxative. **Source:** JI SHI TENG *Paederia scandens*, XIE JI CU YE MU *Lasianthus wallichii* (leaf). **Ref:** 6, 658, 2561, 4238.

**16517 Paederosidic acid**

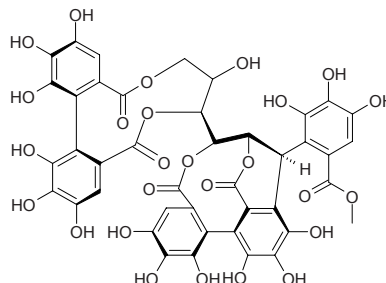
[18842-98-3] C<sub>18</sub>H<sub>24</sub>O<sub>12</sub>S (464.45). Solid +2H<sub>2</sub>O, [ $\alpha$ ]<sub>D</sub><sup>24</sup> = +28.2° (MeOH). **Source:** JI SHI TENG *Paederia scandens*. **Ref:** 2561, 2562.

**16518 Paederotoside**

10-*O*-Benzoyl-6-*O*- $\alpha$ -arabino(1→6)- $\beta$ -glucopyranosyl arborescosidic acid C<sub>28</sub>H<sub>34</sub>O<sub>15</sub> (610.57). [ $\alpha$ ]<sub>D</sub><sup>20</sup> = –29° (*c* = 0.3, MeOH). **Source:** *Paederota lutea*. **Ref:** 3832.

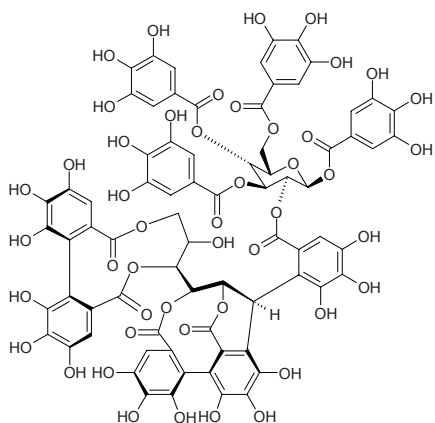
**16519 Paconianiin E**

C<sub>42</sub>H<sub>30</sub>O<sub>26</sub> (950.69). Isolated as C<sub>42</sub>H<sub>30</sub>O<sub>26</sub>·6H<sub>2</sub>O, white amorphous powder, [ $\alpha$ ]<sub>D</sub> = +166.9° (*c* = 0.7, MeOH). **Source:** BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (fresh fruit: yield = 0.0075%fw). **Ref:** 4695.

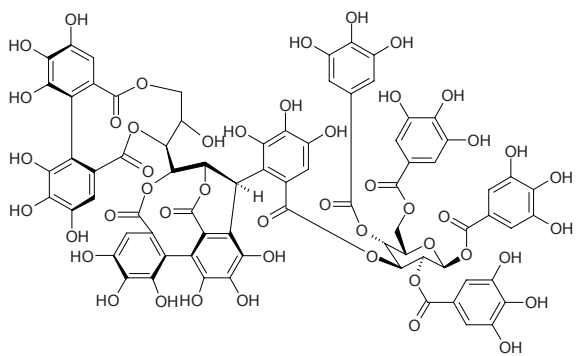


**16520 Paeonianin A**

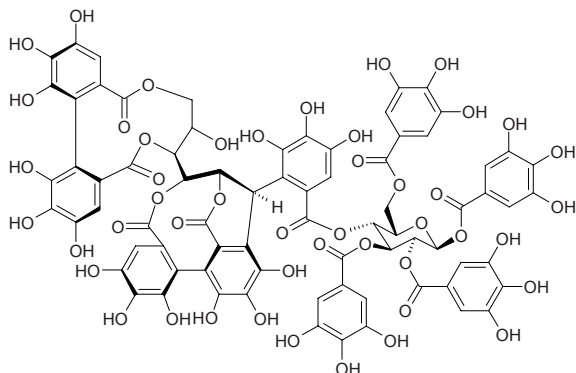
$C_{75}H_{54}O_{47}$  (1707.24). Isolated as  $C_{75}H_{54}O_{47} \cdot 10H_2O$ , white amorphous powder,  $[\alpha]_D = +219.7^\circ$  ( $c = 0.7$ , MeOH). Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (fresh fruit: yield = 0.0011%fw). Ref: 4695.

**16521 Paeonianin B**

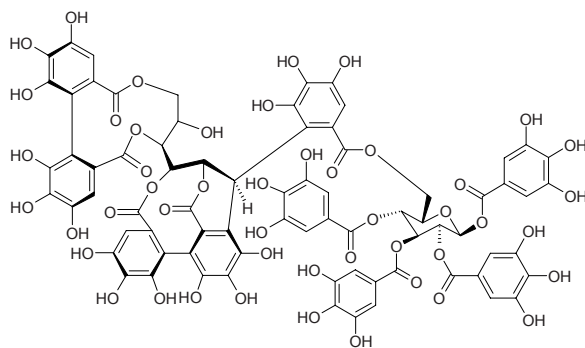
$C_{75}H_{54}O_{47}$  (1707.24). Isolated as  $C_{75}H_{54}O_{47} \cdot 11H_2O$ , white amorphous powder,  $[\alpha]_D = +158.40^\circ$  ( $c = 0.5$ , MeOH). Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (fresh fruit: yield = 0.0084%fw). Ref: 4695.

**16522 Paeonianin C**

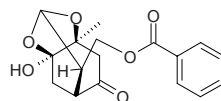
$C_{75}H_{54}O_{47}$  (1707.24). Isolated as  $C_{75}H_{54}O_{47} \cdot 9H_2O$ , white amorphous powder,  $[\alpha]_D = +115.0^\circ$  ( $c = 0.7$ , MeOH). Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (fresh fruit: yield = 0.014%fw). Ref: 4695.

**16523 Paeonianin D**

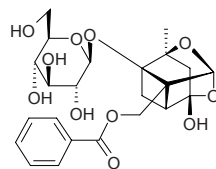
$C_{75}H_{54}O_{47}$  (1707.24). Isolated as  $C_{75}H_{54}O_{47} \cdot 8H_2O$ , white amorphous powder,  $[\alpha]_D = +79.0^\circ$  ( $c = 0.7$ , MeOH). Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (fresh fruit: yield = 0.0011%fw). Ref: 4695.

**16524 Paeoniflorigenone**

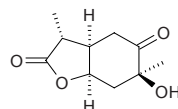
[80454-42-8]  $C_{17}H_{18}O_6$  (318.33). Viscous oil,  $[\alpha]_D^{25} = +4.3^\circ$  ( $c = 0.69$ , MeOH). Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*], CHI SHAO *Paeonia lactiflora* wild. Ref: 2, 3123.

**16525 Paeoniflorin**

[23180-57-6]  $C_{23}H_{28}O_{11}$  (480.47). White hygroscopic powder, mp 196°C. Pharm: Analgesic; antiallergic; antihypertensive; anti-inflammatory (swollen foot model caused by carrageenan, glucosan rat-paw edema model); antipyretic (normal mus, artificial fever mus model); antispasmodic (rat and gpg intestine *in vitro*, rat and gpg stomach *in vivo*, rat uterine smooth muscle); antiulcerative (rat stress ulcer model); coronary vasodilator (increases coronary flow, used in treatment of coronary heart disease, acute myocardial ischemia); platelet aggregation inhibitor; sedative; lipoxygenase inhibitor (*in vitro*,  $IC_{50} = (95.1 \pm 5.0) \mu\text{mol/L}$ )<sup>[4319]</sup>;  $LD_{50}$  (mus, iv) = 3530mg/kg, (mus, ip) = 9530mg/kg. Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (dried root: mean content = 2.63%<sup>[5508]</sup>), CAO SHAO YAO *Paeonia obovata*, CHI SHAO *Paeonia lactiflora* wild (dried root: mean content = 3.99%<sup>[5533]</sup>), CHUAN CHI SHAO *Paeonia veitchii*, DIAN MU DAN *Paeonia delavayi*, MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*] (dried root cortex: content = 1.57%<sup>[5508]</sup>), YAO YONG MU DAN *Paeonia officinalis*. Ref: 2, 4, 448, 658, 660, 4319, 5501, 5508, 5533.

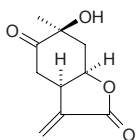
**16526 Paeonilactone A**

[98751-79-2]  $C_{10}H_{14}O_4$  (198.22). Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*]. Ref: 1544.

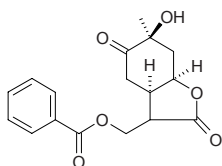


**16527 Paeonilactone B**

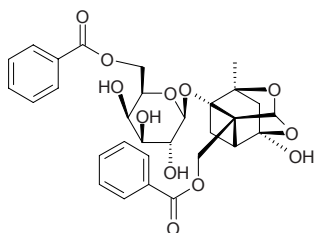
[98751-78-1] C<sub>10</sub>H<sub>12</sub>O<sub>4</sub> (196.20). Needles (EtOAc), mp 88–89°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +23.2° (MeOH). Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*]. Ref: 1544.

**16528 Paeonilactone C**

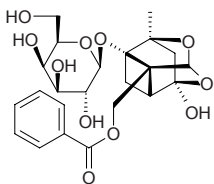
[98751-77-0] C<sub>17</sub>H<sub>18</sub>O<sub>6</sub> (318.33). Needles (MeOH aq.), mp 132–133°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = –31.6° (MeOH). Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*]. Ref: 1544.

**16529 Paeonin A**

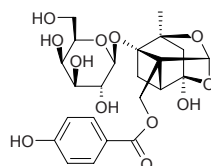
C<sub>30</sub>H<sub>32</sub>O<sub>12</sub> (584.58). Colorless gummy solid. Pharm: Lipoxygenase inhibitor (*in vitro*, IC<sub>50</sub> = 66.1±5.0 μmol/L, control Baicalein IC<sub>50</sub> = (22.4±1.3) μmol/L, control Paeoniflorin IC<sub>50</sub> = (95.1±5.0) μmol/L). Source: DUO HUA SHAO YAO *Paeonia emodi* (root). Ref: 4319.

**16530 Paeonin B**

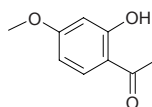
C<sub>23</sub>H<sub>28</sub>O<sub>11</sub> (480.47). Colorless gummy solid. Pharm: Lipoxygenase inhibitor (*in vitro*, IC<sub>50</sub> = 56.9±3.0 μmol/L, control Baicalein IC<sub>50</sub> = (22.4±1.3) μmol/L, control Paeoniflorin IC<sub>50</sub> = (95.1±5.0) μmol/L). Source: DUO HUA SHAO YAO *Paeonia emodi* (root). Ref: 4319.

**16531 Paeonin C**

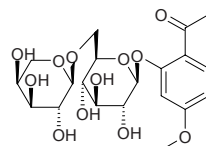
C<sub>23</sub>H<sub>28</sub>O<sub>12</sub> (496.47). Colorless gummy solid, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +14.5° (c = 0.03, CD<sub>3</sub>OD). Pharm: Lipoxygenase inhibitor (IC<sub>50</sub> = (99.5±2.5) μmol/L; control Baicalein, IC<sub>50</sub> = (22.4±1.3) μmol/L); antioxidant (ABTS<sup>•+</sup> radical quenching activity, IC<sub>50</sub> = (498.2±2.6) μmol/L; Trolox, IC<sub>50</sub> = (87.5±0.8) μmol/L). Source: DUO HUA SHAO YAO *Paeonia emodi* (fruit). Ref: 3802.

**16532 Paeonol**

2'-Hydroxy-4'-methoxyacetophenone [552-41-0] C<sub>9</sub>H<sub>10</sub>O<sub>3</sub> (166.18). mp 50°C. Pharm: Analgesic (mus, hot plate model, writhing and aldehyde models); antibacterial (*Staphylococcus aureus*, EC = 500 μg/mL; *Streptococcus faecalis*, EC = 500 μg/mL; *Bacillus coli*, EC = 200 μg/mL; *Bacillus subtilis*, EC = 200 μg/mL); anticonvulsant (induced by electricity or drugs); antihypertensive (anesthetic dog, 80–120 mg/kg iv, decreases blood pressure by 41%–61% and lasts 10–12 min); anti-inflammatory (rat, orl, swollen foot caused by carrageenan, glucosan or acetate acid); antioxidant; antipyretic (normal mus, artificial fever mus); sedative; hypnotic (mus, ip or orl); anti-inflammatory (modulator of cytokine network: inhibits in a concentration-dependent manner the formation of pro-inflammatory cytokines, such as TNF- $\alpha$ , IL-1 $\beta$  and IL-6); inhibits over-production of NO and PGE<sub>2</sub>, a potential candidate for the development of a new anti-inflammatory therapy<sup>[44][6]</sup>. Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (dried root: mean content = 0.0159%<sup>[5508]</sup>), CHI SHAO *Paeonia lactiflora* wild (dried root: mean content = 0.0158%<sup>[5508]</sup>), ER ZHUANG BAO CHUN HUA *Primula auricula*, HONG HUA PI *Betula platyphylla* var. *japonica*, MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*] (dried root cortex: mean content of 28 origins = 1.44%<sup>[5508]</sup>), NIAN BAO CHUN *Primula viscosa*, SANG YE *Morus alba*, XU CHANG QING *Cynanchum paniculatum* (root: mean content = 1.43%<sup>[5508]</sup>). Ref: 2, 4, 658, 660, 4416, 5501, 5508.

**16533 Paeonolide**

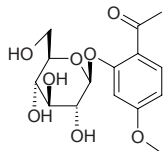
[72520-92-4] C<sub>20</sub>H<sub>28</sub>O<sub>12</sub> (460.44). Pharm: Platelet aggregation inhibitor. Source: CAO SHAO YAO *Paeonia obovata*, MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*], QIAO MU SHAO YAO *Paeonia arborea*. Ref: 2, 658, 660.



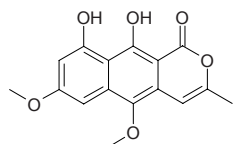


**16534 Paeonoside**

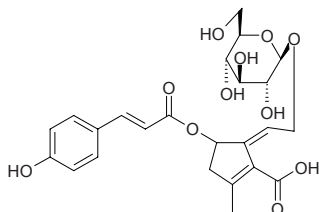
$C_{15}H_{20}O_8$  (328.32). **Pharm:** Platelet aggregation inhibitor. **Source:** MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*], QIAO MU SHAO YAO *Paeonia arborea*. **Ref:** 2, 568.

**16535 Paepalantine**

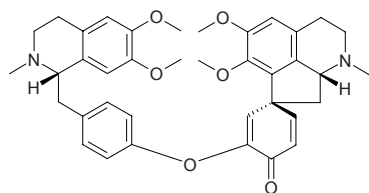
$C_{16}H_{14}O_6$  (302.29). **Pharm:** Anti-inflammatory. **Source:** *Paepalanthus bromelioides* (capitula). **Ref:** 4961.

**16536 Pagoside**

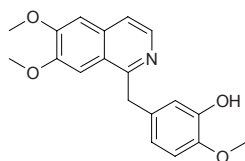
$C_{24}H_{28}O_{11}$  (492.48). **Pharm:** Elastase inhibitor (hmn leukocyte *in vitro*,  $IC_{50} = 154\mu\text{g/mL} = 260\mu\text{mol/L}$ ; control Caffeic acid,  $IC_{50} = 86\mu\text{g/mL} = 475\mu\text{mol/L}$ ). **Source:** NAN FEI GOU MA *Harpagophytum procumbens*. **Ref:** 5458.

**16537 Pakistanamine**

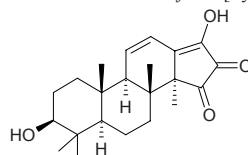
[36506-66-8]  $C_{38}H_{42}N_2O_6$  (622.77). mp 93~94°C,  $[\alpha]_D = +135^\circ$  ( $c = 0.5$ , MeOH). **Source:** MEI SUI XIAO BO *Berberis calliobotrys*, TU HUANG LIAN *Berberis julianae*, WA SHI XIAO BO *Berberis valdiviana*, BI LU ZHI XIAO BO *Berberis baluchistanica*, ZHI ZONG ZHUANG HUA XU XIAO BO *Berberis orthobotrys*. **Ref:** 1521.

**16538 Palaudine**

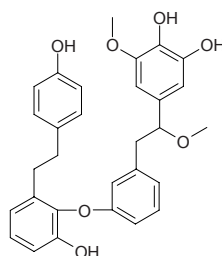
[18694-10-5]  $C_{19}H_{19}NO_4$  (325.37). mp 175~176°C. **Source:** YA PIAN *Papaver somniferum*. **Ref:** 6.

**16539 Palbinone**

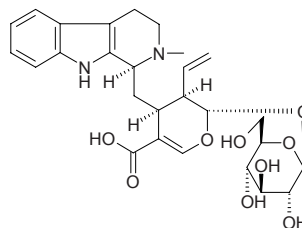
[139954-00-0]  $C_{22}H_{30}O_4$  (358.48). Red needles (Et<sub>2</sub>O-hexane), mp 254~255°C,  $[\alpha]_D = -223.8^\circ$  (CHCl<sub>3</sub>). **Pharm:** 3 $\alpha$ -Hydroxysteroid dehydrogenase inhibitor (reduced,  $IC_{50} = 0.046\mu\text{mol/L}$ , Indomethacin  $IC_{50} = 3.2\mu\text{mol/L}$ ); anti-inflammatory (inhibits hmn monocyte IL-1 $\beta$ ). **Source:** BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*]. **Ref:** 1207, 3589.

**16540 Paleatin B**

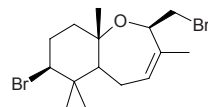
[158848-16-9]  $C_{30}H_{30}O_7$  (502.57). Amorphous powder. **Pharm:** Antioxidant ( $IC_{50} = 11.7\mu\text{mol/L}$ ); 5-lipoxidase inhibitor ( $IC_{50} = 0.78\mu\text{mol/L}$ ); cyclooxygenase inhibitor. ( $IC_{50} = 45.2\mu\text{mol/L}$ ). **Source:** ER YI TUO BAO DI QIAN *Marchantia paleacea* var. *diptera*. **Ref:** 3677, 3678.

**16541 Palicoside**

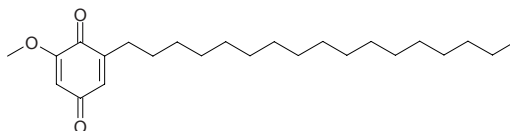
$C_{27}H_{34}N_2O_9$  (530.58). **Source:** *Strychnos mellodora*, *Strychnos vanprukii* (stem). **Ref:** 3471.

**16542 Palisadin B**

[77249-85-5]  $C_{15}H_{24}Br_2O$  (380.17). Oli,  $[\alpha]_D = +8.8^\circ$  ( $c = 1.3$ , CHCl<sub>3</sub>). **Source:** SHAN ZHUANG AO DING ZAO *Laurencia palisada*. **Ref:** 1521.

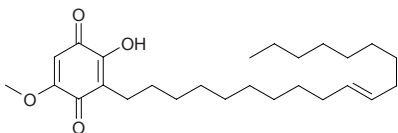
**16543 Pallasone B**

Dihydroirisquinone [78472-08-9]  $C_{24}H_{40}O_3$  (376.58). mp 88~89.5°C. **Source:** MA LIN ZI *Iris lactea* var. *chinensis* [Syn. *Iris pallasii* var. *chinensis*] (spermoderm: mean content = 0.061%<sup>[5508]</sup>). **Ref:** 3125, 3126, 5508.

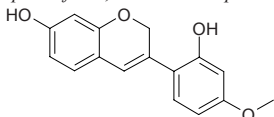


**16544 Pallasone C**

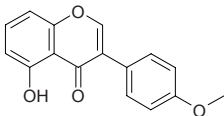
[78472-09-0] C<sub>26</sub>H<sub>42</sub>O<sub>4</sub> (418.62). mp 79.5–80.5°C. Source: MA LIN ZI *Iris lactea* var. *chinensis* [Syn. *Iris pallasii* var. *chinensis*]. Ref: 3125, 3126.

**16545 Pallidiflorene**

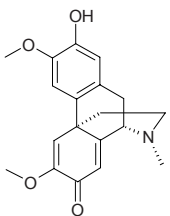
7,2'-Dihydroxy-4'-methoxyisoflav-3-ene; Bolusanthin III C<sub>16</sub>H<sub>14</sub>O<sub>4</sub> (270.29). Brown paste. Pharm: Antibacterial (*Escherichia coli*, MIA = 1.0µg, control Chloramphenicol, MIA = 0.001µg; *Bacillus subtilis*, MIA = 0.5µg, Chloramphenicol, MIA = 0.001µg; *Staphylococcus aureus*, MIA = 0.5µg, Chloramphenicol, MIA (0.001µg)<sup>[3785]</sup>; antifungal (*Candida mycoderma*, MIA = 0.05µg, control Miconazole, MIA = 0.0001µg)<sup>[3785]</sup>; antioxidant (DPPH scavenger, TLC detection limit = 0.1µg, IC<sub>50</sub> = 11µg/mL; control Quercetin, TLC detection limit < 0.05µg, IC<sub>50</sub> = 7µg/mL; Gallic acid, TLC detection limit < 0.05µg, IC<sub>50</sub> = 4µg/mL; Ascorbic acid, TLC detection limit < 0.10µg, IC<sub>50</sub> = 18µg/mL)<sup>[3785]</sup>. Source: CI GUO GAN CAO *Glycyrrhiza pallidiflora*, *Bolusanthus speciosus* (root wood). Ref: 2431, 3785.

**16546 Pallidiflorin**

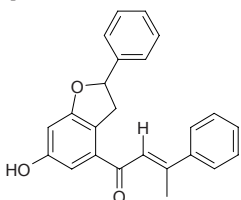
5-Hydroxy-4'-methoxyisoflavone C<sub>16</sub>H<sub>12</sub>O<sub>4</sub> (268.27). White lamellar crystals, mp 265–268°C. Source: CI GUO GAN CAO *Glycyrrhiza pallidiflora*. Ref: 166.

**16547 Pallidine**

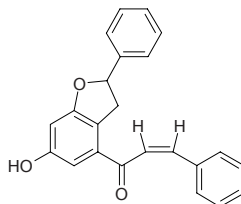
[25650-75-3] C<sub>19</sub>H<sub>21</sub>NO<sub>4</sub> (327.38). Source: JU HUA HUANG LIAN *Corydalis pallida*, ZI HUA YU DENG CAO *Corydalis incisa*. Ref: 6.

**16548 Pallidisetin A**

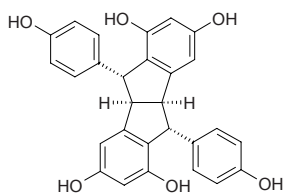
[154037-51-1] C<sub>23</sub>H<sub>18</sub>O<sub>3</sub> (342.40). Colorless plate crystals, mp 233°C (dec), [α]<sub>D</sub><sup>27</sup> = +20.0° (c = 0.1, CHCl<sub>3</sub>). Pharm: Cytotoxic (hmn, melanotic carcinoma RPMI-7951, ED<sub>50</sub> = 1.0µg/mL; polymorphism malignancy glioma, ED<sub>50</sub> = 1.0µg/mL). Source: CANG MAO JIN FA XUAN *Polytrichum pollidisetum*. Ref: 3679.

**16549 Pallidisetin B**

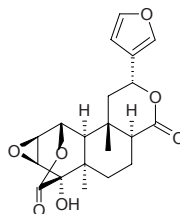
[154098-96-1] C<sub>23</sub>H<sub>18</sub>O<sub>3</sub> (342.40). Colorless needles, mp 194°C (dec), [α]<sub>D</sub><sup>27</sup> = –29.6° (c = 0.1, CHCl<sub>3</sub>). Pharm: Cytotoxic (hmn, melanotic carcinoma RPMI-7951, ED<sub>50</sub> = 2.0µg/mL; polymorphism malignancy glioma, ED<sub>50</sub> = 2.0µg/mL). Source: CANG MAO JIN FA XUAN *Polytrichum pollidisetum*. Ref: 3679.

**16550 Pallidol**

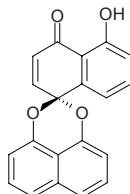
[105037-88-5] C<sub>28</sub>H<sub>22</sub>O<sub>6</sub> (454.48). Brown solid, mp > 300°C (dec), [α]<sub>D</sub> = 0° (MeOH), [α]<sub>D</sub><sup>23</sup> = –36.3° (c = 0.13, MeOH); [α]<sub>D</sub><sup>20</sup> = 0° (c = 0.45, MeOH). Pharm: Cytotoxic (hmn lymphoblast CEM, IC<sub>50</sub> = 32µg/mL); PKC inhibitor (rat brain, partly purified PKC, 100µmol/L, InRt = 25%); anti-inflammatory (COX-1 inhibitor, IC<sub>50</sub> = 50µmol/L; COX-2 inhibitor, IC<sub>50</sub> = 80µmol/L, marginally active)<sup>[3033]</sup>. Source: CANG BAI FEN TENG *Cissus pallida*, GUANG YE SHE PU TAO *Ampelopsis brevipedunculata* var. *hancei*, JIN QUE GEN *Caragana sinica*, PU<sup>(2)</sup> TAO *Vitis vinifera* (cell cultures established from pulp fragments of young fruits: yield = 0.00056%fw), LI QI HUAI *Sophora leachiana*. Ref: 1521, 3033, 3722, 3723, 3724, 3725, 3726.

**16551 Palmarin**

[17226-41-1] C<sub>20</sub>H<sub>22</sub>O<sub>7</sub> (374.39). Pharm: Bitter principle. Source: FEI ZHOU FANG JI *Jateorhiza palmata*. Ref: 658.

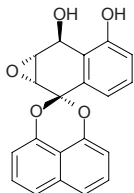
**16552 Palmarumycin CP<sub>1</sub>**

C<sub>20</sub>H<sub>12</sub>O<sub>4</sub> (316.32). Source: MA FENG SHU *Jatropha curcas* (stem). Ref: 3847.

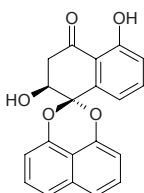


**16553 Palmarumycin JC<sub>1</sub>**

C<sub>20</sub>H<sub>14</sub>O<sub>5</sub> (334.33). White crystals, mp 208~210°C, [α]<sub>D</sub><sup>25</sup> = +82.5° (c = 0.5, MeOH). Source: MA FENG SHU *Jatropha curcas* (stem). Ref: 3847.

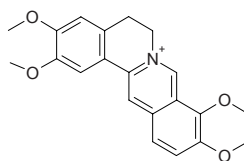
**16554 Palmarumycin JC<sub>2</sub>**

C<sub>20</sub>H<sub>14</sub>O<sub>5</sub> (334.33). Semi solid, mp 192~194°C, [α]<sub>D</sub><sup>25</sup> = +131.9° (c = 0.5, CHCl<sub>3</sub>). Source: MA FENG SHU *Jatropha curcas* (stem). Ref: 3847.

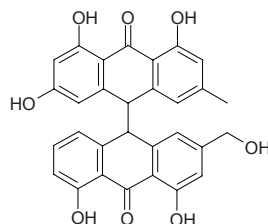
**16555 Palmatine**

Berbericinine [3486-67-7] C<sub>21</sub>H<sub>22</sub>NO<sub>4</sub><sup>+</sup> (352.41). mp 198~201°C. Pharm: Analgesic; antiarrhythmic; antibacterial (*Staphylococcus aureus* and *Sporothrix* sp., EC = 500μg/mL, *Bacillus dysenteriae*, *B. coli*, *β-Streptococcus* and 12 strains of molds); antifungal (*Candida albicans*, EC = 250μg/mL); antiviral (Asia *α*-Influenza virus); enhances myocardial contractility; cholinesterase inhibitor; antitrypanosomal (the iodide kills Lewis-trypanosome); reduces area of myocardial infarction (rbt, *in vivo*, chloride 0.75mg/kg, iv); LD<sub>50</sub> (mus, iv, sulfocyanate) = 98μg/kg. Source: BAN RUI TANG SONG CAO *Thalictrum petaloideum* (root: content < 0.001%)<sup>[5508]</sup>, CHANG JU YAN HU SUO *Corydalis longicalcarata* (rhizome: content = 0.048%)<sup>[5508]</sup>, CHENG KOU SHI DA GONG LAO *Mahonia shenii* (stem: content = 0.33%)<sup>[5510]</sup>, CHI BAN YAN HU SUO *Corydalis remota* [Syn. *Corydalis bulbosa* var. *typica*] (rhizome: content = 0.01%)<sup>[5508]</sup>, CHUAN DIAN SHI DA GONG LAO *Mahonia veitchiorum* (stem: content = 0.19%)<sup>[5510]</sup>, DA YE TANG SONG CAO *Thalictrum faberi* (root: content < 0.001%)<sup>[5508]</sup>, DONG BEI YAN HU SUO *Corydalis ambigua* var. *amurensis* [Syn. *Corydalis ambigua*] (rhizome: content = 0.02%)<sup>[5508]</sup>, DUAN E HUANG LIAN *Coptis chinensis* var. *breviseipala* (rhizome: content = 0.65%)<sup>[5508]</sup>, DUI YE YUAN HU *Corydalis ledebouriana* (rhizome: content = 0.100%)<sup>[5508]</sup>, E MEI YE HUANG LIAN *Coptis omeiensis* (rhizome: content = 1.03%)<sup>[5508]</sup>, FEI ZHOU FANG JI *Jateorhiza palmata*, GU LIN YE LIAN *Coptis gulinensis* (rhizome: content = 0.88%)<sup>[5508]</sup>, HAI SONG ZI *Pinus koraiensis*, HU BEI SHI DA GONG LAO *Mahonia confusa* (stem: content = 0.03%)<sup>[5510]</sup>, HUA NAN GONG LAO MU *Mahonia japonica* (stem: content = 0.19%)<sup>[5510]</sup>, HUA NAN GONG LAO YE *Mahonia japonica*, HUANG BAI *Phellodendron amurense* (bark: mean content of 6 batches = 0.67%)<sup>[5508]</sup>, HUANG LIAN *Coptis chinensis* (rhizome: mean content = 1.94%)<sup>[5508]</sup>, HUANG PI SHU *Phellodendron chinense* (bark: content scope = 0.372%~0.590%)<sup>[5501]</sup>, HUANG YE DI BU RONG *Stephania viridiflavens*,

HUI LV YAN HU SUO *Corydalis adunca* (rhizome: content = 0.026%)<sup>[5508]</sup>, JIN GUO LAN *Tinospora capillipes*, JIN SI MA WEI LIAN *Thalictrum glandulosissimum* (root: content < 0.001%)<sup>[5508]</sup>, KUAN BAO SHI DA GONG LAO *Mahonia eurybracteata* (stem: mean content of 3 origins = 0.06%)<sup>[5510]</sup>, MA WEI LIAN *Thalictrum foliolosum* (root: content = 0.32%)<sup>[5508]</sup>, QUAN YE YAN HU SUO *Corydalis repens* (rhizome: content = 0.01%)<sup>[5508]</sup>, RI BEN XIAO BO *Berberis thunbergii*, SAN JIAO YE HUANG LIAN *Coptis deltoidea* (rhizome: mean content = 0.98%)<sup>[5508]</sup>, SHAO CHI XIAO BO *Berberis potaninii* (root, stem: mean content = 0.144%)<sup>[5508]</sup>, SHI DA GONG LAO MU *Mahonia bealei* (stem: mean content of 4 origins 0.11%)<sup>[5510]</sup>, TIAN XIAN TENG *Fibraurea recisa* (dried lianoid stem: content = 2.71%)<sup>[5508]</sup>, WANG CHUN YU LAN *Magnolia biondii* [Syn. *Magnolia fargesii*] (stem: mean content of 4 origins = 0.19%)<sup>[5510]</sup>, XI BING SHI DA GONG LAO *Mahonia gracilipes* (stem: mean content of 4 origins = 0.14%)<sup>[5510]</sup>, XI YE GONG LAO MU *Mahonia fortunei* (stem: mean content of 4 origins = 0.05%)<sup>[5510]</sup>, XI YE GONG LAO YE *Mahonia fortunei*, XI YE XIAO BO *Berberis poiretii*, XIA TIAN WU *Corydalis decumbens* [Syn. *Corydalis amabilis*] (rhizome: content = 0.07%)<sup>[5508]</sup>, XIA XU TANG SONG CAO *Thalictrum atriplex* (root: content < 0.001%)<sup>[5508]</sup>, XIAN E HUANG LIAN *Coptis linearisepala* (rhizome: content = 0.85%)<sup>[5508]</sup>, XIAN HUANG XIAO BO *Berberis diaphana* (root and stem: mean content = 0.082%)<sup>[5508]</sup>, XIAO BO *Berberis amurensis*, XIAO GUO SHI DA GONG LAO *Mahonia bodinieri* (stem: content = 0.13%)<sup>[5510]</sup>, XIAO GUO TANG SONG CAO *Thalictrum microgynum* (root: content < 0.001%)<sup>[5508]</sup>, YAN GUO CAO *Thalictrum thunbergii* (root: content < 0.001%)<sup>[5508]</sup>, YAN HU SUO *Corydalis yanhusuo* [Syn. *Corydalis turtschaninovii* f. *Yanhusuo*] (rhizome: mean content of 5 origins = 0.080%)<sup>[5508]</sup>, YING SHUI HUANG LIAN *Thalictrum simplex* [Syn. *Thalictrum simplex* var. *brevipes*] (root: content < 0.001%)<sup>[5508]</sup>, YUN NAN HUANG LIAN *Coptis teetoides* [Syn. *Coptis teeta*] (rhizome: mean content = 0.69%)<sup>[5508]</sup>, ZHI YI XIAO BO *Berberis dubia* (root and stem: mean content = 0.182%)<sup>[5508]</sup>, occurs in many plants (mostly in *Berberis* spp. and *Mahonia* spp. in family Berberidaceae spp.; but spread into many families). Ref: 2, 4, 408, 658, 660, 5501, 5508, 5510.

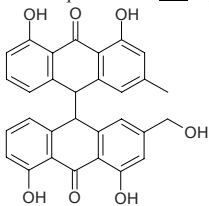
**16556 Palmidin A**

[17062-55-4] C<sub>30</sub>H<sub>22</sub>O<sub>8</sub> (510.51). Source: DA HUANG *Rheum officinale*, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. Ref: 2, 660.

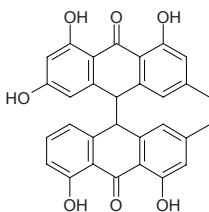


**16557 Palmidin B**

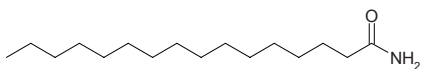
[17062-56-5] C<sub>30</sub>H<sub>22</sub>O<sub>7</sub> (494.51). Source: DA HUANG *Rheum officinale*, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. Ref: 2, 660.

**16558 Palmidin C**

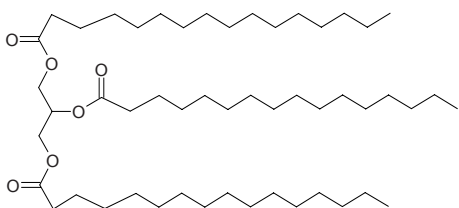
[17177-86-5] C<sub>30</sub>H<sub>22</sub>O<sub>7</sub> (494.51). Source: DA HUANG *Rheum officinale*, OU SHU LI *Rhamnus frangula* [Syn. *Frangula alnus*], TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. Ref: 2, 660, 1521.

**16559 Palmitamide**

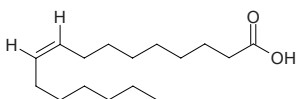
Hexadecanamide [629-54-9] C<sub>16</sub>H<sub>33</sub>NO (255.45). mp 106~107°C, bp 235~236°C/12mmHg. Source: BAI JIANG CAN *Bombyx mori*, XIANG ROU GUO *Casimiroa edulis*. Ref: 1521, 3127.

**16560 Palmitin**

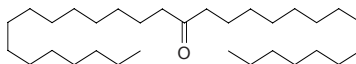
[555-44-2] C<sub>51</sub>H<sub>98</sub>O<sub>6</sub> (807.35). Source: REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 2.

**16561 Palmitoleic acid**

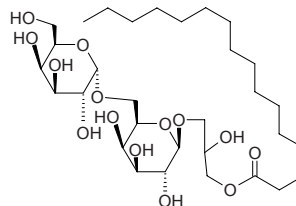
*cis*-9-Hexadecenoic acid [373-49-9] C<sub>16</sub>H<sub>30</sub>O<sub>2</sub> (254.42). Pharm: A major component of lipids of marine plants and animals, also found in plant oils, eg. *Macadamia ternifolia* (small-fruited Macadamia nut) seed oil (20%) Source: AO ZHOU JIAN GUO *Macadamia ternifolia* (seed oil, 20%), BAN WEN LU HUI *Aloe vera* var. *chinensis*, CU LIU GUO *Hippophae rhamnoides*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], GUA LOU *Trichosanthes kirilowii*, MAN JING ZI *Vitex trifolia*, SHUANG BIAN GUA LOU *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*], XING REN *Prunus armeniaca*, YI ZHI REN *Alpinia oxyphylla* (fruit: yield = 0.0095%dw)<sup>[4655]</sup>, YOU ZONG *Elaeis guineensis*. Ref: 2, 658, 660, 1521, 4655.

**16562 Palmitone**

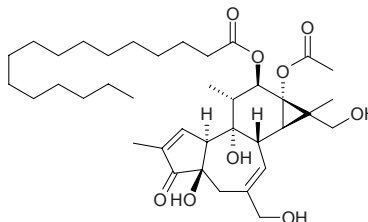
[502-73-8] C<sub>31</sub>H<sub>62</sub>O (450.84). mp 82.8°C. Source: ZHEN CAI *Litsea pungens*. Ref: 6.

**16563 1'-O-Palmitoyl-3'-O-(6-O-α-D-galactopyranosyl-β-D-galactopyranosyl)glycerol**

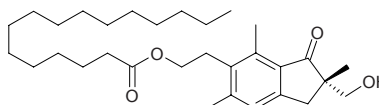
C<sub>31</sub>H<sub>58</sub>O<sub>14</sub> (654.80). Source: KONG SHI CHUN *Ulva pertusa*. Ref: 3128.

**16564 12-O-Palmitoyl-16-hydroxyphorbol-13-acetate**

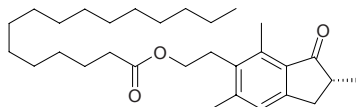
C<sub>38</sub>H<sub>60</sub>O<sub>9</sub> (660.90). Pharm: Fish toxin. Source: TONG YOU *Aleurites cordata* [Syn. *Aleurites fordii*] (fruit). Ref: 658.

**16565 Palmitoylpterosin A**

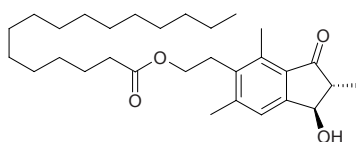
C<sub>31</sub>H<sub>50</sub>O<sub>4</sub> (486.74). mp 50~51°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

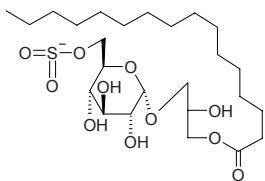
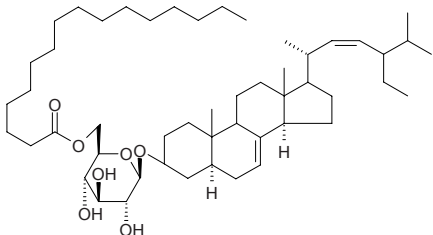
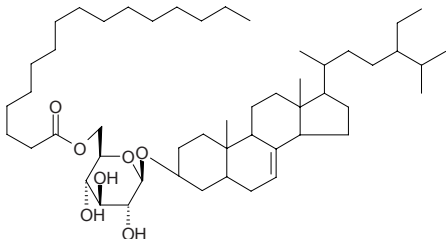
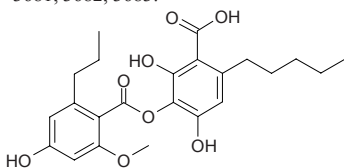
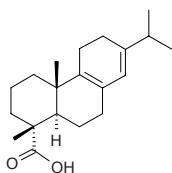
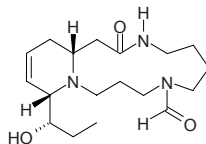
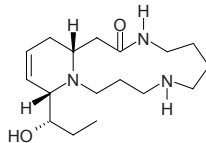
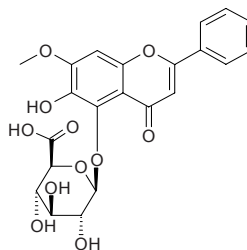
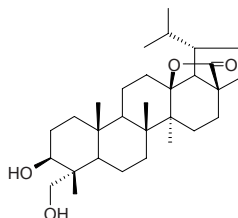
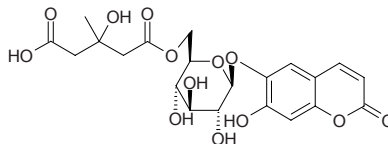
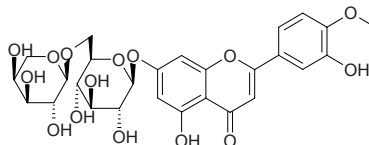
**16566 Palmitoylpterosin B**

C<sub>30</sub>H<sub>48</sub>O<sub>3</sub> (456.72). mp 51~52°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**16567 Palmitoylpterosin C**

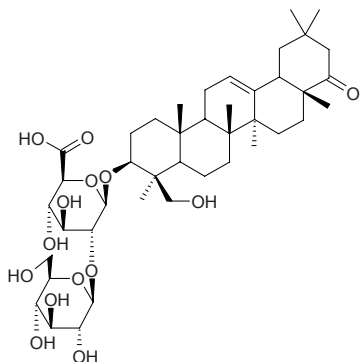
C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). mp 95~97°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.



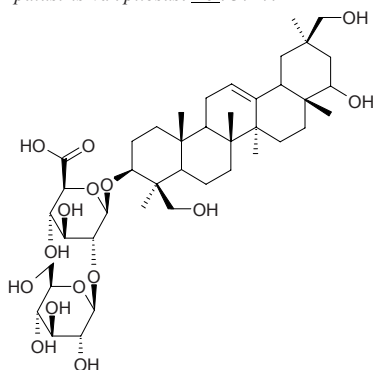
**16568 1'-O-Palmitoyl-3'-O-(6-sulfo-O- $\alpha$ -D-quinovopyranosyl)glycerol**C<sub>25</sub>H<sub>47</sub>O<sub>11</sub>S (555.71). Source: KONG SHI CHUN *Ulva pertusa*. Ref: 3128.**16569 6'-Palmityl- $\alpha$ -spinasteryl- $\beta$ -D-glucoside**C<sub>51</sub>H<sub>88</sub>O<sub>7</sub> (813.27). Source: MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*]. Ref: 2960.**16570 6'-Palmityl- $\Delta^7$ -spinasteryl- $\beta$ -D-glucoside**C<sub>51</sub>H<sub>90</sub>O<sub>7</sub> (815.28). Source: MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*]. Ref: 2960.**16571 Paludolic acid**[19833-81-9] C<sub>23</sub>H<sub>28</sub>O<sub>8</sub> (432.47). Colorless needles (cyclohexane–benzene–EtOAc), mp 170–171°C. Pharm: Anti-inflammatory (rbt kidney microsomes, ostaglandin biosynthesis inhibitor, IC<sub>50</sub> = 1.0 μmol/L, control Indometacin, IC<sub>50</sub> = 4.9 μmol/L, Aspirin, IC<sub>50</sub> = 2.0 μmol/L); Source: LA BA FEN SHI RUI *Cladonia chlorophaea*, ZHAO ZE SHU HUA *Ramalina paludosa*. Ref: 3680, 3681, 3682, 3683.**16572 Palustric acid**8,13-Abietadien-18-oic acid [1945-53-5] C<sub>20</sub>H<sub>30</sub>O<sub>2</sub> (302.46). Crystals (methanol), mp 162–167°C, [α]<sub>D</sub> = +71.6° (ethanol). Pharm: Platelet aggregation inhibitor (rbt, due to PAF, ADP and calcium); insect antifeedant (*Neodiprion species*). Source: SONG XIANG *Pinus massoniana*. Ref: 900.**16573 Palustridine**[22324-43-2] C<sub>18</sub>H<sub>31</sub>N<sub>3</sub>O<sub>3</sub> (337.47). Source: GU JIE CAO *Equisetum palustre*. Ref: 6.**16574 Palustrine**[22324-44-3] C<sub>17</sub>H<sub>31</sub>N<sub>3</sub>O<sub>2</sub> (309.46). Source: MU ZEI *Equisetum hiemale*. Ref: 2.**16575 Palustrinoside**[29673-46-9] C<sub>22</sub>H<sub>20</sub>O<sub>11</sub> (460.40). Source: GUANG YE SHUI SU *Stachys palustris*. Ref: 6.**16576 Palustrolide**[93772-37-3] C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). Crystals (MeOH), mp 310°C (dec). Source: MA TI YE *Caltha palustris*. Ref: 3129.**16577 Palustroside**[132923-05-8] C<sub>21</sub>H<sub>24</sub>O<sub>13</sub> (484.42). Source: LA BA CHA *Ledum palustre*. Ref: 913, 1521.**16578 Palustroside‡**[26931-72-6] C<sub>27</sub>H<sub>30</sub>O<sub>15</sub> (594.53). mp 178–180°C. Source: PENG ZI CAI *Galium verum*. Ref: 6.

**16579 Palustroside I**

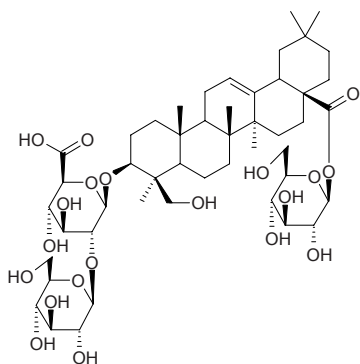
[214692-84-9] C<sub>42</sub>H<sub>66</sub>O<sub>14</sub> (794.99). White powder,  $[\alpha]_D^{25} = -9.8^\circ$  ( $c = 0.52$ , pyridine:H<sub>2</sub>O = 1:1). **Pharm:** Inhibits liver damage (culture rat liver cell, *in vitro* immunoassay of liver damage, 90 $\mu$ mol/L protective rate = 46%, 200 $\mu$ mol/L protective rate = 86%). **Source:** ROU MAO SHAN LI DOU *Lathyrus palustris* var. *pilosus*. **Ref:** 3727.

**16580 Palustroside II**

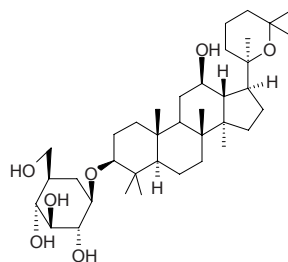
[214692-91-8] C<sub>42</sub>H<sub>68</sub>O<sub>15</sub> (813.00). White powder,  $[\alpha]_D^{25} = +0.50^\circ$  ( $c = 0.68$ , pyridine). **Pharm:** Inhibits liver damage (culture rat liver cell, *in vitro* immunoassay of liver damage, 200 $\mu$ mol/L protective rate = 54%, 500 $\mu$ mol/L protective rate = 81%). **Source:** ROU MAO SHAN LI DOU *Lathyrus palustris* var. *pilosus*. **Ref:** 3727.

**16581 Palustroside III**

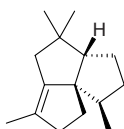
[214692-99-6] C<sub>48</sub>H<sub>76</sub>O<sub>20</sub> (973.13). White powder,  $[\alpha]_D^{25} = -4.6^\circ$  ( $c = 0.52$ , pyridine:H<sub>2</sub>O = 1:1). **Pharm:** Inhibits liver damage (culture rat liver cell, *in vitro* immunoassay of liver damage, 200 $\mu$ mol/L protective rate = 26%, 500 $\mu$ mol/L protective rate = 62%). **Source:** ROU MAO SHAN LI DOU *Lathyrus palustris* var. *pilosus*. **Ref:** 3727.

**16582 Panacon**

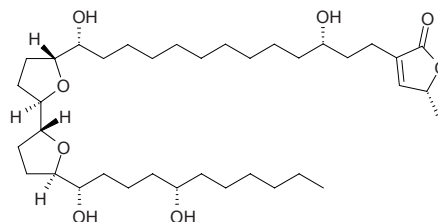
C<sub>37</sub>H<sub>64</sub>O<sub>7</sub> (620.92). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 6.

**16583 Panaginsene**

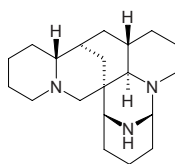
(1*S*\*,8*S*\*,11*R*\*)-4,7,7,11-Tetramethyl-tricyclo[6.3.0.0<sup>1,5</sup>]-undec-4-ene C<sub>15</sub>H<sub>24</sub> (204.36). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 5330.

**16584 Panalicin**

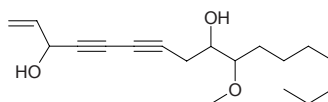
[133594-25-9] C<sub>37</sub>H<sub>66</sub>O<sub>8</sub> (638.93). Waxy solid. **Pharm:** Antimicrobial; anthelmintic. **Source:** NA ER ZI YU PAN *Uvaria narum*. **Ref:** 3684, 3685.

**16585 Panamine**

[2448-27-3] C<sub>20</sub>H<sub>33</sub>N<sub>3</sub> (315.51). Liquid,  $[\alpha]_D = -11^\circ$ , autoxidises in air. **Source:** *Ormosia* spp. **Ref:** 1521.

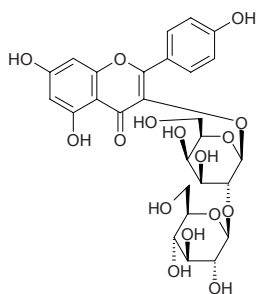
**16586 Panaquinquecol 1**

PQ-1; 10-Methoxyheptadeca-1-ene-4,6-diyn-3,9-diol [133921-57-0] C<sub>18</sub>H<sub>28</sub>O<sub>3</sub> (292.42). Oil,  $[\alpha]_D = -21.7^\circ$  ( $c = 0.58$ , methanol). **Pharm:** Cytotoxic (L<sub>1210</sub>, 0.5~1.0 $\mu$ g/mL, InRt = 100%). **Source:** XI YANG SHEN *Panax quinquefolium*. **Ref:** 2, 1017, 1521.

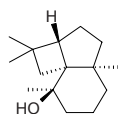


**16587 Panasenoid**

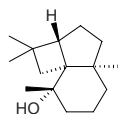
Kaempferol-3-*O*-[ $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-galactopyranoside] [31512-06-8] C<sub>27</sub>H<sub>30</sub>O<sub>16</sub> (610.53). Crystals (EtOH), mp 225–228°C (dec). **Pharm:** Neuroprotective (primary cultures of rat cortical cells, induced by *L*-glutamate, 0.1  $\mu$ mol/L, cell viability = (4.6 $\pm$ 3.6)%), 1.0  $\mu$ mol/L, cell viability = (27.0 $\pm$ 4.9)%,  $p < 0.05$ , 10  $\mu$ mol/L, cell viability = (25.2 $\pm$ 3.6)%,  $p < 0.05$ )<sup>[3027]</sup>; anti-HIV-1 (RT (RDDP) inhibitor, IC<sub>50</sub> > 100  $\mu$ mol/L, positive control Adriamycin, IC<sub>50</sub> = 27  $\mu$ mol/L; DDDP inhibitor, IC<sub>50</sub> > 100  $\mu$ mol/L, positive control Adriamycin, IC<sub>50</sub> = 6  $\mu$ mol/L; HIV-1 IN inhibitor, IC<sub>50</sub> = 59  $\mu$ mol/L, positive control Suramin, IC<sub>50</sub> = 2.4  $\mu$ mol/L)<sup>[4187]</sup>. **Source:** BAI HUA SHE SHE CAO *Oldenlandia diffusa* [Syn. *Hedyotis diffusa*] (whole herb: yield = 0.00041%)<sup>[3027]</sup>, HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*], HUANG HUA JIA ZHU TAO *Thevetia neriifolia* [Syn. *Thevetia peruviana*] (leaf), LAN SHAI PIAO *Sambucus sieboldiana*, QING LIANG BAI HE *Lilium candidum*, REN SHEN YE *Panax ginseng* [Syn. *Panax schinseng*], *Hypericum* spp. **Ref:** 660, 3027, 3121, 3130, 3131, 4187.

**16588 Panasinsanol A**

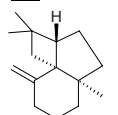
[80374-27-2] C<sub>15</sub>H<sub>26</sub>O (222.37). Oil, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -51.9° ( $c = 0.54$ , CHCl<sub>3</sub>). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 3132.

**16589 Panasinsanol B**

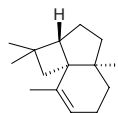
[109785-99-1] C<sub>15</sub>H<sub>26</sub>O (222.37). Oil, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -44.3° ( $c = 0.70$ , CHCl<sub>3</sub>). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 3132.

**16590  $\beta$ -Panasinsene**

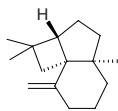
C<sub>15</sub>H<sub>24</sub> (204.36). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 5330.

**16591  $\alpha$ -Panasinsene**

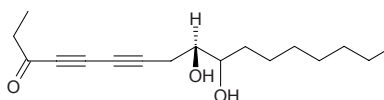
10-Panasinsanene [56633-28-4] C<sub>15</sub>H<sub>24</sub> (204.36). Oil. **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 2616.

**16592  $\beta$ -Panasinsene**

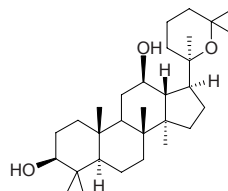
3(15)-Panasinsanene [56684-97-0] C<sub>15</sub>H<sub>24</sub> (204.36). Oil. [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -3°C (MeOH). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 2616.

**16593 Panaxacol**

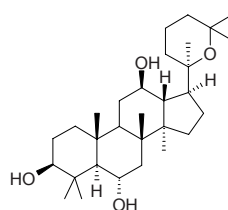
[106828-96-0] C<sub>17</sub>H<sub>26</sub>O<sub>3</sub> (278.39). Colorless solid, rapid polymerization at room temperature, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = +19.5° ( $c = 1.0$ , MeOH). **Pharm:** Antineoplastic (Yoshida sarcoma, 10  $\mu$ g/mL, InRt = 95%, 25  $\mu$ g/mL *in vitro*, InRt = 100%). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 3728, 3729.

**16594 Panaxadiol**

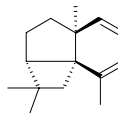
[19666-76-3] C<sub>30</sub>H<sub>52</sub>O<sub>3</sub> (460.75). mp 250°C. **Source:** JIAO GU LAN *Gynostemma pentaphyllum* (dried whole herb: content = 0.5345%)<sup>[5508]</sup>, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (root: content = 1.92 $\pm$ 2.10%)<sup>[5508]</sup>. **Ref:** 6, 5508.

**16595 Panaxatriol**

[32791-84-7] C<sub>30</sub>H<sub>52</sub>O<sub>4</sub> (476.75). mp 238–239°C. **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (root: content = 2.71 $\pm$ 1.36%)<sup>[5508]</sup>. **Ref:** 6, 5508.

**16596 Panaxene**

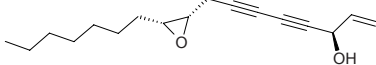
(1*R*\*,2*S*\*,5*S*\*)-2-Ethenyl-1-(1-methylethenyl)-2,6,6-trimethylbicyclo[3.2.0]heptane C<sub>15</sub>H<sub>24</sub> (204.36). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 5330.



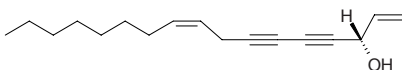


**16597 Panaxydol**[72800-72-7] C<sub>17</sub>H<sub>24</sub>O<sub>2</sub> (260.38). Yellow oil, [ $\alpha$ ]<sub>D</sub> = -19.5° (c = 0.7, MeOH).

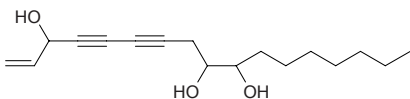
**Pharm:** Antibacterial (strongly inhibits *Staphylococcus aureus*); cytotoxic (tissue culture *in vitro*, inhibits growth of leukaemia cells). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], XI YANG SHEN *Panax quinquefolium*, *Niphogeton ternata*. **Ref:** 1570, 2995, 4156.

**16598 Panaxynol**

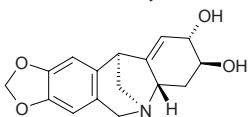
[81203-57-8] C<sub>17</sub>H<sub>24</sub>O (244.38). **Pharm:** Antibacterial (*Staphylococcus aureus*); allergenic; dermatitic (causes contact dermatitis). **Source:** SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.011%dw). **Ref:** 658, 1570, 4702.

**16599 Panaxytriol**

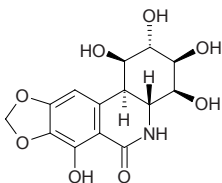
[87005-03-6] C<sub>17</sub>H<sub>26</sub>O<sub>3</sub> (278.39). Colorless lamellar crystals, mp 78~79°C. **Pharm:** Antiviral (EBV); cytotoxic (MK1, B16 melanoma, L929, SW620 and HeLa); antihypercholesterolemic (inhibits cholesterol and LDL and relates to cholesterae transfer protein, IC<sub>50</sub> = 35µg/mL). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. **Ref:** 2, 900.

**16600 (-)-Pancracine**

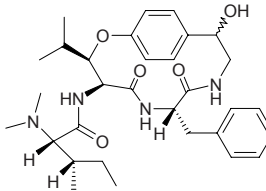
C<sub>16</sub>H<sub>17</sub>NO<sub>4</sub> (287.32). **Pharm:** Antibacterial (*Staphylococcus aureus*, IZD = 22mm, MIC = 188µg/mL; *Pseudomonas aeruginosa*, IZD = 16mm); antifungal (*Candida albicans*, IZD = 15mm, MIC = 188µg/mL). **Source:** GU TING HUA *Amaryllis belladonna* (bulb). **Ref:** 3829.

**16601 Pancratistatin**

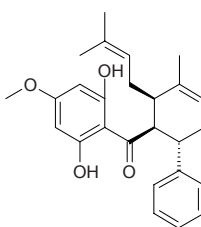
[96203-70-2] C<sub>14</sub>H<sub>15</sub>NO<sub>8</sub> (325.28). **Pharm:** Cytotoxic (P<sub>388</sub> *in vitro*, ED<sub>50</sub> = 0.01µg/mL, P<sub>388</sub> *in vivo*, 0.75~12.5mg/kg, biotic prolonged rate = (38~106)%; also effective to M5076 ovarian sarcoma); antineoplastic (shows high antineoplastic activity in NCI's 60 tumor system, the highest activity is of melanotic carcinoma, also shows high activity for carcinoma in brain, colon, lung and kidney, in stage of pre-clinic); antiviral (RNA virus, B encephalitis affected mus, after injection survival rate increases 100%; also effective to yellow fever virus and bunyavirus). **Source:** FENG YU HUA *Zephyranthes grandiflora* [Syn. *Zephyranthes carinata*]. **Ref:** 658, 1804, 1805, 1806, 1807.

**16602 Pandamine**

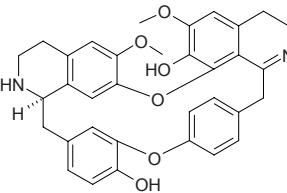
[10233-81-5] C<sub>31</sub>H<sub>44</sub>N<sub>4</sub>O<sub>5</sub> (552.72). **Pharm:** Inhibits oxidative phosphorylation (plants). **Source:** *Panda oleosa*. **Ref:** 658.

**16603 Panduratin A**

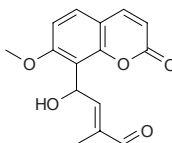
C<sub>26</sub>H<sub>30</sub>O<sub>4</sub> (406.53). **Pharm:** Anti-inflammatory (*in vitro*, NO production inhibitor, IC<sub>50</sub> = 0.0175µmol/L; PGE<sub>2</sub> production inhibitor, IC<sub>50</sub> = 0.0195µmol/L; suppresses both iNOS and COX-2 enzyme expression without any appreciable cytotoxic effect on RAW264.7 cells in a dose-dependent manner). **Source:** TI QIN ZHUANG SHAN NAI *Kaempferia pandurata*. **Ref:** 5488.

**16604 Pangkorimine**

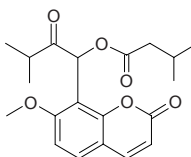
C<sub>34</sub>H<sub>32</sub>N<sub>2</sub>O<sub>6</sub> (564.64). **Pharm:** Antitrypanosomal (inhibits trypanosome form of *Trypanosoma cruzi*, strain Y, IC<sub>50</sub> = 114.8µg/mL, IC<sub>90</sub> = 245.9µg/mL); antimalarial (*Plasmodium falciparum* D6, LC<sub>50</sub> = 134.7ng/mL, SI = 19; *Plasmodium falciparum* W2, LC<sub>50</sub> = 284.5ng/mL, SI = 9); cytotoxic (KB, LC<sub>50</sub> = 2600ng/mL). **Source:** *Gutteria boliviana* (stem cortex). **Ref:** 3976.

**16605 Panial**

[112606-74-3] C<sub>15</sub>H<sub>14</sub>O<sub>5</sub> (274.28). Oil, [ $\alpha$ ]<sub>D</sub> = -6.8° (c = 0.074, CHCl<sub>3</sub>). **Source:** JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. **Ref:** 2810.

**16606 Paniculatin**

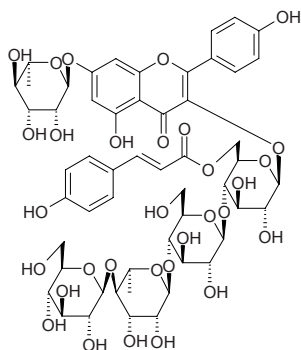
[36072-13-6] C<sub>20</sub>H<sub>24</sub>O<sub>6</sub> (360.41). mp 263°C. **Source:** JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. **Ref:** 6.



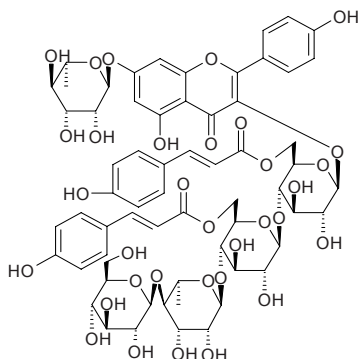


**16607 Panicalatonoid A**

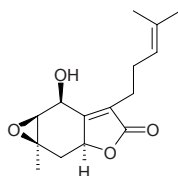
$C_{54}H_{66}O_{31}$  (1211.11). Yellow solid, mp 210~212°C. Source: LUAN SHU *Koeleruteria paniculata*. Ref: 846.

**16608 Panicalatonoid B**

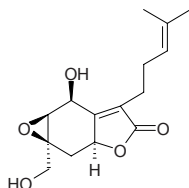
$C_{63}H_{72}O_{33}$  (1357.26). Yellow solid, mp 200~201°C. Source: LUAN SHU *Koeleruteria paniculata*. Ref: 846.

**16609 Paniculide A**

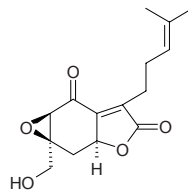
[21764-32-9]  $C_{15}H_{20}O_4$  (264.32). Source: CHUAN XIN LIAN *Andrographis paniculata* [Syn. *Justicia paniculata*]. Ref: 2, 1521.

**16610 Paniculide B**

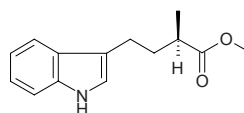
[21764-33-0]  $C_{15}H_{20}O_5$  (280.32). Source: CHUAN XIN LIAN *Andrographis paniculata* [Syn. *Justicia paniculata*]. Ref: 2, 1521.

**16611 Paniculide C**

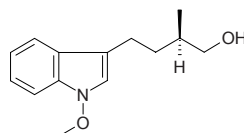
[21764-34-1]  $C_{15}H_{18}O_5$  (278.31). Source: CHUAN XIN LIAN *Andrographis paniculata* [Syn. *Justicia paniculata*]. Ref: 2, 1521.

**16612 Paniculidine A**

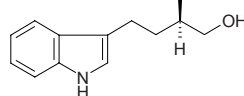
[97399-93-4]  $C_{14}H_{17}NO_2$  (231.30). Oil,  $[\alpha]_D^{24} = -31.9^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ). Source: JIU LI XIANG GEN *Murraya paniculata* [Syn. *Chalcas paniculata*]. Ref: 3133.

**16613 Paniculidine B**

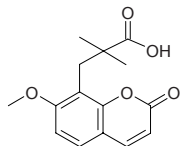
[97399-94-5]  $C_{14}H_{19}NO_2$  (233.31). Oil,  $[\alpha]_D^{20} = +21^\circ$  ( $c = 0.025$ ,  $CHCl_3$ ). Source: JIU LI XIANG GEN *Murraya paniculata* [Syn. *Chalcas paniculata*]. Ref: 3133.

**16614 Paniculidine C**

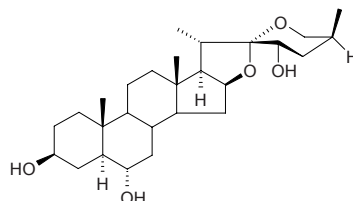
Paniculol [97399-95-6]  $C_{13}H_{17}NO$  (203.29). Oil,  $[\alpha]_D^{20} = +45^\circ$  ( $c = 0.035$ ,  $CHCl_3$ ). Source: JIU LI XIANG GEN *Murraya paniculata* [Syn. *Chalcas paniculata*]. Ref: 3133.

**16615 Paniculin**

[112397-12-3]  $C_{15}H_{16}O_5$  (276.29). Needles (MeOH), mp 236~238°C. Source: JIU LI XIANG GEN *Murraya paniculata* [Syn. *Chalcas paniculata*]. Ref: 1336.

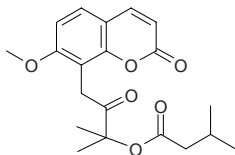
**16616 Paniculogenin**

[16750-37-1]  $C_{27}H_{44}O_5$  (448.65). mp 214~216°C. Source: SHUI QIE *Solanum torvum*. Ref: 6.

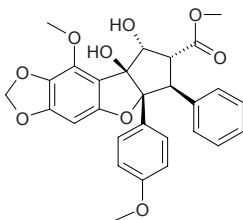


**16617 Paniculonol isovalerate**

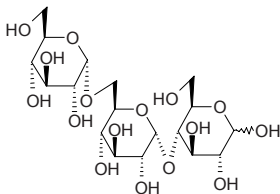
$C_{20}H_{24}O_6$  (360.41). Oil. Source: JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. Ref: 3134.

**16618 Pannellin**

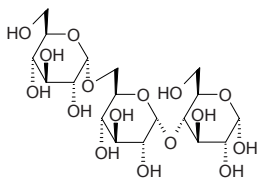
$C_{28}H_{26}O_9$  (506.51). Pharm: Insecticidal (neonate larvae of *Spodoptera littoralis*, survival rate  $LC_{50} = 2.1\mu\text{g/g}$ , control Azadirachtin, survival rate  $LC_{50} = 6.1\mu\text{g/g}$ ; growth inhibition  $EC_{50} = 0.24\mu\text{g/g}$ , Azadirachtin, growth inhibition  $EC_{50} = 0.11\mu\text{g/g}$ )<sup>[2355]</sup>. Source: KE SHI MI ZI LAN *Aglaia edulis*. Ref: 2355.

**16619 Panose**

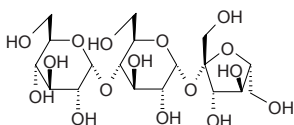
[33401-87-5]  $C_{18}H_{32}O_{16}$  (504.45). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2, 1521.

**16620 Panose B**

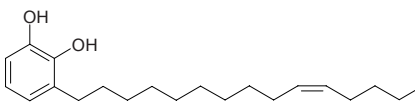
$C_{18}H_{32}O_{16}$  (504.45). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.

**16621 Panose C**

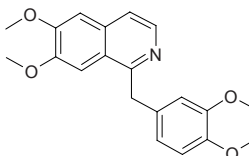
$C_{18}H_{32}O_{16}$  (504.45). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.

**16622 3-(Pantadec-10-enyl)-catechol**

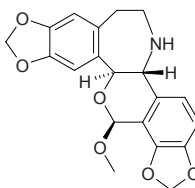
[83532-37-0]  $C_{21}H_{34}O_2$  (318.50). Colorless oil. Pharm: Sensitizer (hmn). Source: SHENG MU *Lithraea caustica*, YI YE ROU TUO GUO *Semecarpus heterophylla*. Ref: 1521, 3693.

**16623 Papaverine**

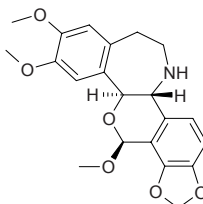
6,7-Dimethoxy-1-veratrylisoquinoline [58-74-2]  $C_{20}H_{21}NO_4$  (339.39). Needles, mp 147~148°C, soluble in ethanol, acetone, hot benzene, slightly soluble in water.<sup>[5507]</sup> Pharm: Antineoplastic; antitussive; choleric; platelet aggregation inhibitor; smooth muscle relaxant (hmn, dog); intestinal smooth muscle relaxant (*in vitro*, rat ileum, 1μg/mL, relaxant effect = (28.6±7.3)%,  $p < 0.05$ )<sup>[5002]</sup>; LD<sub>50</sub> (mus, iv) = 46.3mg/kg, (rat, orl) = 750mg/kg, (mus, orl) = 528mg/kg. Source: BAI HUA YING SU *Papaver album*, BAI YAO ZI *Stephania cepharantha*, YA PIAN *Papaver somniferum* (latex from unripe capsules: content scope = 0.8%~1.0%)<sup>[5507]</sup>, YIN DU LUO FU MU *Rauwolfia serpentina*, YING SU *Papaver somniferum*, YING SU KE *Papaver somniferum*. Ref: 4, 5, 6, 658, 5002, 5507.

**16624 Papaverrubine A**

[6807-93-8]  $C_{20}H_{19}NO_6$  (369.38). mp 223~225°C,  $[\alpha]_D^{22} = +406^\circ$  ( $c = 0.978$ ,  $CHCl_3$ ). Source: HUO XIANG YE LV RONG HAO *Meconopsis betonicifolia*, LI CHUN HUA *Papaver commutatum* [Syn. *Papaver rhoeas*], *Papaver* spp. Ref: 1521, 2993.

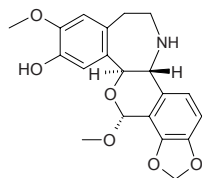
**16625 Papaverrubine B**

[5140-39-6]  $C_{21}H_{23}NO_6$  (385.42). Crystals (MeOH), mp 202~204°C, 201~203°C,  $[\alpha]_D = +398^\circ$  ( $CHCl_3$ ). Source: BO SI YING SU *Papaver persicum*, CHANG GUO YING SU *Papaver dubium*, DA HONG YING SU *Papaver bracteatum*, GAO JIA SUO YING SU *Papaver caucasicum*, GAO SHAN YING SU *Papaver alpinum*, JIN DONG YING SU *Papaver orientale*, LI CHUN HUA *Papaver commutatum* [Syn. *Papaver rhoeas*], YE YING SU *Papaver nudicaule*, YA PIAN *Papaver somniferum*. Ref: 6, 1521.

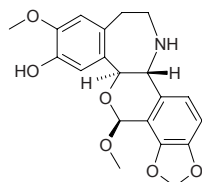


**16626 Papaverrubine C**

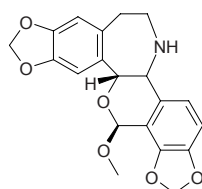
[22584-46-9] C<sub>20</sub>H<sub>21</sub>NO<sub>6</sub> (371.39). Prisms (C<sub>6</sub>H<sub>6</sub>-pet. ether), mp 190–191.5°C, [ $\alpha$ ]<sub>D</sub> = +283° (CHCl<sub>3</sub>). Source: HUO XIANG YE LV RONG HAO *Meconopsis betonicifolia*, YA PIAN *Papaver somniferum*. Ref: 6, 1521.

**16627 Papaverrubine D**

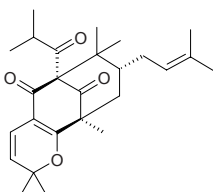
Porphyroxine [18104-24-0] C<sub>20</sub>H<sub>21</sub>NO<sub>6</sub> (371.39). Needles (MeOH), mp 237–239°C, 234–236°C, [ $\alpha$ ]<sub>D</sub> = +391° (CHCl<sub>3</sub>). Source: DUO CI LV RONG HAO *Meconopsis horridula*, HUO XIANG YE LV RONG HAO *Meconopsis betonicifolia*, LI CHUN HUA *Papaver commutatum* [Syn. *Papaver rhoeas*], NI BO ER LV RONG HAO *Meconopsis nepaulensis*, YA PIAN *Papaver somniferum*, *Meconopsis* spp., *Papaver* spp. Ref: 6, 660, 1521, 2979, 2993.

**16628 Papaverrubine E**

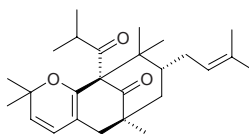
[6807-95-0] C<sub>20</sub>H<sub>19</sub>NO<sub>6</sub> (369.38). mp 230–231°C, [ $\alpha$ ]<sub>D</sub> = +331° (CHCl<sub>3</sub>). Source: DUO CI LV RONG HAO *Meconopsis horridula*, LI CHUN HUA *Papaver commutatum* [Syn. *Papaver rhoeas*], NI BO ER LV RONG HAO *Meconopsis nepaulensis*, YA PIAN *Papaver somniferum*, GUAN ZHUANG MEI YIN SU *Bocconia frutescens*, *Meconopsis* spp., *Papaver* spp. Ref: 660, 1521, 2993, 2979.

**16629 Papuaforin A**

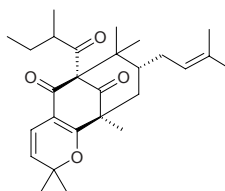
C<sub>26</sub>H<sub>36</sub>O<sub>4</sub> (412.57). Pharm: Antioxidant inactive (PMN cellular chemiluminescence assay, FMLP-induced and OZ-induced oxidative burst). Source: *Hypericum papuanum*. Ref: 5371.

**16630 Papuaforin B**

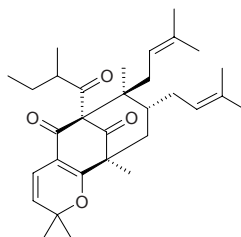
C<sub>26</sub>H<sub>38</sub>O<sub>3</sub> (398.59). Pharm: Antioxidant inactive (PMN cellular chemiluminescence assay, FMLP-induced and OZ-induced oxidative burst). Source: *Hypericum papuanum*. Ref: 5371.

**16631 Papuaforin C**

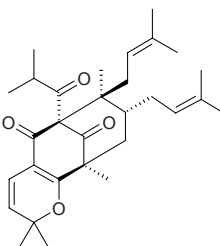
C<sub>27</sub>H<sub>38</sub>O<sub>4</sub> (426.60). Pharm: Antioxidant inactive (PMN cellular chemiluminescence assay, FMLP-induced and OZ-induced oxidative burst)<sup>[5371]</sup>. Source: *Hypericum papuanum*. Ref: 5371.

**16632 Papuaforin D**

C<sub>31</sub>H<sub>44</sub>O<sub>4</sub> (480.69). Pharm: Antioxidant inactive (PMN cellular chemiluminescence assay, FMLP-induced and OZ-induced oxidative burst)<sup>[5371]</sup>. Source: *Hypericum papuanum*. Ref: 5371.

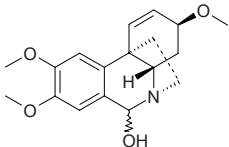
**16633 Papuaforin E**

C<sub>30</sub>H<sub>42</sub>O<sub>4</sub> (466.67). Pharm: Antioxidant (PMN cellular chemiluminescence assay, reduces oxidative burst FMLP-induced, IC<sub>50</sub> = (8.0±1.0)μmol/L, control Quercetin, IC<sub>50</sub> = (0.5±0.1)μmol/L; OZ-induced, inactive)<sup>[5371]</sup>. Source: *Hypericum papuanum*. Ref: 5371.

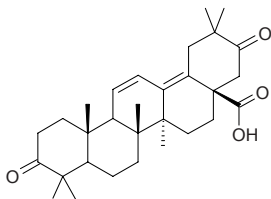


**16634 Papyramine**

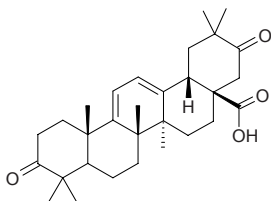
[81149-33-9]  $C_{18}H_{23}NO_4$  (317.39). mp 137~138°C. Pharm: Cytotoxic (hmn lymphoma Molt4,  $ED_{50} = 15.8\mu\text{g/mL}$ , mus fibrocyte LMTK,  $ED_{50} = 1.5\mu\text{g/mL}$ , hmn hepatoma HepG2,  $ED_{50} = 17\mu\text{g/mL}$ ). Source: SHUI XIAN GEN *Narcissus tazetta* var. *chinensis*. Ref: 6, 1847.

**16635 Papyriogenin A**

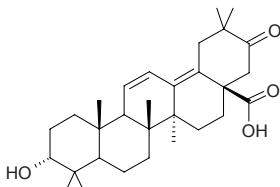
[59076-79-8]  $C_{30}H_{42}O_4$  (466.67). Crystals (MeOH aq.), mp 262~264°C,  $[\alpha]_D = -11.3^\circ$  ( $c = 16.7$ ,  $\text{CHCl}_3$ ). Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 1521, 3135, 3136.

**16636 Papyriogenin B**

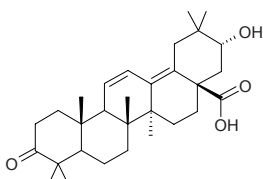
[64854-67-7]  $C_{30}H_{42}O_4$  (466.67). Crystals (MeOH aq.), mp 259~262°C,  $[\alpha]_D = +19.6^\circ$  ( $c = 10$ ,  $\text{CHCl}_3$ ). Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 3137, 3135, 3136.

**16637 Papyriogenin C**

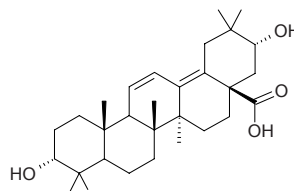
[73341-64-7]  $C_{30}H_{44}O_4$  (468.68). Crystals (MeOH aq.), mp 230~231°C,  $[\alpha]_D = -188.4^\circ$  ( $c = 0.064$ , EtOH). Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 1521, 3135, 3136.

**16638 Papyriogenin D**

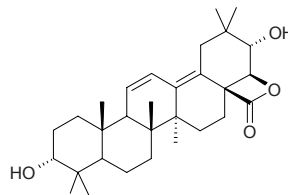
[72933-75-6]  $C_{30}H_{44}O_4$  (468.68). Crystals (MeOH), mp 285~287°C,  $[\alpha]_D = -183^\circ$  ( $c = 0.6$ , pyridine). Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 1521, 3135, 3136.

**16639 Papyriogenin E**

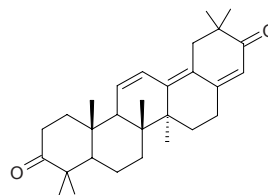
[73341-65-8]  $C_{30}H_{46}O_4$  (470.70). Crystals (MeOH), mp 286~288°C,  $[\alpha]_D = -207^\circ$  ( $c = 0.06$ , pyridine). Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 1521, 3135, 3136.

**16640 Papyriogenin G**

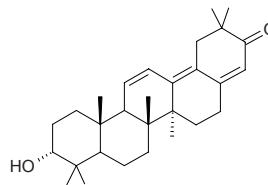
[67779-71-9]  $C_{30}H_{44}O_4$  (468.68). Crystals, mp 188~190°C. Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 1521, 3135, 3136.

**16641 Papyriogenin H**

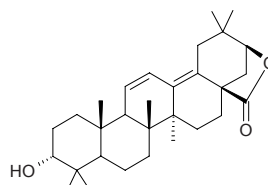
[72933-71-2]  $C_{29}H_{40}O_2$  (420.64). Crystals, mp 127~131°C. Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 3138, 3139.

**16642 Papyriogenin I**

[72938-20-6]  $C_{29}H_{42}O_2$  (422.66). Crystals, mp 255~257°C. Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 3138, 3139.

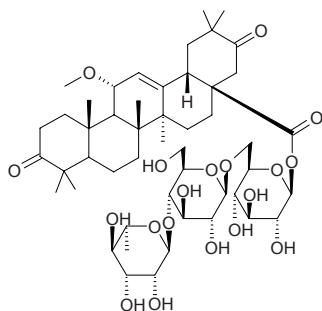
**16643 Papyriogenin J**

[73341-66-9]  $C_{30}H_{44}O_3$  (452.68). Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 1521, 3135, 3136.

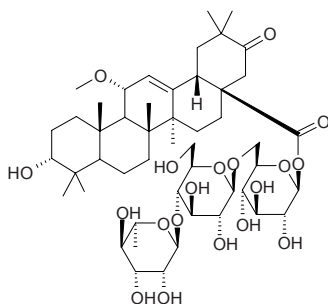


**16644 Papyriocide L-IIa**

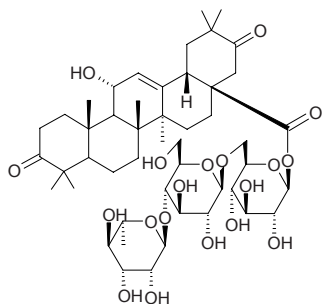
[59112-65-1] C<sub>49</sub>H<sub>76</sub>O<sub>19</sub> (969.14). Powder, mp 182~183°C, [ $\alpha$ ]<sub>D</sub> = -39° (c = 0.82, CHCl<sub>3</sub>), artifact. Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 3140.

**16645 Papyriocide L-IIb**

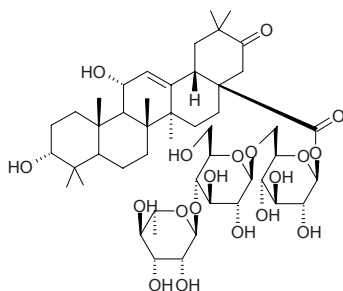
[72933-67-6] C<sub>49</sub>H<sub>78</sub>O<sub>19</sub> (971.16). Crystals, mp 178~182°C, [ $\alpha$ ]<sub>D</sub> = -37.8° (c = 0.27, EtOH). Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 3140.

**16646 Papyriocide L-IIc**

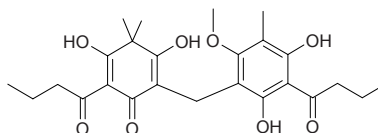
[72938-19-3] C<sub>48</sub>H<sub>74</sub>O<sub>19</sub> (955.11). Powder, mp 188~191°C, [ $\alpha$ ]<sub>D</sub> = -47.1° (c = 0.1, EtOH). Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 3140.

**16647 Papyriocide L-IId**

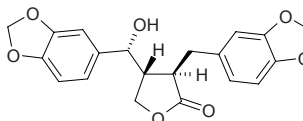
[72933-68-7] C<sub>48</sub>H<sub>76</sub>O<sub>19</sub> (957.13). Powder, mp 185~190°C, [ $\alpha$ ]<sub>D</sub> = -39.3° (c = 0.15, EtOH). Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 3140.

**16648 Paraaspidin BB**

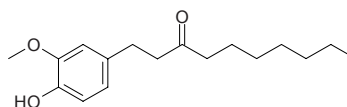
[989-54-8] C<sub>25</sub>H<sub>32</sub>O<sub>8</sub> (460.53). mp 123~125°C. Source: GUAN ZHONG *Dryopteris crassirhizoma*. Ref: 6, 1521.

**16649 Parabenzlactone**

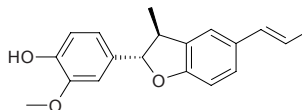
[27675-77-0] C<sub>20</sub>H<sub>18</sub>O<sub>7</sub> (370.36). White needles, mp 123~125°C, 159~161°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -11° (c = 1.15, CHCl<sub>3</sub>), [ $\alpha$ ]<sub>D</sub><sup>30</sup> = -25° (c = 0.14, CHCl<sub>3</sub>). Pharm: Immunosuppressant (hmn, inhibits ConA-induced hyperplasia of lymphocyte in peripheral blood, IC<sub>50</sub> = 4.3μg/mL). Source: CHANG YE FEI SHU *Torreya jackii*, JIA SHAN HU JIAO *Parabenzoin trilobum*. Ref: 3590, 3591, 1669.

**16650 6-Paradol**

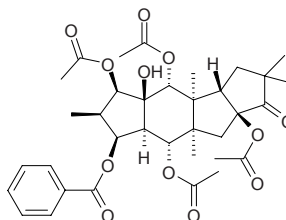
[27113-22-0] C<sub>17</sub>H<sub>26</sub>O<sub>3</sub> (278.40). Pharm: Bitter principle. Source: SHENG JIANG *Zingiber officinale*. Ref: 658.

**16651 Parakmerin A**

2,3-Dihydro-2α-(4-hydroxy-3-methoxyphenyl)-3β-methyl-5E-propenylbenzofuran C<sub>19</sub>H<sub>20</sub>O<sub>3</sub> (296.37). White powder, mp 68~70°C, [ $\alpha$ ]<sub>D</sub><sup>21</sup> = -101.5° (c = 0.50, CHCl<sub>3</sub>). Source: YUN NAN NI DAN XING MU LAN *Parakmeria yunnanensis*. Ref: 2137.

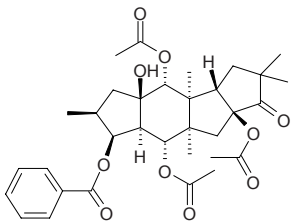
**16652 Paraliane 12**

C<sub>33</sub>H<sub>44</sub>O<sub>12</sub> (656.73). Pharm: Antifeedant (*Spodopetra littoralis*, 500~1000mg/L)<sup>[5221]</sup>; anti-HIV-1 (inhibition of virus-induced cytopathicity in MT-4 cells, EC<sub>50</sub> = 70μg/mL)<sup>[5221]</sup>; cytotoxic (MT-4, CC<sub>50</sub> = 70μg/mL)<sup>[5221]</sup>. Source: HAI YANG DA JI *Euphorbia paralias* (aerial parts). Ref: 5221.

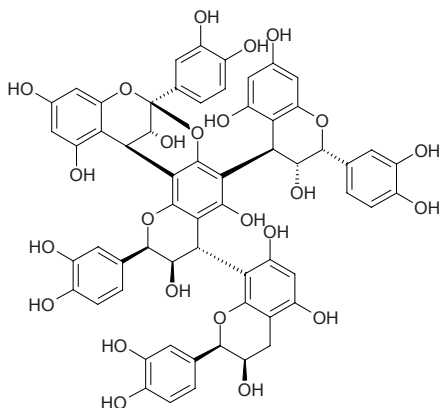


**16653 Paraliene 13**

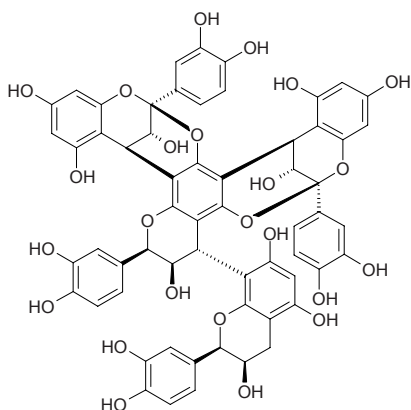
$C_{33}H_{42}O_{10}$  (598.70). **Pharm:** Antifeedant (*Spodopetra littoralis*, 1000mg/L); anti-HIV-1 (inhibition of virus-induced cytopathicity in MT-4 cells,  $EC_{50} = 14\mu\text{g/mL}$ ); cytotoxic (MT-4,  $CC_{50} = 49\mu\text{g/mL}$ ). **Source:** HAI YANG DA JI *Euphorbia paralias* (aerial parts). **Ref:** 5221.

**16654 Parameritannin A<sub>1</sub>**

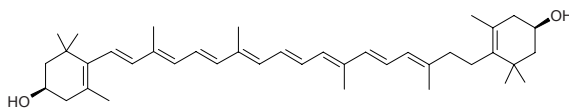
Epicatechin-(2 $\beta$ →O→7,4 $\beta$ →8)-[epicatechin-(4 $\beta$ →6)]-epicatechin-(4 $\beta$ →8)-epicatechin  $C_{60}H_{48}O_{24}$  (1153.04). Pale yellow amorphous powder,  $[\alpha]_D^{21} = +50.1.9^\circ$  ( $c = 1.33$ , MeOH). **Source:** CHANG JIE ZHU *Parameria laevigata* (bark). **Ref:** 3523.

**16655 Parameritannin A<sub>2</sub>**

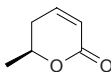
Epicatechin-(2 $\beta$ →O→5,4 $\beta$ →6)-[epicatechin-(2 $\beta$ →O→7,4 $\beta$ →8)]-epicatechin-(4 $\beta$ →8)-epicatechin  $C_{60}H_{46}O_{24}$  (1151.02). Pale yellow amorphous powder. **Source:** CHANG JIE ZHU *Parameria laevigata* (bark). **Ref:** 3523.

**16656 Parasiloxanthin**

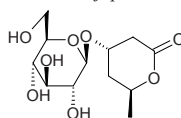
[62994-48-3]  $C_{40}H_{58}O_2$  (570.91). Orange-yellow needles, mp 202°C. **Source:** HAI YUN *Nemacystus decipiens* [Syn. *Mesogloea decipiens*; *Cladosiphon decipiens*], NIAN YU *Parasilurus asotus*. **Ref:** 3141, 3142.

**16657 Parasorbic acid**

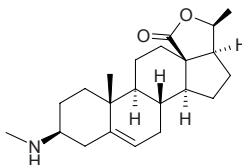
[10048-32-5]  $C_6H_8O_2$  (112.13). Oil, (S), bp (+) 104~105°C/14mmHg,  $[\alpha]_D^{24} = +206^\circ$  ( $c = 1$ , EtOH), ( $\pm$ ): bp 110°C/15mmHg, 44°C/0.05mmHg. **Pharm:** Overcomer dormancy of peppertree fruits; carcinogenic; LD<sub>50</sub> (mus, ip) = 750mg/kg. **Source:** OU ZHOU HUA QIU *Sorbus aucuparia*, TIAN SHAN HUA QIU *Sorbus tianschanica*. **Ref:** 6, 658, 1521.

**16658 Parasorboside**

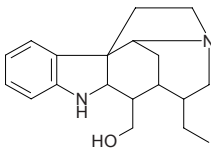
[33276-04-9]  $C_{12}H_{20}O_8$  (292.29). Needles (Me<sub>2</sub>CO), mp 68.9°C, mp 143.4°C (double mp). **Source:** OU ZHOU HUA QIU *Sorbus aucuparia*, ZI QI *Osmunda japonica*. **Ref:** 2886, 2887.

**16659 Paravallarine**

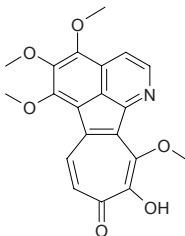
$C_{22}H_{33}NO_2$  (343.51). **Pharm:** Fish toxin. **Source:** ZHI XIE MU PI *Holarrhena antidysenterica*. **Ref:** 658.

**16660 Pareirine**

$C_{19}H_{26}N_2O$  (298.43). mp 142.5~143.0°C. **Source:** XI SHENG TENG *Cissampelos pareira*, YA HU NU *Cissampelos pareira* var. *hirsute*. **Ref:** 6, 660.

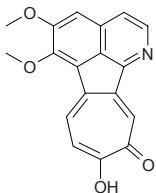
**16661 Pareirubrine A**

[147044-68-6]  $C_{20}H_{17}NO_6$  (367.36). Light red-brown needles, mp 168~170°C. **Pharm:** Cytotoxic (*in vitro*, P<sub>388</sub>, IC<sub>50</sub> = 0.33 $\mu\text{g/mL}$ ). **Source:** XI SHENG TENG *Cissampelos pareira*. **Ref:** 3592.

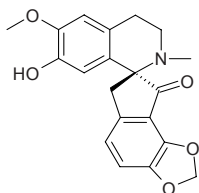


**16662 Pareirubrine B**

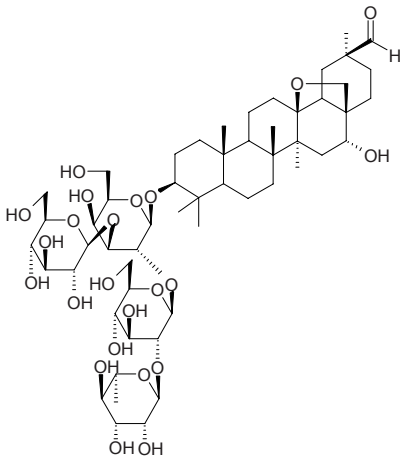
[152845-78-8]  $C_{18}H_{13}NO_4$  (307.31). Light red-brown needles, mp 290°C (dec). **Pharm:** Cytotoxic (*in vitro*,  $P_{388}$ ,  $IC_{50} = 0.17\mu\text{g/mL}$ ). **Source:** XI SHENG TENG *Cissampelos pareira*. **Ref:** 3592.

**16663 Parfumine**

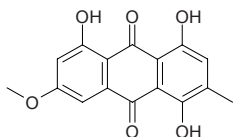
Fumarilicine [28230-70-8]  $C_{20}H_{19}NO_5$  (353.38). Crystals (EtOH or  $CHCl_3$ ), mp 118~120°C (111~112°C)  $[\alpha]_D^{23} = +18^\circ$  ( $c = 1.1$ ,  $CHCl_3$ ). **Source:** WEI LAN QIU GUO ZI JIN *Fumaria vaillantii*, XIAO HUA QIU GUO ZI JIN *Fumaria parviflora*, YAN JIN *Fumaria schleicheri*. **Ref:** 1521.

**16664 Paridiformoside**

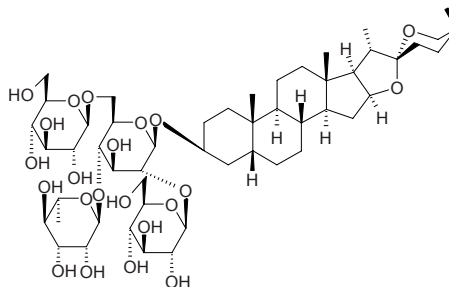
3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1→3)-*O*-( $\alpha$ -*L*-rhamno-pyransyl-(1→2)- $\beta$ -*D*-glucopyranosyl(1→2))- $\beta$ -*D*-glucopyranosyl)cyclamiretin A [112468-35-6]  $C_{54}H_{88}O_{23}$  (1105.29). White powder, mp 163~165°C. **Pharm:** Uterine stimulant (animal model, presents dose-response relationship). **Source:** CHONG LOU PAI CAO *Lysimachia paridiformis*. **Ref:** 86, 1608.

**16665 Parietin**

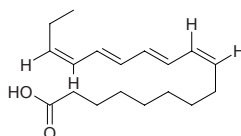
$C_{16}H_{12}O_6$  (300.27). **Pharm:** Cytotoxic inactive (*in vitro*, HeLa, Vero, K562, Raji, Wish, and Calu1 tumor cell lines,  $IC_{50} > 100\mu\text{mol/L}$ ). **Source:** YI HE GUO *Ventilago leiocarpa* (stem). **Ref:** 3057.

**16666 Parillin**

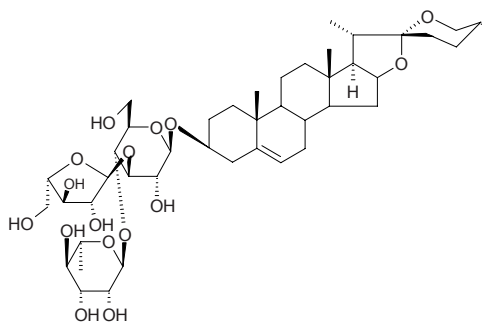
[19057-61-5]  $C_{51}H_{84}O_{22}$  (1049.23). **Pharm:** Antibacterial (phytopathogenic bacteria); antineoplastic (rat Walker carcinoma, non-orl,  $ED_{50} = 50\text{mg/kg}$ ); antifungal (*Sclerotinia*, *Claviceps purpurea* and *Trichothecium roseum*); hemolytic;  $LD_{50}$  (rat, non-orl) = 80mg/kg. **Source:** HUI BA QIA *Smilax aristolochiaefolia*. **Ref:** 658.

**16667 Parinaric acid**

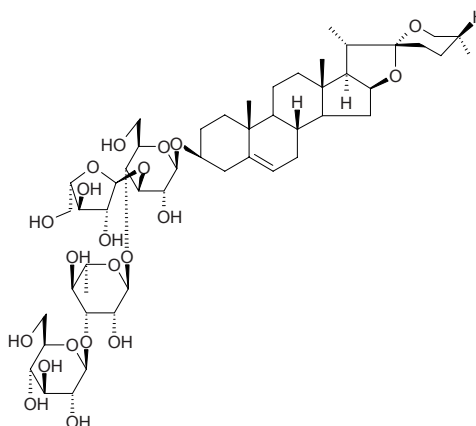
[593-38-4]  $C_{18}H_{28}O_2$  (276.42). mp 85~86°C. **Source:** JI XING ZI *Impatiens balsamina*. **Ref:** 6, 1521.

**16668 Pariphyllin**

$C_{44}H_{70}O_{16}$  (855.04). mp 294~298°C. **Source:** ZAO XIU *Paris polyphylla*. **Ref:** 6.

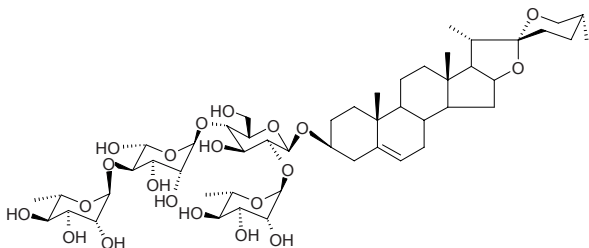
**16669 Pariphyllin B**

[57282-83-4]  $C_{50}H_{80}O_{21}$  (1017.18). Crystals +2 $H_2O$ , mp 168~170°C,  $[\alpha]_D = -97.6^\circ$  ( $c = 0.87$ , pyridine). **Source:** ZAO XIU *Paris polyphylla*. **Ref:** 3143.

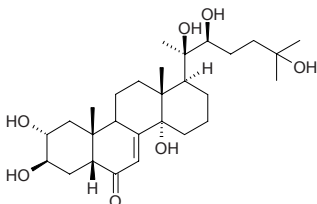


**16670 Parissaponin Pb**

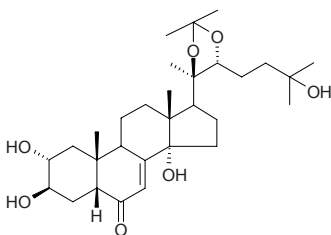
$C_{50}H_{80}O_{21}$  (1017.18). **Pharm:** Cytotoxic (*in vitro*, HeLa,  $IC_{50} = 3.14\mu\text{g/mL}$ ; control Cisplatin, HeLa,  $IC_{50} = 0.75\mu\text{g/mL}$ )<sup>[4788]</sup>. **Source:** HU BEI HUANG JING *Polygonatum zanlanscianense* (rhizome: yield = 0.00058%dw). **Ref:** 4788.

**16671 Paristerone**

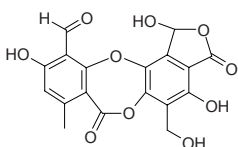
[84580-28-9]  $C_{28}H_{46}O_7$  (494.67). Crystals, mp 216~220°C,  $[\alpha]_D = +41.9^\circ$ . **Source:** ZAO XIU *Paris polyphylla*. **Ref:** 3144.

**16672 Paristerone 20,22-monoacetoneide**

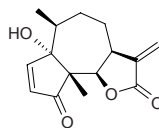
$C_{30}H_{48}O_7$  (520.71). Colorless needles, mp 108~110°C,  $[\alpha]_D^{25} = 48.7^\circ$  ( $c = 0.21$ , MeOH). **Source:** CANG BAI CHENG GOU FENG *Diploclisia glaucescens*. **Ref:** 2496.

**16673 Parmatic acid**

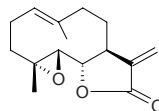
Salazinic acid [521-39-1]  $C_{18}H_{12}O_{10}$  (388.29). mp 260°C (dec). **Source:** SHI HUA *Parmelia saxatilis*. **Ref:** 6.

**16674 Parthenin**

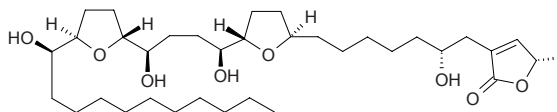
[508-59-8]  $C_{15}H_{18}O_4$  (262.31). **Pharm:** Antifungal; dermatitic (causes contact dermatitis); cytotoxic; inhibits heart (dog); insect antifeedant; molluscicide; toxin (ox, some insects). **Source:** LUO SUI TUN CAO *Ambrosia psilostachya*, NEI HUA YI WA JU *Iva nevadensis*, YIN JIAO JU *Parthenium hysterophorus*. **Ref:** 658, 4489.

**16675 Parthenolide**

[20554-84-1]  $C_{15}H_{20}O_3$  (248.32). Colorless massive crystals, mp 114~115°C. **Pharm:** Antineoplastic; cytotoxic (*in vitro*, SMMC-7721,  $IC_{50} = 4.2\mu\text{g/mL}$ ; HO-8910,  $IC_{50} = 1.37\mu\text{g/mL}$ ; control Vincristine, SMMC-7721,  $IC_{50} = 30.35\mu\text{g/mL}$ ; HO-8910,  $IC_{50} = 20.74\mu\text{g/mL}$ )<sup>[4736]</sup>; cytotoxic (U937,  $IC_{50} = 1.9\mu\text{mol/L}$ )<sup>[3887]</sup>; antibacterial; antifungal; cytotoxic; used in treatment of bilious headache (vasomotor headache); anti-inflammatory (modulator of cytokine network: blocks VCAM-1 expression induced by IL-4 in endothelial cells ( $IC_{50} < 10\mu\text{mol/L}$ ); decreases expression of IL-2 in T-lymphocytes)<sup>[4416]</sup>; anti-inflammatory (RAW264.7 cells, LPS-induced: NF- $\kappa$ B inhibitor,  $IC_{50} = (3.42 \pm 0.08)\mu\text{mol/L}$ )<sup>[3837]</sup>; anti-inflammatory (NO production inhibitor,  $IC_{50} = (2.41 \pm 0.06)\mu\text{mol/L}$ )<sup>[3837]</sup>; anti-inflammatory (TNF- $\alpha$  production inhibitor,  $IC_{50} = (2.68 \pm 0.11)\mu\text{mol/L}$ )<sup>[3837]</sup>; anti-inflammatory (inhibits LPS-induced NF- $\kappa$ B activation in murine macrophage RAW264.7 cells,  $IC_{50} = 2.34\mu\text{mol/L}$ )<sup>[4724]</sup>; anti-inflammatory (NO production inhibitor ( $IC_{50} = 2.01\mu\text{mol/L}$ )<sup>[4724]</sup>. **Source:** CHANG MAO HAN XIAO *Michelia lanuginosa*, CHANG YE TIAN MING JING *Carpesium longifolium* (aerial parts: yield = 0.0012%dw)<sup>[4736]</sup>, HUANG MIAN GUI *Michelia champaca*, YUN NAN HAN XIAO *Michelia yunnanensis*, ZHOU YE MU LAN *Magnolia praecoccissima* (seed), LEI GONG TENG *Tripterygium wilfordii*, *Parthenium* spp., *Chrysanthemum* spp., *Tanacetum* spp., *Ambrosia* spp. **Ref:** 426, 658, 3837, 3887, 4181, 4416, 4724, 4736.

**16676 Parvifloracin**

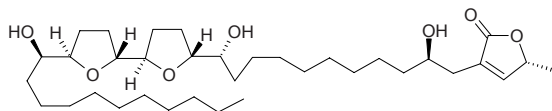
[157110-12-8]  $C_{35}H_{62}O_8$  (610.88). White-like wax,  $[\alpha]_D^{22} = +18.75^\circ$  ( $c = 0.08$ , MeOH). **Pharm:** Cytotoxic (A549,  $ED_{50} = 2.83 \times 10^{-11}\mu\text{g/mL}$ , MCF7,  $ED_{50} < 10^{-12}\mu\text{g/mL}$ , BST,  $LC_{50} = 0.0201\mu\text{g/mL}$ ). **Source:** XIAO HUA PAO PAO *Asimina parviflora*. **Ref:** 3730.



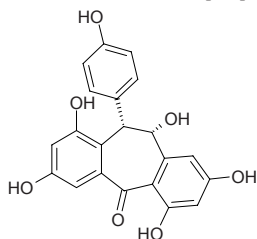


**16677 Parviflorin**

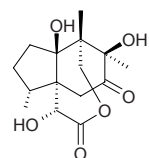
[152378-19-3] C<sub>35</sub>H<sub>62</sub>O<sub>7</sub> (594.88). White-like wax,  $[\alpha]_D^{22} = +18.33^\circ$  ( $c = 0.06$ , alcohol). **Pharm:** Cytotoxic (A549, ED<sub>50</sub> < 10<sup>-12</sup> μg/mL, HT29, ED<sub>50</sub> = 0.549 μg/mL, BST, LC<sub>50</sub> = 0.08 μg/mL). **Source:** PAO PAO SHU *Asimina triloba*, PAO ZHUANG FAN LI ZHI *Annona bullata*, XIAO HUA PAO PAO *Asimina parviflora*. **Ref:** 3731, 3730, 3732, 3733.

**16678 Parviflorol**

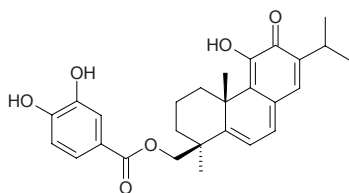
C<sub>21</sub>H<sub>16</sub>O<sub>7</sub> (380.36). Yellow solid,  $[\alpha]_D = +62^\circ$  ( $c = 0.18$ , MeOH). **Source:** XIAO HUA PO LEI *Hopea parviflora* (bark). **Ref:** 3936.

**16679 Parviflorolide**

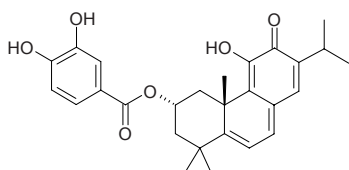
C<sub>15</sub>H<sub>22</sub>O<sub>6</sub> (298.34). **Source:** *Illicium merrillianum* (pericarp). **Ref:** 3046.

**16680 Parvifloron E**

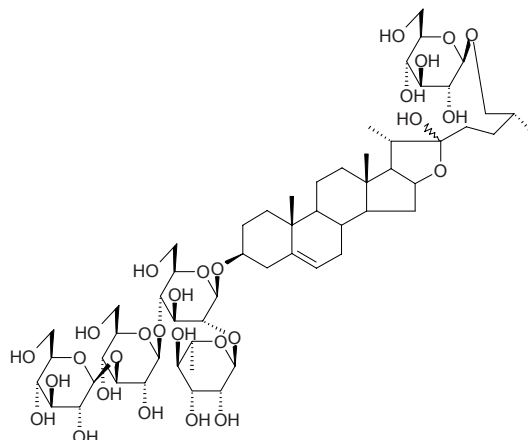
C<sub>27</sub>H<sub>30</sub>O<sub>6</sub> (450.54). **Pharm:** Antioxidant (DPPH scavenger, EC<sub>50</sub> = 0.086 mmol/L, control Vitamin E, EC<sub>50</sub> = 0.134 mmol/L). **Source:** YUAN BAN XIANG CHA CAI *Plectranthus nummularius* (leaf). **Ref:** 4121.

**16681 Parvifloron F**

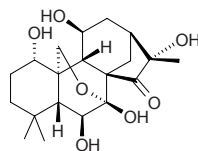
C<sub>27</sub>H<sub>30</sub>O<sub>6</sub> (450.54). **Pharm:** Antioxidant (DPPH scavenger, EC<sub>50</sub> = 0.131 mmol/L, control Vitamin E, EC<sub>50</sub> = 0.134 mmol/L). **Source:** YUAN BAN XIANG CHA CAI *Plectranthus nummularius* (leaf). **Ref:** 4121.

**16682 Parvifloside**

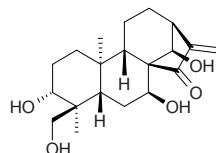
C<sub>57</sub>H<sub>94</sub>O<sub>28</sub> (1227.37). White powder, mp 214~218°C,  $[\alpha]_D^{19.9} = -60.69^\circ$  ( $c = 0.508$ , pyridine). **Source:** XIAO HUA DUN YE SHU YU *Dioscorea parviflora* (fresh rhizome). **Ref:** 4858.

**16683 Parvifolin**

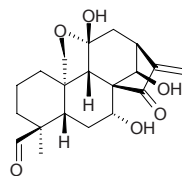
C<sub>20</sub>H<sub>30</sub>O<sub>7</sub> (382.46). Amorphous powder,  $[\alpha]_D = -117^\circ$  (MeOH). **Source:** XIAO YE XIANG CHA CAI *Isodon parvifolia*. **Ref:** 4067.

**16684 Parvifoline A**

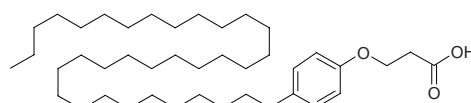
C<sub>20</sub>H<sub>30</sub>O<sub>5</sub> (350.46). mp 163~165°C,  $[\alpha]_D^{20} = -23.5^\circ$  ( $c = 0.45$ , MeOH). **Source:** XIAO YE XIANG CHA CAI *Isodon parvifolia*. **Ref:** 4067.

**16685 Parvifoline B**

C<sub>20</sub>H<sub>26</sub>O<sub>6</sub> (362.43). mp 217~219°C,  $[\alpha]_D^{20} = -65.96^\circ$  ( $c = 0.10$ , MeOH). **Source:** XIAO YE XIANG CHA CAI *Isodon parvifolia*. **Ref:** 4067.

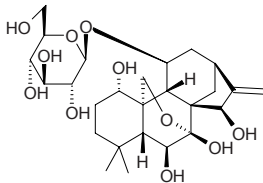
**16686 Parvifoloinic acid**

[133336-95-5] C<sub>42</sub>H<sub>76</sub>O<sub>3</sub> (629.07). White powder, mp 90~91.5°C (CHCl<sub>3</sub>). **Pharm:** Cytotoxic (hmn liver cancer cell QGY-7703). **Source:** XIAO YE XIANG CHA CAI *Isodon parvifolia*. **Ref:** 3593.

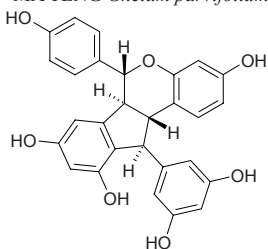


**16687 Parvifoliside**

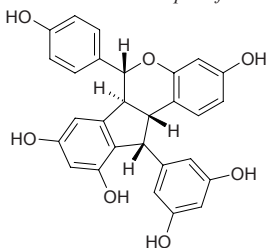
$C_{26}H_{40}O_{11}$  (528.60). mp 279~281°C,  $[\alpha]_D^{20} = +0.5^\circ$  ( $c = 0.4$ , MeOH). Source: XIAO YE XIANG CHA CAI *Isodon parvifolia*. Ref: 4067.

**16688 Parvifolol A**

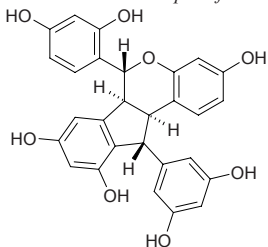
$C_{28}H_{22}O_7$  (470.48). Pale brownish amorphous solid. Source: XIAO YE MAI MA TENG *Gnetum parvifolium* [Syn. *Gnetum indicum*] (bark). Ref: 3550.

**16689 Parvifolol B**

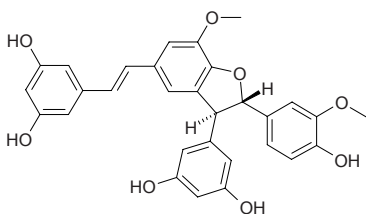
$C_{28}H_{22}O_7$  (470.48). Pale brownish amorphous solid. Source: XIAO YE MAI MA TENG *Gnetum parvifolium* [Syn. *Gnetum indicum*] (bark). Ref: 3550.

**16690 Parvifolol C**

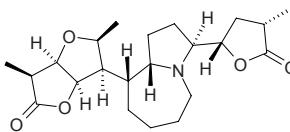
$C_{28}H_{22}O_8$  (486.48). Pale brownish amorphous solid. Source: XIAO YE MAI MA TENG *Gnetum parvifolium* [Syn. *Gnetum indicum*] (bark). Ref: 3550.

**16691 Parvifolol D**

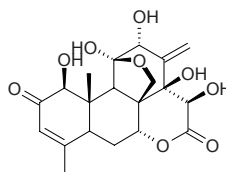
Shegansu B  $C_{30}H_{26}O_8$  (514.54). Pale brownish amorphous solid. Source: SHE GAN *Belamcanda chinensis*, XIAO YE MAI MA TENG *Gnetum parvifolium* [Syn. *Gnetum indicum*] (bark). Ref: 2233, 2234, 3550.

**16692 Parvistemonine**

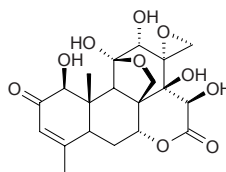
$C_{22}H_{33}NO_5$  (391.51). Pharm: Insecticidal (neonate larvae of *Spodoptera littoralis*,  $LC_{50} > 200\text{mg/L}$ ,  $EC_{50} = 163\text{mg/L}$ ). Source: *Stemona* sp. (HG915). Ref: 3409.

**16693 Pasakbumin A**

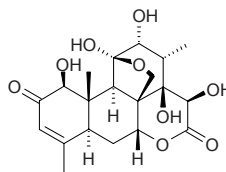
Eurycomanone  $C_{20}H_{24}O_9$  (408.41). Pharm: Cytotoxic (KB cells,  $IC_{50} = 0.40\mu\text{g/mL}$ , MCF7 cells,  $IC_{50} < 2.5\mu\text{g/mL}$ , A549 cells, remarkable activity); antileishmanial (*Leishmania* sp.,  $IC_{50} = 0.11\mu\text{g/mL}$ , control Thallioquin,  $IC_{50} = 0.21\mu\text{g/mL}$ ); antiulcerative (induced by indomethacin,  $ED_{50} = 0.27\mu\text{g/mL}$ );  $LD_{50} = 18.9\mu\text{g/kg}$ . Source: *Eurycoma* sp. Ref: 4556.

**16694 Pasakbumin B**

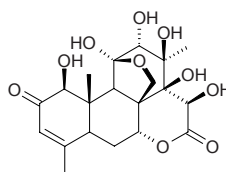
13 $\alpha$ (21)-Epoxyeurycomanone  $C_{20}H_{24}O_{10}$  (424.41). Pharm: Cytotoxic (MCF7 cancer cells,  $IC_{50} < 2.5\mu\text{g/mL}$ ); antiulcerative (induced by indomethacin,  $ED_{50} = 0.19\mu\text{g/mL}$ );  $LD_{50} = 5.1\mu\text{g/kg}$ . Source: *Eurycoma* sp. Ref: 4556.

**16695 Pasakbumin C**

13 $\beta$ ,21-Dihydroeurycomanone  $C_{20}H_{26}O_9$  (410.42). Pharm: Cytotoxic (KB cells,  $IC_{50} = 0.33\mu\text{g/mL}$ , P<sub>388</sub> cells,  $IC_{50} = 1.2\mu\text{g/mL}$ , MCF7 cells  $IC_{50} < 2.5\mu\text{g/mL}$ )<sup>[4556]</sup>. Source: *Eurycoma harmandiana* (root), *Eurycoma* sp. Ref: 4556, 5164.

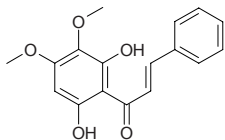
**16696 Pasakbumin D**

$C_{20}H_{26}O_{10}$  (426.42). Source: *Eurycoma* sp. Ref: 4556.

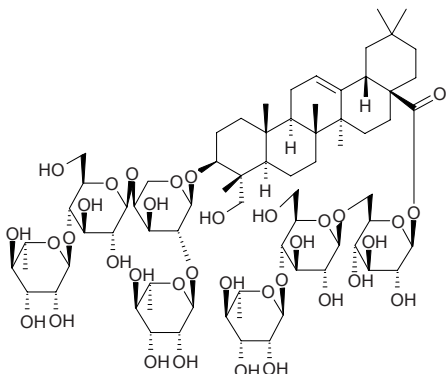


**16697 Pashanone**

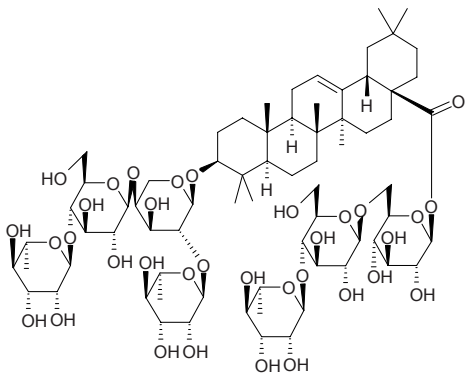
[42438-78-8] C<sub>17</sub>H<sub>16</sub>O<sub>5</sub> (300.31). Orange-red plates (C<sub>6</sub>H<sub>6</sub>-pet. ether), mp 147~149°C. Source: DIAO ZHANG ZHI YE *Lindera umbellata* [Syn. *Lindera erythrocarpa*], *Onychium auratum*, *Didymocarpus pedicellata*. Ref: 3145, 3146, 3147.

**16698 Pastuchoside A**

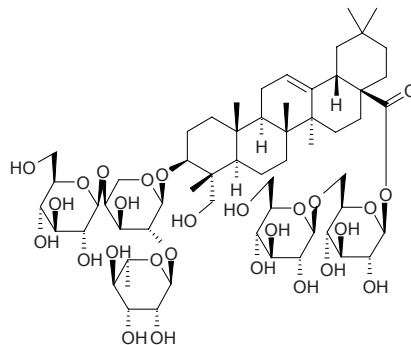
3 $\beta$ -O- $\{\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $[\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)]- $\alpha$ -L-arabinopyranosyl}-28-O- $[\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)]- $\beta$ -D-glucopyranosyl]-hederagenin C<sub>71</sub>H<sub>116</sub>O<sub>35</sub> (1529.70). White powder, mp 198°C,  $[\alpha]_D^{20} = -16^\circ$  ( $c = 0.1$ , MeOH). Source: *Hedera pastuchowii*. Ref: 2543.

**16699 Pastuchoside B**

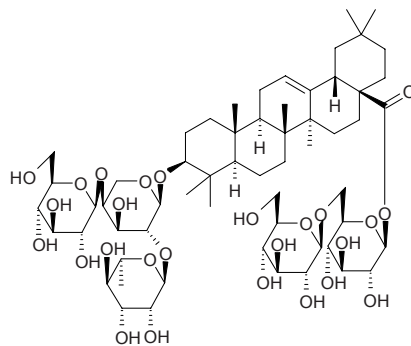
3 $\beta$ -O- $\{\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $[\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)]- $\alpha$ -L-arabinopyranosyl}-28-O- $[\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)]- $\beta$ -D-glucopyranosyl]-oleanolate C<sub>71</sub>H<sub>116</sub>O<sub>34</sub> (1513.70). White powder, mp 212°C,  $[\alpha]_D^{20} = -40^\circ$  ( $c = 0.1$ , MeOH). Source: *Hedera pastuchowii*. Ref: 2543.

**16700 Pastuchoside C**

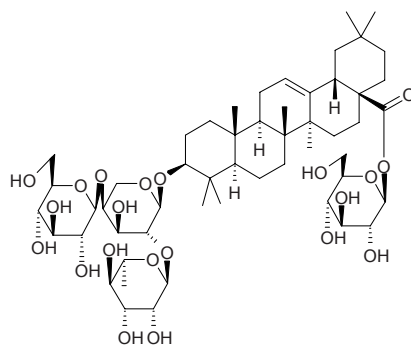
3 $\beta$ -O- $\{\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $[\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)]- $\alpha$ -L-arabinopyranosyl}-28-O- $[\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)]- $\beta$ -D-glucopyranosyl]-hederagenin C<sub>59</sub>H<sub>96</sub>O<sub>27</sub> (1237.41). White powder, mp 201°C,  $[\alpha]_D^{20} = -18^\circ$  ( $c = 0.1$ , MeOH). Source: *Hedera pastuchowii*. Ref: 2543.

**16701 Pastuchoside D**

3 $\beta$ -O- $\{\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $[\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)]- $\alpha$ -L-arabinopyranosyl}-28-O- $[\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)]- $\beta$ -D-glucopyranosyl]-oleanolate C<sub>59</sub>H<sub>96</sub>O<sub>26</sub> (1221.41). White powder, mp 213°C,  $[\alpha]_D^{20} = -30^\circ$  ( $c = 0.1$ , MeOH); amorphous solid, mp 228~229°C,  $[\alpha]_D^{25} = -11.8^\circ$  ( $c = 0.17$ , MeOH). Pharm: Pancreatic lipase inhibitor inactive (*in vitro*, 1mg/mL)<sup>[3021]</sup>. Source: HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.00022%dw), *Hedera pastuchowii*. Ref: 2543, 3021.

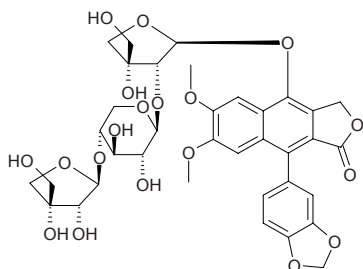
**16702 Pastuchoside E**

3 $\beta$ -O- $\{\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $[\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)]- $\alpha$ -L-arabinopyranosyl}-28-O- $\beta$ -D-glucopyranosyl]-oleanolate C<sub>53</sub>H<sub>86</sub>O<sub>21</sub> (1059.26). White powder, mp 205°C,  $[\alpha]_D^{20} = +25^\circ$  ( $c = 0.1$ , MeOH). Source: *Hedera pastuchowii*. Ref: 2543.

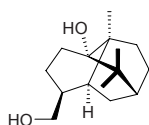


**16703 Patavine**

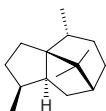
$C_{36}H_{40}O_{19}$  (776.71). Amorphous powder,  $[\alpha]_D^{24} = -18^\circ$  ( $c = 1.1$ , MeOH). **Pharm:** Cytotoxic (hmn LoVo Cell Line *in Vitro*,  $IC_{50} = (43.95 \pm 4.88) \mu\text{L/mL}$ ). **Source:** *Haplophyllum patavinum* (shoot). **Ref:** 4206.

**16704 Patchoulan-1,12-diol**

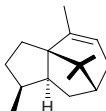
$C_{15}H_{26}O_2$  (238.37). Crystals (hexane- $C_6H_6$ ), mp 132.5–133°C. **Source:** GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*]. **Ref:** 3148.

**16705 Patchoulane**

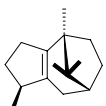
$C_{15}H_{26}$  (206.37). **Source:** HONG CHAI HU *Bupleurum scorzoniferifolium*. **Ref:** 2.

**16706  $\alpha$ -Patchoulene**

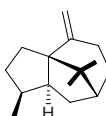
[560-32-7]  $C_{15}H_{24}$  (204.36). **Source:** GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*]. **Ref:** 2, 1521.

**16707  $\beta$ -Patchoulene**

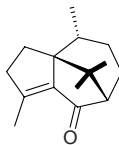
[514-51-2]  $C_{15}H_{24}$  (204.36). Oil, bp 66.8°C/0.6mmHg,  $[\alpha]_D^{30} = -42.6^\circ$  ( $c = 10.5$ ,  $CHCl_3$ ),  $n_D^{25} = 1.4978$ . **Source:** GAN SONG *Nardostachys chinensis*, GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*], MAI DONG *Ophiopogon japonicus*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SHI YE GAN SONG *Nardostachys jatamansi*, ZHI ZHU XIANG *Valeriana jatamansii* [Syn. *Valeriana wallichii*]. **Ref:** 660, 1521.

**16708  $\gamma$ -Patchoulene**

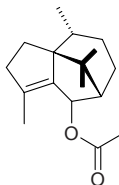
[508-55-4]  $C_{15}H_{24}$  (204.36). **Source:** DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*]. **Ref:** 2, 1521.

**16709 Patchoulenone**

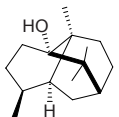
[5986-54-9]  $C_{15}H_{22}O$  (218.34). mp 52.5°C. **Source:** XIANG FU *Cyperus rotundus*. **Ref:** 6, 1521.

**16710 Patchouleny acetate**

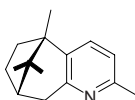
$C_{17}H_{26}O_2$  (262.40). **Source:** XIANG FU *Cyperus rotundus*. **Ref:** 3149.

**16711 Patchoulic alcohol**

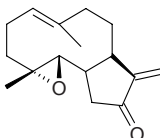
[5986-55-0]  $C_{15}H_{26}O$  (222.37). White solid, mp 37–38°C,  $[\alpha]_D = -119^\circ$  ( $c = 1.0$ ,  $CHCl_3$ ); colorless needles, mp 54–56°C,  $[\alpha]_D = -124^\circ$  ( $c = 0.22$ ,  $CHCl_3$ ). **Pharm:** Antibacterial; calcium antagonist ( $IC_{50} = 47 \mu\text{mol/L}$ ); used as a shampoo; antitrypanosomal (epimastigotes of *Trypanosoma cruzi*, *in vitro*,  $MLC > 200 \text{mmol/L}$ )<sup>[2551]</sup>. **Source:** GAN SONG *Nardostachys chinensis*, GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*] (aerial parts: content scope = 0.26%–3.42%<sup>[5501]</sup>), HUO XIANG *Agastache rugosus*, SHI YE GAN SONG *Nardostachys jatamansi*. **Ref:** 2, 505, 658, 1521, 2551, 5501.

**16712 Patchoulipyridine**

[6517-97-1]  $C_{15}H_{21}N$  (215.34). **Source:** GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*]. **Ref:** 2, 1521.

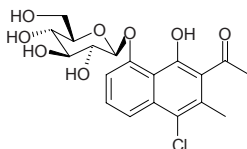
**16713 Pathenolide**

$C_{16}H_{22}O_2$  (246.35). **Pharm:** Anti-inflammatory (NF- $\kappa$ B pathway)<sup>[4415]</sup>; anti-inflammatory (NO production inhibitor, cultured rat aortic smooth muscle cells treated with LPS and interferon- $\gamma$ ; inhibits iNOS expression, hmn monocyte cell line THP-1, caused by TPA)<sup>[4415]</sup>. **Source:** HUANG MIAN GUI *Michelia champaca*, *Chrysanthemum parthenium*. **Ref:** 1521, 4415.

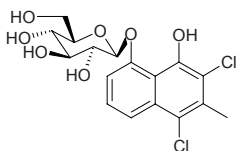


**16714 Patientoside A**

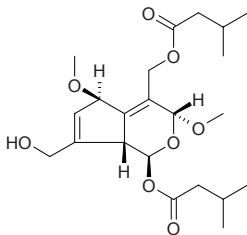
2-Acetyl-4-chloro-1,8-dihydroxy-3-methylnaphthalene-8-*O*- $\beta$ -D-glucopyranoside C<sub>19</sub>H<sub>21</sub>ClO<sub>8</sub> (412.83). Pale yellow amorphous powder,  $[\alpha]_D^{20} = -109.7^\circ$  ( $c = 0.75$ , MeOH). Source: NIU XI XI *Rumex patientia*. Ref: 3059.

**16715 Patientoside B**

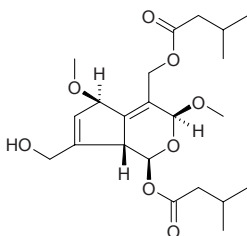
2,4-Dichloro-1,8-dihydroxy-3-methylnaphthalene-8-*O*- $\beta$ -D-glucopyranoside C<sub>17</sub>H<sub>18</sub>Cl<sub>2</sub>O<sub>7</sub> (405.23). Pale yellow amorphous powder,  $[\alpha]_D^{20} = -235.8^\circ$  ( $c = 0.72$ , MeOH). Source: NIU XI XI *Rumex patientia*. Ref: 3059.

**16716 Patridoid I**

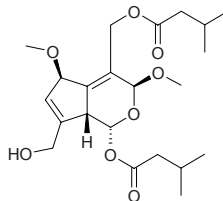
C<sub>22</sub>H<sub>34</sub>O<sub>8</sub> (426.51). Yellow oil,  $[\alpha]_D^{23} = -74.0^\circ$  ( $c = 0.5$ , MeOH). Source: BIAN DOU CAI YE BAI JIANG *Patrinia saniculaefolia* (whole herb). Ref: 4341, 5467.

**16717 Patridoid II**

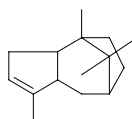
C<sub>22</sub>H<sub>34</sub>O<sub>8</sub> (426.51). Colorless oil,  $[\alpha]_D^{23} = -36.0^\circ$  ( $c = 0.5$ , MeOH). Pharm: NO production inhibitor (dose-dependent manner, IC<sub>50</sub> = 14.1  $\mu$ mol/L, decrease in quantity of NO product was accompanied by a decrease in iNOS protein level, did not affect COX-2 protein expression level)<sup>[5467]</sup>; TNF- $\alpha$  production inhibitor (dose-dependent manner, IC<sub>50</sub> = 17.6  $\mu$ mol/L)<sup>[5467]</sup>. Source: BIAN DOU CAI YE BAI JIANG *Patrinia saniculaefolia* (whole herb). Ref: 4341, 5467.

**16718 Patridoid IIA**

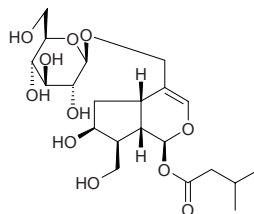
C<sub>22</sub>H<sub>34</sub>O<sub>8</sub> (426.51). Source: BIAN DOU CAI YE BAI JIANG *Patrinia saniculaefolia* (whole herb). Ref: 5467.

**16719 Patrinene**

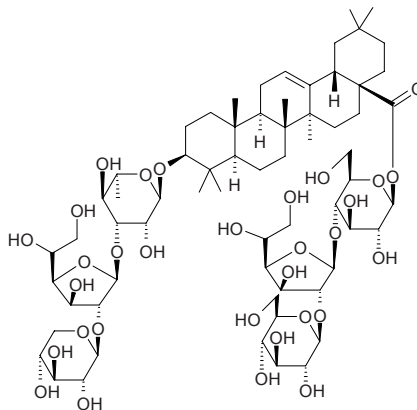
C<sub>15</sub>H<sub>24</sub> (204.36). Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 2.

**16720 Patrinoside**

[53962-20-2] C<sub>21</sub>H<sub>34</sub>O<sub>11</sub> (462.50). Amorphous. Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 3150.

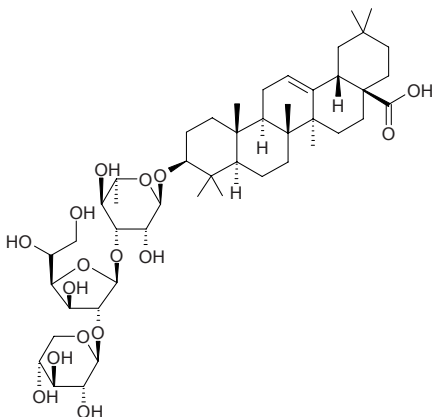
**16721 Patrinoside C**

[27004-24-6] C<sub>65</sub>H<sub>106</sub>O<sub>31</sub> (1383.55). Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 6, 1521.

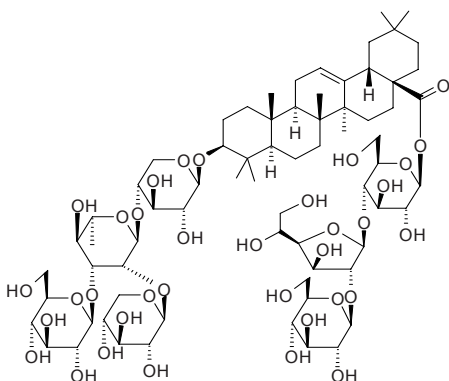


**16722 Patrinoside C<sub>1</sub>**

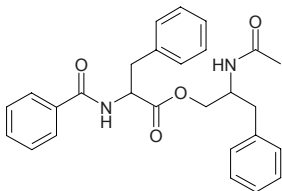
[24581-07-5] C<sub>47</sub>H<sub>76</sub>O<sub>16</sub> (897.12). Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 6, 1521.

**16723 Patrinoside D**

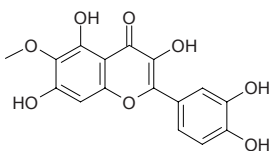
C<sub>70</sub>H<sub>114</sub>O<sub>35</sub> (1515.67). Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 2, 1521.

**16724 Patriscabratine**

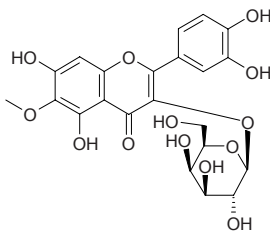
C<sub>27</sub>H<sub>28</sub>N<sub>2</sub>O<sub>4</sub> (444.54). White needles, mp 182.0~184.0°C, [α]<sub>D</sub><sup>25</sup> = -32.8° (c = 1.0, MeOH). Source: CAO YE BAI JIANG *Patrinia scabra*. Ref: 2244.

**16725 Patuletin**

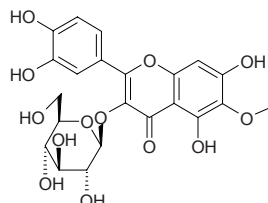
[519-96-0] C<sub>16</sub>H<sub>12</sub>O<sub>8</sub> (332.27). Pharm: Antioxidant (DPPH scavenger, IC<sub>50</sub> = 9.0 μg/mL, disoxidation of cytochrome C, IC<sub>50</sub> = 10.1 μg/mL); cytotoxic (hmn lung cancer strain GLC4, increases ID<sub>50</sub> of helenalin, ID<sub>50</sub> = 160 μmol/L; hmn colon carcinoma strain COLO320, ID<sub>50</sub> = 147 μmol/L). Source: HUANG HUA HAO *Artemisia annua*. Ref: 2, 1823, 1824, 1825.

**16726 Patuletin-3-O-β-D-galactopyranoside**

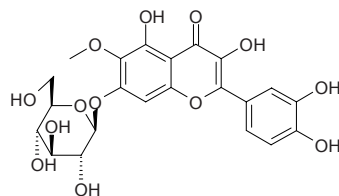
[90706-63-1] C<sub>22</sub>H<sub>22</sub>O<sub>13</sub> (494.41). Pharm: Aldose reductase inhibitor (10 μmol/L InRt = 84%, 1.0 μmol/L InRt = 38%). Source: JIAN CHI BU LI KE ER CAO *Brickellia arguta* var. *odontolepis*. Ref: 3734.

**16727 Patuletin 3-O-β-D-glycopyranoside**

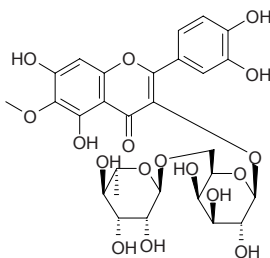
C<sub>22</sub>H<sub>22</sub>O<sub>13</sub> (494.41). Source: HUANG HUA HAO *Artemisia annua*. Ref: 2.

**16728 Patuletin-7-O-β-D-glucopyranoside**

Patulitrin [19833-25-1] C<sub>22</sub>H<sub>22</sub>O<sub>13</sub> (494.41). Pharm: Antioxidant (DPPH scavenger, IC<sub>50</sub> = (23.34±0.10) μmol/L, control Quercetin, IC<sub>50</sub> = (6.11±0.53) μg/mL)<sup>[5318]</sup>. Source: KONG QUE CAO *Tagetes patula*, MU<sup>(3)</sup> JU *Matricaria chamomilla* [Syn. *Matricaria recutita*], XUAN FU HUA *Inula britannica*, ZUI DA WAN SHOU JU *Tagetes maxima* (aerial parts). Ref: 6, 660, 5318.

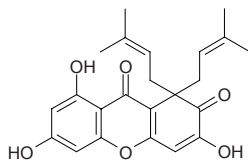
**16729 Patuletin-3-O-β-D-robinabioside**

[90706-6-3] C<sub>28</sub>H<sub>32</sub>O<sub>17</sub> (640.56). Pharm: Aldose reductase inhibitor (10 μmol/L InRt = 86%, 1.0 μmol/L InRt = 33%). Source: JIAN CHI BU LI KE ER CAO *Brickellia arguta* var. *odontolepis*. Ref: 3734.

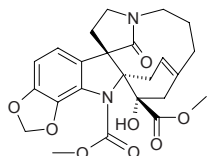


**16730 Patulone**

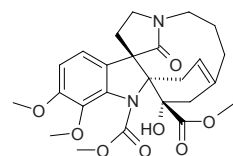
$C_{23}H_{24}O_6$  (396.44). **Pharm:** Anti-hypotension (PAF-induced, 10mg/kg, InRt = (65±9)%). **Source:** JIN SI MEI *Hypericum patulum* (cell suspension cultures). **Ref:** 5050.

**16731 Pauciflorine A**

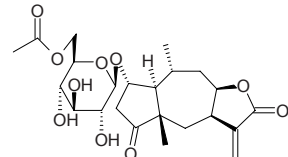
[181486-81-7]  $C_{24}H_{26}N_2O_8$  (470.48). Amorphous solid,  $[\alpha]_D = -50.7^\circ$  ( $c = 0.2$ ,  $CHCl_3$ ). **Pharm:** Antineoplastic (melanotic carcinoma, IC = 13μg/mL, inhibits formation of melanin, no cytotoxic action for normal cells). **Source:** SHAO HUA RUI MU *Kopsia pauciflora*. **Ref:** 3686.

**16732 Pauciflorine B**

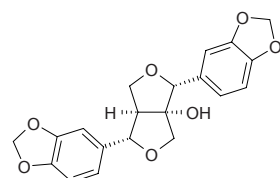
[181486-82-8]  $C_{25}H_{30}N_2O_8$  (486.53).  $[\alpha]_D = -25.0^\circ$  ( $c = 0.4$ ,  $CHCl_3$ ). **Pharm:** Antineoplastic (melanotic carcinoma, IC = 25μg/mL, inhibits formation of melanin, no cytotoxic action for normal cells). **Source:** SHAO HUA RUI MU *Kopsia pauciflora*. **Ref:** 3686.

**16733 Paucin**

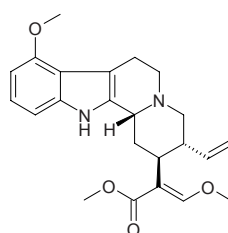
[26836-43-1]  $C_{23}H_{32}O_{10}$  (468.51). mp 178–179°C. **Pharm:** Antineoplastic (mus  $P_{388}$ , *in vivo*, 35.22mg/kg, biotic prolonged rate = 35.37%, 9.6mg/kg, biotic prolonged rate = 37%); cytotoxic (mus,  $P_{388}$  *in vitro*, EC = 0.016μg/mL, KB, EC = 0.4μg/mL). **Source:** DUO BIAN HUA BAI LAI SHI JU *Baileya pleradiata*, SHAO BIAN HUA BAI LAI SHI JU *Baileya pauciradiata*, DA HUA MO ZHI JU *Hymenoxys grandiflora*, XIANG MO ZHI JU *Hymenoxys odorata*. **Ref:** 5, 658.

**16734 Paulownin**

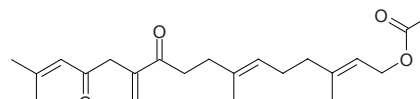
[13040-46-5]  $C_{20}H_{18}O_7$  (370.36). mp 84°C, 104–105°C. **Pharm:** Pesticide. **Source:** MAO PAO TONG *Paulownia tomentosa*, XI NAN MAO WEI SHU *Dolichandrone stipulata*, YUN NAN SHI ZI *Gmelina arborea*. **Ref:** 6, 658.

**16735 Paynantheine**

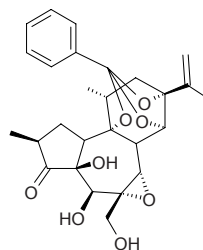
$C_{23}H_{28}N_2O_4$  (396.49). **Pharm:** Opioid agonist (gpg ileum,  $pEC_{50} = 4.99 \pm 0.06$ , control Morphine,  $pEC_{50} = 7.15 \pm 0.05$ ). **Source:** MEI LI MAO ZHU MU *Mitragyna speciosa* (leaf). **Ref:** 5069.

**16736 PC-1999-52-1447-7b**

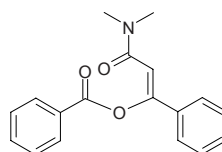
$C_{22}H_{32}O_4$  (360.50). Oil. **Source:** SHUANG CHA ZAO *Bifurcaria bifurcata*. **Ref:** 2405.

**16737 PC-1999-52-1525-6**

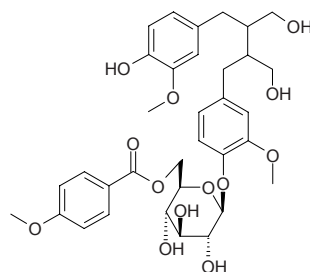
$C_{27}H_{32}O_8$  (484.55). **Source:** YOU RUI XIANG *Daphne oleoides*. **Ref:** 2410.

**16738 PC-2000-53-503-15**

$C_{18}H_{17}NO_3$  (295.34). **Source:** GUANG LIANG SHI SONG *Lycopodium lucidulum*. **Ref:** 3927.

**16739 PC-2004-65-2003-18**

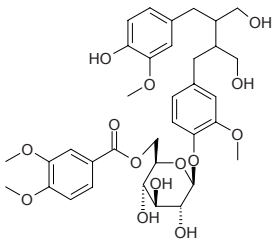
$C_{34}H_{42}O_{13}$  (658.71). Amorphous powder,  $[\alpha]_D^{22} = -35^\circ$  ( $c = 0.63$ , MeOH). **Source:** BAN ZHEN ZHONG HUA SHU *Tabebuia impetiginosa* (bark). **Ref:** 3817.



**16740 PC-2004-65-2003-19**

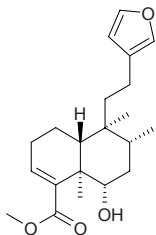
$C_{35}H_{44}O_{14}$  (688.73). Amorphous powder,  $[\alpha]_D^{24} = -43^\circ$  ( $c = 0.49$ , MeOH).

**Source:** BAN ZHEN ZHONG HUA SHU *Tabebuia impetiginosa* (bark). **Ref:** 3817.

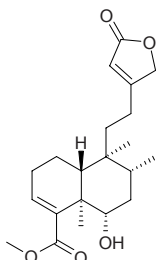
**16741 PC-66-633-5**

$C_{21}H_{30}O_4$  (346.47). Viscous,  $[\alpha]_D^{25} = -33.8^\circ$  ( $c = 1.12$ ,  $CHCl_3$ ). **Pharm:**

Antibacterial (*Bacillus subtilis*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 12mm, control Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 15mm; *Bacillus sphaericus*, 30 $\mu$ g/mL, IZD = 6mm, 100 $\mu$ g/mL, IZD = 9mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 14mm; *Staphylococcus aureus*, 30 $\mu$ g/mL, IZD = 6mm, 100 $\mu$ g/mL, IZD = 9mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 12mm; *Klebsiella aerogenes*, 30 $\mu$ g/mL, IZD = 6mm, 100 $\mu$ g/mL, IZD = 9mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 23mm; *Chromobacterium violaceum*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 10mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 24mm)<sup>[5260]</sup>. **Source:** ZAO CAO *Pulicaria wightiana* (aerial parts). **Ref:** 5260.

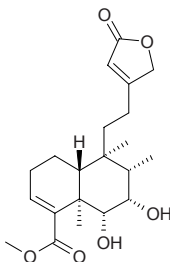
**16742 PC-66-633-1**

$C_{21}H_{30}O_5$  (362.47). White crystals, mp 200–201 $^\circ$ C (MeOH),  $[\alpha]_D^{25} = -34.9^\circ$  ( $c = 1.08$ ,  $CHCl_3$ ). **Pharm:** Antibacterial (*Bacillus subtilis*, 30 $\mu$ g/mL, IZD = 8mm, 100 $\mu$ g/mL, IZD = 12mm, control Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 15mm; *Bacillus sphaericus*, 30 $\mu$ g/mL, IZD = 8mm, 100 $\mu$ g/mL, IZD = 11mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 14mm; *Staphylococcus aureus*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 9mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 12mm; *Klebsiella aerogenes*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 12mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 23mm; *Chromobacterium violaceum*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 9mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 24mm)<sup>[5260]</sup>. **Source:** ZAO CAO *Pulicaria wightiana* (aerial parts). **Ref:** 5260.

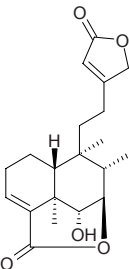
**16743 PC-66-633-2**

$C_{21}H_{30}O_6$  (378.47). Viscous,  $[\alpha]_D^{25} = -31.1^\circ$  ( $c = 0.6$ ,  $CHCl_3$ ). **Pharm:**

Antibacterial (*Bacillus subtilis*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 9mm, control Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 15mm; *Bacillus sphaericus*, 30 $\mu$ g/mL, IZD = 8mm, 100 $\mu$ g/mL, IZD = 12mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 14mm; *Staphylococcus aureus*, 30 $\mu$ g/mL, IZD = 8mm, 100 $\mu$ g/mL, IZD = 11mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 12mm; *Klebsiella aerogenes*, 30 $\mu$ g/mL, IZD = 6mm, 100 $\mu$ g/mL, IZD = 9mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 23mm; *Chromobacterium violaceum*, 30 $\mu$ g/mL, IZD = 8mm, 100 $\mu$ g/mL, IZD = 12mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 24 mm)<sup>[5260]</sup>. **Source:** ZAO CAO *Pulicaria wightiana* (aerial parts). **Ref:** 5260.

**16744 PC-66-633-3**

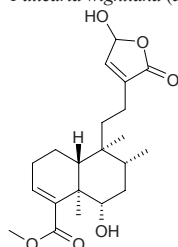
$C_{21}H_{26}O_5$  (346.43). White crystals, mp 205–206 $^\circ$ C (MeOH),  $[\alpha]_D^{25} = -37.3^\circ$  ( $c = 0.8$ ,  $CHCl_3$ ). **Pharm:** Antibacterial (*Bacillus subtilis*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 11mm, control Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 15mm; *Bacillus sphaericus*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 9mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 14 mm; *Staphylococcus aureus*, 30 $\mu$ g/mL, IZD = 6mm, 100 $\mu$ g/mL, IZD = 9mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 12mm; *Klebsiella aerogenes*, 30 $\mu$ g/mL, IZD = 6mm, 100 $\mu$ g/mL, IZD = 8mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 23mm; *Chromobacterium violaceum*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 9mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 24mm)<sup>[5260]</sup>. **Source:** ZAO CAO *Pulicaria wightiana* (aerial parts). **Ref:** 5260.



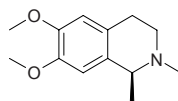


**16745 PC-66-633-4**

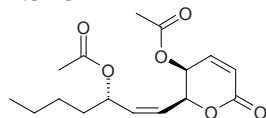
$C_{21}H_{30}O_6$  (378.47). Viscous,  $[\alpha]_D^{25} = -16.3^\circ$  ( $c = 0.4$ ,  $CHCl_3$ ). **Pharm:** Antibacterial (*Bacillus subtilis*, 30 $\mu$ g/mL, IZD = 8mm, 100 $\mu$ g/mL, IZD = 11mm, control Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 15mm; *Bacillus sphaericus*, 30 $\mu$ g/mL, IZD = 8mm, 100 $\mu$ g/mL, IZD = 12mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 14mm; *Staphylococcus aureus*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 10mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 12mm; *Klebsiella aerogenes*, 30 $\mu$ g/mL, IZD = 7mm, 100 $\mu$ g/mL, IZD = 9mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 23mm; *Chromobacterium violaceum*, 30 $\mu$ g/mL, IZD = 8mm, 100 $\mu$ g/mL, IZD = 12mm, Penicillin G streptomycin, 30 $\mu$ g/mL, IZD = 24mm). **Source:** ZAO CAO *Pulicaria wightiana* (aerial parts). **Ref:** 5260.

**16746 Pectenine**

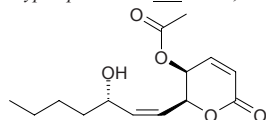
$C_{13}H_{19}NO_2$  (221.30). **Pharm:** Convulsant (warm-blooded animal). **Source:** JU REN ZHU *Carnegiea gigantea*, *Cereus pectenaboriginum*. **Ref:** 658.

**16747 Pectinolide A**

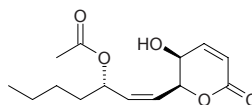
[149155-54-4]  $C_{16}H_{22}O_6$  (310.35). Oil,  $[\alpha]_D = +202^\circ$  ( $c = 0.15$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus*, MIC = 12.5 $\mu$ g/mL, *Bacillus subtilis*, MIC = 6.25 $\mu$ g/mL)<sup>[3594]</sup>; antibacterial (*Staphylococcus aureus*: ATCC25923, MIC = 32 $\mu$ g/mL; XU-212, MIC = 128 $\mu$ g/mL; SA-1199B, MIC = 128 $\mu$ g/mL; EMRSA-15, MIC = 128 $\mu$ g/mL; control Tetracycline, MIC = 0.08 $\mu$ g/mL, 128 $\mu$ g/mL, 64 $\mu$ g/mL and 0.15 $\mu$ g/mL respectively)<sup>[5075]</sup>; cytotoxic (many cancer cells,  $ED_{50} < 4\mu$ g/mL)<sup>[3594]</sup>; cytotoxic (KB,  $ED_{50} = 0.63\mu$ g/mL, control Ellipticine,  $ED_{50} = 0.10\mu$ g/mL)<sup>[5075]</sup>. **Source:** ZHI SHAN XIANG *Hyptis pectinata*. **Ref:** 3594, 5075.

**16748 Pectinolide B**

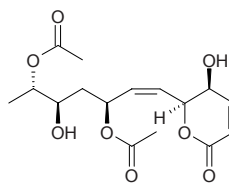
[149155-55-5]  $C_{14}H_{20}O_5$  (268.31). Oil,  $[\alpha]_D = +89.6^\circ$  ( $c = 0.57$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus*, MIC = 100 $\mu$ g/mL; *Bacillus subtilis*, MIC = 25 $\mu$ g/mL)<sup>[3594]</sup>; antibacterial (*Staphylococcus aureus*: ATCC25923, MIC = 128 $\mu$ g/mL; XU-212, MIC = 256 $\mu$ g/mL; SA-1199B, MIC = 256 $\mu$ g/mL; EMRSA-15, MIC = 256 $\mu$ g/mL; control Tetracycline, MIC = 0.08 $\mu$ g/mL, 128 $\mu$ g/mL, 64 $\mu$ g/mL and 0.15 $\mu$ g/mL respectively)<sup>[5075]</sup>; cytotoxic (many cancer cells,  $ED_{50} < 4\mu$ g/mL)<sup>[3594]</sup>; cytotoxic (KB,  $ED_{50} > 20\mu$ g/mL, control Ellipticine,  $ED_{50} = 0.10\mu$ g/mL)<sup>[5075]</sup>. **Source:** ZHI SHAN XIANG *Hyptis pectinata*. **Ref:** 3594, 5075.

**16749 Pectinolide C**

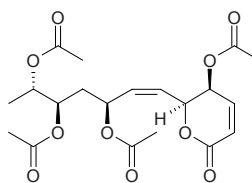
[149155-56-6]  $C_{14}H_{20}O_5$  (268.31). Oil,  $[\alpha]_D = +80.99^\circ$  ( $c = 0.76$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus*, MIC = 100 $\mu$ g/mL; *Bacillus subtilis*, MIC = 12.5 $\mu$ g/mL)<sup>[3594]</sup>; antibacterial (*Staphylococcus aureus*: ATCC25923, MIC = 64 $\mu$ g/mL; XU-212, MIC = 256 $\mu$ g/mL; SA-1199B, MIC = 128 $\mu$ g/mL; EMRSA-15, MIC = 128 $\mu$ g/mL; control Tetracycline, MIC = 0.08 $\mu$ g/mL, 128 $\mu$ g/mL, 64 $\mu$ g/mL and 0.15 $\mu$ g/mL respectively)<sup>[5075]</sup>; cytotoxic (many cancer cells,  $ED_{50} < 4\mu$ g/mL)<sup>[3594]</sup>; cytotoxic (KB,  $ED_{50} = 2.52\mu$ g/mL, control Ellipticine,  $ED_{50} = 0.10\mu$ g/mL)<sup>[5075]</sup>. **Source:** ZHI SHAN XIANG *Hyptis pectinata*. **Ref:** 3594, 5075.

**16750 Pectinolide D**

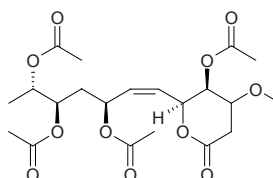
6*S*-[3*S*,6*S*-(Diaceoxy)-5*R*-hydroxy-1*Z*-heptenyl]-5*S*-hydroxy-5,6-dihydro-2*H*-pyran-2-one  $C_{16}H_{22}O_8$  (342.35). Yellow oil. **Source:** ZHI SHAN XIANG *Hyptis pectinata*. **Ref:** 3487.

**16751 Pectinolide E**

6*S*-[3*S*,5*R*,6*S*-(Triaceoxy)-1*Z*-heptenyl]-5*S*-acetoxo-5,6-dihydro-2*H*-pyran-2-one  $C_{20}H_{26}O_{10}$  (426.42). Yellow oil,  $[\alpha]_D = +131.8^\circ$  ( $c = 1.77$ ,  $CHCl_3$ ). **Source:** ZHI SHAN XIANG *Hyptis pectinata*. **Ref:** 3487.

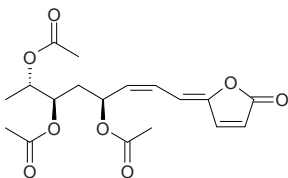
**16752 Pectinolide F**

6*S*-[3*S*,5*R*,6*S*-(triaceoxy)-1*Z*-heptenyl]-5*S*-acetoxo-4*R*-methoxy-3,4,5,6-tetrahydro-4*H*pyran-2-one  $C_{21}H_{30}O_{11}$  (458.47). Yellow oil,  $[\alpha]_D = -10.0^\circ$  ( $c = 0.67$ ,  $CHCl_3$ ). **Source:** ZHI SHAN XIANG *Hyptis pectinata*. **Ref:** 3487.

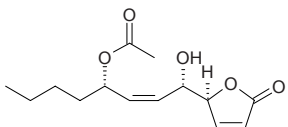


**16753 Pectinolide G**

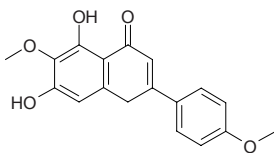
[2'Z,5(1'Z)]5-(4'S,6'R,7'S-triacetoxy-2-octenylidene)-2(5H)-furanone C<sub>18</sub>H<sub>22</sub>O<sub>8</sub> (366.37). Yellow oil,  $[\alpha]_D = -4.4^\circ$  ( $c = 1.0$ , MeOH). Source: ZHI SHAN XIANG *Hyptis pectinata*. Ref: 3487.

**16754 Pectinolide H**

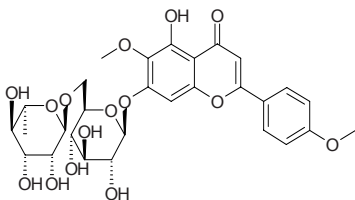
C<sub>14</sub>H<sub>20</sub>O<sub>5</sub> (268.31). Oil,  $[\alpha]_{589\text{nm}}^{25} = -41^\circ$  ( $c = 0.24$ , CHCl<sub>3</sub>). Pharm: Cytotoxic (KB, ED<sub>50</sub> > 20 μg/mL, control Ellipticine, ED<sub>50</sub> = 0.10 μg/mL); antibacterial (*Staphylococcus aureus*: ATCC25923, MIC = 32 μg/mL; XU-212, MIC = 64 μg/mL; SA-1199B, MIC = 64 μg/mL; EMRSA-15, MIC = 64 μg/mL; control Tetracycline, MIC = 0.08 μg/mL, 128 μg/mL, 64 μg/mL and 0.15 μg/mL respectively). Source: ZHI SHAN XIANG *Hyptis pectinata*. Ref: 5075.

**16755 Pectolarigenin**

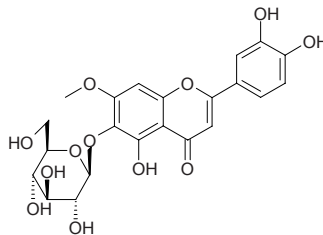
[520-12-7] C<sub>17</sub>H<sub>14</sub>O<sub>6</sub> (314.30). mp 215~216°C. Source: JIA LIAN QIAO YE *Duranta repens*. Ref: 6.

**16756 Pectolarin**

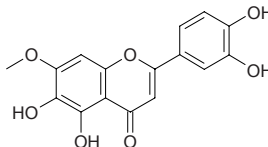
[28978-02-1] C<sub>29</sub>H<sub>34</sub>O<sub>15</sub> (622.59). mp 240~250°C (dec). Pharm: Diuretic and laxative (effective component in Yellow Toadflax, *Linaria vulgaris* (LIU CHUAN YU), used mainly in Russia); enhances myocardial contractility (rbt, iv); hemostatic Source: DA JI<sup>(4)</sup> *Cirsium japonicum* (aerial parts or root: content scope = 0.78%~1.20%<sup>[5501]</sup>), DI TANG HUA *Kerria japonica*, HONG CHE ZHOU CAO *Trifolium pratense*, LIU CHUAN YU *Linaria vulgaris*, TAI WAN JI *Cirsium japonicum* var. *takaense*. Ref: 6, 658, 5501.

**16757 Pedaliin**

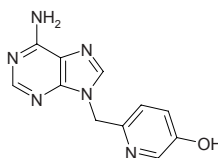
[22860-72-6] C<sub>22</sub>H<sub>22</sub>O<sub>12</sub> (478.41). mp 254°C (dec). Source: HU MA YE *Sesamum indicum*. Ref: 6.

**16758 Pedalitin**

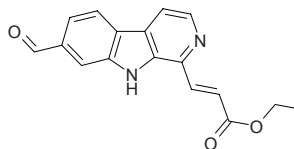
5,6,3',4'-Tetrahydroxy-7-methoxyflavone [22384-63-0] C<sub>16</sub>H<sub>12</sub>O<sub>7</sub> (316.27). Yellow acicular crystals, mp 300~301°C. Pharm: Δ<sup>5</sup>-Lipoxygenase inhibitor. Source: HU MA YE *Sesamum indicum*, LU SHI DONG LING CAO *Isodon rubescens* var. *lushiensis* (leaf: yield = 0.00032%dw)<sup>[4732]</sup>, MAO LIAN HAO *Artemisia vestita*. Ref: 474, 658, 4732.

**16759 Pedatisectine A**

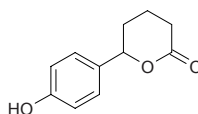
5-Hydroxy-2-pyridylmethyl-adenine [103823-31-0] C<sub>11</sub>H<sub>10</sub>N<sub>6</sub>O (242.24). Colorless fine needles (MeOH), mp 282~284°C. Pharm: Inhibits sino-atrial rate and contraction of atrium Papillary muscle (dog); coronary vasodilator (*in vitro* heart, enhances blood flow through coronary arteries). Source: ZHANG YE BAN XIA *Pinellia pedatisecta*. Ref: 3151, 3152.

**16760 Pedatisectine C**

[103805-66-9] C<sub>17</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub> (294.31). mp 162~164°C. Source: ZHANG YE BAN XIA *Pinellia pedatisecta*. Ref: 3151.

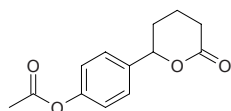
**16761 Pedicellanin**

[89647-77-8] C<sub>11</sub>H<sub>12</sub>O<sub>3</sub> (192.22). Plates (hexane-acetone), mp 125°C,  $[\alpha]_D^{28} = 0^\circ$  (MeOH). Pharm: CNS activity (mus, 20mg/kg ip, has marked adaptogenic and anti-stress action). Source: HUA GENG LONG DAN *Gentiana pedicellata*. Ref: 3595.

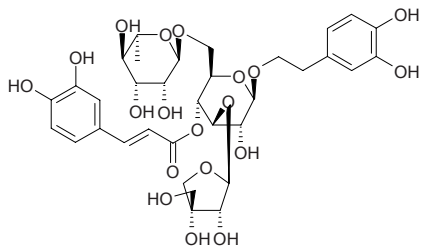


**16762 Pedicellin**

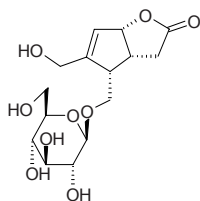
[6851-84-9] C<sub>13</sub>H<sub>14</sub>O<sub>4</sub> (234.25). Fine crystals (hexane–acetone), mp 110–112°C, [α]<sub>D</sub><sup>28</sup> = –12° (c = 0.34, CHCl<sub>3</sub>). **Pharm:** CNS activity (mus, 20mg/kg ip, has marked adaptogenic and anti-stress action). **Source:** HUA GENG LONG DAN *Gentiana pedicellata*. **Ref:** 3595.

**16763 Pedicularioside A**

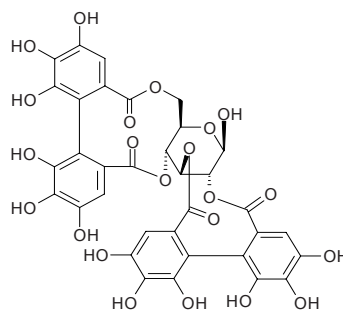
[135010-61-6] C<sub>34</sub>H<sub>44</sub>O<sub>19</sub> (756.72). Amorphous powder, [α]<sub>D</sub><sup>22</sup> = –58.4° (c = 1.2, MeOH). **Pharm:** Antineoplastic (SMMC-7721 liver cancer, IC<sub>50</sub> = (94.8±2.0)μg/mL, MQc80-3 gastric adenocarcinoma cells, IC<sub>50</sub> = (101.6±2.8)μg/mL, L342 pulmonary adenoma, IC<sub>50</sub> = (97.6±5.0)μg/mL); antihemolytic (protects red blood cells against oxydation resulting in hemolysis); antioxidant (lipid peroxidization inhibitor, inhibits microsomal lipid peroxidization InRt = 15.6%, heperoxide InRt = 56.8%). **Source:** HONG WEN MA XIAN HAO *Pedicularis striata*, MEI GUAN MA XIAN HAO *Pedicularis decora*, SUI HUA MA XIAN HAO *Pedicularis spicata*, ZHU SI HONG WEN MA XIAN HAO *Pedicularis striata* ssp. *arachnoidea*. **Ref:** 3687, 3688, 3689, 3690, 3691, 3692.

**16764 Pedicularis lactone-1-O-β-D-glucoside**

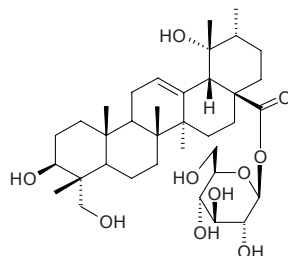
C<sub>15</sub>H<sub>22</sub>O<sub>9</sub> (346.34). White powder. **Source:** MEI GUAN MA XIAN HAO *Pedicularis decora*. **Ref:** 829.

**16765 Pedunculagin**

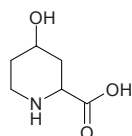
[7045-42-3] C<sub>34</sub>H<sub>24</sub>O<sub>22</sub> (784.56). Earthy yellow amorphous powder, easily soluble in MeOH and Me<sub>2</sub>CO. **Pharm:** Antihepatotoxin (*in vitro*); antioxidant (hepatic cell mitochondria in cats, inhibits lipid peroxidization); antioxidant (SOD-like activity, EC<sub>50</sub> = 63.7μmol/L, control Gallic acid, EC<sub>50</sub> = 31.7μmol/L, L-Ascorbic acid, EC<sub>50</sub> = 34.6μmol/L)<sup>[3408]</sup>; antioxidant (DPPH scavenger, EC<sub>50</sub> = 4.72μmol/L, control Gallic acid, EC<sub>50</sub> = 5.88μmol/L, L-Ascorbic acid, EC<sub>50</sub> = 6.25μmol/L)<sup>[3408]</sup>. **Source:** BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (fresh fruit: yield = 0.219%fw)<sup>[4695]</sup>, HU TAO REN *Juglans regia*, JING JIE HUA *Stachyurus praecox*, SHAN CHA *Camellia japonica*, TAO JIN NIANG *Rhodomyrtus tomentosa*, XIAO MU MA HUANG *Casuarina stricta*, *Quercus* spp., *Rubus* spp., *Potentilla* spp., *Juglans* spp. **Ref:** 429, 658, 3408, 4695.

**16766 Pedunculoside**

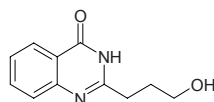
[42719-32-4] C<sub>36</sub>H<sub>58</sub>O<sub>10</sub> (650.86). White needles (MeOH), mp 212–214°C. **Source:** CHANG GENG DONG QING *Ilex pedunculosa*, GUANG LIANG YANG TONG *Adinandra nitida*, JIU BI YING *Ilex rotunda*, LUO TUO PENG *Peganum harmala*. **Ref:** 527, 1521, 2518.

**16767 Pegaline**

C<sub>6</sub>H<sub>11</sub>NO<sub>3</sub> (145.16). mp 294°C. **Source:** SI JI QING *Ilex chinensis* [Syn. *Ilex purpurea*]. **Ref:** 6.

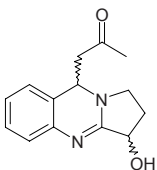
**16768 Pegamine**

[31431-93-3] C<sub>11</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub> (204.23). **Source:** LUO TUO PENG *Peganum harmala*. **Ref:** 6.

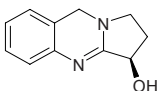


**16769 Peganidine**

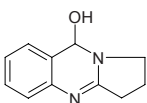
[28463-17-4] C<sub>14</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub> (244.30). mp 189~190°C. Source: LUO TUO PENG *Peganum harmala*. Ref: 6, 1521.

**16770 Peganine**

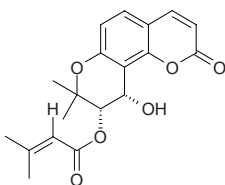
Vasicine C<sub>11</sub>H<sub>12</sub>N<sub>2</sub>O (188.23). Acicular crystals (ethanol), mp 212°C, [α]<sub>D</sub><sup>14</sup> = -254° (c = 2.4, chloroform), [α]<sub>D</sub><sup>14</sup> = -62° (c = 2.4, ethanol). Pharm: Antibacterial (*Staphylococcus aureus*, *Bacillus sonne*, *Shigella* sp., *Bacillus proteus* and *Bacillus typhosus*); anthelmintic (roundworm); antispasmodic (*in vitro* and *in vivo*); choleric (cat, iv, ED = 5mg/kg; dog, sc, bile increases 40%~100%); gastric secretion promotor (ox); antihypertensive; oxytocic. Source: DA BO GU *Adhatoda vasica*, HUANG HUA ZI *Sida cordifolia*, LIU CHUAN YU *Linaria vulgaris*, LUO TUO PENG *Peganum harmala*, LUO TUO PENG ZI *Peganum harmala*. Ref: 6, 658, 1521.

**16771 Peganol**

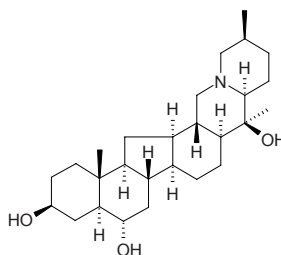
[36101-54-9] C<sub>11</sub>H<sub>12</sub>N<sub>2</sub>O (188.23). mp 178~180°C. Source: LUO TUO PENG *Peganum harmala*. Ref: 6.

**16772 Peguangxienin**

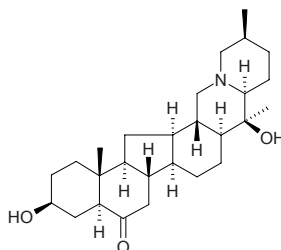
C<sub>19</sub>H<sub>20</sub>O<sub>6</sub> (344.37). White granular substance (acetone-cyclohexane), mp about 75°C, [α]<sub>D</sub><sup>12</sup> = +74° (c = 0.11, CHCl<sub>3</sub>). Source: QIAN HU *Angelica decursiva* [Syn. *Peucedanum decursivum*]. Ref: 9.

**16773 Peimine**

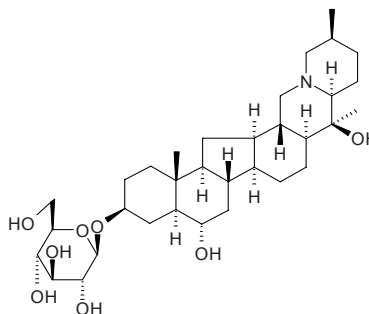
Verticine; Cevane-3,6,20-triol [23496-41-5] C<sub>27</sub>H<sub>45</sub>NO<sub>3</sub> (431.66). Acicular crystals (ethanol), mp 223~224°C, 268~270°C, [α]<sub>D</sub><sup>16</sup> = -19.4° (ethanol), [α]<sub>D</sub><sup>17</sup> = -20° (chloroform), [α]<sub>D</sub><sup>25</sup> = -15.8° (c = 0.19, EtOH), insoluble in water, soluble in most of organic solvents<sup>[5507]</sup>. Pharm: ACE inhibitor (dose-dependent manner, IC<sub>50</sub> = 312.8 μmol/L)<sup>[5414]</sup>; bronchial smooth muscle stimulant (cat and rbt, high dose, *in vitro*); bronchial smooth muscle relaxant (cat and rbt, low dose, *in vitro*); mydriatic (dog, cat and rbt); uterine stimulant (rbt, rat); LD<sub>50</sub> (mus, iv, hydrobromate) = 9.0mg/kg. Source: PING BEI MU *Fritillaria ussuriensis*, XI BEI MU *Fritillaria imperialis*, ZHE BEI MU *Fritillaria verticillata* var. *thunbergii* [Syn. *Fritillaria thunbergii*] (dried bulb: content = 0.049%<sup>[5508]</sup>); in 1932, the compound was isolated from the plant by Cheng-xia Zhao for the first time. Ref: 4, 528, 661, 5414, 5501, 5507, 5508.

**16774 Peiminine**

Verticinone [18059-10-4] C<sub>27</sub>H<sub>43</sub>NO<sub>3</sub> (429.65). mp 212~213°C, [α]<sub>D</sub> = -62.5° (ethanol). [α]<sub>D</sub><sup>25</sup> = -75.0° (c = 0.2, EtOH), Pharm: ACE inhibitor (dose-dependent manner, IC<sub>50</sub> = 165.0 μmol/L)<sup>[5414]</sup>; uterine stimulant. Source: PING BEI MU *Fritillaria ussuriensis*, ZHE BEI MU *Fritillaria verticillata* var. *thunbergii* [Syn. *Fritillaria thunbergii*] (dried bulb: content = 0.019%<sup>[5508]</sup>). Ref: 6, 658, 661, 5414, 5501, 5508.

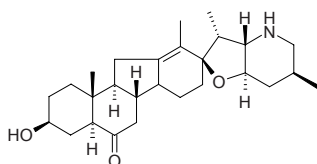
**16775 Peiminiside**

C<sub>33</sub>H<sub>55</sub>NO<sub>8</sub> (593.81). Source: ZHE BEI MU *Fritillaria verticillata* var. *thunbergii* [Syn. *Fritillaria thunbergii*]. Ref: 6.

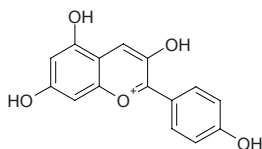


**16776 Peimisine**

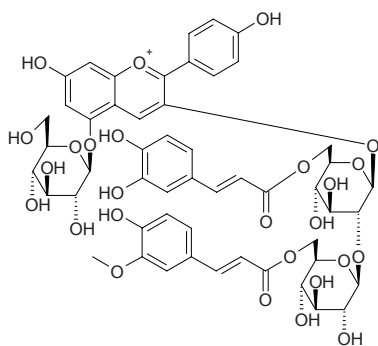
$C_{27}H_{41}NO_3$  (427.63). Colorless acicular crystals, mp 268–270°C (acetic ester–methanol),  $[\alpha]_D^{20} = -34.8^\circ$  ( $c = 0.24$ , methanol);  $[\alpha]_D^{25} = -16.7^\circ$  ( $c = 0.12$ , EtOH). **Pharm:** ACE inhibitor (dose-dependent manner,  $IC_{50} = 526.5 \mu\text{mol/L}$ )<sup>[5414]</sup>. **Source:** HUA XI BEI MU *Fritillaria siechuanica*, NING XIA BEI MU *Fritillaria taipaiensis* var. *ningxiaensis*, YI BEI MU *Fritillaria pallidiflora*, PING BEI MU *Fritillaria ussuriensis*. **Ref:** 225, 271, 660, 5414.

**16777 Pelargonidin**

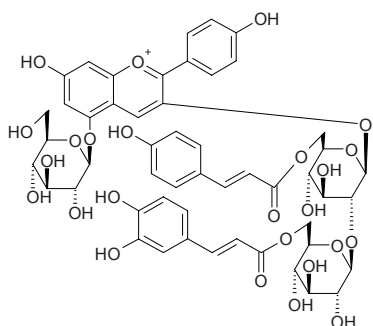
[7690-51-9]  $C_{15}H_{11}O_5^+$  (271.25). **Pharm:** Antiviral; leukocyte elastase MMP-2/9 inhibitor<sup>[4416]</sup>. **Source:** CHOU MO LI *Clerodendron fragrans*, FENG XIAN HUA *Impatiens balsamina*. **Ref:** 6, 658, 4416.

**16778 Pelargonidin-3-O-[6-O-(E)-caffeoyl-2-O-(6-(E)-feruloyl-beta-D-glucopyranosyl)-(1-2)-beta-D-glucopyranoside]-5-O-(beta-D-glucopyranoside)**

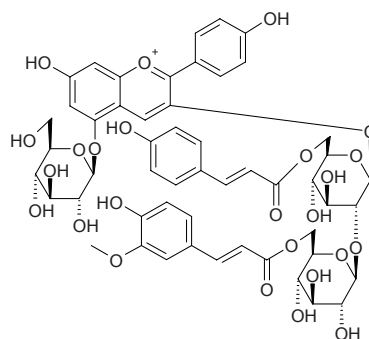
$C_{52}H_{55}O_{26}^+$  (1096.00). Red amorphous powder. **Source:** LAI FU *Raphanus sativus*. **Ref:** 1949.

**16779 Pelargonidin-3-O-[6-O-(E)-p-coumaroyl-2-O-(6-(E)-caffeoyl-beta-D-glucopyranosyl)-(1-2)-beta-D-glucopyranoside]-5-O-(beta-D-glucopyranoside)**

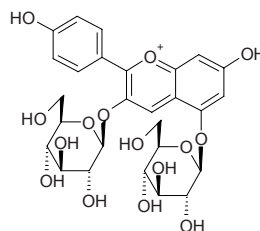
$C_{51}H_{53}O_{25}^+$  (1065.98). Red amorphous powder. **Source:** LAI FU *Raphanus sativus*. **Ref:** 1949.

**16780 Pelargonidin-3-O-[6-O-(E)-p-coumaroyl-2-O-(6-(E)-feruloyl-beta-D-glucopyranosyl)-(1-2)-beta-D-glucopyranoside]-5-O-(beta-D-glucopyranoside)**

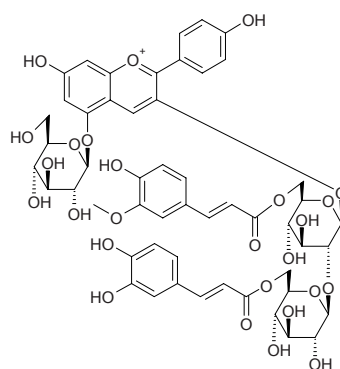
$C_{52}H_{55}O_{25}^+$  (1080.00). Red amorphous powder. **Source:** LAI FU *Raphanus sativus*. **Ref:** 1949.

**16781 Pelargonidin-3,5-diglucoside**

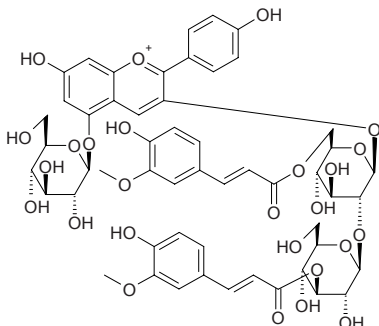
Pelargonin  $C_{27}H_{31}O_{15}^+$  (595.54). **Source:** BAI FAN DOU *Phaseolus vulgaris*, MA TI WEN TIAN ZHU KUI *Pelargonium zonale*, MU KU ER MO YAO *Commiphora mukul*, SHI LIU GEN *Punica granatum*, *Gladiolus* sp. **Ref:** 6, 658.

**16782 Pelargonidin-3-O-[6-O-(E)-feruloyl-2-O-(6-(E)-caffeoyl-beta-D-glucopyranosyl)-(1-2)-beta-D-glucopyranoside]-5-O-(beta-D-glucopyranoside)**

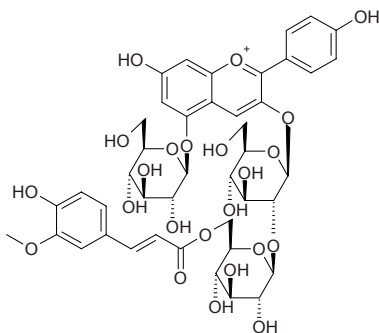
$C_{52}H_{55}O_{26}^+$  (1096.00). Red amorphous powder. **Source:** LAI FU *Raphanus sativus*. **Ref:** 1949.



**16783 Pelargonidin-3-O-[6-O-(E)-feruloyl-2-O-(2-(E)-feruloyl-β-D-glucopyranosyl)-(1→2)-β-D-glucopyranoside]-5-O-(β-D-glucopyranoside)**  
 $C_{53}H_{57}O_{26}^+$  (1110.03). Red amorphous powder. Source: LAI FU *Raphanus sativus*. Ref: 1949.

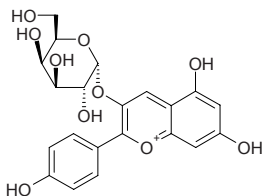


**16784 Pelargonidin-3-O-[6-O-(E)-feruloyl-2-O-β-D-glucopyranosyl]-(1→2)-β-D-glucopyranoside(-5-O-β-D-glucopyranoside)**  
 $C_{43}H_{49}O_{23}^+$  (933.86). Red amorphous powder. Source: LAI FU *Raphanus sativus*. Ref: 1949.



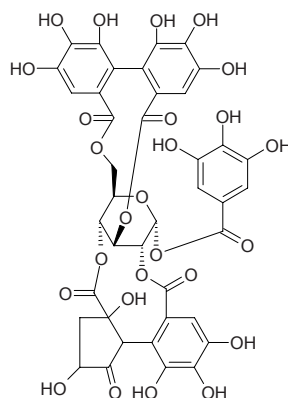
**16785 Pelargonidin-3-galactoside**

$C_{21}H_{21}O_{10}$  (433.40). Source: QIU MU GUA *Chaenomeles lagenaria* [Syn. *Chaenomeles speciosa*]. Ref: 6.



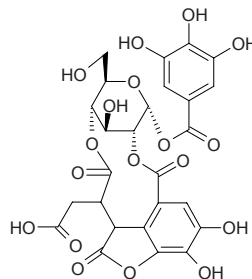
**16786 Pelargoniin A**

$C_{40}H_{30}O_{26}$  (926.67). White amorphous powder, mp 220°C,  $[\alpha]_D^{20} = -65.5^\circ$  ( $c = 0.06$ , MeOH). Source: SHEN YE TIAN ZHU KUI *Pelargonium reniforme* (aerial parts). Ref: 3975.



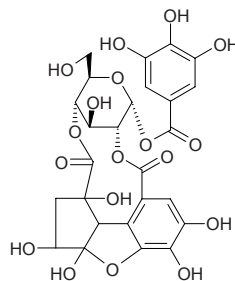
**16787 Pelargoniin B**

$C_{26}H_{22}O_{18}$  (622.45). White amorphous powder, mp 214°C,  $[\alpha]_D^{20} = -43.0^\circ$  ( $c = 0.5$ , MeOH). Source: SHEN YE TIAN ZHU KUI *Pelargonium reniforme* (aerial parts). Ref: 3975.



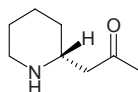
**16788 Pelargoniin C**

$C_{26}H_{24}O_{18}$  (624.47). White amorphous powder, mp 210°C. Source: SHEN YE TIAN ZHU KUI *Pelargonium reniforme* (aerial parts). Ref: 3975.



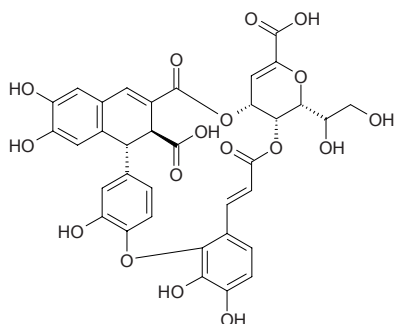
**16789 Pelletierine**

Isopelletierine [4396-01-4]  $C_8H_{15}NO$  (141.22). Pharm: Anthelmintic (racemate, liver flukes and tapeworm);  $LD_{50}$  (rbt, iv, racemate) = 40mg/kg. Source: AO ZHOU QIE *Solanum aviculare* [Syn. *Solanum laciniatum*], CUI MIAN SHUI QIE *Withania somnifera*, SHI LIU GEN *Punica granatum*, SHI LIU PI *Punica granatum*, TAI JING TIAN *Sedum acre*, *Lupinus formosus*. Ref: 6, 658, 1521.

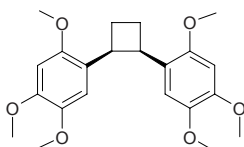


**16790 Pelliatin**

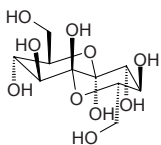
$C_{35}H_{28}O_{17}$  (720.60). Source: XI TAI *Pellia epiphylla*. Ref: 4549.

**16791 Pellucidin A**

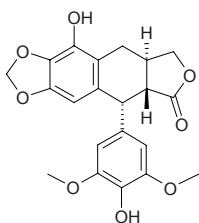
$C_{22}H_{28}O_6$  (388.46). Pale-white amorphous substance, mp 109.6~110.5°C (*n*-hexane-EtOAc). Source: CAO HU JIAO *Peperomia pellucida* (aerial parts). Ref: 5106.

**16792 Peltalosa**

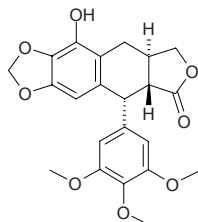
$C_{10}H_{18}O_{10}$  (298.25). Light brown solid, mp 187~189 °C,  $[\alpha]_D^{20} = -310^\circ$  ( $c = 0.01$ ,  $H_2O$ ). Pharm: Hypoglycemic (alloxan diabetic mouse)<sup>[4529]</sup>. Source: DUN ZHUANG LI JU *Pscacium peltatum* (root and rhizome). Ref: 4529.

**16793  $\alpha$ -Peltatin**

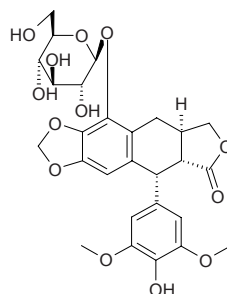
[568-53-6]  $C_{21}H_{20}O_8$  (400.39). Colorless prismatic crystals (absolute ethanol), mp 238~241°C (dec); 236~246°C,  $[\alpha]_D^{20} = -122.9^\circ$  ( $c = 0.578$ , chloroform). Pharm: Antineoplastic (mus, EAC cells, iv 0.1mg, inhibits cancer cell mitosis); anti-fertility agent (pregnant mus, orl 4mg); antiviral (HSV-1, measles virus). Source: BAI YA MA *Linum album*, DUN YE GUI JIU *Podophyllum peltatum*. Ref: 4, 5, 661.

**16794  $\beta$ -Peltatin**

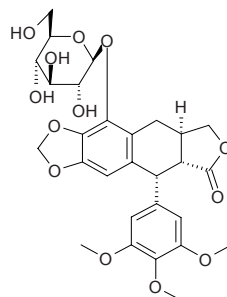
[518-29-6]  $C_{22}H_{22}O_8$  (414.42). mp 238~241°C (dec). Source: BAI YA MA *Linum album*, DUN YE GUI JIU *Podophyllum peltatum*. Ref: 4, 5.

**16795  $\alpha$ -Peltatin glucoside**

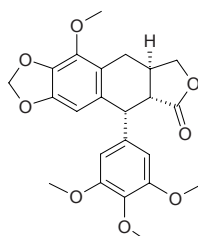
$C_{27}H_{30}O_{13}$  (562.53). mp 168~171°C. Pharm: Antineoplastic; inhibits mitosis (fibrocyte in chick, mus EAC cells, ip and lasts 6~20h); LD<sub>50</sub> (mus, ip)  $\geq 200$ mg/kg. Source: DUN YE GUI JIU *Podophyllum peltatum*. Ref: 5, 658.

**16796  $\beta$ -Peltatin glucoside**

$C_{28}H_{32}O_{13}$  (576.56). mp 156~159°C. Pharm: Antineoplastic; inhibits mitosis (mus ascites carcinoma cells, 2mg iv, the action lasts 20h); inhibits herpes simplex; LD<sub>50</sub> (mus, ip)  $> 200$ mg/kg. Source: DUN YE GUI JIU *Podophyllum peltatum*. Ref: 5, 658.

**16797  $\beta$ -Peltatin A methyl ether**

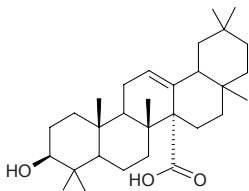
$C_{23}H_{24}O_8$  (428.45). Pharm: Antineoplastic. Source: CHA ZI YUAN BAI *Juniperus sabina*, DUN YE GUI JIU *Podophyllum peltatum*. Ref: 658.



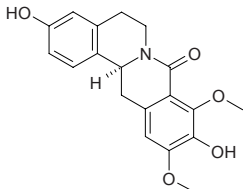


**16798  $\beta$ -Peltoboykinolic acid**

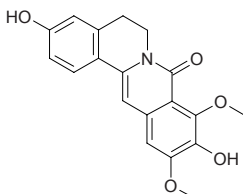
$C_{30}H_{48}O_3$  (456.72). White needles, mp 248~251°C. Source: ZANG YAO LUO JING JIN YAO *Chrysosplenium nudicaule*. Ref: 4547.

**16799 Pendulamine A**

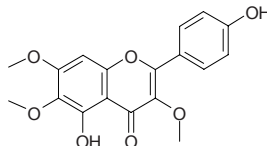
$C_{19}H_{19}NO_5$  (341.37). Brown solid,  $[\alpha]_D^{26} = -25.0^\circ$  ( $c = 0.4$ ,  $CHCl_3$ ). Pharm: Antibacterial (gram-positive: *Bacillus subtilis*, MIC = 2.0 $\mu$ g/disc, control Konamycin sulphate, MIC = 1.25 $\mu$ g/disc; *Corynebacterium hoffmanii*, MIC = 0.02 $\mu$ g/disc, Konamycin sulphate, MIC = 0.62 $\mu$ g/disc; *Staphylococcus aureus*, MIC = 0.2 $\mu$ g/disc, Konamycin sulphate, MIC = 0.31 $\mu$ g/disc; *Streptococcus pyogenes*, MIC = 20 $\mu$ g/disc, Konamycin sulphate, MIC = 1.25 $\mu$ g/disc; *Streptococcus viridans*, MIC = 12.5 $\mu$ g/disc, Konamycin sulphate, MIC = 2.5 $\mu$ g/disc; *Micrococcus lysodicklycus*, MIC = 0.02 $\mu$ g/disc, Konamycin sulphate, MIC = 10 $\mu$ g/disc; gram negative: *Klebsiella pneumoniae*, MIC = 2 $\mu$ g/disc, Konamycin sulphate, MIC = 5 $\mu$ g/disc; *Pseudomonas aeruginosa*, MIC = 2 $\mu$ g/disc, Konamycin sulphate, MIC = 5 $\mu$ g/disc; *Salmonella paratyphi A*, MIC = 0.2 $\mu$ g/disc, Konamycin sulphate, MIC = 1.25 $\mu$ g/disc; *Salmonella typhi*, MIC = 0.02 $\mu$ g/disc, Konamycin sulphate, MIC = 2.5 $\mu$ g/disc). Source: BIAN ZHONG CHANG YE AN LUO *Polyalthia longifolia* var. *pendula*. Ref: 5386.

**16800 Pendulamine B**

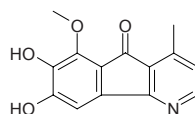
$C_{19}H_{17}NO_5$  (339.35). Reddish brown gum. Pharm: Antibacterial (gram-positive: *Corynebacterium hoffmanii*, MIC = 0.02 $\mu$ g/disc, control Konamycin sulphate, MIC = 0.62 $\mu$ g/disc; *Staphylococcus aureus*, MIC = 0.2 $\mu$ g/disc, Konamycin sulphate, MIC = 0.31 $\mu$ g/disc; *Streptococcus faecalis*, MIC = 2 $\mu$ g/disc, Konamycin sulphate, MIC = 0.31 $\mu$ g/disc; *Streptococcus pyogenes*, MIC = 20 $\mu$ g/disc, Konamycin sulphate, MIC = 1.25 $\mu$ g/disc; *Streptococcus viridans*, MIC = 0.02 $\mu$ g/disc, Konamycin sulphate, MIC = 2.5 $\mu$ g/disc; *Micrococcus lysodicklycus*, MIC = 0.02 $\mu$ g/disc, Konamycin sulphate, MIC = 10 $\mu$ g/disc; gram negative: *Bacillus pneumoniae*, MIC = 2 $\mu$ g/disc, Konamycin sulphate, MIC = 5 $\mu$ g/disc; *Salmonella paratyphi A*, MIC = 0.2 $\mu$ g/disc, Konamycin sulphate, MIC = 1.25 $\mu$ g/disc; *Salmonella typhi*, MIC = 0.2 $\mu$ g/disc, Konamycin sulphate, MIC = 2.5 $\mu$ g/disc). Source: BIAN ZHONG CHANG YE AN LUO *Polyalthia longifolia* var. *pendula*. Ref: 5386.

**16801 Penduletin**

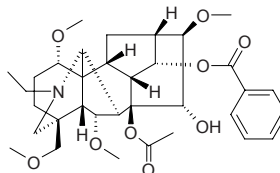
[569-80-2]  $C_{18}H_{16}O_7$  (344.32). Source: HUANG HUA HAO *Artemisia annua*. Ref: 2.

**16802 Penduline**

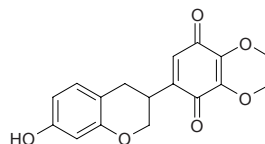
$C_{14}H_{11}NO_4$  (257.25). Orange crystals, mp 188~189°C. Pharm: Antibacterial (gram-positive: *Bacillus subtilis*, MIC = 25 $\mu$ g/disc, control Konamycin sulphate, MIC = 1.25 $\mu$ g/disc; *Corynebacterium hoffmanii*, MIC = 12.5 $\mu$ g/disc, Konamycin sulphate, MIC = 0.62 $\mu$ g/disc; *Staphylococcus aureus*, MIC = 12.5 $\mu$ g/disc, Konamycin sulphate, MIC = 0.31 $\mu$ g/disc; *Streptococcus faecalis*, MIC = 12.5 $\mu$ g/disc, Konamycin sulphate, MIC = 0.31 $\mu$ g/disc). Source: BIAN ZHONG CHANG YE AN LUO *Polyalthia longifolia* var. *pendula*. Ref: 5386.

**16803 Penduline**

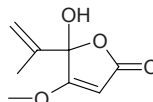
[81362-34-7]  $C_{34}H_{47}NO_9$  (613.75). Crystals (absolute ethanol), mp 166~167°C. Pharm: Analgesic (animal trials); local anesthetic (animal trials). Source: TIE BANG CHUI *Aconitum pendulum*. Ref: 661, 1521.

**16804 Pendulone**

7-Hydroxy-3',4'-dimethoxyisoflavanquinone [69359-09-7]  $C_{17}H_{16}O_6$  (316.31). Nacarat prismatic crystals, mp 154~156°C (chloroform-hexane),  $[\alpha]_D^{20} = -42^\circ$  ( $c = 2.0$ , methanol). Pharm: Inhibits promotor of cancer. Source: KUN MING JI XUE TENG *Milletia dielsiana*. Ref: 900.

**16805 Penicillic acid**

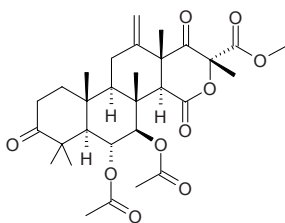
$C_8H_{10}O_4$  (170.17). Pharm: Phytogrowth inhibitor (inhibits radicle growth of *Amaranthus hypochondriacus*,  $IC_{50} = 6.57\mu$ mol/L); phytotoxic (highly toxic to corn seeds). Source: *Malbranchea aurantiaca*. Ref: 5273.



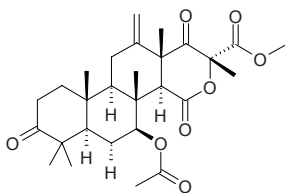


**16806 Penisimplicin A**

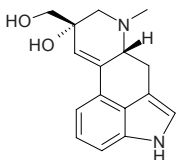
$C_{30}H_{40}O_{10}$  (560.65). Colorless needles, mp 242~245°C (benzene),  $[\alpha]_D^{20} = -298^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ). Source: JI JIAN DAN QING MEI *Penicillium simplicissimum*. Ref: 4501.

**16807 Penisimplicin B**

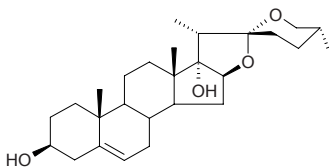
$C_{28}H_{38}O_8$  (502.61). Colorless needles, mp 252~254°C (MeOH),  $[\alpha]_D^{20} = -118^\circ$  ( $c = 0.11$ ,  $CHCl_3$ ). Source: JI JIAN DAN QING MEI *Penicillium simplicissimum*. Ref: 4501.

**16808 Penniclavine**

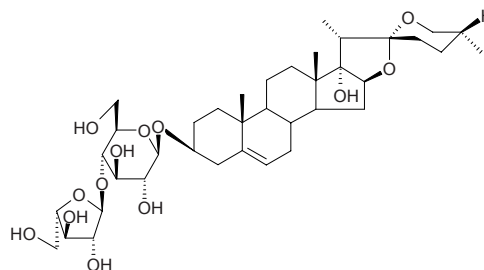
$C_{16}H_{18}N_2O_2$  (270.33). mp 222~225°C (dec). Pharm: Inhibits breeding (female rat); inhibits lactation hormone (10µg, InRt = 40%); similar action with ergotamine and ergometrine; used in treatment of bilious headache and obstetric process. Source: LIE YE QIAN NIU *Ipomoea hederacea*, MAI JIAO *Claviceps purpurea*, QIAN NIU ZI *Pharbitis nil*, TIE BANG CHUI *Aconitum pendulum*, YE MAI YIN BEI TENG *Argyrea nervosa*. Ref: 6, 658.

**16809 Pennogenin**

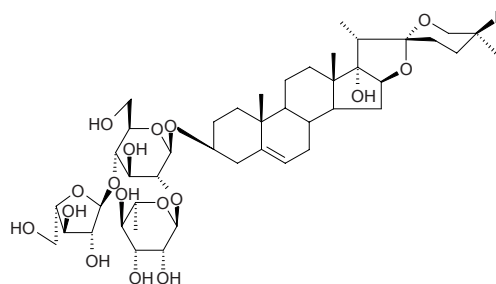
Spirost-5-ene-3,17-diol [507-89-1]  $C_{27}H_{42}O_4$  (430.63). Crystals (MeOH or  $Et_2O$ ), mp 245~247°C, 232~234°C,  $[\alpha]_D = -104.3^\circ$  ( $c = 1$ ,  $CHCl_3$ ). Source: HE HUA YAN LING CAO *Trillium erectum*, RI BEN BAI SI CAO *Chionographis japonica*, YU ER QI *Trillium camtschaticum*, *Helioniopsis orientalis*, *Paris* spp. Ref: 6, 1521.

**16810 Pennogenin-3-O-α-L-arabinofuranosyl(1→4)-β-D-glucopyranoside**

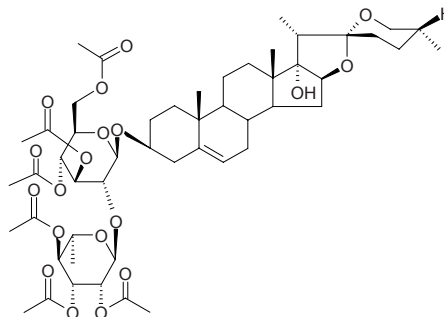
$C_{38}H_{60}O_{13}$  (724.89). Source: ZAO XIU *Paris polyphylla*. Ref: 2741.

**16811 Pennogenin-3-O-α-L-arabinofuranosyl(1→4)-[α-L-rhamnopyranosyl(1→2)]-β-D-glucopyranoside**

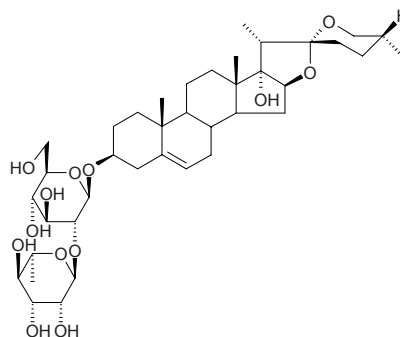
$C_{44}H_{70}O_{17}$  (871.04). Source: ZAO XIU *Paris polyphylla*. Ref: 2741.

**16812 Pennogenin-hexaacetyl-3-O-α-L-rhamnopyranosyl(1→2)-β-D-glucopyranoside**

$C_{51}H_{74}O_{19}$  (991.15). Source: ZAO XIU *Paris polyphylla*. Ref: 2741.

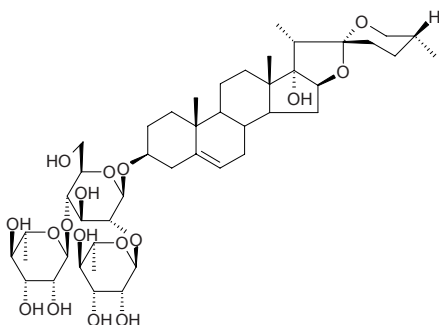
**16813 Pennogenin-3-O-α-L-rhamnopyranosyl(1→2)-β-D-glucopyranoside**

$C_{39}H_{62}O_{13}$  (738.92). Source: YUN NAN CHONG LOU *Paris polyphylla* var. *yunnanensis*. Ref: 2635.



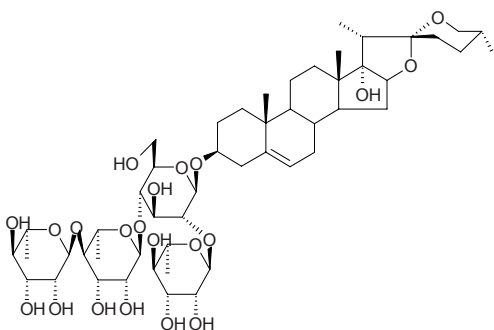
**16814 Pennogenin-3-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)-[ $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranoside**

C<sub>45</sub>H<sub>72</sub>O<sub>17</sub> (885.07). **Source:** YUN NAN CHONG LOU *Paris polyphylla* var. *yunnanensis*. **Ref:** 2635, 2673.



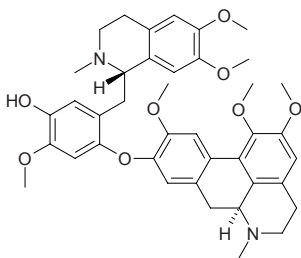
**16815 Pennogenin rhamnosyl chactotrioseide**

Pennogenin-3-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 4)- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 4)-[ $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)]- $\beta$ -D-glucopyranoside C<sub>51</sub>H<sub>82</sub>O<sub>21</sub> (1031.21). mp 223–227°C (dec). **Source:** HUA CHONG LOU *Paris polyphylla* var. *chinensis*, WANG SUN *Paris tetraphylla*, YUN NAN CHONG LOU *Paris polyphylla* var. *yunnanensis*, ZAO XIU *Paris polyphylla*. **Ref:** 6, 2741, 2635, 2673, 2991.



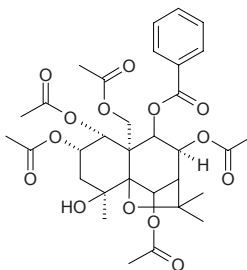
**16816 Pennsylvanine**

[53466-31-2] C<sub>40</sub>H<sub>46</sub>N<sub>2</sub>O<sub>8</sub> (682.82). White powder, mp 110–112°C (Et<sub>2</sub>O), [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +138° (*c* = 0.6, MeOH). **Pharm:** Antibacterial (*Mycobacterium smegmatis*, MIC = 1000 $\mu$ g/mL). **Source:** WAI JUAN TANG SONG CAO *Thalictrum revolutum*, YI XING TANG SONG CAO *Thalictrum dioicum*, ZAXING TANG SONG CAO *Thalictrum polygamum*. **Ref:** 3596, 1648, 3597, 3598.



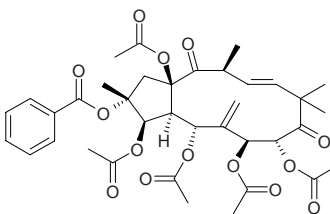
**16817 1 $\alpha$ ,2 $\alpha$ ,6 $\beta$ ,8 $\beta$ ,13-Pentaacetoxy-9 $\beta$ -benzoyloxy-4 $\beta$ -hydroxy- $\beta$ -dihydroagarofuran**

C<sub>32</sub>H<sub>40</sub>O<sub>14</sub> (648.67). White amorphous powder, mp 117–118°C, [ $\alpha$ ]<sub>D</sub><sup>24</sup> = –23.2° (*c* = 0.46, CHCl<sub>3</sub>). **Pharm:** Insecticidal (larvae of *Mythimna separata*, KD<sub>50</sub> = 159.8 $\mu$ g/g). **Source:** DIAO GAN MA *Celastrus angulatus* (root cortex): yield = 0.00053%dw). **Ref:** 3044.



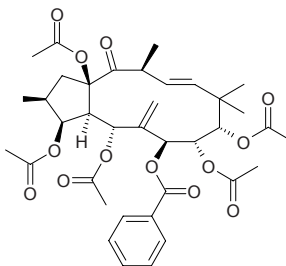
**16818 3 $\beta$ ,5 $\alpha$ ,7 $\beta$ ,8 $\alpha$ ,15 $\beta$ -Pentaacetoxy-2 $\alpha$ -benzoyloxyjatropa-6(17),11E-dien-9,14-dione**

C<sub>37</sub>H<sub>44</sub>O<sub>14</sub> (712.75). **Pharm:** Cytotoxic (*in vitro*, B16 melanoma cell line, IC<sub>50</sub> > 5 $\mu$ g/mL, no significant cytotoxicity); irritant inactive (mouse ear inflammation model, ID<sub>50</sub> > 100 $\mu$ g/ear). **Source:** *Euphorbia turczanowii* (whole herb). **Ref:** 3078.

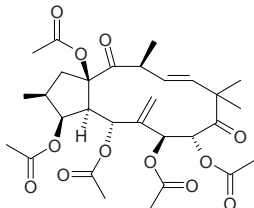


**16819 3 $\beta$ ,5 $\alpha$ ,8 $\alpha$ ,9 $\alpha$ ,15 $\beta$ -Pentaacetoxy-7 $\beta$ -benzoyloxyjatropa-6(17),11E-dien-14-one**

C<sub>37</sub>H<sub>46</sub>O<sub>13</sub> (698.77). Colorless crystals, mp 160–161°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +45.8° (*c* = 0.46, CHCl<sub>3</sub>). **Pharm:** Cytotoxic (*in vitro*, B16 melanoma cell line, IC<sub>50</sub> > 5 $\mu$ g/mL, no significant cytotoxicity)<sup>[3078]</sup>; irritant inactive (mouse ear inflammation model, ID<sub>50</sub> > 100 $\mu$ g/ear)<sup>[3078]</sup>. **Source:** *Euphorbia turczanowii* (whole herb). **Ref:** 3078.

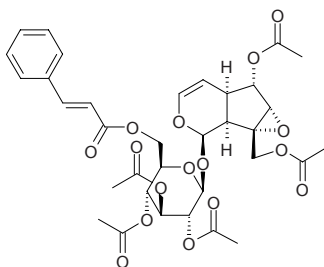


**16820** *3β,5α,7β,8α,15β*-Pentaacetoxyjatropa-6(17),11*E*-dien-9,14-dione  
 $C_{30}H_{40}O_{12}$  (592.65). Colorless crystals, mp 287~289°C,  $[\alpha]_D^{25} = +41.9^\circ$  ( $c = 0.48$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic (*in vitro*, B16 melanoma cell line,  $IC_{50} > 5\mu g/mL$ , no significant cytotoxicity); irritant inactive (mouse ear inflammation model,  $ID_{50} > 100\mu g/ear$ ). **Source:** *Euphorbia turczaninowii* (whole herb). **Ref:** 3078.



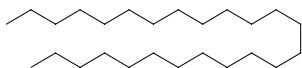
**16821** Pentaacetyl-6'-cinnamoyl catalpol

$C_{34}H_{38}O_{16}$  (702.67). **Source:** HU HUANG LIAN *Picrorhiza kurrooa*. **Ref:** 3153.



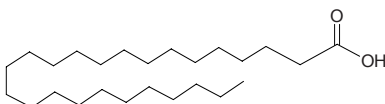
**16822** Pentacosane

[629-99-2]  $C_{25}H_{52}$  (352.69). **Source:** LU BIAN QING *Clerodendron cyrtophyllum*, PU HUANG *Typha angustata*, XIA YE XIANG PU *Typha angustifolia*. **Ref:** 2, 660.



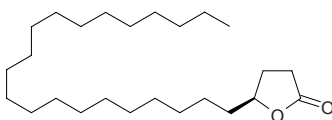
**16823** *n*-Pentacosanoic acid

Neocerotic acid [506-38-7]  $C_{25}H_{50}O_2$  (382.68). **Source:** BING GUO HU JI SHENG *Viscum multinerve*, MI LA *Apis cerana*, QIANG HUO *Notopterygium incisum*. **Ref:** 2, 660.



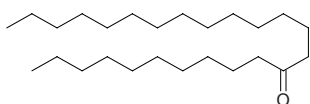
**16824** Pentacosan-4-olide

$C_{25}H_{48}O_2$  (380.66). **Source:** FU CHUI FE LAO JU *Flourensia cernua*. **Ref:** 3433.



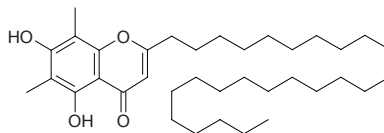
**16825** 11-Pentacosanone

$C_{25}H_{50}O$  (366.68). Solid, mp 66~68°C. **Source:** KU LANG SHU *Clerodendrum inerme*. **Ref:** 3382.



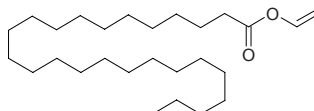
**16826** 2-*n*-Pentacosyl-5,7-dihydroxy-6,8-dimethyl chromone

$C_{36}H_{60}O_4$  (556.88). **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 2695.



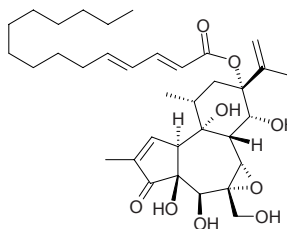
**16827** Pentacosyl vinyl ester

$C_{27}H_{52}O_2$  (408.71). **Source:** ZHI MU *Anemarrhena asphodeloides*. **Ref:** 3154.



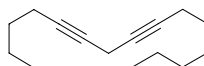
**16828** Pentadecadienoic acid

$C_{15}H_{28}O_2$  (240.36). White amorphous powder,  $[\alpha]_D^{26} = +6.1^\circ$  ( $c = 0.6$ ,  $CHCl_3$ ). **Source:** LANG DU *Stellera chamaejasme*. **Ref:** 4159.



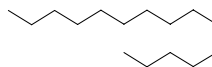
**16829** 7,10-Pentadecadiynoic acid

[22117-06-2]  $C_{15}H_{24}$  (204.36). **Source:** DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*]. **Ref:** 2.



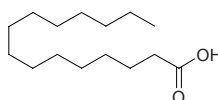
**16830** *n*-Pentadecane

Pentadecane [629-62-9]  $C_{15}H_{32}$  (212.42). **Source:** DANG SHEN *Codonopsis pilosula*, JIAN JIAN MU LAN *Magnolia acuminata*, LIAO XI XIN *Asarum heterotropoides* var. *mandshuricum*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], XI XIN *Asarum sieboldii*. **Ref:** 2, 658, 660.



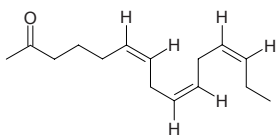
**16831** Pentadecanoic acid

Pentadecylic acid [1002-84-2]  $C_{15}H_{30}O_2$  (242.41). **Source:** DANG SHEN *Codonopsis pilosula*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], GUA LOU *Trichosanthes kirtlowii*, LU HUI *Aloe vera* [Syn. *Aloe barbadensis*], SHUANG BIAN GUA LOU *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*]. **Ref:** 2, 660.

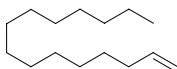


**16832 (6Z,9Z,12Z)Pentadecatrien-2-one**

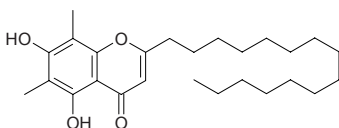
[139328-79-3] C<sub>15</sub>H<sub>24</sub>O (220.36). Oil. **Pharm:** Cytotoxic (MCF7, IC<sub>50</sub> = 5.15 μg/mL, HT29, IC<sub>50</sub> = 3.01 μg/mL). **Source:** GUI PI DIAO ZHANG *Lindera benzoin*. **Ref:** 1053.

**16833 1-Pentadecene**

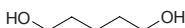
[13360-61-7] C<sub>15</sub>H<sub>30</sub> (210.41). **Source:** BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*]. **Ref:** 2.

**16834 2-n-Pentadecyl-5,7-dihydroxy-6,8-dimethyl chromone**

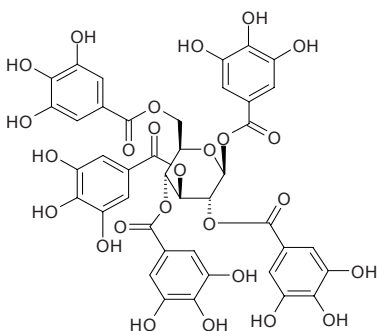
C<sub>26</sub>H<sub>40</sub>O<sub>4</sub> (416.61). **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 2695.

**16835 1,5-Pentadiol**

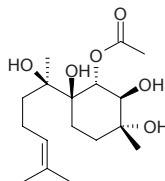
C<sub>5</sub>H<sub>12</sub>O<sub>2</sub> (104.15). **Source:** BAN XIA *Pinellia ternata*. **Ref:** 1401.

**16836 1,2,3,4,6-Pentagalloylglucose**

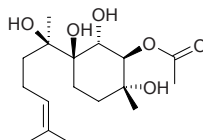
C<sub>41</sub>H<sub>32</sub>O<sub>26</sub> (940.70). **Pharm:** Anti-HIV; antioxidant (lipid peroxidation inhibitor in hepatic cellular mitochondria and microsome of rat); antihepatotoxin. **Source:** BAI LIAN *Ampelopsis japonica* [Syn. *Paullinia japonica*], BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*], BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (fresh fruit: yield = 0.043%fw)<sup>[4695]</sup>, HE ZI *Terminalia chebula*, MO SHI ZI *Quercus infectoria* (parasitic bee: *Cynips gallae-tinctoriae*), MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*], NUO WEI QI *Acer platanoides*, RI BEN PING PENG CAO *Nuphar japonicum*, XIAN XI LAO GUAN CAO *Geranium robertianum*, YOU GAN YE *Phyllanthus emblica* (leaf and branch), *Rhus* sp., *Cotinus* sp., *Fuchsia* sp., *Epilobium* sp., *Rosa* sp. **Ref:** 2, 658, 660, 4205, 4695, 5501.

**16837 (1R\*,2R\*,3R\*,6R\*,7R\*)1,2,3,6,7-Pentahydroxy-1-acetoxy-bisabol-10(11)-ene**

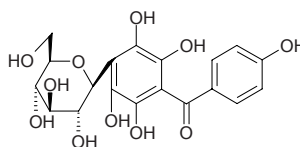
C<sub>17</sub>H<sub>30</sub>O<sub>6</sub> (330.43). [α]<sub>D</sub><sup>24</sup> = -24.1° (c = 0.45, CHCl<sub>3</sub>). **Source:** JIN SE MU JU *Matricaria aurea*. **Ref:** 2301.

**16838 (1R\*,2R\*,3R\*,6R\*,7R\*)1,2,3,6,7-Pentahydroxy-2-acetoxy-bisabol-10(11)-ene**

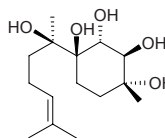
C<sub>17</sub>H<sub>30</sub>O<sub>6</sub> (330.43). **Source:** JIN SE MU JU *Matricaria aurea*. **Ref:** 2301.

**16839 2,3,4',5,6-Pentahydroxybenzophenone-4-C-glucoside**

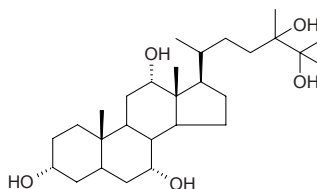
C<sub>19</sub>H<sub>20</sub>O<sub>11</sub> (424.36). Light-yellow powder, mp 168~171°C, [α]<sub>D</sub><sup>21</sup> = +21° (c = 0.1, MeOH). **Source:** ZONG BAO GE NI DI MU *Gnidia involucreta* (aerial parts). **Ref:** 3996.

**16840 (1R\*,2R\*,3R\*,6R\*,7R\*)1,2,3,6,7-Pentahydroxy-bisabol-10(11)-ene**

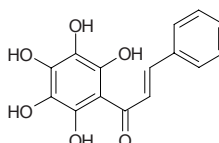
[248937-37-3] C<sub>15</sub>H<sub>28</sub>O<sub>5</sub> (288.39). [α]<sub>D</sub><sup>24</sup> = -39.9° (c = 0.36, CHCl<sub>3</sub>). **Source:** JIN SE MU JU *Matricaria aurea*. **Ref:** 2301.

**16841 Pentahydroxybufostane**

C<sub>28</sub>H<sub>50</sub>O<sub>5</sub> (466.71). mp 172°C. **Source:** CHAN CHU DAN *Bufo bufo gargarizans*; *Bufo melanostictus*. **Ref:** 6.

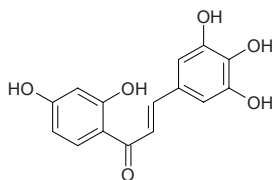
**16842 2',3',4',5',6'-Pentahydroxychalcone**

C<sub>15</sub>H<sub>12</sub>O<sub>6</sub> (288.26). Yellow solid. **Source:** BAI JIE ZI *Sinapis alba* [Syn. *Brassica alba*; *Brassica hirta*] (root and exudates). **Ref:** 3890.

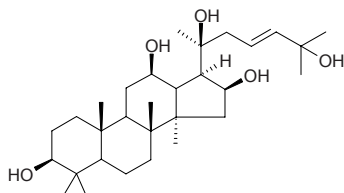


**16843 3,4,5,2',4'-Pentahydroxychalcone**

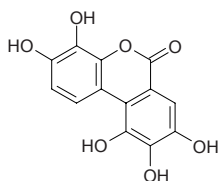
[2679-65-4] C<sub>15</sub>H<sub>12</sub>O<sub>6</sub> (288.26). Source: CI HUAI HUA *Robinia pseudoacacia*. Ref: 6.

**16844 (20S)-3β,12β,16β,25-Pentahydroxydammar-23-ene**

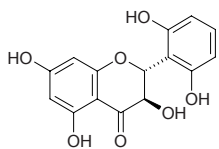
C<sub>30</sub>H<sub>52</sub>O<sub>5</sub> (492.75). Colorless needles, mp >250°C, [α]<sub>D</sub><sup>25</sup> = +47.6° (c = 0.5, CH<sub>2</sub>Cl<sub>2</sub>). Source: HUN XIAO MO YAO *Commiphora confusa* (resin). Ref: 4335.

**16845 3,4,8,9,10-Pentahydroxydibenzo[b,d]pyran-6-one**

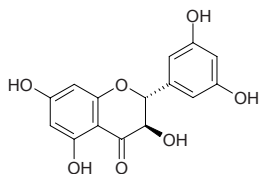
C<sub>13</sub>H<sub>8</sub>O<sub>7</sub> (276.20). Source: MAO CAO LONG *Ludwigia octovalvis* (fresh whole herb). Ref: 4827.

**16846 3,5,7,2',6'-Pentahydroxyflavanone**

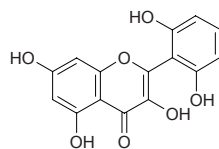
[82854-32-8] C<sub>15</sub>H<sub>12</sub>O<sub>7</sub> (304.26). Needles (MeOH), mp 221–225°C (dec). Source: HUANG QIN *Scutellaria baicalensis*, DIAN HUANG QIN *Scutellaria amoena*. Ref: 2, 660, 1521.

**16847 (+)-3,5,7,3',5'-Pentahydroxyflavanone**

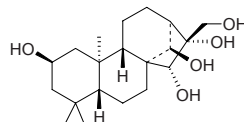
C<sub>15</sub>H<sub>12</sub>O<sub>7</sub> (304.26). Yellowish acicular crystals, mp 218–220°C, [α]<sub>D</sub><sup>15</sup> = +23.7° (c = 0.11, methanol). Source: ZHI JU ZI *Hovenia dulcis*. Ref: 391.

**16848 3,5,7,2',6'-Pentahydroxy flavone**

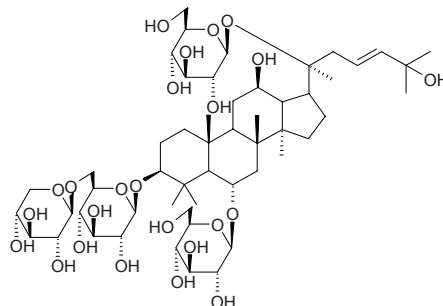
Viscudulin I [92519-95-4] C<sub>15</sub>H<sub>10</sub>O<sub>7</sub> (302.24). mp 293°C (dec). Source: HUANG QIN *Scutellaria baicalensis*, DIAN HUANG QIN *Scutellaria amoena*. Ref: 2, 660, 1521.

**16849 ent-2α,14α,15β,16S,17-Pentahydroxy kaurane**

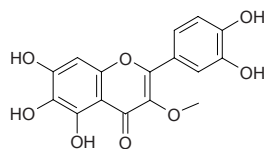
C<sub>20</sub>H<sub>34</sub>O<sub>5</sub> (354.49). Source: LI BING FENG WEI JUE *Pteris plumbea*. Ref: 3155.

**16850 3β,6α,12β,20S,25-Pentahydroxyl-dammar-23-ene-6-O-β-D-glucopyranoside-20-O-β-D-glucopyranosyl-3-O-β-D-xylopyranosyl(1→6)-D-glucopyranoside**

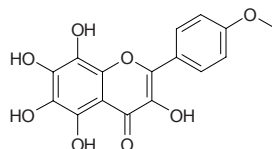
C<sub>53</sub>H<sub>90</sub>O<sub>24</sub> (1111.29). White powder, mp 201–203°C. Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2267.

**16851 5,6,7,3',4'-Pentahydroxy-3-methoxyflavone**

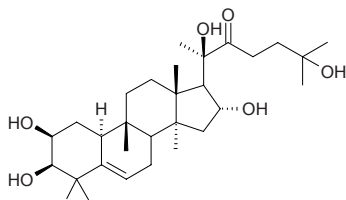
Quercetagenin 3-methyl ether [64190-88-1] C<sub>16</sub>H<sub>12</sub>O<sub>8</sub> (332.26). mp 218–220°C. Pharm: α-Glucosidase inhibitor (rat small intestine, 50 μmol/L, InRt = 62%, IC<sub>50</sub> = 31 μmol/L); invertase inhibitor (rat small intestine, IC<sub>50</sub> = 28 μmol/L, 50 μmol/L, InRt = 64%); aldose reductase inhibitor (rat eye lens, IC<sub>50</sub> = 0.058 μmol/L, ox eye lens, IC<sub>50</sub> = 0.37 μmol/L). Source: HUANG HUA HAO *Artemisia annua*. Ref: 900.

**16852 3,5,6,7,8-Pentahydroxy-2-(4-methoxyphenyl)-4H-1-benzopyran-4-one**

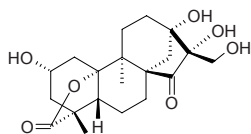
3,5,6,7,8-Pentahydroxy-4'-methoxy flavone C<sub>16</sub>H<sub>12</sub>O<sub>8</sub> (332.27). Colorless solid. Source: BAI JIE ZI *Sinapis alba* [Syn. *Brassica alba*; *Brassica hirta*] (shoot). Ref: 3890.



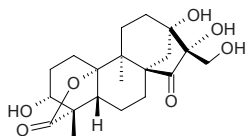
**16853 2,3,16,20,25-Pentahydroxy-9-methyl-19-norlanost-5-en-22-one**  
 $C_{30}H_{50}O_6$  (506.73). Source: HU HUANG LIAN *Picrorhiza kurroa*. Ref: 3156.



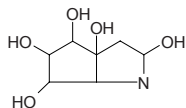
**16854 2 $\alpha$ ,10 $\alpha$ ,13 $\alpha$ ,16 $\alpha$ ,17-Pentahydroxy-9 $\alpha$ -methyl-15-oxo-20-norkauran-19-oic acid (19,10)-lactone**  
 $C_{20}H_{28}O_7$  (380.44). White needles, mp 100~103°C,  $[\alpha]_D^{25} = +15.0^\circ$  ( $c = 0.1$ , MeOH). Pharm: Cytotoxic inactive (Lu1, Col2, KB, LNCaP, hTERT-RPE1, HUVEC; control Taxol, ED<sub>50</sub> = 0.002 $\mu$ g/mL, 0.003 $\mu$ g/mL, 0.0005 $\mu$ g/mL, 0.001 $\mu$ g/mL, 0.004 $\mu$ g/mL, 0.008 $\mu$ g/mL, respectively). Source: *Parinari sprucei* (leaf). Ref: 4991.



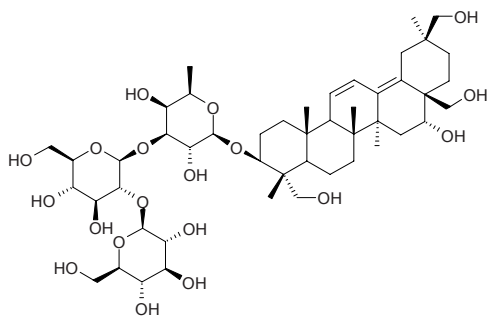
**16855 3 $\alpha$ ,10 $\alpha$ ,13 $\alpha$ ,16 $\alpha$ ,17-Pentahydroxy-9 $\alpha$ -methyl-15-oxo-20-norkaur-an-19-oic acid  $\gamma$ -lactone**  
 $C_{20}H_{28}O_7$  (380.44). White crystals, mp 85~90°C,  $[\alpha]_D^{25} = +5.3^\circ$  ( $c = 0.1$ , MeOH). Pharm: Cytotoxic inactive (Lu1, Col2, KB, LNCaP, hTERT-RPE1, HUVEC; control Taxol, ED<sub>50</sub> = 0.002 $\mu$ g/mL, 0.003 $\mu$ g/mL, 0.0005 $\mu$ g/mL, 0.001 $\mu$ g/mL, 0.004 $\mu$ g/mL, 0.008 $\mu$ g/mL, respectively). Source: *Parinari sprucei* (leaf). Ref: 4991.



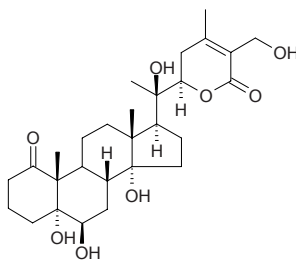
**16856 1,2,3,4,7-Pentahydroxy-6-nitrobicyclo[3.3.0]octane**  
 $C_7H_{13}NO_5$  (191.19). Source: GOU QI GEN PI *Lycium chinense*. Ref: 3157.



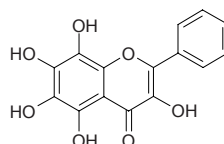
**16857 3 $\beta$ ,16 $\alpha$ ,23,28,30-Pentahydroxyolean-11,13(18)-diene 3-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-fucopyranoside**  
 $C_{48}H_{78}O_{19}$  (959.15). Amorphous powder,  $[\alpha]_D^{25} = -27.5^\circ$  ( $c = 0.08$ , MeOH). Source: DUO CI CHAI HU *Bupleurum spinosum* (root). Ref: 3980.



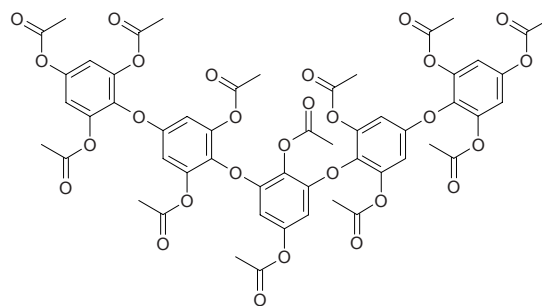
**16858 (20R,22R)-5 $\alpha$ ,6 $\beta$ ,14 $\alpha$ ,20,27-Pentahydroxy-1-oxowitha-24-enolide**  
 $C_{28}H_{42}O_8$  (506.64). Amorphous powder,  $[\alpha]_D = +72.5^\circ$  ( $c = 0.2$ , MeOH). Source: DENG LONG CAO *Physalis peruviana*. Ref: 1915.



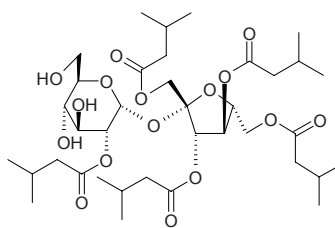
**16859 3,5,6,7,8-Pentahydroxy-2-phenyl-4H-1-benzopyran-4-one**  
3,5,6,7,8-Pentahydroxy flavone  $C_{15}H_{10}O_7$  (302.24). Colorless solid. Source: BAI JIE ZI *Sinapis alba* [Syn. *Brassica alba*; *Brassica hirta*] (root and exudates). Ref: 3890.



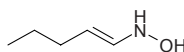
**16860 Pentaisofulhalol dodecaacetate**  
 $C_{54}H_{46}O_{28}$  (1142.95). Source: SHENG ZAO *Chorda filum*. Ref: 3158.



**16861 1',3,3',4',6'-Pentakis-O-(3-methylbutanoyl)- $\beta$ -D-fructofuranosyl  $\alpha$ -D-glucopyranoside**  
 $C_{37}H_{62}O_{16}$  (762.90). Yellowish oil,  $[\alpha]_D^{20} = +2.71^\circ$  ( $c = 0.7$ ,  $CH_2Cl_2$ ). Source: JI NEI YA BAN JIU JU *Vernonia guineensis*. Ref: 3412.

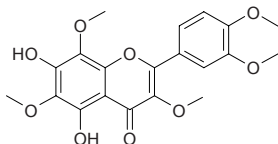


**16862 Pentaldehyde oxime**  
 $C_5H_{11}NO$  (101.15). Source: BAN XIA *Pinellia ternata*. Ref: 1401.

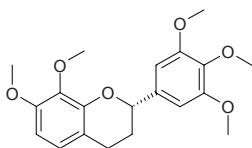


**16863 3,6,8,3',4'-Pentamethoxy-5,7-dihydroxyflavone**

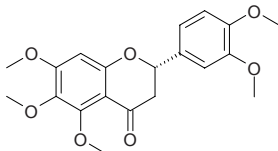
$C_{20}H_{20}O_9$  (404.38). Yellow crystals [Source](#): RU NI WENG DAO MI ZHU YU *Melicope coodeana*. [Ref](#): 1975.

**16864 (2S)-7,8,3',4',5'-Pentamethoxyflavan**

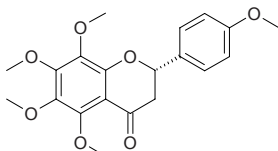
[133342-91-3]  $C_{20}H_{24}O_6$  (360.41). Colorless oil,  $[\alpha]_D^{20} = -75.0^\circ$  ( $c = 0.30$ ,  $CHCl_3$ ). [Pharm](#): Cytotoxic (hmn: melanotic carcinoma  $ED_{50} = 8.9\mu g/mL$ , colon cancer  $ED_{50} = 15.8\mu g/mL$ , nasopharyngeal carcinoma  $ED_{50} = 13.3\mu g/mL$ , vincristine-resistant KB  $ED_{50} = 2.1\mu g/mL$ ; mus: lymph leukemia cell  $ED_{50} = 5.4\mu g/mL$ ). [Source](#): YA MAI JIA YING TAO *Muntingia calabura*. [Ref](#): 3599.

**16865 (2S)-5,6,7,3',4'-Pentamethoxyflavanone**

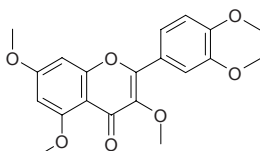
$C_{20}H_{22}O_7$  (374.39). Yellow oil,  $[\alpha]_D = 0^\circ$  ( $c = 0.1325$ , MeOH). [Source](#): RU JU *Citrus kinokuni* (peel). [Ref](#): 4132.

**16866 (2S)-5,6,7,8,4'-Pentamethoxyflavanone**

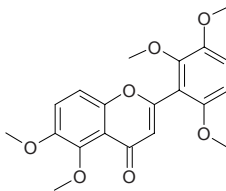
$C_{20}H_{22}O_7$  (374.39). Yellow oil,  $[\alpha]_D = +8^\circ$  ( $c = 0.074$ , MeOH). [Source](#): RU JU *Citrus kinokuni* (peel). [Ref](#): 4132.

**16867 3,5,7,3',4'-Pentamethoxyflavone**

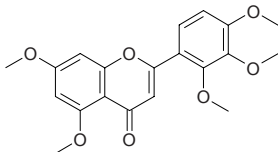
[1247-97-8]  $C_{20}H_{20}O_7$  (372.38). Yellowish plate crystals (MeOH), mp 150–151°C. [Pharm](#): Vasodilator (rat aorta strip, contraction caused by arterenol, KCl); cAMP phosphodiesterase inhibitor (rat heart,  $IC_{50} = 7.1\mu mol/L$ , rat brain,  $IC_{50} = 6.3\sim 10.2\mu mol/L$ , bovine heart,  $IC_{50} = 129\mu mol/L$ ); anti-inflammatory (rat, swollen foot model caused by carrageenan, 300mg/kg orl,  $InRt = 25.3\%$ ); cytotoxic (KB,  $ED_{50} = 25\mu g/mL$ ). [Source](#): DU HONG HUA *Callicarpa formosana*, QIN ZHUANG AO CHUN JIANG *Boesenbergia pandurata*, SAN YE MI ZHU YU *Melicope triphylla*. [Ref](#): 1555.

**16868 5,6,2',3',6'-Pentamethoxyflavone**

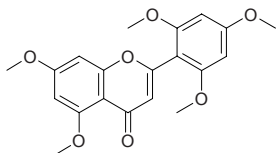
$C_{20}H_{20}O_7$  (372.38). Yellow amorphous solid. [Source](#): SI JI XIANG ROU GUO *Casimiroa tetramera* (leaf). [Ref](#): 5262.

**16869 5,7,2',3',4'-Pentamethoxyflavone**

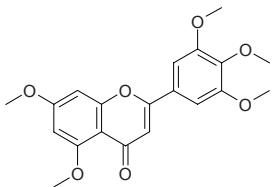
$C_{20}H_{20}O_7$  (372.38). Colorless needles ( $CHCl_3$ ), mp 166–167°C. [Source](#): TIAO WEN CHUAN XIN LIAN *Andrographis lineata*. [Ref](#): 3390.

**16870 5,7,2',4',6'-Pentamethoxyflavone**

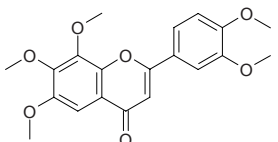
$C_{20}H_{20}O_7$  (372.38). Pale yellow solid, mp 192–194°C. [Source](#): NAN YIN DU CHUAN XIN LIAN *Andrographis viscosula*. [Ref](#): 1936.

**16871 5,7,3',4',5'-Pentamethoxyflavone**

[53350-26-8]  $C_{20}H_{20}O_7$  (372.38). Needles (MeOH), prisms ( $CHCl_3$ ), mp 196–197°C, 193°C. [Source](#): JIU LI XIANG GEN *Murraya paniculata* [Syn: *Chalcas paniculata*], JU PI *Citrus reticulata*, LONG XU TENG *Bauhinia championii*. [Ref](#): 1295, 2910.

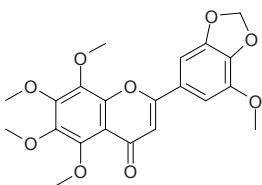
**16872 6,7,8,3',4'-Pentamethoxyflavone**

$C_{20}H_{20}O_7$  (372.38). [Source](#): XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.0082%dw). [Ref](#): 3053.

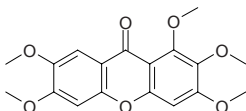


**16873 5,6,7,8,5'-Pentamethoxy-3',4'-methylenedioxyflavone**

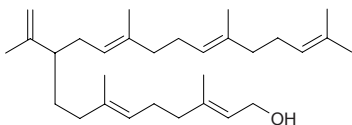
$C_{21}H_{20}O_9$  (416.39). **Pharm:** Cytotoxic inactive (HeLa,  $IC_{50} > 200\mu\text{g/mL}$ , control Mitomycin C,  $IC_{50} = 1.7\mu\text{g/mL}$ ). **Source:** TUAN JI AI NA XIANG *Blumea glomerata*. **Ref:** 4092.

**16874 1,2,3,6,7-Pentamethoxyxanthone**

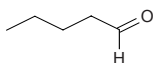
$C_{18}H_{18}O_7$  (346.34). **Source:** YUAN ZHI *Polygala tenuifolia*. **Ref:** 3159.

**16875 (2E,6E,12E,16E)-3,7,13,17,21-Pentamethyl-10-(1-methylethenyl)-2,6,12,16,20-docosapentaen-1-ol**

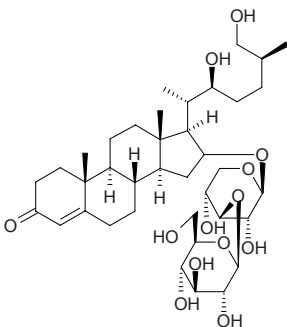
$C_{30}H_{50}O$  (426.73). Colorless oil. **Source:** *Cupania latifolia* (leaf). **Ref:** 4496.

**16876 Pentanal**

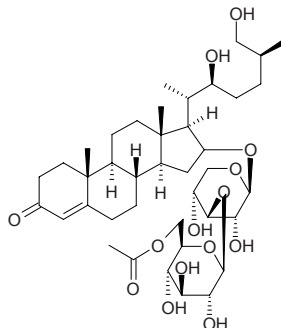
Valeric aldehyde [110-62-3]  $C_5H_{10}O$  (86.13). bp  $103^\circ\text{C}$ . **Source:** DA SUAN *Allium sativum*, FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*]. **Ref:** 2, 6.

**16877 Pentandroside A**

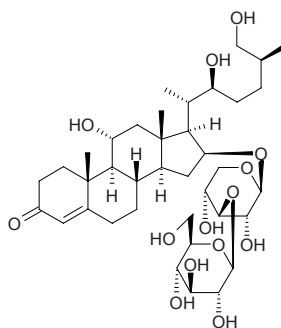
(22*S*,25*S*)-16 $\beta$ ,22,26-Trihydroxycholest-4-en-3-one  
16-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-xylopyranoside  $C_{38}H_{62}O_{13}$  (726.91).  
Amorphous powder,  $[\alpha]_D^{25} = +18^\circ$  ( $c = 0.1$ , MeOH). **Source:** WU XIONG  
RUI JI LI *Tribulus pentandrus* (aerial parts). **Ref:** 3877.

**16878 Pentandroside B**

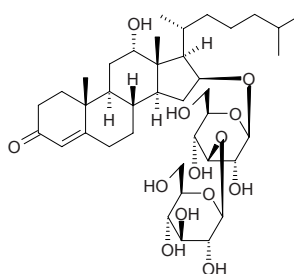
(22*S*,25*S*)-16 $\beta$ ,22,26-Trihydroxycholest-4-en-3-one  
16-*O*-[6-*O*-acetyl- $\beta$ -D-glucopyranosyl]-(1 $\rightarrow$ 3)- $\beta$ -D-xylopyranoside  
 $C_{40}H_{64}O_{14}$  (768.95). Amorphous powder,  $[\alpha]_D^{25} = +25^\circ$  ( $c = 0.1$ , MeOH).  
**Source:** WU XIONG RUI JI LI *Tribulus pentandrus* (aerial parts). **Ref:** 3877.

**16879 Pentandroside C**

(22*S*,25*S*)-11 $\alpha$ ,16 $\beta$ ,22,26-Tetrahydroxycholest-4-en-3-one  
16-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-xylopyranoside  $C_{38}H_{62}O_{14}$  (742.91).  
Amorphous powder,  $[\alpha]_D^{25} = +27.3^\circ$  ( $c = 0.1$ , MeOH). **Source:** WU XIONG  
RUI JI LI *Tribulus pentandrus* (aerial parts). **Ref:** 3877.

**16880 Pentandroside D**

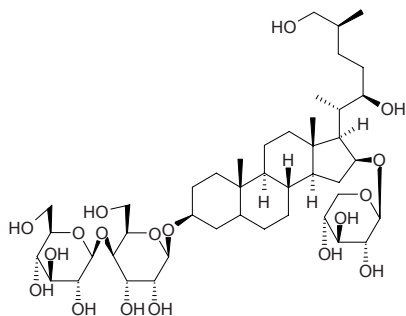
(25*S*)-12 $\alpha$ ,16 $\beta$ -Dihydroxycholest-4-en-3-one  
16-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-glucopyranoside  $C_{39}H_{64}O_{13}$  (740.94).  
Amorphous powder,  $[\alpha]_D^{25} = +12^\circ$  ( $c = 0.1$ , MeOH). **Source:** WU XIONG  
RUI JI LI *Tribulus pentandrus* (aerial parts). **Ref:** 3877.



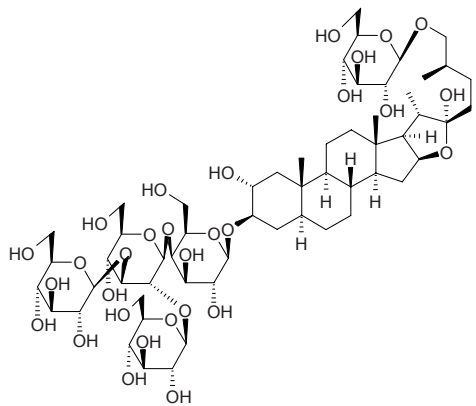


**16881 Pentandroside E**

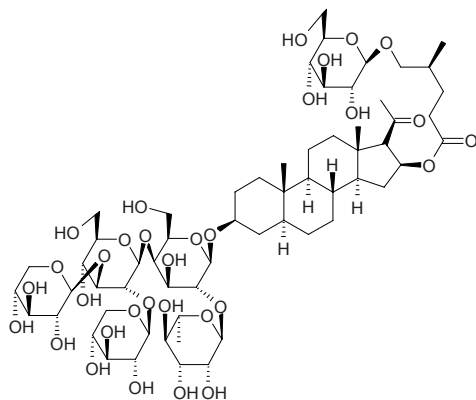
(2*S*,25*S*)-16-*O*- $\beta$ -*D*-Xylopyranosyl-5 $\alpha$ -cholestan-3 $\beta$ ,16 $\beta$ ,22,26-tetraol  
3-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-galactopyranoside C<sub>44</sub>H<sub>76</sub>O<sub>18</sub> (893.09).  
Amorphous powder,  $[\alpha]_D^{25} = +41^\circ$  ( $c = 0.1$ , MeOH). **Source:** WU XIONG  
RUI JI LI *Tribulus pentandrus* (aerial parts). **Ref:** 3877.

**16882 Pentandroside F**

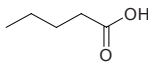
(2*S*)-26-*O*- $\beta$ -*D*-Glucopyranosyl-5 $\alpha$ -furostan-2 $\alpha$ ,3 $\beta$ ,22 $\alpha$ ,26-tetraol  
3-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)-*O*- $\beta$ -*D*-glu  
copyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-galactopyranoside C<sub>57</sub>H<sub>96</sub>O<sub>30</sub> (1261.38). Amorphous  
powder,  $[\alpha]_D^{25} = -53.0^\circ$  ( $c = 0.1$ , MeOH). **Source:** WU XIONG RUI JI LI  
*Tribulus pentandrus* (aerial parts). **Ref:** 3877.

**16883 Pentandroside G**

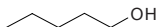
16 $\beta$ -[(4'*S*)-5'-( $\beta$ -*D*-Glucopyranosyloxy)-4'-methylpentanoyloxy]-3 $\beta$ -hydroxy-  
5 $\alpha$ -pregnan-20-one 3-*O*- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)-*O*- $\beta$ -*D*-xylopyranosyl-  
syl-(1 $\rightarrow$ 2)-*O*- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -  
*D*-galactopyranoside} C<sub>61</sub>H<sub>100</sub>O<sub>32</sub> (1345.46). Amorphous powder,  $[\alpha]_D^{25} =$   
 $-13^\circ$  ( $c = 0.1$ , MeOH). **Source:** WU XIONG RUI JI LI *Tribulus pentandrus*  
(aerial parts). **Ref:** 3877.

**16884 Pentanic acid**

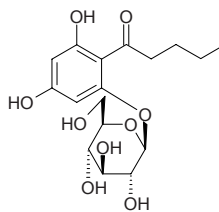
Valeric acid [109-52-4] C<sub>5</sub>H<sub>10</sub>O<sub>2</sub> (102.13). **Pharm:** LD<sub>50</sub> (mus, iv) =  
1290mg/kg. **Source:** CHAI HU *Bupleurum chinense*, HAN QIN *Apium*  
*graveolens*, KONG SHI CHUN *Ulvia pertusa*, MU HE *Rodgersia aesculifolia*,  
QIAN NIU ZI *Pharbitis nil*, SANG YE *Morus alba*, SHUI LIAO *Polygonum*  
*hydropiper*, TAO YE LIAO *Polygonum persicaria*, XIE CAO *Valeriana*  
*officinalis*, YAN CAO *Nicotiana tabacum*, YING SHAN HONG  
*Rhododendron mucronulatum*, ZHANG SHU PI *Cinnamomum camphora*, ZI  
CAI *Porphyra tenera*. **Ref:** 2, 658, 660.

**16885 Pentanol**

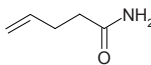
[71-41-0] C<sub>5</sub>H<sub>12</sub>O (88.15). **Source:** FANG FENG *Saposhnikovia divaricata*  
[Syn. *Ledebouriella seseloides*]. **Ref:** 2.

**16886 1-[(Pentanoyl)phlorogluciny]- $\beta$ -*D*-glucopyranoside**

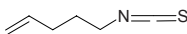
C<sub>17</sub>H<sub>24</sub>O<sub>9</sub> (372.38). Colorless gummy solid,  $[\alpha]_D^{25} = -58.6^\circ$  ( $c = 0.14$ , MeOH).  
**Pharm:** Lipoxygenase inhibitor (lipoxygenase (1.13.11.12) type I-B, IC<sub>50</sub> =  
(44.9 $\pm$ 0.5) $\mu$ mol/L, control Baicalein, IC<sub>50</sub> = (22.6 $\pm$ 0.1) $\mu$ mol/L)<sup>[442]</sup>. **Source:**  
YI HUA MU LAN *Indigofera heteranthazha* (Whole herb). **Ref:** 4442.

**16887 4-Pentenamide**

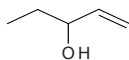
C<sub>5</sub>H<sub>9</sub>NO (99.13). Colorless lamellar crystals, mp 98.0~100.0°C. **Source:** BO  
NIANG HAO *Descurainia Sophia* (seed). **Ref:** 4903.

**16888 4-Pentenyl isothiocyanate**

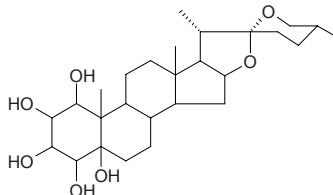
[18060-79-2] C<sub>6</sub>H<sub>9</sub>NS (127.21). bp 75°C/12mmHg. **Pharm:** Prevents cancer  
(animal model). **Source:** JIE ZI *Brassica juncea*. **Ref:** 6, 1582.

**16889 1-Penten-3-ol**

[616-25-1] C<sub>5</sub>H<sub>10</sub>O (86.13). bp 114~116°C. **Source:** LUO HUA SHENG ZHI  
YE *Arachis hypogaea*. **Ref:** 6.

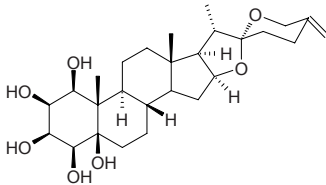
**16890 Pentolgenin**

C<sub>27</sub>H<sub>44</sub>O<sub>7</sub> (480.65). **Source:** JI XIANG CAO *Reineckea carnea*. **Ref:** 3160.

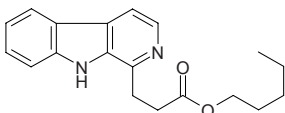


**16891**  $\Delta^{25(27)}$ -Pentrogenin

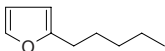
$C_{27}H_{42}O_7$  (478.63). **Pharm:** Cytotoxic (*in vitro*, hmn gastric tumor cell NUGC, 50 $\mu$ mol/L, InRt = 100%; hmn nasopharyngeal carcinoma cell HONE-1, 50 $\mu$ mol/L, InRt = 100%). **Source:** KAI KOU JIAN *Tupistra chinensis* (underground part). **Ref:** 4676.

**16892** *n*-Pentyl- $\beta$ -carboline-1-propionate

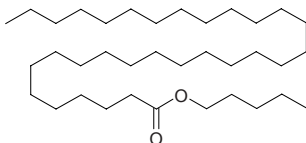
$C_{19}H_{22}N_2O_2$  (310.40). Yellow powder (benzene), mp 127°C (dec). **Pharm:** Antimalarial inactive (*Plasmodium falciparum* clones W2, D6, and TM91C235)<sup>[4728]</sup>. **Source:** CHANG YE KUAN MU *Eurycoma longifolia* (root: yield = 0.000031%dw), *Eurycoma* sp. **Ref:** 4556, 4728.

**16893** 2-Pentylfuran

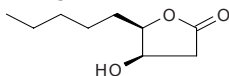
[3777-69-3]  $C_9H_{14}O$  (138.21). Oil. **Source:** CHAI SHOU *Bupleurum chaishouii*, XIA YE XIANG PU *Typha angustifolia*, ZUO JIANG CAO *Oxalis corniculata* [Syn. *Oxalis repens*]. **Ref:** 3161, 3162, 1402.

**16894** Pentyl hentriacontanoate

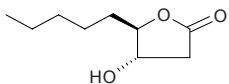
$C_{36}H_{72}O_2$  (536.97). White solid, mp 60–62°C. **Source:** RUAN GU ZAO *Chondria armata* [Syn. *Lophura armata*]. **Ref:** 5080.

**16895** erythro-5-*n*-Pentyl-4-hydroxytetrahydrofuran-2-one

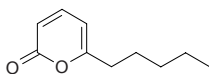
$C_9H_{16}O_3$  (172.23). Colorless liquid. **Source:** YANG HONG SHAN *Pimpinella thelungiana*. **Ref:** 817.

**16896** threo-5-*n*-Pentyl-4-hydroxy tetrahydrofuran-2-one

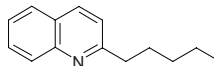
$C_9H_{16}O_3$  (172.23). Colorless liquid. **Source:** YANG HONG SHAN *Pimpinella thelungiana*. **Ref:** 817.

**16897** 6-*n*-Pentyl- $\alpha$ -pyrone

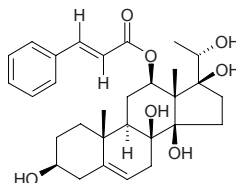
$C_{10}H_{14}O_2$  (166.22). **Pharm:** Tyrosinase inhibitor (IC<sub>50</sub> = 0.8 $\mu$ mol/L, control Kojic acid, IC<sub>50</sub> = 7.7 $\mu$ mol/L, used as a functional personal-care compound)<sup>[4457]</sup>. **Source:** *Myrothecium* sp. **Ref:** 4457.

**16898** 2-*n*-Pentylquinoline

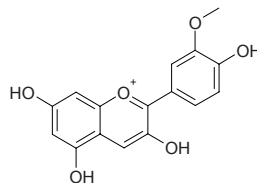
[93005-16-4]  $C_{14}H_{17}N$  (199.30). Oil. **Pharm:** Antileishmanial (*in vitro*: *Leishmania* sp. 2903 IC<sub>90</sub> = 100 $\mu$ g/mL, *Trypanosoma cruzi* IC<sub>90</sub> = 100 $\mu$ g/mL, mus-infected *Leishmania amazonensis*); Antiplasmodial (*in vivo*, mus, infected by *Plasmodium vinckei*, 0.31mmol/L/kg, survival rate = 100%); plant growth and germination inhibitor (lettuce WO JU *Lactuca sativa*); molluscicide (kills snails, 20mg/L effective). **Source:** BAO PIAN TU LA SHU *Galipea bracteata*, CHANG HUA TU LA SHU *Galipea longiflora*. **Ref:** 3600, 3601, 3602, 3603.

**16899** Penupogenin

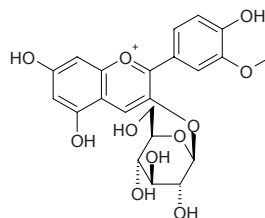
[27526-87-0]  $C_{30}H_{40}O_7$  (512.65). mp 145–150°C. **Source:** BAI SHOU WU *Cynanchum bungei*. **Ref:** 6.

**16900** Peonidin

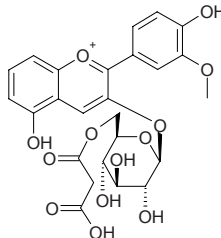
Peonidin  $C_{16}H_{13}O_6^+$  (301.28). **Pharm:** Anti-inflammatory; prevents brittle rupture of blood capillary. **Source:** XI LA GANG LIU *Periploca graeca*, XIN YI *Magnolia liliflora*, *Rhododendron* spp., *Corydalis* spp. **Ref:** 6, 658, 1521.

**16901** Peonidin-3-glucoside

Oxycoccicyanin [6906-39-4]  $C_{22}H_{23}O_{11}^+$  (463.42). Dark brown needles +2H<sub>2</sub>O, (as chloride). **Source:** AO TOU XIAN *Amaranthus lividus*, PU<sup>(2)</sup> TAO *Vitis vinifera*, MU JIN HUA *Hibiscus syriacus*, occurs in many plants. **Ref:** 660, 1521.

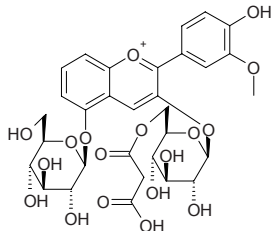
**16902** Peonidin-3-*O*-(6''-*O*-malonyl- $\beta$ -glucopyranoside)

$C_{25}H_{25}O_{13}^+$  (533.47). **Source:** YANG CONG *Allium cepa*. **Ref:** 3497.

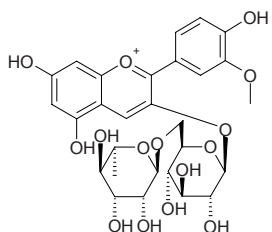


**16903 Peonidin-3-O-(6''-O-malonyl-β-glucopyranoside)-5-O-β-glucopyranoside**

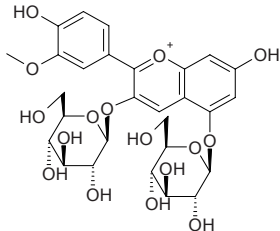
$C_{31}H_{35}O_{18}^+$  (695.61). **Source:** YANG CONG *Allium cepa*. **Ref:** 3497.

**16904 Peonidin-3-O-(6''-O-α-rhamnopyranosyl-β-glucopyranoside)**

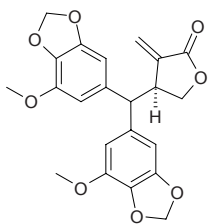
$C_{28}H_{33}O_{15}^+$  (609.57). **Source:** *Dracula chimaera*, *Dracula cordobae*. **Ref:** 3406.

**16905 Peonin**

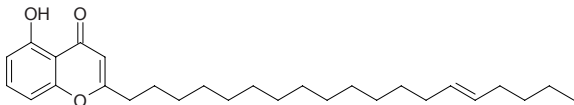
Peonin; Peonidin-3,5-diglucoside [132-37-6]  $C_{28}H_{33}O_{16}^+$  (625.57). Reddish-violet crystals +1H<sub>2</sub>O (HCl aq., as chloride), mp 165–167°C (dec, CHCl<sub>3</sub>), [α]<sub>D</sub> = +53.4°, chloride). **Source:** BAI SHAO *Paeonia albiflora* [*Syn. Paeonia lactiflora*], DU JUAN HUA *Rhododendron simsii*, XIA KU CAO *Prunella vulgaris*, *Paeonia* spp. **Ref:** 2, 1521, 1239, 3163, 3164.

**16906 Peperomin E**

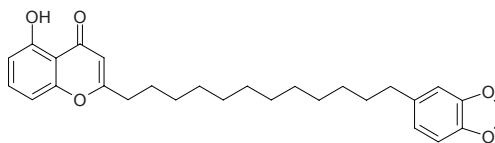
$C_{22}H_{20}O_8$  (412.40). **Pharm:** Cytotoxic (*in vitro*, HONE-1 cell line, 50μmol/L, cell growth InRt = 5%; NUGC-3 cell line, 50μmol/L, cell growth InRt = 1%)<sup>[3401]</sup>. **Source:** *Peperomia sui*. **Ref:** 3401.

**16907 Peperovulcanone A**

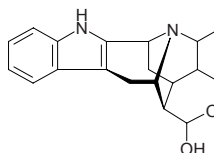
$C_{28}H_{42}O_3$  (426.65). Yellow oil. **Source:** HUO SHAN YAN CAO HU JIAO *Peperomia vulcanica*. **Ref:** 2017.

**16908 Peperovulcanone B**

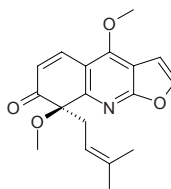
$C_{28}H_{34}O_5$  (450.58). White Crystals (hexane), mp 85–86°C. **Source:** HUO SHAN YAN CAO HU JIAO *Peperomia vulcanica*. **Ref:** 2017.

**16909 Peraksine**

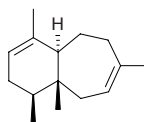
[15527-80-7]  $C_{19}H_{22}N_2O_2$  (310.40). mp 196–198°C. **Source:** PI LI LUO FU MU *Rauwolfia perakensis*, CUI TU LUO FU MU *Rauwolfia vomitoria*. **Ref:** 6, 660.

**16910 Perfamine**

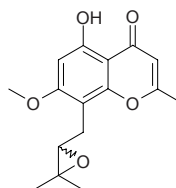
[59557-95-8]  $C_{18}H_{19}NO_4$  (313.36). Prisms (hexane–Me<sub>2</sub>CO), mp 175–178°C, 164–165°C, [α]<sub>546nm</sub><sup>26.5</sup> = –20° (*c* = 1.00, CHCl<sub>3</sub>), [α]<sub>D</sub> = +53.4°. **Source:** DA YE YUN XIANG CAO *Haplophyllum perforatum*, *Haplophyllum glabrinum*. **Ref:** 1521.

**16911 (–)-Perfora-1,7-diene**

$C_{15}H_{24}$  (204.36). Colorless oil. **Source:** BO BAN HE YE TAI *Scapania undulata* (essential oil). **Ref:** 3752.

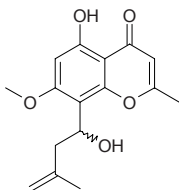
**16912 Perforamone A**

5-Hydroxy-7-methoxy-2-methyl-8-(2,3-epoxy-3-methylbutyl)chromone  $C_{16}H_{18}O_5$  (290.32). Colorless needles, mp 119–120°C, [α]<sub>D</sub><sup>25</sup> = 19.4° (*c* = 0.07, MeOH). **Pharm:** Antimalarial (antiplasmodial *in vitro*, *Plasmodium falciparum*, IC<sub>50</sub> > 20μg/mL); antibacterial (*Mycobacterium tuberculosis*, MIC = 50μg/mL). **Source:** NIU JIN GUO *Harrisonia perforata* (branche: yield = 0.043%). **Ref:** 25.

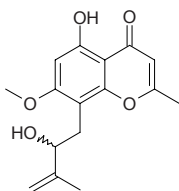


**16913 Performamone B**

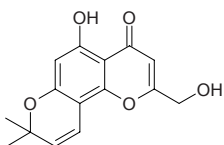
5-Hydroxy-7-methoxy-2-methyl-8-(1-hydroxy-3-methyl-3-butenyl)chromone  
 $C_{16}H_{18}O_5$  (290.32). Colorless needles, evaporation, mp 162~163°C,  $[\alpha]_D^{25} = 18.2^\circ$  ( $c = 0.12$ , MeOH). **Pharm:** Antimalarial (antiplasmodial *in vitro*, *Plasmodium falciparum*,  $IC_{50} = 10.5\mu\text{g/mL}$ ); antibacterial (*Mycobacterium tuberculosis*,  $MIC = 100\mu\text{g/mL}$ ). **Source:** NIU JIN GUO *Harrisonia perforata* (branche: yield = 0.013%). **Ref:** 25.

**16914 Performamone C**

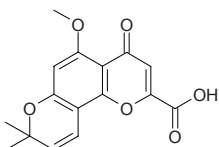
5-Hydroxy-7-methoxy-2-methyl-8-(2-hydroxy-3-methyl-3-butenyl)chromone  
 $C_{16}H_{18}O_5$  (290.32). Pale yellow rhombs, mp 104~105°C,  $[\alpha]_D^{25} = 70.6^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Antimalarial (antiplasmodial *in vitro*, *Plasmodium falciparum*,  $IC_{50} > 20\mu\text{g/mL}$ ); antibacterial (*Mycobacterium tuberculosis*,  $MIC > 200\mu\text{g/mL}$ ). **Source:** NIU JIN GUO *Harrisonia perforata* (branche: yield = 0.025%). **Ref:** 25.

**16915 Performamone D**

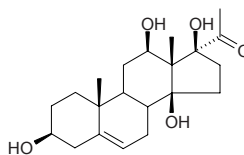
2-Hydroxymethylalloptaeroxilin  $C_{15}H_{14}O_5$  (274.28). Pale yellow rhombs, mp 139~140°C. **Pharm:** Antimalarial (antiplasmodial *in vitro*, *Plasmodium falciparum*,  $IC_{50} > 20\mu\text{g/mL}$ ); antibacterial (*Mycobacterium tuberculosis*,  $MIC = 200\mu\text{g/mL}$ ). **Source:** NIU JIN GUO *Harrisonia perforata* (branche: yield = 0.0005%). **Ref:** 25.

**16916 Perforatic acid**

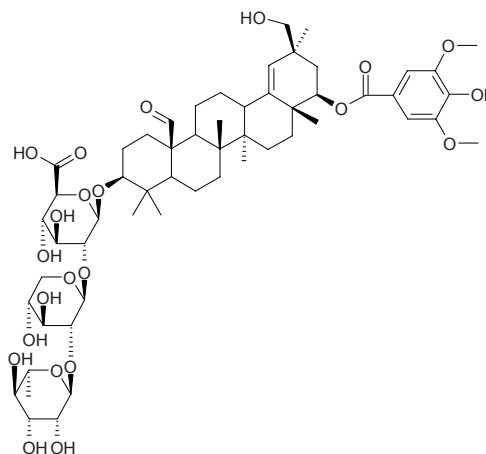
[94736-67-1]  $C_{16}H_{14}O_6$  (302.29). Yellow fine needles (MeOH), mp 246.5~248°C (dec). **Pharm:** Antineoplastic (mus, 3H-TDR *in vitro* doped ascites liver cancer cell,  $InRt = 91.2\%$ ). **Source:** NIU JIN GUO *Harrisonia perforata*. **Ref:** 3694.

**16917 Pergularin**

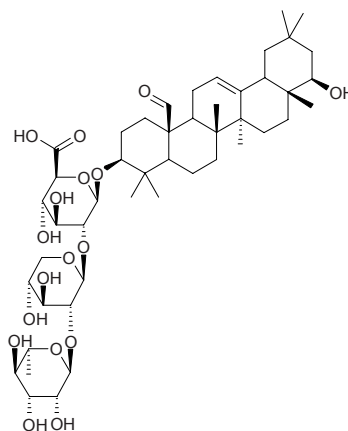
$C_{21}H_{32}O_5$  (364.49). mp 220~230°C. **Source:** FU SHOU CAO *Adonis amurensis*, LUO MO *Metaplexis japonica*. **Ref:** 6.

**16918 Periandradulcin A**

[135545-88-9]  $C_{56}H_{82}O_{22}$  (1107.26). Maple amorphous powder, mp 220~225°C (dec),  $[\alpha]_D^{25} = -55.0^\circ$  ( $c = 0.2$ , MeOH). **Pharm:** Phosphodiesterase inhibitor (phosphodiesterase in ox heart,  $ID_{50} = 0.033\mu\text{mol/L}$ ). **Source:** TIAN ZHOU WEI JIA XIONG RUI *Periandra dulcis*. **Ref:** 3695, 3696.

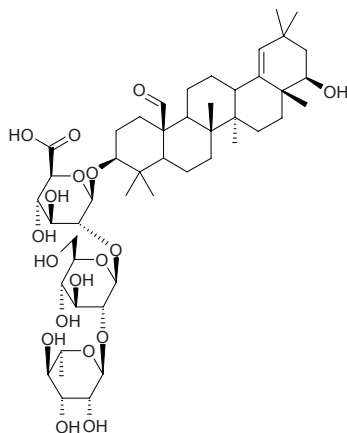
**16919 Periandradulcin B**

[135545-89-0]  $C_{47}H_{74}O_{17}$  (911.10). White amorphous powder, mp 225~227°C (dec),  $[\alpha]_D^{25} = +12.0^\circ$  ( $c = 1.0$ , MeOH). **Pharm:** Phosphodiesterase inhibitor (phosphodiesterase in ox heart,  $ID_{50} = 7.6\mu\text{mol/L}$ ). **Source:** TIAN ZHOU WEI JIA XIONG RUI *Periandra dulcis*. **Ref:** 3695.

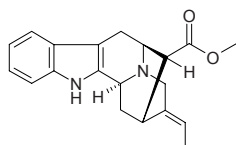


**16920 Periandradulcin C**

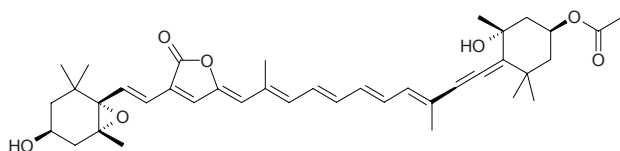
[135545-90-3] C<sub>48</sub>H<sub>76</sub>O<sub>18</sub> (941.13). Maple powder, mp 205~210°C (dec), [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -17.4° (*c* = 0.5, pyridine). **Pharm:** Phosphodiesterase inhibitor (phosphodiesterase in ox heart, ID<sub>50</sub> = 7.7 μmol/L). **Source:** TIAN ZHOU WEI JIA XIONG RUI *Periandra dulcis*. **Ref:** 3695.

**16921 Pericyclivine**

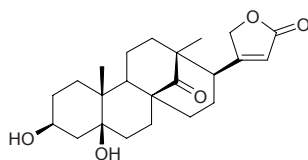
[975-77-9] C<sub>20</sub>H<sub>22</sub>N<sub>2</sub>O<sub>2</sub> (322.41). **Source:** CHANG CHUN HUA *Catharanthus roseus* [Syn. *Vinca rosea*; *Lochera rosea*]. **Ref:** 2, 1521.

**16922 Peridinin**

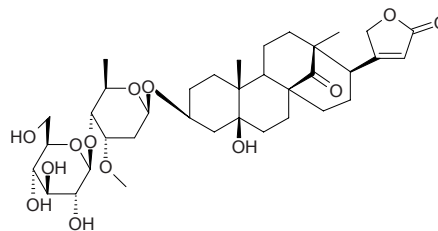
C<sub>39</sub>H<sub>50</sub>O<sub>7</sub> (630.83). **Pharm:** Anti-carcinogenic (inhibits 50nmol/L 12-*O*-tetradecanoyl phorbol 13-acetate (TPA)-stimulated <sup>32</sup>P-incorporation into the phospholipids of HeLa cells, 25 μg/mL, InRt = 28.2%). **Source:** ER JIAO DUO JIA ZAO *Peridinium bipes*. **Ref:** 4256.

**16923 Periforgenin A**

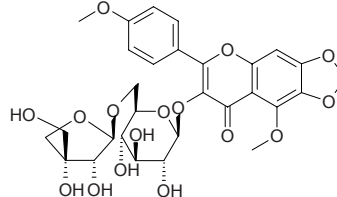
[130774-24-2] C<sub>23</sub>H<sub>32</sub>O<sub>5</sub> (388.51). mp 230~231°C, [ $\alpha$ ]<sub>D</sub> = +79.8°. **Source:** XI NAN GANG LIU *Periploca forrestii*. **Ref:** 2498.

**16924 Periforoside I**

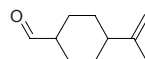
Periforoside 3-*O*-(2,6-dideoxy-4-*O*- $\beta$ -*D*-glucopyranosidyl)-3-*O*-methyl- $\beta$ -*D*-ribo-hexopyranoside [130812-53-2] C<sub>36</sub>H<sub>54</sub>O<sub>13</sub> (694.82). mp 240~241°C, [ $\alpha$ ]<sub>D</sub> = +90.38°. **Source:** XI NAN GANG LIU *Periploca forrestii*. **Ref:** 2498.

**16925 Periginatorine**

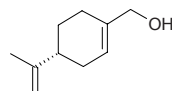
C<sub>29</sub>H<sub>32</sub>O<sub>16</sub> (636.57). Yellow crystals, mp 248~249°C, [ $\alpha$ ]<sub>D</sub><sup>29</sup> = -97° (*c* = 0.39, MeOH). **Source:** NI A LUO *Polygonum periginatoris* (root). **Ref:** 4554.

**16926 Perilal**

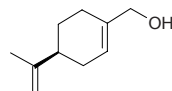
C<sub>10</sub>H<sub>16</sub>O (152.24). **Source:** SHENG JIANG *Zingiber officinale*. **Ref:** 2.

**16927 (R)-Perilla alcohol**

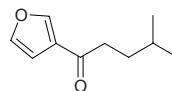
*p*-(*R*)-Mentha-1,8-dien-7-ol [57717-97-2] C<sub>10</sub>H<sub>16</sub>O (152.24). [ $\alpha$ ]<sub>D</sub> = +73°. **Source:** GE LU ZI *Carum carvi*, *Cymbopogon polyneuros*. **Ref:** 1521.

**16928 (S)-Perilla alcohol**

*p*-(*S*)-Mentha-1,8-dien-7-ol [18457-55-1] C<sub>10</sub>H<sub>16</sub>O (152.24). Oil, bp 244.5°C, bp 118~121°C/11mmHg. **Source:** DING XIANG LUO LE *Ocimum gratissimum*. **Ref:** 1521.

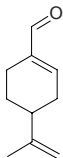
**16929 Perilla ketone**

Isoamyl-3-furyl ketone [553-84-4] C<sub>10</sub>H<sub>14</sub>O<sub>2</sub> (166.22). mp 149.5°C. **Pharm:** Cytotoxic; used in research on  $\gamma$ -radiation (strongly penetrates goat lung); promotes impetus of small intestine (stimulates mus circular muscle); LD<sub>50</sub> (mus, orl) = 78.9mg/kg, (rat, ip) = 5.0mg/kg, (dog, ip) = 106mg/kg, (pig, ip)  $\geq$  158mg/kg. **Source:** BAI SU ZI *Perilla frutescens*, GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*], JIAN ZI SU YE *Perilla frutescens* var. *acuta* [Syn. *Perilla frutescens* var. *purpurascens*], ZI SU GENG *Perilla frutescens* var. *arguta*. **Ref:** 2, 660, 900.

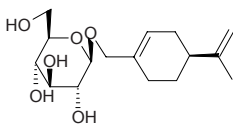


**16930 Perillaldehyde**

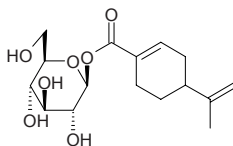
Perillylaldehyde [2111-75-3]  $C_{10}H_{14}O$  (150.22). bp (+) 234~236°C/743mmHg, (-) 235~237°C/750mmHg. Pharm: Sweetener. Source: BAI SU ZI *Perilla frutescens*, HUI HUI SU *Perilla frutescens* var. *crispa*, HUI HUI SU GENG *Perilla frutescens* var. *crispa*, JIAN ZI SU *Perilla frutescens* var. *acuta* [Syn. *Perilla frutescens* var. *purpurascens*], JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], JU PI *Citrus reticulata*, OU ZE QIN *Sium latifolium*, RUI ZI SU *Perilla arguta*, ZI SU YE *Perilla frutescens* var. *arguta*. Ref: 6, 11, 658, 660.

**16931 Perilloside A**

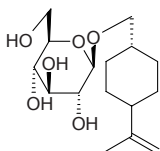
[141206-20-4]  $C_{16}H_{26}O_6$  (314.38). Needles (MeOH-H<sub>2</sub>O), mp 114.5~115°C,  $[\alpha]_D^{22} = -92.7^\circ$  ( $c = 0.77$ , MeOH). Pharm: Aldose reductase inhibitor (rat eye lens, 0.1mmol/L, InRt = 54.5%, hmn recombinant cells); prevention and cure of diabetes syndrome (retinopathy, cataract, nervous system diseases); hypoglycemic (rat, injection into stomach 10mg/kg and cane sugar 1g/kg, markedly inhibits increase of level of blood sugar); sugar hydrolase inhibitor (inhibits digestion of sugar and its absorption in small intestine). Source: BAI SU YE *Perilla frutescens*, QING ZI SU *Perilla frutescens* f. *viridis*. Ref: 3165, 3166, 3167, 3168.

**16932 Perilloside B**

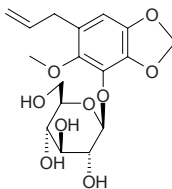
$C_{16}H_{24}O_7$  (328.37). Source: ZI SU YE *Perilla frutescens* var. *arguta*. Ref: 3169.

**16933 Perilloside C**

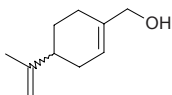
[146763-94-2]  $C_{16}H_{28}O_6$  (316.40). Needles (MeOH-H<sub>2</sub>O), mp 125.5~126.5°C,  $[\alpha]_D^{22} = -32.3^\circ$  ( $c = 0.6$ , MeOH). Pharm: Aldose reductase inhibitor (rat eye lens, 0.1mmol/L, InRt = 46.4%, hmn recombinant cells); prevention and cure of diabetes syndrome (retinopathy, cataract, nervous system diseases). Source: QING ZI SU *Perilla frutescens* f. *viridis*. Ref: 3170, 3169, 3168, 3167.

**16934 Perilloside E**

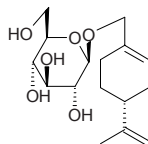
[149380-62-1]  $C_{17}H_{22}O_9$  (370.36). Needles, mp 164~165°C,  $[\alpha]_D = -22.8^\circ$  ( $c = 0.3$ , MeOH). Pharm: Antifungal. Source: BAI SU YE *Perilla frutescens*. Ref: 3171.

**16935 Perillyl alcohol**

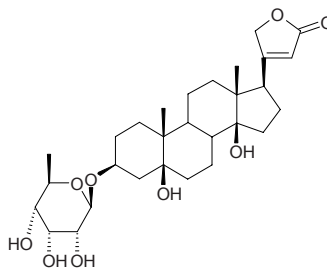
Perilla alcohol [536-59-4]  $C_{10}H_{16}O$  (152.24). bp (+) 228~229°C/755mmHg, (-) 244.5°C. Pharm: Antineoplastic (treatment of pancreatic duct cancer, inhibits skin cancer and mastocytosis)<sup>[2622]</sup>; cytotoxic (rat, liver cancer cell, inhibits growth of cells)<sup>[2622]</sup>. Source: JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], HUI HUI SU GENG *Perilla frutescens* var. *crispa*. Ref: 6, 11, 660, 2622.

**16936 Perillylglucopyranoside**

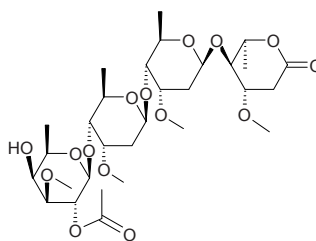
$C_{16}H_{26}O_6$  (314.38). Source: ZI SU YE *Perilla frutescens* var. *arguta*. Ref: 3172.

**16937 Peripalloside**

$C_{29}H_{44}O_9$  (536.67). Source: JIAN XUE FENG HOU *Antiaris toxicaria* [Syn. *Ambora toxicaria*]. Ref: 3173.

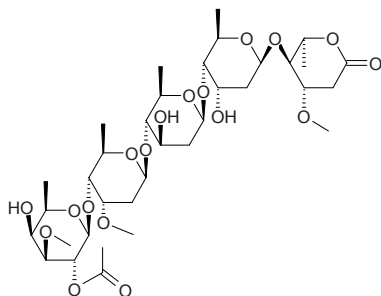
**16938 Periplocae oligosaccharide C<sub>1</sub>**

$C_{30}H_{50}O_{15}$  (650.72). Source: XIANG JIA PI *Periploca sepium*. Ref: 3174.

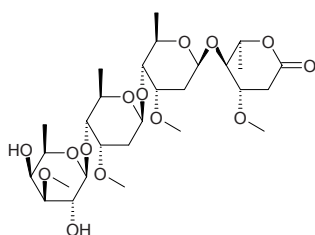


**16939 Periplocae oligosaccharide D<sub>2</sub>**

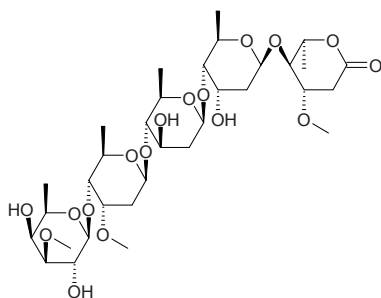
$C_{35}H_{58}O_{18}$  (766.84). Source: XIANG JIA PI *Periploca sepium*. Ref: 3174.

**16940 Periplocae oligosaccharide F<sub>1</sub>**

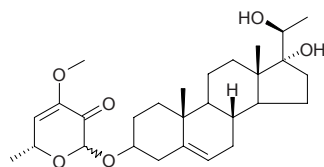
$C_{28}H_{48}O_{14}$  (608.69). Source: XIANG JIA PI *Periploca sepium*. Ref: 3174.

**16941 Periplocae oligosaccharide F<sub>2</sub>**

$C_{33}H_{56}O_{17}$  (724.80). Source: XIANG JIA PI *Periploca sepium*. Ref: 3174.

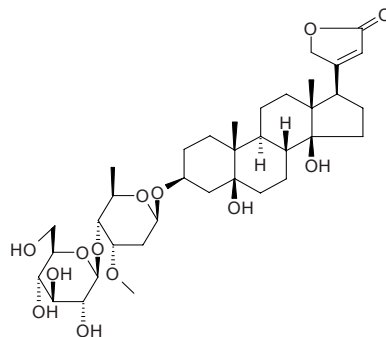
**16942 Periplocagenin**

2-[(17,20-Dihydroxypregn-5-en-3-yl)oxy]-4-methoxy-6-methyl-2H-pyran-3(6H)-one [112899-63-5]  $C_{28}H_{42}O_6$  (474.64). Needles ( $C_6H_6-CHCl_3$ ), mp 203–206°C,  $[\alpha]_D^{20} = -51.2^\circ$  ( $c = 0.3$ , MeOH). Source: XIANG JIA PI *Periploca sepium*. Ref: 2498, 3175.

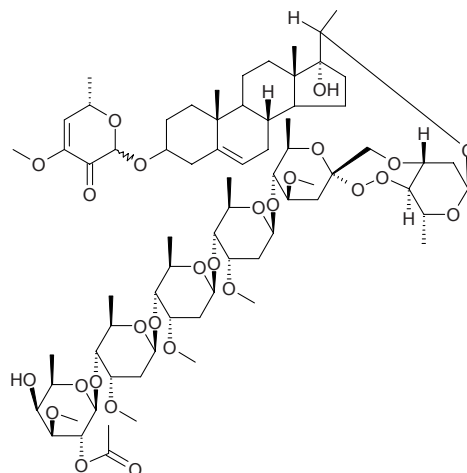
**16943 Periplocin**

Periplocoside [13137-64-9]  $C_{36}H_{56}O_{13}$  (696.84). mp 209°C (dec), 232–233°C.

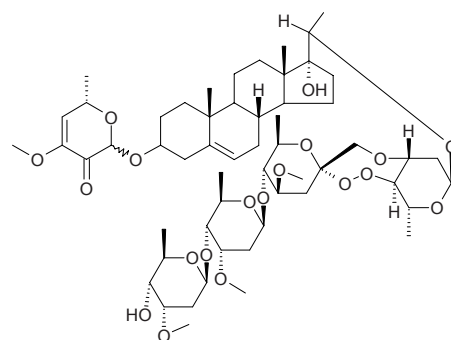
Pharm: Radioprotector (mus, microwave damage model, biotic prolonged rate = 146%); cardiac glucoside (similar action with digitalis). Source: KANG PI DU MAO XUAN HUA *Strophanthus kombe*, XI LA GANG LIU *Periploca graeca*, XIANG JIA PI *Periploca sepium*. Ref: 6, 658.

**16944 Periplocoside A**

[114828-46-5]  $C_{72}H_{114}O_{27}$  (1411.70). Powder, mp 174–176°C,  $[\alpha]_D^{20} = -1.2^\circ$  ( $c = 1.4$ ,  $CHCl_3$ ). Source: XIANG JIA PI *Periploca sepium*. Ref: 3175.

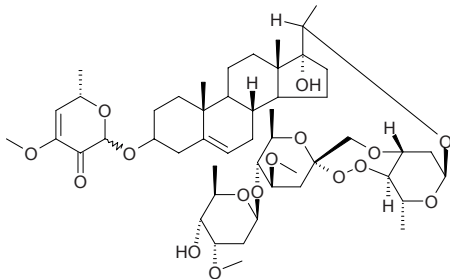
**16945 Periplocoside B**

[115742-49-2]  $C_{56}H_{88}O_{19}$  (1065.31). Powder, mp 136–138°C,  $[\alpha]_D^{20} = +1.9^\circ$  ( $c = 0.2$ ,  $CHCl_3$ ). Source: XIANG JIA PI *Periploca sepium*. Ref: 3175.

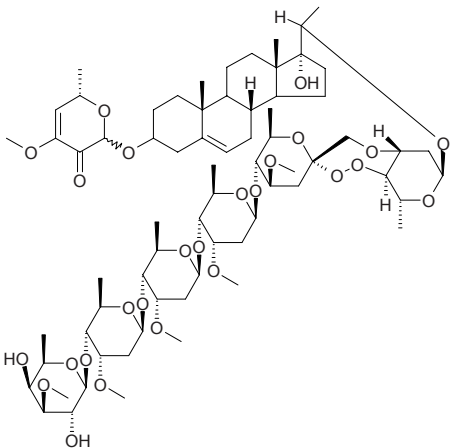


**16946 Periplocoside C**

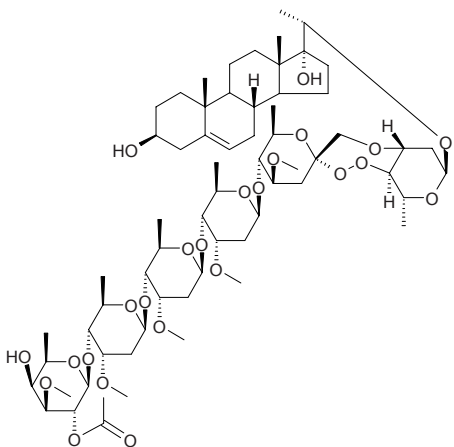
[114828-47-6] C<sub>49</sub>H<sub>76</sub>O<sub>16</sub> (921.14). Powder, mp 180~182°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -8.4° (*c* = 0.3, CHCl<sub>3</sub>). [Source](#): XIANG JIA PI *Periploca sepium*. [Ref](#): 3175.

**16947 Periplocoside D**

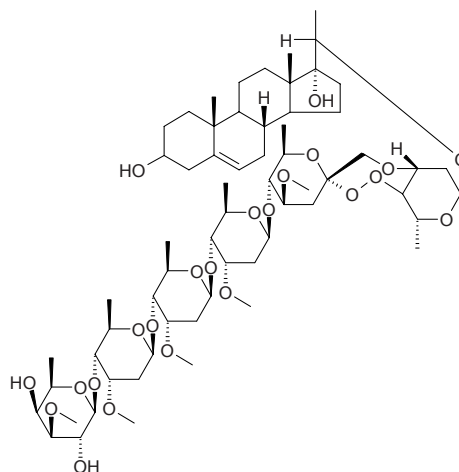
[116709-67-2] C<sub>70</sub>H<sub>112</sub>O<sub>26</sub> (1369.66). Powder, mp 191~193°C, [ $\alpha$ ]<sub>D</sub> = -3.08° (*c* = 0.26, CHCl<sub>3</sub>). [Source](#): XIANG JIA PI *Periploca sepium*. [Ref](#): 3175.

**16948 Periplocoside E**

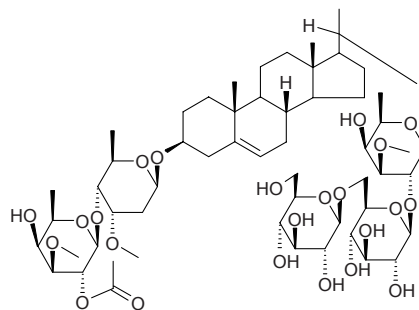
Pregn-5-ene-3,17,20-triol 20-*O*-[2-*O*-acetyl- $\beta$ -*D*-digitalopyranosyl-(1→4)- $\beta$ -*D*-cymaropyranosyl-(1→4)- $\beta$ -*D*-cymaropyranosyl-(1→4)- $\beta$ -*D*-cymaropyranosyl-(1→5)-3,7-dideoxy-4-*O*-methyl- $\alpha$ -*D*-gluco-2-heptulopyranosyl-(2→4)-dioxo-(1→3)- $\beta$ -*D*-canaropyranoside] [116709-65-0] C<sub>65</sub>H<sub>106</sub>O<sub>24</sub> (1271.56). Powder, mp 183~189°C, [ $\alpha$ ]<sub>D</sub> = -7.5° (*c* = 0.08, CHCl<sub>3</sub>). [Source](#): XIANG JIA PI *Periploca sepium*, XI NAN GANG LIU *Periploca forrestii*. [Ref](#): 2498, 3175, 3176.

**16949 Periplocoside F**

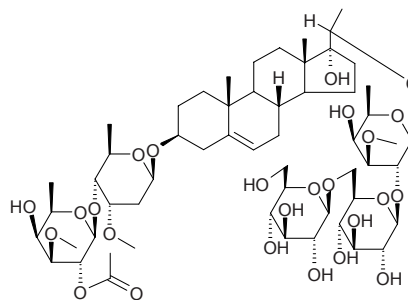
[119902-17-9] C<sub>63</sub>H<sub>104</sub>O<sub>23</sub> (1229.52). Powder, mp 195~198°C, [ $\alpha$ ]<sub>D</sub> = +8.1° (*c* = 0.07, MeOH). [Source](#): XIANG JIA PI *Periploca sepium*. [Ref](#): 3175.

**16950 Periplocoside H<sub>1</sub>**

C<sub>56</sub>H<sub>92</sub>O<sub>24</sub> (1149.34). [Source](#): XIANG JIA PI *Periploca sepium*. [Ref](#): 3353.

**16951 Periplocoside H<sub>2</sub>**

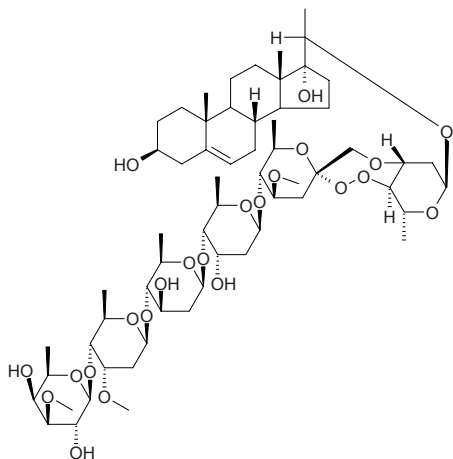
C<sub>56</sub>H<sub>92</sub>O<sub>25</sub> (1165.34). [Source](#): XIANG JIA PI *Periploca sepium*. [Ref](#): 3177.



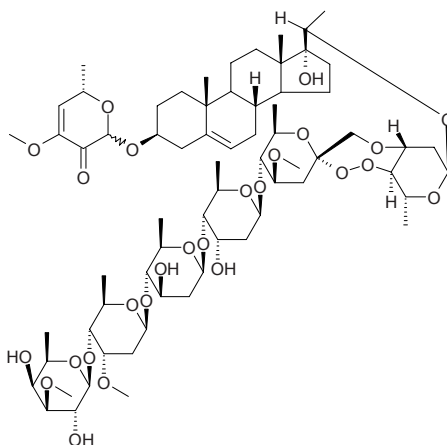


**16952 Periplocoside J**

[119902-15-7] C<sub>61</sub>H<sub>100</sub>O<sub>23</sub> (1201.46). Powder, mp 178~181°C,  $[\alpha]_D^{20} = +24.13^\circ$  ( $c = 0.12$ , MeOH). Source: XIANG JIA PI *Periploca sepium*. Ref: 3175.

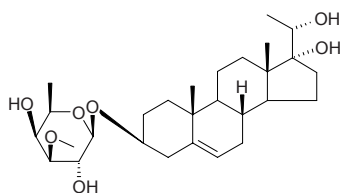
**16953 Periplocoside K**

C<sub>68</sub>H<sub>108</sub>O<sub>26</sub> (1341.60). Source: XIANG JIA PI *Periploca sepium*. Ref: 3175.

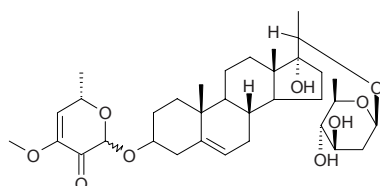
**16954 Periplocoside L**

C<sub>28</sub>H<sub>46</sub>O<sub>7</sub> (494.67). Needles, mp 238~240°C,  $[\alpha]_D = -53.3^\circ$  ( $c = 0.06$ , MeOH).

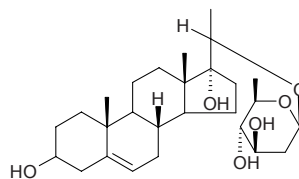
Source: XIANG JIA PI *Periploca sepium*. Ref: 2498, 3175.

**16955 Periplocoside M**

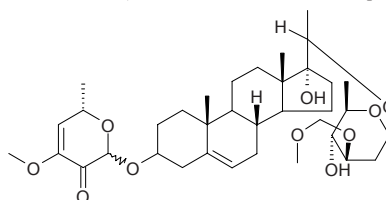
[116782-73-1] C<sub>34</sub>H<sub>52</sub>O<sub>9</sub> (604.79). Needles, mp 195~197°C,  $[\alpha]_D = -89.91^\circ$  ( $c = 0.23$ , MeOH). Source: XIANG JIA PI *Periploca sepium*. Ref: 3175.

**16956 Periplocoside N**

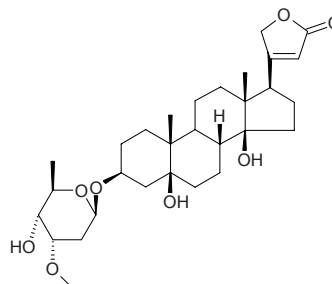
C<sub>27</sub>H<sub>44</sub>O<sub>6</sub> (464.65). Source: XIANG JIA PI *Periploca sepium*. Ref: 3175.

**16957 Periplocoside O**

[116709-67-2] C<sub>36</sub>H<sub>56</sub>O<sub>10</sub> (648.84). Powder, mp 103~106°C,  $[\alpha]_D^{20} = -84.0^\circ$  ( $c = 0.05$ , MeOH). Source: XIANG JIA PI *Periploca sepium*. Ref: 3175.

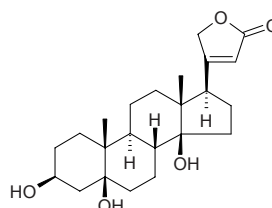
**16958 Periplocyamarin**

[32476-67-8] C<sub>30</sub>H<sub>46</sub>O<sub>8</sub> (534.70). Crystals (MeOH aq.), mp 145°C,  $[\alpha]_D^{20} = +29^\circ$  (MeOH), mp 212°C (MeOH); mp 205~208°C,  $[\alpha]_D = +25.25^\circ$ . Pharm: Toxic; LD<sub>50</sub> (cat) = 0.154mg/kg. Source: XIANG JIA PI *Periploca sepium*, *Castilla elastica*, *Strophanthus* spp., *Pentopetia* spp. Ref: 1521, 2498.

**16959 Periplogenin**

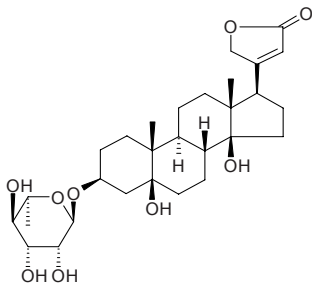
[514-39-6] C<sub>23</sub>H<sub>34</sub>O<sub>5</sub> (390.52). Crystals (MeOH aq.), mp 238°C (sinters at 140°C),  $[\alpha]_D^{31.5} = +27^\circ$  ( $c = 0.667$ , CHCl<sub>3</sub>); mp 237~238°C,  $[\alpha]_D = +29.5^\circ$ .

Pharm: Toxic; LD<sub>50</sub> (cat) = 0.72mg/kg. Source: JIAN XUE FENG HOU *Antiaris toxicaria* [Syn. *Ambora toxicaria*], PEN TUO PO TI CAO *Pentopetia androsaernifolia*, QING SHE TENG *Periploca calophylla*, XIANG JIA PI *Periploca sepium*, XI LA GANG LIU *Periploca graeca*, XI NAN GANG LIU *Periploca forrestii*, *Strophanthus preussii*, *Castilla elastica*. Ref: 1521, 2498.

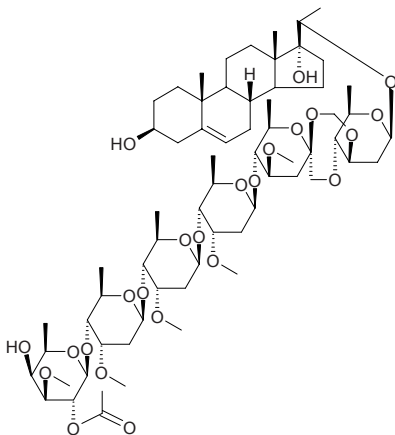


**16960 Periplogenin-3-O- $\alpha$ -L-rhamnopyranoside**

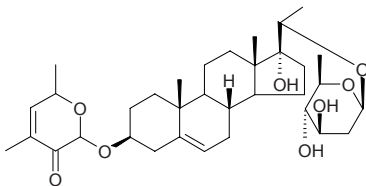
$C_{29}H_{44}O_9$  (536.67). mp 170–174°C, 219–226°C. Source: LING LAN  
*Convallaria keiskei* [Syn. *Convallaria majalis*]. Ref: 6.

**16961 Periploside A**

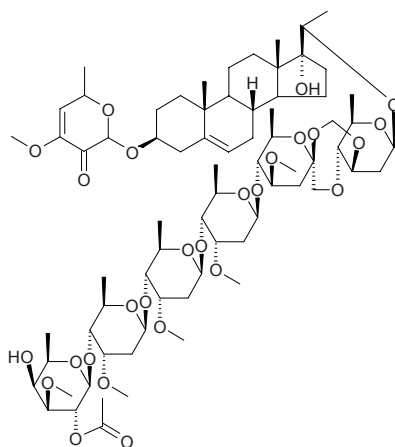
$C_{66}H_{108}O_{24}$  (1285.58). Source: XIANG JIA PI *Periploca sepium*. Ref: 3178.

**16962 Periploside B**

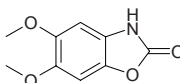
$C_{34}H_{52}O_8$  (588.79). Source: XIANG JIA PI *Periploca sepium*. Ref: 3178.

**16963 Periploside C**

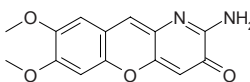
$C_{73}H_{116}O_{27}$  (1425.72). Source: XIANG JIA PI *Periploca sepium*. Ref: 3178.

**16964 Peristrophamide**

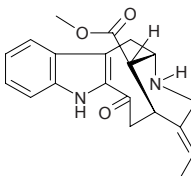
$C_9H_9NO_4$  (195.18). Reddish thin, clustered crystals; mp 221–222°C, easily soluble in ethanol, ketone, chloroform; insoluble in petroleum ether. Source: GUAN YIN CAO *Peristrophe roxburghiana*. Ref: 681.

**16965 Peristrophine**

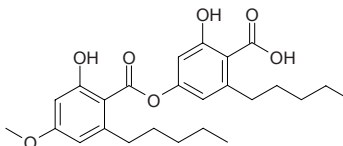
$C_{14}H_{12}N_2O_4$  (272.26). Dark red crystals, mp 250°C (dec); easy soluble in MeOH, EtOH, Me<sub>2</sub>CO, CHCl<sub>3</sub>; soluble in EtOAc; insoluble in petroleum ether. Source: GUAN YIN CAO *Peristrophe roxburghiana*. Ref: 681.

**16966 Perivine**

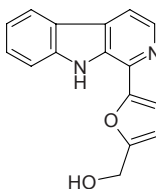
[2673-40-7]  $C_{20}H_{22}N_2O_3$  (338.41). mp 218–221°C (dec). Pharm: Analgesic; antibacterial (1.5%, effective in ratio of 8/30 hmn pathogenic bacteria); antihypertensive; antipyretic; antispasmodic; cytotoxic (mus, P<sub>388</sub> *in vitro*, ED<sub>50</sub> = 20μg/mL, KB *in vitro*, ED<sub>50</sub> = 70μg/mL); LD<sub>50</sub> (mus, orl) = 145.9mg/kg, (mus, sc) = 133.4mg/kg, (mus, iv) = 89.6mg/kg. Source: CHANG CHUN HUA *Catharanthus roseus* [Syn. *Vinca rosea*; *Lochera rosea*], HE ER TI SHAN MA CHA *Tabernaemontana holstii*, YUE HAN SI TONG SHAN MA CHA *Tabernaemontana johnstonii*, ZHI ZHI SHAN MA CHA *Tabernaemontana chartacea*. Ref: 4, 5, 658.

**16967 Perlatolic acid**

[529-47-5]  $C_{25}H_{32}O_7$  (444.53). mp 108°C. Source: TAI BAI HUA *Cladonia stellaris* [Syn. *Cladonia alpestris*]. Ref: 6.

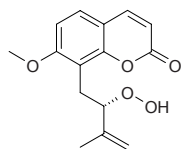
**16968 Perlolryine**

[29700-20-7]  $C_{16}H_{12}N_2O_2$  (264.29). mp 165°C. Source: CHUAN DANG SHEN *Codonopsis tangshen* (dried root: content = 0.00019%)<sup>[5508]</sup>, DANG SHEN *Codonopsis pilosula* (dried root: content = 0.000028%)<sup>[5508]</sup>, SU HUA DANG SHEN *Codonopsis pilosula* var. *modesta* [Syn. *Codonopsis modesta*] (dried root: content = 0.000007%)<sup>[5508]</sup>, YUAN ZHI *Polygala tenuifolia*. Ref: 538, 5508.

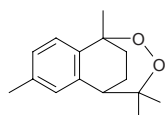


**16969 Peroxyauraptenol**

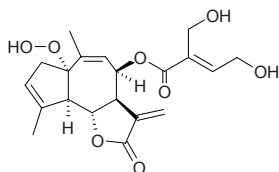
[109741-39-1] C<sub>15</sub>H<sub>16</sub>O<sub>5</sub> (276.29). Prisms, mp 114~116°C, [ $\alpha$ ]<sub>D</sub> = +3.53° (CHCl<sub>3</sub>). Source: XIAO YE JIU LI XIANG *Murraya paniculata* var. *exotica*. Ref: 1272, 3179.

**16970 10,12-Peroxycalamenene**

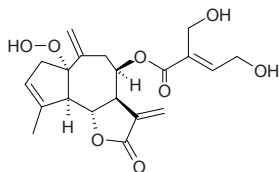
[168207-85-0] C<sub>15</sub>H<sub>20</sub>O<sub>2</sub> (232.33). Needles (CH<sub>2</sub>Cl<sub>2</sub>:hexane = 1:1), mp 67~68.5°C (cold hexane), [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -67.22° (*c* = 0.2765, CHCl<sub>3</sub>). Pharm: Antimalarial (*Plasmodium falciparum*, IC<sub>50</sub> = 2.33 μmol/L). Source: XIANG FU *Cyperus rotundus*. Ref: 1089.

**16971 Peroxyeupahakolin A**

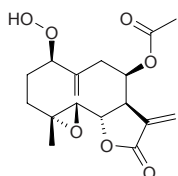
[82425-23-8] C<sub>20</sub>H<sub>24</sub>O<sub>8</sub> (392.41). Amorphous, mp 143~146°C, [ $\alpha$ ]<sub>D</sub><sup>26</sup> = -165° (*c* = 0.21, MeOH). Source: HUA ZE LAN *Eupatorium chinense*. Ref: 3180.

**16972 Peroxyeupahakolin B**

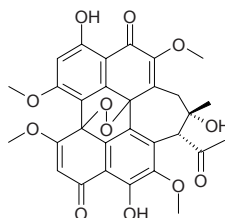
[82425-22-7] C<sub>20</sub>H<sub>24</sub>O<sub>8</sub> (392.41). Crystals (Me<sub>2</sub>CO), mp 147~148°C, [ $\alpha$ ]<sub>D</sub><sup>26</sup> = +35.4° (*c* = 0.18, MeOH). Source: HUA ZE LAN *Eupatorium chinense*. Ref: 3180.

**16973 1-Peroxyferolide**

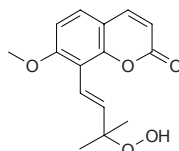
[61228-73-7] C<sub>17</sub>H<sub>22</sub>O<sub>7</sub> (338.36). Pharm: Insect antifeedant. Source: BEI MEI E ZHANG QIU *Liriodendron tulipifera*. Ref: 658.

**16974 Peroxyhypocrellin**

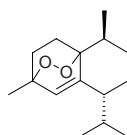
C<sub>30</sub>H<sub>26</sub>O<sub>12</sub> (578.53). Source: ZHU HONG JUN *Hypocrella bambusae*. Ref: 3181.

**16975 Peroxymurraol**

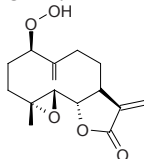
[121994-13-6] C<sub>15</sub>H<sub>16</sub>O<sub>5</sub> (276.29). Source: XIAO YE JIU LI XIANG *Murraya paniculata* var. *exotica*. Ref: 3134.

**16976 1,4-Peroxy-5-murolene**

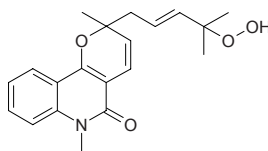
C<sub>15</sub>H<sub>26</sub>O<sub>2</sub> (236.36). Amorphous, [ $\alpha$ ]<sub>D</sub> = +41.9° (*c* = 2.30). Source: BO BAN HE YE TAI *Scapania undulata*. Ref: 5132.

**16977 Peroxyparthenolide**

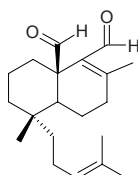
[64845-91-6] C<sub>15</sub>H<sub>20</sub>O<sub>5</sub> (280.32). Crystals (Me<sub>2</sub>CO-Et<sub>2</sub>O), mp 190°C (dec), [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +27° (*c* = 0.21, Me<sub>2</sub>CO). Source: HE HUA YU LAN *Magnolia grandiflora*. Ref: 3182.

**16978 Peroxysimulenoline**

C<sub>20</sub>H<sub>23</sub>NO<sub>4</sub> (341.41). Pharm: Platelet aggregation inhibitor; DNA isomerase inhibitor; antibacterial; cytotoxic. Source: *Zanthoxylum* sp. Ref: 2176.

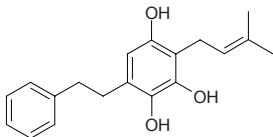
**16979 Perrottetianal**

C<sub>20</sub>H<sub>30</sub>O<sub>2</sub> (302.46). Source: SHANG ZUO JIAN YE GUANG E TAI *Porella acutifolia* ssp. *tosana*. Ref: 3932.

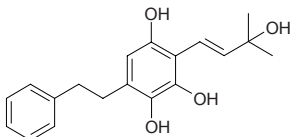


**16980 Perrottetin A**

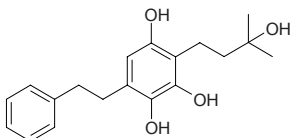
[85526-61-0] C<sub>19</sub>H<sub>22</sub>O<sub>3</sub> (298.39). Crystals, mp 99~100°C. Source: NING BIAN E TAI *Radula perrottetii*. Ref: 3697.

**16981 Perrottetin B**

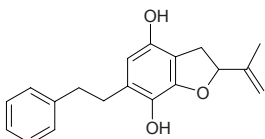
[85526-63-2] C<sub>19</sub>H<sub>22</sub>O<sub>4</sub> (314.38). Gum. Source: NING BIAN E TAI *Radula perrottetii*. Ref: 3697.

**16982 Perrottetin C**

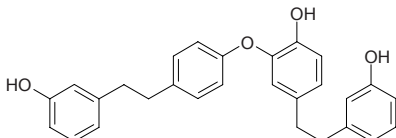
[85526-65-4] C<sub>19</sub>H<sub>24</sub>O<sub>4</sub> (316.40). Gum. Source: NING BIAN E TAI *Radula perrottetii*. Ref: 3697.

**16983 Perrottetin D**

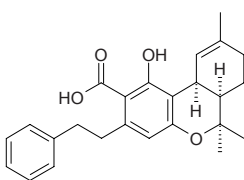
[133462-36-9] C<sub>19</sub>H<sub>20</sub>O<sub>3</sub> (296.37). Pharm: Antioxidant (lipid peroxidation inhibitor); 5-lipoxygenase inhibitor (IC<sub>50</sub> = 0.66 μmol/L); cyclooxygenase inhibitor. Source: NING BIAN E TAI *Radula perrottetii*. Ref: 3697, 3698, 3678.

**16984 Perrottetin E**

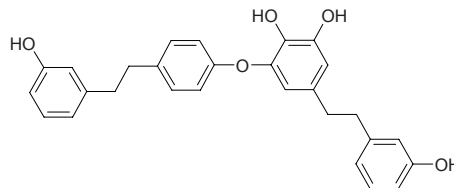
[89911-97-7] C<sub>28</sub>H<sub>26</sub>O<sub>4</sub> (426.52). Oil. Pharm: Cytotoxic (KB cells). Source: DI SUO LUO *Marchantia polymorpha*, NING BIAN E TAI *Radula perrottetii*, *Pollia endiviifolia*. Ref: 3183, 3184, 3185.

**16985 Perrottetinenic acid**

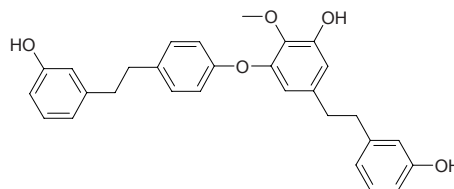
C<sub>25</sub>H<sub>28</sub>O<sub>4</sub> (392.50). Oil, [α]<sub>D</sub><sup>22</sup> = -165.8° (c = 0.35, CHCl<sub>3</sub>). Source: BIAN YUAN BIAN E TAI *Radula marginata*. Ref: 4236.

**16986 Perrottetin F**

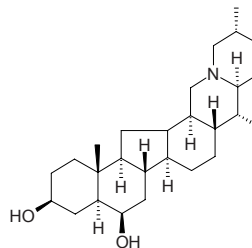
[89911-98-8] C<sub>28</sub>H<sub>26</sub>O<sub>5</sub> (442.52). Source: NING BIAN E TAI *Radula perrottetii*. Ref: 3697.

**16987 Perrottetin G**

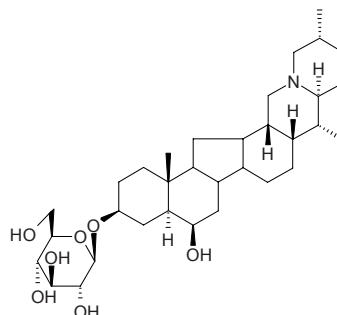
C<sub>29</sub>H<sub>28</sub>O<sub>5</sub> (456.54). Source: NING BIAN E TAI *Radula perrottetii*. Ref: 1521, 3697.

**16988 17αH-Persicanidine A**

C<sub>27</sub>H<sub>45</sub>NO<sub>2</sub> (415.67). Crystals (EtOH), mp 228~230°C (dec), [α]<sub>D</sub><sup>23</sup> = -9.7° (c = 0.5, CHCl<sub>3</sub>). Pharm: AChE inhibitor (IC<sub>50</sub> = (352.2±4.0) μmol/L, control Eserine, IC<sub>50</sub> = (0.41±0.01) μmol/L)<sup>[4217]</sup>; BChE inhibitor (IC<sub>50</sub> = (4.25±0.08) μmol/L, control Eserine, IC<sub>50</sub> = (0.857±0.008) μmol/L)<sup>[4217]</sup>. Source: XI BEI MU *Fritillaria imperialis* (bulb). Ref: 4217.

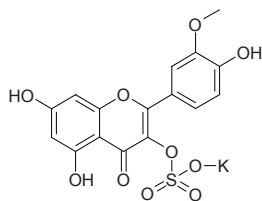
**16989 Persicanidine B-3-O-β-D-glucoside**

[144940-48-7] C<sub>33</sub>H<sub>55</sub>NO<sub>7</sub> (577.81). Amorphous powder, [α]<sub>D</sub><sup>29</sup> = -36.2° (c = 0.21, CHCl<sub>3</sub>). Pharm: cAMP phosphodiesterase inhibitor (IC<sub>50</sub> = 183 μmol/L). Source: TAO BEI MU *Fritillaria persica*, Ref: 1755.

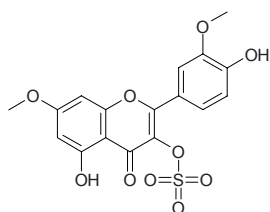


**16990 Persicarin**

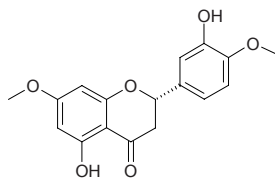
[549-31-5]  $C_{16}H_{11}KO_{10}S$  (434.43). mp 280°C. Source: QIN HUA *Oenanthe javanica*, SHUI LIAO *Polygonum hydropiper*, SHUI MA TIAO *Polygonum thunbergii*. Ref: 6.

**16991 Persicarin-7-methylether**

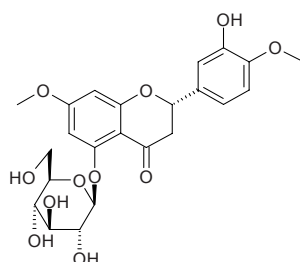
$C_{17}H_{13}O_{10}S$  (409.35). Source: LA LIAO *Polygonum hydropiper* var. *flaccidum* [Syn. *Polygonum flaccidum*], SHUI LIAO *Polygonum hydropiper*. Ref: 660, 3186.

**16992 Persicogenin**

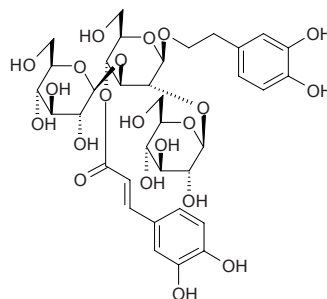
[28590-41-0]  $C_{17}H_{16}O_6$  (316.31). Source: TAO ZHI *Prunus persica*, TAO JING BAI PI *Prunus persica*, SHAN TAO JING BAI PI *Prunus davidiana*. Ref: 6, 660.

**16993 Persicoside**

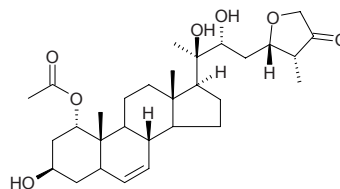
[28978-03-2]  $C_{23}H_{26}O_{11}$  (478.46). mp 250~260°C. Source: TAO ZHI *Prunus persica*, TAO JING BAI PI *Prunus persica*, SHAN TAO JING BAI PI *Prunus davidiana*. Ref: 6, 660, 1521.

**16994 Persicoside**

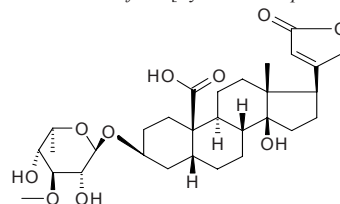
$C_{35}H_{46}O_{21}$  (802.74). Amorphous powder,  $[\alpha]_D^{23} = -63^\circ$  ( $c = 0.17$ , EtOH). Pharm: Antioxidant (DPPH scavenger,  $IC_{50} = 0.32$ mmol/L, control Vitamin E,  $IC_{50} = 0.48$ mmol/L, BHA,  $IC_{50} = 0.63$ mmol/L). Source: A LA BO PO PO NA *Veronica persica* (aerial parts). Ref: 4211.

**16995 Perulactone**

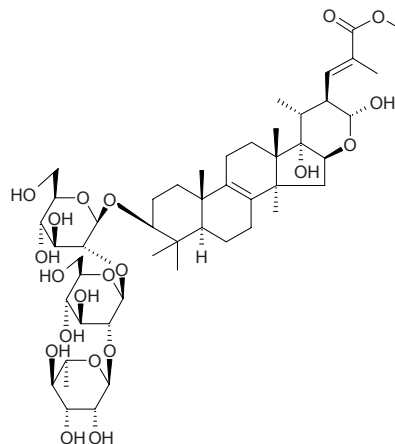
$C_{30}H_{46}O_7$  (518.70). Crystals (MeOH), mp 214~215°C, 239~240°C (dimorphism). Source: DENG LONG CAO *Physalis peruviana*. Ref: 3187.

**16996 Perusitin**

$C_{30}H_{44}O_{10}$  (564.68). mp 168~170°C. Source: HUANG HUA JIA ZHU TAO *Thevetia nerifolia* [Syn. *Thevetia peruviana*]. Ref: 6, 1521.

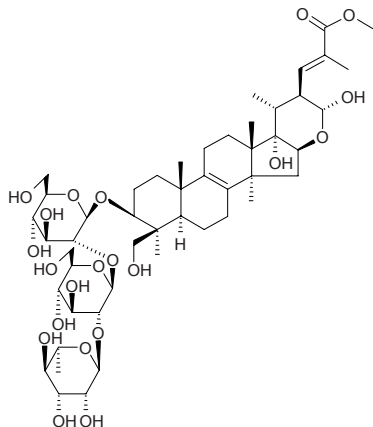
**16997 Peruvianoside A**

[145567-94-8]  $C_{49}H_{78}O_{20}$  (987.16). White amorphous powder,  $[\alpha]_D^{30} = -23.2^\circ$  ( $c = 0.21$ , MeOH). Pharm: cAMP phosphodiesterase inhibitor ( $IC_{50} = 235$ μmol/L); enhances myocardial contractility. Source: BI LU MIAN ZAO ER *Scilla peruviana*. Ref: 3609.

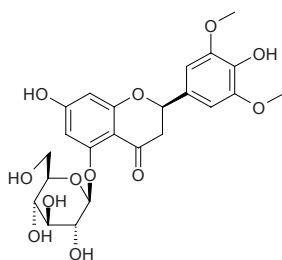


**16998 Peruvianoside B**

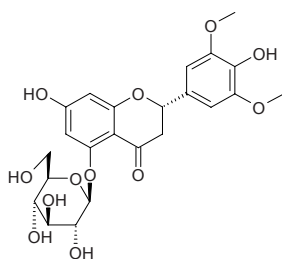
[149155-15-7] C<sub>49</sub>H<sub>78</sub>O<sub>21</sub> (1003.16). White amorphous powder,  $[\alpha]_D^{30} = -24.0^\circ$  ( $c = 0.50$ , MeOH). **Pharm:** inhibits promotor of cancer (inhibits TPA-induced <sup>32</sup>P combines with phospholipid in HeLa cells, 50 μg/mL, InRt = 15.5%). **Source:** BI LU MIAN ZAO ER *Scilla peruviana*. **Ref:** 3609, 3610.

**16999 Peruvianoside I**

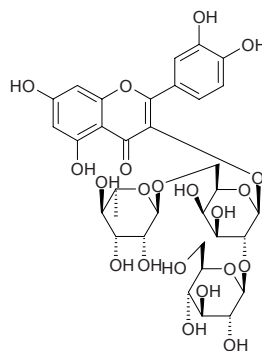
(2*R*)-5-*O*-β-*D*-Glucopyranosyl-7,4'-dihydroxy-3',5'-dimethoxyflavanone C<sub>23</sub>H<sub>26</sub>O<sub>12</sub> (494.46). White amorphous powder, mp 194–196°C,  $[\alpha]_D^{25} = -93^\circ$  ( $c = 0.02$ , MeOH). **Pharm:** Anti-HIV-1 (RT (RDDP) inhibitor, IC<sub>50</sub> > 100 μmol/L, positive control Adriamycin, IC<sub>50</sub> = 27 μmol/L; DDDP inhibitor, IC<sub>50</sub> > 100 μmol/L, positive control Adriamycin, IC<sub>50</sub> = 6 μmol/L; HIV-1 IN inhibitor, IC<sub>50</sub> > 100 μmol/L, positive control Suramin, IC<sub>50</sub> = 2.4 μmol/L). **Source:** HUANG HUA JIA ZHU TAO *Thevetia nerifolia* [Syn. *Thevetia peruviana*] (leaf). **Ref:** 4187.

**17000 Peruvianoside II**

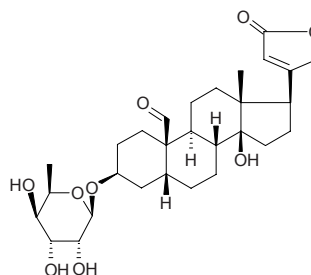
(2*S*)-5-*O*-β-*D*-Glucopyranosyl-7,4'-dihydroxy-3',5'-dimethoxyflavanone C<sub>23</sub>H<sub>26</sub>O<sub>12</sub> (494.46). White amorphous powder, mp 190–192°C,  $[\alpha]_D^{25} = -127^\circ$  ( $c = 0.02$ , MeOH). **Pharm:** Anti-HIV-1 (RT (RDDP) inhibitor, IC<sub>50</sub> > 100 μmol/L, positive control Adriamycin, IC<sub>50</sub> = 27 μmol/L; DDDP inhibitor, IC<sub>50</sub> > 100 μmol/L, positive control Adriamycin, IC<sub>50</sub> = 6 μmol/L; HIV-1 IN inhibitor, IC<sub>50</sub> > 100 μmol/L, positive control Suramin, IC<sub>50</sub> = 2.4 μmol/L). **Source:** HUANG HUA JIA ZHU TAO *Thevetia nerifolia* [Syn. *Thevetia peruviana*] (leaf). **Ref:** 4187.

**17001 Peruvianoside III**

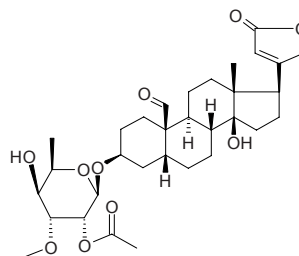
Quercetin-3-*O*-{β-*D*-glucopyranosyl-(1→2)-[α-*L*-rhamnopyranosyl-(1→6)]-β-*D*-galactopyranoside} C<sub>33</sub>H<sub>40</sub>O<sub>21</sub> (772.67). White amorphous powder, mp 205–207°C,  $[\alpha]_D^{25} = +106^\circ$  ( $c = 0.05$ , MeOH). **Pharm:** Anti-HIV-1 (RT (RDDP) inhibitor, IC<sub>50</sub> > 100 μmol/L, positive control Adriamycin, IC<sub>50</sub> = 27 μmol/L; DDDP inhibitor, IC<sub>50</sub> > 100 μmol/L, positive control Adriamycin, IC<sub>50</sub> = 6 μmol/L; HIV-1 IN inhibitor, IC<sub>50</sub> > 100 μmol/L, positive control Suramin, IC<sub>50</sub> = 2.4 μmol/L). **Source:** HUANG HUA JIA ZHU TAO *Thevetia nerifolia* [Syn. *Thevetia peruviana*] (leaf). **Ref:** 4187.

**17002 Peruvoside**

Encordin [1182-87-2] C<sub>29</sub>H<sub>42</sub>O<sub>9</sub> (534.65). mp 161–164°C. **Pharm:** Cardiac glucoside (cat model, cardiac bioactivity = (0.147±0.007)mg/kg). **Source:** HUANG HUA JIA ZHU TAO *Thevetia nerifolia* [Syn. *Thevetia peruviana*] (seed: mean content = 0.70%<sup>[5508]</sup>). **Ref:** 4, 658, 1521, 5508.

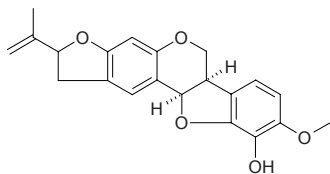
**17003 Peruvoside-2'-monoacetate**

C<sub>32</sub>H<sub>46</sub>O<sub>10</sub> (590.72). mp 212–217°C. **Source:** HUANG HUA JIA ZHU TAO *Thevetia nerifolia* [Syn. *Thevetia peruviana*]. **Ref:** 6.

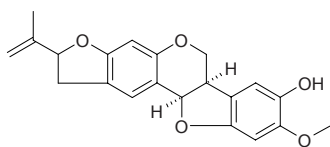


**17004 Pervilline**

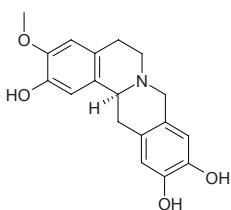
$C_{21}H_{20}O_5$  (352.39). White powder from n-hexane, mp 112~114°C,  $[\alpha]_D^{20} = -192^\circ$  ( $c = 0.12$ ,  $CHCl_3$ ). Source: *Milletia pervilleana*. Ref: 3393.

**17005 Pervillinine**

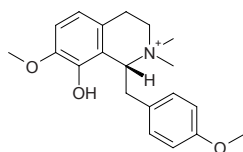
$C_{21}H_{20}O_5$  (352.39). Yellow powder from n-hexane, mp 152~154°C,  $[\alpha]_D^{20} = -189^\circ$  ( $c = 0.07$ ,  $CHCl_3$ ). Source: *Milletia pervilleana*. Ref: 3393.

**17006 Pesseoine**

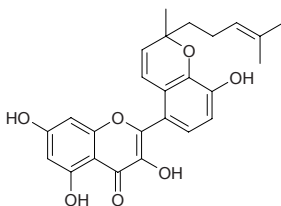
[88668-29-5]  $C_{18}H_{19}NO_4$  (313.36). Amorphous substance,  $[\alpha]_D^{20} = -160^\circ$  ( $c = 0.2$ , MeOH). Pharm: Antitrypanosomal (*Trypanosoma cruzi*, 250µg/mL, deactivation rate = 55%, control crystal violet deactivation rate = 100%). Source: CI ZHUANG FAN LI ZHI *Annona spinescens*. Ref: 3699.

**17007 Petaline**

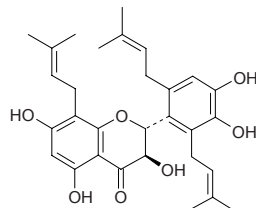
[7354-32-7]  $C_{20}H_{26}NO_3^+$  (328.44). Pharm: CNS depressant (shows antiacetylcholine activity). Source: HUA BAN SHI ZU CAO *Leontice leontopetalum*. Ref: 3188.

**17008 Petalopurpleanol**

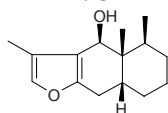
[173221-05-1]  $C_{25}H_{24}O_7$  (436.47). Yellow solid, mp 92~95°C,  $[\alpha]_D^{20} = -12^\circ$  ( $c = 1.1$ ,  $CHCl_3$ ). Pharm: Cytotoxic (BC1,  $ED_{50} = 9.9\mu\text{g/mL}$ , HT,  $ED_{50} = 7.3\mu\text{g/mL}$ , Lu1,  $ED_{50} = 14.8\mu\text{g/mL}$ , Mel-2,  $ED_{50} = 17.1\mu\text{g/mL}$ , KB, 18.9µg/mL, KB-V(+VLB), 1.0µg/mL, KB-V(-VLB), 6.7µg/mL, A-431, 11.9µg/mL, LNCaP, 14.8µg/mL, ZR-75-1, 4.1µg/mL, U373, 13.3µg/mL). Source: ZI SE BAN RUI DOU *Petalostemon purpureus*. Ref: 3612.

**17009 Petalostemumol**

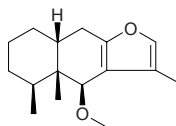
[152253-68-4]  $C_{30}H_{36}O_7$  (508.62). Yellow lamellar crystals (20%Et<sub>2</sub>O-n-hexane), mp 179~180°C,  $[\alpha]_D = +6.4^\circ$  ( $c = 0.032$ , MeOH). Pharm: Antibacterial (gram-positive bacteria, strong activity; gram-negative bacteria, moderate activity); cytotoxic (HT  $ED_{50} = 10.3\mu\text{g/mL}$ ; KB-V +VLB  $ED_{50} = 1.2\mu\text{g/mL}$ ; ZR-75-1  $ED_{50} = 17.1\mu\text{g/mL}$ ); antineoplastic (25µg/mL, same activity with bleomycin sulfate). Source: HUANG SE BAN RUI DOU *Petalostemum purpureum*. Ref: 3611, 3612.

**17010 Petasalbin**

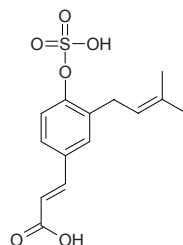
[4176-11-8]  $C_{15}H_{22}O_2$  (234.34). mp 81~82°C. Source: FENG DOU CAI *Petasites japonicus*. Ref: 6.

**17011 Petasalbin methyl ether**

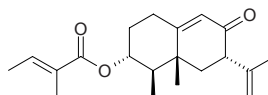
$C_{16}H_{24}O_2$  (248.37). bp 90~100°C/0.0004mmHg. Source: FENG DOU CAI *Petasites japonicus*. Ref: 6.

**17012 Petasiformin A**

$C_{14}H_{16}O_6S$  (312.34). White powder, mp > 300°C. Pharm: Antioxidant (DPPH scavenger,  $IC_{50} = 0.21\text{mg/mL}$ , control Vitamin E,  $IC_{50} = 0.15\text{mg/mL}$ ). Source: TAI WAN FENG DOU CAI *Petasites formosanus* (leaf). Ref: 2587.

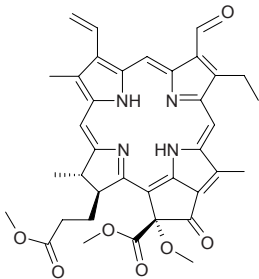
**17013 Petasin**

[26577-85-5]  $C_{20}H_{28}O_3$  (316.44). mp 65~68°C. Pharm: Antispasmodic. Source: FENG DOU CAI *Petasites japonicus*, ZI FENG DOU CAI *Petasites officinalis* [Syn. *Petasites hybridu*]. Ref: 6, 658.

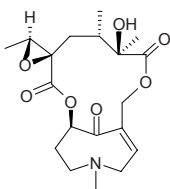


**17014 Petasiphyll A**

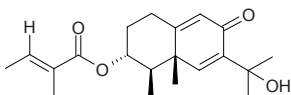
$C_{37}H_{38}N_4O_7$  (650.74). Deep green powder. Source: TAI WAN FENG DOU CAI *Petasites formosanus* (leaf). Ref: 2587.

**17015 Petasitenine**

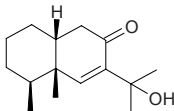
[60102-37-6]  $C_{19}H_{27}NO_7$  (381.43). Source: FENG DOU CAI *Petasites japonicus*, ZI FENG DOU CAI *Petasites officinalis* [Syn. *Petasites hybridu*]. Ref: 658.

**17016 Petasitin**

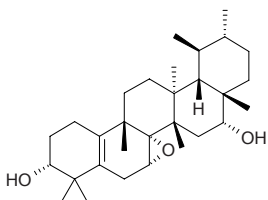
[19887-90-2]  $C_{20}H_{28}O_4$  (332.44). Source: FENG DOU CAI *Petasites japonicus*. Ref: 6.

**17017 Petasitolone**

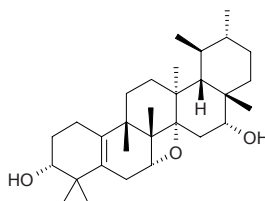
[35124-22-2]  $C_{15}H_{24}O_2$  (236.36). bp 92°C/0.15mmHg. Source: FENG DOU CAI *Petasites japonicus*. Ref: 6.

**17018 Petatrachel A**

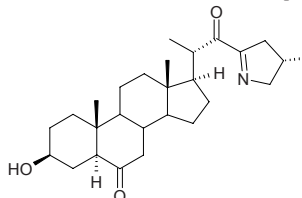
*D*:*B*-Friedoursane-3*a*,16*a*-dihydroxy-7*a*,8*a*-epoxy-5(10)-ene  $C_{30}H_{48}O_3$  (456.72). White powder, mp 186~187°C,  $[\alpha]_D^{17} = +43^\circ$  ( $c = 0.24$ ,  $CHCl_3$ ). Pharm: Antibacterial (*Escherichia coli*, IZD = 13~15mm, control Chloramphenicol, IZD = 16~20mm, DMSO (4%), IZD < 10mm; *Staphylococcus aureus*, IZD = 10~12mm, Chloramphenicol, IZD = 16~20mm, DMSO (4%), IZD < 10mm; *Bacillus subtilis*, IZD = 16~20mm; Chloramphenicol, IZD = 16~20mm, DMSO (4%), IZD < 10mm)<sup>[5315]</sup>. Source: MAO LIE FENG DOU CAI *Petasites tricholobus* (rhizome). Ref: 5315.

**17019 Petatrachel B**

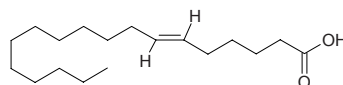
26(14→8)Abeo-*D*:*B*-friedo-ursane-3*β*,16*a*-dihydroxy-7*α*,14*α*-epoxy-5(10)-ene  $C_{30}H_{48}O_3$  (456.72). White powder, mp 191~192°C,  $[\alpha]_D^{22} = -20^\circ$  ( $c = 0.12$ ,  $CHCl_3$ ). Pharm: Antibacterial (*Escherichia coli*, IZD = 13~15mm, control Chloramphenicol, IZD = 16~20mm, DMSO (4%), IZD < 10mm; *Staphylococcus aureus*, IZD = 10~12mm, Chloramphenicol, IZD = 16~20mm, DMSO (4%), IZD < 10mm; *Bacillus subtilis*, IZD = 16~20mm; Chloramphenicol, IZD = 16~20mm, DMSO (4%), IZD < 10mm)<sup>[5315]</sup>. Source: MAO LIE FENG DOU CAI *Petasites tricholobus* (rhizome). Ref: 5315.

**17020 Petisidine**

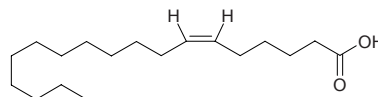
[79805-74-6]  $C_{27}H_{41}NO_3$  (427.63). Amorphous powder,  $[\alpha]_D^{29} = +18.4^\circ$  ( $c = 0.50$ ,  $CHCl_3$ ). Pharm: cAMP phosphodiesterase inhibitor (IC<sub>50</sub> = 106μmol/L). Source: TAO BEI MU *Fritillaria persica*. Ref: 1521, 3613.

**17021 Petroselaidic acid**

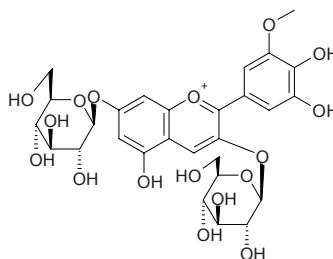
[593-40-8]  $C_{18}H_{34}O_2$  (282.47). mp 54~59°C. Source: CHAI HU *Bupleurum chinense*, HAN QIN *Apium graveolens*. Ref: 6.

**17022 Petroselinic acid**

[593-39-5]  $C_{18}H_{34}O_2$  (282.47). mp 33°C. Source: CHAI HU *Bupleurum chinense*. Ref: 6.

**17023 Petudin-3,7-di-O-(β-D-glucopyranoside)**

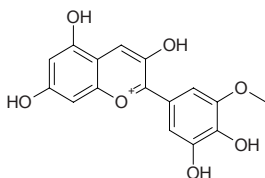
$C_{28}H_{33}O_{17}^+$  (641.57). Source: HE LAN ZHONG ZHI FAN HONG HUA *Crocus antalyensis* cv. Ref: 1897.



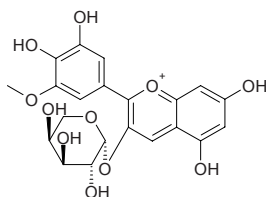


**17024 Petunidin**

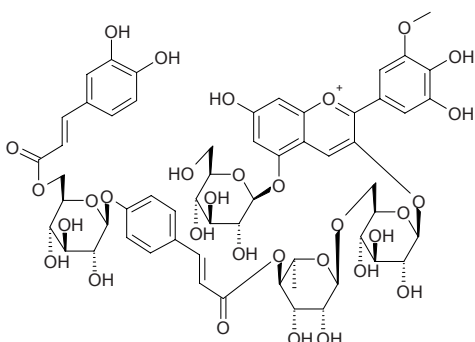
[13270-60-5] C<sub>16</sub>H<sub>13</sub>O<sub>7</sub><sup>+</sup> (317.28). **Pharm:** Anti-inflammatory; prevents brittle rupture of blood capillary. **Source:** MU XU *Medicago sativa*, PU<sup>(2)</sup> TAO *Vitis vinifera*. **Ref:** 6, 658.

**17025 Petunidin-3-arabinoside**

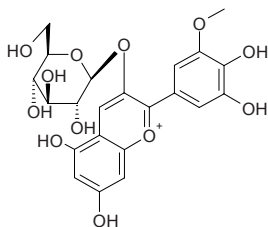
C<sub>21</sub>H<sub>21</sub>O<sub>11</sub> (449.39). **Source:** ZI WEI HUA *Lagerstroemia indica*. **Ref:** 6.

**17026 Petunidin 3-O-(6-O-(4-O-(4-O-(6-O-feruloyl-β-D-glucopyranosyl)-E-p-coumaroyl)-α-rhamnosyl)-β-D-glucopyranoside)-5-β-D-glucopyranoside**

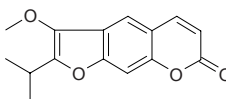
C<sub>58</sub>H<sub>65</sub>O<sub>31</sub><sup>+</sup> (1258.15). **Source:** BI DONG QIE *Petunia hybrida* (flower). **Ref:** 5240.

**17027 Petunidin-3-glucoside**

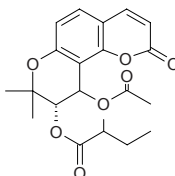
C<sub>22</sub>H<sub>23</sub>O<sub>12</sub> (479.42). **Source:** BAI FAN DOU *Phaseolus vulgaris*, HUANG LU ZHI YE *Cotinus coggygria* var. *cinerea*. **Ref:** 6.

**17028 Peucedanin**

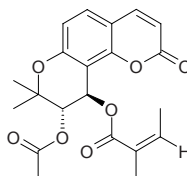
[133-26-6] C<sub>15</sub>H<sub>14</sub>O<sub>4</sub> (258.26). mp 97–99°C. **Pharm:** Antibacterial (aflatoxin B<sub>1</sub>); antineoplastic (mus ascites carcinoma, InRt = 70%, mus mammary cancer *in vivo*, InRt = (30–40)%, hmn melanoma and granulation carcinoma); contracts blood vessels (frog); cytotoxic (mus ascites carcinoma, *in vitro*); estrogenic activity; LD<sub>50</sub> (mus, orl) = 315mg/kg. **Source:** E GUO QIAN HU *Peucedanum ruthenicum*, NAN HE SHI *Daucus carota*, OU ZHOU MO YAO *Myrrhis odorata*, QIAN HU *Angelica decursiva* [Syn. *Peucedanum decursivum*], SHUAN CHI QIN *Prangos pabularia*, XIA GUO QIAN HU *Peucedanum stenocarpum*, XUE WEI CAI *Anthriscus cerefolium*, YAO YONG QIAN HU *Peucedanum officinale*, ZHUN GE ER QIAN HU *Peucedanum morisonii*, AO PA CAO *Oppopanax chironium* (root). **Ref:** 5, 658, 4071.

**17029 Peucedanocoumarin I**

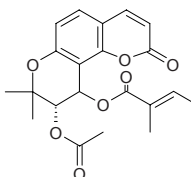
C<sub>21</sub>H<sub>24</sub>O<sub>7</sub> (388.42). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*. **Ref:** 660.

**17030 Peucedanocoumarin II**

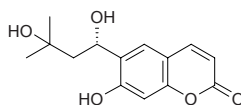
C<sub>21</sub>H<sub>22</sub>O<sub>7</sub> (386.41). mp 134.5–136.0°C (dec), [α]<sub>D</sub><sup>24</sup> = +7.0° (c = 1.0, CHCl<sub>3</sub>). **Source:** LI JIANG QIAN HU *Peucedanum govanianum* var. *bicolor*. **Ref:** 557, 660.

**17031 Peucedanocoumarin III**

C<sub>21</sub>H<sub>22</sub>O<sub>7</sub> (386.41). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*. **Ref:** 660.

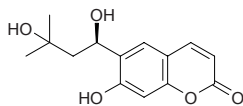
**17032 (R)-Peucedanol**

[20516-23-8] C<sub>14</sub>H<sub>16</sub>O<sub>5</sub> (264.28). Crystals (EtOAc), mp 177.5–178°C, 174–175°C, [α]<sub>D</sub><sup>23</sup> = +50.2° (c = 0.5, EtOH). **Source:** BIN HAI QIAN HU *Peucedanum japonicum*. **Ref:** 1521, .

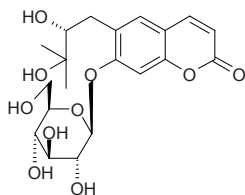


**17033 (S)-Peucedanol**

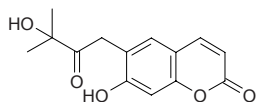
$C_{14}H_{16}O_5$  (264.28). mp 175°C,  $[\alpha]_D = -47^\circ$  ( $c = 0.68$ , EtOH). Source: BAI HUA QIAN HU *Peucedanum praeruptorum*, *Evodia beleha*. Ref: 1521, 3189.

**17034 (R)-Peucedanol 7-O-β-D-glucopyranoside**

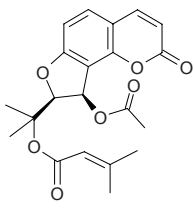
$C_{20}H_{26}O_{10}$  (426.42). Source: FEN CHA DANG GUI *Angelica furcijuga* (flower). Ref: 4454.

**17035 Peucedanone**

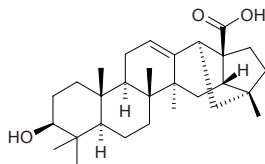
7-Hydroxy-6-(3-hydroxy-3-methyl-2-oxobutyl)-coumarin  $C_{14}H_{14}O_5$  (262.26). Pharm: AChE inhibitor (*in vitro*,  $IC_{50} = 180\mu\text{mol/L}$ ). Source: CHAO XIAN DANG GUI *Angelica gigas* (underground part). Ref: 3058.

**17036 Peucenidin**

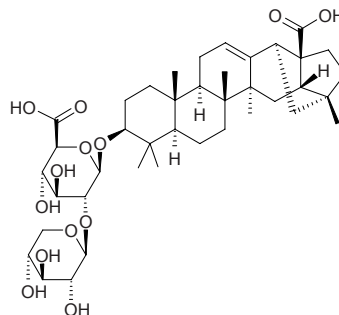
[33044-93-8]  $C_{21}H_{22}O_7$  (386.41). Pharm: Antispasmodic; coronary vasodilator. Source: BO SHI QIAN HU *Peucedanum bourgaei*, SHAN QIAN HU *Peucedanum oreoselinum*, *Libanotis pyrenaicum*. Ref: 658.

**17037 Pfaffic acid**

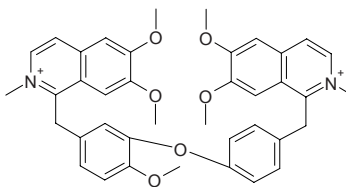
[86432-14-6]  $C_{29}H_{44}O_3$  (440.67). Pharm: Cytotoxic (4–6μg/mL). Source: BA XI REN SHEN *Pfaffia paniculata*. Ref: 658.

**17038 Pfaffoside A**

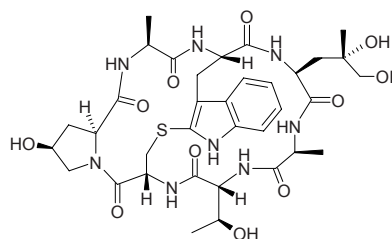
[90745-17-8]  $C_{40}H_{60}O_{13}$  (748.92). Pharm: Cytotoxic (30–50μg/mL). Source: BA XI REN SHEN *Pfaffia paniculata*. Ref: 658.

**17039 Phaeantharine**

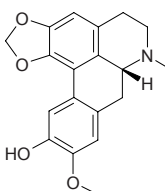
[22670-80-0]  $C_{39}H_{40}N_2O_6^{2+}$  (632.76). Pharm: Antineoplastic (animal model). Source: *Phaeanthus ebracteolatus*. Ref: 658.

**17040 Phalloidin**

[17466-45-4]  $C_{35}H_{48}N_8O_{11}S$  (788.88). Pharm: Hepatotoxin; toxin (genus *Mus*, fast action lasts 1–2h.). Source: DU E GAO *Amanita phalloides*. Ref: 658.

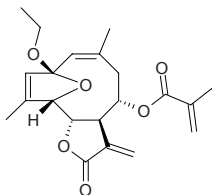
**17041 (-)-Phanostenine**

[25368-02-9]  $C_{19}H_{19}NO_4$  (325.37). Colorless Featheriness crystals (MeOH), mp 126–128°C,  $[\alpha]_D = -39^\circ$  ( $c = 0.48$ ,  $CHCl_3$ ). Pharm: Cytotoxic (hmn cancer cells); antimalarial (*Plasmodium falciparum*). Source: TAI WAN QIAN JIN TENG *Stephania sasakii*, XIAO YE DI BU RONG *Stephania succifera*, YUAN HUA FAN LI ZHI *Annona glabra*. Ref: 3614, 3615, 1756, 3616.

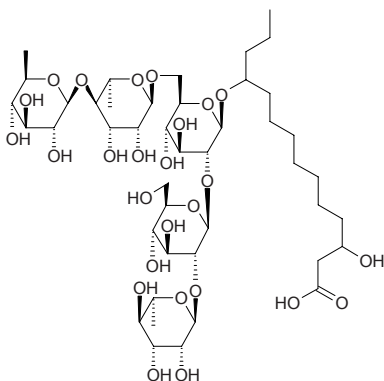


**17042 Phantomolin**

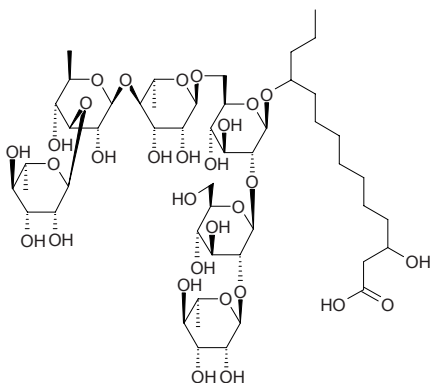
[55306-08-6] C<sub>21</sub>H<sub>26</sub>O<sub>6</sub> (374.44). Colorless oil. **Pharm:** Analgesic (mus, acetic acid-induced writhing model, 20mg/kg ip, InRt = (53±9)%, *p*<0.001); antineoplastic (mus EAC, 25mg/(kg·d) ip, InRt = 87%); anti-inflammatory (rat, swollen foot model caused by carrageenan, ip, InRt (54±19)%, *p*<0.001); cytotoxic (hmn throat epicytoma H.Ep.-2 cells *in vitro*, 0.66µg/mL). **Source:** ROU MAO DI DAN CAO *Elephantopus mollis*. **Ref:** 658, 661.

**17043 Pharbitic acid C**

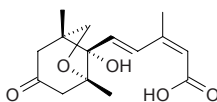
[30657-76-2] C<sub>44</sub>H<sub>78</sub>O<sub>26</sub> (1023.10). Crystals, +1H<sub>2</sub>O, mp 120–129°C, [α]<sub>D</sub> = –54.1° (MeOH). **Source:** QIAN NIU ZI *Pharbitis nil*. **Ref:** 1521.

**17044 Pharbitic acid D**

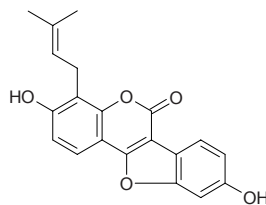
C<sub>50</sub>H<sub>88</sub>O<sub>30</sub> (1169.24). **Source:** QIAN NIU ZI *Pharbitis nil*. **Ref:** 6.

**17045 Phaseic acid**

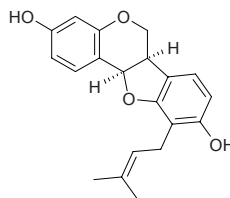
[24394-14-7] C<sub>15</sub>H<sub>20</sub>O<sub>5</sub> (280.32). mp 207–209°C, [α]<sub>D</sub> = –3350° (MeOH). **Source:** HONG HUA CAI DOU *Phaseolus multiflorus*. **Ref:** 1521.

**17046 Phaseol**

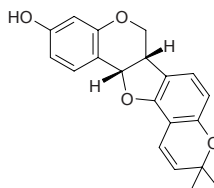
C<sub>20</sub>H<sub>16</sub>O<sub>5</sub> (336.35). **Source:** *Glycyrrhiza* sp. **Ref:** 2431.

**17047 (–)-Phaseollidin**

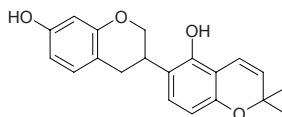
[37831-70-2] C<sub>20</sub>H<sub>20</sub>O<sub>4</sub> (324.38). **Pharm:** Antibacterial; antifungal; insect antifeedant. **Source:** JIANG DOU *Vigna unguiculata*, BIAN DOU *Lablab niger*, *Erythrina* spp., *Phaseolus* spp. **Ref:** 658.

**17048 Phaseollin**

3,9-Dihydroxy-10-*c,c*-dimethylallylpterocarpan [13401-40-6] C<sub>20</sub>H<sub>18</sub>O<sub>4</sub> (322.36). **Pharm:** Antibacterial (*Escherichia coli*, MIA = 5.00µg, control Chloramphenicol, MIA = 0.001µg; *Staphylococcus aureus*, MIA = 0.50µg, Chloramphenicol, MIA = 0.0001µg; *Bacillus subtilis*, MIA = 0.50µg, Chloramphenicol, MIA = 0.0001µg)<sup>[5247]</sup>; antifungal (*Candida mycoderma*, MIA = 0.10µg, control Miconazole, MIA = 0.0001µg)<sup>[5247]</sup>; antioxidant (DPPH scavenger, TLC, MIA = 0.1µg, IC<sub>50</sub> = 135µg/mL; control Quercetin, MIA < 0.05µg, IC<sub>50</sub> = 7µg/mL, Gallic acid, MIA < 0.05µg, IC<sub>50</sub> = 4µg/mL; Ascorbic acid, MIA < 0.10µg, IC<sub>50</sub> = 18µg/mL)<sup>[5247]</sup>; insect antifeedant. **Source:** BAI FAN DOU *Phaseolus vulgaris*, JI KUAN CI TONG *Erythrina latissima* (stem wood), JIANG DOU *Vigna unguiculata*. **Ref:** 658, 5247.

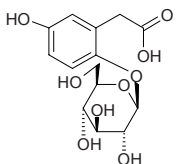
**17049 Phaseollinisoflavan**

[40323-57-7] C<sub>20</sub>H<sub>20</sub>O<sub>4</sub> (324.38). **Pharm:** Antibacterial (*Staphylococcus aureus in vitro*, MIC = 25µg/mL; *Mycobacterium smegmatis in vitro*, MIC = 12.5µg/mL); antifungal (*Blastomyces dermatitidis*, EC = 25µg/mL); insect antifeedant (*Costelytra zealandica* larva and *Heteronychus arator* larva). **Source:** BAI FAN DOU *Phaseolus vulgaris*, GAN CAO *Glycyrrhiza uralensis*, OU YA GAN CAO *Glycyrrhiza glabra* var. *typica*. **Ref:** 2, 658.

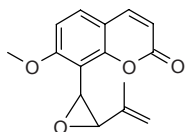


**17050 Phaseolidin**

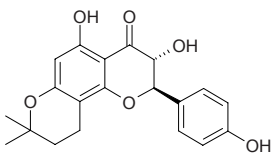
[118555-82-1] C<sub>14</sub>H<sub>18</sub>O<sub>9</sub> (330.29). Crystals (EtOAc–MeOH), mp 207–209°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = –41.13° (c = 1.24, H<sub>2</sub>O). Source: KE TENG ZI *Entada phaseoloides* [Syn. *Lens phaseoloides*]. Ref: 3190.

**17051 Phebalosin**

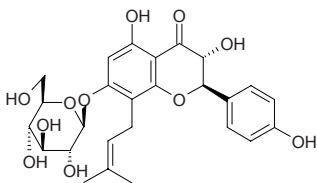
[6545-99-9] C<sub>15</sub>H<sub>14</sub>O<sub>4</sub> (258.28). Source: JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], *Murraya* spp. Ref: 11.

**17052 Phellamuretin**

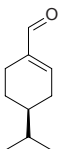
C<sub>20</sub>H<sub>20</sub>O<sub>6</sub> (356.38). Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.00044%dw). Ref: 4722.

**17053 Phellamurin**

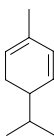
[52589-11-4] C<sub>26</sub>H<sub>30</sub>O<sub>11</sub> (518.52). mp 205°C. Pharm: Antioxidant (DPPH scavenger, 250μmol/L, InRt = 34.6%; control Vitamin E, IC<sub>50</sub> = 8.3μmol/L)<sup>[4722]</sup>. Source: HUANG BAI *Phellodendron amurense*, RI BEN HUANG BAI *Phellodendron japonicum* (leaf), TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: 2.61%dw)<sup>[4722]</sup>. Ref: 5, 4502, 4722.

**17054 Phellandral**

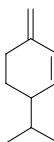
[21391-98-0] C<sub>10</sub>H<sub>16</sub>O (152.24). Oil, bp 220–230°C, [ $\alpha$ ]<sub>D</sub> = –139° (CHCl<sub>3</sub>). Source: RU XIANG *Boswellia carterii*, ZI RAN QIN *Cuminum cyminum*, *Eucalyptus* spp., *Lavandula* spp. Ref: 660, 1521.

**17055 α-Phellandrene**

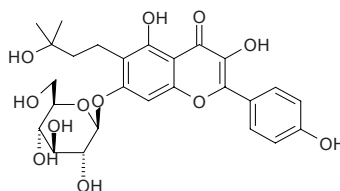
Phellandrene [99-83-2] C<sub>10</sub>H<sub>16</sub> (136.24). Pharm: Bronchial smooth muscle stimulant. Source: A LU HA LIANG JIANG *Alpinia allughas*, DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*], FU SHE SONG *Pinus radiata*, GAN JIANG *Zingiber officinale*, JU PI *Citrus reticulata*, JU YUAN *Citrus medica*, KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*], MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*], SHUI HUI XIANG AN *Eucalyptus phellandra*, XIANG HUANG LIAN MU *Pistacia lentiscus*. Ref: 2, 658, 660.

**17056 β-Phellandrene**

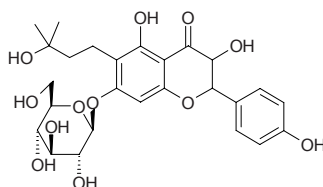
3-Methylene-6-(1-methylethyl)cyclohexene [550-10-2] C<sub>10</sub>H<sub>16</sub> (136.24). Pharm: Bronchial smooth muscle stimulant. Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], DANG GUI *Angelica sinensis*, KA XI YA SONG *Pinus kesiya*, LIAN QIAO *Forsythia suspensa*, NAN DE WA MIAN *Gossypium sturtianum* var. *nandewarance*, SHAN NAI *Kaempferia galanga*, SHENG JIANG *Zingiber officinale*, WAN YAN XIANG MAO *Cymbopogon flexuosus*. Ref: 2, 658, 660, 1344.

**17057 Phellatin**

[32507-67-9] C<sub>26</sub>H<sub>30</sub>O<sub>12</sub> (534.52). Source: HUANG BAI *Phellodendron amurense*. Ref: 6.

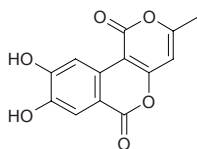
**17058 Phellavin**

[32507-67-8] C<sub>26</sub>H<sub>32</sub>O<sub>12</sub> (536.54). Source: HUANG BAI *Phellodendron amurense*. Ref: 6.

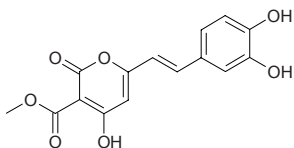


**17059 Phelligridin A**

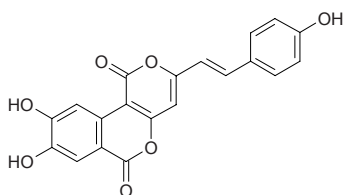
$C_{13}H_8O_6$  (260.21). **Pharm:** Cytotoxic (*in vitro*, A549,  $IC_{50} > 0.192\mu\text{mol/L}$ ; BGC823,  $IC_{50} = 0.181\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.109\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.11\mu\text{mol/L}$ ; Ketr3,  $IC_{50} > 0.192\mu\text{mol/L}$ ; HCT8,  $IC_{50} > 0.192\mu\text{mol/L}$ ; control Topotecan, A549,  $IC_{50} = 0.0032\mu\text{mol/L}$ ; BGC823,  $IC_{50} = 0.0043\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.0018\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.0012\mu\text{mol/L}$ ; Ketr3,  $IC_{50} = 0.0049\mu\text{mol/L}$ ; HCT8,  $IC_{50} = 0.0015\mu\text{mol/L}$ ). **Source:** SANG HUANG *Phellinus igniarius* (sporocarp). **Ref:** 4747.

**17060 Phelligridin B**

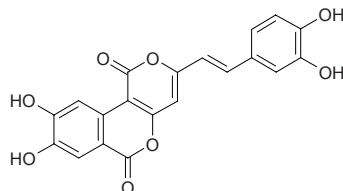
$C_{15}H_{12}O_7$  (304.26). **Pharm:** Cytotoxic (*in vitro*, A549,  $IC_{50} > 0.164\mu\text{mol/L}$ ; BGC823,  $IC_{50} = 0.146\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.143\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.05\mu\text{mol/L}$ ; Ketr3,  $IC_{50} = 0.144\mu\text{mol/L}$ ; HCT8,  $IC_{50} = 0.139\mu\text{mol/L}$ ; control Topotecan, A549,  $IC_{50} = 0.0032\mu\text{mol/L}$ ; BGC823,  $IC_{50} = 0.0043\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.0018\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.0012\mu\text{mol/L}$ ; Ketr3,  $IC_{50} = 0.0049\mu\text{mol/L}$ ; HCT8,  $IC_{50} = 0.0015\mu\text{mol/L}$ ). **Source:** SANG HUANG *Phellinus igniarius* (sporocarp). **Ref:** 4747.

**17061 Phelligridin C**

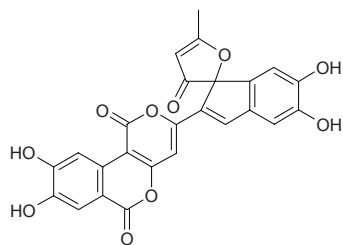
$C_{20}H_{12}O_7$  (364.31). Yellow powder, mp 272–275°C (MeOH). **Pharm:** Cytotoxic (*in vitro*, A549,  $IC_{50} = 0.012\mu\text{mol/L}$ ; BGC823,  $IC_{50} > 0.137\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.072\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.01\mu\text{mol/L}$ ; Ketr3,  $IC_{50} = 0.094\mu\text{mol/L}$ ; HCT8,  $IC_{50} = 0.126\mu\text{mol/L}$ ; control Topotecan, A549,  $IC_{50} = 0.0032\mu\text{mol/L}$ ; BGC823,  $IC_{50} = 0.0043\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.0018\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.0012\mu\text{mol/L}$ ; Ketr3,  $IC_{50} = 0.0049\mu\text{mol/L}$ ; HCT8,  $IC_{50} = 0.0015\mu\text{mol/L}$ ). **Source:** SANG HUANG *Phellinus igniarius* (sporocarp; yield = 0.0013%dw). **Ref:** 4747.

**17062 Phelligridin D**

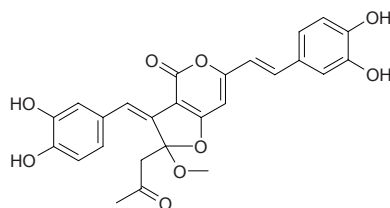
$C_{20}H_{12}O_8$  (380.31). Yellow powder (MeOH), mp > 300°C. **Pharm:** Cytotoxic (*in vitro*, A549,  $IC_{50} = 0.016\mu\text{mol/L}$ ; BGC823,  $IC_{50} > 0.131\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.0037\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.008\mu\text{mol/L}$ ; Ketr3,  $IC_{50} = 0.09\mu\text{mol/L}$ ; HCT8,  $IC_{50} = 0.099\mu\text{mol/L}$ ; control Topotecan, A549,  $IC_{50} = 0.0032\mu\text{mol/L}$ ; BGC823,  $IC_{50} = 0.0043\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.0018\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.0012\mu\text{mol/L}$ ; Ketr3,  $IC_{50} = 0.0049\mu\text{mol/L}$ ; HCT8,  $IC_{50} = 0.0015\mu\text{mol/L}$ ). **Source:** SANG HUANG *Phellinus igniarius* (sporocarp; yield = 0.00034%dw). **Ref:** 4747.

**17063 Phelligridin E**

$C_{25}H_{14}O_{10}$  (474.38). Orange powder (MeOH), mp 178–181°C,  $[\alpha]_D^{18} = 0^\circ$  ( $c = 0.16$ , MeOH:DMSO = 1:1). **Pharm:** Cytotoxic (*in vitro*, A549,  $IC_{50} = 0.079\mu\text{mol/L}$ ; BGC823,  $IC_{50} = 0.096\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.07\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.055\mu\text{mol/L}$ ; Ketr3,  $IC_{50} > 0.105\mu\text{mol/L}$ ; HCT8,  $IC_{50} > 0.105\mu\text{mol/L}$ ; control Topotecan, A549,  $IC_{50} = 0.0032\mu\text{mol/L}$ ; BGC823,  $IC_{50} = 0.0043\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.0018\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.0012\mu\text{mol/L}$ ; Ketr3,  $IC_{50} = 0.0049\mu\text{mol/L}$ ; HCT8,  $IC_{50} = 0.0015\mu\text{mol/L}$ ). **Source:** SANG HUANG *Phellinus igniarius* (sporocarp; yield = 0.00030%dw). **Ref:** 4747.

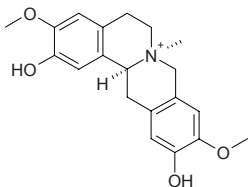
**17064 Phelligridin F**

$C_{26}H_{22}O_9$  (478.46). Orange powder (MeOH), mp<sup>21</sup> 5–217°C,  $[\alpha]_D^{18} = -3.23^\circ$  ( $c = 0.31$ , MeOH:DMSO = 1:1). **Pharm:** Cytotoxic (*in vitro*, A549,  $IC_{50} = 0.084\mu\text{mol/L}$ ; BGC823,  $IC_{50} = 0.092\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.085\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.046\mu\text{mol/L}$ ; Ketr3,  $IC_{50} > 0.104\mu\text{mol/L}$ ; HCT8,  $IC_{50} > 0.104\mu\text{mol/L}$ ; control Topotecan, A549,  $IC_{50} = 0.0032\mu\text{mol/L}$ ; BGC823,  $IC_{50} = 0.0043\mu\text{mol/L}$ ; MCF7,  $IC_{50} = 0.0018\mu\text{mol/L}$ ; Bel7402,  $IC_{50} = 0.0012\mu\text{mol/L}$ ; Ketr3,  $IC_{50} = 0.0049\mu\text{mol/L}$ ; HCT8,  $IC_{50} = 0.0015\mu\text{mol/L}$ ). **Source:** SANG HUANG *Phellinus igniarius* (sporocarp; yield = 0.00044%dw). **Ref:** 4747.

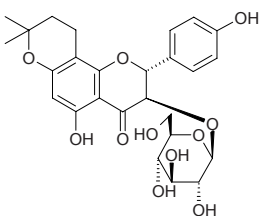


**17065 Phellodendrine**

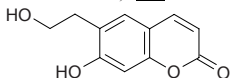
[6873-13-8] C<sub>20</sub>H<sub>24</sub>NO<sub>4</sub><sup>+</sup> (342.42). mp 258°C. Pharm: CNS depressant; inhibits spontaneous movement and reflex actions (mus). Source: HUANG BAI *Phellodendron amurense* (bark: mean content of 9 samples = 0.1468%<sup>[5508]</sup>); HUANG PI SHU *Phellodendron chinense* (bark: mean content of 15 samples = 0.4210%<sup>[5508]</sup>), TU YE HUANG PI SHU *Phellodendron chinense* var. *glabriusculum*. Ref: 4, 658, 660, 5501, 5508.

**17066 Phellodendroside**

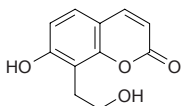
[40451-69-2] C<sub>26</sub>H<sub>30</sub>O<sub>11</sub> (518.52). Crystals, mp 154–156°C. Source: HUANG BAI *Phellodendron amurense*, RI BEN HUANG BAI *Phellodendron japonicum*. Ref: 1521.

**17067 Phellodenol A**

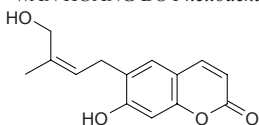
C<sub>11</sub>H<sub>10</sub>O<sub>4</sub> (206.2). White powder, mp 179–180°C (MeOH). Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.00008%dw). Ref: 4722.

**17068 Phellodenol B**

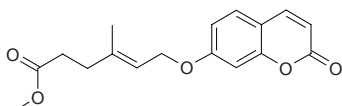
C<sub>11</sub>H<sub>10</sub>O<sub>4</sub> (206.2). White needles, mp 159–160°C (MeOH). Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.00072%dw). Ref: 4722.

**17069 Phellodenol C**

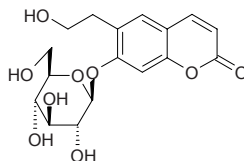
C<sub>14</sub>H<sub>14</sub>O<sub>4</sub> (246.27). White needles, mp 177–178°C (MeOH). Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf). Ref: 4722.

**17070 Phellodenol D**

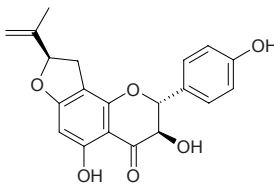
C<sub>17</sub>H<sub>18</sub>O<sub>5</sub> (302.33). Colorless powder, mp 88–89°C. Source: HUANG PI SHU *Phellodendron chinense* (leaf). Ref: 4941.

**17071 Phellodenol E**

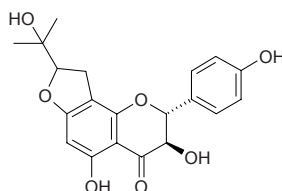
C<sub>17</sub>H<sub>20</sub>O<sub>9</sub> (368.34). Colorless powder, mp 166–167°C, [α]<sub>D</sub><sup>25</sup> = –49.5° (c = 0.025, MeOH). Source: HUANG PI SHU *Phellodendron chinense* (leaf). Ref: 4941.

**17072 Phellodensin A**

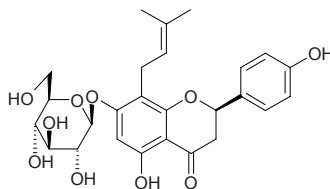
C<sub>20</sub>H<sub>18</sub>O<sub>6</sub> (354.36). White powder, mp 150–151°C (MeOH), [α]<sub>D</sub><sup>25</sup> = –18.8° (c = 0.06, MeOH). Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.00053%dw). Ref: 4722.

**17073 Phellodensin C**

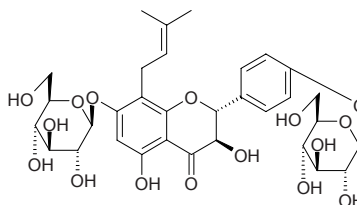
C<sub>20</sub>H<sub>20</sub>O<sub>7</sub> (372.38). White powder, mp 108–109°C (MeOH), [α]<sub>D</sub><sup>25</sup> = –28.0° (c = 0.046, MeOH). Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.00009%dw). Ref: 4722.

**17074 (2R)-Phellodensin F**

C<sub>26</sub>H<sub>30</sub>O<sub>10</sub> (502.52). White powder, mp 220–221°C, [α]<sub>D</sub><sup>25</sup> = –67.5° (c = 0.15, MeOH). Source: RI BEN HUANG BAI *Phellodendron japonicum* (leaf). Ref: 4502.

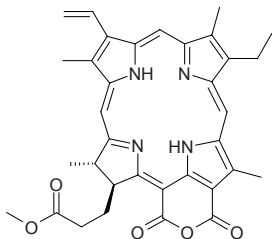
**17075 Phellodensin G**

C<sub>32</sub>H<sub>40</sub>O<sub>16</sub> (680.67). Colorless powder, mp 266–267°C, [α]<sub>D</sub><sup>25</sup> = +66.78° (c = 0.023, MeOH). Source: HUANG PI SHU *Phellodendron chinense* (leaf). Ref: 4941.

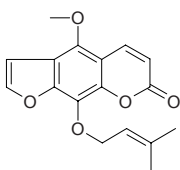


**17076 Phellophyll a**

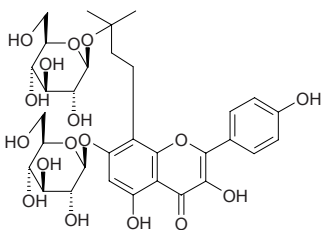
$C_{34}H_{34}N_4O_5$  (578.67). Deep green powder, mp 141~142°C, (MeOH),  $[\alpha]_D^{25} = +298.0^\circ$  ( $c = 0.007$ , MeOH). Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.00031%dw). Ref: 4722.

**17077 Phellopterin**

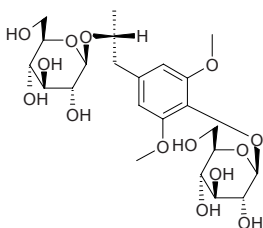
[2543-94-4]  $C_{17}H_{16}O_5$  (300.31). mp 102°C. Pharm: PGE<sub>2</sub> production inhibitor (rat peritoneal macrophages, LPS-induced, 30 μmol/L; inhibits LPS-induced expression of COX-2 and mPGES, not directly inhibits COX-1 and COX-2)<sup>[5392]</sup>. Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], DA YE NIU FANG FENG *Heracleum mantegazzianum*, FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*], GUANG HUA DANG GUI *Angelica glabra*, HANG BAI ZHI *Angelica taiwaniana*, QI BAI ZHI *Angelica dahurica* cv. *qibaizhi*, QIANG HUO *Notopterygium incisum*, XIA YAN GU DANG GUI *Archangelica decurrens*, *Ferula alliacea*. Ref: 2, 566, 660, 1521, 5392.

**17078 Phelloside**

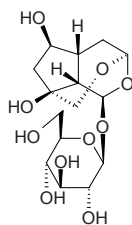
Phellizide [20194-51-8]  $C_{32}H_{40}O_{17}$  (696.67). Yellow needles, mp 282~284°C. Source: HUANG BAI *Phellodendron amurense*, KU YE DAO HUANG BAI *Phellodendron sachalinense*. Ref: 3191.

**17079 Pheloside**

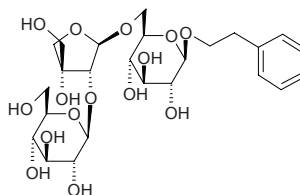
Feloside [58497-07-7]  $C_{23}H_{36}O_{14}$  (536.53). mp 224~225°C,  $[\alpha]_D^{20} = -27.7^\circ$  ( $c = 0.99$ , water). Source: *Ferula kopetdaghensis*. Ref: 2088.

**17080 Phelypaeside**

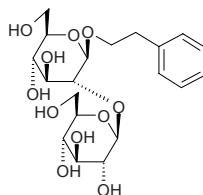
$C_{15}H_{24}O_{10}$  (364.35). Source: *Cistanche* sp. Ref: 2448.

**17081 Phenethylalcohol 8-O-β-D-glucopyranosyl-(1→2)-O-β-D-apiofuranosyl-(1→6)-β-D-glucopyranoside**

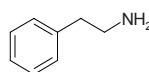
$C_{25}H_{38}O_{15}$  (578.57). Powder,  $[\alpha]_D^{26} = -56.6^\circ$  ( $c = 1.7$ , MeOH). Source: ZI HU *Bupleurum falcatum*. Ref: 2317.

**17082 Phenethylalcohol 8-O-β-D-glucopyranosyl-(1→2)-β-D-glucopyranoside**

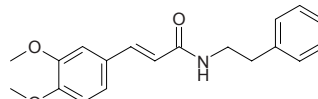
$C_{20}H_{30}O_{11}$  (446.46). Powder,  $[\alpha]_D^{26} = -17.7^\circ$  ( $c = 0.7$ , MeOH). Source: ZI HU *Bupleurum falcatum*. Ref: 2317.

**17083 Phenethylamine**

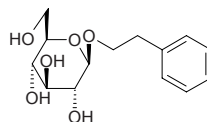
[64-04-0]  $C_8H_{11}N$  (121.18). Liquid,  $d_4^{24} = 0.958$ , bp 197~198°C, bp 70~71°C/7mmHg,  $n_D^{25} = 1.5290$ . Pharm: Irritant (to skin); sensitizer. Source: GUI GAI *Coprinus atramentarius*, HUANG HUA ZI *Sida cordifolia*, HONG MU JI CAO *Desmodium gangeticum*, MA HUANG *Ephedra sinica*, *Acacia* spp., *Crataegus* spp. Ref: 2, 6, 658, 660, 1521.

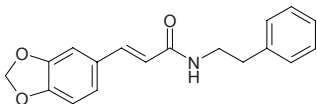
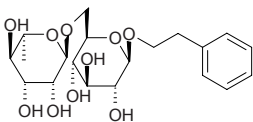
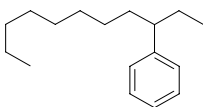
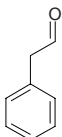
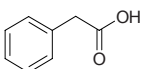
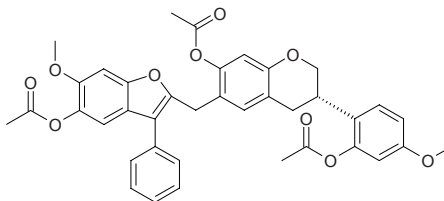
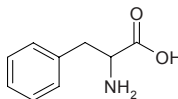
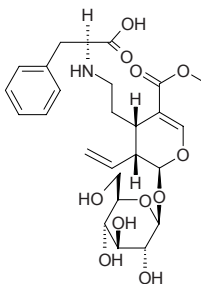
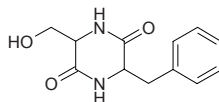
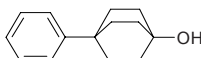
**17084 N-β-Phenethyl-3-(3,4-dimethoxy phenyl) propenamide**

$C_{19}H_{21}NO_3$  (311.38). Source: JI JI JING YE *Chloranthus serratus*. Ref: 3192.

**17085 Phenethyl β-D-glucopyranoside**

$C_{14}H_{20}O_6$  (284.31). Amorphous powder,  $[\alpha]_D^{23} = -37^\circ$ . Source: BEI SHA SHEN *Glehnia littoralis* (fruit), JIAN YE YIN YANG HUO *Epimedium sagittatum*, KUO BAO JU *Baccharis indica* [Syn. *Pluchea indica*]. Ref: 3193, 3194, 3525.

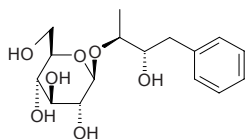


**17086 N-β-Phenethyl-3-(3,4-methylenedioxy phenyl) propenamide**C<sub>18</sub>H<sub>17</sub>NO<sub>3</sub> (295.34). Source: JI JI JING YE *Chloranthus serratus*. Ref: 3192.**17087 Phenethyl rutinoside**Phenethyl α-L-rhamnopyranosyl(1→6)-β-D-glucopyranoside C<sub>20</sub>H<sub>30</sub>O<sub>10</sub> (430.46).Source: GUAN CANG ZHU *Atractylodes japonica* (fresh rhizome), SHI LIU ZHONG ZI *Punica granatum* (seed; yield = 0.0005%). Ref: 4310, 4792.**17088 3-Phenylundecane**C<sub>17</sub>H<sub>28</sub> (232.41). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.**17089 Phenol**Hydroxybenzene [108-95-2] C<sub>6</sub>H<sub>6</sub>O (94.11). Pharm: Antiseptic; relieves itching; toxin. Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*], CHAI HU *Bupleurum chinense*, CHAN YANG *Populus tremuloides*, CHUAN XU DUAN *Dipsacus asperoides*, DANG GUI *Angelica sinensis*, LU DI MIAN *Gossypium hirsutum* [Syn. *Gossypium mexicanum*], MAN JING ZI *Vitex trifolia*, RI BEN XIANG RU *Elsholtzia nipponica*, YIN CHEN HAO *Artemisia capillaris*, ZHONG HUA JI SHI TENG *Paederia chinensis*. Ref: 2, 658, 660.**17090 Phenylacetaldehyde**[122-78-1] C<sub>8</sub>H<sub>8</sub>O (120.15). Crystals (H<sub>2</sub>O), d<sub>4</sub><sup>19.6</sup> = 1.027, mp 33–34°C, bp 195°C, bp 78°C/10mmHg. Source: BAI GUI BI *Phallus impudicus*, FAN QIE *Lycopersicon esculentum*, HONG HUA *Carthamus tinctorius*, MENG GU HAO *Artemisia mongolica*, NIU BANG GEN *Arctium lappa*, SUAN JIAO *Tamarindus indica*, WEI XIAO WAN SHOU JU *Tagetes minuta*, XING ZI *Prunus armeniaca*, *Citrus* spp. Ref: 660, 1521.**17091 Phenylacetic acid**[103-82-2] C<sub>8</sub>H<sub>8</sub>O<sub>2</sub> (136.15). Source: GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingsensis*]. Ref: 2.**17092 (3S)-6-(3-Phenyl-5-acetoxy-6-methoxybenzo[b]furan-2-ylmethyl)-vestitol-triacetate**C<sub>38</sub>H<sub>34</sub>O<sub>10</sub> (650.69). Light brown solid. Source: GUANG LIANG HUANG TAN *Dalbergia nitidula*. Ref: 1992.**17093 Phenylalanine**2-Amino-3-phenylpropanoic acid [3617-44-5] C<sub>9</sub>H<sub>11</sub>NO<sub>2</sub> (165.19). Pharm: Antidepressant; essential amino acid. Source: BAN XIA *Pinellia ternata* (dried tuber; content scope of 4 origins = 0.82%–1.61%, mean content = 1.05%)<sup>[5521]</sup>, BING LANG *Areca catechu*, CHUAN DANG SHEN *Codonopsis tangshen*, DANG SHEN *Codonopsis pilosula*, NING XIA GOU QI ZI *Lycium barbarum*, QIU HUA DANG SHEN *Codonopsis subglobosa*, ROU CONG RONG *Cistanche deserticola*, SU HUA DANG SHEN *Codonopsis pilosula* var. *modesta* [Syn. *Codonopsis modesta*]. Ref: 2, 658, 660, 5521.**17094 L-Phenylalaninosecologanin**C<sub>26</sub>H<sub>36</sub>NO<sub>11</sub> (537.57). Amorphous powder, [α]<sub>D</sub><sup>26</sup> = -112.4° (c = 0.214, MeOH). Source: JIN YIN HUA *Lonicera japonica* (stem and leaf). Ref: 4220.**17095 L-Phenylalanyl-L-serine anhydride**C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub> (234.26). Source: ZHANG YE BAN XIA *Pinellia pedatisecta*. Ref: 477.**17096 4-Phenylbicyclo[2.2.2]octan-1-ol**C<sub>14</sub>H<sub>18</sub>O (202.30). Source: WU WEI ZI *Schisandra chinensis*. Ref: 2.

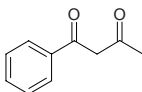


**17097 (2S,3S)-1-Phenyl-2,3-butanediol 3-O-β-D-glucopyranoside**

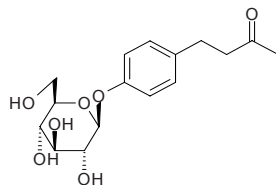
$C_{16}H_{24}O_7$  (328.37). White powder,  $[\alpha]_D^{27} = -21.9^\circ$  ( $c = 2.00$ ,  $CHCl_3$ ). Pharm: Aldose reductase inhibitor (rat lens,  $IC_{50} > 100\mu mol/L$ ,  $100\mu mol/L$  InRt = 9.7%, control Epalrestat,  $IC_{50} = 0.072\mu mol/L$ ). Source: YE JU HUA *Chrysanthemum indicum* (flower: yield = 0.019%). Ref: 4214.

**17098 1-Phenyl-1,3-butanediol**

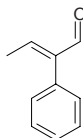
[93-91-4]  $C_{10}H_{10}O_2$  (162.19). Source: HUANG QIN *Scutellaria baicalensis*. Ref: 2.

**17099 Phenylbutanone-glucoside**

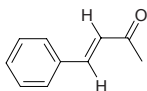
$C_{16}H_{22}O_7$  (326.35). Source: DA HUANG *Rheum officinale*, ZHANG YE DA HUANG *Rheum palmatum*. Ref: 2, 660.

**17100 2-Phenyl-2-butenal**

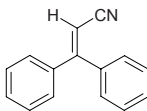
$C_{10}H_{10}O$  (146.19). Source: CHAYE *Camellia sinensis* [Syn. *Thea sinensis*]. Ref: 660.

**17101 (E)-4-Phenyl-3-buten-2-one**

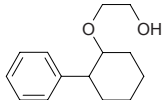
$C_{10}H_{10}O$  (146.19). Source: HUANG QIN *Scutellaria baicalensis*. Ref: 2.

**17102 α-Phenylcinnamic acid nitrile**

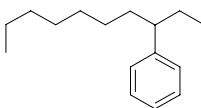
[5331-24-6]  $C_{15}H_{11}N$  (205.26). mp 49~51°C, bp 213~214°C/23mmHg. Source: HAN LIAN HUA *Tropaeolum majus*. Ref: 6.

**17103 2-(2-Phenyl cyclohexyloxy) ethanol**

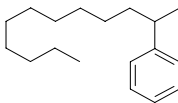
$C_{14}H_{20}O_2$  (220.31). Source: WU WEI ZI *Schisandra chinensis*. Ref: 2.

**17104 3-Phenyldecane**

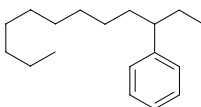
(1-Methylundecyl)benzene [2719-61-1]  $C_{16}H_{26}$  (218.39). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.

**17105 2-Phenyldecane**

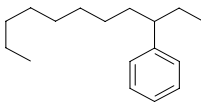
[4621-36-7]  $C_{18}H_{30}$  (246.44). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.

**17106 3-Phenyldecane**

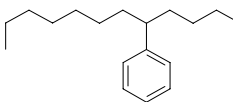
[2400-00-2]  $C_{18}H_{30}$  (246.44). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.

**17107 4-Phenyldecane**

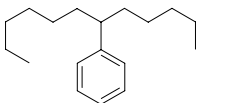
[2719-64-4]  $C_{18}H_{30}$  (246.44). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.

**17108 5-Phenyldecane**

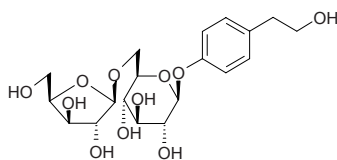
[2719-63-3]  $C_{18}H_{30}$  (246.44). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.

**17109 6-Phenyldecane**

[2719-62-2]  $C_{18}H_{30}$  (246.44). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.

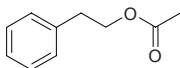
**17110 Phenyl ethanol 4-O-β-D-xylopyranosyl-(1→6)-β-D-glucopyranoside**

$C_{19}H_{28}O_{11}$  (432.43). Colorless amorphous powder. Source: TAO ER QI *Podophyllum emodii* [Syn. *Podophyllum emodii* var. *chinense*; *Podophyllum sikkimensis*; *Sinopodophyllum emodii*] (root and rhizome). Ref: 4142.

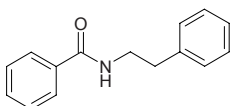


**17111 Phenylethyl acetate**

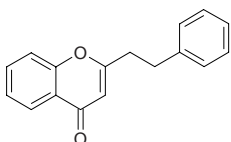
[103-45-7] C<sub>10</sub>H<sub>12</sub>O<sub>2</sub> (164.21). bp 224°C. Source: LU DOU LE HUA *Pandanus tectorius*, MEI GUI HUA *Rosa rugosa*, SHUI XIAN HUA *Narcissus tazetta* var. *chinensis*. Ref: 6.

**17112 N-(2-Phenylethyl)benzamide**

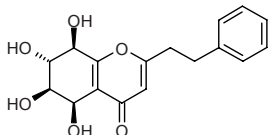
C<sub>15</sub>H<sub>15</sub>NO (225.29). White amorphous powder, mp 115.0~116.0°C, mp 117.0~118.0°C. Source: LIU ZHUANG DAN YE YUN XIANG *Ruta tuberculata* [Syn. *Haplophyllum tuberculatum*] (aerial parts). Ref: 5156.

**17113 2-(2-Phenylethyl) chromone**

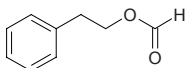
C<sub>17</sub>H<sub>14</sub>O<sub>2</sub> (250.30). White acicular crystals, mp 65°C. Source: BAI MU XIANG *Aquilaria sinensis*, CHEN XIANG *Aquilaria agallocha*. Ref: 13, 4173.

**17114 (5R,6R,7S,8R)-2-(2-Phenylethyl)-5e',6a,7e,8e'-tetrahydroxy-5,6,7,8-tetrahydrochromone**

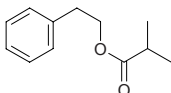
AH16 C<sub>17</sub>H<sub>18</sub>O<sub>6</sub> (318.33). White powder, mp 100~105°C, [α]<sub>D</sub> = +4.76°. Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13.

**17115 Phenyl ethyl formate**

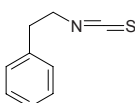
[104-62-1] C<sub>9</sub>H<sub>10</sub>O<sub>2</sub> (150.18). bp 94°C/9mmHg. Source: CHA YE *Camellia sinensis* [Syn. *Thea sinensis*]. Ref: 6.

**17116 β-Phenylethyl isobutanoate**

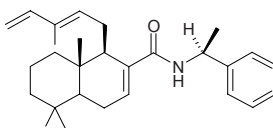
C<sub>12</sub>H<sub>16</sub>O<sub>2</sub> (192.26). Source: FU JIAN XI XIN *Asarum fukienense*. Ref: 3197.

**17117 β-Phenylethyl isothiocyanate**

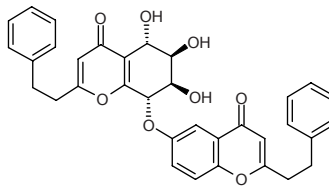
[2257-09-2] C<sub>9</sub>H<sub>9</sub>NS (163.24). Liquid, bp 142°C/13mmHg, 143~145°C/12mmHg, 106°C/2.5mmHg. Pharm: Insecticidal. Source: JIE CAI *Brassica juncea*, JIE ZI *Brassica juncea*, family Brassicaceae spp. Ref: 6, 1521.

**17118 N-[(S)-1-Phenylethyl]-labda-7,12(E),14-triene-17-amide**

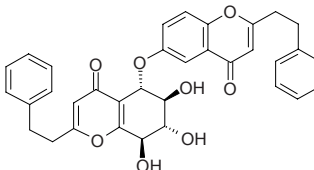
C<sub>28</sub>H<sub>39</sub>NO (405.63). mp 146~148°C, [α]<sub>D</sub><sup>20</sup> = +9.2° (c = 1.2, CHCl<sub>3</sub>). Pharm: Cytotoxic inactive (*in vitro*, BT474, CHAGO, HepG2, Kato3, SW620: > 10μg/mL). Source: GUANG YE BA DOU *Croton oblongifolius* [Syn. *Croton laevigatus*]. Ref: 5363.

**17119 (5S,6R,7R,8S)-2-(2-Phenylethyl)-5,6,7-tri-hydroxy-5,6,7,8-tetrahydro-8-[2-(2-phenylethyl)chromonyl-6-oxy]chromone (AH13)**

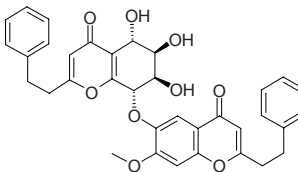
C<sub>34</sub>H<sub>30</sub>O<sub>8</sub> (566.61). Colorless acicular crystals, mp 193~194°C, [α]<sub>D</sub> = +2°. Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13.

**17120 (5S,6S,7S,8R)-2-(2-Phenylethyl)-6,7,8-trihydroxy-5,6,7,8-tetrahydro-5-[2-(2-phenylethyl)chromonyl-6-oxy]chromone (AH14)**

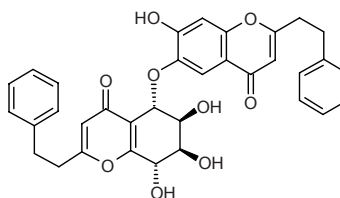
C<sub>34</sub>H<sub>30</sub>O<sub>8</sub> (566.61). White powder, mp 86~88°C, [α]<sub>D</sub> = +64.4°. Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13.

**17121 (5S,6S,7R,8S)-2-(2-Phenylethyl)-5,6,7-trihydroxy-5,6,7,8-tetrahydro-8-[2-(2-phenylethyl)-7-methoxychromonyl-6-oxy]chromone (AH12)**

C<sub>35</sub>H<sub>32</sub>O<sub>9</sub> (596.64). Colorless acicular crystals, mp 227°C, [α]<sub>D</sub> = +0.7°. Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13.

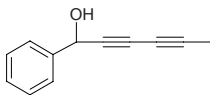
**17122 (5S,6S,7R,8S)-2-(2-Phenylethyl)-6,7,8-trihydroxy-5,6,7,8-tetrahydro-5-[2-(2-phenyl-ethyl)-7-hydroxy-chromonyl-6-oxy]-chromone (AH15)**

C<sub>34</sub>H<sub>30</sub>O<sub>9</sub> (582.61). Colorless acicular crystals, mp 244~245°C, [α]<sub>D</sub> = +5.8°. Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13.

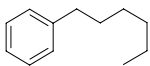


**17123 1-Phenyl-2,4-hexadiyne-1-ol**

[1574-95-4] C<sub>12</sub>H<sub>10</sub>O (170.21). Source: YIN CHEN HAO *Artemisia capillaris*. Ref: 2.

**17124 1-Phenylhexane**

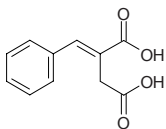
[1077-16-3] C<sub>12</sub>H<sub>18</sub> (162.28). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.

**17125 Phenyl isothiocyanate**

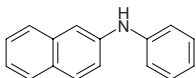
Isothiocyanato-benzene [103-72-0] C<sub>7</sub>H<sub>5</sub>NS (135.19). bp 221°C. Source: JIE ZI *Brassica juncea*. Ref: 6.

**17126 trans-Phenylitaconic acid**

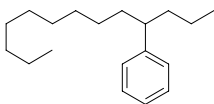
C<sub>11</sub>H<sub>10</sub>O<sub>4</sub> (206.20). Source: AI YE *Artemisia argyi*. Ref: 3198.

**17127 N-Phenyl-2-naphthylamine**

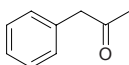
[135-88-6] C<sub>16</sub>H<sub>13</sub>N (219.29). Needles (MeOH), mp 108°C, 103–104°C, bp 395–399.5°C, 237°C/13mmHg. Pharm: Carcinogenic; LD<sub>50</sub> (mus, orl) = 8730mg/kg. Source: DING YU JU *Acroptilon repens*, DUO GEN WU TOU *Aconitum karakolicum*, JIAN HAI LONG *Syngnathus acus*, NAN HE SHI *Daucus carota*, SHUI HU LU *Eichhornia crassipes*. Ref: 1521, 3199.

**17128 4-Phenyltridecane**

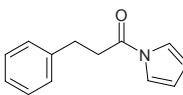
C<sub>19</sub>H<sub>32</sub> (260.47). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.

**17129 Phenyl-2-propanone**

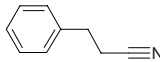
Phenylacetone [103-79-7] C<sub>9</sub>H<sub>10</sub>O (134.18). Source: WU WEI ZI *Schisandra chinensis*. Ref: 2.

**17130 N-(3-Phenylpropanoyl)pyrrole**

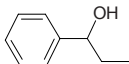
[112448-69-8] C<sub>13</sub>H<sub>13</sub>NO (199.25). mp 48.5–50°C. Source: JIA JU ZI *Piper sarmentosum*. Ref: 1510.

**17131 Phenyl propionitrile**

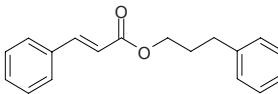
C<sub>9</sub>H<sub>9</sub>N (131.18). Source: DOU BAN CAI *Nasturtium officinale*. Ref: 1323.

**17132 Phenylpropyl alcohol**

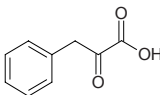
[93-54-9] C<sub>9</sub>H<sub>12</sub>O (136.20). bp (–) 94–95°C/10mmHg, (±) 217–221°C. Source: SHUI XIAN HUA *Narcissus tazetta* var. *chinensis*. Ref: 6.

**17133 Phenylpropyl cinnamate**

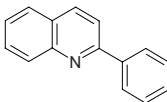
C<sub>18</sub>H<sub>18</sub>O<sub>2</sub> (266.34). Source: AN XI XIANG *Styrax benzoin*. Ref: 6.

**17134 Phenyl pyruvic acid**

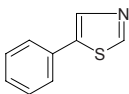
[156-06-9] C<sub>9</sub>H<sub>8</sub>O<sub>3</sub> (164.16). mp 157°C (dec). Source: LAI FU *Raphanus sativus*. Ref: 6.

**17135 2-Phenylquinoline**

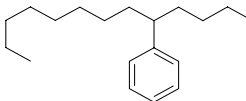
[612-96-4] C<sub>15</sub>H<sub>11</sub>N (205.26). mp 84°C (hexane). Pharm: Antileishmanial (*in vitro* *Leishmania* sp. 2903 IC<sub>90</sub> = 100µg/mL, *Trypanosoma cruzi* IC<sub>90</sub> = 100µg/mL, mus-infacted by *Leishmania amazonensis* H-142, IC<sub>90</sub> = 100µg/mL). Source: CHANG HUA TU LA SHU *Galipea longiflora*. Ref: 3617, 3601, 3618.

**17136 5-Phenyl thiazole**

C<sub>9</sub>H<sub>7</sub>NS (161.23). Source: SHAN NAI *Kaempferia galanga*. Ref: 1344.

**17137 5-Phenyltridecane**

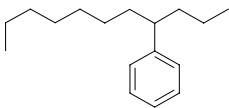
C<sub>19</sub>H<sub>32</sub> (260.47). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2.



**17138 4-Phenylundecane**

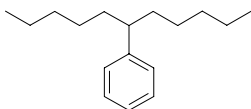
[4536-86-1] C<sub>17</sub>H<sub>28</sub> (232.41). Source: XI YANG SHEN *Panax quinquefolium*.

Ref: 2.

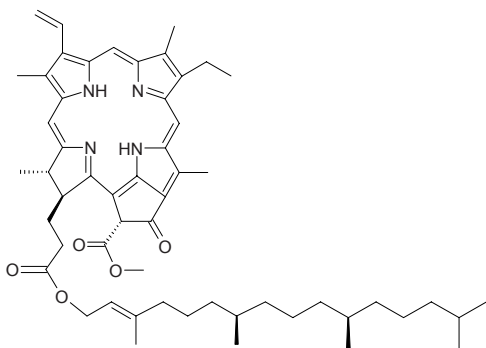
**17139 6-Phenylundecane**

[4537-14-8] C<sub>17</sub>H<sub>28</sub> (232.41). Source: XI YANG SHEN *Panax quinquefolium*.

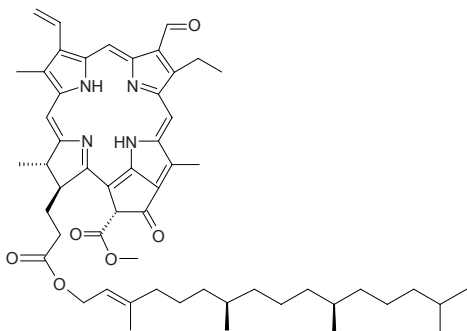
Ref: 2.

**17140 Pheophytin a**

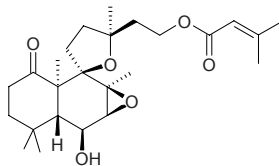
[603-17-8] C<sub>55</sub>H<sub>74</sub>N<sub>4</sub>O<sub>5</sub> (871.23). Deep-greenish-black crystals (pet. ether), [α]<sub>D</sub><sup>20</sup> = -126°. Source: BAI SHU YE *Cupressus funebris*, BO CAI *Spinacia oleracea*, TAI WAN JIN GU CAO *Ajuga taiwanensis* (whole herb), YUAN CAN SHA *Bombyx mori*. Ref: 660, 1521, 4483.

**17141 Pheophytin b**

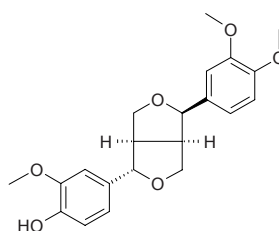
C<sub>55</sub>H<sub>72</sub>N<sub>4</sub>O<sub>6</sub> (885.21). Deep-grey-green greasy solid (pet. ether), [α]<sub>D</sub><sup>20</sup> = -133°. Source: BO CAI *Spinacia oleracea*, TAI WAN JIN GU CAO *Ajuga taiwanensis* (whole herb), YUAN CAN SHA *Bombyx mori*. Ref: 660, 1521, 4483.

**17142 Philadelphinone**

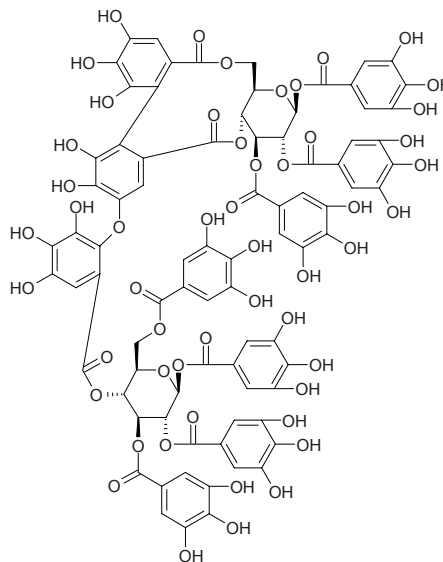
C<sub>25</sub>H<sub>38</sub>O<sub>6</sub> (434.58). Colorless amorphous solid, [α]<sub>D</sub><sup>24</sup> = -73.8° (c = 0.2, CHCl<sub>3</sub>). Source: FEI CHENG FEI PENG *Erigeron philadelphicus* (aerial parts). Ref: 4338.

**17143 Phillygenin**

C<sub>21</sub>H<sub>24</sub>O<sub>6</sub> (372.42). Source: LIAN QIAO *Forsythia suspensa*. Ref: 660, 1521.

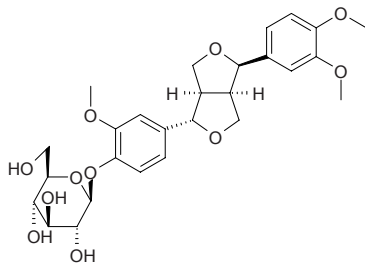
**17144 Phillyraeoidin A**

[125002-71-3] C<sub>82</sub>H<sub>60</sub>O<sub>52</sub> (1877.36). Maple amorphous powder, [α]<sub>D</sub><sup>31</sup> = +75.8° (c = 1.1, acetone). Pharm: Cytotoxic (melanotic carcinoma RPMI-7951, ED<sub>50</sub> = 0.50 μg/mL); topoisomerase II inhibitor (IC<sub>100</sub> = 0.5 μmol/L). Source: FEI LI GUI LI *Quercus phillyraeoides*. Ref: 3619, 1728, 1706.

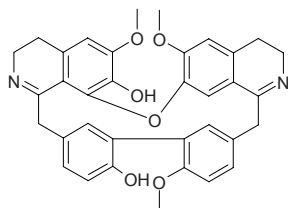


**17145 Phillyrin**

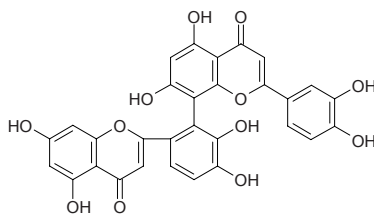
Forsythin [487-41-2]  $C_{27}H_{34}O_{11}$  (534.57). mp ( $\alpha$ ) 155°C, ( $\beta$ ) 185°C,  $[\alpha]_D^{21} = +46.9^\circ$  ( $c = 0.25$ ,  $CH_3OH$ ). Pharm: Anti-inflammatory (inhibits production of COX metabolite  $PGE_2$ ,  $IC_{50} = 45.6 \mu mol/L$ ; reduces TXB2 level,  $IC_{50} = 168 \mu mol/L$ )<sup>[4415]</sup>. Source: KUO YE OU NV ZFEN *Phillyrea latifolia* (leaf), LIAN QIAO *Forsythia suspensa* (green fruit: mean content of 7 origins = 0.393%, ripe fruit: mean content of 5 origins = 0.113%<sup>[5508]</sup>). Ref: 2, 660, 1521, 4415, 5508.

**17146 Philogaline**

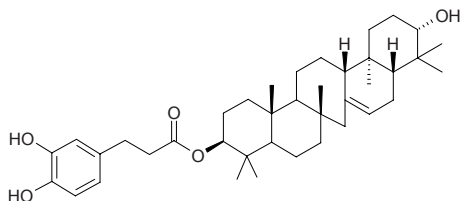
$C_{35}H_{32}N_2O_6$  (576.66). Amorphous,  $[\alpha]_D^{20} = 0^\circ$  ( $c = 0.23$ ,  $MeOH$ ). Source: *Guatteria boliviana* (stem cortex). Ref: 3976.

**17147 Philonotisflavone**

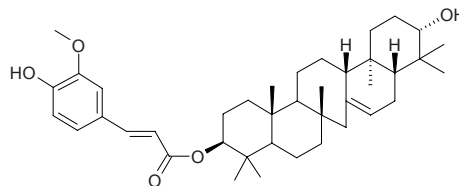
[124615-12-9]  $C_{30}H_{18}O_{12}$  (570.47). Source: ZE XIAN *Philonotis fontana*, ZHOU SHUO XIAN *Aulacomnium androgynum*. Ref: 3120, 4549.

**17148 Phlegmanol A**

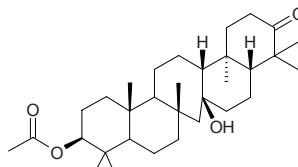
$C_{39}H_{58}O_5$  (606.89). Source: MA WEI SHAN *Phlegmariurus phlegmaria* [Syn. *Lycopodium phlegmaria*]. Ref: 3200, 2987.

**17149 Phlegmanol B**

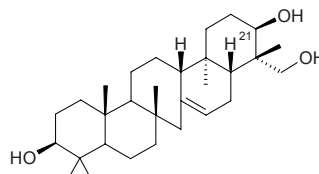
$C_{40}H_{58}O_5$  (618.91). Source: MA WEI SHAN *Phlegmariurus phlegmaria* [Syn. *Lycopodium phlegmaria*]. Ref: 2987.

**17150 Phlegmanol D**

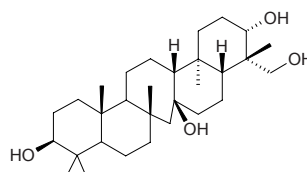
[35298-92-1]  $C_{32}H_{52}O_4$  (500.77). Crystals ( $C_6H_6$ -pet. ether), mp 304~305°C,  $[\alpha]_D^{15} = +26^\circ$  ( $c = 0.5$ ,  $CHCl_3$ ). Source: MA WEI SHAN *Phlegmariurus phlegmaria* [Syn. *Lycopodium phlegmaria*], *Lycopodium megastachyum*. Ref: 2987.

**17151 Phlegmanol E**

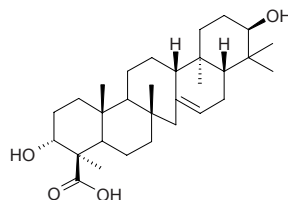
[35298-93-2]  $C_{30}H_{50}O_3$  (458.73). Crystals (pet. ether, tri-Ac compound), mp 241~242°C (tri-Ac compound). Source: GUANG LIANG SHI SONG *Lycopodium lucidulum*, MA WEI SHAN *Phlegmariurus phlegmaria* [Syn. *Lycopodium phlegmaria*]. Ref: 2987.

**17152 Phlegmanol F**

[35345-81-4]  $C_{30}H_{52}O_4$  (476.75). Crystals (as tri-Ac compound), mp 254~256°C (tri-Ac),  $[\alpha]_D^{16} = +16^\circ$  ( $c = 0.5$ ,  $CHCl_3$ , tri-Ac). Source: MA WEI SHAN *Phlegmariurus phlegmaria* [Syn. *Lycopodium phlegmaria*]. Ref: 3201.

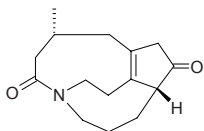
**17153 Phlegmaric acid**

[35298-94-3]  $C_{30}H_{48}O_4$  (472.71). Source: MA WEI SHAN *Phlegmariurus phlegmaria* [Syn. *Lycopodium phlegmaria*]. Ref: 2987.

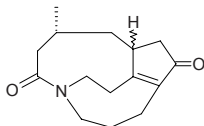


**17154 Phlegmariurine A**

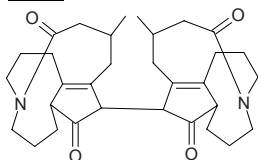
$C_{15}H_{21}NO_2$  (247.34). Source: HUA NAN MA WEI SHAN *Phlegmariurus fordii*. Ref: 3202.

**17155 Phlegmariurine B**

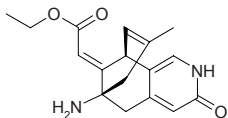
$C_{15}H_{21}NO_2$  (247.34). Source: HUA NAN MA WEI SHAN *Phlegmariurus fordii*. Ref: 3202.

**17156 Phlegmariurine C**

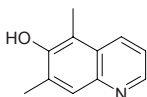
[115491-58-2]  $C_{32}H_{44}N_2O_4$  (520.72). Acicular crystals, mp 151~152°C. Source: HUA NAN MA WEI SHAN *Phlegmariurus fordii*. Ref: 95.

**17157 Phlegmariurine M**

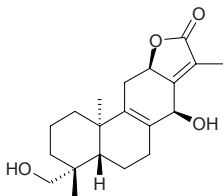
[125287-10-7]  $C_{17}H_{20}N_2O_3$  (300.36). Source: HUA NAN MA WEI SHAN *Phlegmariurus fordii*. Ref: 3203.

**17158 Phlegmariurine N**

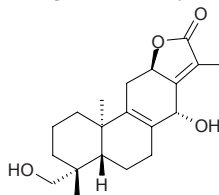
$C_{11}H_{11}NO$  (173.22). White acicular crystals, 179~181°C. Source: HUA NAN MA WEI SHAN *Phlegmariurus fordii*. Ref: 122.

**17159 Phlogacantholide B**

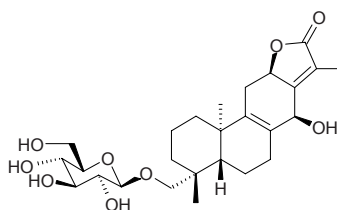
14 $\beta$ ,19-Dihydroxyabieta-8,13(15)-dien-16,12-olide  $C_{20}H_{28}O_4$  (332.44). Colorless needles (MeOH), mp<sup>21</sup> 1~213°C. Source: HUO YAN HUA *Phlogacanthus curviflorus* (root: yield = 0.0523%dw). Ref: 4799.

**17160 Phlogacantholide C**

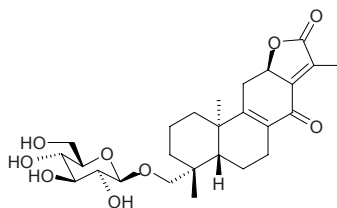
14 $\alpha$ ,19-Dihydroxyabieta-8,13(15)-dien-16,12-olide  $C_{20}H_{28}O_4$  (332.44). Colorless needles (acetone), mp 181~183°C. Source: HUO YAN HUA *Phlogacanthus curviflorus* (root: yield = 0.00042%dw). Ref: 4799.

**17161 Phlogacanthoside A**

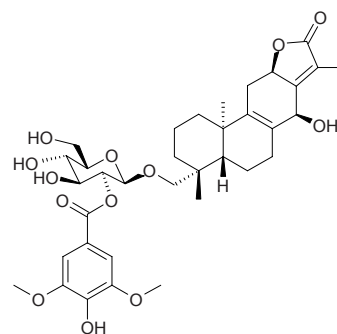
14 $\beta$ ,19-Dihydroxyabieta-8,13(15)-dien-16,12-olide 19-*O*- $\beta$ -D-glucopyranoside  $C_{26}H_{38}O_9$  (494.59). Colorless needles (MeOH), mp 148~149°C (MeOH). Source: HUO YAN HUA *Phlogacanthus curviflorus* (root: yield = 0.0085%dw). Ref: 4799.

**17162 Phlogacanthoside B**

19-Hydroxy-14-oxoabieta-8,13(15)-dien-16,12-olide 19-*O*- $\beta$ -D-glucopyranoside  $C_{26}H_{36}O_9$  (492.57). Colorless needles (MeOH), mp 136~137°C (MeOH),  $[\alpha]_D^{25} = -109.4^\circ$  ( $c = 0.16$ , MeOH). Source: HUO YAN HUA *Phlogacanthus curviflorus* (root: yield = 0.049%dw). Ref: 4799.

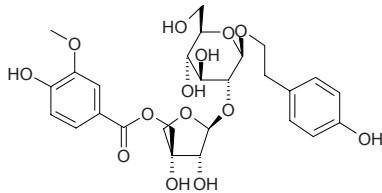
**17163 Phlogacanthoside C**

14 $\beta$ ,19-Dihydroxyabieta-8,13(15)-dien-16,12-olide 19-*O*-[2-(4-hydroxy-3,5-dimethoxybenzoyl)]- $\beta$ -D-glucopyranoside  $C_{35}H_{46}O_{13}$  (674.75). White powder,  $[\alpha]_D^{25} = -137.1^\circ$  ( $c = 0.14$ , MeOH). Source: HUO YAN HUA *Phlogacanthus curviflorus* (root: yield = 0.000077%dw). Ref: 4799.

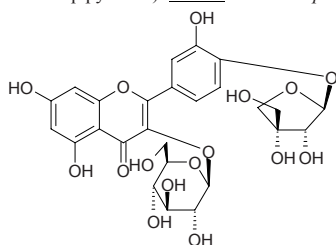


**17164 Phlomisethanoside**

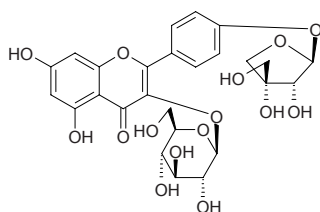
$C_{27}H_{34}O_{14}$  (582.56). Amorphous powder,  $[\alpha]_D = -58.6^\circ$  ( $c = 0.65$ , MeOH).  
 Source: DA HUA CAO SU *Phlomis grandiflora* var. *grandiflora*. Ref: 2287.

**17165 Phlomisflavoside A**

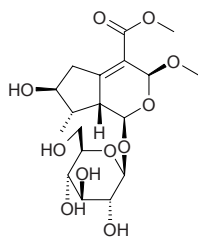
$C_{26}H_{28}O_{16}$  (596.50). Yellow amorphous powder,  $[\alpha]_D^{21} = -140^\circ$  ( $c = 0.55$ , 50% aq. pyridine). Source: *Phlomis spinidens* (aerial parts). Ref: 4115.

**17166 Phlomisflavoside B**

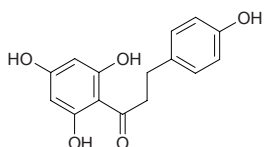
$C_{26}H_{28}O_{15}$  (580.50). Yellow amorphous powder,  $[\alpha]_D^{22} = -93.5^\circ$  ( $c = 0.64$ , 50% aq. pyridine). Source: *Phlomis spinidens* (aerial parts). Ref: 4115.

**17167 Phlomurin**

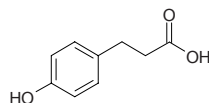
$C_{18}H_{28}O_{11}$  (420.42).  $[\alpha]_D^{21} = +12.4^\circ$  ( $c = 0.5$ , MeOH). Source: JIN HUANG CAO SU *Phlomis aurea* (leaf). Ref: 5093.

**17168 Phloretin**

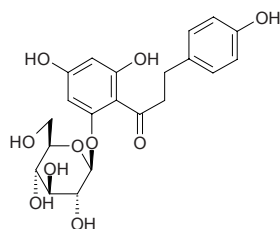
[60-82-2]  $C_{15}H_{14}O_5$  (274.28). mp 262–264°C (dec). Pharm: Antibacterial; anti-inflammatory (COX-2 inhibitor, prevents COX-2 expression)<sup>[4415]</sup>; platelet aggregation inhibitor<sup>[4415]</sup>; induces lipid peroxidization (rat, brain mitochondria); iodine-induced thyronine deiodinase inhibitor; protein kinase C inhibitor; insect antifeedant (*Schizaphis graminum*). Source: NING MENG YE *Citrus limon*. Ref: 6, 658, 4415.

**17169 Phloretinic acid**

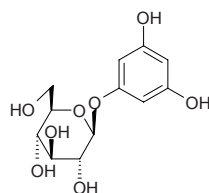
3-(4-Hydroxyphenyl)propanoic acid [501-97-3]  $C_9H_{10}O_3$  (166.18). Fluorescent substance, prisms (Et<sub>2</sub>O), mp 129–130°C, pKa = 4.76 (25°C). Pharm: Tyrosine kinase inhibitor (IC<sub>50</sub> = 64 μmol/L, interleukin-2 inducible T-cell kinase)<sup>[5252]</sup>. Source: HUANG GAN CAO *Glycyrrhiza kansuensis*, MO LEI NAN YANG SHEN *Polyscias murrayi*, PENG ZI CAI *Galium verum*, PING GUO *Malus pumila*. Ref: 660, 1521, 5252.

**17170 Phloridzin**

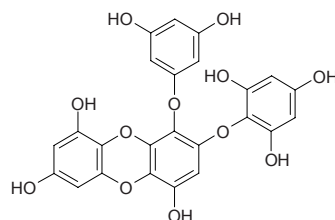
[60-81-1]  $C_{21}H_{24}O_{10}$  (436.42). Pharm: Diabetogenic; insect antifeedant (*Schizaphis graminum*, *Myzus persicae*). Source: KUAN YE SHAN YUE GUI *Kalmia latifolia*, RI BEN MA ZUI MU *Pieris japonica*, *Rhododendron* sp., *Malus* sp. Ref: 658.

**17171 Phlorin**

1,3,5-Trihydroxybenzene 1-*O*-β-*D*-glucoside [28217-60-9]  $C_{12}H_{16}O_8$  (288.26). mp 231–233°C. Pharm: α2-Macroglobulin inhibitor. Source: AN MO LE *Phyllanthus emblica* (root)<sup>[3065]</sup>, JI SU ZI *Cornus capitata* [Syn. *Dendrobenthamia capitata*], TIAN CHENG *Citrus sinensis*. Ref: 6, 3065.

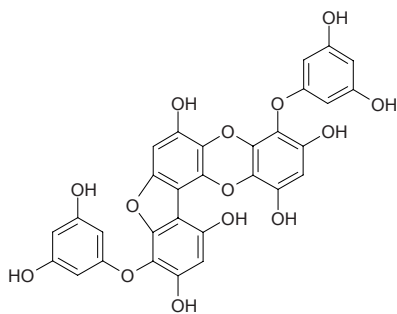
**17172 2-*O*-Phloroeckol**

[89444-89-3]  $C_{24}H_{16}O_{12}$  (496.38). Crystals, mp 206–207°C. Pharm: Insect growth inhibitor; α2-macroglobulin inhibitor. Source: HEI KUN BU *Ecklonia kurome*. Ref: 955.

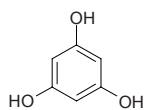


**17173 Phlorofucofuroeckol A**

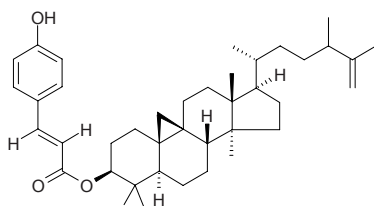
[128129-56-6] C<sub>30</sub>H<sub>18</sub>O<sub>14</sub> (602.47). Amorphous solid. **Pharm:** Antioxidant (DPPH scavenger, IC<sub>50</sub> = 4.6 μmol/L, control Ascorbic acid, IC<sub>50</sub> = 10.3 μmol/L)<sup>[4376]</sup>. **Source:** HEI KUN BU *Ecklonia kurome*, Brown alga *Ecklonia stolonifera*. **Ref:** 3204, 4376.

**17174 Phloroglucinol**

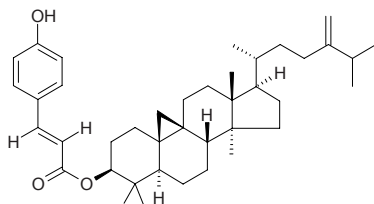
1,3,5-Trihydroxybenzene [108-73-6] C<sub>6</sub>H<sub>6</sub>O<sub>3</sub> (126.11). Leaflets or plates +2H<sub>2</sub>O (H<sub>2</sub>O), mp 117°C (dihydrate), mp 217~219°C (anhydrate, rapid heat), mp 200~209°C (anhydrate, slow heat), pK<sub>a1</sub> = 7.97; pK<sub>a2</sub> = 9.23 (20°C). **Pharm:** Antispasmodic; cytotoxic (Colon26-L5, ED<sub>50</sub> = 26.4 μmol/L; HT1080, ED<sub>50</sub> = 20.9 μmol/L)<sup>[3042]</sup>. **Source:** A LA BO JIN HE HUAN *Acacia arabica*, LV SONG QIU MAO *Mallotus philippinensis*, PING GUO *Malus pumila*, YANG CONG *Allium cepa*, YUN NAN CAO KOU *Alpinia blepharocalyx* (seed: yield = 0.00065%), *Eucalyptus kino*. **Ref:** 6, 658, 660, 1521, 3042.

**17175 Pholidotanin**

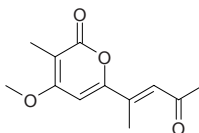
25-Methylenecycloartanyl-*p*-hydroxy-*trans*-cinnamate C<sub>40</sub>H<sub>58</sub>O<sub>3</sub> (586.91). White acicular crystals, mp 202~204°C, [α]<sub>D</sub><sup>14</sup> = +45.6° (c = 0.19, chloroform). **Source:** YUN NAN SHI XIAN TAO *Pholidota yunnanensis*. **Ref:** 478.

**17176 Pholidotin**

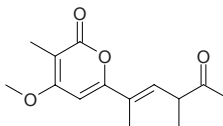
C<sub>40</sub>H<sub>58</sub>O<sub>3</sub> (586.91). Crystals, mp 196°C, [α]<sub>D</sub> = +5.54° (chloroform). **Source:** HONG SHI XIAN TAO *Pholidota rubra*. **Ref:** 659.

**17177 Phomapyrone D**

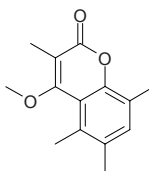
C<sub>12</sub>H<sub>14</sub>O<sub>4</sub> (222.24). **Source:** BAN DIAN XIAO QIU QIANG JUN *Leptosphaeria maculans*, JING DIAN MEI *Phoma lingam*. **Ref:** 5246.

**17178 Phomapyrone E**

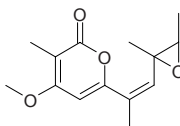
C<sub>14</sub>H<sub>18</sub>O<sub>4</sub> (250.30). **Source:** BAN DIAN XIAO QIU QIANG JUN *Leptosphaeria maculans*, JING DIAN MEI *Phoma lingam*. **Ref:** 5246.

**17179 Phomapyrone F**

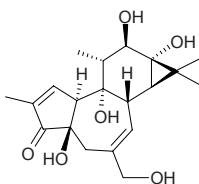
C<sub>14</sub>H<sub>16</sub>O<sub>3</sub> (232.28). **Source:** BAN DIAN XIAO QIU QIANG JUN *Leptosphaeria maculans*, JING DIAN MEI *Phoma lingam*. **Ref:** 5246.

**17180 Phomapyrone G**

C<sub>14</sub>H<sub>18</sub>O<sub>4</sub> (250.30). **Source:** BAN DIAN XIAO QIU QIANG JUN *Leptosphaeria maculans*, JING DIAN MEI *Phoma lingam*. **Ref:** 5246.

**17181 Phorbol**

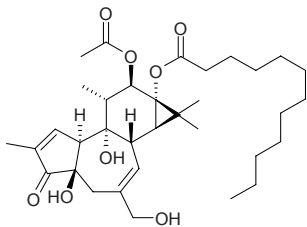
4β,9α,12β,13α,20-Pentahydroxy-1,6-tigliadien-3-one [17673-25-5] C<sub>20</sub>H<sub>28</sub>O<sub>6</sub> (364.44). Crystals +MeOH (MeOH), mp 240~250°C, 250~251°C (dec, solvent free), [α]<sub>D</sub><sup>20</sup> = +118° (c = 0.4, dioxane). **Pharm:** Irritant (skin); Esters are potent tumor-promoting agents **Source:** BA DOU *Croton tiglium*, BEI MEI HONG SHAN *Sequoia sempervirens*, HONG JIAN QIU LUO *Lychnis dioica*, JU SHAN *Sequoia gigantea*, YANG CONG *Allium cepa*, *Euphorbia* spp., *Sapium* spp. **Ref:** 2, 1521.



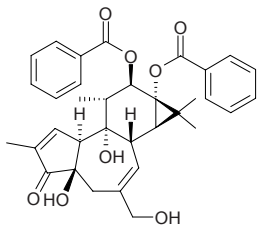


**17182 Phorbol-12-acetate-13-laurate**

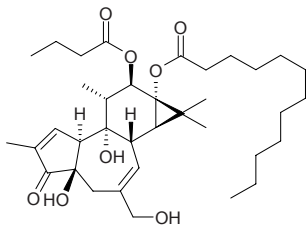
$C_{34}H_{52}O_8$  (588.79). Source: BA DOU *Croton tiglium*. Ref: 660.

**17183 Phorbol-12-benzoate-13-benzoate**

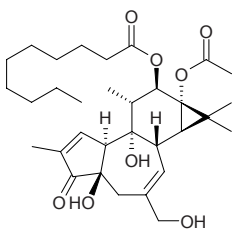
$C_{34}H_{36}O_8$  (572.66). Source: BA DOU *Croton tiglium*. Ref: 660.

**17184 Phorbol-12-butyrate-13-laurate**

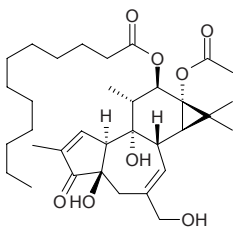
$C_{36}H_{56}O_8$  (616.84). Source: BA DOU *Croton tiglium*. Ref: 660.

**17185 Phorbol-12-caprate-13-acetate**

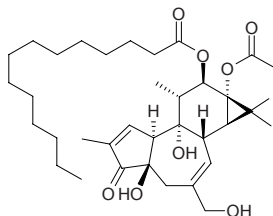
$C_{32}H_{48}O_8$  (560.73). Source: BA DOU *Croton tiglium*. Ref: 660.

**17186 Phorbol-12-laurate-13-acetate**

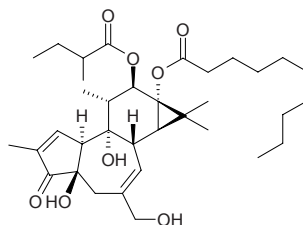
$C_{34}H_{52}O_8$  (588.79). Source: BA DOU *Croton tiglium*. Ref: 660.

**17187 Phorbol-4-methoxy-12-myristate-13-acetate**

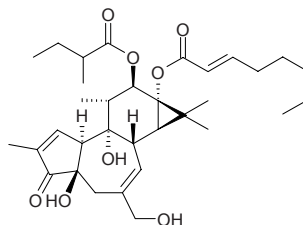
12-Tetradecanoylphorbol 13-acetate  $C_{36}H_{56}O_8$  (616.84). Pharm: Carcinogen assistant; irritant; anti-HIV-1 (MT-4 cells, HIV-1-induced cytopathic effect inhibitor,  $IC_{100} = 0.00048 \mu\text{g/mL}$ ,  $CC_0 = 31.3 \mu\text{g/mL}$ , control DS8000,  $IC_{100} = 3.9 \mu\text{g/mL}$ ,  $CC_0 > 1000 \mu\text{g/mL}$ )<sup>[3921]</sup>; PKC activator (10ng/mL, activity rate = 96%)<sup>[3921]</sup>. Source: BA DOU *Croton tiglium*. Ref: 658, 660, 3921.

**17188 Phorbol-12-α-methylbutyrate-13-caprate**

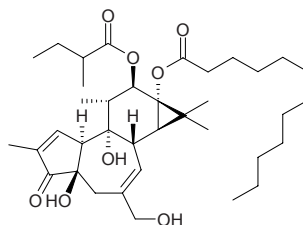
$C_{35}H_{54}O_8$  (602.82). Source: BA DOU *Croton tiglium*. Ref: 660.

**17189 Phorbol-12-α-methylbutyrate-13-caprylenate**

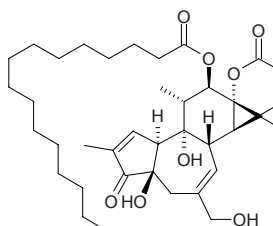
$C_{33}H_{48}O_8$  (572.75). Source: BA DOU *Croton tiglium*. Ref: 660.

**17190 Phorbol-12-α-methylbutyrate-13-laurate**

$C_{37}H_{58}O_8$  (630.87). Source: BA DOU *Croton tiglium*. Ref: 660.

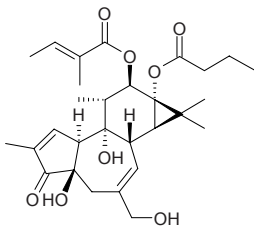
**17191 Phorbol-12-palmitate-13-acetate**

$C_{38}H_{60}O_8$  (644.90). Source: BA DOU *Croton tiglium*. Ref: 660.

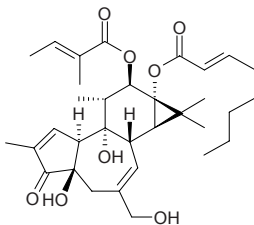


**17192 Phorbol-12-tiglate-13-butyrate**

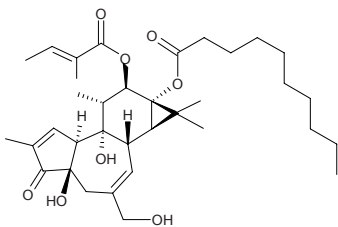
$C_{29}H_{40}O_8$  (516.64). Source: BA DOU *Croton tiglium*. Ref: 660.

**17193 Phorbol-12-tiglate-13-caprylate**

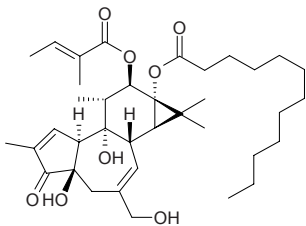
$C_{33}H_{46}O_8$  (570.73). Source: BA DOU *Croton tiglium*. Ref: 660.

**17194 Phorbol 12-tiglate 13-decanonate**

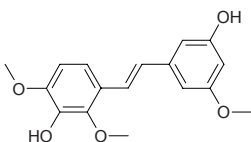
Phorbol-12-tiglate-13-caprate  $C_{35}H_{52}O_8$  (600.80). Resinoid,  $[\alpha]_D^{27} = +39^\circ$  ( $c = 0.78$ , dioxane). Pharm: Activates plasminogen; antineoplastic (mus P<sub>388</sub>, 60~250mg/kg). Source: BA DOU *Croton tiglium*. Ref: 658, 660, 661.

**17195 Phorbol-12-tiglate-13-laurate**

$C_{37}H_{56}O_8$  (628.85). Source: BA DOU *Croton tiglium*. Ref: 660.

**17196 Phoyunbene A**

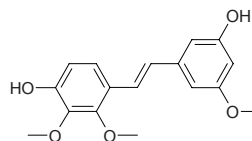
*trans*-3,3'-Dihydroxy-2',4',5-trimethoxystilbene  $C_{17}H_{18}O_5$  (302.33). White needles, mp 170~171°C. Pharm: NO production inhibitor ( $IC_{50} = 32.9\mu\text{mol/L}$  without cytotoxicity). Source: YUN NAN SHI XIAN TAO *Pholidota yunnanensis* (air-dried whole herb; yield = 0.0007%dw). Ref: 17.

**17197 Phoyunbene B**

*trans*-3,4'-Dihydroxy-2',3',5-trimethoxystilbene  $C_{17}H_{18}O_5$  (302.33). Oil.

Pharm: NO production inhibitor ( $IC_{50} = 7.5\mu\text{mol/L}$  without cytotoxicity).

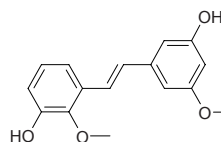
Source: YUN NAN SHI XIAN TAO *Pholidota yunnanensis* (air-dried whole herb; yield = 0.0037%dw). Ref: 17.

**17198 Phoyunbene C**

*trans*-3,3'-Dihydroxy-2',5-dimethoxystilbene  $C_{16}H_{16}O_4$  (272.30). Oil. Pharm:

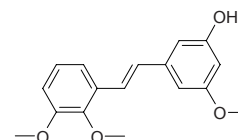
NO production inhibitor ( $IC_{50} = 49.0\mu\text{mol/L}$  without cytotoxicity). Source:

YUN NAN SHI XIAN TAO *Pholidota yunnanensis* (air-dried whole herb; yield = 0.0077%dw). Ref: 17.

**17199 Phoyunbene D**

*trans*-3-Hydroxy-2',3',5-trimethoxystilbene(6)  $C_{17}H_{18}O_4$  (286.33). Yellow

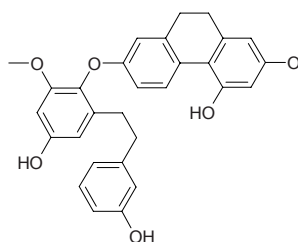
prisms, mp 128~129°C. Pharm: NO production inhibitor ( $IC_{50} = 87.3\mu\text{mol/L}$  without cytotoxicity). Source: YUN NAN SHI XIAN TAO *Pholidota yunnanensis* (air-dried whole herb; yield = 0.0005%dw). Ref: 17.

**17200 Phoyunnanin A**

7-[2-(3-Hydroxyphenethyl)-4-hydroxy-6-methoxyphenoxy]-4-hydroxy-2-methoxy-9,10-dihydrophenanthrene  $C_{30}H_{28}O_6$  (484.55). Amorphous powder.

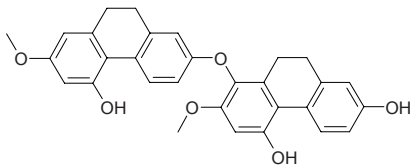
Pharm: NO production inhibitor (with cytotoxicity at the test concentration).

Source: YUN NAN SHI XIAN TAO *Pholidota yunnanensis* (air-dried whole herb; yield = 0.0007%dw). Ref: 17.

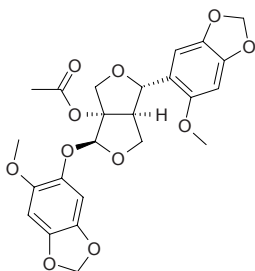


**17201 Phoyunnanin B**

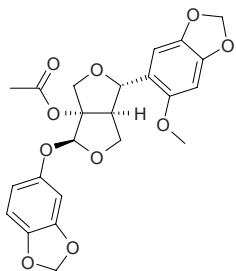
1-[(9,10-Dihydro-4-hydroxy-2-methoxy-7-phenanthrenyl)oxy]-4,7-dihydroxy-2-methoxy-9,10-dihydrophenanthrene C<sub>30</sub>H<sub>26</sub>O<sub>6</sub> (482.54). Amorphous powder. **Pharm:** NO production inhibitor (with cytotoxicity at the test concentration). **Source:** YUN NAN SHI XIAN TAO *Pholidota yunnanensis* (air-dried whole herb: yield = 0.0012%dw). **Ref:** 17.

**17202 Phrymarolin I**

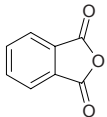
[38303-95-6] C<sub>24</sub>H<sub>24</sub>O<sub>11</sub> (488.46). **Pharm:** Synergist of pesticides. **Source:** TOU GU CAO *Speranskia tuberculata*, *Speranskia leptostachya* (in 1969, the compound was isolated from the plant)<sup>[5505]</sup>. **Ref:** 658, 5505.

**17203 Phrymarolin II**

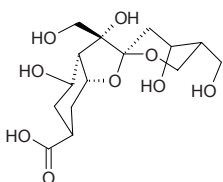
[23720-86-7] C<sub>23</sub>H<sub>22</sub>O<sub>10</sub> (458.43). mp 160–161°C. **Source:** LAO PO ZI ZHEN XIAN *Phryma leptostachya*. **Ref:** 6.

**17204 Phthalic anhydride**

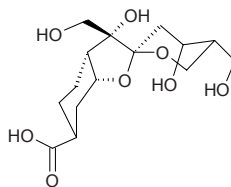
1,3-Phthalandione [85-44-9] C<sub>8</sub>H<sub>4</sub>O<sub>3</sub> (148.12). **Source:** DANG GUI *Angelica sinensis*. **Ref:** 2.

**17205 Phyllaemblic acid B**

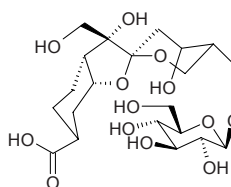
C<sub>15</sub>H<sub>24</sub>O<sub>9</sub> (348.35). Off-white amorphous powder, [α]<sub>D</sub><sup>17</sup> = +58.7° (c = 0.46, MeOH). **Source:** AN MO LE *Phyllanthus emblica* (root). **Ref:** 3065.

**17206 Phyllaemblic acid C**

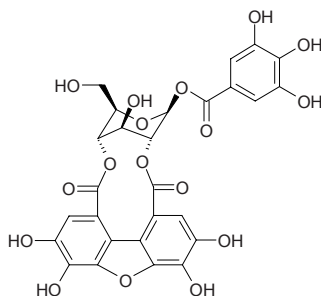
C<sub>15</sub>H<sub>24</sub>O<sub>8</sub> (332.35). Off-white amorphous powder, [α]<sub>D</sub><sup>17</sup> = +80.6° (c = 0.32, MeOH). **Source:** AN MO LE *Phyllanthus emblica* (root). **Ref:** 3065.

**17207 Phyllaemblicin D**

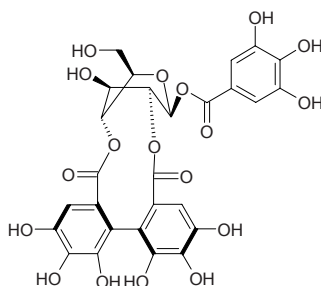
C<sub>21</sub>H<sub>34</sub>O<sub>13</sub> (494.50). Off-white amorphous powder, [α]<sub>D</sub><sup>17</sup> = +32.5° (c = 0.31, MeOH). **Source:** AN MO LE *Phyllanthus emblica* (root). **Ref:** 3065.

**17208 Phyllanemblinin A**

1-*O*-Galloyl-2,4-tetrahydroxydibenzofurancarboxyl-β-*D*-glucose C<sub>27</sub>H<sub>20</sub>O<sub>17</sub> (616.45). Off-white amorphous powder, [α]<sub>D</sub><sup>22</sup> = –103.0° (c = 0.21, MeOH). **Source:** AN MO LE *Phyllanthus emblica* (fruit juice). **Ref:** 3094.

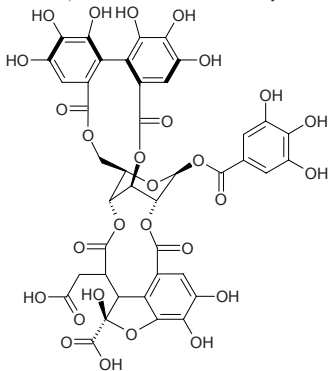
**17209 Phyllanemblinin B**

1-*O*-Galloyl-2,4-(*R*)-HHDP-β-*D*-glucose C<sub>27</sub>H<sub>22</sub>O<sub>18</sub> (634.47). White amorphous powder, [α]<sub>D</sub><sup>22</sup> = –39.5° (c = 0.18, MeOH). **Source:** AN MO LE *Phyllanthus emblica* (leaf, branch). **Ref:** 3094.

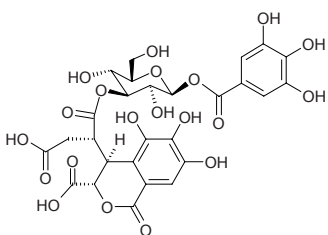


**17210 Phyllanemblinin C**

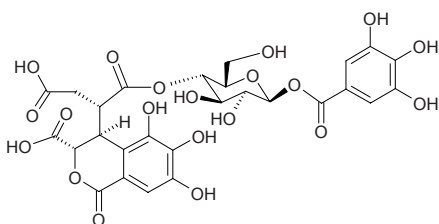
$C_{41}H_{30}O_{28}$  (970.68). Off-white amorphous powder,  $[\alpha]_D^{22} = -26.0^\circ$  ( $c = 0.13$ , MeOH). Source: AN MO LE *Phyllanthus emblica* (leaf, branch). Ref: 3094.

**17211 Phyllanemblinin D**

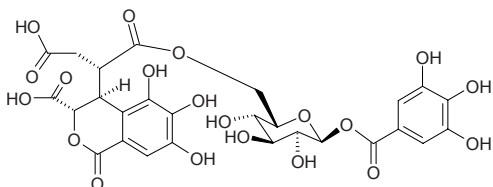
$C_{27}H_{26}O_{20}$  (670.5). White amorphous powder,  $[\alpha]_D^{22} = -7.9^\circ$  ( $c = 0.33$ , MeOH). Source: AN MO LE *Phyllanthus emblica* (leaf, branch). Ref: 3094.

**17212 Phyllanemblinin E**

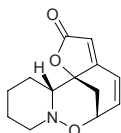
$C_{27}H_{26}O_{20}$  (670.5). White amorphous powder,  $[\alpha]_D^{22} = -8.3^\circ$  ( $c = 0.36$ , MeOH). Source: AN MO LE *Phyllanthus emblica* (leaf, branch). Ref: 3094.

**17213 Phyllanemblinin F**

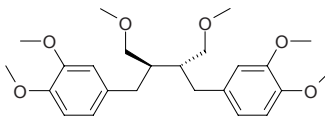
$C_{27}H_{26}O_{20}$  (670.5). White amorphous powder,  $[\alpha]_D^{22} = -18.3^\circ$  ( $c = 0.17$ , MeOH). Source: AN MO LE *Phyllanthus emblica* (leaf, branch). Ref: 3094.

**17214 ent-Phyllanthidine**

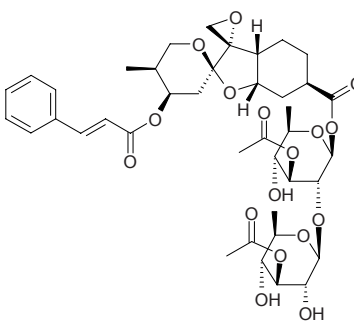
$C_{13}H_{15}NO_3$  (233.27). White needles (petroleum ether–acetone), mp 169–170°C,  $[\alpha]_D^{20} = +300^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ). Source: YI YE QIU *Securinega suffruticosa* (branch leaf). Ref: 4818.

**17215 Phyllanthin**

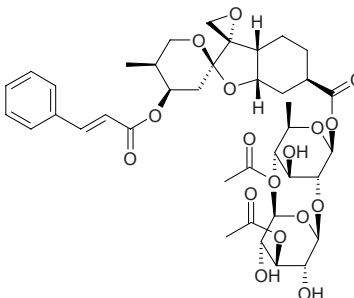
[10351-88-9]  $C_{24}H_{34}O_6$  (418.54). Pharm: Bitter principle. Source: ZHU ZI CAO *Phyllanthus niruri*. Ref: 658.

**17216 Phyllanthoside**

[63166-73-4]  $C_{40}H_{52}O_{17}$  (804.85). Amorphous solid, mp 125–127°C,  $[\alpha]_D^{22} = +16.9^\circ$  ( $c = 0.71$ ,  $CHCl_3$ ). Pharm: Antineoplastic (mus: melanotic carcinoma B16, 8mg/kg, cure rate = 12%, 4–16mg/kg, biotic prolonged rate = 62%–90%,  $P_{388}$  high activity; in stage of pre-clinic at NCI); antiviral (*in vivo*: mus genital, vagina administration, 1mg/mL tid, inhibits infection of herpes simplex virus 2; *in vitro*: cellculture, inhibits herpes simplex virus, vesicular stomatitis virus VSV, Gesak virus). Source: JIAN YE YE XIA ZHU *Phyllanthus acuminatus*. Ref: 3620, 3621, 3622.

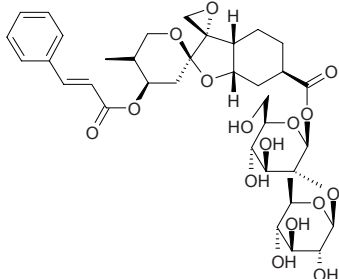
**17217 Phyllanthostatin 1**

[82209-93-6]  $C_{40}H_{52}O_{17}$  (804.85). Amorphous solid, mp 125–126°C,  $[\alpha]_D^{26} = -3.6^\circ$  ( $c = 0.83$ ,  $CHCl_3$ ). Pharm: Antineoplastic (mus: melanotic carcinoma B16, 6–48mg/kg, biotic prolonged rate = 52%–90%,  $P_{388}$  high activity); antiviral (*in vivo*: mus genital, inhibits infection of herpes simplex virus 2; *in vitro*: cellculture, inhibits herpes simplex virus, vesicular stomatitis virus VSV, Gesak virus). Source: JIAN YE YE XIA ZHU *Phyllanthus acuminatus*. Ref: 3620, 3621, 3622.

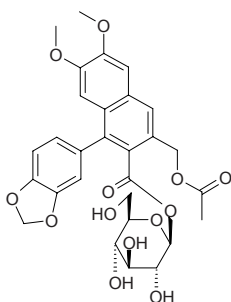


**17218 Phyllanthostatin 6**

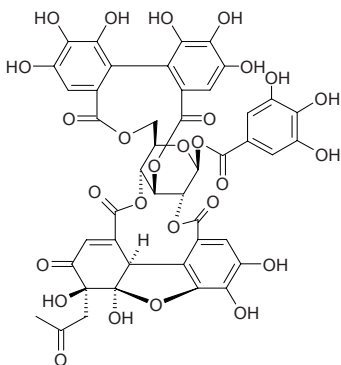
[132282-94-1] C<sub>36</sub>H<sub>48</sub>O<sub>16</sub> (736.77). Amorphous solid, mp 136–139°C,  $[\alpha]_D^{25} = +12.0^\circ$  ( $c = 0.25$ , CH<sub>2</sub>Cl<sub>2</sub>). **Pharm:** Cytotoxic (P<sub>388</sub>, ED<sub>50</sub> = 0.35 μg/mL). **Source:** JIAN YE YE XIA ZHU *Phyllanthus acuminatus*. **Ref:** 3700.

**17219 Phyllanthostatin A**

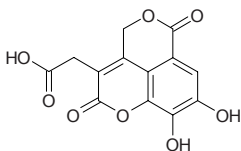
[119767-19-0] C<sub>29</sub>H<sub>30</sub>O<sub>13</sub> (586.56). **Pharm:** Inhibits activity of cells. **Source:** JIAN YE YE XIA ZHU *Phyllanthus acuminatus*. **Ref:** 658.

**17220 Phyllanthusiin D**

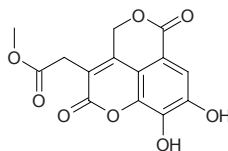
Acetonylgeraniin A [133145-19-4] C<sub>44</sub>H<sub>32</sub>O<sub>27</sub> (992.71). Colorless acicular crystals, mp 245–247°C (water–methanol). **Pharm:** Antiulcerative (mus, stomach ulcer induced by stress reaction of cold); increases blood pressure; reverses standing low blood pressure (conscious SHR rat, induced by hexamethonium); regulates cAMP level and hydrochloric acid in gastric juice. **Source:** LONG YAN YE *Euphoria longan* [Syn. *Dimocarpus longan*]. **Ref:** 900.

**17221 Phyllanthusiin E**

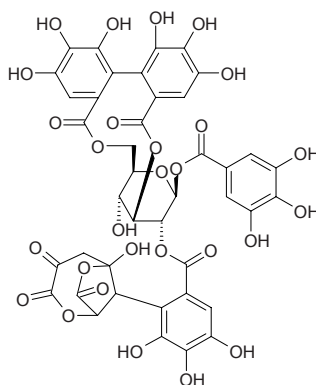
C<sub>13</sub>H<sub>8</sub>O<sub>8</sub> (292.20). White amorphous powder. **Source:** SHEN YE TIAN ZHU KUI *Pelargonium reniforme* (aerial parts). **Ref:** 3975.

**17222 Phyllanthusiin E methyl ester**

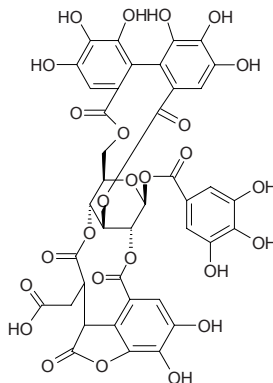
C<sub>14</sub>H<sub>10</sub>O<sub>8</sub> (306.23). White amorphous powder, mp 158–160°C. **Source:** SHEN YE TIAN ZHU KUI *Pelargonium reniforme* (aerial parts). **Ref:** 3975.

**17223 Phyllanthusiin G**

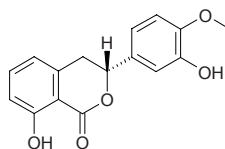
C<sub>41</sub>H<sub>30</sub>O<sub>28</sub> (970.68). Light yellow-brown amorphous powder, mp 270°C (dec, EtOH–H<sub>2</sub>O),  $[\alpha]_D^{25} = +23.1^\circ$  ( $c = 0.65$ , H<sub>2</sub>O–acetone). **Source:** YE XIA ZHU *Phyllanthus urinaria* (fresh whole herb). **Ref:** 4832.

**17224 Phyllanthusiin U**

1-*O*-Galloyl-3,6-*O*-HHDP-2,4-*O*-dehydroxymethyl-chebuloyl-β-*D*-glucopyranos C<sub>40</sub>H<sub>28</sub>O<sub>26</sub> (924.65). Yellowish amorphous powder, mp 270°C (dec),  $[\alpha]_D = -77^\circ$  ( $c = 0.6$ , MeOH). **Source:** YE XIA ZHU *Phyllanthus urinaria*. **Ref:** 680.

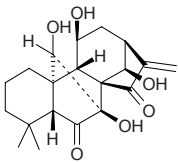
**17225 Phyllo dulcin**

[480-46-6] C<sub>16</sub>H<sub>14</sub>O<sub>5</sub> (286.29). **Pharm:** Antifungal. **Source:** SE BO GE XIU QIU *Hydrangea macrophylla* var. *thunbergii* (in 1916, the compound was isolated from the plant)<sup>[5505]</sup>. **Ref:** 658, 5505.

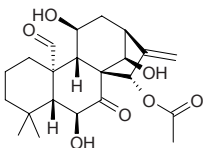


**17226 Phyllostachysin A**

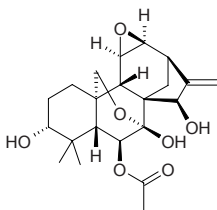
$C_{20}H_{26}O_6$  (362.43). mp 264–265°C,  $[\alpha]_D^{20} = -30.5^\circ$  ( $c = 1.25$ ,  $C_5H_5N$ ). Source: YE SUI XIANG CHA CAI *Isodon phyllostachys*. Ref: 4067.

**17227 Phyllostachysin B**

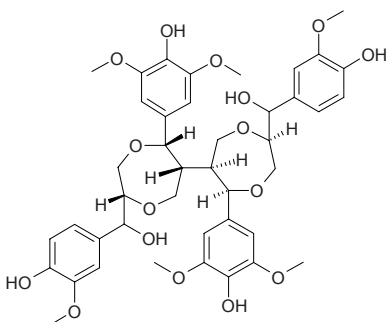
$C_{22}H_{30}O_7$  (406.48). mp 213–215°C. Source: YE SUI XIANG CHA CAI *Isodon phyllostachys*. Ref: 4067.

**17228 Phyllostachysin C**

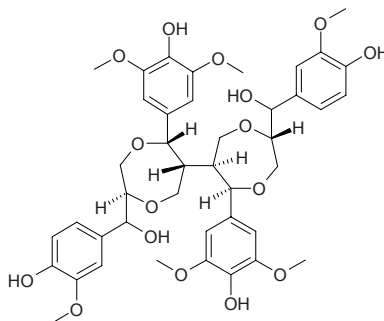
$C_{22}H_{30}O_7$  (406.48). mp 203–205°C,  $[\alpha]_D^{13} = -102.0^\circ$  ( $c = 0.55$ ,  $C_5H_5N$ ). Source: YE SUI XIANG CHA CAI *Isodon phyllostachys*. Ref: 4067.

**17229 Phyllostadimer A**

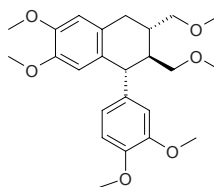
$C_{42}H_{50}O_{16}$  (810.86). Amorphous powder, mp 117–119°C,  $[\alpha]_D = -4.0^\circ$  ( $c = 1.0$ ,  $CHCl_3$ ). Pharm: Antioxidant (liposomal lipid peroxidation inhibitor, ADP/Fe<sup>2+</sup>-induced, IC<sub>50</sub> = 15 μmol/L, control Vitamin E, IC<sub>50</sub> = 235 μmol/L)<sup>[3475]</sup>. Source: MENG ZONG ZHU *Phyllostachys edulis* (bamboo stem). Ref: 3475.

**17230 Phyllostadimer B**

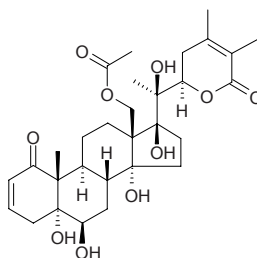
$C_{42}H_{50}O_{16}$  (810.86). Amorphous powder, mp 118–120°C,  $[\alpha]_D = +19.0^\circ$  ( $c = 1.0$ ,  $CHCl_3$ ). Source: MENG ZONG ZHU *Phyllostachys edulis* (bamboo stem). Ref: 3475.

**17231 Phytetralin**

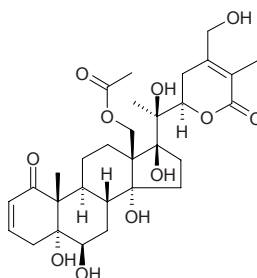
3',4',5,9,9'-Hexamethoxy-2,7'-cyclo lignan [123048-17-9]  $C_{24}H_{32}O_6$  (416.52). mp 110–111°C,  $[\alpha]_D^{30} = +17.5^\circ$  ( $c = 0.16$ ,  $CHCl_3$ ). Source: ZHU ZI CAO *Phyllanthus niruri*. Ref: 2676.

**17232 Physachenolide A**

$C_{30}H_{42}O_{10}$  (362.66). Colorless crystals, mp 204–205°C,  $[\alpha]_D^{22} = +17.58^\circ$  ( $c = 1.7$ , MeOH). Source: *Physalis chenopodifolia* (flower, stem and leaf). Ref: 4922.

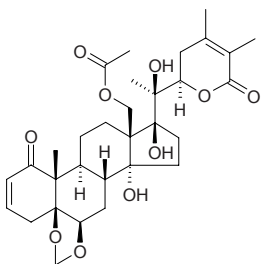
**17233 Physachenolide B**

$C_{30}H_{42}O_{11}$  (578.66). Colorless crystals (decompose on storage), mp 209–210°C,  $[\alpha]_D^{22} = +62.09^\circ$  ( $c = 1.53$ , MeOH). Source: *Physalis chenopodifolia* (flower, stem and leaf). Ref: 4922.

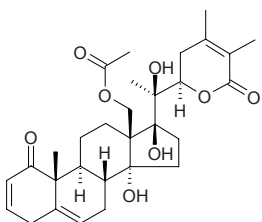


**17234 Physachenolide C**

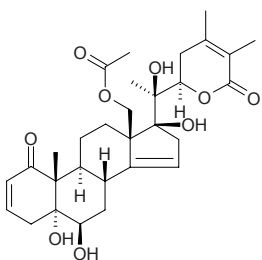
$C_{31}H_{42}O_{10}$  (574.67). Colorless crystals, mp 156–157°C. Source: *Physalis chenopodifolia* (flower, stem and leaf). Ref: 4922.

**17235 Physachenolide D**

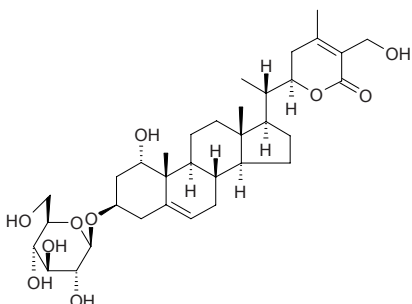
$C_{30}H_{40}O_8$  (528.65). Colorless crystals, mp 150–151°C,  $[\alpha]_D^{25} = +17.5^\circ$  ( $c = 2.05$ , MeOH). Source: *Physalis chenopodifolia* (flower, stem and leaf). Ref: 4922.

**17236 Physachenolide E**

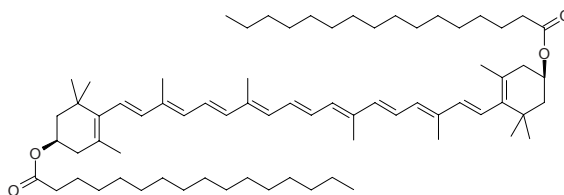
$C_{30}H_{40}O_9$  (544.65). Colorless crystals, mp 185–187°C,  $[\alpha]_D^{25} = +7.77^\circ$  ( $c = 0.9$ , MeOH). Source: *Physalis chenopodifolia* (flower, stem and leaf). Ref: 4922.

**17237 Physagulin D**

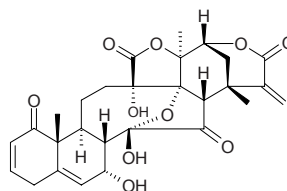
$C_{34}H_{52}O_{10}$  (620.79). Source: CUI MIAN SHUI QIE *Withania somnifera* (root). Ref: 4198.

**17238 Physalien**

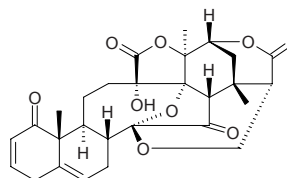
Zeaxanthin dipalmitate [144-67-2]  $C_{72}H_{116}O_4$  (1045.72). Pharm: Yellow pigment. Source: GOU QI ZI *Lycium chinense*, GUA JIN DENG GEN *Physalis alkekengi* var. *franchetii*, MAO SUAN JIANG *Physalis pubescens*, NING XIA GOU QI ZI *Lycium barbarum*. Ref: 2, 658.

**17239 Physalin A**

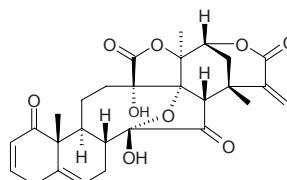
[23027-91-0]  $C_{28}H_{30}O_{10}$  (526.55). mp 266°C. Pharm: Cytotoxic (mus, myelocytic leukemia M1, 50 μmol/L); inducing cell differentiation activity (mus, myelocytic leukemia M1, 10 μmol/L, 50% M1 cells differentiate to macrophage). Source: SUAN JIANG *Physalis alkekengi*. Ref: 6, 1703.

**17240 Physalin B**

[23133-56-4]  $C_{28}H_{30}O_9$  (510.55). mp 250°C (acetone), 271°C (methanol). Pharm: Antineoplastic (mouse, leukemia 3PS, 300 mg/kg, T/C = 137%); cytotoxic (mouse lymph leukemia 9PS ED<sub>50</sub> = 0.01 μg/mL, 9KB ED<sub>50</sub> = 3.1 μg/mL; hmn leukemia cells HL-60, KG-1, CTV1, K562, APM1840); anti-inflammatory (modulator of cytokine network: inhibits generation of TNF-α, IL-6 and IL-12 in macrophages stimulated with LPS and IFNγ, IC<sub>50</sub> < 2 μg/mL; also reduces levels of TNF-α in the serum of LPS-treated mouse, 0.5 mg/mouse)<sup>[4416]</sup>. Source: SUAN JIANG *Physalis alkekengi*, KU ZHI *Physalis angulata*. Ref: 6, 1722, 1723, 1724, 4416.

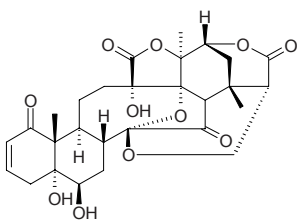
**17241 Physalin C**

[27503-33-9]  $C_{28}H_{30}O_9$  (510.55). mp 274–277°C. Source: SUAN JIANG *Physalis alkekengi*. Ref: 6.

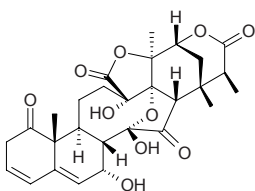


**17242 Physalin D**

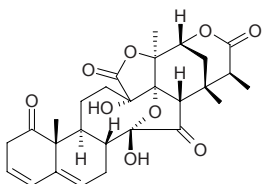
[54980-22-2] C<sub>28</sub>H<sub>32</sub>O<sub>11</sub> (544.56). Source: SUAN JIANG *Physalis alkekengi*.  
Ref: 6.

**17243 Physalin L**

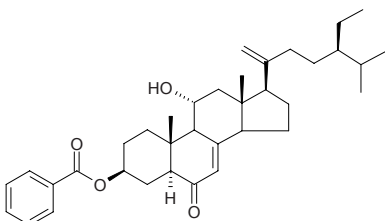
[113146-74-0] C<sub>28</sub>H<sub>32</sub>O<sub>10</sub> (528.56). Colorless prisms, mp 252~254°C (CHCl<sub>3</sub>:MeOH = 1:1), [α]<sub>D</sub> = -134° (c = 0.033, acetone). Pharm: Antineoplastic (50 μmol/L, inducing cell differentiation activity). Source: GUA JIN DENG *Physalis alkekengi* var. *franchetii*. Ref: 3623, 1703.

**17244 Physalin M**

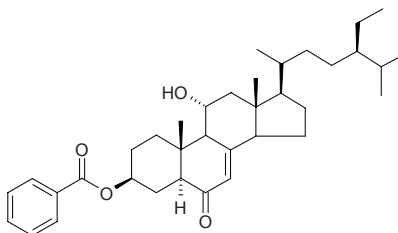
[117591-92-1] C<sub>28</sub>H<sub>32</sub>O<sub>9</sub> (512.56). Colorless prisms, mp 224~227°C, [α]<sub>D</sub><sup>24</sup> = -106° (c = 0.34, acetone). Pharm: Cytotoxic (HeLa, IC<sub>50</sub> = 27.6 μg/mL). Source: GUA JIN DENG *Physalis alkekengi* var. *franchetii*. Ref: 3735.

**17245 Physanol A**

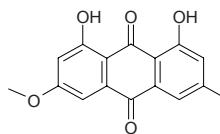
[54615-35-9] C<sub>36</sub>H<sub>50</sub>O<sub>4</sub> (546.80). Crystals (CHCl<sub>3</sub>-MeOH), mp 234~236°C, [α]<sub>D</sub> = +60° (CHCl<sub>3</sub>). Source: GUA JIN DENG *Physalis alkekengi* var. *franchetii*. Ref: 3205.

**17246 Physanol B**

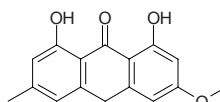
[54615-36-0] C<sub>36</sub>H<sub>52</sub>O<sub>4</sub> (548.81). Crystals (CHCl<sub>3</sub>-MeOH), mp 232~233°C. Source: GUA JIN DENG *Physalis alkekengi* var. *franchetii*. Ref: 3205.

**17247 Physcion**

Emodin-3-monomethyl ether [521-61-9] C<sub>16</sub>H<sub>12</sub>O<sub>5</sub> (284.27). mp 206~207°C. Pharm: Antibacterial (*Staphylococcus aureus*, *Bacillus coli*, *Bacillus pyocyaneus*, *Bacillus dysenteriae*); mutagen (*Salmonella* TA1535); cytochrome P-450 inhibitor (slows NADPH's reduction to P-450, influence liver's metabolism to drugs); antioxidant inactive (DPPH scavenger, IC<sub>50</sub> > 100 μg/mL; control Ascorbic acid, IC<sub>50</sub> = 3.9 μg/mL)<sup>[4711]</sup>; antioxidant inactive (DPPH scavenger assay)<sup>[5232]</sup>; cytotoxic inactive (MCF, HM02, HepG2)<sup>[5232]</sup>. Source: BA JI TIAN *Morinda officinalis*, DA HUANG *Rheum officinale*, DUN YE JUE MING *Cassia obtusifolia* (ripe seed: mean content = 0.0032%)<sup>[5508]</sup>, FAN XIE YE *Cassia angustifolia*, HE SHOU WU *Polygonum multiflorum* (dried tuberoid (raw): content scope of 8 batch samples = 0.004%~0.082%, mean content = 0.029%)<sup>[5508]</sup>, HE SHOU WU *Polygonum multiflorum* (dried tuberoid (preparing): content scope of 7 batch samples = 0.002%~0.095%, mean content = 0.067%)<sup>[5508]</sup>, HU ZHANG *Polygonum cuspidatum* (mean content = 0.228%)<sup>[5508]</sup>, JIAN YE FAN XIE YE *Cassia acutifolia*, JUE MING ZI *Cassia tora* (ripe seed: content = 0.0014%)<sup>[5508]</sup>, NI BO ER YANG TI *Rumex nepalensis*, NIU SHE CAO *Rumex dentatus* (root: mean content = 0.0249%)<sup>[5508]</sup>, NIU XI XI *Rumex patientia* (root: mean content = 0.0587%)<sup>[5508]</sup>, SUAN MO *Rumex acetosa* (root: mean content = 0.1133%)<sup>[5508]</sup>, TANG GU TE DA HUANG *Rheum tanguticum*, WANG JIANG NAN ZI *Cassia occidentalis* (ripe seed: content = 0.0068%)<sup>[5508]</sup>, YANG TI *Rumex japonicus* (root: mean content = 0.0754%)<sup>[5508]</sup>, YE JIAO TENG *Polygonum multiflorum*, ZANG BIAN DA HUANG *Rheum emodi* [Syn. *Rheum australe*] (root: yield = 0.23%dw)<sup>[4711]</sup>, ZHANG YE DA HUANG *Rheum palmatum*. Ref: 2, 6, 608, 660, 4711, 5232, 5501, 5508.

**17248 Physcion anthrone**

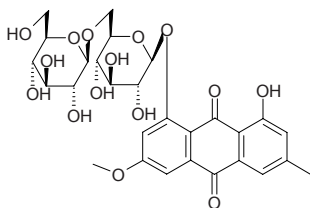
C<sub>16</sub>H<sub>14</sub>O<sub>4</sub> (270.29). Source: SUAN MO *Rumex acetosa*, Ref: 3206.



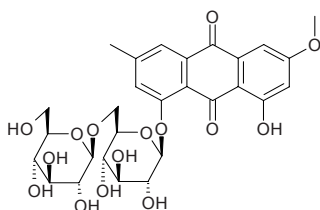


**17249 Physciondiglucoside**

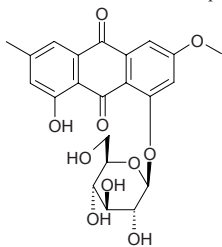
[84268-38-2] C<sub>28</sub>H<sub>32</sub>O<sub>15</sub> (608.56). Nacarat crystals (ethanol), mp 358~360°C, mp 221~223°C. **Pharm:** Laxative (mus, ori). **Source:** ZHANG YE DA HUANG *Rheum palmatum*. **Ref:** 900.

**17250 Physcion-8-O-β-D-gentiobioside**

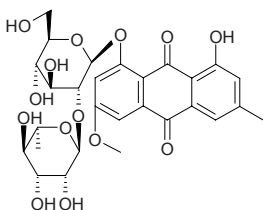
[84268-38-2] C<sub>28</sub>H<sub>32</sub>O<sub>15</sub> (608.56). **Source:** DA HUANG *Rheum officinale*, JUE MING ZI *Cassia tora*, TANG GU TE DA HUANG *Rheum tanguticum*, ZANG BIAN DA HUANG *Rheum emodi* [Syn. *Rheum australe*] (root: yield = 0.083%dw)<sup>[4711]</sup>, ZHANG YE DA HUANG *Rheum palmatum*, ZHOU ZHI SHU LI *Rhamnus virgata*. **Ref:** 2, 658, 660, 4711.

**17251 Physcion-8-O-β-D-glucopyranoside**

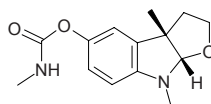
C<sub>22</sub>H<sub>22</sub>O<sub>10</sub> (446.42). **Pharm:** Laxative; antioxidant inactive (DPPH scavenger, IC<sub>50</sub> > 100μg/mL; control Ascorbic acid, IC<sub>50</sub> = 3.9μg/mL)<sup>[4711]</sup>. **Source:** BO XI SHU LI *Rhamnus purshiana*, DA HUANG *Rheum officinale*, HU ZHANG *Polygonum cuspidatum*, TANG GU TE DA HUANG *Rheum tanguticum*, TIAN SHAN DA HUANG *Rheum wittrocki*, ZANG BIAN DA HUANG *Rheum emodi* [Syn. *Rheum australe*] (root: yield = 0.53%dw)<sup>[4711]</sup>, ZHANG YE DA HUANG *Rheum palmatum*. **Ref:** 608, 658, 660, 4711.

**17252 Physcion-8-O-rhamnosyl-(1→2)-glucoside**

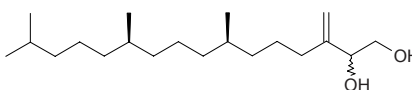
[132396-79-3] C<sub>28</sub>H<sub>32</sub>O<sub>14</sub> (592.56). Orange-yellow needles (CH<sub>3</sub>OH), mp 174~176°C. **Pharm:** Cytotoxic (hmn hepatoma cell PLC/PRF/5, ED<sub>50</sub> = 2.50μg/mL, KB cell, ED<sub>50</sub> = 3.58μg/mL). **Source:** TAI WAN SHU LI *Rhamnus formosana*. **Ref:** 3624, 3625.

**17253 Physyovenine**

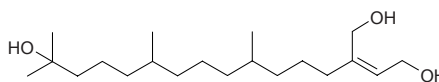
[6091-05-5] C<sub>14</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub> (262.31). mp 123°C, [α]<sub>D</sub><sup>22</sup> = -92° (EtOH). **Pharm:** Cholinesterase inhibitor; similar action with physostigmine; myotic agent (powerful). **Source:** DU BIAN DOU *Physostigma venenosum*. **Ref:** 658, 1521.

**17254 Phytene-1,2-diol**

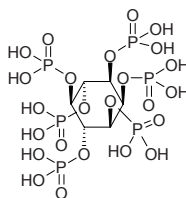
C<sub>20</sub>H<sub>40</sub>O<sub>2</sub> (312.54). Colorless oil. **Source:** HUANG HUA HAO *Artemisia annua* (seed). **Ref:** 3435.

**17255 2Z-Phytene-1,15,20-triol**

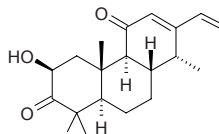
C<sub>20</sub>H<sub>40</sub>O<sub>3</sub> (328.54). Colorless oil, [α]<sub>D</sub><sup>20</sup> = -7.1° (c = 0.2, CHCl<sub>3</sub>). **Source:** *Tylimanthus renifolius*. **Ref:** 3491.

**17256 Phytic acid**

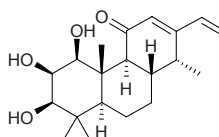
Myo-inositol hexaphosphate [83-86-3] C<sub>6</sub>H<sub>18</sub>O<sub>24</sub>P<sub>6</sub> (660.04). **Source:** SHAN YAO *Dioscorea batatas* [Syn. *Dioscorea opposita*]. **Ref:** 2.

**17257 Phytocassane A**

[166547-21-3] C<sub>20</sub>H<sub>28</sub>O<sub>3</sub> (316.44). Colorless mucus. **Pharm:** Antifungal (rice pathogenic fungus *Magnaporthe grisea*, ED<sub>50</sub> = 20μg/mL). **Source:** DAO CAO *Oryza sativa*. **Ref:** 1169.

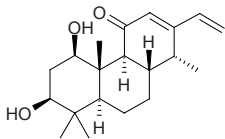
**17258 Phytocassane B**

[166547-22-4] C<sub>20</sub>H<sub>30</sub>O<sub>4</sub> (334.46). Colorless glue. **Pharm:** Antifungal (rice pathogenic fungus *Magnaporthe grisea*, inhibits sporular growth, ED<sub>50</sub> = 4μg/mL). **Source:** DAO CAO *Oryza sativa*. **Ref:** 1169.

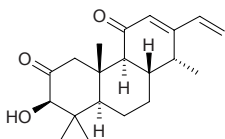


**17259 Phytocassane C**

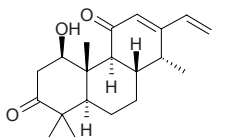
[166547-23-5] C<sub>20</sub>H<sub>30</sub>O<sub>3</sub> (318.46). Colorless glue. **Pharm:** Antifungal (rice pathogenic fungus *Magnaporthe grisea*, inhibits sporular growth, ED<sub>50</sub> = 7 μg/mL). **Source:** DAO CAO *Oryza sativa*. **Ref:** 1169.

**17260 Phytocassane D**

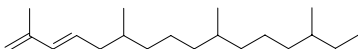
[166547-24-6] C<sub>20</sub>H<sub>28</sub>O<sub>3</sub> (316.44). Colorless glue. **Pharm:** Antifungal (rice pathogenic fungus *Magnaporthe grisea*, inhibits sporular growth, ED<sub>50</sub> = 25 μg/mL). **Source:** DAO CAO *Oryza sativa*. **Ref:** 1169.

**17261 Phytocassane E**

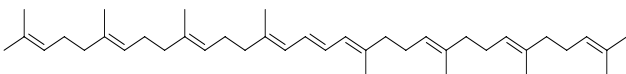
[181524-78-7] C<sub>20</sub>H<sub>28</sub>O<sub>3</sub> (316.44). Glue. **Pharm:** Antifungal (rice pathogenic fungus *Magnaporthe grisea*, inhibits sporular growth, ED<sub>50</sub> = 6 μg/mL). **Source:** DAO CAO *Oryza sativa*. **Ref:** 1169.

**17262 trans-1,3-Phytodiene**

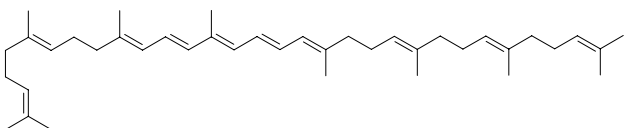
C<sub>20</sub>H<sub>38</sub> (278.53). **Source:** FU PING *Lemna minor*. **Ref:** 3207.

**17263 Phytoene**

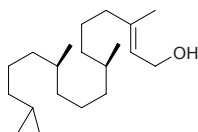
7,7',8,8',11,11',12,12'-Octahydrolycopene [540-04-5] C<sub>40</sub>H<sub>64</sub> (544.96). Viscous oil with strong UV fluorescence. **Source:** FAN MU GUA *Carica papaya*, WAN SHOU JU *Tagetes erecta*, ZANG HONG HUA *Crocus sativus*, *Mycobacterium phlei*. **Ref:** 660, 1521.

**17264 Phytofluene**

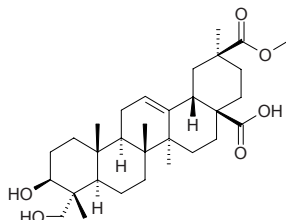
7,7',8,8',11,12-Hexahydrolycopene [540-05-6] C<sub>40</sub>H<sub>62</sub> (542.94). Pale-yellow oil with brilliant green fluorescence. **Source:** FAN MU GUA *Carica papaya*, HU LUO BO *Daucus carota* var. *sativa*, JU YUAN *Citrus medica*, PI PA *Eriobotrya japonica*, SAN SE JIN *Viola tricolor*, WAN SHOU JU *Tagetes erecta*, XI GUA *Citrullus vulgaris* [Syn. *Citrullus lanatus*], YANG TAO *Averrhoa carambola*, ZANG HONG HUA *Crocus sativus*, *Neurospora* spp. **Ref:** 6, 660, 1521.

**17265 Phytol**

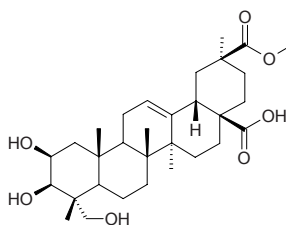
(E)-Phytol [150-86-7] C<sub>20</sub>H<sub>40</sub>O (296.54). bp 145°C/0.03mmHg. **Pharm:** Cytotoxic (HeLa, IC<sub>50</sub> = (13.8±1.3) μg/mL, control Camptothecin, IC<sub>50</sub> = 0.5 μmol/mL; HL-60, IC<sub>50</sub> = (16.4±2.0) μg/mL, Camptothecin, IC<sub>50</sub> = 0.1 μmol/mL; WI-38, IC<sub>50</sub> = (13.8±1.7) μg/mL, Camptothecin, IC<sub>50</sub> = 0.6 μmol/mL)<sup>[3807]</sup>; raw material of synthesis of vitamins K<sub>1</sub> and E. **Source:** BAI MEI HUA *Prunus mume* (flower: yield = 0.0009%fw)<sup>[4641]</sup>, HAI FENG TENG *Piper kadsura* [Syn. *Piper futokadsura*], QUN DAI CAI *Undaria pinnatifida*, YUAN CAN SHA *Bombyx mori*, ZAN BI XI BA DOU *Croton zambesicus* (leaf). **Ref:** 6, 658, 2537, 3807, 4641.

**17266 Phytolaccagenic acid**

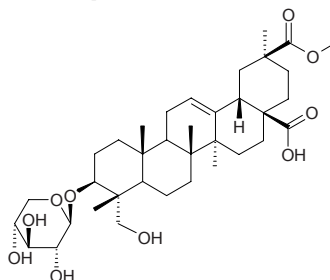
Phytolaccinic acid [54928-05-1] C<sub>31</sub>H<sub>48</sub>O<sub>6</sub> (516.72). Crystals (EtOAc), mp 295–299°C, [α]<sub>D</sub><sup>25</sup> = –66.5° (c = 1, MeOH). **Source:** MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*]. **Ref:** 3208.

**17267 Phytolaccagenin**

[1802-12-6] C<sub>31</sub>H<sub>48</sub>O<sub>7</sub> (532.72). Crystals (MeOH), mp 317–318°C (dec), [α]<sub>D</sub><sup>26</sup> = +113.7° (c = 0.89, MeOH). **Pharm:** Anti-inflammatory. **Source:** MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*], *Phytolacca* spp. **Ref:** 660, 1521.

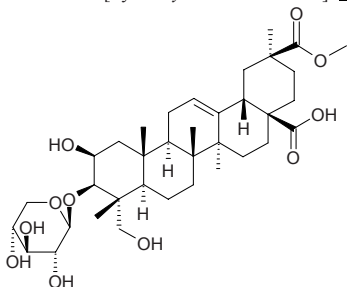
**17268 Phytolaccoside A**

[65608-00-6] C<sub>36</sub>H<sub>56</sub>O<sub>10</sub> (648.84). mp 273–274°C, [α]<sub>D</sub> = +56.5° (c = 0.14, MeOH). **Source:** MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*]. **Ref:** 3106, 3108.

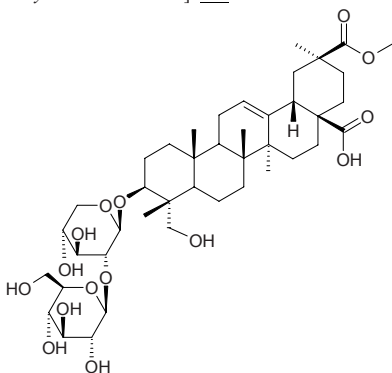


**17269 Phytolaccoside B**

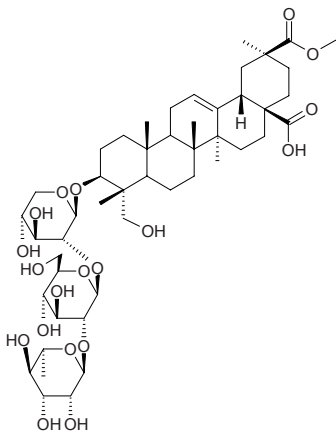
Phytolaccasaponin G [60820-94-2] C<sub>36</sub>H<sub>56</sub>O<sub>11</sub> (664.84). **Pharm:** Ectoparasiticide; molluscicide. **Source:** MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*]. **Ref:** 658, 1521.

**17270 Phytolaccoside D<sub>2</sub>**

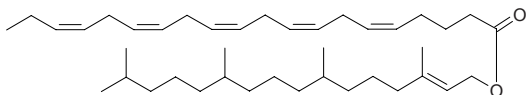
C<sub>42</sub>H<sub>66</sub>O<sub>15</sub> (810.99). **Source:** MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*]. **Ref:** 3108.

**17271 Phytolaccoside F**

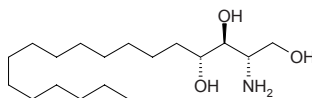
C<sub>48</sub>H<sub>76</sub>O<sub>19</sub> (957.13). **Source:** MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*]. **Ref:** 3108.

**17272 (E)-Phytol(5Z,8Z,11Z,14Z,17Z)-eicosapentaenoate**

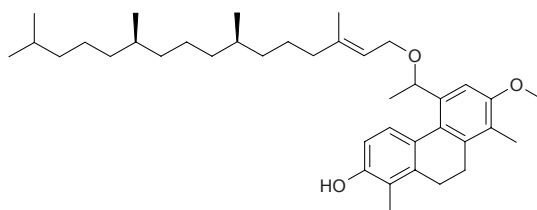
[94035-77-5] C<sub>40</sub>H<sub>68</sub>O<sub>2</sub> (580.99). Colorless oil. **Pharm:** Antibacterial (*Staphylococcus aureus*, *Staphylococcus epidermidis* and *Salmonella typhimurium*, inhibits markedly). **Source:** TUO YUAN ZHOU XING ZAO *Navicula delognei* f. *elliptica*. **Ref:** 3736.

**17273 Phytosphingosine**

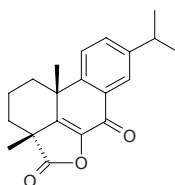
[15639-50-6] C<sub>18</sub>H<sub>39</sub>NO<sub>3</sub> (317.52). mp 108°C, [α]<sub>D</sub><sup>28</sup> = -14.1° (CHCl<sub>3</sub>). **Source:** HONG YUAN CENG KONG JUN *Fomitopsis pinicola* [Syn. *Fomes pinicola*; *Polyporus pinicola*]. **Ref:** 660, 1521.

**17274 5-(1-Phytoxy-ethyl)-2-hydroxy-7-methoxy-1,8-dimethyl-9,10-dihydrophenanthrene**

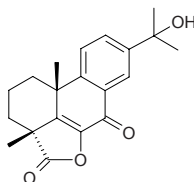
C<sub>39</sub>H<sub>60</sub>O<sub>3</sub> (576.91). **Source:** JIAN DENG XIN CAO *Juncus acutus*. **Ref:** 1965.

**17275 Picelactone A**

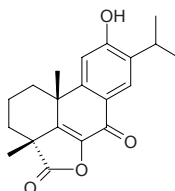
C<sub>20</sub>H<sub>22</sub>O<sub>3</sub> (310.40). Amorphous solid, [α]<sub>D</sub><sup>20</sup> = +14.5° (c = 0.45, CHCl<sub>3</sub>). **Source:** TAI WAN YUN SHAN *Picea morrisonicola* (heartwood). **Ref:** 4054.

**17276 Picelactone B**

C<sub>20</sub>H<sub>22</sub>O<sub>4</sub> (326.40). Amorphous solid, [α]<sub>D</sub><sup>19</sup> = +23.5° (c = 0.25, CHCl<sub>3</sub>). **Source:** TAI WAN YUN SHAN *Picea morrisonicola* (heartwood). **Ref:** 4054.

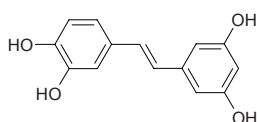
**17277 Picelactone C**

C<sub>20</sub>H<sub>22</sub>O<sub>4</sub> (326.40). Amorphous solid, [α]<sub>D</sub><sup>26</sup> = +20.1° (c = 0.17, CHCl<sub>3</sub>). **Source:** TAI WAN YUN SHAN *Picea morrisonicola* (heartwood). **Ref:** 4054.

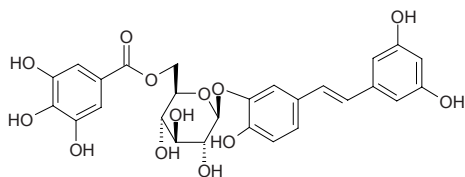


**17278 E-Piceatannol**

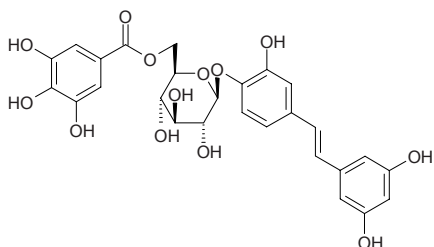
3,5,3',4'-Tetrahydroxystilbene [10083-24-6] C<sub>14</sub>H<sub>12</sub>O<sub>4</sub> (244.25). Yellowish crystals, mp 229°C; 222~223°C; needles (EtOAc-hexane), mp 231~232°C, 216°C. **Pharm:** Antineoplastic; antifungal; coronary vasodilator (gpg, ED<sub>50</sub> = 13.0µg/heart); antihistamine (inhibits histamine release, rat); antioxidant (superoxide anion scavenger, inhibits lipid peroxidation); antioxidant (superoxide anion scavenger (IC<sub>50</sub> = (4.66±0.14)µmol/L, positive control (+)-Catechin, IC<sub>50</sub> = (3.67±0.14)µmol/L)<sup>[4514]</sup>; aromatic L-amino-acid decarboxylase inhibitor (IC<sub>50</sub> = 5µmol/L); lipoxygenase inhibitor (10µmol/L, LTC<sub>4</sub> in leukemia basophiles, InRt = 100%, PGD<sub>2</sub> formation in leukemia basophiles, InRt = 75%); monoamine oxidase A inhibitor; antihypertensive (rat); plant growth inhibitor; supertoxic agent. **Source:** CHANG HUA BAN KE YA SHU *Vouacapoua macropetala*, FANG JI YE BA QIA *Smilax menispermoidea*, MAO CI JIN JI ER *Caragana tibetica* (stem), TIAN SHAN DA HUANG *Rheum wittrockii*, OU ZHOU YUN SHAN *Picea abies*, *Pericopsis angolensis*, SI CHUAN CHAN DA HUANG *Rheum* sp.<sup>[2969]</sup>, YU DA HUANG *Rheum* sp.<sup>[4064]</sup>. **Ref:** 609, 900, 1521, 2834, 2969, 4064, 4514.

**17279 Piceatannol 3'-O-β-D-(6''-O-galloyl)glucopyranoside**

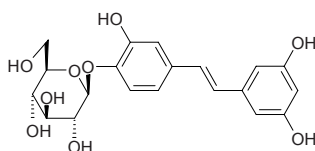
C<sub>27</sub>H<sub>26</sub>O<sub>13</sub> (558.50). **Source:** YU DA HUANG *Rheum* sp.<sup>[4064]</sup>. **Ref:** 2834, 4064.

**17280 Piceatannol 4'-O-(6''-O-galloyl)β-D-glucopyranoside**

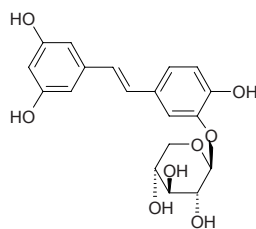
C<sub>27</sub>H<sub>26</sub>O<sub>13</sub> (558.50). **Source:** SI CHUAN CHAN DA HUANG *Rheum* sp.<sup>[2969]</sup>. **Ref:** 2969.

**17281 Piceatannol 4'-O-β-D-glucopyranoside**

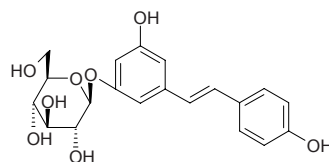
C<sub>20</sub>H<sub>22</sub>O<sub>9</sub> (406.39). **Source:** SI CHUAN CHAN DA HUANG *Rheum* sp.<sup>[2969]</sup>. **Ref:** 2969.

**17282 Piceatannol 3'-O-β-D-xylopyranoside**

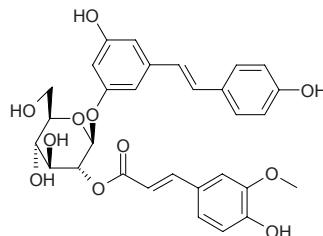
C<sub>19</sub>H<sub>20</sub>O<sub>8</sub> (376.37). **Source:** YU DA HUANG *Rheum* sp.<sup>[4064]</sup>. **Ref:** 2834, 4064.

**17283 Piceid**

Polydatin; Resveraltrol 3-O-β-D-glucopyranoside [27208-80-6] C<sub>20</sub>H<sub>22</sub>O<sub>8</sub> (390.39). White needles, mp 219~223°C (220~225°C, 225~226°C, 229~231°C), [α]<sub>D</sub><sup>25</sup> = -59.9° (c = 0.25, MeOH); [α]<sub>D</sub><sup>25</sup> = -65.26°, [α]<sub>D</sub><sup>20</sup> = -61.0° (c = 0.02, CH<sub>3</sub>OH). **Pharm:** Antibacterial (*Staphylococcus aureus*, *Diplococcus pneumoniae*); antitussive (mus, cat); vasodilator (rat aortic rings, inhibits phenylephrine-induced vasoconstriction in the presences of indomethacin and N<sup>o</sup>-L-nitroarginine (L-NA) at 10µmol/L Ach, 10µmol/L, relaxation = (65±2)%, control SNP, relaxation = (109±5)%)<sup>[4086]</sup>; platelet aggregation inhibitor (2.5µg/mL collagen-induced, IC<sub>50</sub> = (41.8±2.2)µmol/L, p<0.01, control *trans*-Resveratrol, IC<sub>50</sub> = (11.6±2.1)µmol/L, p<0.01; 6µmol/L ADP-induced, IC<sub>50</sub> = (91.9±6.7)µmol/L, p<0.01, *trans*-Resveratrol, IC<sub>50</sub> = (17.8±3.3)µmol/L, p<0.01)<sup>[5094]</sup>; antioxidant (DPPH radical scavenger, IC<sub>50</sub> = 82.4µmol/L, control Vitamin E, IC<sub>50</sub> = 20.7µmol/L, control BHT, IC<sub>50</sub> = 12.6µmol/L)<sup>[3452]</sup>; antioxidant (superoxide anion scavenger, 100µmol/L, InRt < 50%, control Vitamin E, 100µmol/L, InRt < 50%, control BHT, IC<sub>50</sub> = 24.6µmol/L)<sup>[3452]</sup>; antioxidant (lipid peroxidation inhibitor, IC<sub>50</sub> = 67.2µmol/L, control Vitamin E, IC<sub>50</sub> = 5.3µmol/L, control BHT, IC<sub>50</sub> = 1.0µmol/L)<sup>[3452]</sup>. **Source:** HE SHOU WU *Polygonum multiflorum*, HU ZHANG *Polygonum cuspidatum* (rhizome: content scope of 15 origins = 1.20%~3.63%, mean content = 2.23%)<sup>[5508]</sup>, MAO MAI LIAO *Pleuropterus ciliinervis*, QING MEI *Vatica rassak* (stem cortex), SA HA LIN YUN SHAN *Picea glehnii*, TANG GU TE DA HUANG *Rheum tanguticum*, WEI JING BAI HE *Schoenocaulon officinale* (rhizome), YI HUA *Lysidice rhodostegia* (root), ZHANG YE DA HUANG *Rheum palmatum*, *Rheum palaestinum* (aerial parts), *Eucalyptus* sp. **Ref:** 2, 658, 660, 3452, 3950, 4086, 4186, 4210, 5094, 5501, 5508.

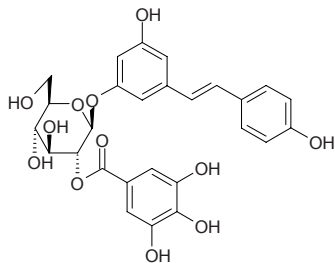
**17284 Piceid 2'-O-E-ferulate**

C<sub>30</sub>H<sub>30</sub>O<sub>11</sub> (566.57). White amorphous powder, [α]<sub>D</sub> = -13° (c = 0.20, MeOH). **Source:** *Upuna borneensis* (stem). **Ref:** 3834.

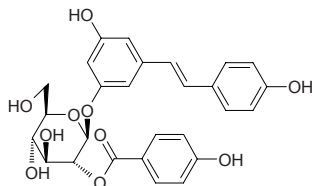


**17285 Piccid-2''-O-gallate**

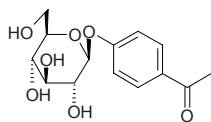
$C_{27}H_{26}O_{12}$  (542.50). White amorphous powder (MeOH-H<sub>2</sub>O),  $[\alpha]_D = -37.0^\circ$  ( $c = 0.22$ , MeOH). **Pharm:** Antioxidant (DPPH radical scavenger,  $IC_{50} = 16.5\mu\text{mol/L}$ , control Vitamin E,  $IC_{50} = 20.7\mu\text{mol/L}$ , control BHT,  $IC_{50} = 12.6\mu\text{mol/L}$ )<sup>[3452]</sup>; antioxidant (superoxide anion scavenger,  $IC_{50} = 23.9\mu\text{mol/L}$ , control Vitamin E,  $100\mu\text{mol/L}$ , InRt < 50%, control BHT,  $IC_{50} = 24.6\mu\text{mol/L}$ )<sup>[3452]</sup>; antioxidant (lipid peroxidation inhibitor,  $IC_{50} = 4.3\mu\text{mol/L}$ , control Vitamin E,  $IC_{50} = 5.3\mu\text{mol/L}$ , control BHT,  $IC_{50} = 1.0\mu\text{mol/L}$ )<sup>[3452]</sup>.  
**Source:** MAO MAI LIAO *Pleuropterus ciliinervis*. **Ref:** 3452.

**17286 Piccid 2'-O-p-hydroxybenzoate**

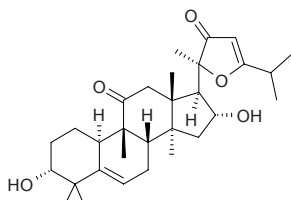
$C_{27}H_{26}O_{10}$  (510.50). White amorphous powder,  $[\alpha]_D = -9^\circ$  ( $c = 0.10$ , MeOH).  
**Source:** *Upuna borneensis* (stem). **Ref:** 3834.

**17287 Picein**

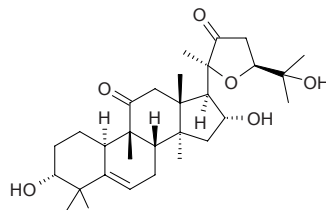
Piceoside [530-14-3]  $C_{14}H_{18}O_7$  (298.30). Crystals +1H<sub>2</sub>O (H<sub>2</sub>O), mp 195°C,  $[\alpha]_D = -88.9^\circ$  (H<sub>2</sub>O). **Pharm:** Antihepatotoxin (rat, liver toxicosis induced by CCl<sub>4</sub> and GaIN, weak activity); antioxidant inactive (hydroxyl radical scavenger,  $IC_{50} > 400\mu\text{mol/L}$ , control Ascorbic acid,  $IC_{50} = 51.8\mu\text{mol/L}$ , superoxide anion radical scavenger,  $IC_{50} > 400\mu\text{mol/L}$ , control Ascorbic acid,  $IC_{50} = 86.2\mu\text{mol/L}$ )<sup>[4289]</sup>. **Source:** HU HUANG LIAN *Picrorhiza kurroa*, LIU ZHI *Salix babylonica*, XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora* (root), *Amelanchier* spp., *Picea* spp. **Ref:** 1521, 3100, 4289.

**17288 Picfeltarraegenin I**

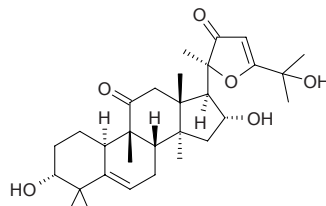
[82145-63-9]  $C_{30}H_{44}O_5$  (484.68). Crystals, mp 209~210°C,  $[\alpha]_D = +158.9^\circ$  ( $c = 1$ , MeOH). **Source:** KU XUAN SHEN *Picria felterrae*. **Ref:** 3209.

**17289 Picfeltarraegenin II**

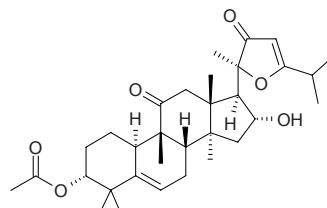
[82145-62-8]  $C_{30}H_{46}O_6$  (502.70). **Source:** KU XUAN SHEN *Picria felterrae*. **Ref:** 3210, 3211.

**17290 Picfeltarraegenin III**

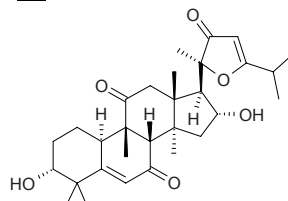
[80818-76-4]  $C_{30}H_{44}O_6$  (500.68). **Source:** KU XUAN SHEN *Picria felterrae*. **Ref:** 3210.

**17291 Picfeltarraegenin IV**

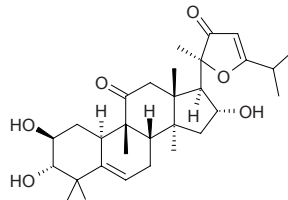
[82145-61-7]  $C_{32}H_{46}O_6$  (526.72). **Source:** KU XUAN SHEN *Picria felterrae*. **Ref:** 3354.

**17292 Picfeltarraegenin V**

[82452-27-5]  $C_{30}H_{42}O_6$  (498.67). **Source:** KU XUAN SHEN *Picria felterrae*. **Ref:** 3212.

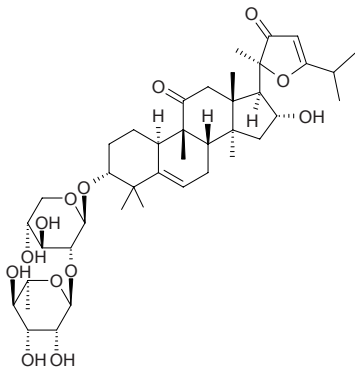
**17293 Picfeltarraegenin VI**

[82452-26-4]  $C_{30}H_{44}O_6$  (500.68). **Source:** KU XUAN SHEN *Picria felterrae*. **Ref:** 3212.

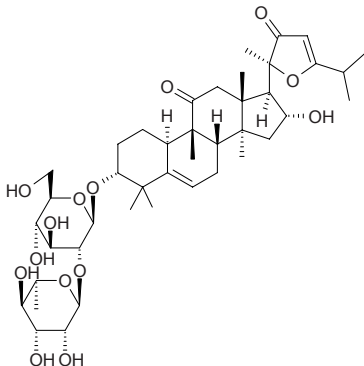


**17294 Picfeltarraenin IA**

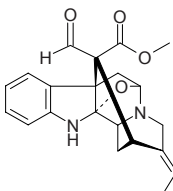
[97230-47-2] C<sub>41</sub>H<sub>62</sub>O<sub>13</sub> (762.94). Source: KU XUAN SHEN *Picria felterrae*.  
Ref: 3213.

**17295 Picfeltarraenin IB**

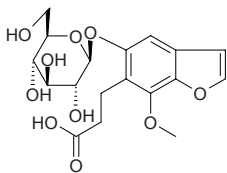
[97230-46-1] C<sub>42</sub>H<sub>64</sub>O<sub>14</sub> (792.97). Source: KU XUAN SHEN *Picria felterrae*.  
Ref: 3213.

**17296 Picralinal**

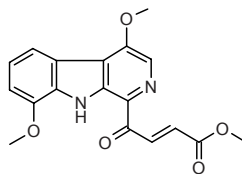
[20045-06-1] C<sub>21</sub>H<sub>22</sub>N<sub>2</sub>O<sub>4</sub> (366.42). mp 179~180°C. Source: XIANG PI MU  
*Alstonia scholaris*. Ref: 6, 1521.

**17297 Picraqquassioide A**

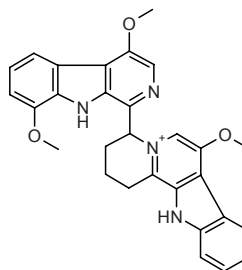
6-Carboxyethyl-7-methoxy-5-hydroxybenzofuran-5-*O*-β-*D*-glucopyranoside  
 C<sub>18</sub>H<sub>22</sub>O<sub>10</sub> (398.37). Amorphous powder, [α]<sub>D</sub><sup>21</sup> = -60° (c = 1.8, MeOH).  
Source: BEI SHA SHEN *Glehnia littoralis* (fruit), CHOU CAO *Ruta graveolens* (dried aerial parts). Ref: 3073, 3525.

**17298 Picrasidine E**

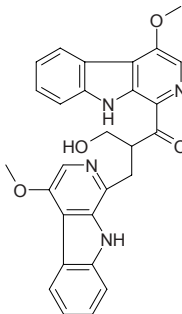
[94530-77-5] C<sub>18</sub>H<sub>16</sub>N<sub>2</sub>O<sub>5</sub> (340.34). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**17299 Picrasidine F**

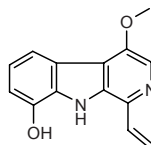
C<sub>29</sub>H<sub>27</sub>N<sub>4</sub>O<sub>3</sub><sup>+</sup> (479.56). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 1521.

**17300 Picrasidine H**

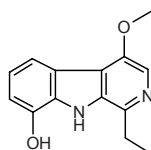
[105608-30-8] C<sub>28</sub>H<sub>24</sub>N<sub>4</sub>O<sub>4</sub> (480.53). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 1521.

**17301 Picrasidine I**

[100234-59-1] C<sub>14</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub> (240.26). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

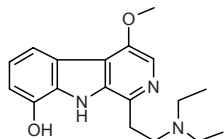
**17302 Picrasidine J**

[100234-62-6] C<sub>14</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub> (242.28). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

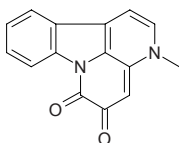


**17303 Picrasidine K**

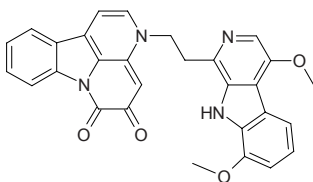
[100234-63-7] C<sub>18</sub>H<sub>23</sub>N<sub>3</sub>O<sub>2</sub> (313.40). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**17304 Picrasidine L**

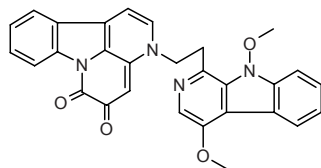
C<sub>15</sub>H<sub>10</sub>N<sub>2</sub>O<sub>2</sub> (250.26). Source: CHANG YE KUAN MU *Eurycoma longifolia* (root: yield = 0.000011%dw)<sup>[4728]</sup>. Ref: 4556, 4728.

**17305 Picrasidine M**

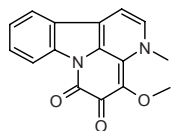
[99964-79-1] C<sub>29</sub>H<sub>22</sub>N<sub>4</sub>O<sub>4</sub> (490.52). Nacarat acicular crystals (dimethyl sulfoxide), mp 294~295°C (dec). Pharm: cAMP phosphodiesterase inhibitor (*in vitro*, IC<sub>50</sub> = 96μmol/L). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 1009, 1011, 1198.

**17306 Picrasidine N**

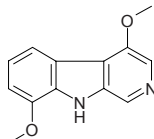
[101219-62-9] C<sub>29</sub>H<sub>22</sub>N<sub>4</sub>O<sub>4</sub> (490.52). Nacarat acicular crystals (chloroform:methanol = 1:1), mp 171~172°C (dec). Pharm: cAMP phosphodiesterase inhibitor (*in vitro*, IC<sub>50</sub> = 2μmol/L). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 1010, 1011, 1198.

**17307 Picrasidine O**

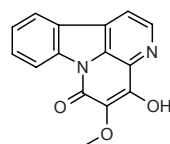
[101219-63-0] C<sub>16</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub> (280.29). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**17308 Picrasidine P**

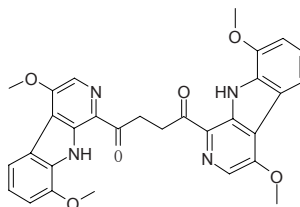
[99964-78-0] C<sub>13</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub> (228.25). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 1521.

**17309 Picrasidine Q**

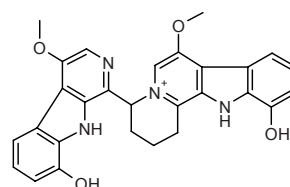
C<sub>15</sub>H<sub>10</sub>N<sub>2</sub>O<sub>3</sub> (266.26). Pharm: Cytotoxic (*in vitro*, A549, ED<sub>50</sub> = 16.2μg/mL; MCF7, ED<sub>50</sub> = 18.1μg/mL; HIV, no significant effect)<sup>[4728]</sup>, antimalarial (*Plasmodium falciparum* W2, IC<sub>50</sub> = 3.5μg/mL; *Plasmodium falciparum* D6, IC<sub>50</sub> = 3μg/mL)<sup>[4728]</sup>. Source: CHANG YE KUAN MU *Eurycoma longifolia* (root: yield = 0.00001%dw)<sup>[4728]</sup>, KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 4728.

**17310 Picrasidine R**

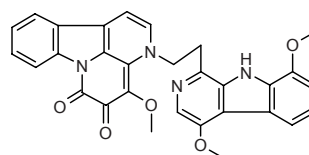
[106154-68-1] C<sub>31</sub>H<sub>28</sub>N<sub>4</sub>O<sub>5</sub> (538.61). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 1521.

**17311 Picrasidine T**

C<sub>28</sub>H<sub>25</sub>N<sub>4</sub>O<sub>4</sub> (481.54). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12, 1521.

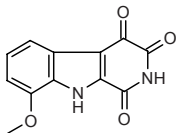
**17312 Picrasidine U**

[118636-90-1] C<sub>30</sub>H<sub>24</sub>N<sub>4</sub>O<sub>5</sub> (520.55). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

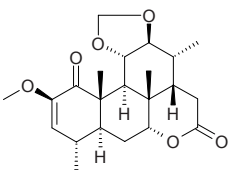


**17313 Picrasidine V**

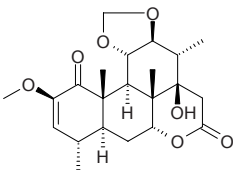
[131653-92-4] C<sub>12</sub>H<sub>8</sub>N<sub>2</sub>O<sub>4</sub> (244.21). [Source](#): KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. [Ref](#): 12.

**17314 Picrasin D**

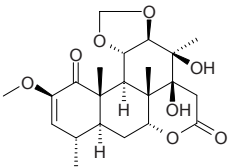
[33204-37-4] C<sub>22</sub>H<sub>30</sub>O<sub>6</sub> (390.48). mp 283.5~285.0°C. [Source](#): KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. [Ref](#): 12.

**17315 Picrasin E**

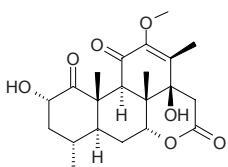
[33204-38-5] C<sub>22</sub>H<sub>30</sub>O<sub>7</sub> (406.48). mp 293~295°C. [Source](#): KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. [Ref](#): 12.

**17316 Picrasin F**

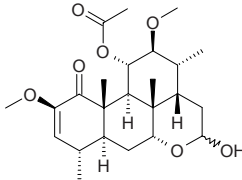
[35026-93-8] C<sub>22</sub>H<sub>30</sub>O<sub>8</sub> (422.48). mp 282~283°C. [Source](#): KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. [Ref](#): 12.

**17317 Picrasin G**

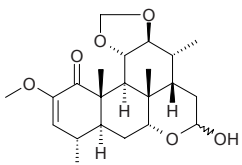
[35598-69-7] C<sub>21</sub>H<sub>28</sub>O<sub>7</sub> (392.45). [Source](#): KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. [Ref](#): 12, 1521.

**17318 Picrasinol A**

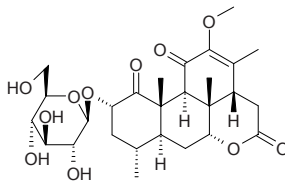
[89498-92-0] C<sub>24</sub>H<sub>36</sub>O<sub>7</sub> (436.55). [Source](#): KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. [Ref](#): 12.

**17319 Picrasinol B**

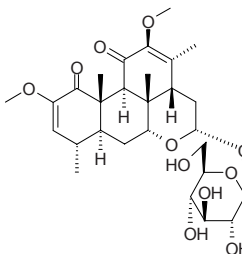
[89498-91-9] C<sub>22</sub>H<sub>32</sub>O<sub>6</sub> (392.50). [Source](#): KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. [Ref](#): 12.

**17320 Picrasinoside A**

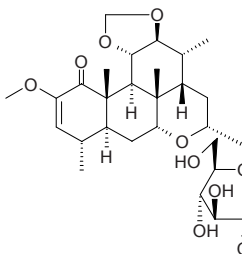
[83543-82-2] C<sub>27</sub>H<sub>38</sub>O<sub>11</sub> (538.60). [Source](#): KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. [Ref](#): 12.

**17321 Picrasinoside B**

[89200-08-8] C<sub>28</sub>H<sub>40</sub>O<sub>11</sub> (552.62). [Source](#): KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. [Ref](#): 12.

**17322 Picrasinoside C**

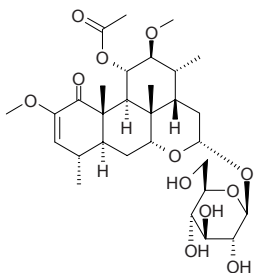
[89200-07-0] C<sub>28</sub>H<sub>42</sub>O<sub>11</sub> (554.64). [Source](#): KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. [Ref](#): 12.



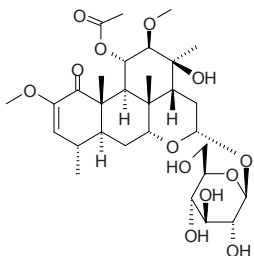


**17323 Picrasinoides D**

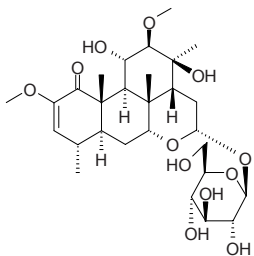
[89200-06-6] C<sub>30</sub>H<sub>46</sub>O<sub>12</sub> (598.69). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**17324 Picrasinoides E**

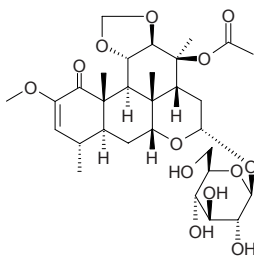
[89200-05-5] C<sub>30</sub>H<sub>46</sub>O<sub>13</sub> (614.69). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**17325 Picrasinoides G**

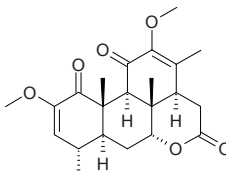
[89200-03-3] C<sub>28</sub>H<sub>44</sub>O<sub>12</sub> (572.66). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**17326 Picrasinoides H**

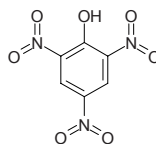
C<sub>30</sub>H<sub>44</sub>O<sub>13</sub> (612.68). Source: KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 12.

**17327 Picrasmin**

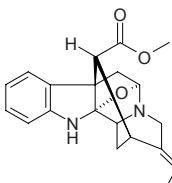
Isoquassin C<sub>22</sub>H<sub>28</sub>O<sub>6</sub> (388.46). Plates and rods (MeOH aq.), mp 222~225°C, mp 291°C, [α]<sub>D</sub><sup>20</sup> = +46.6° (CHCl<sub>3</sub>). Source: KU MU *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*]. Ref: 6, 660, 1521.

**17328 Picric acid**

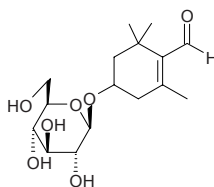
C<sub>6</sub>H<sub>3</sub>N<sub>3</sub>O<sub>7</sub> (229.11). Source: WU MEI *Prunus mume*. Ref: 660.

**17329 Picrinine**

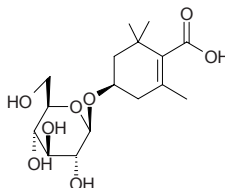
[4684-32-6] C<sub>20</sub>H<sub>22</sub>N<sub>2</sub>O<sub>3</sub> (338.41). mp 223~225°C (dec). Source: XIANG PI MU *Alstonia scholaris*. Ref: 6.

**17330 Picrocrocin**

[138-55-6] C<sub>16</sub>H<sub>26</sub>O<sub>7</sub> (330.38). mp 156°C. Source: ZANG HONG HUA *Crocus sativus*, ZANG HONG HUA *Crocus sativus* (stigma: 1.39%dw)<sup>[4653]</sup>. Ref: 6, 4653.

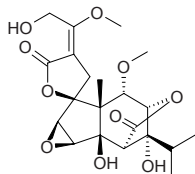
**17331 Picrocrocinic acid O-β-D-glucopyrinoside**

[62218-53-5] C<sub>16</sub>H<sub>26</sub>O<sub>8</sub> (346.38). Source: ZHI ZI *Gardenia jasminoides* [Syn. *Gardenia florida*]. Ref: 2, 626.

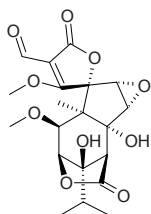


**17332 Picrodendrin A**

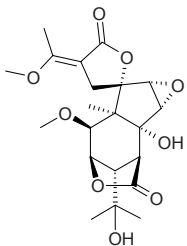
[123617-36-7] C<sub>21</sub>H<sub>28</sub>O<sub>10</sub> (440.45). Colorless prismatic crystals, mp 223°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -25° (*c* = 1.3, pyridine). **Pharm:** Pesticide (kills cockroach, LD<sub>50</sub> = 1.1 μg/cockroach). **Source:** JIANG GUO KU SHU *Picrodendron baccatum*. **Ref:** 1555.

**17333 Picrodendrin B**

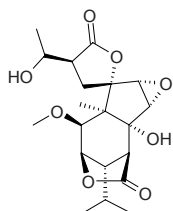
[135462-99-6] C<sub>20</sub>H<sub>24</sub>O<sub>10</sub> (414.41). Colorless prisms (MeOH), mp 245°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -50.4° (*c* = 1.8, pyridine). **Pharm:** Inhibits <sup>35</sup>S-TBPS specially combines with rat brain meninges (IC<sub>50</sub> = 0.16 μmol/L). **Source:** JIANG GUO KU SHU *Picrodendron baccatum*. **Ref:** 3737, 1198.

**17334 Picrodendrin M**

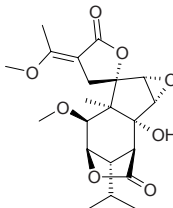
[142808-70-6] C<sub>21</sub>H<sub>28</sub>O<sub>9</sub> (414.45). Prisms (MeOH), mp 256–258°C, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -23.1° (*c* = 0.3, pyridine). **Pharm:** Inhibits <sup>35</sup>S-TBPS specially combines with rat brain meninges (IC<sub>50</sub> = 0.16 μmol/L, the activity is double of that of tutin); pesticide (kills cockroach, LD<sub>50</sub> = 0.047 μg/cockroach). **Source:** JIANG GUO KU SHU *Picrodendron baccatum*. **Ref:** 3701, 1198.

**17335 Picrodendrin O**

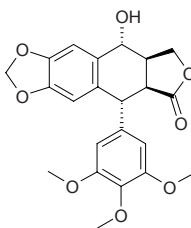
[142816-75-9] C<sub>20</sub>H<sub>28</sub>O<sub>8</sub> (396.44). Prisms (MeOH), mp 233–234°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +9.4° (*c* = 0.6, pyridine). **Pharm:** Inhibits <sup>35</sup>S-TBPS specially combines with rat brain meninges (IC<sub>50</sub> = 5.4 μmol/L); pesticide (kills cockroach, LD<sub>50</sub> = 0.37 μg/cockroach). **Source:** JIANG GUO KU SHU *Picrodendron baccatum*. **Ref:** 3701, 1198.

**17336 Picrodendrin Q**

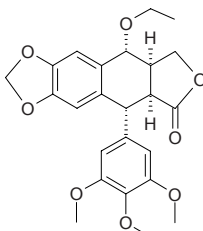
[142808-73-9] C<sub>21</sub>H<sub>28</sub>O<sub>8</sub> (408.45). Prisms (MeOH), mp 219°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -2.0° (*c* = 0.6, pyridine). **Pharm:** Inhibits <sup>35</sup>S-TBPS specially combines with rat brain meninges (IC<sub>50</sub> = 0.0075 μmol/L, the activity is 45 times of that of tutin); pesticide (kills cockroach, LD<sub>50</sub> = 0.071 μg/cockroach). **Source:** JIANG GUO KU SHU *Picrodendron baccatum*. **Ref:** 3701, 1198.

**17337 Picropodophyllin**

Picropodophyllotoxin [477-47-4] C<sub>22</sub>H<sub>22</sub>O<sub>8</sub> (414.42). Colorless fine needles, mp 229–230°C, [ $\alpha$ ]<sub>D</sub> = +9.4°. **Pharm:** Anti-fertility agent; antiviral (measles virus, HSV-1, HSV/CV-1, IC<sub>50</sub> < 20 μg/mL, VSV/BHK, IC<sub>50</sub> < 10 μg/mL); antineoplastic (P<sub>388</sub> IC<sub>50</sub> < 2.5 μg/mL, control Adriamycin, IC<sub>50</sub> = 0.017 μg/mL, A549 IC<sub>50</sub> < 2.5 μg/mL, adriamycin, IC<sub>50</sub> = 0.053 μg/mL, HT29 IC<sub>50</sub> < 2.5 μg/mL, adriamycin, IC<sub>50</sub> = 0.11 μg/mL). **Source:** DUN YE GUI JIU *Podophyllum peltatum*, SHAN HE YE *Diphylleia grayi*, BAI BA JIAO LIAN *Dysosma majorensis* [Syn. *Podophyllum majorensis*; *Dysosma lichuanensis*], CHA ZI YUAN BAI *Juniperus sabina*, DUO HUA BA JIAO LIAN *Dysosma aurantiocaulis*, RU XIANG BAI *Juniperus thurifera*, LIU JIAO LIAN *Dysosma pleiantha* [Syn. *Podophyllum pleianthum*] (rhizome: content = 0.034%)<sup>[5508]</sup>, TAO ER QI *Podophyllum emodii* [Syn. *Podophyllum emodii* var. *chinense*; *Podophyllum sikkimensis*; *Sinopodophyllum emodii*] (root and rhizome: mean content of 2 origins = 0.12%<sup>[5508]</sup>), WO ER QI *Diphylleia sinensis* (rhizome: mean content of 4 origins = 0.52%<sup>[5508]</sup>), ZHE BEI MU *Fritillaria verticillata* var. *thunbergii* [Syn. *Fritillaria thunbergii*]. **Ref:** 658, 1521, 2719, 2729, 3115, 3218, 3220, 3221, 3222, 3223, 3224, 3543, 5508.

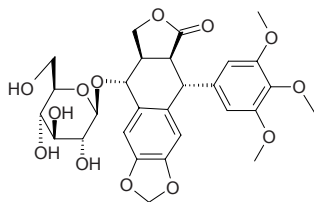
**17338 Picropodophyllin-1-ethyl ether**

C<sub>24</sub>H<sub>26</sub>O<sub>8</sub> (442.47). White thin acicular crystals (Me<sub>2</sub>CO), mp 217–220°C, [ $\alpha$ ]<sub>D</sub><sup>17</sup> = +69° (*c* = 0.01, CHCl<sub>3</sub>). **Source:** SHAN HE YE *Diphylleia grayi*. **Ref:** 279.

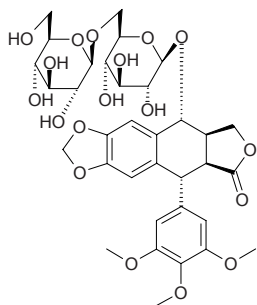


**17339 L-Picropodophyllin 7'-O-β-D-glucopyranoside**

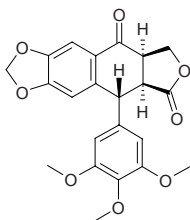
$C_{28}H_{32}O_{13}$  (576.56). Colorless needles,  $[\alpha]_D^{26} = -91^\circ$  ( $c = 0.08$ , EtOH:H<sub>2</sub>O = 1:1). **Source:** TAO ER QI *Podophyllum emodii* [Syn. *Podophyllum emodii* var. *chinense*; *Podophyllum sikkimense*; *Sinopodophyllum emodii*] (rhizome). **Ref:** 4320.

**17340 L-Picropodophyllin 7'-O-(β-D-glucopyranosyl-(1→6)-β-D-glucopyranoside)**

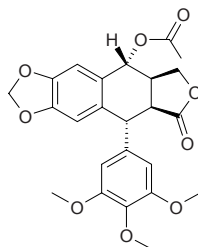
$C_{34}H_{42}O_{18}$  (738.70). Colorless needles,  $[\alpha]_D^{29} = -46^\circ$  ( $c = 0.6$ , MeOH). **Source:** TAO ER QI *Podophyllum emodii* [Syn. *Podophyllum emodii* var. *chinense*; *Podophyllum sikkimense*; *Sinopodophyllum emodii*] (rhizome). **Ref:** 4320.

**17341 Picropodophyllone**

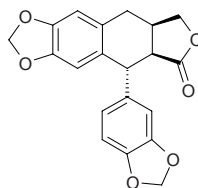
[477-48-5]  $C_{22}H_{20}O_8$  (412.40). Colorless needles, mp 158–159°C,  $[\alpha]_D^{25} = -142^\circ$  ( $c = 0.83$ , CHCl<sub>3</sub>). **Pharm:** Antiviral (HSV/CV-1, IC<sub>50</sub> = 20 μg/mL, VSV/BHK, IC<sub>50</sub> = 10 μg/mL); antineoplastic (P<sub>388</sub> IC<sub>50</sub> = 5 μg/mL, control adriamycin IC<sub>50</sub> = 0.017 μg/mL, A549 IC<sub>50</sub> = 5 μg/mL, control adriamycin IC<sub>50</sub> = 0.053 μg/mL, HT29 IC<sub>50</sub> = 5 μg/mL, control adriamycin IC<sub>50</sub> = 0.11 μg/mL); antifungal (200 μg/mL: *Acrothesium floccosum*, *Curvularia lunata*, *Pleurotus ostreatus*). **Source:** BAI BA JIAO LIAN *Dysosma majorensis* [Syn. *Podophyllum majorensis*; *Dysosma lichuanensis*], CHA ZI YUAN BAI *Juniperus sabina*, DUO HUA BA JIAO LIAN *Dysosma aurantiocaulis*, LIU JIAO LIAN *Dysosma pleiantha* [Syn. *Podophyllum pleianthum*] (rhizome: content = 0.031%<sup>[5508]</sup>), SHAN XI WO ER QI *Diphylleia cymosa*, TAO ER QI *Podophyllum emodii* [Syn. *Podophyllum emodii* var. *chinense*; *Podophyllum sikkimense*; *Sinopodophyllum emodii*] (rhizome: mean content of 2 origins = 0.042%<sup>[5508]</sup>), WO ER QI *Diphylleia sinensis* (rhizome: mean content of 4 origins = 0.067%<sup>[5508]</sup>). **Ref:** 3214, 3215, 2729, 3115, 3216, 3217, 3218, 3219, 5508.

**17342 Picropodophyllotoxin acetate**

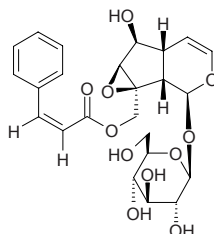
Anticancer Lignan PMV70P691-027 [38491-90-6]  $C_{24}H_{24}O_9$  (456.45). Colorless needles, mp 217°C,  $[\alpha]_D^{20} = +19.4^\circ$  ( $c = 1.0$ , CHCl<sub>3</sub>). **Pharm:** Antiviral (HSV/CV-1, IC<sub>50</sub> < 20 μg/mL, VSV/BHK, IC<sub>50</sub> < 10 μg/mL); antineoplastic (P<sub>388</sub> IC<sub>50</sub> < 0.25 μg/mL, control adriamycin IC<sub>50</sub> = 0.017 μg/mL, A549 IC<sub>50</sub> < 0.25 μg/mL, adriamycin IC<sub>50</sub> = 0.053 μg/mL, HT29 IC<sub>50</sub> < 0.25 μg/mL, adriamycin IC<sub>50</sub> = 0.11 μg/mL); cytotoxic (soft agar transformation assay with JB6 cells)<sup>[5038]</sup>. **Source:** CHA ZI YUAN BAI *Juniperus sabina*, LIAN YE TONG *Hernandia Sonora* [Syn. *Hernandia ovigera*] (seed). **Ref:** 3218, 3220, 5038.

**17343 Picropolygamain**

$C_{20}H_{16}O_6$  (352.35). Colorless oil. **Pharm:** Cytotoxic (hmn fibrosarcoma cells HT1080, ED<sub>50</sub> = 1.9 μg/mL, control Adriamycin, ED<sub>50</sub> = 0.1 μg/mL)<sup>[4437]</sup>. **Source:** LIE WEI LIE LAN *Bursera graveolens* (stem). **Ref:** 4437.

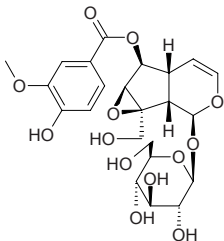
**17344 Picroside I**

6'-Cinnamoylcatalpol [76248-14-1]  $C_{24}H_{28}O_{11}$  (492.48). White powder crystals (ethanol–water), mp 76–77°C. **Pharm:** Antihepatotoxic; anti-inflammatory (mus); antioxidant (free radical scavenger *in vitro*). **Source:** HU HUANG LIAN *Picrorhiza kurroa*, XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora*. **Ref:** 900, 1521.

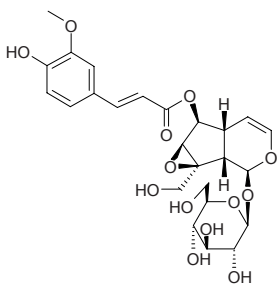


**17345 Picroside II**

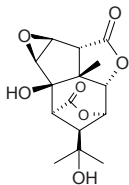
6-Vanilloylcatalpol [39012-20-9] C<sub>23</sub>H<sub>28</sub>O<sub>13</sub> (512.47). White acicular crystals (methanol), mp 186°C. **Pharm:** Antihepatotoxin (complement-dependent hepatotoxicity, inhibits increase of GTP); anti-inflammatory (mus, edema on ears induced by TPA). **Source:** HU HUANG LIAN *Picrorhiza kurroa* (dried rhizome:: mean content = 1.62%<sup>[5508]</sup>), XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora* (dried rhizome:: mean content = 7.23%<sup>[5508]</sup>). **Ref:** 6, 660, 900, 1521, 5508.

**17346 Picroside III**

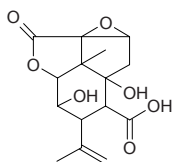
[64461-95-6] C<sub>25</sub>H<sub>30</sub>O<sub>13</sub> (538.51). mp 154–155°C, [α]<sub>D</sub><sup>20</sup> = –78° (CHCl<sub>3</sub>). **Source:** HU HUANG LIAN *Picrorhiza kurroa*. **Ref:** 3225.

**17347 Picrotin**

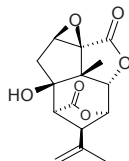
[21416-53-5] C<sub>15</sub>H<sub>18</sub>O<sub>7</sub> (310.31). Very bitter and very poisonous glittering trapezoidal leaflike crystals, mp 203°C, [α]<sub>D</sub><sup>16</sup> = –29.3° (c = 4, absolute ethanol). **Pharm:** Antidote (poisoning from barbital); CNS stimulant; GABA<sub>A</sub> receptor antagonist; used in treatment of skin disease. **Source:** DUN YE GUI JIU *Podophyllum peltatum*, SHAN HE YE *Diphylleia grayi*, CHA ZI YUAN BAI *Juniperus sabina*, YIN DU FANG JI *Anamirta paniculata*, YIN DU MU FANG JI *Cocculus indicus*. **Ref:** 658, 661, 1521.

**17348 Picrotoxic acid**

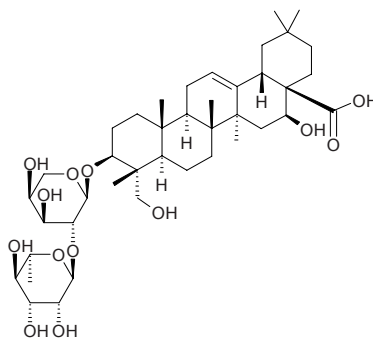
C<sub>15</sub>H<sub>18</sub>O<sub>7</sub> (310.31). White needles, mp 208–210 °C. **Source:** *Anamirta cocculus*. **Ref:** 1876.

**17349 Picrotoxinin**

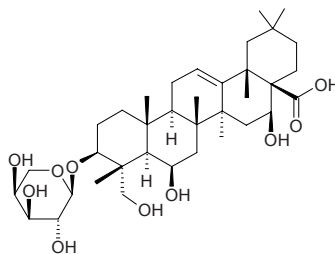
[17617-45-7] C<sub>15</sub>H<sub>16</sub>O<sub>6</sub> (292.29). **Source:** YIN DU MU FANG JI *Cocculus indicus*. **Ref:** 661, 1521.

**17350 Pictoside A**

Caulophyllogenin 3-*O*-*α*-L-rhamnopyranosyl(1→2)-*α*-L-arabinopyranoside C<sub>41</sub>H<sub>66</sub>O<sub>13</sub> (766.98). Colorless powder, mp 224–226°C (MeOH), [α]<sub>D</sub><sup>20</sup> = –1.8° (c = 0.23, MeOH). **Pharm:** Anti-inflammatory (male ICR mus, orl, dose = 50mg/kg). **Source:** ZHUO SE CI QIU *Kalopanax pictum* (stem cortex). **Ref:** 4212.

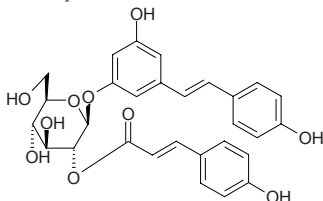
**17351 Pictoside B**

Pictogenin (3β,6β,16α,23-tetrahydroxyolean-12-ene-28-oic acid) 3-*O*-*α*-L-arabinopyranoside C<sub>35</sub>H<sub>56</sub>O<sub>10</sub> (636.83). Colorless powder, mp 218–220°C (MeOH), [α]<sub>D</sub><sup>20</sup> = +2.6° (c = 0.17, MeOH). **Pharm:** Anti-inflammatory inactive<sup>[4212]</sup>. **Source:** ZHUO SE CI QIU *Kalopanax pictum* (stem cortex). **Ref:** 4212.

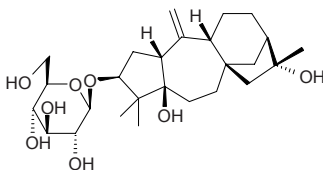


**17352 Pieceid-2''-O-coumarate**

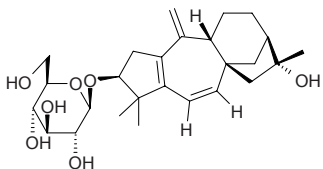
$C_{29}H_{28}O_{10}$  (536.54). White amorphous powder (MeOH),  $[\alpha]_D^{25} = 2.5^\circ$  ( $c = 0.22$ , MeOH). **Pharm:** Antioxidant (DPPH radical scavenger,  $IC_{50} = 84.3\mu\text{mol/L}$ , control Vitamin E,  $IC_{50} = 20.7\mu\text{mol/L}$ , control BHT,  $IC_{50} = 12.6\mu\text{mol/L}$ ); antioxidant (superoxide anion scavenger,  $IC_{50} = 74.6\mu\text{mol/L}$ , control Vitamin E,  $100\mu\text{mol/L}$ , InRt < 50%, control BHT,  $IC_{50} = 24.6\mu\text{mol/L}$ ); antioxidant (lipid peroxidation inhibitor,  $IC_{50} = 5.1\mu\text{mol/L}$ , control Vitamin E,  $IC_{50} = 5.3\mu\text{mol/L}$ , control BHT,  $IC_{50} = 1.0\mu\text{mol/L}$ ). **Source:** MAO MAI LIAO *Pleuropterus ciliinervis*. **Ref:** 3452.

**17353 Pierisformoside B**

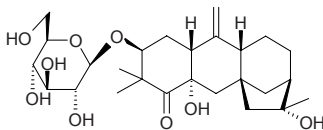
$C_{26}H_{42}O_8$  (482.62). Viscous syrup,  $[\alpha]_D^{18} = -2.31^\circ$  ( $c = 0.17$ , MeOH). **Source:** MEI LI MA ZUI MU *Pieris formosa* (leaf). **Ref:** 3992.

**17354 Pierisformoside C**

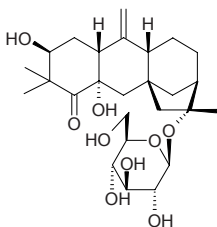
$C_{26}H_{38}O_7$  (462.59). Viscous syrup,  $[\alpha]_D^{23} = +87.81^\circ$  ( $c = 0.11$ , MeOH). **Source:** MEI LI MA ZUI MU *Pieris formosa* (leaf). **Ref:** 3992.

**17355 Pierisformoside D**

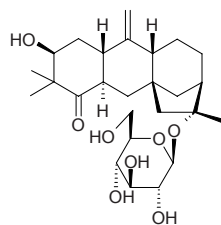
$C_{26}H_{40}O_9$  (496.60). Viscous syrup,  $[\alpha]_D^{18} = -4.35^\circ$  ( $c = 0.15$ , MeOH). **Source:** MEI LI MA ZUI MU *Pieris formosa* (leaf). **Ref:** 3992.

**17356 Pierisformoside E**

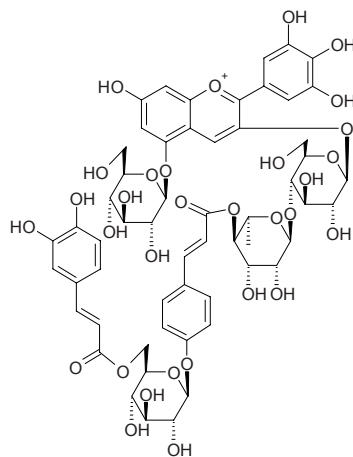
$C_{26}H_{40}O_9$  (496.60). Viscous syrup,  $[\alpha]_D^{18} = -6.09^\circ$  ( $c = 0.20$ , MeOH). **Source:** MEI LI MA ZUI MU *Pieris formosa* (leaf). **Ref:** 3992.

**17357 Pierisformoside F**

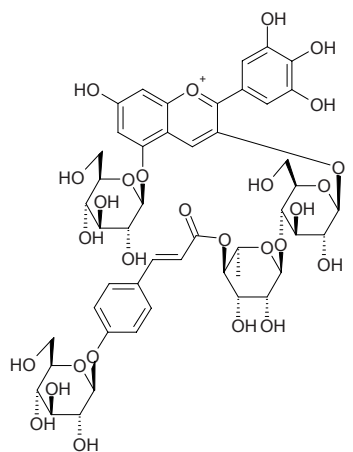
$C_{26}H_{40}O_8$  (480.60). Viscous syrup,  $[\alpha]_D^{16} = -13.78^\circ$  ( $c = 0.13$ , MeOH). **Source:** MEI LI MA ZUI MU *Pieris formosa* (leaf). **Ref:** 3992.

**17358 Pigment 25**

Delphinidin 3-O-[6-O-(4-O-(4-O-(6-O-(*trans*-caffeoyl)- $\beta$ -D-glucopyranosyl)-*trans*-*p*-coumaroyl)- $\alpha$ -L-rhamnopyranosyl)- $\beta$ -D-glucopyranoside]-5-O-[ $\beta$ -D-glucopyranoside]  $C_{57}H_{63}O_{31}^+$  (1244.12). **Source:** *Petunia reitzii*. **Ref:** 3998.

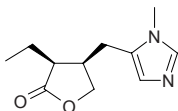
**17359 Pigment 26**

Delphinidin 3-O-[6-O-(4-O-(4-O-( $\beta$ -D-glucopyranosyl)-*trans*-*p*-coumaroyl)- $\alpha$ -L-rhamnopyranosyl)- $\beta$ -D-glucopyranoside]-5-O-[ $\beta$ -D-glucopyranoside]  $C_{48}H_{57}O_{28}^+$  (1081.97). **Source:** *Petunia reitzii*. **Ref:** 3998.

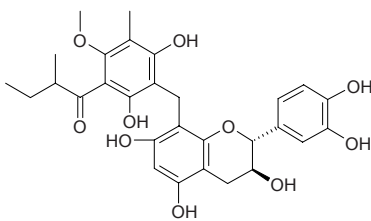


**17360 Pilocarpine**

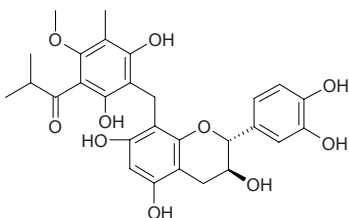
Ocusert pilo [92-13-7]  $C_{11}H_{16}N_2O_2$  (208.26). Oil or crystals, mp 34°C, bp 260°C/5mmHg, (with some conversion into iso-pilocarpine),  $[\alpha]_D^{18} = +106^\circ$  ( $c = 2$ , water), soluble in water, ethanol, chloroform, slightly soluble in ether, benzene, almost insoluble in petroleum spirit.<sup>[5507]</sup> **Pharm:** Stimulates M-cholinergic receptor agonist; causes miosis; smooth muscle stimulant; perspiration; used in treatment of glaucoma. **Source:** MAO GUO YUN XING *Pilocarpus jaborandi* (in 1879, isolated from the plant by Petit for the first time<sup>[5507]</sup>; in 1966, the compound was isolated from the plant by R.K.Hill et al.)<sup>[5505]</sup>. **Ref:** 658, 5505, 5507.

**17361 Pilosanol A**

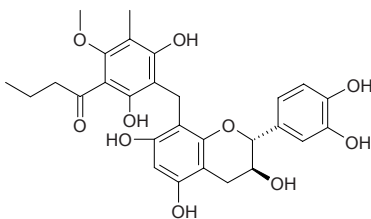
[142542-76-5]  $C_{29}H_{32}O_{10}$  (540.57). Maple powder, mp 190–195°C (dec),  $[\alpha]_D^{23} = -52.6^\circ$  ( $c = 1.9$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus*, MED = 100µg/disk). **Source:** LONG YA CAO *Agrimonia pilosa*. **Ref:** 3626.

**17362 Pilosanol B**

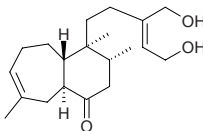
[142542-77-6]  $C_{28}H_{32}O_{10}$  (526.55). Maple powder, mp 158–160°C (dec),  $[\alpha]_D^{23} = -46.3^\circ$  ( $c = 1.86$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus*, MED = 100µg/disk). **Source:** LONG YA CAO *Agrimonia pilosa*. **Ref:** 3626.

**17363 Pilosanol C**

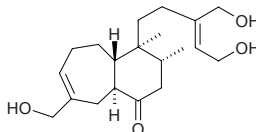
[142542-78-7]  $C_{28}H_{30}O_{10}$  (526.55). Maple powder, mp 185–190°C (dec),  $[\alpha]_D^{23} = -69.2^\circ$  ( $c = 1.82$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus*, MED = 100µg/disk). **Source:** LONG YA CAO *Agrimonia pilosa*. **Ref:** 3626.

**17364 Pilosanol A**

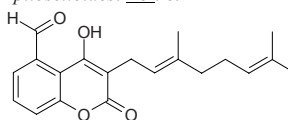
$C_{20}H_{32}O_3$  (320.48). Crystals, mp 98.5–99°C,  $[\alpha]_D^{30.5} = -51.1^\circ$  ( $c = 0.56$ , EtOH). **Source:** MAO MA CHI XIAN *Portulaca pilosa*. **Ref:** 3226.

**17365 Pilosanol B**

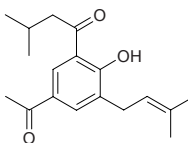
$C_{20}H_{32}O_4$  (336.48). Oil,  $[\alpha]_D^{30.5} = -52.2^\circ$  ( $c = 1.27$ , EtOH). **Source:** MAO MA CHI XIAN *Portulaca pilosa*. **Ref:** 3226.

**17366 Piloselloidal**

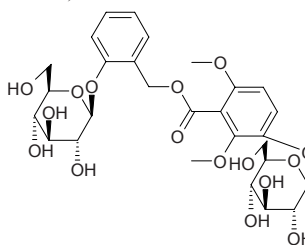
[54963-36-9]  $C_{20}H_{22}O_4$  (326.40). **Source:** MAO DA DING CAO *Gerbera piloselloides*. **Ref:** 6.

**17367 Piloselloidone**

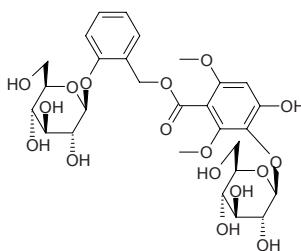
[54963-42-7]  $C_{18}H_{24}O_3$  (288.39). **Source:** MAO DA DING CAO *Gerbera piloselloides*. **Ref:** 6.

**17368 Piloside A**

$C_{28}H_{36}O_{16}$  (628.59). Crystals (MeOH), mp 150–152°C,  $[\alpha]_D^{20} = -50.2^\circ$  ( $c = 0.6$ , MeOH). **Source:** MAO XIAN MAO *Curculigo pilosa* (rhizome). **Ref:** 5095.

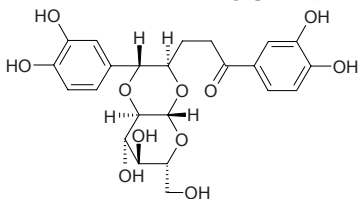
**17369 Piloside B**

$C_{28}H_{36}O_{17}$  (644.59). Amorphous powder, mp 132–136°C,  $[\alpha]_D^{20} = -39.3^\circ$  ( $c = 0.34$ , MeOH). **Source:** MAO XIAN MAO *Curculigo pilosa* (rhizome). **Ref:** 5095.

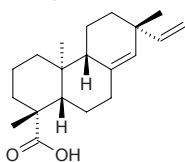


**17370 Pilosidine**

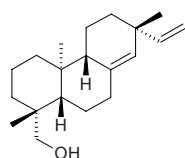
$C_{23}H_{26}O_{11}$  (478.46). Crystals (EtOAc), mp 165~167°C,  $[\alpha]_D^{20} = +43.2^\circ$  ( $c = 0.84$ , MeOH). **Pharm:** Contracts blood vessels (*in vitro*, rabbit aorta, facilitating effect on adrenaline evoked contractions, 1~30 $\mu$ mol/L); contracts blood vessels (*in vitro*, rabbit aorta, dose dependent, 30~62 $\mu$ mol/L). **Source:** MAO XIAN MAO *Curculigo pilosa* (rhizome). **Ref:** 5095.

**17371 L-Pimara-8(14),15-dien-19-oic acid**

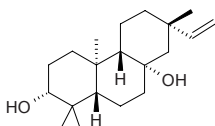
*ent*-Pimara-8(14),15-dien-19-oic acid  $C_{20}H_{30}O_2$  (302.46). mp (-) 163~164°C; white crystals, mp 163~165°C,  $[\alpha]_D^{25} = -120.0^\circ$  ( $c = 0.50$ ,  $CHCl_3$ ). **Pharm:** Antibacterial (*Staphylococcus aureus*, MIC > 100 $\mu$ g/mL; *Bacillus subtilis*, MIC = 50 $\mu$ g/mL)<sup>[4144]</sup>; COX-1 inhibitor (*in vitro*, IC<sub>50</sub> = 0.19mmol/L)<sup>[4957]</sup>. **Source:** RI BEN HUA BAI *Chamaecyparis pisifera* (leaf), TU DANG GUI *Aralia cordata*, CI SAN JIA *Acanthopanax trifoliatum* (stem cortex). **Ref:** 6, 4144, 4957.

**17372 L-Pimara-8(14),15-dien-19-ol**

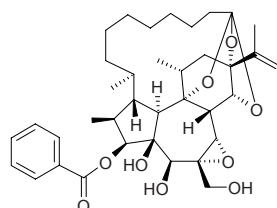
$C_{20}H_{32}O$  (288.48). mp (-) 109~110°C. **Source:** TU DANG GUI *Aralia cordata*. **Ref:** 6.

**17373 ent-Pimara-15-ene-3 $\alpha$ ,8 $\alpha$ -diol**

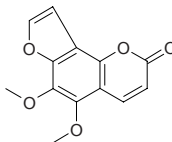
$C_{20}H_{34}O_2$  (309.49). White solid, mp 137.5~138.5°C,  $[\alpha]_D^{25} = -17.5^\circ$  ( $c = 1.36$ ,  $CHCl_3$ ). **Source:** A GEN TING SHU QU CAO *Gnaphalium gaudichaudianum*. **Ref:** 2059.

**17374 Pimelea factor P<sub>2</sub>**

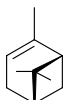
$C_{37}H_{50}O_9$  (638.81). **Pharm:** Irritant. **Source:** family Thymelaeaceae spp. **Ref:** 658.

**17375 Pimpinellin**

[131-12-4]  $C_{13}H_{10}O_5$  (246.22). Crystals (EtOAc-hexane), mp 95~96°C, 119°C. **Pharm:** Antibacterial (*Mycobacterium tuberculosis*). **Source:** DA HUI QIN *Pimpinella magna*, DIAN BAI ZHI *Heracleum scabridum*, DUAN JING GU DANG GUI *Archangelica brevicaulis* [Syn. *Angelica brevicaulis*; *Angelica brevicaulis*], DUAN MAO DU HUO *Heracleum moellendorffii* [Syn. *Heracleum microcarpum*; *Heracleum morifolium*], FEI LONG ZHANG XUE *Toddalia asiatica* [Syn. *Toddalia aculeata*; *Paullinia asiatica*], HU ER CAO YE HUI QIN *Pimpinella saxifraga*, JIA NA LI HAO *Artemisia canariensis*, LANG DU *Stellera chamaejasme*, LI JIANG QIAN HU *Peucedanum govanianum* var. *bicolor*, NIU FANG FENG *Heracleum sphondylium*, QU XI DANG GUI *Angelica genuflexa*, YANG JIAO MIAN *Alstonia mairei*, YONG NING DU HUO *Heracleum yungningense*, ZHI SHA CAO *Cyperus papyrus*, *Heracleum* spp. **Ref:** 6, 541, 557, 658, 660, 1521.

**17376  $\alpha$ -Pinene**

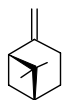
$C_{10}H_{16}$  (136.24). bp (+) 155~156°C/755mmHg, (-) 155~156°C/746mmHg, ( $\pm$ ) 156.2°C/741mmHg. **Pharm:** Antifungal; antitussive (dispels phlegm); irritant. **Source:** BO HE *Mentha haplocalyx* [Syn. *Mentha canadaensis*; *Mentha arvensis* var. *haplocalyx*; *Mentha arvensis*], DAN YE MAN JING ZI *Vitex rotundifolia* [Syn. *Vitex trifolia* var. *simplicifolia*], DANG SHEN *Codonopsis pilosula*, DONG LING CAO *Rabdosia rubescens*, DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*], FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*], GAO LIANG JIANG *Alpinia officinarum* (dried rhizome: mean content = 0.42%)<sup>[5508]</sup>, HOU PO *Magnolia officinalis*, HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*], HUANG HUA HAO *Artemisia annua*, HUI HUI SU GENG *Perilla frutescens* var. *crispa*, HUO XIANG *Agastache rugosus*, JIAN ZI SU YE *Perilla frutescens* var. *acuta* [Syn. *Perilla frutescens* var. *purpurascens*], JIN YIN HUA *Lonicera japonica*, JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*], JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], JU PI *Citrus reticulata*, KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*], KUO YE XIE CAO *Valeriana officinalis* var. *latifolia*, LIAN QIAO *Forsythia suspensa*, LIAO XI XIN *Asarum heterotropoides* var. *mandshuricum*, MA WEI SONG YE *Pinus massoniana* (dried leaf: mean content = 0.0221%)<sup>[5508]</sup>, NAN HE SHI *Daucus carota*, PI PA YE *Eriobotrya japonica*, QIANG HUO *Notopterygium incisum*, ROU DOU KOU *Myristica fragrans* (kernel: mean content = 0.78%)<sup>[5508]</sup>, SHENG JIANG *Zingiber officinale*, TOU HUA DU JUAN *Rhododendron capitatum*, WU WEI ZI *Schisandra chinensis*, XI XIN *Asarum sieboldii*, YIN CHEN HAO *Artemisia capillaris*, YU XING CAO *Houttuynia cordata*, ZHI ZHU XIANG *Valeriana jatamansii* [Syn. *Valeriana wallichii*], *Citrus* sp., occurs in many plants. **Ref:** 2, 11, 658, 660, 5501, 5508.



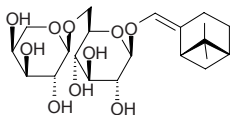


**17377  $\beta$ -Pinene**

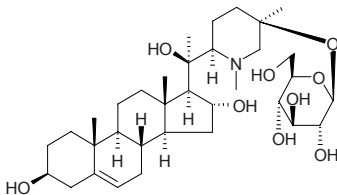
$C_{10}H_{16}$  (136.24). bp (+) 162~166°C, (–) 163.5~164.0°C/746mmHg. **Pharm:** Antifungal; anti-inflammatory (the most effective component of 10 compounds in Fineleaf Schizonepeta, JING JIE, *Schizonepeta tenuifolia*); antitussive (dispels phlegm). **Source:** DAN YE MAN JING ZI *Vitex rotundifolia* [Syn. *Vitex trifolia* var. *simplicifolia*], HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*], HUANG HUA HAO *Artemisia annua*, HUO XIANG *Agastache rugosus*, JIAN ZI SU YE *Perilla frutescens* var. *acuta* [Syn. *Perilla frutescens* var. *purpurascens*], JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*], JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*], KUO YE XIE CAO *Valeriana officinalis* var. *latifolia*, LIAN QIAO *Forsythia suspensa* (green fruit: mean content of 7 origins = 1.16%, ripe fruit: mean content of 5 origins = 0.50%)<sup>[5520]</sup>, PI PA YE *Eriobotrya japonica*, QIANG HUO *Notopterygium incisum*, YIN CHEN HAO *Artemisia capillaris*. **Ref:** 2, 11, 658, 660, 5520.

**17378 (Z)-(1S,5R)- $\beta$ -Pinen-10-yl- $\beta$ -vicianoside**

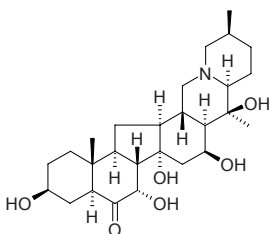
$C_{21}H_{34}O_{10}$  (446.50). **Source:** CHI SHAO *Paeonia lactiflora* wild. **Ref:** 2.

**17379 Pingbeidinioside**

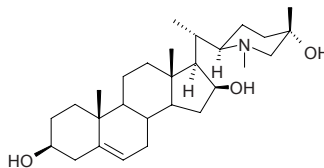
[125309-97-9]  $C_{34}H_{57}NO_9$  (623.83). Colorless acicular crystals, mp 242.0~243.2°C,  $[\alpha]_D^{25} = +6.9^\circ$  ( $c = 0.145$ , MeOH). **Source:** PING BEI MU *Fritillaria ussuriensis*. **Ref:** 138.

**17380 Pingbeimine C**

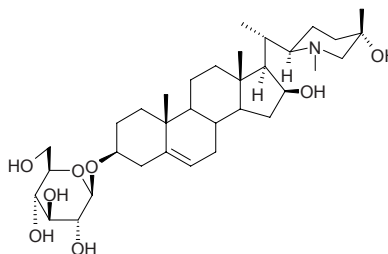
C-Nor-D-homosteroid alkaloid [128585-96-6]  $C_{27}H_{43}NO_6$  (477.65). Colorless prismatic crystals, mp 171.53°C,  $[\alpha]_D^{25} = -24.6^\circ$  ( $c = 1.1$ , methanol). **Source:** PING BEI MU *Fritillaria ussuriensis*. **Ref:** 150.

**17381 Pingbeinine**

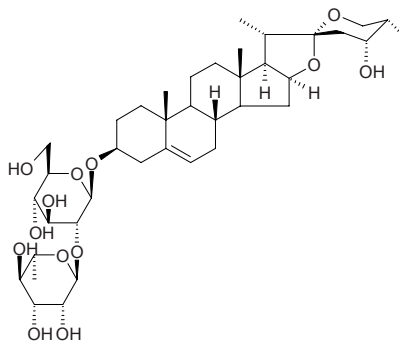
[131984-89-9]  $C_{28}H_{47}NO_3$  (445.69). Needles (MeOH), mp 223~235°C,  $[\alpha]_D = -32.8^\circ$  ( $c = 0.09$ , MeOH). **Source:** PING BEI MU *Fritillaria ussuriensis*. **Ref:** 3227.

**17382 Pingbeininoside**

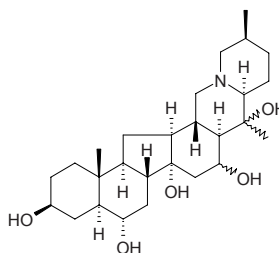
[131984-90-2]  $C_{34}H_{57}NO_8$  (607.84). Needles (MeOH), mp 244~246°C,  $[\alpha]_D = -4.57^\circ$  ( $c = 0.164$ , MeOH). **Source:** PING BEI MU *Fritillaria ussuriensis*. **Ref:** 3227.

**17383 Pingbeisaponin**

Pingbeisaponin [126453-84-7]  $C_{39}H_{62}O_{13}$  (738.92). **Source:** PING BEI MU *Fritillaria ussuriensis*. **Ref:** 3228.

**17384 Pingpeimine A**

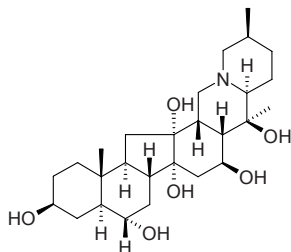
Pingpeimine A [82841-67-6]  $C_{27}H_{45}NO_5$  (463.66). **Pharm:** Antitussive (dispels phlegm); antihypertensive. **Source:** PING BEI MU *Fritillaria ussuriensis*. **Ref:** 658, 3114.



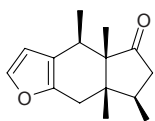


**17385 Pingpeimine B**

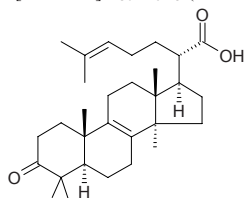
5 $\alpha$ ,17 $\beta$ ,22 $\alpha$ -Cevanine-3 $\beta$ ,6 $\alpha$ ,12 $\alpha$ ,14 $\alpha$ ,16 $\beta$ ,20 $\beta$ -hexol C<sub>27</sub>H<sub>45</sub>NO<sub>6</sub> (479.66). Colorless acicular crystals, mp 242~244°C, [ $\alpha$ ]<sub>D</sub> = +24.9° (c = 0.08, methanol). Source: PING BEI MU *Fritillaria ussuriensis*. Ref: 117, 660.

**17386 Pinguisone**

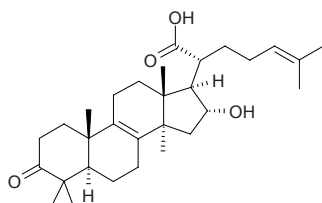
[22489-40-3] C<sub>15</sub>H<sub>20</sub>O<sub>2</sub> (232.33). Pharm: Insect antifeedant. Source: LONG YA CAO *Agrimonia pilosa*. Ref: 658.

**17387 Pinicolic acid A**

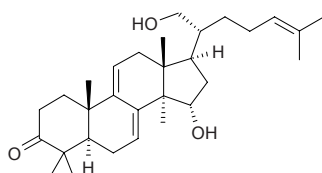
[466-05-7] C<sub>30</sub>H<sub>46</sub>O<sub>3</sub> (454.70). Source: FU LING *Poria cocos*. Ref: 2.

**17388 Pinicolic acid E**

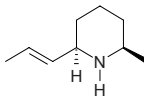
16 $\alpha$ -Hydroxy-3-oxolanosta-8,24-dien-21-oic acid C<sub>30</sub>H<sub>46</sub>O<sub>4</sub> (470.70). Waxy yellow solid. Source: HONG YUAN CENG KONG JUN *Fomitopsis pinicola* [Syn. *Fomes pinicola*; *Polyporus pinicola*] (crust). Ref: 3972.

**17389 Pinicolol C**

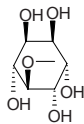
3-Oxolanosta-7,9(11),24-trien-15 $\alpha$ ,21-diol C<sub>30</sub>H<sub>46</sub>O<sub>3</sub> (454.70). Waxy yellow solid. Source: HONG YUAN CENG KONG JUN *Fomitopsis pinicola* [Syn. *Fomes pinicola*; *Polyporus pinicola*] (crust). Ref: 3972.

**17390 Pinidine**

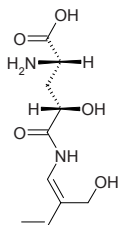
2-Methyl-6-(prop-2-enyl)piperidine [501-02-0] C<sub>9</sub>H<sub>17</sub>N (139.24). bp 176~177°C/751mmHg. Source: HAI SONG ZI *Pinus koraiensis*. Ref: 6.

**17391 Pinitol**

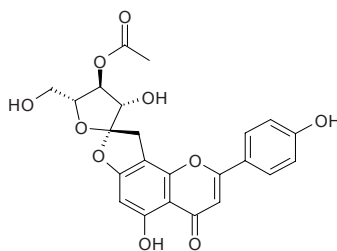
[10284-63-6] C<sub>7</sub>H<sub>14</sub>O<sub>6</sub> (194.19). mp 186°C. Source: YE GUAN MEN *Lespedeza cuneata*. Ref: 6.

**17392 Pinnatanine**

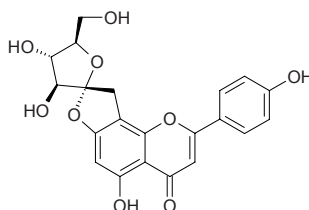
[35214-74-5] C<sub>10</sub>H<sub>16</sub>N<sub>2</sub>O<sub>5</sub> (244.25). mp 175°C (dec), [ $\alpha$ ]<sub>D</sub><sup>27</sup> = +3.2° (c = 0.5, H<sub>2</sub>O). Source: OU ZHOU SHENG GU YOU *Staphylea pinnata*, XUAN CAO GEN *Hemerocallis fulva*. Ref: 3229.

**17393 Pinnatifin I**

C<sub>23</sub>H<sub>20</sub>O<sub>10</sub> (456.41). yellowish acicular crystals, mp 251~253°C. Source: SHAN LI HONG *Crataegus pinnatifida* var. *major*. Ref: 2129.

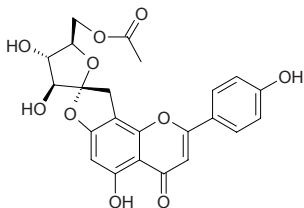
**17394 Pinnatifinoside A**

C<sub>21</sub>H<sub>18</sub>O<sub>9</sub> (414.37). Yellow needles, mp 185~187°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +79° (c = 0.24, MeOH). Source: SHAN LI HONG *Crataegus pinnatifida* var. *major* (leaf). Ref: 5170.

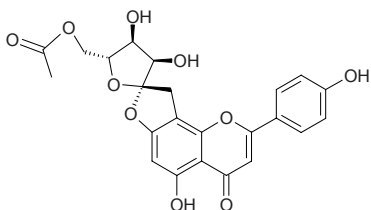


**17395 Pinnatifinoside B**

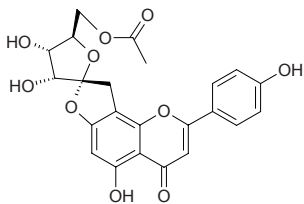
$C_{23}H_{20}O_{10}$  (456.41). Light yellow needles, 240~242°C,  $[\alpha]_D^{25} = +58^\circ$  ( $c = 0.12$ , MeOH). Source: SHAN LI HONG *Crataegus pinnatifida* var. *major* (leaf). Ref: 5170.

**17396 Pinnatifinoside C**

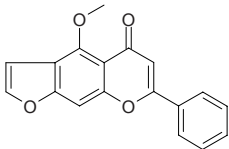
$C_{23}H_{20}O_{10}$  (456.41). Light yellow needles, 246~248°C,  $[\alpha]_D^{25} = -34^\circ$  ( $c = 0.16$ , MeOH). Source: SHAN LI HONG *Crataegus pinnatifida* var. *major* (leaf). Ref: 5170.

**17397 Pinnatifinoside D**

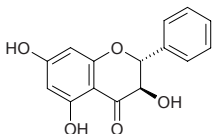
$C_{23}H_{20}O_{10}$  (456.41). Light yellow needles, 248~250°C,  $[\alpha]_D^{25} = +25^\circ$  ( $c = 0.11$ , MeOH). Source: SHAN LI HONG *Crataegus pinnatifida* var. *major* (leaf). Ref: 5170.

**17398 Pinnatin**

[1232-43-5]  $C_{18}H_{12}O_4$  (292.29). mp 176~177°C. Source: SHUI LIU DOU *Pongamia pinnata*. Ref: 6.

**17399 Pinobanksin**

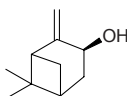
[548-82-3]  $C_{15}H_{12}O_5$  (272.26). Long yellow prisms (MeOH), mp 177~178°C,  $[\alpha]_D = +15^\circ$  ( $c = 2$ , MeOH). Source: BO LE SHU *Bretschneidera sinensis*, JIE LIAO *Polygonum nodosum*, MI HUA SHI DOU LAN *Bulbophyllum odoratissimum* [Syn. *Stelis odoratissimum*], *Baccharis* spp., *Helichrysum* spp., *Larix* spp., *Pinus* spp., *Platanus* spp., *Polygonum* spp., *Prunus* spp., *Tilia* spp. Ref: 1521, 3230, 3231, 3232.

**17400 L-Pinocamphone**

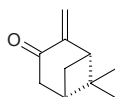
[22339-21-5]  $C_{10}H_{16}O$  (152.24). bp 212~214°C. Source: JIN XIAN CAO *Glechoma longituba*. Ref: 6, 1521.

**17401 trans-Pinocarveol**

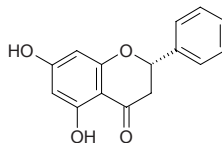
$C_{10}H_{16}O$  (152.24). mp (+) 7°C, (-) 5°C, (±) 14°C. Source: HU JIAO *Piper nigrum*. Ref: 6.

**17402 (-)-Pinocarvone**

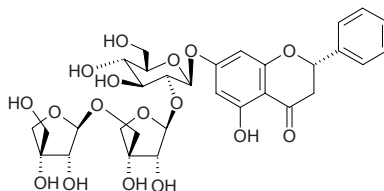
(-)-2(10)-Pinen-3-one  $C_{10}H_{14}O$  (150.22). Oil, mp -1.8°C, bp 67~69°C/4mmHg,  $[\alpha]_D = -68.5^\circ$ . Pharm: Insect attractant (bark beetles). Source: AN YE *Eucalyptus globulus*, TU JING JIE *Chenopodium ambrosioides*, YUAN MAO JING JIE *Nepeta ciliaris*. Ref: 1521.

**17403 Pinocembrin**

(S)-Pinocembrin [480-39-7]  $C_{15}H_{12}O_4$  (256.26).  $[\alpha]_D^{25} = -32.8^\circ$  ( $c = 0.39$ , acetone). Pharm: Cytotoxic (aromatase inhibitor)<sup>[5038]</sup>; antibacterial (*Bacillus subtilis*, 3µg/mL); antifungal (*Candida albicans*, EC = 0.1-3.0mg/mL, *Saccharomyces cerevisiae* and *Cryptococcus neoformans*); anti-inflammatory<sup>[4415]</sup>. Source: DA HUA GE NA XIANG *Goniotalamus griffithii*, GOU SHU GUO *Broussonetia papyrifera*, GUANG GUO GAN CAO *Glycyrrhiza glabra* (leaf)<sup>[4685]</sup>, RUI SHI SHI SONG *Pinus cembra*, YI DA LI LA JU *Helichrysum italicum*, *Glycyrrhiza* sp., *Prunus* sp., *Helichrysum* sp., YANG PU TAO YE *Syzygium samarangense*. Ref: 658, 1521, 5038, 4100, 4415, 4685, 5453.

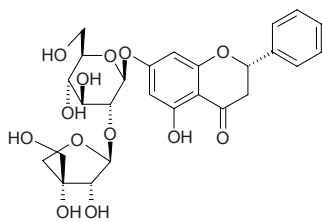
**17404 Pinocembrin 7-O-apiosyl(1→5)apiosyl(1→2)-β-D-glucopyranoside**

$C_{31}H_{38}O_{17}$  (682.64). Colorless amorphous solid,  $[\alpha]_D = -119^\circ$  ( $c = 0.3$ , MeOH). Source: LENG ZHI HU JI SHENG *Viscum angulatum* (whole herb: yield = 0.015%dw). Ref: 4626.

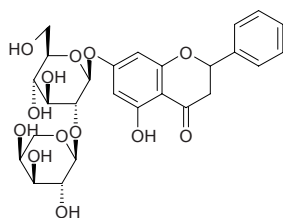


**17405 (2S)-Pinocembrin 7-O-[β-D-apiosyl(1→2)]-β-D-glucoside**

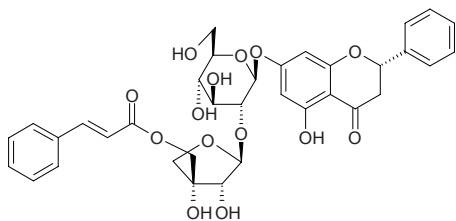
C<sub>26</sub>H<sub>30</sub>O<sub>13</sub> (550.52). Colorless powder (MeOH), mp 204~205°C, [α]<sub>D</sub> = -107.6° (c = 0.01, MeOH). Source: BIAN ZHI HU JI SHENG *Viscum articulatum*. Ref: 4053.

**17406 Pinocembrin-7-O-α-arabinopyranosyl-(1→2)-β-glucopyranoside**

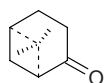
C<sub>26</sub>H<sub>30</sub>O<sub>13</sub> (550.52). Pale yellowish powder. Source: DONG AN NA TUO LI YA SHI CHE JU *Centaurea pseudoscabiosa* ssp. *pseudoscabiosa*. Ref: 1947.

**17407 (2S)-Pinocembrin****7-O-[cinnamoyl(1→5)]-β-D-apiosyl(1→2)]-β-D-glucoside**

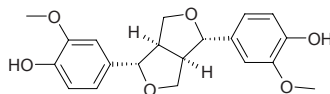
C<sub>35</sub>H<sub>36</sub>O<sub>14</sub> (680.67). White powder (MeOH), mp 170~172°C, [α]<sub>D</sub> = -129.7° (c = 0.035, MeOH). Source: BIAN ZHI HU JI SHENG *Viscum articulatum*. Ref: 4053.

**17408 (-)-β-Pinone**

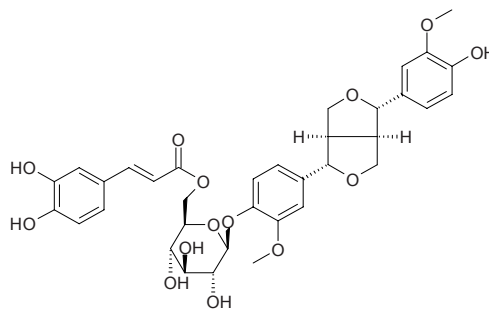
C<sub>9</sub>H<sub>14</sub>O (138.21). bp 85°C/11mmHg, [α]<sub>D</sub> = -18.35° (semisynthetic). Source: YAO YONG XUN YI CAO *Lavandula officinalis*. Ref: 1521.

**17409 (+)-Pinoresinol**

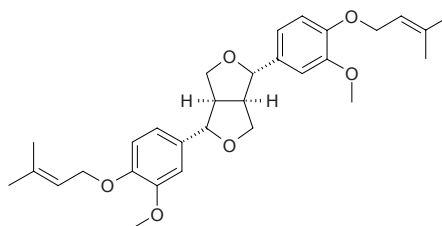
C<sub>20</sub>H<sub>22</sub>O<sub>6</sub> (358.40). Pharm: cAMP phosphodiesterase inhibitor; aldose reductase inhibitor (IC<sub>50</sub> > 100μmol/L, 100μmol/L InRt = 34%, control Epalrestat, IC<sub>50</sub> = 0.072μmol/L)<sup>[4530]</sup>; EBV-EA inhibitor (TPA-induced, IC<sub>50</sub> = 398(mol ratio/32pmol TPA), control Curcumin, IC<sub>50</sub> = 341(mol ratio/32pmol TPA))<sup>[5028]</sup>; anti-inflammatory (modulator of cytokine network: inhibits LPS-activated production of TNF-α in RAW264.7 cells, IC<sub>50</sub> = 50~100μmol/L)<sup>[4416]</sup>; inhibits inducible nitric oxide synthase (iNOS) expression (lipopolysaccharide (LPS)-induced, RAW264.7 cells)<sup>[2582]</sup>; plant growth stimulatory or inhibitory activity (radicle length: *Lactuca sativa*, 1μmol/L, StRt > 61%, 10μmol/L, StRt = (30~60)%, 100μmol/L, StRt > 61%, 1mmol/L, StRt > 61%; *Raphanus sativus*, 1μmol/L, StRt > 61%, 10μmol/L, StRt > 61%, 100μmol/L, StRt > 61%, 1mmol/L, StRt > 61%; *Allium cepa*, 1μmol/L, StRt = (30~60)%, 10μmol/L, StRt or InRt < 10%, 100μmol/L, StRt = (10~30)%, 1mmol/L, StRt = (10~30)%)<sup>[5217]</sup>. Source: DU ZHONG *Eucommia ulmoides*, LIAN QIAO *Forsythia suspensa* (fruit: content = 0.121%)<sup>[5508]</sup>, RI BEN BAI LA SHU *Fraxinus japonica*, RI BEN HUANG LIAN *Coptis japonica* (rhizome), RI BEN YU LIN SONG *Picea jezoensis*, SA HA LIN YUN SHAN *Picea glehnii* (stem cortex), SHUI MU XUE LIAN HUA *Saussurea medusa* (whole herb), TAI WAN GE NA XIANG *Gonithalamus amuyon* (fresh leaf)<sup>[4686]</sup>, XI YANG JIE GU MU *Sambucus nigra*, YI YE TIE SHAN *Tsuga heterophylla*, ZHAI YE NAN YANG SHAN *Araucaria angustifolia*, *Wikstroemia* sp., *Pinus* sp. Ref: 658, 2582, 4416, 4530, 4686, 5028, 5217, 5508.

**17410 Pinoresinol O-[6-O-(E)-caffeoyl]-β-D-glucopyranoside**

C<sub>35</sub>H<sub>38</sub>O<sub>14</sub> (682.68). Amorphous powder, [α]<sub>D</sub><sup>22</sup> = +39° (c = 0.69, MeOH). Source: XIAO LONG YE KUO BAO JU *Baccharis dracunculifolia* (aerial parts). Ref: 4184.

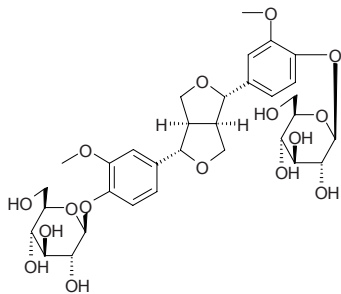
**17411 (+)-Pinoresinol-di-3,3-dimethylallyl ether**

C<sub>30</sub>H<sub>38</sub>O<sub>6</sub> (494.63). Pharm: Antineoplastic; cathartic; sthenic; pesticide; ichthyotoxin; muscle relaxant. Source: *Zanthoxylum* sp. Ref: 2176.

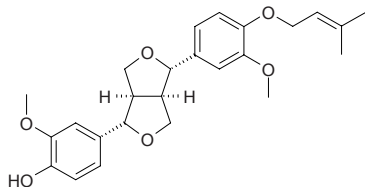


**17412 (+)-Pinoresinol-di-O-β-D-glucoside**

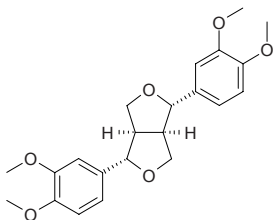
Pinoresinol-4,4'-di-O-β-D-glucoside C<sub>32</sub>H<sub>42</sub>O<sub>16</sub> (682.68). **Pharm:** Antihypertensive (spontaneous hypertensive rat, iv: 30mg/kg, lowers blood pressure by 25~35mmHg, 40mg/kg, 80mmHg, 100mg/kg, 90~120mmHg). **Source:** CI WU JIA *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*], DU ZHONG *Eucommia ulmoides* (bark: content scope of 7 origins = 0.043%~0.506%, mean content = 0.23%<sup>[5508]</sup>), XIE CAO *Valeriana officinalis* (root: yield = 0.016%<sup>[4656]</sup>). **Ref:** 2, 4656, 5501, 5508.

**17413 (+)-Pinoresinol-3,3-dimethylallyl ether**

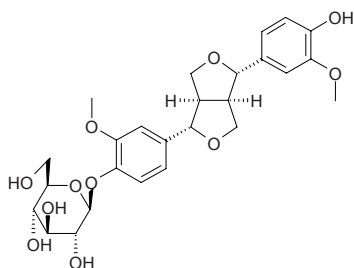
C<sub>25</sub>H<sub>30</sub>O<sub>6</sub> (426.51). **Pharm:** Antineoplastic; cathartic; sthenic; pesticide; ichthyotoxin; muscle relaxant. **Source:** *Zanthoxylum* sp. **Ref:** 2176.

**17414 Pinoresinol dimethyl ether**

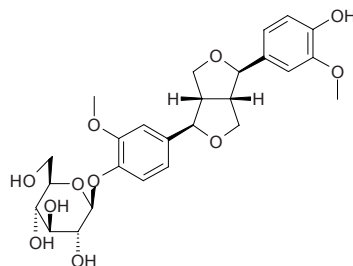
C<sub>22</sub>H<sub>26</sub>O<sub>6</sub> (386.45). **Source:** WANG CHUN YU LAN *Magnolia biondii* [Syn. *Magnolia fargesii*]. **Ref:** 543.

**17415 (+)-Pinoresinol O-β-D-glucopyranoside**

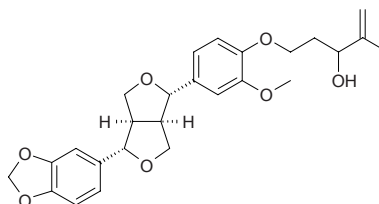
C<sub>26</sub>H<sub>32</sub>O<sub>11</sub> (520.54). **Pharm:** Aldose reductase inhibitor (IC<sub>50</sub> > 100μmol/L, 100μmol/L InRt = 37%, control Epalrestat, IC<sub>50</sub> = 0.072μmol/L)<sup>[4530]</sup>. **Source:** DU ZHONG *Eucommia ulmoides*, SAI ER WEI YA SHI CAO *Achillea alexandri-regis*, SHUI MU XUE LIAN HUA *Saussurea medusa* (whole herb), XIAO LONG YE KUO BAO JU *Baccharis dracunculifolia* (aerial parts), XIE CAO *Valeriana officinalis* (root)<sup>[4656]</sup>. **Ref:** 2, 2545, 4184, 4530, 4656.

**17416 (-)-Pinoresinol O-β-D-glucopyranoside**

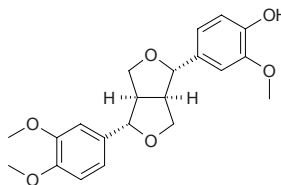
C<sub>26</sub>H<sub>32</sub>O<sub>11</sub> (520.54). **Pharm:** Antioxidant (*in vitro*, DPPH radical scavenger, IC<sub>50</sub> = 260μmol/L; control Vitamin E, IC<sub>50</sub> = 20.1μmol/L). **Source:** RI BEN AN XI XIANG JING PI *Styrax japonica* (stem cortex: yield = 0.0113%<sup>[dw]</sup>). **Ref:** 4787.

**17417 (+)-Pinoresinol-3-hydroxy-4-methyl-4-pentenyl ether**

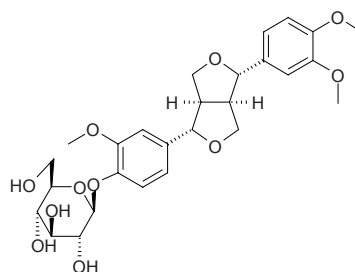
C<sub>26</sub>H<sub>30</sub>O<sub>7</sub> (454.52). **Pharm:** Antineoplastic; cathartic; sthenic; pesticide; ichthyotoxin; muscle relaxant. **Source:** *Zanthoxylum* sp. **Ref:** 2176.

**17418 (+)-Pinoresinol monomethyl ether**

C<sub>21</sub>H<sub>24</sub>O<sub>6</sub> (372.42). **Source:** YUN NAN FEI SHU *Torreya yunnanensis* (leaf and twig: yield = 0.0096%<sup>[dw]</sup>). **Ref:** 4707.

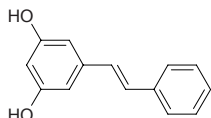
**17419 (+)-Pinoresinol monomethyl ether O-β-D-glucopyranoside**

C<sub>27</sub>H<sub>34</sub>O<sub>11</sub> (534.57). **Source:** YUN NAN FEI SHU *Torreya yunnanensis* (leaf and twig: yield = 0.022%<sup>[dw]</sup>)<sup>[4707]</sup>, ZHONG HUA QING NIU DAN *Tinospora sinensis* (stem). **Ref:** 4292, 4707.

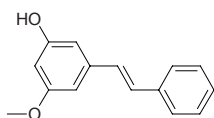


**17420 Pinosylvin**

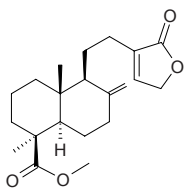
[22139-77-1] C<sub>14</sub>H<sub>12</sub>O<sub>2</sub> (212.25). **Pharm:** Antifungal (*Pyricularia grisea*, EC<sub>50</sub> = 7 μg/mL, EC<sub>90</sub> = 16 μg/mL; *Cladosporium herbarum*, EC<sub>50</sub> = 10 μg/mL, EC<sub>90</sub> = 58 μg/mL; *Fusarium avenaceum*, EC<sub>50</sub> = 36 μg/mL, EC<sub>90</sub> = 50 μg/mL; *Alternaria citri*, EC<sub>50</sub> = 35 μg/mL, EC<sub>90</sub> = 46 μg/mL; *Botrytis cinerea*, EC<sub>50</sub> = 11 μg/mL, EC<sub>90</sub> = 39 μg/mL)<sup>[3751]</sup>; toxin (fungi, bacteria and some animals). **Source:** YIN DU HUANG TAN *Dalbergia sissoo*, XI BO DE QI MU *Alnus sieboldiana*, *Stemona cf. pierrei* (underground parts), *Pinus sp.*, *Nothofagus sp.* **Ref:** 658, 3751.

**17421 Pinosylvin methyl ether**

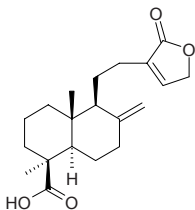
C<sub>15</sub>H<sub>14</sub>O<sub>2</sub> (226.28). **Pharm:** Antifungal; insect antifeedant ("Showshoe Hare" *Lepus americanus*). **Source:** MEI ZHOU LU QI MU *Alnus crispa*, XI BO DE QI MU *Alnus sieboldiana*, *Pinus sp.* **Ref:** 658.

**17422 Pinusolide**

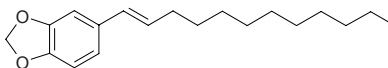
[31685-80-0] C<sub>21</sub>H<sub>30</sub>O<sub>4</sub> (346.47). Colorless oil, [α]<sub>D</sub><sup>25</sup> = +47° (c = 3.0, CHCl<sub>3</sub>), [α]<sub>D</sub><sup>23</sup> = +58.5° (c = 0.1, CHCl<sub>3</sub>); fine needles (pet. ether), mp 83–84°C, [α]<sub>D</sub><sup>23</sup> = +24° (MeOH). **Pharm:** PAF antagonist (*in vivo*, *in vitro*, IC<sub>50</sub> = 0.25 μmol/L, protects mus from lethality induced by PAF, ED<sub>50</sub> (iv) = 1.1 mg/kg, ED<sub>50</sub> (orl) = 69 mg/kg); Anti-inflammatory (mus, edema on ears caused by oleum crotonis, 2 mg/ear); antimalarial (*in vitro*, *Plasmodium falciparum* strain 3D7, IC<sub>50</sub> = (18.5 ± 1.6) μg/mL = (53.4 ± 4.6) μmol/L)<sup>[3022]</sup>. **Source:** BAI ZI REN *Biota orientalis* [Syn. *Thuja orientalis*; *Platyclusus orientalis*], CE BAI YE *Thuja orientalis* [Syn. *Platyclusus orientalis*; *Biota orientalis*], HONG SONG *Pinus koraiensis*, TAI WAN GUO SONG *Pinus armandii* var. *mastersiana*, XI BO LI YA HONG SONG *Pinus sibirica*. **Ref:** 1521, 3022, 3233, 3234, 3235.

**17423 Pinusolidic acid**

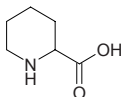
Pinosolide acid; Pinusolic acid C<sub>20</sub>H<sub>28</sub>O<sub>4</sub> (332.44). Colorless oil, [α]<sub>D</sub><sup>25</sup> = +53° (c = 0.36, CHCl<sub>3</sub>), [α]<sub>D</sub><sup>23</sup> = +54.5° (c = 0.1, CHCl<sub>3</sub>). **Pharm:** Antimalarial (*in vitro*, *Plasmodium falciparum* strain 3D7, IC<sub>50</sub> = (54.5 ± 1.4) μg/mL = (163.9 ± 4.2) μmol/L)<sup>[3022]</sup>. **Source:** CE BAI YE *Thuja orientalis* [Syn. *Platyclusus orientalis*; *Biota orientalis*]. **Ref:** 3022.

**17424 Pipataline**

[18634-87-2] C<sub>19</sub>H<sub>28</sub>O<sub>2</sub> (288.43). mp 38°C. **Source:** *Piper peepuloides*. **Ref:** 3236.

**17425 Pipecolic acid**

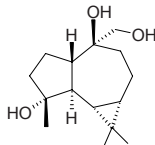
*dl*-Pipecolinic acid [535-75-1] C<sub>6</sub>H<sub>11</sub>NO<sub>2</sub> (129.16). mp (+) 270°C, (–) 270°C, (±) 264°C. **Pharm:** Germination inhibitor. **Source:** BAI FAN DOU *Phaseolus vulgaris*, BIAN DOU *Dolichos lablab*, CAN DOU *Vicia faba*, HAI JIU CAI *Triglochin maritimum*, SHENG JIANG *Zingiber officinale*, SUAN JIAO *Tamarindus indica*, WANG GUA ZI *Trichosanthes cucumeroides*. **Ref:** 6, 658.

**17426 D-α-Pipecoline**

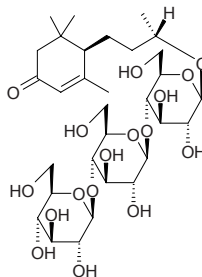
[109-05-7] C<sub>6</sub>H<sub>13</sub>N (99.18). bp (+) 117.0–117.5°C. **Source:** HAI SONG ZI *Pinus koraiensis*. **Ref:** 6.

**17427 Pipelol A**

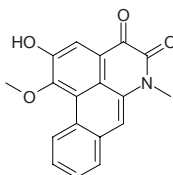
C<sub>15</sub>H<sub>26</sub>O<sub>3</sub> (254.37). Syrup, [α]<sub>D</sub><sup>19</sup> = –14.3° (c = 1.2, MeOH). **Source:** CHANG HU JIAO *Piper elongatum* (aerial parts). **Ref:** 4239.

**17428 Pipeloside A**

C<sub>31</sub>H<sub>52</sub>O<sub>17</sub> (696.75). Syrup, [α]<sub>D</sub><sup>19</sup> = +173.7° (c = 0.9, MeOH). **Source:** CHANG HU JIAO *Piper elongatum* (aerial parts). **Ref:** 4239.

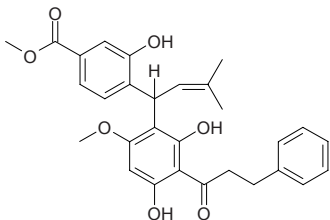
**17429 Piperadione**

Aristolodione [109771-09-7] C<sub>18</sub>H<sub>13</sub>NO<sub>4</sub> (307.31). Crystals (CHCl<sub>3</sub>–MeOH), mp 273–276°C (dec). **Source:** BI BA GEN *Piper longum*, ZHI LI MA DOU LING *Aristolochia chilensis*. **Ref:** 3237, 3238.

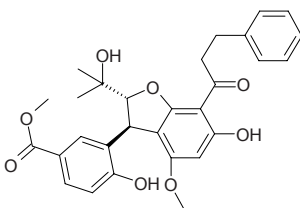


**17430 Piperaduncin A**

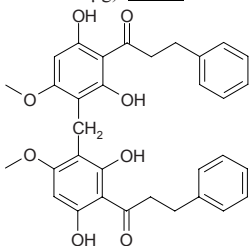
[155023-54-4] C<sub>29</sub>H<sub>30</sub>O<sub>7</sub> (490.56). Yellowish amorphous powder,  $[\alpha]_D^{20} = -3.1^\circ$  ( $c = 0.64$ , MeOH). **Pharm:** Cytotoxic (KB, ED<sub>50</sub> = 2.3 μg/mL); antibacterial (*Bacillus subtilis* MIC = 1.6 μg on TLC plate, *Micrococcus luteus* MIC = 1.6 μg). **Source:** GOU ZHUANG HU JIAO *Piper aduncum*. **Ref:** 3702.

**17431 Piperaduncin B**

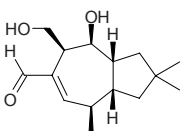
[155023-55-5] C<sub>29</sub>H<sub>30</sub>O<sub>8</sub> (506.56). Yellow oil,  $[\alpha]_D^{20} = -15^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Cytotoxic (KB, ED<sub>50</sub> = 4.7 μg/mL); antibacterial (*Bacillus subtilis* MIC = 0.2 μg on TLC plate, *Micrococcus luteus* MIC = 0.4 μg). **Source:** GOU ZHUANG HU JIAO *Piper aduncum*. **Ref:** 3702.

**17432 Piperaduncin C**

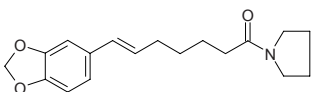
[155023-56-6] C<sub>33</sub>H<sub>32</sub>O<sub>8</sub> (556.62). Yellow amorphous powder. **Pharm:** Antibacterial (*Bacillus subtilis*, TLC plate, MIC = 1.5 μg, *Micrococcus luteus*, MIC = 3.0 μg). **Source:** GOU ZHUANG HU JIAO *Piper aduncum*. **Ref:** 3702.

**17433 Piperalol**

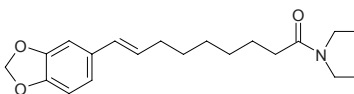
[100288-35-5] C<sub>15</sub>H<sub>24</sub>O<sub>3</sub> (252.36). Pungent oil,  $[\alpha]_D^{23} = +57^\circ$  ( $c = 4.3$ , Et<sub>2</sub>O). **Source:** LA RU GU *Lactarius piperatus* [Syn. *Agaricus piperatus*], MAO TOU RU GU *Lactarius torminosus*, *Lactarius necator*, *Russula queletii*. **Ref:** 3239.

**17434 Piperamide C 7:1(6E)**

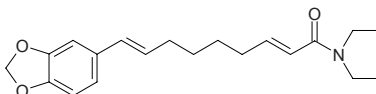
[117137-66-3] C<sub>18</sub>H<sub>23</sub>NO<sub>3</sub> (301.39). Oil. **Pharm:** Larvicidal. **Source:** HU JIAO *Piper nigrum*. **Ref:** 3240.

**17435 Piperamide C 9:1(8E)**

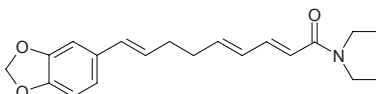
Tricholein [62510-52-5] C<sub>20</sub>H<sub>27</sub>NO<sub>3</sub> (329.44). Oil. **Pharm:** Larvicidal. **Source:** HU JIAO *Piper nigrum* (root: yield = 0.00019%dw), MAO SUI HU JIAO *Piper trichostachyon*. **Ref:** 3242, 3243, 3240, 4753.

**17436 Piperamide C 9:2(2E,8E)**

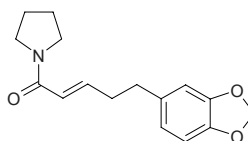
Brachyamide B [117137-67-4] C<sub>20</sub>H<sub>25</sub>NO<sub>3</sub> (327.43). Oil. **Pharm:** Larvicidal. **Source:** DUAN SUI HU JIAO *Piper brachystachyum*, HU JIAO *Piper nigrum* (root: yield = 0.000057%dw). **Ref:** 3240, 3244, 4753.

**17437 Piperamide C 9:3(2E,4E,8E)**

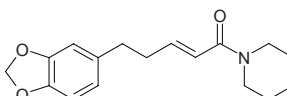
[117137-68-5] C<sub>20</sub>H<sub>23</sub>NO<sub>3</sub> (325.41). Yellow needles, mp 105~106°C. **Pharm:** Larvicidal. **Source:** HU JIAO *Piper nigrum* (root: yield = 0.00011%dw). **Ref:** 3240, 4753.

**17438 Piperamine**

Piperamide C 5:1(2E); 1-[1-Oxo-5(3,4-methylenedioxyphenyl)-2E-pentenyl]pyrrolidine [117137-65-2] C<sub>16</sub>H<sub>19</sub>NO<sub>3</sub> (273.33). Oil. **Pharm:** Antifungal (*Cladosporium sphaerospermum*, MIA = 5.0 μg, control Nystatin, MIA = 0.5 μg)<sup>[5102]</sup>. **Source:** HU JIAO *Piper nigrum*, HU JIAO *Piper nigrum* (root: yield = 0.00016%dw), YING MAO HU JIAO *Piper hispidum* (stem). **Ref:** 3240, 3241, 4753, 5102.

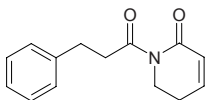
**17439 Piperanine**

1-[1-Oxo-5(3,4-methylenedioxyphenyl)-2E-pentenyl]piperidine [23512-46-1] C<sub>17</sub>H<sub>21</sub>NO<sub>3</sub> (287.36). Colorless crystals. **Pharm:** Protective gastric lesions (rat, ethanol-induced, 25mg/kg orl, length = (58.2±9.8)mm, control, length = (118.6±16.2)mm, InRt = 50.9%; indomethacin-induced in rats, dose, 25mg/kg orl, length = (62.8±10.1)mm, control, length = (89.5±9.8)mm, InRt = 29.8%)<sup>[4935]</sup>; antifungal (*Cladosporium sphaerospermum*, MIA = 5.0 μg, control Nystatin, MIA = 0.5 μg)<sup>[5102]</sup>. **Source:** HU JIAO *Piper nigrum* (root: yield = 0.000024%dw), LIU TU HU JIAO *Piper tuberculatum* (seed), *Piper chaba* (fruit). **Ref:** 6, 4753, 4935, 5102.

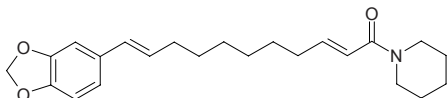


**17440 Piperchabamide A**

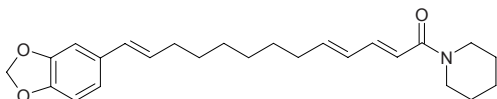
$C_{14}H_{15}NO_2$  (229.28). Colorless oil. Source: *Piper chaba* (fruit). Ref: 4935.

**17441 Piperchabamide B**

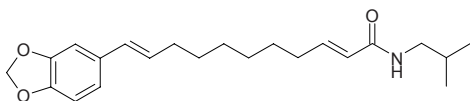
$C_{23}H_{31}NO_3$  (369.51). Colorless oil. Source: *Piper chaba* (fruit). Ref: 4935.

**17442 Piperchabamide C**

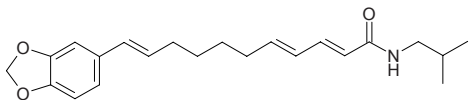
$C_{25}H_{33}NO_3$  (395.55). Colorless oil. Source: *Piper chaba* (fruit). Ref: 4935.

**17443 Piperchabamide D**

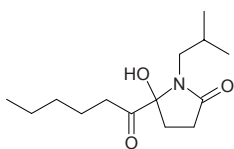
$C_{22}H_{31}NO_3$  (357.50). Colorless oil. Source: *Piper chaba* (fruit). Ref: 4935.

**17444 Pipericide**

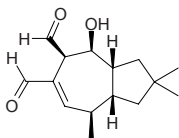
Retrofractamide B [54794-74-0]  $C_{22}H_{29}NO_3$  (355.48). Crystals (EtOAc), mp 114–115°C. Pharm: Insecticidal. Source: CHANG GUO BI BA *Piper retrofractum*, HU JIAO *Piper nigrum*. Ref: 3245, 3240.

**17445 Pipericycliamide**

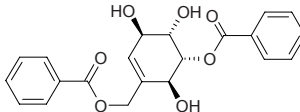
*N*-Isobutyl-4-hexanoyl-4-hydroxypiperidin-1-one  $C_{14}H_{25}NO_3$  (255.36). Colorless oil,  $[\alpha]_D^{25} = 0^\circ$  ( $c = 1$ ,  $CHCl_3$ ). Source: HU JIAO *Piper nigrum* (root: yield = 0.00056%dw). Ref: 4753.

**17446 Piperdial**

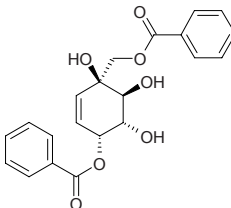
[100288-36-6]  $C_{15}H_{22}O_3$  (250.34). Pungent oil,  $[\alpha]_D^{23} = +77^\circ$  ( $c = 0.8$ ,  $Et_2O$ ). Source: LA RU GU *Lactarius piperatus* [Syn. *Agaricus piperatus*], MAO TOU RU GU *Lactarius torminosus*, *Lactarius necator*, *Russula queletii*. Ref: 3239.

**17447 Piperenol A**

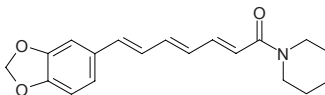
[134476-89-4]  $C_{21}H_{20}O_7$  (384.39). Crystals (EtOAc–hexane), mp 48–49°C,  $[\alpha]_D = +14.6^\circ$  ( $c = 0.5$ , MeOH). Source: BI CHENG QIE *Piper cubeba*, *Piper clarkii*. Ref: 3246.

**17448 Piperenol B**

[134476-91-8]  $C_{21}H_{20}O_7$  (384.39). Semi-solid,  $[\alpha]_D = +50^\circ$  ( $c = 1$ , MeOH). Source: BI CHENG QIE *Piper cubeba*, Ref: 3246.

**17449 Piperettine**

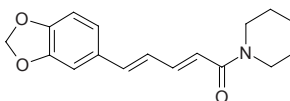
Piperamide A 7:3(2*E*,4*E*,6*E*) [583-34-6]  $C_{19}H_{21}NO_3$  (311.38). Yellow needles ( $C_6H_6$ –hexane), mp 148°C. Source: HU JIAO *Piper nigrum* (fruit: mean content = yield = 0.53%<sup>[5508]</sup>; root: yield = 0.000014%dw<sup>[4753]</sup>), *Piper aurantiacum*. Ref: 3240, 4753, 5508.

**17450 Piperidine**

Azacyclohexane [110-89-4]  $C_5H_{11}N$  (85.15). mp  $-9^\circ C$ , bp  $106^\circ C$ . Source: BI BA *Piper longum*, MA HUA *Cannabis sativa*. Ref: 6.

**17451 Piperine**

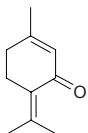
1,3-Benzodioxol-5-yl-1-oxo-2,4-pentadienylpiperine; (*E,E*)-Piperylpiperidine [94-62-2]  $C_{17}H_{19}NO_3$  (285.35). Yellow needles, mp 129.5°C, almost insoluble in water, slightly soluble in ether, soluble in ethanol, easily soluble in chloroform, benzene, acetic acid.<sup>[5507]</sup> Pharm: Anticonvulsant; pesticide; sedative; MAO-A inhibitor ( $IC_{50} = 20.9\mu mol/L$ ); MAO-B inhibitor ( $IC_{50} = 7.0\mu mol/L$ ); protective gastric lesions (rat, ethanol-induced, 6.25mg/kg orl, length = (113.0±13.1)mm, control, length = (122.6±11.3)mm, InRt = 7.8%; 25mg/kg orl, length = (54.8±6.3)mm, InRt = 55.3%; indomethacin-induced, 25mg/kg orl, length = (27.3±5.6)mm, control, length = (77.1±6.7)mm, InRt = 64.6%)<sup>[4935]</sup>;  $LD_{50}$  (rat, ip) = 348.6mg/kg. Source: BI BA *Piper longum* (fruit-spike: content scope = 4%–6%<sup>[5501]</sup>), BI BA GEN *Piper longum*, JI NEI YA HU JIAO *Piper guineense*, HU JIAO *Piper nigrum* (fruit: content scope = 3.15%–4.82%<sup>[5501]</sup>), HU JIAO *Piper nigrum* (fruit: mean content = 4.32%<sup>[5508]</sup>; root: yield = 0.000036%dw<sup>[4753]</sup>), *Piper chaba* (fruit). Ref: 6, 658, 4482, 4753, 4935, 5501, 5507, 5508.



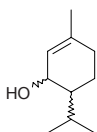


**17452 Piperitenone**

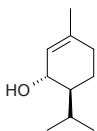
[491-09-8] C<sub>10</sub>H<sub>14</sub>O (150.22). Source: JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*]. Ref: 2.

**17453 Piperitol**

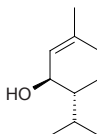
C<sub>10</sub>H<sub>18</sub>O (154.25). Source: AI YE *Artemisia argyi*, KUI HAO *Artemisia princeps*, MENG GU HAO *Artemisia mongolica*, ROU DOU KOU *Myristica fragrans*, YE AI HAO *Artemisia lavandulaefolia*. Ref: 3247, 3248, 1268.

**17454 (3R,4S)-(-)-trans-Piperitol**

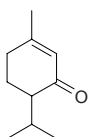
[25437-28-9] C<sub>10</sub>H<sub>18</sub>O (154.25). Oil, bp 98°C/15mmHg, [α]<sub>D</sub><sup>35</sup> = -25° (c = 2.1, C<sub>6</sub>H<sub>6</sub>). Source: *Mentha* spp., *Eucalyptus* spp. Ref: 1521, 3249.

**17455 (3S,4R)-(+)-cis-Piperitol**

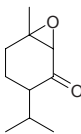
[65733-28-0] C<sub>10</sub>H<sub>18</sub>O (154.25). bp 101~104°C/16mmHg, [α]<sub>D</sub><sup>16</sup> = +40.22° (+28°). Source: *Andropogon* sp. Ref: 1521, 3249.

**17456 Piperitone**

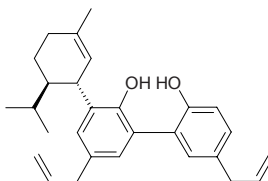
3-Methyl-6-(1-methylethyl)-2-cyclohexen-1-one [89-81-6] C<sub>10</sub>H<sub>16</sub>O (152.24). bp (+) 116.0~118.5°C/20mmHg, (-) 109.5~110.5°C/15mmHg, (±) 232~233°C/769mmHg. Pharm: Antiasthmatic (gpg, bronchospasm induced by histamine, im, 1.2mL/kg, tracheal smooth muscle relaxant); antibacterial (*α*-Streptococcus, *β*-Streptococcus, *Diplococcus pneumoniae* and *Staphylococcus aureus*); antitussive; LD<sub>50</sub> (mus, perfusion in stomach) = 4.32mg/kg. Source: FU AN *Eucalyptus dives*, HU JIAO *Piper nigrum*, JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*], XI TE KA YUN SHAN *Picea sitchensis*, XIN NONG XIANG MAO *Cymbopogon sennaarensis*, YUN XIANG CAO *Cymbopogon distans*. Ref: 2, 4, 6, 658, 3112, 5501.

**17457 Piperitone oxide**

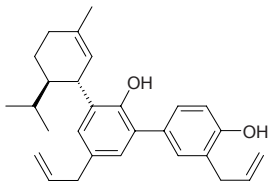
[5286-38-4] C<sub>10</sub>H<sub>16</sub>O<sub>2</sub> (168.24). Crystals (hexane), mp 14.5~15.5°C, [α]<sub>D</sub><sup>22</sup> = -177.0° (c = 0.96, EtOH), d<sub>25</sub><sup>25</sup> = 1.01, n<sub>D</sub><sup>20</sup> = 1.4624. Source: SEN LIN BO HE *Mentha sylvestris*, YU XIANG CAO *Mentha rotundifolia*. Ref: 3250.

**17458 Piperitylmagnolol**

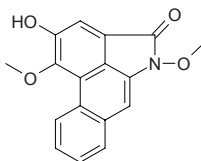
C<sub>28</sub>H<sub>34</sub>O<sub>2</sub> (402.58). Source: HOU PO *Magnolia officinalis*. Ref: 2.

**17459 Piperitylhonokiol**

C<sub>28</sub>H<sub>34</sub>O<sub>2</sub> (402.58). Source: HOU PO *Magnolia officinalis*. Ref: 2.

**17460 Piperlactam S**

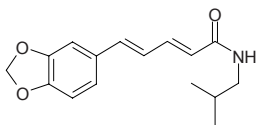
Spiplactam S C<sub>17</sub>H<sub>13</sub>NO<sub>4</sub> (295.30). Pharm: Anti-inflammatory (modulator of cytokine network: inhibits C5a-induced release of TNF-α and IL-1β in RAW264.7 macrophages)<sup>[4416]</sup>; antioxidant (1~20μmol/L, prevention of copper-induced LDL peroxidation; amelioration of freeradical-Induced oxidative stress of endothelial cells; attenuate Fe<sup>2+</sup>-in-duced oxidation of cell membrane; effectively minimizes H<sub>2</sub>O<sub>2</sub>/FeSO<sub>4</sub>-induced loss of cell viability in cultured endothelial cells and significantly reversed H<sub>2</sub>O<sub>2</sub>/FeSO<sub>4</sub>-induced impairment of endothelium-dependent relaxation to acetylcholine in rat aorta; may help to reduce the risk of atherosclerosis)<sup>[5353]</sup>; anti-Inflammatory (modulation of C5a-induced chemotaxis and inflammatory cytokines production in macrophages: 1~30μmol/L Piperlactam S suppresses C5a-induced migration across a fibrinogen-coated barrier, IC<sub>50</sub> = (4.5±0.3)μmol/L; At 30μmol/L, piperlactam S inhibits chemotaxis by more than 95% and also decreased phagocytosis by 25% without reducing macrophage viability and adherent capacity; inhibits C5a-stimulated release of TNF-α and IL-1β; retardation of macrophage recruitment and suppression of cytokines production might underlie potential usefulness of piperlactam S as an anti-inflammatory agent)<sup>[5354]</sup>. Source: HAI FENG TENG *Piper kadsura* [Syn. *Piper futokadsura*]. Ref: 4416, 5353, 5354.



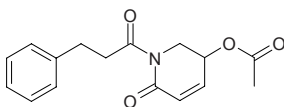


**17461 Piperlonguminine**

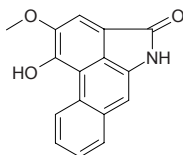
[5950-12-9] C<sub>16</sub>H<sub>19</sub>NO<sub>3</sub> (273.33). Colorless crystals, mp 166~168°C. **Pharm:** Protective gastric lesions (rat, ethanol-induced, 25mg/kg orl, length = (51.7±9.7)mm, control, length = (118.6±16.2)mm, InRt = 56.4%; indomethacin-induced in rats, dose, 25mg/kg orl, length = (73.6±12.8)mm, control, length = (89.5±9.8)mm, InRt = 17.8%)<sup>[4935]</sup>; melanogenesis inhibitor (melanoma B16 cells, inhibits  $\alpha$ -melanocyte-stimulating hormone ( $\alpha$ -MSH)-induced melanogenesis, 25 $\mu$ mol/L, InRt = (85.1±4.9)%, 12.5 $\mu$ mol/L, InRt = (62.1±6.1)%, 6.3 $\mu$ mol/L, InRt = (36.4±4.6)%, 3.1 $\mu$ mol/L, InRt = (18.4±5.1)%, IC<sub>50</sub> = 9.6 $\mu$ mol/L; control, Kojic acid, IC<sub>50</sub> = 44.6 $\mu$ mol/L; inhibits  $\alpha$ -MSH-induced tyrosinase synthesis, does not inhibit tyrosinase activity or directly depigments melanin)<sup>[4083]</sup>. **Source:** BI BA GEN *Piper longum*, *Piper chaba* (fruit), BI BA *Piper longum* (fruit). **Ref:** 6, 4083, 4935.

**17462 Pipermethystine**

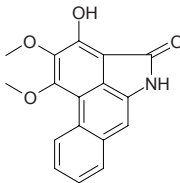
C<sub>16</sub>H<sub>17</sub>NO<sub>4</sub> (287.32). Colorless oil, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = -176.4° (c = 0.49, Me<sub>2</sub>CO). **Source:** KA WA HU JIAO *Piper methysticum*. **Ref:** 3373.

**17463 Piperolactam A**

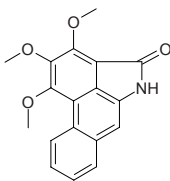
[112501-42-5] C<sub>16</sub>H<sub>11</sub>NO<sub>3</sub> (265.27). Crystals, (C<sub>6</sub>H<sub>6</sub>-MeOH), mp 303~306°C (dec), mp 271~273°C (EtOAc). **Pharm:** Platelet aggregation inhibitor (rbt platelets induced by thrombin, 100 $\mu$ g/mL, add thrombin 0.1u/mL, cause platelet aggregation, control AggRt = (92.6±0.4)%; add AA, 100 $\mu$ mol/L, 100 $\mu$ g/mL, cause platelet aggregation, 20 $\mu$ g/mL, AggRt = (83.0±0.3)%, control AggRt = (87.8±0.3)%; add collagen 10 $\mu$ g/mL, 100 $\mu$ g/mL, cause platelet aggregation, 20 $\mu$ g/mL, AggRt = (87.5±0.2)%, control AggRt = (89.3±0.5)%, Aspirin 100 $\mu$ g/mL, AggRt = (81.3±0.5)%; add PAF 2ng/mL, 100 $\mu$ g/mL, cause platelet aggregation, control AggRt = (93.0±0.6)%)<sup>[4938]</sup>. **Source:** BI BA GEN *Piper longum*, LUAN YE HU JIAO *Piper attenuatum*, TAI WAN HU JIAO *Piper taiwanense* (stem), YU XING CAO *Houttuynia cordata*, ZHU YE JU *Piper boehmeriaefolium*, *Piper hamiltonii*, *Parastolochia flos-avis*. **Ref:** 1521, 2428, 2713, 3238, 4938.

**17464 Piperolactam B**

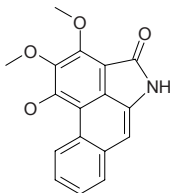
[116084-93-6] C<sub>17</sub>H<sub>13</sub>NO<sub>4</sub> (295.30). Crystals, (MeOH), mp 212~214°C. **Pharm:** Platelet aggregation inhibitor (rbt platelets induced by thrombin, 50 $\mu$ g/mL, add thrombin 0.1u/mL, AggRt = (51.0±0.7)%, control AggRt = (92.6±0.4)%; add AA 100 $\mu$ mol/L, 20 $\mu$ g/mL, AggRt = (72.0±0.7)%, control AggRt = (87.8±0.3)%, Aspirin 50 $\mu$ g/mL, AggRt = (11.7±10.1)%; add collagen 10 $\mu$ g/mL, 20 $\mu$ g/mL, AggRt = (64.7±3.0)%, control AggRt = (89.3±0.5)%, Aspirin 100 $\mu$ g/mL, AggRt = (81.3±0.5)%; add PAF 2ng/mL, 50 $\mu$ g/mL, AggRt = (73.0±1.4)%, control AggRt = (93.0±0.6)%)<sup>[4938]</sup>. **Source:** BI BA GEN *Piper longum*, TAI WAN HU JIAO *Piper taiwanense* (stem), ZHU YE JU *Piper boehmeriaefolium*. **Ref:** 1521, 2713, 3238, 4938.

**17465 Piperolactam C**

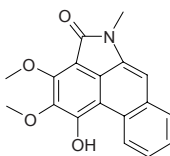
[116064-76-7] C<sub>18</sub>H<sub>15</sub>NO<sub>4</sub> (309.32). Crystals, (C<sub>6</sub>H<sub>6</sub>-MeOH), mp 187~188°C. **Source:** BI BA GEN *Piper longum*, TAI WAN HU JIAO *Piper taiwanense* (stem), ZHU YE JU *Piper boehmeriaefolium*. **Ref:** 2713, 4938.

**17466 Piperolactam D**

[128718-51-4] C<sub>17</sub>H<sub>13</sub>NO<sub>4</sub> (295.30). Yellow crystals, (C<sub>6</sub>H<sub>6</sub>-MeOH), mp 226~227°C. **Source:** BI BA GEN *Piper longum*, LUAN YE HU JIAO *Piper attenuatum*, ZHU YE JU *Piper boehmeriaefolium*. **Ref:** 3251.

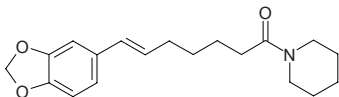
**17467 Piperolactam E**

C<sub>18</sub>H<sub>15</sub>NO<sub>4</sub> (309.32). Grayish needles (benzene-MeOH), mp 179~181°C. **Pharm:** Platelet aggregation inhibitor (rbt platelets induced by thrombin, 100 $\mu$ g/mL, add thrombin 0.1u/mL, AggRt = (79.7±1.2)%, control AggRt = (92.6±0.4)%; add AA 100 $\mu$ mol/L, 100 $\mu$ g/mL, AggRt = (49.3±3.8)%, control AggRt = (87.8±0.3)%, Aspirin 50 $\mu$ g/mL, AggRt = (11.7±10.1)%; add collagen 10 $\mu$ g/mL, 100 $\mu$ g/mL, AggRt = (0.0±0.0)%, 20 $\mu$ g/mL, AggRt = (74.0±2.5)%, control AggRt = (89.3±0.5)%, Aspirin 100 $\mu$ g/mL, AggRt = (81.3±0.5)%; add PAF 2ng/mL, 100 $\mu$ g/mL, AggRt = (66.7±4.3)%, control AggRt = (93.0±0.6)%)<sup>[4938]</sup>. **Source:** TAI WAN HU JIAO *Piper taiwanense* (stem). **Ref:** 4938.

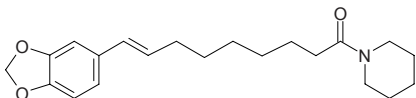


**17468 Piperolein A**

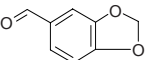
[30505-92-1] C<sub>19</sub>H<sub>25</sub>NO<sub>3</sub> (315.42). Pale-yellow oil. Source: HU JIAO *Piper nigrum*. Ref: 3252.

**17469 Piperolein B**

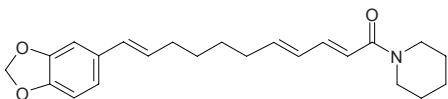
1-[1-Oxo-9(3,4-methylenedioxyphenyl)-8E-nonenyl]piperidine; Piperamide A 9:1(8E) C<sub>21</sub>H<sub>29</sub>NO<sub>3</sub> (343.47). Source: HU JIAO *Piper nigrum* (root: yield = 0.00049%dw). Ref: 3240, 4753.

**17470 Piperonal**

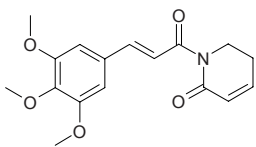
Piperonylaldehyde [120-57-0] C<sub>8</sub>H<sub>6</sub>O<sub>3</sub> (150.11). mp 37°C. Pharm: Kills body louse. Source: CI HUAI HUA *Robinia pseudoacacia*, HU JIAO *Piper nigrum*, PENG ZI CAI *Galium verum*, SHOU ZHANG SHEN *Gymnadenia conopsea*, *Heliotropium* sp., *Vanilla* sp., *Viola* sp. Ref: 6, 658.

**17471 Piperundecalidine**

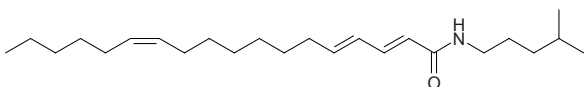
[88660-11-1] C<sub>23</sub>H<sub>29</sub>NO<sub>3</sub> (367.49). Crystals, (EtOAc-hexane), mp 64.5-65.5°C. Source: BI BA *Piper longum*. Ref: 3253.

**17472 Piplartine**

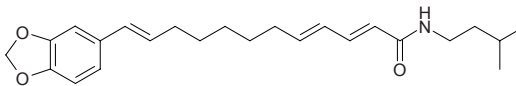
*N*-(3',4',5'-Trimethoxycinnamoyl)-2-pyridin-2-one [20069-09-4] C<sub>17</sub>H<sub>19</sub>NO<sub>5</sub> (317.34). Pale yellow needles (MeOH), mp 124-126°C. Pharm: Antiasthmatic (effective treatment for asthma and chronic bronchitis); antihypertensive (dog, 0.1mg/kg); inhibits ileac tension and contractility (rbt, rat). Source: BI BA *Piper longum*, CHANG BING HU JIAO *Piper sulvaticum*, BI BA GEN *Piper longum*, *Piper cenocladum* (leaf). Ref: 6, 658, 3896, 5501.

**17473 Pipnoohine**

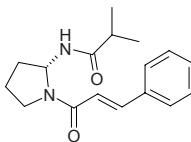
(2E,4E,12Z)-*N*-(4-Methylpentyl)octadeca-2,4,12-trienamide C<sub>24</sub>H<sub>43</sub>NO (361.62). Amorphous powder. Pharm: Pesticide (fourth instar larvae of *Aedes aegypti*, WHO method, 35.0mg/L)<sup>[2559]</sup>. Source: HU JIAO *Piper nigrum*. Ref: 2559.

**17474 Pipyahyine**

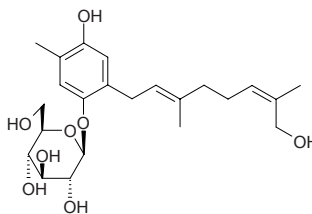
(2E,4E,11E)-12-(Benzo[1,3]dioxol-5-yl)-*N*-(3-methylbutyl)dodeca-2,4,11-triene n-amide C<sub>24</sub>H<sub>33</sub>NO<sub>3</sub> (383.54). White needles (pet. ether : EtOAc = 7:3), mp 109-110.5°C. Pharm: Pesticide (fourth instar larvae of *Aedes aegypti*, WHO method, 30.0mg/L). Source: HU JIAO *Piper nigrum*. Ref: 2559.

**17475 Piriferine**

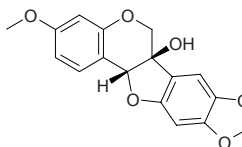
[113689-36-4] C<sub>17</sub>H<sub>22</sub>N<sub>2</sub>O<sub>2</sub> (286.38). Crystals, mp 164-165.5°C (Et<sub>2</sub>O-CHCl<sub>3</sub>), [α]<sub>D</sub><sup>28</sup> = +30° (c = 0.01, absolute alcohol). Pharm: Promotes cytotoxic effects of vincalukoblastine (KB-VI ED<sub>50</sub> = 10μg/mL, with 1mg/mL vincalukoblastine ED<sub>50</sub> = 8.5μg/mL). Source: DA YE SHU LAN *Aglaia elliptifolia* (leaf: yield = 0.00015%dw)<sup>[3031]</sup>, LI MI ZI LAN *Aglaia pirifera*. Ref: 3031, 3628.

**17476 Pirolatin**

[23176-70-7] C<sub>23</sub>H<sub>34</sub>O<sub>8</sub> (438.52). Crystals +1H<sub>2</sub>O (MeOH aq.), mp 168-170°C, [α]<sub>D</sub><sup>25</sup> = -35.3° (c = 1.015, EtOH). Source: RI BEN LU TI CAO *Pyrola japonica*, family Pyrolaceae spp. Ref: 3254.

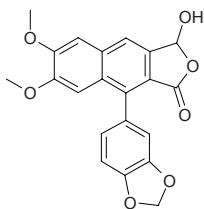
**17477 Pisatin**

[20186-22-5] C<sub>17</sub>H<sub>14</sub>O<sub>6</sub> (314.30). Crystals(petroleum ether), mp 72°C, [α]<sub>578nm</sub><sup>20</sup> = +280° (c = 0.11, ether). Pharm: Antifungal (genus *Sclerotinia*, ED<sub>50</sub> = 0.1mmol/L, CIC = 0.28mmol/L). Source: WAN DOU *Pisum sativum*. Ref: 661.

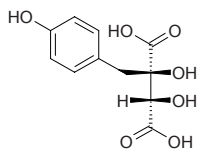


**17478 Piscatorin**

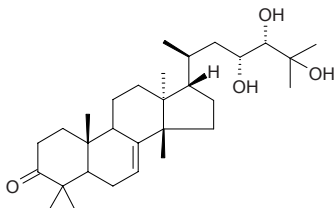
$C_{21}H_{16}O_7$  (380.36). White amorphous powder, mp 247°C. **Pharm:** Antifungal (*Aspergillus fumigatus*, MIC  $\geq 3\mu\text{g/mL}$ , Miconazole nitrate, MIC  $\geq 0.5\mu\text{g/mL}$ ; *Candida albicans*, MIC  $\geq 8\mu\text{g/mL}$ , Miconazole nitrate, MIC  $\geq 0.2\mu\text{g/mL}$ ; *Aspergillus flavus*, MIC  $\geq 25\mu\text{g/mL}$ , Miconazole nitrate, MIC  $\geq 0.2\mu\text{g/mL}$ ; *Blastoschizomyces capitatus*, MIC  $\geq 128\mu\text{g/mL}$ , Miconazole nitrate, MIC  $\geq 1\mu\text{g/mL}$ ; *Cryptococcus neoformans*, MIC  $\geq 128\mu\text{g/mL}$ ); antiprotozoal (*Trypanosoma brucei rhodesiense*, IC<sub>50</sub> = 2.3 $\mu\text{g/mL}$ , control Melarsoprol, IC<sub>50</sub> = 0.003 $\mu\text{g/mL}$ ; *Trypanosoma cruzi*, IC<sub>50</sub> > 4 $\mu\text{g/mL}$ , control Benznidazol, IC<sub>50</sub> = 0.27 $\mu\text{g/mL}$ ; *Plasmodium falciparum* (strain K1), IC<sub>50</sub> > 5 $\mu\text{g/mL}$ , control Chloroquine, IC<sub>50</sub> = 0.12 $\mu\text{g/mL}$ ); cytotoxic (Jurkat-T, IC<sub>50</sub> = 14 $\mu\text{g/mL}$ , control Helenalin, IC<sub>50</sub> = 0.03 $\mu\text{g/mL}$ ; KB, IC<sub>50</sub> = 10 $\mu\text{g/mL}$ , control Helenalin, IC<sub>50</sub> = 0.2 $\mu\text{g/mL}$ ; L-6, IC<sub>50</sub> > 15 $\mu\text{g/mL}$ ; PBMC, IC<sub>50</sub> > 15 $\mu\text{g/mL}$ , control Helenalin, IC<sub>50</sub> = 0.03 $\mu\text{g/mL}$ ); piscicide (adult zebra fishes *Brachydanio rerio*, LC<sub>100</sub> = 1.0 $\mu\text{g/mL}$ , time = 25–35min; control Rotenone, LC<sub>100</sub> = 1.0 $\mu\text{g/mL}$ , time = 20–30min; negative control Catechin, LC<sub>100</sub> > 200 $\mu\text{g/mL}$ , time > 120min). **Source:** YU FU YE XIA ZHU *Phyllanthus piscatorum*. **Ref:** 5393.

**17479 Piscidic acid**

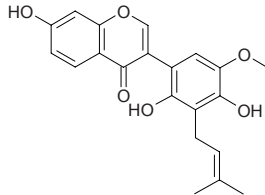
*p*-Hydroxybenzyltartaric acid [35388-57-9]  $C_{11}H_{12}O_7$  (256.21). Elongated prisms (EtOAc-CHCl<sub>3</sub>), mp 186–187°C,  $[\alpha]_D^{20} = +41.03^\circ$  ( $c = 2.65$ , H<sub>2</sub>O). **Source:** CHUAN LONG SHU YU *Dioscorea nipponica*, FAN MA *Agave americana*, HONG KOU SHUI XIAN *Narcissus poeticus*, LI GUO XIAN REN ZHANG *Opuntia ficus-indica*, YA MAI JIA DU YU DOU *Piscidia erythrina*. **Ref:** 3255, 3256, 3257.

**17480 Piscidinol A**

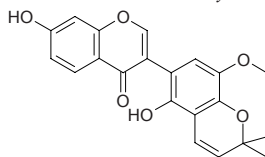
[100198-09-2]  $C_{30}H_{50}O_4$  (474.73). Crystals (MeOH), mp 195°C,  $[\alpha]_D^{25} = -90^\circ$  ( $c = 1$ , CHCl<sub>3</sub>). **Source:** HUANG PI SHU *Phellodendron chinense*, PI XI DI GE SHE SHU *Walsura piscidia*, NI LUO HE JIN YIN LIAN *Turraea nilotica*, *Eurycoma* sp. **Ref:** 1521, 2663, 4556.

**17481 Piscisoflavone A**

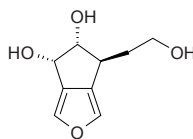
[141968-01-6]  $C_{21}H_{20}O_6$  (368.39). Yellowish glue with modera fluorescence. **Pharm:** Antifungal (*Cladosporium* sp., TLC chromatoplate 50 $\mu\text{g}$ , diameter of bacterial inhibition zone = 15mm). **Source:** YA MAI JIA DU YU DOU *Piscidia erythrina*. **Ref:** 3629.

**17482 Piscisoflavone B**

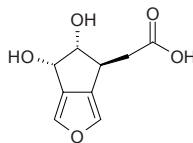
[141968-02-7]  $C_{21}H_{18}O_6$  (366.37). Yellow prisms with modera fluorescence, mp 212–213°C. **Pharm:** Antifungal (*Cladosporium* sp., TLC chromatoplate 50 $\mu\text{g}$ , diameter of bacterial inhibition zone = 12mm). **Source:** YA MAI JIA DU YU DOU *Piscidia erythrina*. **Ref:** 3629.

**17483 Piscirocin A**

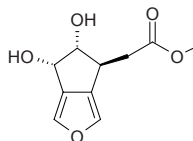
(4*S*,5*R*,6*S*)-5,6-Dihydroxy-5,6-dihydro-4*H*-cyclopenta[*c*]furan-4-ethanol  $C_9H_{12}O_4$  (184.19). Colorless plates, mp 88–90°C (MeOH),  $[\alpha]_D^{20} = -50.2^\circ$  ( $c = 1.0$ , MeOH). **Source:** XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora* (root). **Ref:** 4966.

**17484 Piscirocin B**

(4*S*,5*R*,6*S*)-5,6-Dihydroxy-5,6-dihydro-4*H*-cyclopenta-*c*]furan-4-acetic acid  $C_9H_{10}O_5$  (198.18). White amorphous powder, mp 160–162°C (MeOH),  $[\alpha]_D^{20} = -50.2^\circ$  ( $c = 0.3$ , MeOH). **Source:** XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora* (root). **Ref:** 4966.

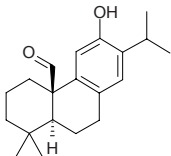
**17485 Piscirocin C**

(4*S*,5*R*,6*S*)-5,6-Dihydroxy-5,6-dihydro-4*H*-cyclopenta-*c*]furan-4-acetic acid methyl ester  $C_{10}H_{12}O_5$  (212.20). Colorless oil, mp 88–90°C (MeOH),  $[\alpha]_D^{20} = -34.5^\circ$  ( $c = 0.4$ , MeOH). **Source:** XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora* (root). **Ref:** 4966.

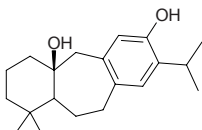


**17486 Pisiferal**

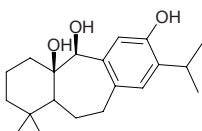
[24035-37-8] C<sub>20</sub>H<sub>28</sub>O<sub>2</sub> (300.44). Colorless needles (benzene–Et<sub>2</sub>O), mp 80–82°C, [α]<sub>D</sub><sup>25</sup> = 164.1° (c = 0.61, MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus*, MIC = 25 μg/mL; *Bacillus subtilis*, MIC = 25 μg/mL)<sup>[4144]</sup>; used in treatment of skin disease (acne, scurf)<sup>[900]</sup>; deodorant (bad breath, foot osmyl, hircus)<sup>[900]</sup>; antioxidant<sup>[900]</sup>. **Source:** DU YU SHU WEI CAO *Salvia pisdica*, JU MI SHU WEI CAO *Salvia mellifera*, RI BEN HUA BAI *Chamaecyparis pisifera*, WEI SHI SHU WEI CAO *Salvia wiedemanni*, XIAO GAI SHU WEI CAO *Salvia microstegia*. **Ref:** 900, 4144.

**17487 Pisiferanol**

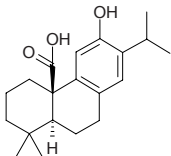
C<sub>20</sub>H<sub>30</sub>O<sub>2</sub> (302.46). **Pharm:** Antibacterial (*Staphylococcus aureus*, MIC = 25 μg/mL; *Bacillus subtilis*, MIC = 25 μg/mL)<sup>[4144]</sup>. **Source:** GAN XI SHU WEI CAO *Salvia przewalskii*, RI BEN HUA BAI *Chamaecyparis pisifera*. **Ref:** 1521, 4144, 4538.

**17488 Pisiferdiol**

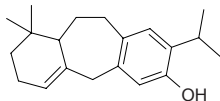
C<sub>20</sub>H<sub>30</sub>O<sub>3</sub> (318.46). **Pharm:** Antibacterial (*Staphylococcus aureus*, MIC = 100 μg/mL; *Bacillus subtilis*, MIC = 50 μg/mL). **Source:** RI BEN HUA BAI *Chamaecyparis pisifera* (leaf). **Ref:** 4144.

**17489 Pisiferic acid**

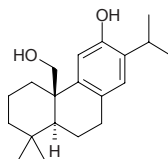
[67494-15-9] C<sub>20</sub>H<sub>28</sub>O<sub>3</sub> (316.44). Colorless prisms, mp 155–160°C, [α]<sub>D</sub><sup>20</sup> = +177° (c = 0.35, MeOH). **Pharm:** Cytotoxic (HeLa-S3, inhibits biosynthesis of DNA)<sup>[900]</sup>; antibacterial (*Staphylococcus aureus*, MIC = 25 μg/mL; *Bacillus subtilis*, MIC = 25 μg/mL)<sup>[4144]</sup>; antibacterial (gram-positive and gram-negative bacteria, *Proteus vulgaris*, *Pyricularia oryzae*, *Pseudomonas* sp.)<sup>[900]</sup>; antioxidant (stronger than VE)<sup>[900]</sup>. **Source:** JIAO NIAN XIANG CHA CAI *Isodon glutinosa*, RI BEN HUA BAI *Chamaecyparis pisifera*. **Ref:** 900, 4144.

**17490 Pisiferin**

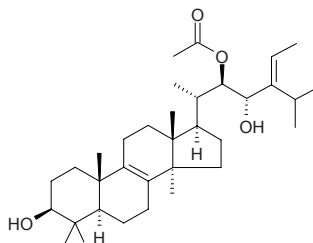
[76210-23-6] C<sub>20</sub>H<sub>28</sub>O (284.45). **Source:** GAN XI SHU WEI CAO *Salvia przewalskii*, RI BEN HUA BAI *Chamaecyparis pisifera*. **Ref:** 1521, 4538.

**17491 Pisiferol**

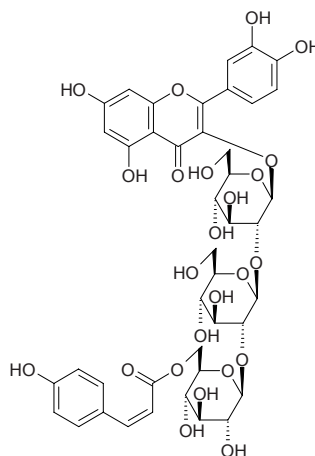
[24035-36-7] C<sub>20</sub>H<sub>30</sub>O<sub>2</sub> (302.46). Needles (benzene–Et<sub>2</sub>O), mp 95–97°C (Et<sub>2</sub>O/ethane), [α]<sub>D</sub><sup>26</sup> = +80.6° (c = 0.85, MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus*, MIC = 25 μg/mL; *Bacillus subtilis*, MIC = 25 μg/mL)<sup>[4144]</sup>; used in treatment of skin disease (acne, scurf)<sup>[900]</sup>; deodorant (bad breath, foot osmyl, hircus)<sup>[900]</sup>; antioxidant (stronger than VE)<sup>[900]</sup>. **Source:** RI BEN HUA BAI *Chamaecyparis pisifera*. **Ref:** 900, 4144.

**17492 Pisosterol**

Mutumul [97091-00-4] C<sub>34</sub>H<sub>56</sub>O<sub>4</sub> (528.82). **Source:** DOU BAO JUN *Pisolithus tinctorius* [Syn. *Lycoperdon capitatum*; *Scleroderma tinctorium*]. **Ref:** 3258, 3259, 3260.

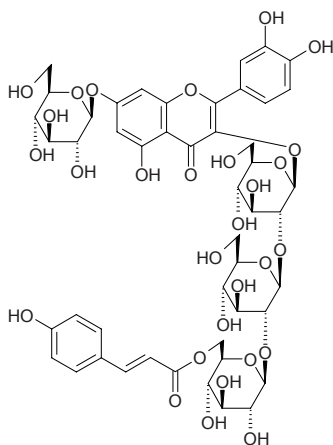
**17493 Pisumflavonoside I**

Quercetin-3-*O*-(6-*O*-*cis-p*-coumaroyl)-β-*D*-glucopyranosyl (1→2)-β-*D*-glucopyranosyl (1→2)-β-*D*-glucopyranoside C<sub>42</sub>H<sub>46</sub>O<sub>24</sub> (934.82). Yellow powder, [α]<sub>D</sub><sup>25</sup> = –38.2° (c = 0.3, MeOH). **Pharm:** Hepatoprotective (*in vitro*, mus primary cultured hepatocytes, inhibits liver cytotoxicity induced by GaIN, 100 μmol/L, InRt = (12.1±1.5)%, *p*<0.01). **Source:** WAN DOU *Pisum sativum* (young seedpot). **Ref:** 4110.

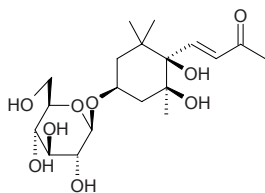


**17494 Pisumflavonoid II**

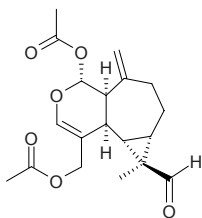
7-*O*- $\beta$ -D-Glucopyranosyl-quercetin 3-*O*-(6-*O*-*trans*-*p*-coumaroyl)- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside  
 $C_{48}H_{56}O_{29}$  (1096.96). Yellow powder,  $[\alpha]_D^{25} = -59.0^\circ$  ( $c = 0.3$ , MeOH).  
**Pharm:** Hepatoprotective (*in vitro*, mus primary cultured hepatocytes, inhibits liver cytotoxicity induced by GaIn, 100 $\mu$ mol/L, InRt = (15.5 $\pm$ 1.0)%,  $p < 0.01$ ).  
**Source:** WAN DOU *Pisum sativum* (young seedpot). **Ref:** 4110.

**17495 Pisumionoside**

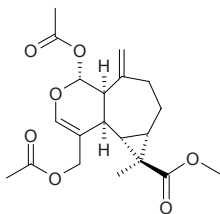
$C_{19}H_{32}O_9$  (404.46). White powder,  $[\alpha]_D^{26} = -3.4^\circ$  ( $c = 0.2$ , MeOH). **Source:** WAN DOU *Pisum sativum* (young seedpot). **Ref:** 4110.

**17496 Plagiochiline T**

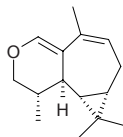
2 $\alpha$ ,15-Diacetoxy-2,3-epoxy-2,3-seco-(1 $\alpha$ ,5 $\alpha$ ,6 $\beta$ ,7 $\beta$ )-aromadendra-3,10(14)-dien-13-al  $C_{19}H_{24}O_6$  (384.40). **Source:** *Plagiochila carringtonii*. **Ref:** 2307.

**17497 Plagiochiline U**

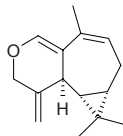
Methyl-2 $\alpha$ ,15-diacetoxy-2,3-epoxy-2,3-seco-(1 $\alpha$ ,5 $\alpha$ ,6 $\beta$ ,7 $\beta$ )-aromadendra-3,10(14)-dien-13-oate  $C_{20}H_{26}O_7$  (378.43). **Source:** *Plagiochila carringtonii*. **Ref:** 2307.

**17498 (+)-Plagiochiline W**

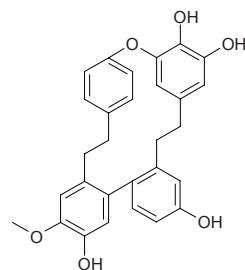
$C_{15}H_{22}O$  (218.34). Colorless oil. **Source:** TIE JIAO JUE YU TAI *Plagiochila asplenioides* (essential oil). **Ref:** 5257.

**17499 (+)-Plagiochiline X**

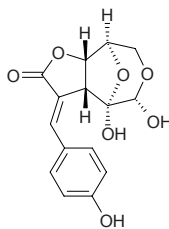
$C_{15}H_{20}O$  (216.33). Colorless oil. **Source:** TIE JIAO JUE YU TAI *Plagiochila asplenioides* (essential oil). **Ref:** 5257.

**17500 Plagiochin A**

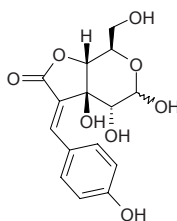
[112923-41-8]  $C_{29}H_{26}O_6$  (470.53). / **Pharm:** Nourishes nerve (neurite outgrowth enhancer). **Source:** RI BEN DUO CI YU TAI *Plagiochila acanthophylla* ssp. *japonica*, *Plagiochila siophila*. **Ref:** 3703, 3704.

**17501 Plagiogyrin A**

[91486-94-1]  $C_{15}H_{14}O_7$  (306.27). Needles (MeOH), mp 223~225 $^\circ$ C,  $[\alpha]_D^{25} = +438.0^\circ$  ( $c = 1.0$ , MeOH). **Source:** ER XING LIU ZU JUE *Plagiogyria stenoptera*, HUA ZHONG LIU ZU JUE *Plagiogyria euphlebia*, *Plagiogyria matsumureana*. **Ref:** 3261, 3262.

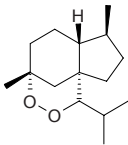
**17502 Plagiogyrin B**

[91486-95-2]  $C_{15}H_{16}O_8$  (324.29). Oil,  $[\alpha]_D^{22} = +94.1^\circ$  ( $c = 1.0$ , MeOH). **Source:** DAO YE LIU ZU JUE *Plagiogyria dumii*, *Plagiogyria matsumureana*. **Ref:** 3261, 3262.

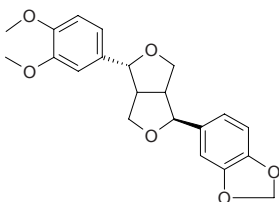


**17503 (+)-Plagio-4,7-peroxide**

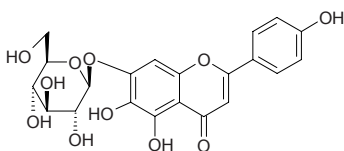
$C_{15}H_{26}O_2$  (238.37). Colorless oil. Source: TIE JIAO JUE YU TAI *Plagiochila asplenioides* (essential oil). Ref: 5257.

**17504 L-Planinin**

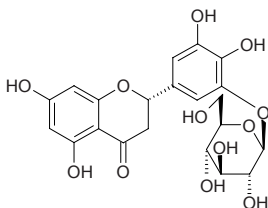
(1*R*,2*R*,5*R*,6*S*)-2-(3',4'-Dimethoxy-phenyl)-6-(3'',4''-methylene dioxyphenyl)-3,7-dioxabicyclo(3,3,0) octane  $C_{21}H_{22}O_6$  (370.41). Colorless columnar crystals, mp 133.0~133.5°C. Source: ZHU YE JIAO *Zanthoxylum planispinum*. Ref: 106.

**17505 Plantaginin**

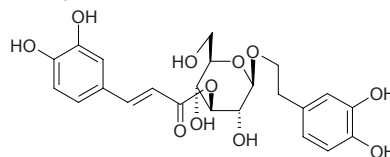
[26046-94-6]  $C_{21}H_{20}O_{11}$  (448.39). mp 214°C. Pharm: Antitussive (dispels phlegm, effective component in *Plantago asiatica* CHE QIAN); CNS activity (causes heart beat to slow and amplitude to increasing in low dose; causes heart paralysis and hypotension in high dose); promotes intestinal and uterine motion; low toxin. Source: CHE QIAN *Plantago asiatica*, CHE QIAN *Plantago asiatica* (seed). Ref: 6, 658, 5501.

**17506 Plantagoside**

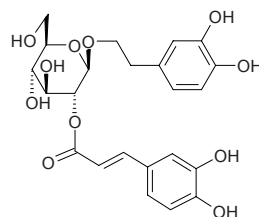
[78708-33-5]  $C_{21}H_{22}O_{12}$  (466.40). Colorless acicular crystals (methanol), mp 208~211°C, 241~243°C (dec, two melting points),  $[\alpha]_D^{25} = -44.4^\circ$  ( $c = 0.61$ , methanol). Pharm: Inhibits lymphocyte reproduction caused by sheep red blood cell antibody and concanavalin A (ConA,  $IC_{50} = 1.8\mu\text{g/mL}$ ); selective  $\alpha$ -mannosidase inhibitor. Source: CHE QIAN *Plantago asiatica*, DA CHE QIAN *Plantago major* (dried ripe fruit: mean content of 7 origins = 0.66%)<sup>[5508]</sup>. Ref: 942, 1000, 1028, 5508.

**17507 Plantainoside A**

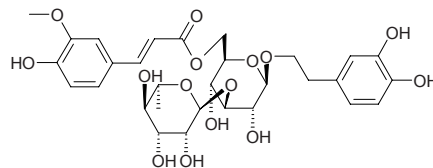
Plantagoside A [136172-59-3]  $C_{23}H_{26}O_{11}$  (478.46).  $[\alpha]_D^{23} = +4.5^\circ$  ( $c = 1.47$ , methanol). Pharm: Antioxidant (microsome of murine hepatic cells, inhibits lipid peroxidation induced by ADP+NADPH,  $IC_{50} = 0.54\mu\text{mol/L}$ ). Source: CHE QIAN *Plantago asiatica*, JIA MA CHI XIAN *Bacopa monniera* (whole herb: yield = 0.012%fw). Ref: 1127, 4664.

**17508 Plantainoside B**

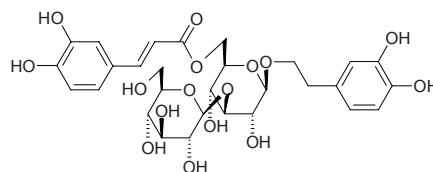
[136083-85-7]  $C_{23}H_{26}O_{11}$  (478.46). Amorphous,  $[\alpha]_D^{23} = -54.6^\circ$  ( $c = 0.27$ , MeOH). Pharm: Antioxidant (lipid peroxidation inhibitor, rat, hepatic cellular microsome, induced by ADP+NADPH,  $IC_{50} = 0.49\mu\text{mol/L}$ ); platelet aggregation inhibitor (caused by collagen, marked inhibiting). Source: CHE QIAN *Plantago asiatica*, JIA MA CHI XIAN *Bacopa monniera* (whole herb: yield = 0.00094%fw). Ref: 1127, 3263, 4254, 4664.

**17509 Plantainoside C**

[136083-86-8]  $C_{30}H_{38}O_{15}$  (638.63).  $[\alpha]_D^{23} = -238.1^\circ$  ( $c = 0.07$ , MeOH). Source: CHE QIAN *Plantago asiatica*, DA YE ZUI YU CAO *Buddleja davidii*. Ref: 1127, 3264.

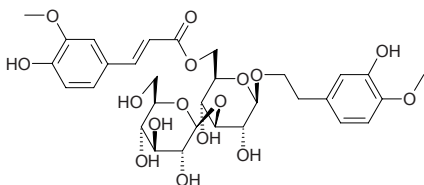
**17510 Plantainoside D**

[136083-87-9]  $C_{29}H_{36}O_{16}$  (640.60). Amorphous powder,  $[\alpha]_D^{23} = -24.8^\circ$  ( $c = 1.07$ , MeOH). Pharm: Antioxidant (hydroxyl radical scavenger,  $IC_{50} = 39.3\mu\text{mol/L}$ , control Ascorbic acid,  $IC_{50} = 51.8\mu\text{mol/L}$ , superoxide anion radical scavenger,  $IC_{50} = 74.8\mu\text{mol/L}$ , control Ascorbic acid,  $IC_{50} = 86.2\mu\text{mol/L}$ )<sup>[4289]</sup>; antioxidant (lipid peroxidation inhibitor, rat, hepatic cellular microsome, induced by ADP+NADPH,  $IC_{50} = 0.36\mu\text{mol/L}$ ). Source: BIAN DA XIU QIU *Hemiphragma heterophyllum*, CHANG YE CHE QIAN *Plantago lanceolata*, CHE QIAN *Plantago asiatica*, XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora* (root), YU ZAN YE CHE QIAN *Plantago hostifolia*. Ref: 1127, 3265, 3266, 4289, 5020.

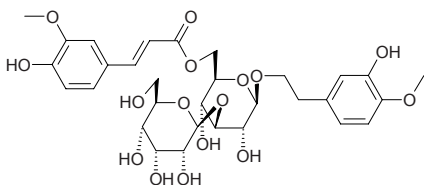


**17511 Plantainoside E**

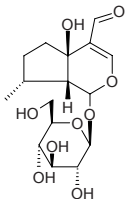
Scroside B [136083-88-0] C<sub>31</sub>H<sub>40</sub>O<sub>16</sub> (668.65).  $[\alpha]_D^{23} = -32.7^\circ$  ( $c = 0.84$ , MeOH). **Pharm:** Antioxidant (hydroxyl radical scavenger, IC<sub>50</sub> = 94.9 μmol/L, control Ascorbic acid, IC<sub>50</sub> = 51.8 μmol/L, superoxide anion radical scavenger, IC<sub>50</sub> = 233.0 μmol/L, control Ascorbic acid, IC<sub>50</sub> = 86.2 μmol/L)<sup>[4289]</sup>. **Source:** CHE QIAN *Plantago asiatica*, XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora* (root). **Ref:** 1127, 4289.

**17512 Plantainoside F**

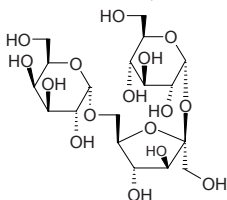
[136029-89-5] C<sub>31</sub>H<sub>40</sub>O<sub>16</sub> (668.65).  $[\alpha]_D^{23} = -60.6^\circ$  ( $c = 0.31$ , MeOH). **Source:** CHE QIAN *Plantago asiatica*. **Ref:** 660, 1127.

**17513 Plantarenaloid**

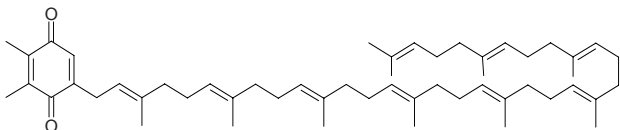
Yuheinoside [72396-01-1] C<sub>16</sub>H<sub>24</sub>O<sub>9</sub> (360.36). Amorphous,  $[\alpha]_D^{25} = -188.8^\circ$  ( $c = 1.2$ , MeOH). **Source:** DA CHE QIAN *Plantago major*, HUANG ZHONG HUA *Tecoma stans*, SONG HAO *Phtheirospermum japonicum* [Syn. *Gerardia japonica*], *Leucocarpus perfoliatus*. **Ref:** 1521, 3267, 1259.

**17514 Planteose**

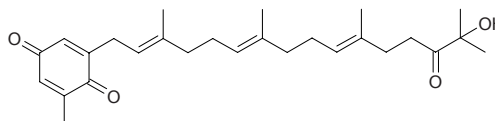
[470-57-5] C<sub>18</sub>H<sub>32</sub>O<sub>16</sub> (504.45). mp 123~124°C. **Source:** LUO LE ZI *Ocimum basilicum*. **Ref:** 6, 1521.

**17515 Plastoquinone**

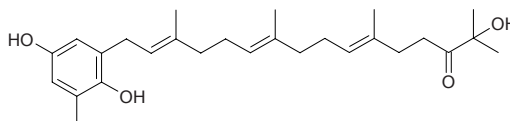
[4299-57-4] C<sub>53</sub>H<sub>80</sub>O<sub>2</sub> (749.23). mp 48~49°C. **Pharm:** Bioactive in connection with plant photosynthesis and path of respiration. **Source:** CAN DOU YE *Vicia faba*, HONG CAO *Polygonum orientale*, YAO YONG PU GONG YING *Taraxacum officinale*. **Ref:** 6, 658, 660.

**17516 Plastoquinone C<sub>1</sub>**

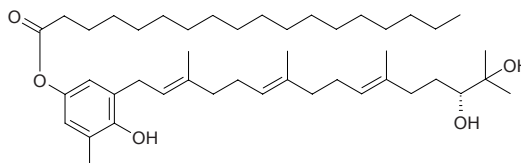
C<sub>27</sub>H<sub>38</sub>O<sub>4</sub> (426.60). Colorless oil. **Source:** Gulfweed *Sargassum micracanthum*. **Ref:** 4506.

**17517 Plastoquinone C<sub>2</sub>**

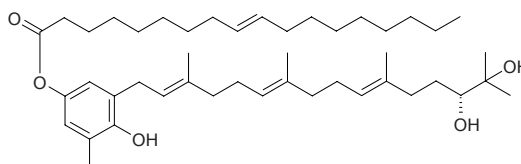
C<sub>27</sub>H<sub>40</sub>O<sub>4</sub> (428.62). Pale yellowish oil. **Pharm:** Antioxidant (lipid peroxidation inhibitor, IC<sub>50</sub> = 0.95 μg/mL, control Vitamin E, IC<sub>50</sub> = 40.4 μg/mL; DPPH scavenger, 100 μg/mL, reductive rate = 3.00%); cytotoxic (Colon26-L5 cell, IC<sub>50</sub> = 1.51 μg/mL, control *cis*-Platin, IC<sub>50</sub> = 0.67 μg/mL). **Source:** Gulfweed *Sargassum micracanthum*. **Ref:** 4506.

**17518 Plastoquinone C<sub>3</sub>**

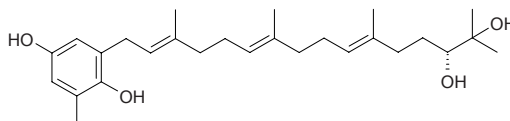
C<sub>45</sub>H<sub>76</sub>O<sub>5</sub> (697.10). Colorless oil,  $[\alpha]_D^{25} = +6.2^\circ$  ( $c = 0.56$ , CHCl<sub>3</sub>). **Pharm:** Antioxidant (lipid peroxidation inhibitor, IC<sub>50</sub> = 44.3 μg/mL, control Vitamin E, IC<sub>50</sub> = 40.4 μg/mL; DPPH scavenger, 100 μg/mL, reductive rate = 52.6%); cytotoxic (Colon26-L5 cell, IC<sub>50</sub> = 17.5 μg/mL, control *cis*-Platin, IC<sub>50</sub> = 0.67 μg/mL). **Source:** Gulfweed *Sargassum micracanthum*. **Ref:** 4506.

**17519 Plastoquinone C<sub>4</sub>**

C<sub>45</sub>H<sub>74</sub>O<sub>5</sub> (695.09). Colorless oil,  $[\alpha]_D^{25} = +6.0^\circ$  ( $c = 0.33$ , CHCl<sub>3</sub>). **Pharm:** Antioxidant (lipid peroxidation inhibitor, IC<sub>50</sub> = 1.15 μg/mL, control Vitamin E, IC<sub>50</sub> = 40.4 μg/mL; DPPH scavenger, 100 μg/mL, reductive rate = 32.3%); cytotoxic (Colon26-L5 cell, IC<sub>50</sub> = 1.69 μg/mL, control *cis*-Platin, IC<sub>50</sub> = 0.67 μg/mL). **Source:** Gulfweed *Sargassum micracanthum*. **Ref:** 4506.

**17520 Plastoquinone from *Sargassum micracanthum***

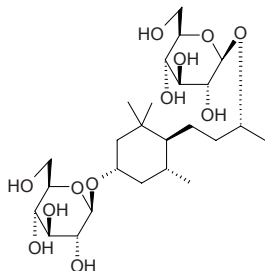
C<sub>27</sub>H<sub>42</sub>O<sub>4</sub> (430.63). **Source:** Gulfweed *Sargassum micracanthum*. **Ref:** 4506.



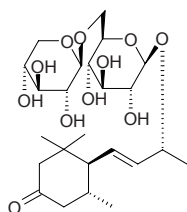


**17521 Platanionoside D**

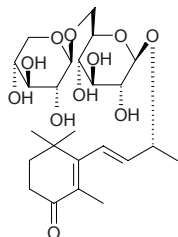
(3*S*,5*R*,6*S*,9*R*)-3,9-Dihydroxymegastigmane di-*O*- $\beta$ -*D*-glucopyranoside C<sub>25</sub>H<sub>46</sub>O<sub>12</sub> (538.64). Amorphous powder,  $[\alpha]_D^{20} = -41.0^\circ$  ( $c = 0.61$ , MeOH). Source: GUA MU BIAN ZHONG *Alangium paltanifolium* var. *platanifolium* (leaf). Ref: 4170.

**17522 Platanionoside E**

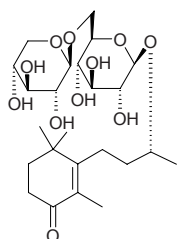
(5*R*,6*R*,7*E*)-9-Hydroxymegastigman-7-en-3-one *O*-primeveroside C<sub>24</sub>H<sub>40</sub>O<sub>11</sub> (504.58). Amorphous powder,  $[\alpha]_D^{20} = -41.0^\circ$  ( $c = 0.61$ , MeOH). Source: GUA MU BIAN ZHONG *Alangium paltanifolium* var. *platanifolium* (leaf). Ref: 4170.

**17523 Platanionoside F**

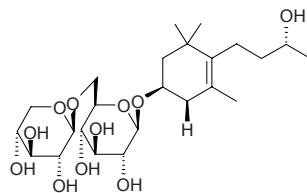
(9*R*,7*E*)-9-Hydroxymegastigmane-5,7-dien-4-one *O*-primeveroside C<sub>24</sub>H<sub>38</sub>O<sub>11</sub> (502.56). Amorphous powder,  $[\alpha]_D^{23} = -17.6^\circ$  ( $c = 0.74$ , MeOH). Source: GUA MU BIAN ZHONG *Alangium paltanifolium* var. *platanifolium* (leaf). Ref: 4170.

**17524 Platanionoside G**

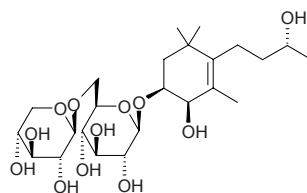
(9*R*)-9-Hydroxymegastigman-5-en-4-one *O*-primeveroside C<sub>24</sub>H<sub>40</sub>O<sub>11</sub> (504.58). Amorphous powder,  $[\alpha]_D^{23} = -32.8^\circ$  ( $c = 1.28$ , MeOH). Source: GUA MU BIAN ZHONG *Alangium paltanifolium* var. *platanifolium* (leaf). Ref: 4170.

**17525 Platanionoside H**

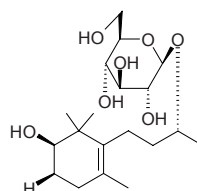
(3*S*,9*R*)-3,9-Dihydroxymegastigman-5-ene 3-*O*-primeveroside C<sub>24</sub>H<sub>42</sub>O<sub>11</sub> (506.60). Amorphous powder,  $[\alpha]_D^{20} = -66.9^\circ$  ( $c = 1.30$ , MeOH). Source: GUA MU BIAN ZHONG *Alangium paltanifolium* var. *platanifolium* (leaf). Ref: 4170.

**17526 Platanionoside I**

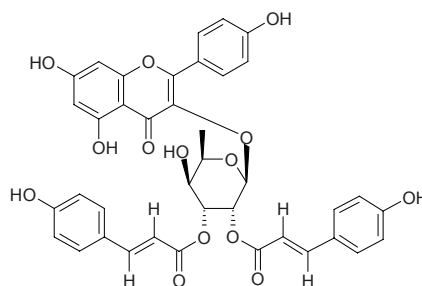
(3*S*,4*R*,9*\zeta*)-3,4,9-Trihydroxymegastigman-5-ene 3-*O*-primeveroside C<sub>24</sub>H<sub>42</sub>O<sub>12</sub> (522.60). Amorphous powder,  $[\alpha]_D^{20} = -65.4^\circ$  ( $c = 0.26$ , MeOH). Source: GUA MU BIAN ZHONG *Alangium paltanifolium* var. *platanifolium* (leaf). Ref: 4170.

**17527 Platanionoside J**

(2*R*,9*R*)-2,9-Dihydroxymegastigman-5-ene 9-*O*- $\beta$ -*D*-glucopyranoside C<sub>19</sub>H<sub>34</sub>O<sub>7</sub> (374.48). Amorphous powder,  $[\alpha]_{405nm}^{20} = -7.8^\circ$  ( $c = 0.51$ , MeOH). Source: GUA MU BIAN ZHONG *Alangium paltanifolium* var. *platanifolium* (leaf). Ref: 4170.

**17528 Platanoside**

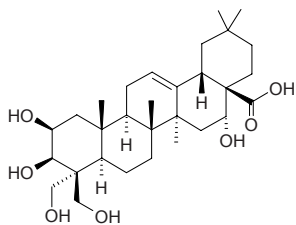
Kaempferol 3-(2,3-di-*E*-*p*-coumaroyl- $\alpha$ -*L*-rhamnopyranoside) C<sub>39</sub>H<sub>32</sub>O<sub>14</sub> (724.67). Yellowish powder. Pharm: Antibacterial ( *$\beta$* -*Streptococcus*, *Bacillus coli*, *Klebsiella pneumoniae* and *Bacillus pyocyaneus*); cytotoxic (KM3, HL-60, DAUDI, Jurkat-T and SDK). Source: HU SUI ZI *Coriandrum sativum*. Ref: 1115.



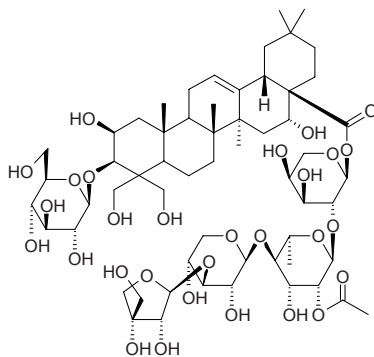


**17529 Platycodigenin**

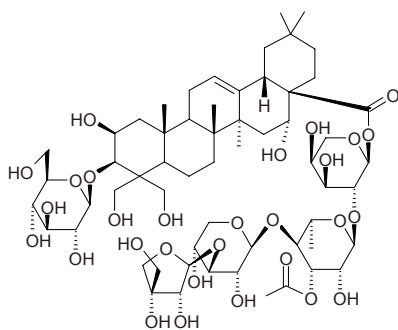
[22327-82-8] C<sub>30</sub>H<sub>48</sub>O<sub>7</sub> (520.71). mp 241~242°C. Source: JIE GENG *Platycodon grandiflorum*. Ref: 6.

**17530 Platycodin A**

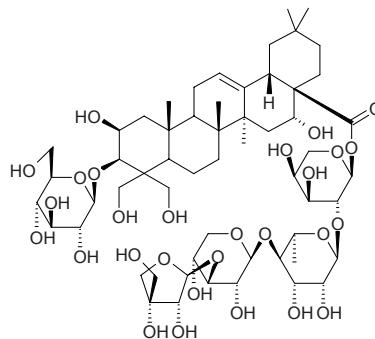
2''-*O*-Acetyl platycodin D [66779-34-8] C<sub>59</sub>H<sub>94</sub>O<sub>29</sub> (1267.39). Powder +1H<sub>2</sub>O, mp 217~220.5°C (dec), [α]<sub>D</sub><sup>28</sup> = -26.6° (c = 1.7, MeOH). Source: JIE GENG *Platycodon grandiflorum*. Ref: 1521, 3268.

**17531 Platycodin C**

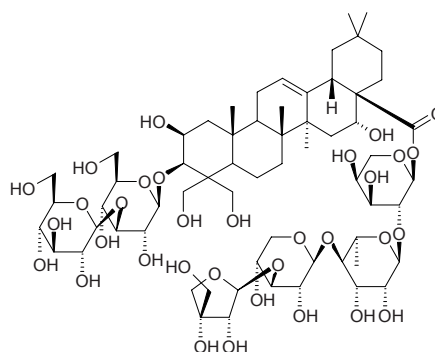
3''-*O*-Acetyl platycodin D [66779-35-9] C<sub>59</sub>H<sub>94</sub>O<sub>29</sub> (1267.39). Powder, mp 225~227°C (dec), [α]<sub>D</sub><sup>28</sup> = -28.3° (c = 1.14, MeOH). Source: JIE GENG *Platycodon grandiflorum*. Ref: 1521, 3268.

**17532 Platycodin D**

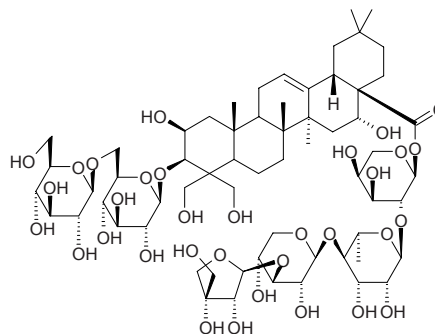
[58479-68-8] C<sub>57</sub>H<sub>92</sub>O<sub>28</sub> (1225.35). mp 228~237°C, [α]<sub>D</sub><sup>23</sup> = -30.5° (MeOH). Pharm: Anti-inflammatory (rat peritoneal macrophages, inhibits PGE2 production and inhibits COX-2 production, but not COX-1)<sup>[4415]</sup>. Source: JIE GENG *Platycodon grandiflorum* (dried root: content scope of 10 origins = 0.28%~0.88%, mean content = 0.50%<sup>[5508]</sup>). Ref: 1521, 3268, 4415, 5508.

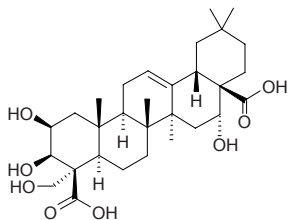
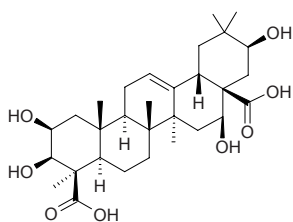
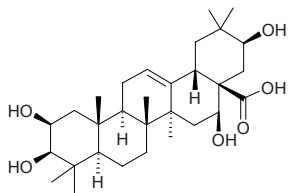
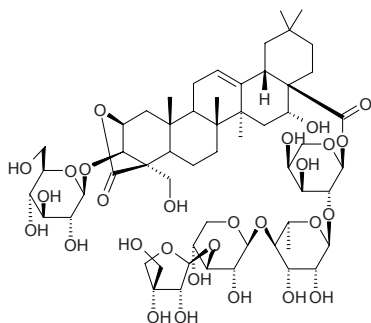
**17533 Platycodin D<sub>2</sub>**

[66663-90-9] C<sub>63</sub>H<sub>102</sub>O<sub>33</sub> (1387.50). mp 227~235°C, [α]<sub>D</sub><sup>23</sup> = -27.9° (MeOH). Source: JIE GENG *Platycodon grandiflorum*. Ref: 1521, 1382.

**17534 Platycodin D<sub>3</sub>**

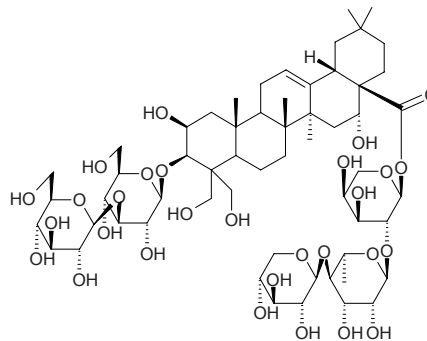
[67884-03-1] C<sub>63</sub>H<sub>102</sub>O<sub>33</sub> (1387.50). mp 218~225°C, [α]<sub>D</sub><sup>23</sup> = -24.3° (MeOH). Source: JIE GENG *Platycodon grandiflorum*. Ref: 1521, 1382.



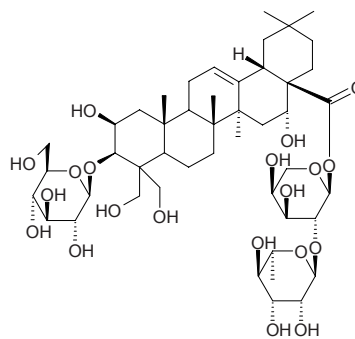
**17535 Platycogenic acid A**[26121-79-9] C<sub>30</sub>H<sub>46</sub>O<sub>8</sub> (534.70). mp 243~249°C. Source: JIE GENG*Platycodon grandiflorum*. Ref: 6.**17536 Platycogenic acid B**[26121-80-2] C<sub>30</sub>H<sub>46</sub>O<sub>8</sub> (534.70). mp 274~277°C (dec). Source: JIE GENG*Platycodon grandiflorum*. Ref: 6.**17537 Platycogenic acid C**[26121-81-3] C<sub>30</sub>H<sub>48</sub>O<sub>6</sub> (504.71). mp 282~288°C (dec). Source: JIE GENG*Platycodon grandiflorum*. Ref: 6.**17538 Platyconic acid A lactone-28-[β-D-apiofuranosyl(1→3)-β-D-xylopyranosyl(1→4)-α-L-rhamnopyranosyl(1→2)-L-arabinopyranosyl] 3-O-β-D-glucopyranoside**C<sub>57</sub>H<sub>88</sub>O<sub>28</sub> (1221.32). Source: JIE GENG *Platycodon grandiflorum*. Ref: 1382.**17539 Platycoside A**

3-O-β-D-Glucopyranosyl-(1→3)-β-D-glucopyranosyl

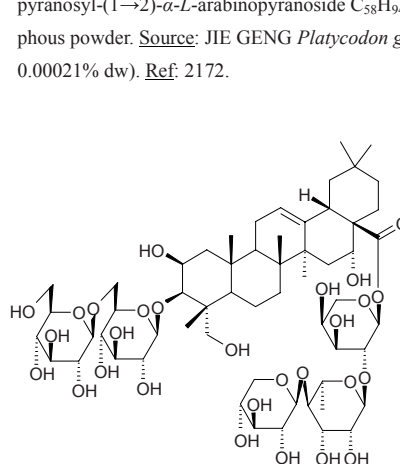
2β,3β,16α,23,24-pentahydroxyolean-12-ene-28-oic acid

28-O-β-D-xylopyranosyl-(1→4)-α-L-rhamnopyranosyl-(1→2)-α-L-arabinopyranoside C<sub>58</sub>H<sub>94</sub>O<sub>29</sub> (1255.38). Source: JIE GENG *Platycodon grandiflorum*.Ref: 4900.**17540 Platycoside F**

3-O-β-D-Glucopyranosyl-2β,3β,16α,23,24-pentahydroxyolean-12-ene-28-oic acid

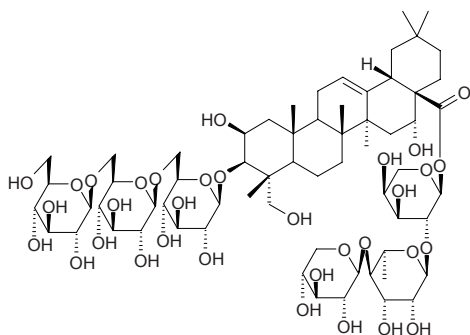
28-O-α-L-rhamnopyranosyl-(1→2)-α-L-arabinopyranoside C<sub>47</sub>H<sub>76</sub>O<sub>20</sub>(961.12). Source: JIE GENG *Platycodon grandiflorum*. Ref: 4900.**17541 Platycoside H**

3-O-β-D-Glucopyranosyl-(1→6)-β-D-glucopyranosyl-2β,3β,16α,23-tetrahydroxyolean-12-en-28-oic acid

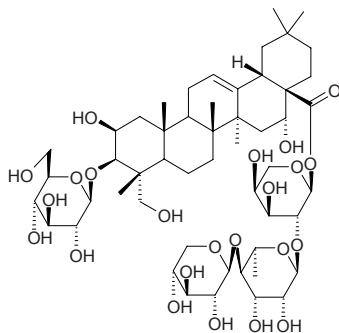
28-O-β-D-xylopyranosyl-(1→4)-α-L-rhamnopyranosyl-(1→2)-α-L-arabinopyranoside C<sub>58</sub>H<sub>94</sub>O<sub>28</sub> (1239.38). White amorphous powder. Source: JIE GENG *Platycodon grandiflorum* (root; yield = 0.00021% dw). Ref: 2172.

**17542 Platycoside I**

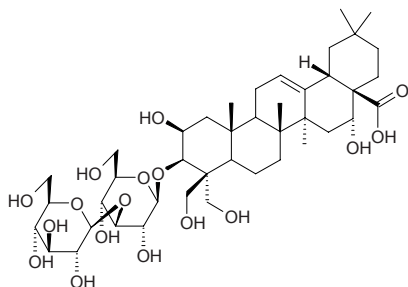
3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranosyl-2 $\beta$ ,3 $\beta$ ,16 $\alpha$ ,23-tetrahydroxyolean-12-en-28-oic acid 28-*O*- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranoside C<sub>64</sub>H<sub>104</sub>O<sub>33</sub> (1401.52). White amorphous powder. Source: JIE GENG *Platycodon grandiflorum* (root; yield = 0.00005% dw). Ref: 2172.

**17543 Platycoside J**

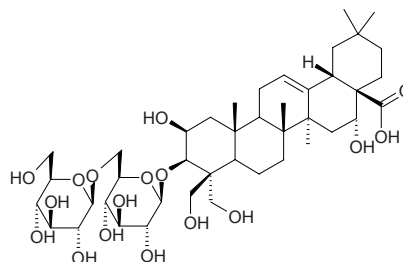
3-*O*- $\beta$ -*D*-Glucopyranosyl-2 $\beta$ ,3 $\beta$ ,16 $\alpha$ ,23-tetrahydroxyolean-12-en-28-oic acid 28-*O*- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranoside C<sub>52</sub>H<sub>84</sub>O<sub>23</sub> (1077.24). White amorphous powder. Source: JIE GENG *Platycodon grandiflorum* (root; yield = 0.00018% dw). Ref: 2172.

**17544 Platycoside K**

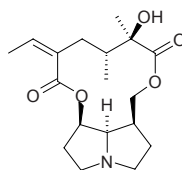
3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-glucopyranosyl-2 $\beta$ ,3 $\beta$ ,16 $\alpha$ ,23,24-pentahydroxyolean-12-en-28-oic acid C<sub>42</sub>H<sub>68</sub>O<sub>17</sub> (845.00). White amorphous powder. Source: JIE GENG *Platycodon grandiflorum* (root; yield = 0.00012% dw). Ref: 2172.

**17545 Platycoside L**

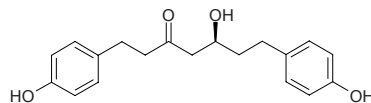
3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranosyl-2 $\beta$ ,3 $\beta$ ,16 $\alpha$ ,23,24-pentahydroxyolean-12-en-28-oic acid C<sub>42</sub>H<sub>68</sub>O<sub>17</sub> (845.00). White amorphous powder. Source: JIE GENG *Platycodon grandiflorum* (root; yield = 0.00013% dw). Ref: 2172.

**17546 Platyphylline**

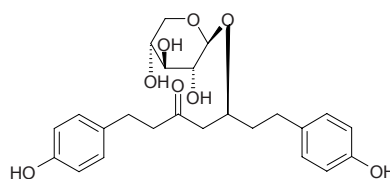
[480-78-4] C<sub>18</sub>H<sub>27</sub>NO<sub>5</sub> (337.42). Needles (H<sub>2</sub>O), mp 129°C, mp 124~125°C, [α]<sub>D</sub> = -56° (CHCl<sub>3</sub>), [α]<sub>D</sub> = -59° (EtOH). Pharm: Anticholinergic; antiulcerative (used in treatment of peptic ulcer of digestive tract). Source: DA BAI DING CAO *Senecio oryzetorum*, DA TOU TUO WU *Ligularia japonica* [Syn. *Arnica japonica*; *Senecio japonica*], GOU SHE CAO *Tephrosia kirilowii* [Syn. *Senecio integrifolius* var. *fauriei*], KUAN YE QIAN LI GUANG *Senecio platyphyllus*, PING HUA FENG DOU CAI *Petasites laevigatus*, TIE SHENG QIAN LI GUANG *Senecio adnatus*, YAO YONG DAO TI HU *Cynoglossum officinale*, *Senecio* spp. Ref: 6, 658, 1521, 2971, 3107.

**17547 Platyphyllonol**

Hannokinin; 1,7-Bis(4-hydroxyphenyl)-5*S*-hydroxy-3-heptanone C<sub>19</sub>H<sub>22</sub>O<sub>4</sub> (314.38). Needles, mp 139~140°C, 131~142°C. Source: CHI YANG *Alnus japonica*, HUA MU PI *Betula platyphylla*, HONG HUA PI *Betula platyphylla* var. *japonica* (in 1973, the compound was isolated from the plant by M.terazawa et al.)<sup>[5505]</sup>, *Alnus* spp. Ref: 660, 1521, 5505.

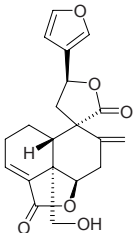
**17548 Platyphyllonol-5-*O*- $\beta$ -*D*-xylopyranoside**

C<sub>24</sub>H<sub>30</sub>O<sub>8</sub> (446.50). Pharm: Antioxidant (3.125μg/mL, superoxide radical scavenging activity = 1.4%, control Urcumin 16.1%; 6.25μg/mL, DPPH radical scavenging activity = 2.0%, control Urcumin 50.0%). Source: CHI YANG *Alnus japonica* (leaf). Ref: 4535.

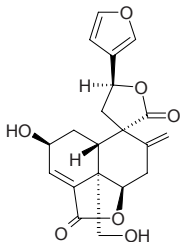


**17549 Plaunol B**

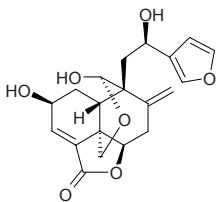
[69749-00-4] C<sub>20</sub>H<sub>20</sub>O<sub>6</sub> (356.38). mp 184°C, [ $\alpha$ ]<sub>D</sub><sup>24</sup> = +41.4° (*c* = 0.35, acetone). **Pharm:** Antiulcerative (inhibits gastric ulcer, rat, ip, 3mg/kg and 10mg/kg, InRt = 55% and 85% respectively). **Source:** JIN QIN ZHUANG BA DOU *Croton sublyratus*. **Ref:** 661.

**17550 Plaunol C**

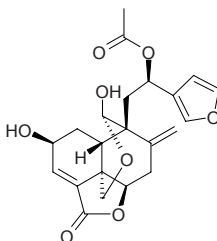
[69749-01-5] C<sub>20</sub>H<sub>20</sub>O<sub>7</sub> (372.38). mp 197~199°C, [ $\alpha$ ]<sub>D</sub><sup>24</sup> = -144° (*c* = 1.28, acetone). **Pharm:** Antiulcerative (inhibits gastric ulcer, rat, ip, 3mg/kg and 10mg/kg, InRt = 36% and 88% respectively). **Source:** JIN QIN ZHUANG BA DOU *Croton sublyratus*. **Ref:** 661.

**17551 Plaunol D**

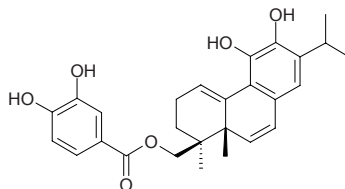
[66302-50-9] C<sub>20</sub>H<sub>22</sub>O<sub>7</sub> (374.40). mp 170~172°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -144° (*c* = 1.0, acetone). **Pharm:** Antiulcerative (inhibits gastric ulcer, rat, ip, 3mg/kg and 10mg/kg, InRt = 44% and 61% respectively). **Source:** JIN QIN ZHUANG BA DOU *Croton sublyratus*. **Ref:** 661.

**17552 Plaunol E**

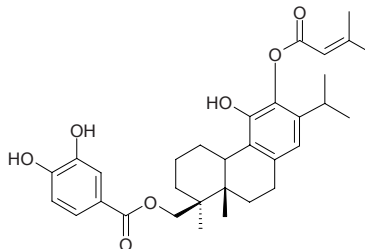
[69749-02-6] C<sub>22</sub>H<sub>24</sub>O<sub>8</sub> (416.43). mp 180~181°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -140° (*c* = 1.0, acetone). **Pharm:** Antiulcerative (inhibits gastric ulcer, rat, ip, 3mg/kg and 10mg/kg, InRt = 52% and 82% respectively). **Source:** JIN QIN ZHUANG BA DOU *Croton sublyratus*. **Ref:** 661.

**17553 Plectranthol A**

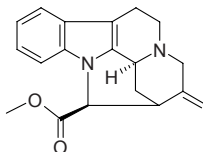
19-*O*-(3,4-Dihydroxybenzoyl)-11,12-dihydroxy-20(10→5)-abeo-abieta-1(10), 6,8,11,13-tetraene C<sub>27</sub>H<sub>30</sub>O<sub>6</sub> (450.54). Brownish oil, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -154.2° (*c* = 0.22, MeOH). **Pharm:** Antioxidant (DPPH scavenger, EC<sub>50</sub> = 0.073mmol/L, control Vitamin E, EC<sub>50</sub> = 0.134mmol/L). **Source:** YUAN BAN XIANG CHA CAI *Plectranthus nummularius* (leaf). **Ref:** 4121.

**17554 Plectranthol B**

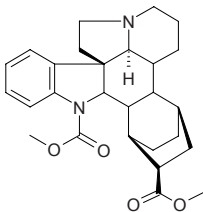
12-*O*-(3-Methyl-2-butenyl)-19-*O*-(3,4-dihydroxybenzoyl)-11-hydroxyabieta-8,11,13-triene C<sub>32</sub>H<sub>40</sub>O<sub>7</sub> (536.67). Brownish amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -20.6° (*c* = 0.20, MeOH). **Pharm:** Antioxidant (DPPH scavenger, EC<sub>50</sub> = 0.099mmol/L, control Vitamin E, EC<sub>50</sub> = 0.134mmol/L). **Source:** YUAN BAN XIANG CHA CAI *Plectranthus nummularius* (leaf). **Ref:** 4121.

**17555 Pleiocarpamine**

[6393-66-4] C<sub>20</sub>H<sub>22</sub>N<sub>2</sub>O<sub>2</sub> (322.41). **Source:** CHANG CHUN HUA *Catharanthus roseus* [Syn. *Vinca rosea*; *Lochnera rosea*], HONG HUA RUI MU *Kopsia fruticosa* (leaf). **Ref:** 2, 1521, 3830.

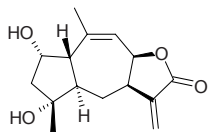
**17556 Pleiocarpine**

[559-52-4] C<sub>27</sub>H<sub>34</sub>N<sub>2</sub>O<sub>4</sub> (450.58). Crystals (MeOH or pentane-MeOH), mp 142.5°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -145° (*c* = 1.1725, CHCl<sub>3</sub>), pK<sub>a</sub> = 6.19 (MAS). **Source:** YUN NAN RUI MU *Kopsia officinalis*. **Ref:** 1521, 3269.

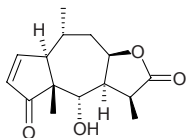


**17557 Pleniradin**

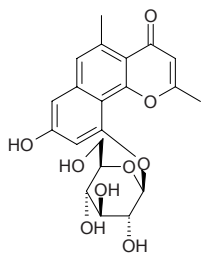
[25941-24-6] C<sub>15</sub>H<sub>20</sub>O<sub>4</sub> (264.32). **Pharm:** Antineoplastic (mus P<sub>388</sub> *in vivo*, 25mg/kg, biotic prolonged rate = 45%, mus B16 melanoma *in vivo*, 150mg/kg, biotic prolonged rate = 26%); cytotoxic (L<sub>1210</sub>, ED<sub>50</sub> = 4.3μg/mL; KB *in vitro*, ED<sub>50</sub> = 14μg/mL; mus P<sub>388</sub>, *in vitro*). **Source:** BAI LAI SHI JU *Baileya multiradiata*. **Ref:** 5, 658.

**17558 Plenolin**

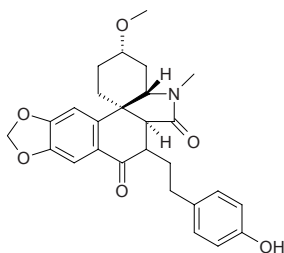
[34257-95-9] C<sub>15</sub>H<sub>20</sub>O<sub>4</sub> (264.33). **Pharm:** Antineoplastic; cytotoxic. **Source:** DUO BIAN HUA BAI LAI SHI JU *Baileya pleniradiata*, DUI XIN JU *Helenium autumnale*. **Ref:** 658.

**17559 Pleuropyrone A**

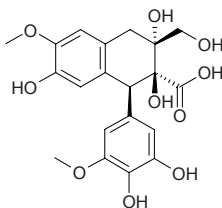
2,5-Dimethyl-8,10-dihydroxynaphthopyrone 10-*O*-β-*D*-glucopyranoside C<sub>21</sub>H<sub>22</sub>O<sub>9</sub> (418.40). White amorphous powder (MeOH), [α]<sub>D</sub><sup>24</sup> = -51° (c = 2.3, MeOH). **Pharm:** Antioxidant inactive (DPPH scavenger, IC<sub>50</sub> > 100μmol/L, control BHT, IC<sub>50</sub> = (15.3±0.6)μmol/L; superoxide radical inhibitor, IC<sub>50</sub> > 100μmol/L, control BHT, IC<sub>50</sub> = (48.9±2.5)μmol/L; lipid peroxidation scavenger, IC<sub>50</sub> > 100μmol/L, control BHT, IC<sub>50</sub> = (0.11±0.02)μmol/L)<sup>[4402]</sup>. **Source:** MAO MAI LIAO *Pleuropterus ciliinervis* (root). **Ref:** 4402.

**17560 (+)-Plicamine**

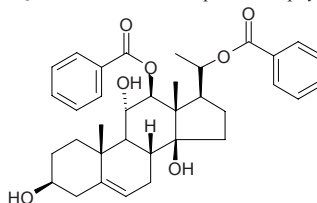
C<sub>27</sub>H<sub>29</sub>NO<sub>6</sub> (463.54). Amorphous solid, [α]<sub>D</sub> = +74.4° (c = 0.117, MeOH). **Source:** TU ER QI XUE HUA LIAN *Galanthus plicatus* ssp. *byzantinus*. **Ref:** 1872.

**17561 Plicatic acid**

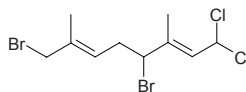
[16462-65-0] C<sub>20</sub>H<sub>22</sub>O<sub>10</sub> (422.40). **Pharm:** Causes asthma and nasitis; sensitizer. **Source:** BEI MEI XIANG BAI *Thuja plicata*. **Ref:** 658.

**17562 Plocigenin**

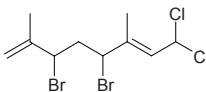
[97743-93-6] C<sub>35</sub>H<sub>42</sub>O<sub>7</sub> (574.72). mp 187~189°C, [α]<sub>D</sub> = -18.6°. **Source:** QING SHE TENG *Periploca calophylla*. **Ref:** 2498.

**17563 Plocoralide A**

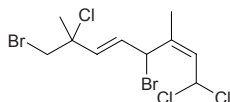
4,8-Dibromo-1,1-dichloro-3,7-dimethyl-2*E*,6*E*-octadiene C<sub>10</sub>H<sub>14</sub>Br<sub>2</sub>Cl<sub>2</sub> (364.94). Colorless oil. **Source:** SHAN HU GEN HAI TOU HONG *Plocamium corallorrhiza*. **Ref:** 5277.

**17564 Plocoralide B**

4,6-Dibromo-1,1-dichloro-3,7-dimethyl-2*E*,7-octadiene C<sub>10</sub>H<sub>14</sub>Br<sub>2</sub>Cl<sub>2</sub> (364.94). Colorless oil, [α]<sub>D</sub> = -15° (c = 0.02, CHCl<sub>3</sub>). **Pharm:** Cytotoxic (*in vitro*, WHCO1, IC<sub>50</sub> = 9.3μmol/L, control *cis*-Platin, IC<sub>50</sub> = 13μmol/L)<sup>[5277]</sup>. **Source:** SHAN HU GEN HAI TOU HONG *Plocamium corallorrhiza*. **Ref:** 5277.

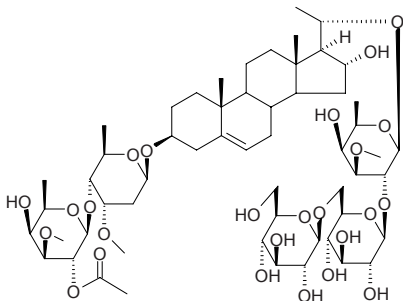
**17565 Plocoralide C**

4,8-Dibromo-1,1,7-trichloro-3,7-dimethyl-2*E*,5*Z*-octadiene C<sub>10</sub>H<sub>13</sub>Br<sub>2</sub>Cl<sub>3</sub> (399.38). Colorless oil, [α]<sub>D</sub> = -43° (c = 0.03, CHCl<sub>3</sub>). **Pharm:** Cytotoxic (*in vitro*, WHCO1, IC<sub>50</sub> = 33.8μmol/L, control *cis*-Platin, IC<sub>50</sub> = 13μmol/L). **Source:** SHAN HU GEN HAI TOU HONG *Plocamium corallorrhiza*. **Ref:** 5277.

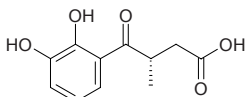


**17566 Plocoside B**

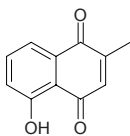
3-*O*-[2-Acetyl-3-*O*-methyl- $\beta$ -*D*-fucopyranosyl-(1 $\rightarrow$ 4)-2,6-dideoxy-3-*O*-methyl- $\beta$ -*D*-ribo-hexopyranoside] 20-*O*-[ $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)-3-*O*-methyl- $\beta$ -*D*-fucopyranoside] [73528-21-9] C<sub>56</sub>H<sub>92</sub>O<sub>25</sub> (1165.34).  $[\alpha]_D^{25} = +18.5^\circ$ . Source: XIANG JIA PI *Periploca sepium*. Ref: 2498.

**17567 Plumbagic acid**

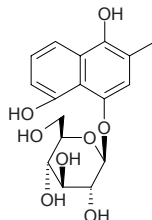
C<sub>11</sub>H<sub>12</sub>O<sub>5</sub> (224.21). Yellowish rhomboid crystals, mp 110°C. Pharm: Antibacterial; antitussive (dispels phlegm). Source: BAI HUA DAN *Plumbago zeylanica*. Ref: 661.

**17568 Plumbagin**

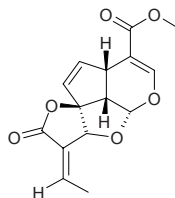
5-Hydroxy-2-methyl-1,4-naphthoquinone [481-42-5] C<sub>11</sub>H<sub>8</sub>O<sub>3</sub> (188.18). mp 78–79°C. Pharm: Antibacterial (*Mycobacterium tuberculosis*, MIC = 7.8 μg/mL); anti-fertility agent; antihypertensive; inhibits heart and relaxes artery; antitussive (mus, orl, dispels phlegm, 80mg/kg); enhances phagocytosis of granular leukocytes (hmn, *in vitro*); platelet aggregation inhibitor (zooper); antithrombotic (platelet aggregation inhibitor *in vitro*: ADP-induced IC<sub>50</sub> = 39.4 μmol/L, AA-induced IC<sub>50</sub> = 82.7 μmol/L, PAF-induced IC<sub>50</sub> = 38.1 μmol/L; decreases binding between thrombin-stimulated platelets and neutrophils, IC<sub>50</sub> = 62.9 μmol/L; inhibits washed platelet aggregation stimulated by fMLP-activated neutrophils, IC<sub>50</sub> = 54.3 μmol/L, stimulated by PAF-activated neutrophils, IC<sub>50</sub> = 47.6 μmol/L; increases inhibition of intact neutrophils on platelet reactivity)<sup>[5498]</sup>. Source: BAI HUA DAN *Plumbago zeylanica*, BU YING CAO *Dionaea muscipula*, JI WA CAO *Plumbagella micrantha*, JIAO ZHU HUA *Ceratostigma plumbaginoides*, MAO GAO CAI *Drosera peltata* var. *lunata*, OU ZHOU LAN MO LI *Plumbago europaea*, YUAN YE MAO GAO CAI *Drosera rotundifolia*, ZI JIN LIAN *Ceratostigma willmottianum*, ZI XUE HUA *Plumbago indica*, *Diospyros* sp., *Sparaxis* sp. Ref: 4, 621, 658, 5498.

**17569 Plumbaside A**

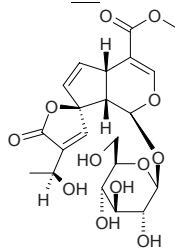
[126582-70-5] C<sub>17</sub>H<sub>20</sub>O<sub>8</sub> (352.34). Yellow-white powder. Pharm: Immunoenhancer (*in vitro*, promotes multiplication of lymphocyte T in 10–100pg/mL). Source: BU YING CAO *Dionaea muscipula*, XIAO JIAO ZHU HUA *Ceratostigma minus*, YUAN YE BU YING CAO *Dionaea rotundifolia*, ZHONG JIAN MAO GAO CAI *Drosera intermedia*. Ref: 3738, 3739, 3740, 3741.

**17570 Plumericin**

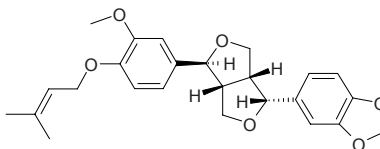
[77-16-7] C<sub>15</sub>H<sub>14</sub>O<sub>6</sub> (290.28). Thin oblong lamellar crystals (ethanol, methyl benzene or dichloroethane–ether), mp 211.5–212.5 (decomposition), under high vacuum 160–180°C (sub),  $[\alpha]_D^{25} = +195.5^\circ$  (*c* = 0.982, chloroform). Pharm: Antibacterial (*Mycobacterium tuberculosis* 607, gram-negative and -positive bacteria); antifungal. Source: RUAN ZHI HUANG CHAN *Allemanda cathartica*. Ref: 661.

**17571 Plumieride**

[511-89-7] C<sub>21</sub>H<sub>26</sub>O<sub>12</sub> (470.44). Bitter monohydrate crystals (water), mp 156–158°C; anhydride colorless rhomboid crystals (methanol–acetone), mp 224–225°C,  $[\alpha]_D^{16} = -114^\circ$  (*c* = 0.54, water),  $[\alpha]_D^{20} = -80^\circ$  (methanol). Pharm: Antibacterial (gram-negative and -positive bacteria); diuretic (> 0.3g); laxative (mus, ED<sub>50</sub> = 0.12g/kg). Source: HONG JI DAN HUA *Plumeria rubra*. Ref: 661.

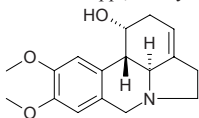
**17572 Pluviatilol- $\gamma$ , $\gamma$ -dimethylallyl ether**

[85994-79-2] C<sub>25</sub>H<sub>28</sub>O<sub>6</sub> (424.50). White granularity ceystals, mp 102°C (MeOH),  $[\alpha]_D^{20} = -107.5^\circ$  (*c* = 0.9, CHCl<sub>3</sub>). Pharm: CNS depressant. Source: BING GUO HUA JIAO *Zanthoxylum podocarpum*, CHU YE HUA JIAO PI *Zanthoxylum ailanthoides*, CI HUA JIAO *Zanthoxylum acanthopodium*, MEI GUO CI JIAO *Zanthoxylum clava-hercules*. Ref: 3742, 3743, 3744, 3745.

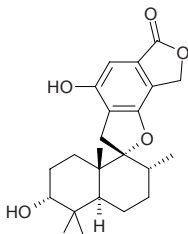


**17573 Pluviine**

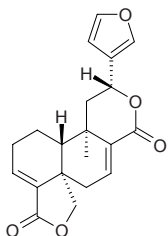
[548-11-8] C<sub>17</sub>H<sub>21</sub>NO<sub>3</sub> (287.36). mp 225~227°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -171° (c = 0.18, EtOH). Source: LU CONG *Lycoris squamigera*, SHI SUAN *Lycoris radiata* [Syn. *Amaryllis radiata*], ZHONG GUO SHI SUAN *Lycoris chinensis*, *Narcissus* spp., family Amaryllidaceae spp. Ref: 6, 1521, 3270.

**17574 PM04701085-02**

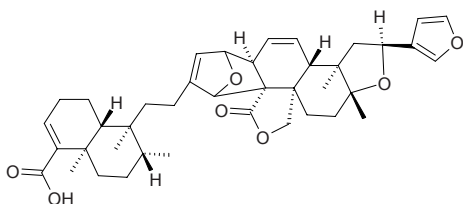
C<sub>23</sub>H<sub>30</sub>O<sub>5</sub> (386.49). Brown solid, [ $\alpha$ ]<sub>D</sub><sup>28</sup> = -18.9° (c = 0.33, MeOH). Pharm: Antiviral (HSV-1, 20µg/mL inactive, control Acyclovir IC<sub>50</sub> = (1.5±0.5)µg/mL, colorimetric method (P. Skehan, et al., J Natl Cancer Inst 1990, 82, 1107-1112)); antimalarial (*Plasmodium falciparum*, K1 multi-drug-resistant strain, cultivated *in vitro* by Trager and Jensen method (Science, 1976, 193, 673), IC<sub>50</sub> = (0.15±0.01)µg/mL, control Dihydroartemisinin IC<sub>50</sub> = (1.2±0.02)ng/mL); cytotoxic (Vero cells, 50µg/mL inactive, control Ellipticine IC<sub>50</sub> = (0.4±0.1)µg/mL, colorimetric method (P. Skehan, et al., J Natl Cancer Inst 1990, 82, 1107-1112)). Source: Fungus *Stachybotrys nephrospora*. Ref: 4078.

**17575 PM-2004-70-452-3**

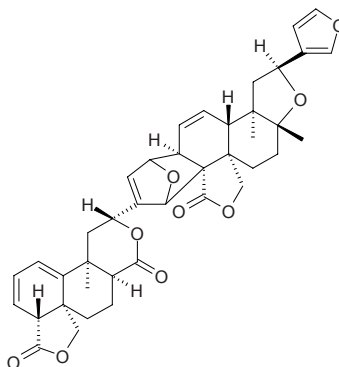
C<sub>20</sub>H<sub>20</sub>O<sub>5</sub> (340.38). Crystallized (CHCl<sub>3</sub>-MeOH), mp 240~241°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -85.0° (c = 1.0, CHCl<sub>3</sub>). Source: *Salvia wagneriana* (aerial parts). Ref: 4976.

**17576 PM-2004-70-452-4**

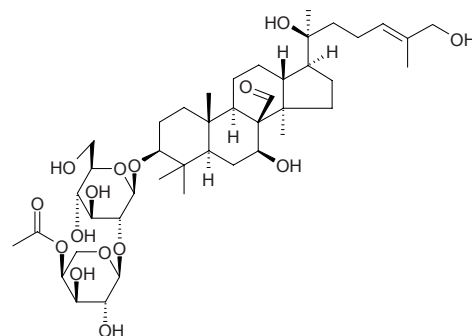
C<sub>40</sub>H<sub>50</sub>O<sub>7</sub> (642.84). Crystallized (CHCl<sub>3</sub>-MeOH), mp 223~224°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -140.0° (c = 1.0, CHCl<sub>3</sub>). Source: *Salvia wagneriana* (aerial parts). Ref: 4976.

**17577 PM-2004-70-452-5**

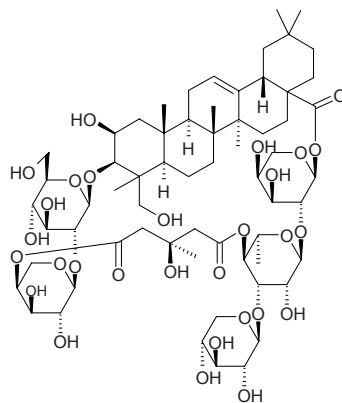
C<sub>40</sub>H<sub>42</sub>O<sub>9</sub> (666.78). Crystallized (CHCl<sub>3</sub>-MeOH), mp 212~213°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +9.0° (c = 1.0, CHCl<sub>3</sub>). Source: *Salvia wagneriana* (aerial parts). Ref: 4976.

**17578 PM-2004-70-458-3b**

C<sub>43</sub>H<sub>70</sub>O<sub>15</sub> (827.03). White crystalline powder (MeOH), mp 136~138°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +20.75° (c = 0.53, MeOH). Pharm: Antiviral (Vero cells, HSV-1, TC<sub>50</sub> = 852.1µg/mL, Acyclovir, TC<sub>50</sub> > 1000µg/mL). Source: JIA BEI MU *Bolbostemma paniculatum* (bulb). Ref: 4977.

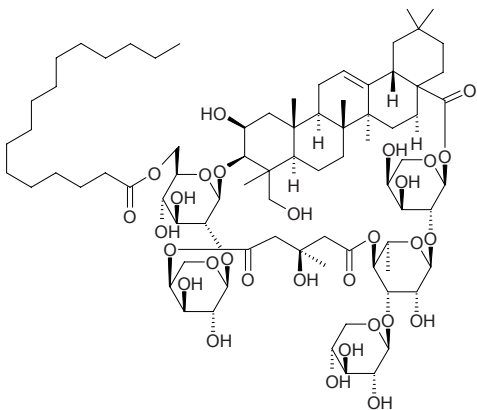
**17579 PM-2004-70-458-4**

C<sub>63</sub>H<sub>98</sub>O<sub>29</sub> (1319.27). Pharm: Antiviral (Vero cells, HSV-1, TC<sub>50</sub> = 1.37µg/mL, Acyclovir, TC<sub>50</sub> > 1000µg/mL). Source: JIA BEI MU *Bolbostemma paniculatum* (bulb). Ref: 4977.

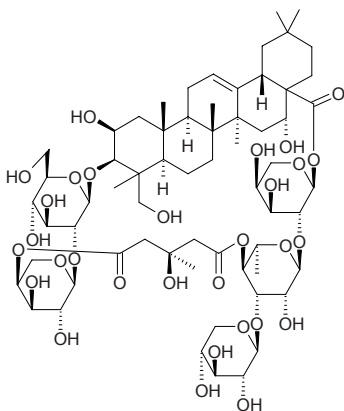


**17580 PM-2004-70-458-4a**

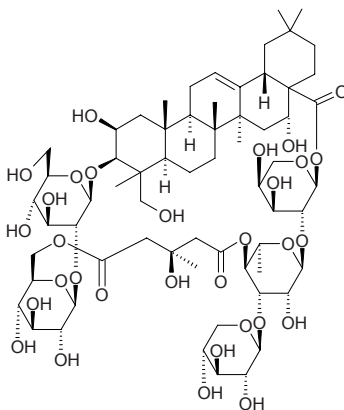
$C_{79}H_{128}O_{30}$  (1557.88). White crystalline powder (MeOH), mp 238–240°C,  $[\alpha]_D^{20} = +12.57^\circ$  ( $c = 0.56$ , MeOH). **Pharm:** Antiviral (Vero cells, HSV-1,  $TC_{50} = 4.11 \mu\text{g/mL}$ , Acyclovir,  $TC_{50} > 1000 \mu\text{g/mL}$ ). **Source:** JIA BEI MU *Bolbostemma paniculatum* (bulb). **Ref:** 4977.

**17581 PM-2004-70-458-5**

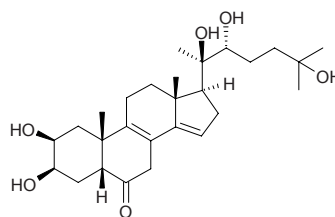
$C_{63}H_{98}O_{30}$  (1335.47). **Pharm:** Antiviral (Vero cells, HSV-1,  $TC_{50} < 0.45 \mu\text{g/mL}$ , Acyclovir,  $TC_{50} > 1000 \mu\text{g/mL}$ ). **Source:** JIA BEI MU *Bolbostemma paniculatum* (bulb). **Ref:** 4977.

**17582 PM-2004-70-458-6**

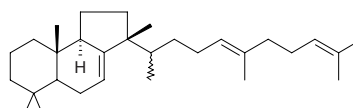
$C_{64}H_{100}O_{31}$  (1365.49). **Pharm:** Antiviral (Vero cells, HSV-1,  $TC_{50} = 2.45 \mu\text{g/mL}$ , Acyclovir,  $TC_{50} > 1000 \mu\text{g/mL}$ ). **Source:** JIA BEI MU *Bolbostemma paniculatum* (bulb). **Ref:** 4977.

**17583 Podecdysone B**

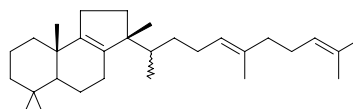
[22612-27-7]  $C_{27}H_{42}O_6$  (426.63). **Pharm:** Insect ecdysone. **Source:** *Podocarpus* sp. **Ref:** 658.

**17584 7,17,21-Podiodatriene**

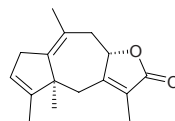
$C_{30}H_{50}$  (410.73). Oil,  $[\alpha]_D^{23} = -11.5^\circ$  ( $c = 0.2$ ,  $\text{CHCl}_3$ ). **Source:** SHUI LONG GU *Polypodium niponicum*. **Ref:** 3271.

**17585 8,17,21-Podiodatriene**

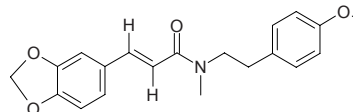
$C_{30}H_{50}$  (410.73). Oil,  $[\alpha]_D^{23} = +11.7^\circ$  ( $c = 0.2$ ,  $\text{CHCl}_3$ ). **Source:** SHUI LONG GU *Polypodium niponicum*. **Ref:** 3271.

**17586 Podoandin**

[142279-47-8]  $C_{15}H_{18}O_2$  (230.31). Prisms, mp 114–115°C. **Pharm:** Molluscicide (*Biomphalaria glabratus*, 250mg/L, 24h, kill ratio = 100%). **Source:** ZHI LI LUO HAN SONG *Podocarpus andina*. **Ref:** 3630.

**17587 Podocarpamide**

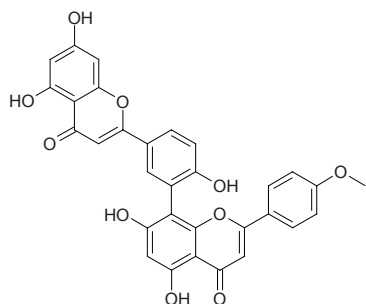
[121880-09-9]  $C_{20}H_{21}NO_4$  (339.39). Acicular clustered crystals, mp 85–86°C. **Pharm:** Platelet aggregation inhibitor (*in vitro*); antihepatotoxin (reduces level of transaminase *in vitro*). **Source:** BING GUO HUA JIAO *Zanthoxylum podocarpum*. **Ref:** 119.



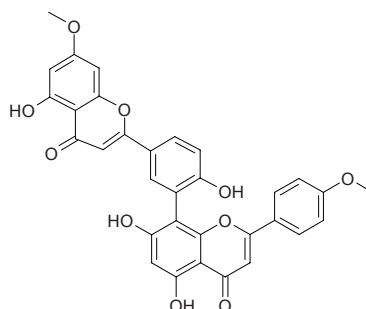


**17588 Podocarpusflavone A**

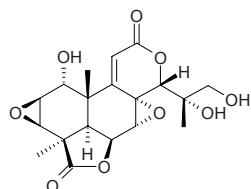
[22136-74-9] C<sub>31</sub>H<sub>20</sub>O<sub>10</sub> (552.50). Yellowish amorphous powder (MeOH), mp 321~323°C, [α]<sub>D</sub><sup>18.1</sup> = +15.31° (c = 0.27, C<sub>5</sub>H<sub>5</sub>N). **Pharm:** Tissue proteinase B inhibitor (IC<sub>50</sub> = 1.68 μmol/L); cytotoxic (HT29, IC<sub>50</sub> = 11.16 μmol/L); antioxidant inactive (DPPH scavenger, 10 μmol/L, ScRt = 5%; control BHT, 10 μmol/L, ScRt = 43%, IC<sub>50</sub> = 19.00 μmol/L)<sup>[4422]</sup>. **Source:** DU SONG SHI *Juniperus rigida*, JI MAO SONG *Podocarpus imbricatus*, LUO HAN SONG YE *Podocarpus macrophyllus*, MO XI GE LUO YU SHAN *Taxodium mucronatum* (twig and leaf), TIAN SHAN ZHU ZI *Garcinia dulcis* (flower). **Ref:** 6, 544, 4422, 4571.

**17589 Podocarpusflavone B**

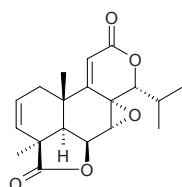
[23624-21-7] C<sub>32</sub>H<sub>22</sub>O<sub>10</sub> (566.53). **Source:** LUO HAN SONG YE *Podocarpus macrophyllus*. **Ref:** 6.

**17590 Podolactone B**

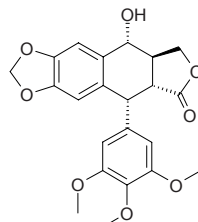
[26804-82-0] C<sub>19</sub>H<sub>22</sub>O<sub>9</sub> (394.38). **Pharm:** Inhibits mitosis (plant cells). **Source:** BAI RI QING *Podocarpus neriifolius*. **Ref:** 658, 1521.

**17591 Podolide**

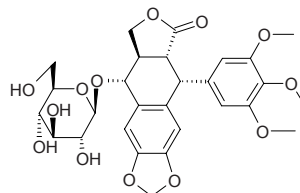
[55786-36-2] C<sub>19</sub>H<sub>22</sub>O<sub>5</sub> (330.38). mp 296~298°C. **Pharm:** Antineoplastic (mus P<sub>388</sub>, *in vivo*); cytotoxic (KB *in vitro*, hmn P<sub>388</sub> *in vitro*, inhibits cell culture of Kichita sarcoma). **Source:** XI LUO HAN SONG *Podocarpus gracilior*. **Ref:** 5.

**17592 Podophyllotoxin**

Condyline; Podophyllinic acid lactone [518-28-5] C<sub>22</sub>H<sub>22</sub>O<sub>8</sub> (414.42). Solvated crystals, mp 114~118°C (bubble occurs), mp 183.3~184.0°C (after drying), [α]<sub>D</sub><sup>20</sup> = -132.7° (chloroform), slightly soluble in water, soluble in ethanol, chloroform, acetone, hot benzene, ice vinegar.<sup>[5507]</sup> **Pharm:** Anti-fertility agent; antiviral (measles virus, HSV-1); cytotoxic (KB, IC<sub>50</sub> = 0.014 μmol/L<sup>[3969]</sup>, IC<sub>50</sub> = 0.01 μg/mL<sup>[5176]</sup>); cytotoxic (BST assay, IC<sub>50</sub> = 4.5 μg/mL)<sup>[5332]</sup>; cytotoxic (L-6, IC<sub>50</sub> = 0.0075 μg/mL)<sup>[5008]</sup>; cytotoxic (L-6, IC<sub>50</sub> = 0.008 μg/mL)<sup>[5009]</sup>; inhibits mitosis; immunosuppressant; intestinal smooth muscle stimulant; used in treatment of the fig wart (tincture in 5%, overall effective rate = 100%); LD<sub>50</sub> (mus, orl) = 90 mg/kg, (mus, ip) = 30~35 mg/kg. **Source:** BAI BA JIAO LIAN *Dysosma majorensis* [Syn. *Podophyllum majorensis*; *Dysosma lichuanensis*] (rhizome: content = 0.50%)<sup>[5508]</sup>, BEI MEI YUAN BAI *Juniperus virginiana*, BI LIN BA JIAO LIAN *Dysosma furfuracea* (rhizome: mean content in different seasons = 7.09%)<sup>[5508]</sup>, CHA ZI YUAN BAI *Juniperus sabina*, CHONG MING BA JIAO LIAN *Dysosma subrosea* (rhizome: content = 0.29%)<sup>[5508]</sup>, CHOU BAI *Sabina vulgaris*, CHUAN BA JIAO LIAN *Dysosma veitchii* (rhizome: content = 0.089%)<sup>[5508]</sup>, DUN YE GUI JIU *Podophyllum peltatum*, E SHEN *Anthriscus sylvestris*, GUANG XI BA JIAO LIAN *Dysosma guangxiensis* (rhizome: content = 0.12%)<sup>[5508]</sup>, GUI JIU *Dysosma versipellis* [Syn. *Podophyllum versipelle*] (rhizome: content = 0.86%)<sup>[5508]</sup>, LIU JIAO LIAN *Dysosma pleiantha* [Syn. *Podophyllum pleianthum*] (rhizome: content = 0.24%)<sup>[5508]</sup>, SHAN HE YE *Diphylleia grayi* (rhizome: content = 2.8%)<sup>[5508]</sup>, TAO ER QI *Podophyllum emodii* [Syn. *Podophyllum emodii* var. *chinense*; *Podophyllum sikkimense*; *Sinopodophyllum emodii*] (rhizome: mean content of 3 origins = 5.60%)<sup>[5508]</sup>, WO ER QI *Diphylleia sinensis* (rhizome: mean content of 4 origins = 2.99%)<sup>[5508]</sup>, XIAO BA JIAO LIAN *Dysosma difformis* (rhizome: content = 0.22%)<sup>[5508]</sup>. **Ref:** 4, 6, 279, 658, 3543, 3969, 5008, 5009, 5176, 5332, 5499, 5507, 5508.

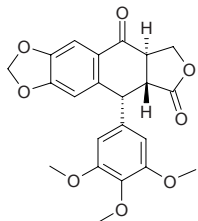
**17593 Podophyllotoxin 7'-O-β-D-glucopyranoside**

C<sub>28</sub>H<sub>32</sub>O<sub>13</sub> (576.56). Hygroscopic white amorphous flocculus, mp 152~154°C, [α]<sub>D</sub><sup>20</sup> = -76.4° (c = 0.576, methanol), [α]<sub>D</sub><sup>20</sup> = -117° (c = 0.668, pyridine). **Pharm:** Antineoplastic (mus EAC, ip); inhibits mitosis; antiviral (herpes simplex virus); LD<sub>50</sub> (mus, ip) = 200 mg/kg. **Source:** TAO ER QI *Podophyllum emodii* [Syn. *Podophyllum emodii* var. *chinense*; *Podophyllum sikkimense*; *Sinopodophyllum emodii*], DUN YE GUI JIU *Podophyllum peltatum*. **Ref:** 661, 3543.

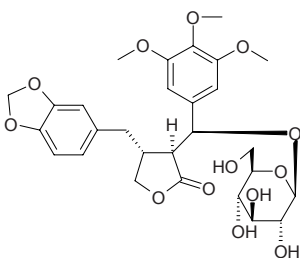


**17594 Podophyllotoxone**

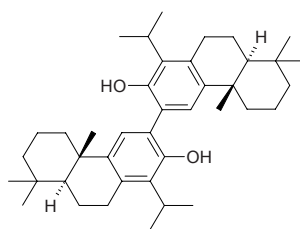
$C_{22}H_{20}O_8$  (412.40). **Pharm:** Cytotoxic. **Source:** BAI BA JIAO LIAN *Dysosma majorensis* [Syn. *Podophyllum majorensis*; *Dysosma lichuanensis*], DUN YE GUI JIU *Podophyllum peltatum*, LIU JIAO LIAN *Dysosma pleiantha* [Syn. *Podophyllum pleianthum*] (rhizome: content = 0.016%<sup>[5508]</sup>), TAO ER QI *Podophyllum emodii* [Syn. *Podophyllum emodii* var. *chinense*; *Podophyllum sikkimense*; *Sinopodophyllum emodii*] (rhizome: mean content of 2 origins = 0.306%<sup>[5508]</sup>), WO ER QI *Diphylleia sinensis* (rhizome: mean content of 4 origins = 0.131%<sup>[5508]</sup>). **Ref:** 658, 2719, 2729, 2997, 3115, 5508.

**17595 Podorhizol  $\beta$ -D-glucoside**

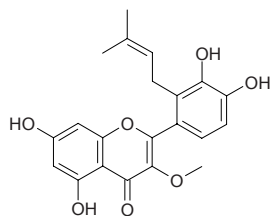
$C_{28}H_{34}O_{13}$  (578.58). **Pharm:** Inhibits mitosis. **Source:** DUN YE GUI JIU *Podophyllum peltatum*, TAO ER QI *Podophyllum emodii* [Syn. *Podophyllum emodii* var. *chinense*; *Podophyllum sikkimense*; *Sinopodophyllum emodii*]. **Ref:** 658.

**17596 Podototarin**

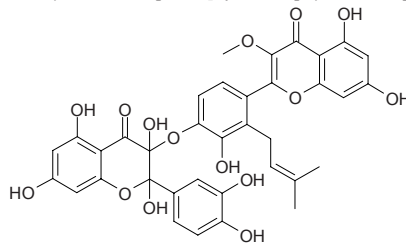
[2539-02-8]  $C_{40}H_{58}O_2$  (570.91). mp 225–226°C. **Source:** LUO HAN SONG YE *Podocarpus macrophyllus*. **Ref:** 6.

**17597 Podoverin A**

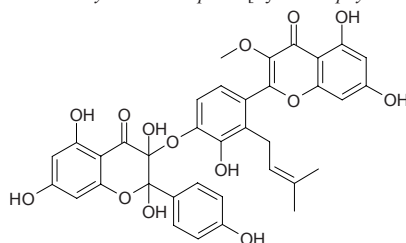
[107882-43-9]  $C_{21}H_{20}O_7$  (384.38). White crystals, mp 82–84°C (Et<sub>2</sub>O-pet. ether). **Pharm:** Anti-inflammatory (*in vitro*, IC<sub>50</sub> = 4.7 μmol/L). **Source:** GUI JIU *Dysosma versipellis* [Syn. *Podophyllum versipelle*]. **Ref:** 3631.

**17598 Podoverin B**

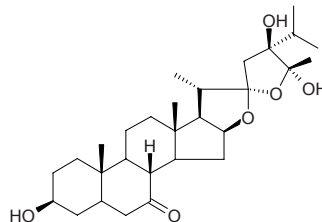
[107882-41-7]  $C_{36}H_{30}O_{15}$  (702.63). Yellow crystals, mp 180–182°C (Et<sub>2</sub>O-pet. ether). **Pharm:** Anti-inflammatory (*in vitro*, IC<sub>50</sub> = 6.4 μmol/L). **Source:** GUI JIU *Dysosma versipellis* [Syn. *Podophyllum versipelle*]. **Ref:** 3631.

**17599 Podoverin C**

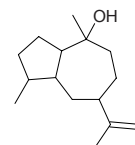
[107882-40-6]  $C_{36}H_{30}O_{14}$  (686.63). Yellowish amorphous substance, mp 171–173°C. **Pharm:** Anti-inflammatory (*in vitro*, IC<sub>50</sub> = 89 μmol/L). **Source:** GUI JIU *Dysosma versipellis* [Syn. *Podophyllum versipelle*]. **Ref:** 3631.

**17600 Pogosterol**

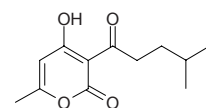
[149155-26-0]  $C_{29}H_{46}O_6$  (490.69). Crystals (MeOH), mp 154–157°C, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = –91.6° (*c* = 0.43, CHCl<sub>3</sub>). **Pharm:** Cytotoxic (*in vitro*, L<sub>1210</sub> IC<sub>50</sub> = 1.7 μg/mL). **Source:** BO GE BAN JIU JU *Vernonia pogosperma*. **Ref:** 3632.

**17601 Pogostol**

[21698-41-9]  $C_{15}H_{26}O$  (222.37). **Source:** GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*]. **Ref:** 2, 660.

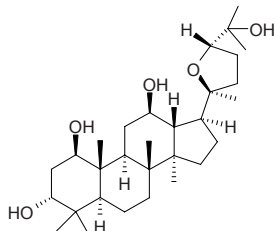
**17602 Pogostone**

$C_{12}H_{16}O_4$  (224.26). mp 33–34°C. **Pharm:** Antibacterial (*Staphylococcus aureus*,  $\alpha$ -hemolytic streptococcus); antifungal (*Candida albicans*, *Rhizopus niger*, *Cryptococcus neoformans*); antiseptic. **Source:** GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*] (aerial parts: content scope = 0.004%–0.016%<sup>[5501]</sup>). **Ref:** 2, 505, 660, 5501.

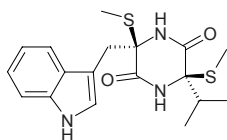


**17603 Polacamdrin**

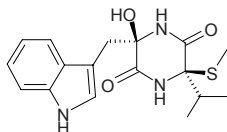
[145700-90-9] C<sub>30</sub>H<sub>52</sub>O<sub>5</sub> (492.75). Colorless prisms, mp 234~238°C, [ $\alpha$ ]<sub>D</sub> = -86.5° (*c* = 0.89, CHCl<sub>3</sub>). **Pharm:** Cytotoxic (KB, ED<sub>50</sub> = 0.6 μg/mL, P<sub>388</sub> ED<sub>50</sub> = 0.9 μg/mL, RPMI-7951 ED<sub>50</sub> = 0.62 μg/mL). **Source:** SHI ER RUI CHOU SHI CAI *Polanisia dodecandra*. **Ref:** 3633.

**17604 Polanrazine B**

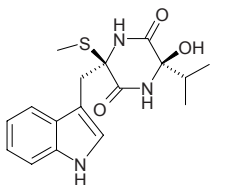
C<sub>18</sub>H<sub>23</sub>N<sub>3</sub>O<sub>2</sub>S<sub>2</sub> (377.53). [ $\alpha$ ]<sub>D</sub> = -60° (*c* = 0.2, CHCl<sub>3</sub>). **Source:** BAN DIAN XIAO QIU QIANG JUN *Leptosphaeria maculans*, JING DIAN MEI *Phoma lingam*. **Ref:** 5213.

**17605 Polanrazine C**

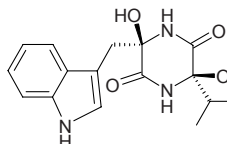
C<sub>17</sub>H<sub>21</sub>N<sub>3</sub>O<sub>3</sub>S (347.44). [ $\alpha$ ]<sub>D</sub> = +16° (*c* = 0.18, MeOH). **Pharm:** Phytotoxin (brown mustard leaves, moderate but selective toxicity, causing necrotic and chlorotic lesions, 1~3mm diameter). **Source:** BAN DIAN XIAO QIU QIANG JUN *Leptosphaeria maculans*, JING DIAN MEI *Phoma lingam*. **Ref:** 5213.

**17606 Polanrazine D**

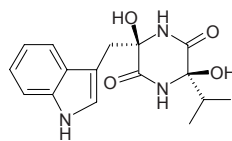
C<sub>17</sub>H<sub>21</sub>N<sub>3</sub>O<sub>3</sub>S (347.44). [ $\alpha$ ]<sub>D</sub> = -8.2° (*c* = 0.18, MeOH). **Source:** BAN DIAN XIAO QIU QIANG JUN *Leptosphaeria maculans*, JING DIAN MEI *Phoma lingam*. **Ref:** 5213.

**17607 Polanrazine E**

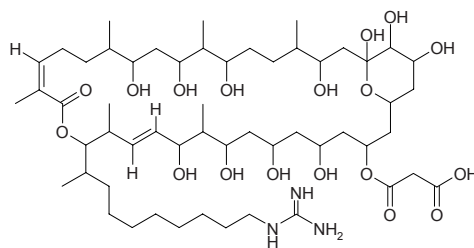
C<sub>17</sub>H<sub>21</sub>N<sub>3</sub>O<sub>4</sub> (331.37). [ $\alpha$ ]<sub>D</sub> = -6° (*c* = 0.07, MeOH). **Pharm:** Phytotoxin (brown mustard leaves, moderate but selective toxicity, causing necrotic and chlorotic lesions, 1~3mm diameter)<sup>[5213]</sup>. **Source:** BAN DIAN XIAO QIU QIANG JUN *Leptosphaeria maculans*, JING DIAN MEI *Phoma lingam*. **Ref:** 5213.

**17608 Polanrazine F**

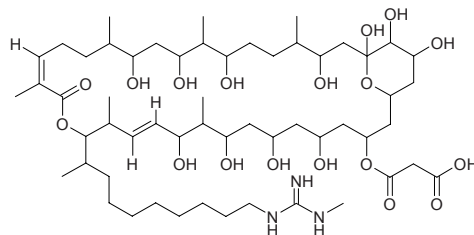
C<sub>17</sub>H<sub>19</sub>N<sub>3</sub>O<sub>4</sub> (317.35). [ $\alpha$ ]<sub>D</sub> = -10° (*c* = 0.26, MeOH). **Source:** BAN DIAN XIAO QIU QIANG JUN *Leptosphaeria maculans*, JING DIAN MEI *Phoma lingam*. **Ref:** 5213.

**17609 Polaramycin A**

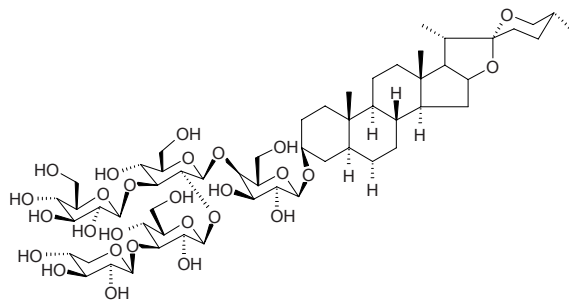
C<sub>55</sub>H<sub>99</sub>N<sub>3</sub>O<sub>18</sub> (1090.41). White crystalline powder. **Source:** *Streptomyces hygroscopicus*. **Ref:** 380.

**17610 Polaramycin B**

C<sub>56</sub>H<sub>101</sub>N<sub>3</sub>O<sub>18</sub> (1104.44). White crystalline powder. **Source:** *Streptomyces hygroscopicus*. **Ref:** 380.

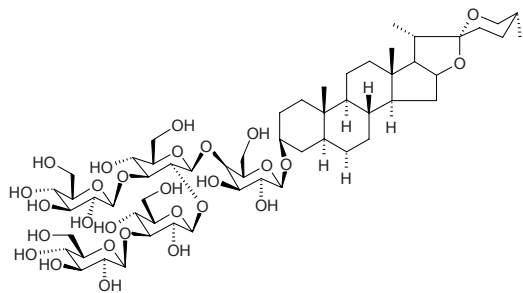
**17611 Polianthoside B**

Tigogenin 3-*O*- $\beta$ -*D*-Xylopyranosyl-(1→3)- $\beta$ -*D*-glucopyranosyl-(1→2)-[ $\beta$ -*D*-glucopyranosyl-(1→3)]- $\beta$ -*D*-glucopyranosyl-(1→4)- $\beta$ -*D*-galactopyranoside C<sub>56</sub>H<sub>92</sub>O<sub>27</sub> (1197.34). White amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>18.3</sup> = -52.04° (*c* = 0.0221, pyridine). **Pharm:** Cytotoxic inactive (*in vitro*, HeLa, IC<sub>50</sub> > 20 μg/mL; control cis-Platin, IC<sub>50</sub> = 0.75 μg/mL). **Source:** WAN XIANG YU *Polianthes tuberosa* (tuber: yield = 0.00058%fw). **Ref:** 3002.

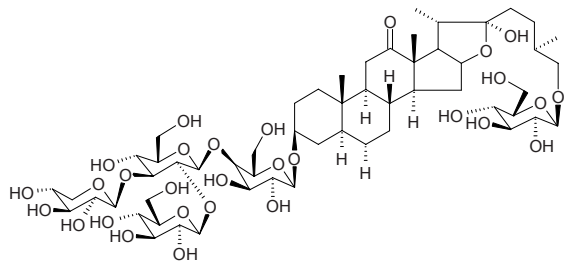


**17612 Polianthoside C**

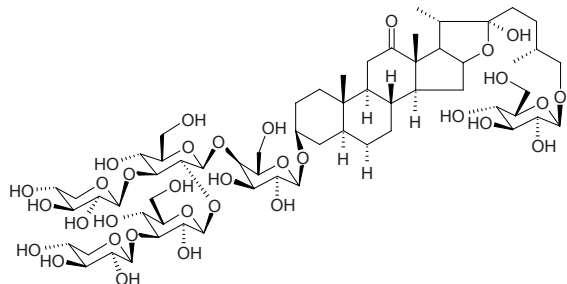
Tigogenin 3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)-[ $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)]- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-galactopyranoside C<sub>57</sub>H<sub>94</sub>O<sub>28</sub> (1227.37). White amorphous powder,  $[\alpha]_D^{19.8} = -32.79^\circ$  ( $c = 0.0183$ , pyridine). **Pharm:** Cytotoxic inactive (*in vitro*, HeLa, IC<sub>50</sub> > 20 $\mu$ g/mL; control cis-Platin, IC<sub>50</sub> = 0.75 $\mu$ g/mL). **Source:** WAN XIANG YU *Polianthes tuberosa* (tuber: yield = 0.00028%fw). **Ref:** 3002.

**17613 Polianthoside D**

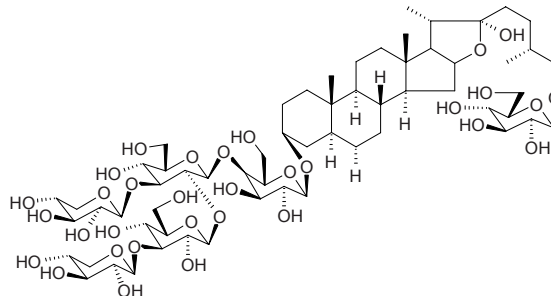
26-*O*- $\beta$ -*D*-Glucopyranosyl-(25*R*)-5 $\alpha$ -furost-3 $\beta$ ,22 $\alpha$ ,26-triol-12-one 3-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)-[ $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)]- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-galactopyranoside C<sub>56</sub>H<sub>92</sub>O<sub>29</sub> (1229.34). White amorphous powder,  $[\alpha]_D^{18.1} = -23.21^\circ$  ( $c = 0.0474$ , pyridine). **Pharm:** Cytotoxic (*in vitro*, HeLa, IC<sub>50</sub> = 7.9 $\mu$ g/mL; control cis-Platin, IC<sub>50</sub> = 0.75 $\mu$ g/mL). **Source:** WAN XIANG YU *Polianthes tuberosa* (tuber: yield = 0.0062%fw). **Ref:** 3002.

**17614 Polianthoside E**

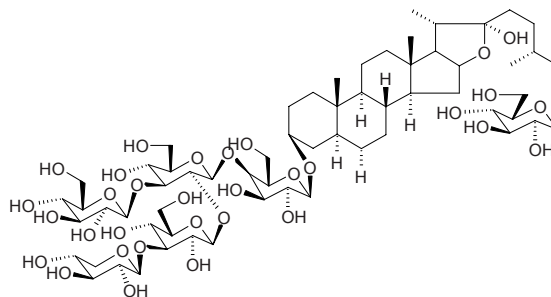
26-*O*- $\beta$ -*D*-Glucopyranosyl-(25*R*)-5 $\alpha$ -furost-3 $\beta$ ,22 $\alpha$ ,26-triol-12-one 3-*O*- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)-[ $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)]- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-galactopyranoside C<sub>61</sub>H<sub>100</sub>O<sub>33</sub> (1361.46). White amorphous powder,  $[\alpha]_D^{18.1} = -23.53^\circ$  ( $c = 0.034$ , pyridine). **Pharm:** Cytotoxic (*in vitro*, HeLa, IC<sub>50</sub> = 5.2 $\mu$ g/mL; control cis-Platin, IC<sub>50</sub> = 0.75 $\mu$ g/mL). **Source:** WAN XIANG YU *Polianthes tuberosa* (tuber: yield = 0.021%fw). **Ref:** 3002.

**17615 Polianthoside F**

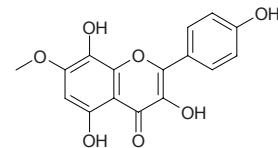
26-*O*- $\beta$ -*D*-Glucopyranosyl-(25*R*)-5 $\alpha$ -furost-3 $\beta$ ,22 $\alpha$ ,26-triol 3-*O*- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)-[ $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)]- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-galactopyranoside C<sub>61</sub>H<sub>102</sub>O<sub>32</sub> (1347.47). White amorphous powder,  $[\alpha]_D^{19.8} = -37.18^\circ$  ( $c = 0.039$ , pyridine). **Pharm:** Cytotoxic (*in vitro*, HeLa, IC<sub>50</sub> = 20.00 $\mu$ g/mL; control cis-Platin, IC<sub>50</sub> = 0.75 $\mu$ g/mL). **Source:** WAN XIANG YU *Polianthes tuberosa* (tuber: yield = 0.030%fw). **Ref:** 3002.

**17616 Polianthoside G**

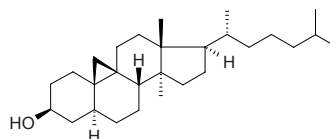
26-*O*- $\beta$ -*D*-Glucopyranosyl-(25*R*)-5 $\alpha$ -furost-3 $\beta$ ,22 $\alpha$ ,26-triol 3-*O*- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)-[ $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)]- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-galactopyranoside C<sub>62</sub>H<sub>104</sub>O<sub>33</sub> (1377.5). White amorphous powder,  $[\alpha]_D^{19.7} = -35.26^\circ$  ( $c = 0.039$ , pyridine). **Pharm:** Cytotoxic (*in vitro*, HeLa, IC<sub>50</sub> = 5.4 $\mu$ g/mL; control cis-Platin, IC<sub>50</sub> = 0.75 $\mu$ g/mL). **Source:** WAN XIANG YU *Polianthes tuberosa* (tuber: yield = 0.00075%fw). **Ref:** 3002.

**17617 Pollenitin**

3,5,8,4'-Tetrahydroxy-7-methoxy flavone C<sub>16</sub>H<sub>12</sub>O<sub>7</sub> (316.27). Yellow needles (AcOH), mp 285°C. **Source:** CHA HUA *Camellia sinensis* [Syn. *Thea sinensis*], *Notholaena* spp. **Ref:** 1521, 3272.

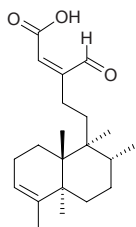
**17618 Pollinastanol**

[1912-66-9] C<sub>28</sub>H<sub>48</sub>O (400.69). mp 95°C. **Source:** SHUI LONG GU *Polypodium niponicum*. **Ref:** 6.

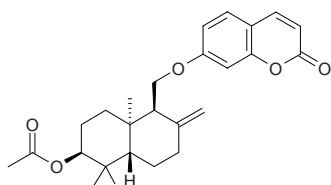


**17619 Polyalthialdoic acid**

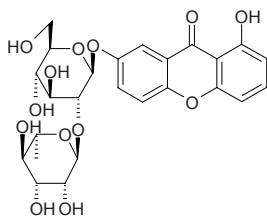
[137109-33-2] C<sub>20</sub>H<sub>30</sub>O<sub>3</sub> (318.46). White powder, mp 167~170°C,  $[\alpha]_D^{22} = -36.7^\circ$  ( $c = 0.03$ , absolute alcohol). **Pharm:** Cytotoxic (hmn, markedly inhibits A549, MCF7, and HT29; hmn culture cancer cells ED<sub>50</sub> = 0.6 µg/mL; markedly inhibits Crown gall cancer). **Source:** CHANG YE AN LUO *Polyalthia longifolia*. **Ref:** 3634.

**17620 Polyanthinin**

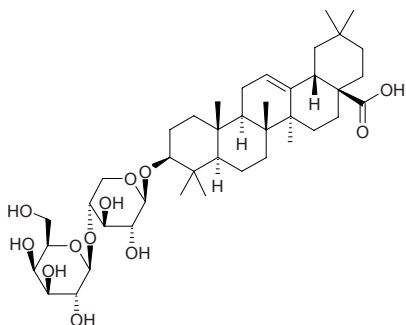
Polyanthin C<sub>26</sub>H<sub>32</sub>O<sub>5</sub> (424.54). mp 127~129°C,  $[\alpha]_D^{20} = -32^\circ$  (EtOH). **Source:** A WEI *Ferula assafoetida* (root), DUO HUA A WEI *Ferula polyantha*. **Ref:** 1521, 3273, 5243.

**17621 Polycalcoside A**

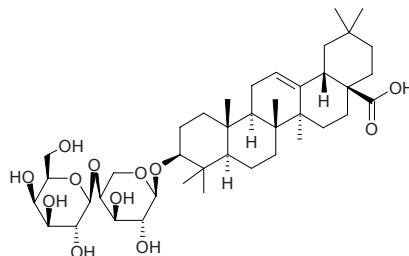
1,7-Dihydroxyxanthone-7-*O*- $\alpha$ -L-rhamnopyranosyl-(1→2)- $\beta$ -D-glucopyranoside C<sub>25</sub>H<sub>28</sub>O<sub>13</sub> (536.49). Yellow needles, mp = 115~117°C. **Source:** SHUI HUANG YANG MU *Polygala caudata*. **Ref:** 2329.

**17622 Polyfolioliide A**

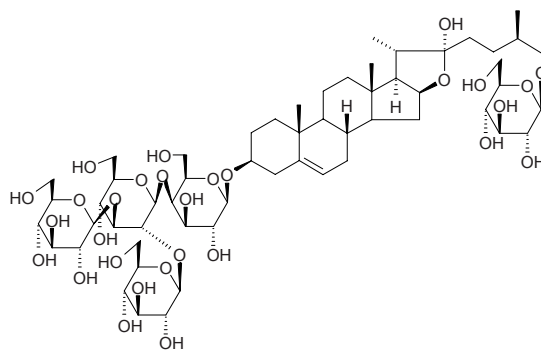
3-*O*- $\beta$ -D-Galactopyranosyl-(1→4)- $\beta$ -D-xylopyranosyloleanolic acid C<sub>41</sub>H<sub>66</sub>O<sub>12</sub> (750.98). Colorless solid,  $[\alpha]_D^{25} = +12.4^\circ$  ( $c = 1.42$ , MeOH). **Pharm:** Cytotoxic (A2780, IC<sub>50</sub> = (6.7±0.4) µg/mL; control Actinomycin D, IC<sub>50</sub> = 2~5 ng/mL). **Source:** DA YE NAN YANG SHEN *Polyscias amplifolia* (infructescence). **Ref:** 5397.

**17623 Polyfolioliide B**

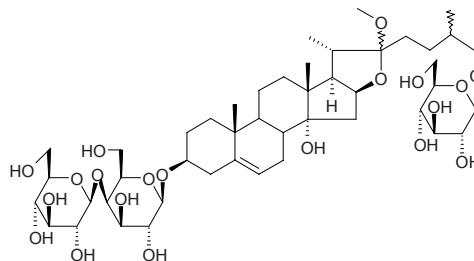
3-*O*- $\beta$ -D-Galactopyranosyl-(1→4)- $\alpha$ -L-arabinopyranosyloleanolic acid C<sub>41</sub>H<sub>66</sub>O<sub>12</sub> (750.98). Colorless solid,  $[\alpha]_D^{25} = +26.4^\circ$  ( $c = 0.96$ , MeOH). **Pharm:** Cytotoxic (A2780, IC<sub>50</sub> = (9.2±0.3) µg/mL; control Actinomycin D, IC<sub>50</sub> = 2~5 ng/mL). **Source:** DA YE NAN YANG SHEN *Polyscias amplifolia* (infructescence). **Ref:** 5397.

**17624 Polyfuroside**

C<sub>57</sub>H<sub>94</sub>O<sub>29</sub> (1243.37). **Source:** YU ZHU *Polygonatum odoratum* [Syn. *Polygonatum officinale*]. **Ref:** 660.

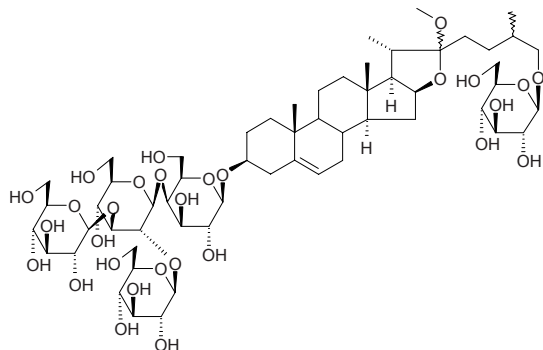
**17625 Polyfuroside PO<sub>6</sub>**

C<sub>46</sub>H<sub>76</sub>O<sub>20</sub> (949.11). **Source:** YU ZHU *Polygonatum odoratum* [Syn. *Polygonatum officinale*]. **Ref:** 660.

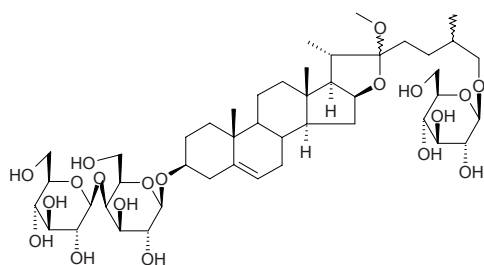


**17626 Polyfuroside PO<sub>7</sub>**

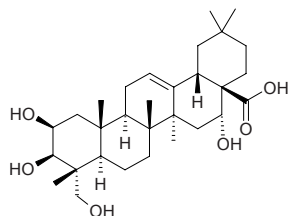
$C_{58}H_{96}O_{29}$  (1257.39). Source: YU ZHU *Polygonatum odoratum* [Syn. *Polygonatum officinale*]. Ref: 660.

**17627 Polyfuroside PO<sub>8</sub>**

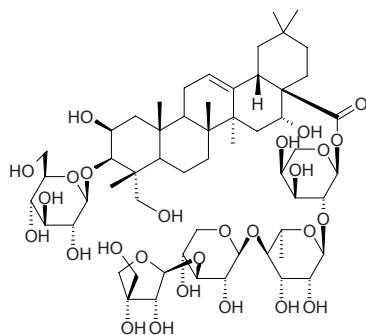
$C_{46}H_{76}O_{19}$  (933.11). Source: YU ZHU *Polygonatum odoratum* [Syn. *Polygonatum officinale*]. Ref: 660.

**17628 Polygalacic acid**

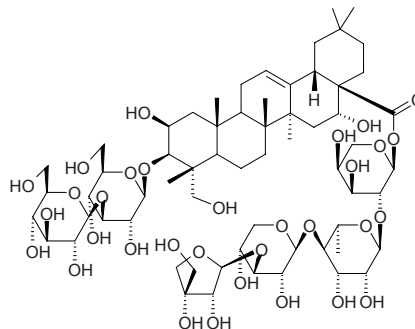
[22338-71-2]  $C_{30}H_{48}O_6$  (504.71). mp 300~305°C. Source: JIE GENG *Platycodon grandiflorum*. Ref: 6.

**17629 Polygalacin D**

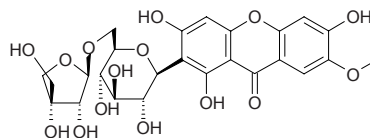
$C_{57}H_{92}O_{27}$  (1209.35). Source: JIE GENG *Platycodon grandiflorum*. Ref: 1382.

**17630 Polygalacin D<sub>2</sub>**

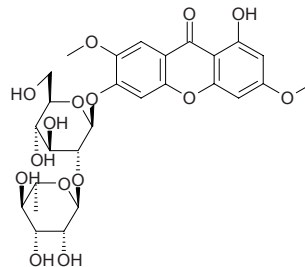
$C_{63}H_{102}O_{32}$  (1371.50). Source: JIE GENG *Platycodon grandiflorum*. Ref: 1382.

**17631 Polygalaxanthone III**

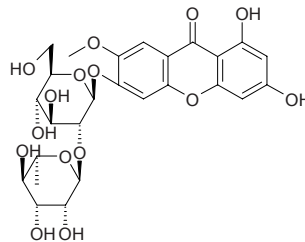
$C_{25}H_{28}O_{15}$  (568.39). Amorphous powder. Source: XI BO LI YA YUAN ZHI *Polygala sibirica*. Ref: 691.

**17632 Polygalaxanthone IV**

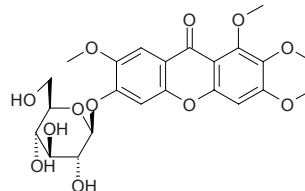
$C_{27}H_{32}O_{15}$  (596.55). Yellow powder, mp 273~275°C,  $[\alpha]_D^{23} = -60^\circ$  ( $c = 0.70$ , MeOH). Source: YUAN ZHI *Polygala tenuifolia*. Ref: 1974.

**17633 Polygalaxanthone V**

$C_{26}H_{30}O_{15}$  (582.52). Yellow powder, mp 232~235 °C,  $[\alpha]_D^{23} = -81.7^\circ$  ( $c = 0.71$ , MeOH). Source: YUAN ZHI *Polygala tenuifolia*. Ref: 1974.

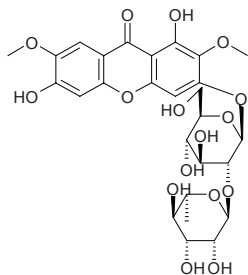
**17634 Polygalaxanthone VI**

$C_{23}H_{26}O_{12}$  (494.46). Yellow powder, mp 245~247 °C. Source: YUAN ZHI *Polygala tenuifolia*. Ref: 1974.

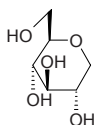


**17635 Polygalaxanthone VII**

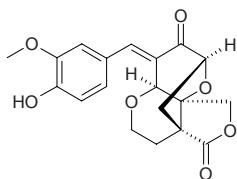
$C_{27}H_{32}O_{16}$  (612.55). Pale yellow powder, mp 182~184 °C. Source: YUAN ZHI *Polygala tenuifolia*. Ref: 1974.

**17636 Polygalitol**

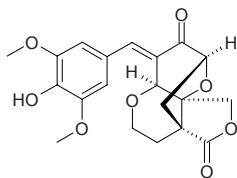
$C_6H_{12}O_5$  (164.16). mp 142~143°C. Source: HUANG HUA YUAN ZHI *Polygala arillata*, YUAN ZHI *Polygala tenuifolia*. Ref: 2.

**17637 Polygalolide A**

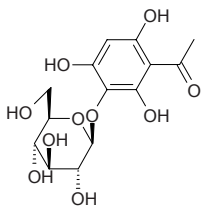
$C_{19}H_{18}O_7$  (358.35). Light brown amorphous powder,  $[\alpha]_D^{24} = -14.4^\circ$  ( $c = 0.018$ , MeOH). Source: JIA HUANG HUA YUAN ZHI *Polygala fallax* [Syn. *Polygala aureocauda*] (root and stem: yield = 0.00054%). Ref: 4683.

**17638 Polygalolide B**

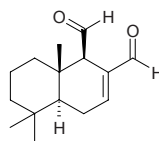
$C_{20}H_{20}O_8$  (388.38). Light brown amorphous powder,  $[\alpha]_D^{24} = -21.3^\circ$  ( $c = 0.015$ , MeOH). Source: JIA HUANG HUA YUAN ZHI *Polygala fallax* [Syn. *Polygala aureocauda*] (root and stem: yield = 0.00049%). Ref: 4683.

**17639 Polygoacetophenoside**

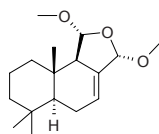
[110906-84-8]  $C_{14}H_{18}O_{10}$  (346.29). Source: HE SHOU WU *Polygonum multiflorum*. Ref: 2.

**17640 Polygodial**

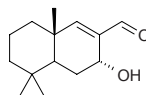
Tadeonal [6754-20-7]  $C_{15}H_{22}O_2$  (234.34). mp 57°C, bp 138~140°C/0.8mmHg. Pharm: Insect antifeedant. Source: SHUI LIAO *Polygonum hydropiper*. Ref: 6, 658, 1521.

**17641 Polygodial acetal**

[98204-88-7]  $C_{17}H_{28}O_3$  (280.41). Yellow oil. Source: SHUI LIAO *Polygonum hydropiper*. Ref: 3274.

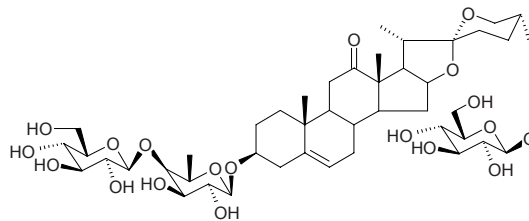
**17642 Polygonal**

[72537-20-3]  $C_{14}H_{22}O_2$  (222.33). Crystals, mp 116~117°C,  $[\alpha]_D = -7.3^\circ$  ( $c = 7.4$ ,  $CHCl_3$ ). Source: LIAO SHI *Polygonum hydropiper*. Ref: 3275.

**17643 Polygonatoside A**

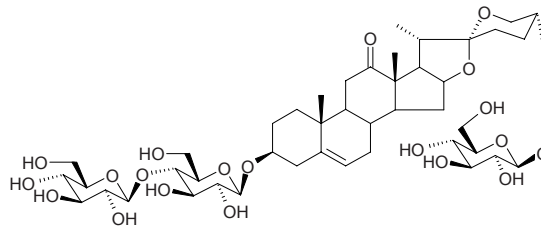
(25S)-3 $\beta$ ,27-Dihydroxyspirost-5-en-12-one

27-O- $\beta$ -D-glucopyranosyl-3-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-fucopyranoside of  $C_{45}H_{70}O_{19}$  (915.05). White amorphous powder,  $[\alpha]_D^{20} = -24.51^\circ$  ( $c = 0.1489$ , pyridine). Pharm: Cytotoxic (*in vitro*, HeLa,  $IC_{50} = 5.06\mu g/mL$ ; control Cisplatin, HeLa,  $IC_{50} = 0.75\mu g/mL$ ). Source: HU BEI HUANG JING *Polygonatum zanlanscianense* (rhizome: yield = 0.00055%dw). Ref: 4788.

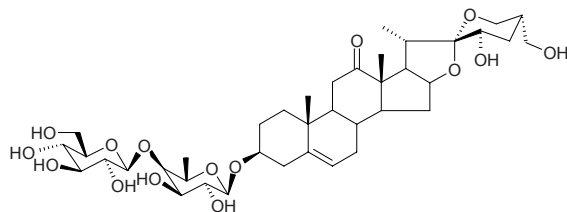
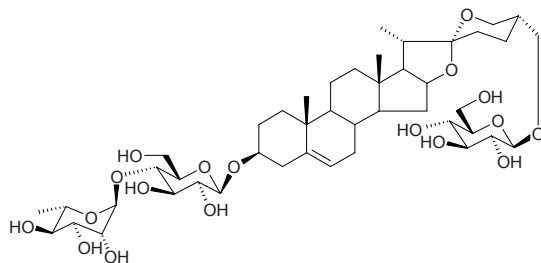
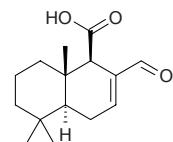
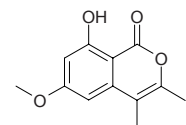
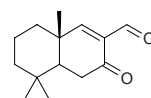
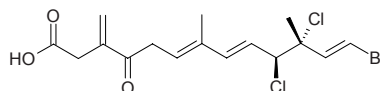
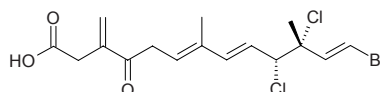
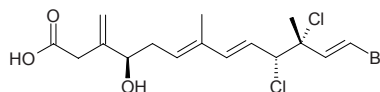
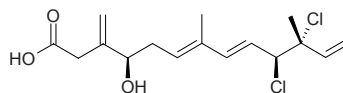
**17644 Polygonatoside B**

(25S)-3 $\beta$ ,27-Dihydroxyspirost-5-en-12-one

27-O- $\beta$ -D-glucopyranosyl-3-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-galactopyranoside  $C_{45}H_{70}O_{20}$  (831.05). White amorphous powder,  $[\alpha]_D^{20} = -19.19^\circ$  ( $c = 0.0521$ , pyridine). Pharm: Cytotoxic (*in vitro*, HeLa,  $IC_{50} = 5.13\mu g/mL$ ; control Cisplatin, HeLa,  $IC_{50} = 0.75\mu g/mL$ ). Source: HU BEI HUANG JING *Polygonatum zanlanscianense* (rhizome: yield = 0.00014%dw). Ref: 4788.



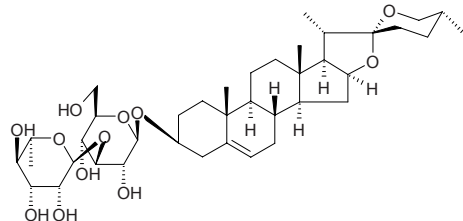


**17645 Polygonatoside C**(23*S*,25*S*)-3 $\beta$ ,23,27-Trihydroxyspirost-5-en-12-one3-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-fucopyranoside C<sub>39</sub>H<sub>60</sub>O<sub>15</sub> (768.9).White solid,  $[\alpha]_D^{20} = -48.43^\circ$  ( $c = 0.0351$ , pyridine). **Pharm:** Cytotoxic (*in vitro*, HeLa, IC<sub>50</sub> = 7.45  $\mu$ g/mL; control Cisplatin, HeLa, IC<sub>50</sub> = 0.75  $\mu$ g/mL).**Source:** HU BEI HUANG JING *Polygonatum zanlanscianense* (rhizome: yield = 0.00018%dw). **Ref:** 4788.**17646 Polygonatoside D**(25*S*)-Spirost-5-ene-3 $\beta$ ,27-diol27-*O*- $\beta$ -*D*-glucopyranosyl-3-*O*-[ $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -*D*-glucopyranoside C<sub>45</sub>H<sub>72</sub>O<sub>18</sub> (901.06). White amorphous powder,  $[\alpha]_D^{20} = -50.31^\circ$  ( $c = 0.0141$ , pyridine).**Pharm:** Cytotoxic (*in vitro*, HeLa, IC<sub>50</sub> = 5.83  $\mu$ g/mL; control Cisplatin, HeLa, IC<sub>50</sub> = 0.75  $\mu$ g/mL). **Source:** HU BEI HUANG JING*Polygonatum zanlanscianense* (rhizome: yield = 0.00006%dw). **Ref:** 4788.**17647 Polygonic acid**[98204-84-3] C<sub>15</sub>H<sub>22</sub>O<sub>3</sub> (250.34). Crystals, mp 96–97°C,  $[\alpha]_D^{23} = -31^\circ$  ( $c = 1.06$ , CHCl<sub>3</sub>).**Source:** LA LIAO *Polygonum hydropiper* var. *flaccidum* [Syn. *Polygonum flaccidum*], SHUI LIAO *Polygonum hydropiper*. **Ref:** 660, 3274.**17648 Polygonolide**[100560-66-5] C<sub>12</sub>H<sub>12</sub>O<sub>4</sub> (220.23). **Pharm:** Anti-inflammatory. **Source:** SHUI LIAO *Polygonum hydropiper*. **Ref:** 658.**17649 Polygonone**[72581-67-0] C<sub>14</sub>H<sub>20</sub>O<sub>2</sub> (220.31). Oil. **Source:** SHUI LIAO *Polygonum hydropiper*. **Ref:** 3274.**17650 Polyhalogenated homosesquiterpenic fatty acid A**(6*E*,8*E*,12*E*)-3-Methylene-4-oxo-7,11-dimethyl-(10*S*\*,11*R*\*)-dichloro-13-bromo-trideca-6,8,12-trienoic acid C<sub>16</sub>H<sub>19</sub>BrCl<sub>2</sub>O<sub>3</sub> (410.14).  $[\alpha]_D = -43.1^\circ$  ( $c = 0.17$ , MeOH).**Source:** RUAN GU HAI TOU HONG *Plocamium cartilagineum*. **Ref:** 5158.**17651 Polyhalogenated homosesquiterpenic fatty acid B**(6*E*,8*E*,12*E*)-3-Methylene-4-oxo-7,11-dimethyl-(10*R*\*,11*R*\*)-dichloro-13-bromo-trideca-6,8,12-trienoic acid C<sub>16</sub>H<sub>19</sub>BrCl<sub>2</sub>O<sub>3</sub> (410.14).  $[\alpha]_D = +37.6^\circ$  ( $c = 0.14$ , MeOH).**Source:** RUAN GU HAI TOU HONG *Plocamium cartilagineum*. **Ref:** 5158.**17652 Polyhalogenated homosesquiterpenic fatty acid C**(6*E*,8*E*,12*E*)-3-Methylene-(4*R*)-hydroxy-7,11-dimethyl-(10*R*\*,11*R*\*)-dichloro-13-bromo-trideca-6,8,12-trienoic acid C<sub>16</sub>H<sub>21</sub>BrCl<sub>2</sub>O<sub>3</sub> (412.15).  $[\alpha]_D = +30.1^\circ$  ( $c = 0.14$ , MeOH).**Source:** RUAN GU HAI TOU HONG *Plocamium cartilagineum*. **Ref:** 5158.**17653 Polyhalogenated homosesquiterpenic fatty acid D**(6*E*,8*E*,12*E*)-3-Methylene-(4*R*)-hydroxy-7,11-dimethyl-(10*S*\*,11*R*\*)-dichloro-13-bromo-trideca-6,8,12-trienoic acid oil C<sub>16</sub>H<sub>22</sub>Cl<sub>2</sub>O<sub>3</sub> (333.26).  $[\alpha]_D = 15.4^\circ$  ( $c = 0.18$ , MeOH).**Source:** RUAN GU HAI TOU HONG *Plocamium cartilagineum*. **Ref:** 5158.

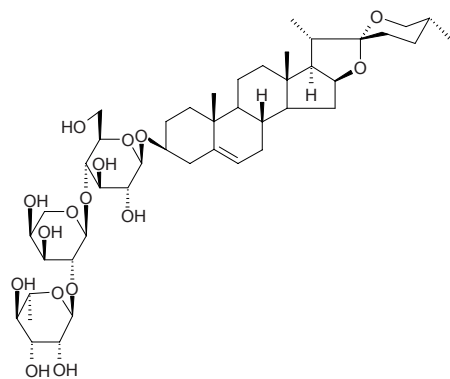


**17654 Polyphyllin C**

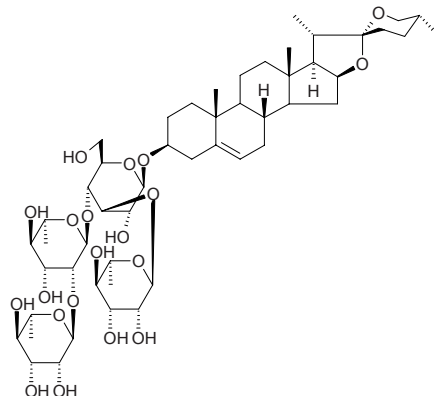
Diosgenin-3- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 3)- $\beta$ -D-glucopyranoside C<sub>39</sub>H<sub>62</sub>O<sub>12</sub> (722.92).  $[\alpha]_D^{25} = -97.3^\circ$  ( $c = 0.07$ , pyridine). **Pharm:** Cytotoxic (*in vitro*, HeLa, IC<sub>50</sub> = 6.23  $\mu$ g/mL; control *cis*-Platin, HeLa, IC<sub>50</sub> = 0.75  $\mu$ g/mL)<sup>[4788]</sup>; cytotoxic (*in vitro*: A375, IC<sub>50</sub> = (3.31 $\pm$ 2.51)  $\mu$ mol/L, control Mithramycin, IC<sub>50</sub> = (0.37 $\pm$ 0.05)  $\mu$ mol/L; L929, IC<sub>50</sub> = (4.37 $\pm$ 2.89)  $\mu$ mol/L, Mithramycin, IC<sub>50</sub> = (0.31 $\pm$ 0.03)  $\mu$ mol/L; HeLa, IC<sub>50</sub> = (4.29 $\pm$ 1.89)  $\mu$ mol/L, Mithramycin, IC<sub>50</sub> = (0.19 $\pm$ 0.03)  $\mu$ mol/L)<sup>[5000]</sup>. **Source:** HU BEI HUANG JING *Polygonatum zanlanscianense* (rhizome: yield = 0.00025%dw)<sup>[4788]</sup>, HUANG SHAN YAO *Dioscorea panthaica* (rhizome), ZAO XIU Paris *polyphylla*. **Ref:** 6, 2996, 4788, 5000.

**17655 Polyphyllin D**

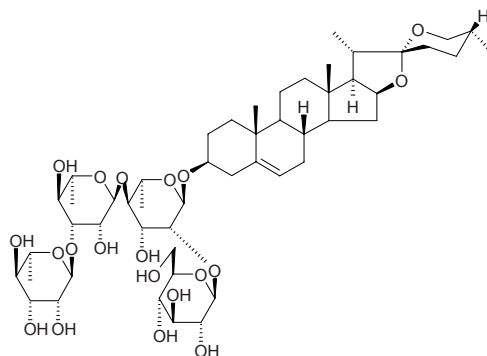
Diosgenin-3-O-[ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)-[ $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranoside [76296-72-5] C<sub>44</sub>H<sub>70</sub>O<sub>16</sub> (855.04). Crystals (MeOH), mp 275~280°C,  $[\alpha]_D = -113^\circ$  ( $c = 0.53$ , MeOH). **Pharm:** Hemostatic. **Source:** ZAO XIU Paris *polyphylla*. **Ref:** 2996, 3355.

**17656 Polyphyllin E**

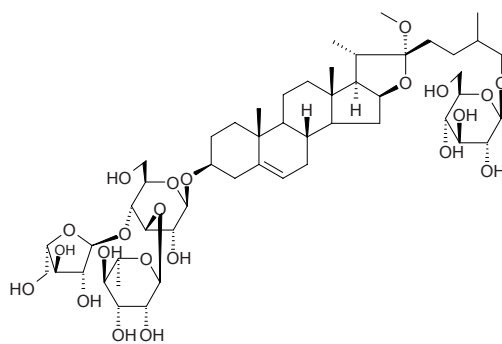
Diosgenin-3-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 4)[ $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 3)]- $\beta$ -D-glucopyranoside C<sub>51</sub>H<sub>82</sub>O<sub>20</sub> (1015.21). **Source:** ZAO XIU Paris *polyphylla*. **Ref:** 2996.

**17657 Polyphyllin F**

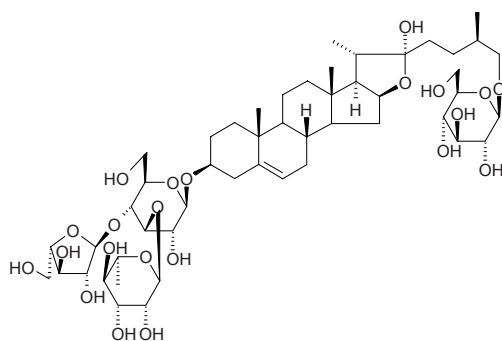
Diosgenin 3-O-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)]- $\alpha$ -L-rhamnopyranoside] C<sub>51</sub>H<sub>82</sub>O<sub>20</sub> (1015.21). **Source:** ZAO XIU Paris *polyphylla*. **Ref:** 2996.

**17658 Polyphyllin G**

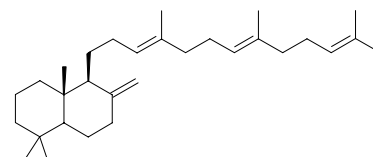
C<sub>51</sub>H<sub>84</sub>O<sub>22</sub> (1049.22). **Source:** ZAO XIU Paris *polyphylla*. **Ref:** 3276.

**17659 Polyphyllin H**

C<sub>50</sub>H<sub>82</sub>O<sub>22</sub> (1035.20). **Source:** ZAO XIU Paris *polyphylla*. **Ref:** 3276.

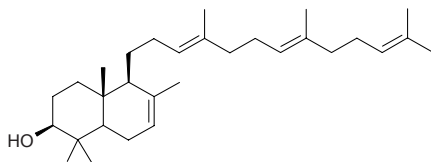
**17660  $\alpha$ -Polypodatetraene**

[88902-02-7] C<sub>30</sub>H<sub>50</sub> (410.73). Oil,  $[\alpha]_D^{23} = +27.4^\circ$  ( $c = 0.4$ , CHCl<sub>3</sub>). **Source:** DUO ZU JUE *Polypodium vulgare*, FU RUI ER JUE *Polystichum fauriei*, LUO YAN CAO *Lemmaphyllum microphyllum*. **Ref:** 3277, 2839.

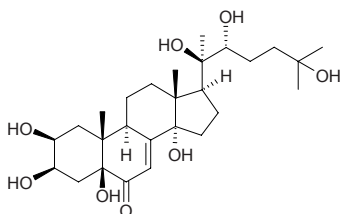


**17661 (13E,17E)-Polypoda-7,13,17,21-tetraen-3 $\beta$ -ol**

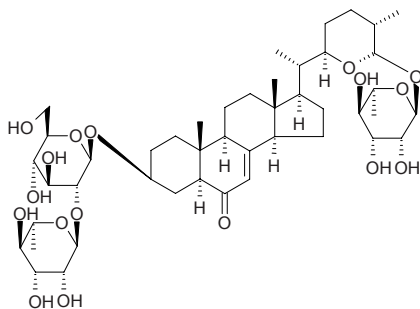
$C_{30}H_{50}O$  (426.73). Oil,  $[\alpha]_D^{20} = +3.8^\circ$  ( $c = 1.4$ ). Source: HUANG NIU MU *Cratogeomys cochinchinense*. Ref: 1907.

**17662 Polypodine B**

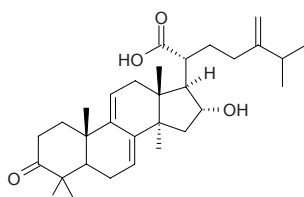
[18069-14-2]  $C_{27}H_{44}O_8$  (496.65). White powder, mp 252~254°C. Pharm: Insect ecdysone; larvicide (larva growth inhibitor of *Acroepiopsis assectella*); antineoplastic (inhibits EBV-EA induction). Source: BAI MAO XIA KU CAO *Ajuga decumbens*, DA HUA JIAN QIU LUO *Lychnis fulgens*, DUO ZU JUE *Polypodium vulgare*, LU CAO *Rhaponticum carthamoides*, PU FU JIN GU CAO *Ajuga reptans*, MAO JIAN QIU LUO *Lychnis coronaria*. Ref: 658, 693, 2189.

**17663 Polypodoside A**

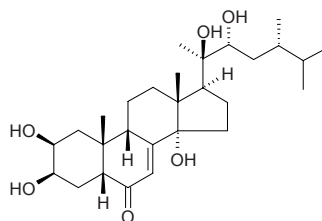
[119784-25-7]  $C_{45}H_{72}O_{17}$  (885.07). Colorless needles (alcohol), mp 198~200°C,  $[\alpha]_D^{20} = -37^\circ$  ( $c = 0.3$ , MeOH). Pharm: Sweetener. Source: DUO ZU JUE *Polypodium vulgare*, TIAN GEN DUO ZU JUE *Polypodium glycyrrhiza*. Ref: 3746, 3747.

**17664 Polyporenic acid C**

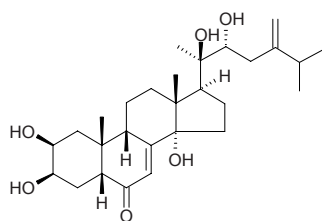
[465-18-9]  $C_{31}H_{46}O_4$  (482.71). White columnar crystals, mp 258~260°C. Pharm: Antineoplastic (EBV-EA induced by TPA, mol ratio/TPA = 1000, relative percentage of EBV-EA = 0% (positive control value 32pmol, 20ng TPA = 100%), viability of Raji cells = 70%; reference compound  $\beta$ -Carotene, relative percentage = 8.6%)<sup>[4616]</sup>. Source: FU LING *Poria cocos* (sclerotium; yield = 0.00013%dw)<sup>[4616]</sup>. Ref: 473, 4616.

**17665 Polyporusterone A**

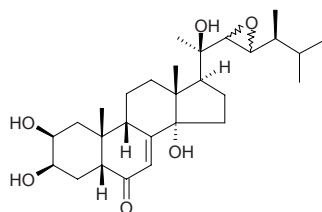
[141360-88-5]  $C_{28}H_{46}O_6$  (478.68). Needles (MeOH), mp 261.5°C,  $[\alpha]_D^{20} = +52.9^\circ$  ( $c = 0.61$ , EtOH). Pharm: Cytotoxic. Source: ZHU LING *Polyporus umbellatus*. Ref: 3278.

**17666 Polyporusterone B**

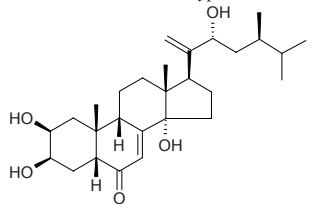
[141360-89-6]  $C_{28}H_{44}O_6$  (476.66). Needles (MeOH), mp 250°C,  $[\alpha]_D^{20} = +56.1^\circ$  ( $c = 0.46$ , EtOH). Pharm: Cytotoxic. Source: ZHU LING *Polyporus umbellatus*. Ref: 3278.

**17667 Polyporusterone C**

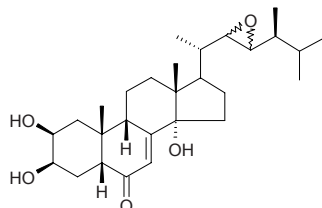
[141360-90-9]  $C_{28}H_{44}O_6$  (476.66). Needles (MeOH), mp 250°C. Pharm: Cytotoxic. Source: ZHU LING *Polyporus umbellatus*. Ref: 3278.

**17668 Polyporusterone D**

[141360-91-0]  $C_{28}H_{44}O_5$  (460.66). Amorphous powder. Pharm: Cytotoxic. Source: ZHU LING *Polyporus umbellatus*. Ref: 3278.

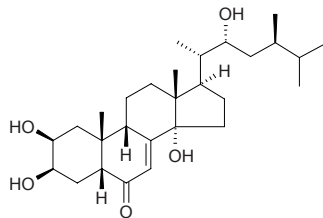
**17669 Polyporusterone E**

[141360-92-1]  $C_{28}H_{44}O_5$  (460.66). Needles (MeOH), mp 232°C. Pharm: Cytotoxic. Source: ZHU LING *Polyporus umbellatus*. Ref: 3278.

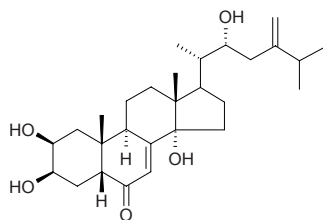


**17670 Polyporusterone F**

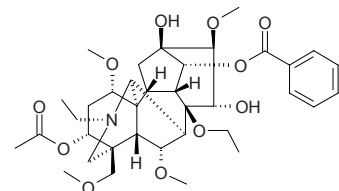
[141360-93-2]  $C_{28}H_{46}O_5$  (462.68). Needles (MeOH), mp 251°C. Pharm.: Cytotoxic. Source: ZHU LING *Polyporus umbellatus*. Ref.: 3278.

**17671 Polyporusterone G**

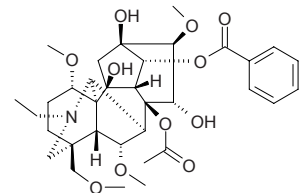
[141360-94-3]  $C_{28}H_{44}O_5$  (460.66). Amorphous powder. Pharm.: Cytotoxic. Source: ZHU LING *Polyporus umbellatus*. Ref.: 3278.

**17672 Polyschistine A**

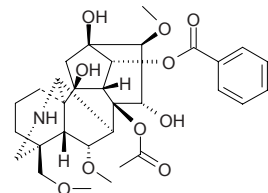
$C_{36}H_{51}NO_{11}$  (673.81). Source: BEI WU TOU *Aconitum kusnezoffii*, DUO LIE WU TOU *Aconitum polyschistum*. Ref.: 1521.

**17673 Polyschistine B**

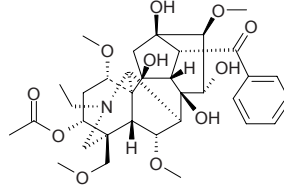
[96562-89-9]  $C_{34}H_{47}NO_{11}$  (645.75). mp 182~185°C. Source: DUO LIE WU TOU *Aconitum polyschistum*. Ref.: 3279.

**17674 Polyschistine C**

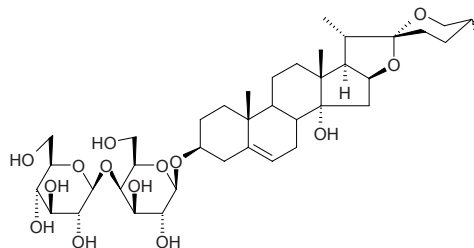
[96562-90-2]  $C_{31}H_{41}NO_{10}$  (587.67). Amorphous solid. Source: DUO LIE WU TOU *Aconitum polyschistum*. Ref.: 3279.

**17675 Polyschistine D**

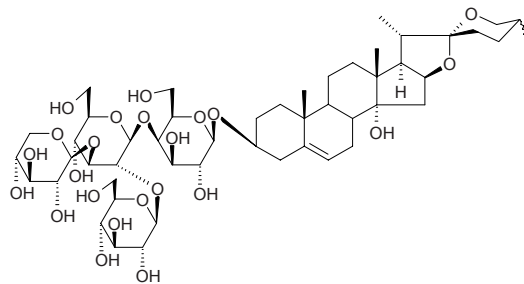
[119347-26-1]  $C_{34}H_{47}NO_{11}$  (645.75). Needles (EtOAc), mp 251~252°C,  $[\alpha]_D = +11.4^\circ$  (CHCl<sub>3</sub>). Source: DUO LIE WU TOU *Aconitum polyschistum*. Ref.: 3280.

**17676 Polyspirostanol PO<sub>1</sub>**

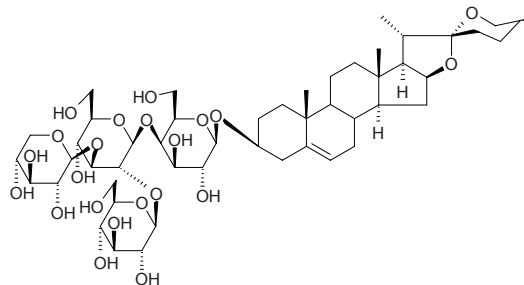
$C_{39}H_{62}O_{14}$  (754.92). Source: HUANG JING *Polygonatum sibiricum*. Ref.: 660.

**17677 Polyspirostanol PO<sub>2</sub>**

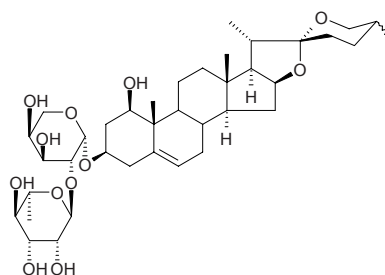
$C_{50}H_{80}O_{23}$  (1049.18). Source: HUANG JING *Polygonatum sibiricum*. Ref.: 660.

**17678 Polyspirostanol PO<sub>3</sub>**

$C_{50}H_{80}O_{22}$  (1033.18). Source: HUANG JING *Polygonatum sibiricum*. Ref.: 660.

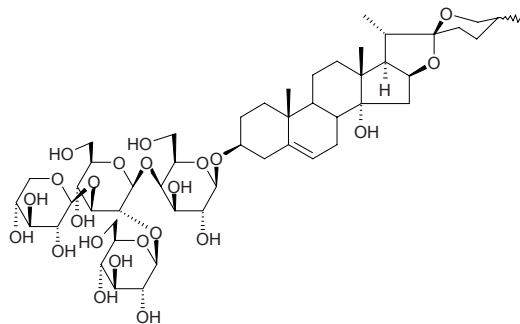
**17679 Polyspirostanol PO<sub>5</sub>**

$C_{38}H_{60}O_{12}$  (708.89). Source: HUANG JING *Polygonatum sibiricum*. Ref.: 660.

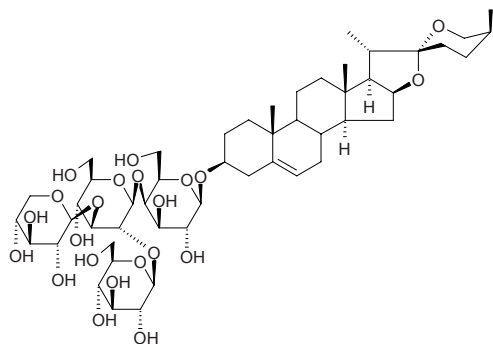


**17680 Polyspirostanol PO<sub>6</sub>**

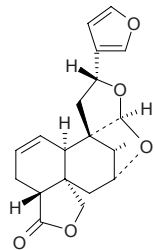
C<sub>50</sub>H<sub>80</sub>O<sub>23</sub> (1049.18). [Source](#): HUANG JING *Polygonatum sibiricum*. [Ref](#): 660.

**17681 Polyspirostanol PO<sub>6</sub>**

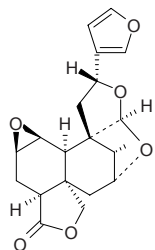
C<sub>50</sub>H<sub>80</sub>O<sub>22</sub> (1033.18). [Source](#): HUANG JING *Polygonatum sibiricum*. [Ref](#): 660.

**17682 Polystachyne A**

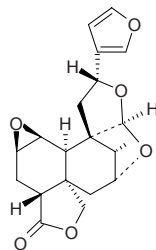
C<sub>20</sub>H<sub>22</sub>O<sub>5</sub> (342.40). mp 204~206°C, [α]<sub>D</sub><sup>20</sup> = 8.5° (c = 0.155, CHCl<sub>3</sub>). [Source](#): DUO SUI SHU WEI CAO *Salvia polystachya* (aerial parts). [Ref](#): 3901.

**17683 Polystachyne B**

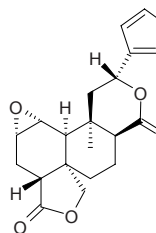
C<sub>20</sub>H<sub>22</sub>O<sub>6</sub> (358.39). mp 217~219°C, [α]<sub>D</sub><sup>20</sup> = 0.0° (c = 0.159, CHCl<sub>3</sub>). [Source](#): DUO SUI SHU WEI CAO *Salvia polystachya* (aerial parts). [Ref](#): 3901.

**17684 Polystachyne C**

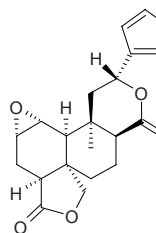
C<sub>20</sub>H<sub>22</sub>O<sub>6</sub> (358.39). mp 244~247°C, [α]<sub>D</sub><sup>20</sup> = -15.09° (c = 0.159, CHCl<sub>3</sub>). [Source](#): DUO SUI SHU WEI CAO *Salvia polystachya* (aerial parts). [Ref](#): 3901.

**17685 Polystachyne D**

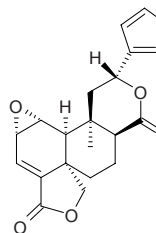
C<sub>20</sub>H<sub>22</sub>O<sub>6</sub> (358.39). mp 180~182°C, [α]<sub>D</sub><sup>20</sup> = -78.3° (c = 0.279, CHCl<sub>3</sub>). [Source](#): DUO SUI SHU WEI CAO *Salvia polystachya* (aerial parts). [Ref](#): 3901.

**17686 4αH-Polystachyne D**

C<sub>20</sub>H<sub>22</sub>O<sub>6</sub> (358.39). [Source](#): DUO SUI SHU WEI CAO *Salvia polystachya* (aerial parts). [Ref](#): 3901.

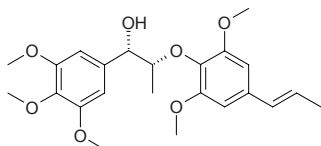
**17687 Polystachyne E**

C<sub>20</sub>H<sub>20</sub>O<sub>6</sub> (356.38). mp 251~253°C. [Source](#): DUO SUI SHU WEI CAO *Salvia polystachya* (aerial parts). [Ref](#): 3901.

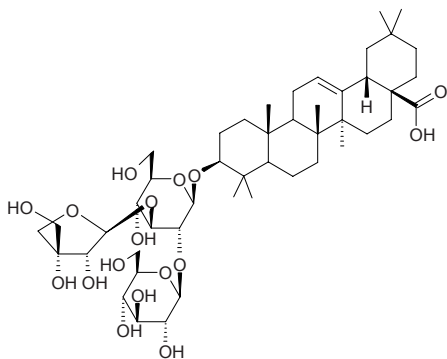


**17688 Polysyphorin**

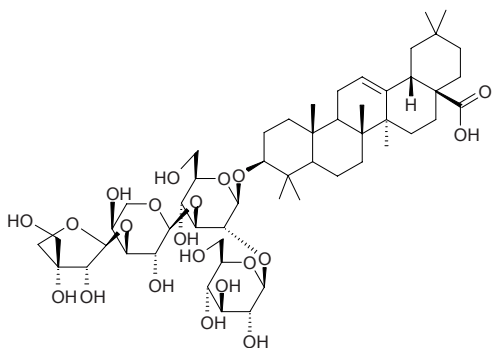
*threo*-*A*<sup>7</sup>-7-Hydroxy-3,4,5,3',5'-pentamethoxy-8-*O*-4'-neoligna [137196-25-9] C<sub>23</sub>H<sub>30</sub>O<sub>7</sub> (418.49). Colorless prismatic crystals, mp 147–148°C, [α]<sub>D</sub><sup>25</sup> = 0° (*c* = 0.40, chloroform). **Pharm:** Platelet aggregation inhibitor (25 μmol/L, InRt = 94%, IC<sub>50</sub> = 13.0 μmol/L); PAF receptor antagonist (12 μmol/L, InRt = 72%, IC<sub>50</sub> = 10 μmol/L). **Source:** ZHANG YE HU JIAO *Piper polysyphorum*. **Ref:** 191, 1578.

**17689 Pomelia ridleyi saponin 2**

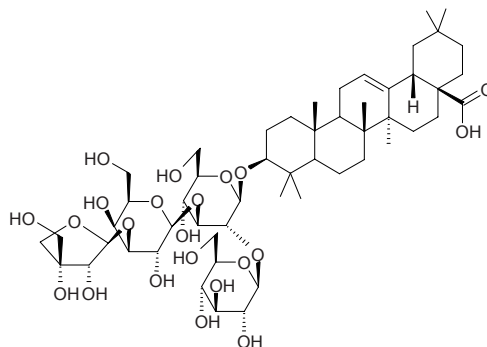
3-*O*-β-*D*-Apiofuranosyl-(1→3)-[β-*D*-glucopyranosyl-(1→2)]-β-*D*-glucopyranosyl-oleanolic acid C<sub>47</sub>H<sub>76</sub>O<sub>17</sub> (913.12). [α]<sub>D</sub><sup>21</sup> = +4.92° (*c* = 0.32, MeOH). **Source:** LI DE LI FAN LONG YAN *Pometia ridleyi* (stem cortex). **Ref:** 3455.

**17690 Pomelia ridleyi saponin 3**

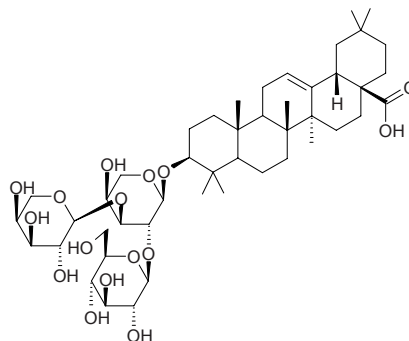
3-*O*-β-*D*-Apiofuranosyl-(1→3)-α-*L*-arabinopyranosyl-(1→3)-[β-*D*-glucopyranosyl-(1→2)]-β-*D*-glucopyranosyl-oleanolic acid C<sub>52</sub>H<sub>84</sub>O<sub>21</sub> (1045.24). [α]<sub>D</sub><sup>21</sup> = +16.0° (*c* = 0.25, MeOH). **Source:** LI DE LI FAN LONG YAN *Pometia ridleyi* (stem cortex). **Ref:** 3455.

**17691 Pomelia ridleyi saponin 5**

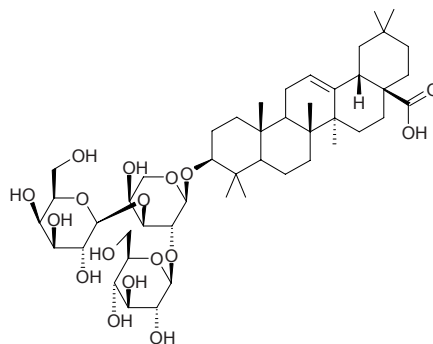
3-*O*-β-*D*-Apiofuranosyl-(1→3)-β-*D*-galactopyranosyl-(1→3)-[β-*D*-glucopyranosyl-(1→2)]-β-*D*-glucopyranosyl-oleanolic acid C<sub>53</sub>H<sub>86</sub>O<sub>22</sub> (1075.26). [α]<sub>D</sub><sup>21</sup> = +10.5° (*c* = 0.98, MeOH). **Source:** LI DE LI FAN LONG YAN *Pometia ridleyi* (stem cortex). **Ref:** 3455.

**17692 Pomelia ridleyi saponin 6**

3-*O*-α-*L*-Arabinopyranosyl-(1→3)-[β-*D*-glucopyranosyl-(1→2)]-α-*L*-arabinopyranosyl-oleanolic acid C<sub>46</sub>H<sub>74</sub>O<sub>16</sub> (883.09). [α]<sub>D</sub><sup>21</sup> = -27.3° (*c* = 0.13, MeOH). **Source:** LI DE LI FAN LONG YAN *Pometia ridleyi* (stem cortex). **Ref:** 3455.

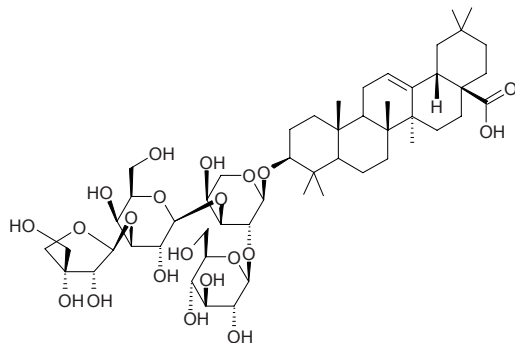
**17693 Pomelia ridleyi saponin 7**

3-*O*-β-*D*-Galactopyranosyl-(1→3)-[β-*D*-glucopyranosyl-(1→2)]-α-*L*-arabinopyranosyl-oleanolic acid C<sub>47</sub>H<sub>76</sub>O<sub>17</sub> (913.12). [α]<sub>D</sub><sup>21</sup> = +6.7° (*c* = 0.15, MeOH). **Source:** LI DE LI FAN LONG YAN *Pometia ridleyi* (stem cortex). **Ref:** 3455.

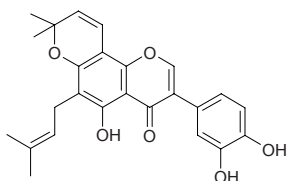


**17694 Pomelia ridleyi saponin 8**

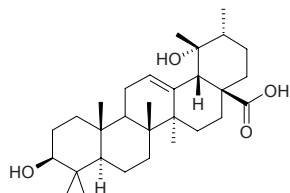
3-*O*- $\beta$ -D-Apiofuranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 3)-[ $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)]- $\alpha$ -L-arabinopyranosyl-oleanolic acid C<sub>52</sub>H<sub>84</sub>O<sub>21</sub> (1045.24). [ $\alpha$ ]<sub>D</sub><sup>21</sup> = +12.8° (c = 0.22, MeOH). **Source:** LI DE LI FAN LONG YAN *Pometia ridleyi* (stem cortex). **Ref:** 3455.

**17695 Pomiferin**

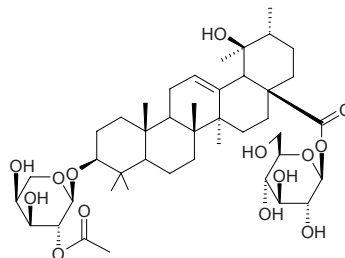
[572-03-2] C<sub>25</sub>H<sub>24</sub>O<sub>6</sub> (420.47). **Pharm:** Antimicrobial. **Source:** SANG CHENG *Maclura pomifera*. **Ref:** 658.

**17696 Pomolic acid**

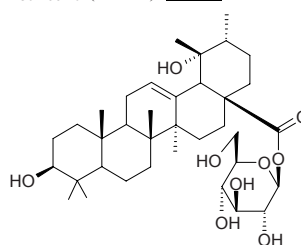
3 $\beta$ ,19 $\alpha$ -Dihydroxyurs-12-en-28-oic acid; 19 $\alpha$ -Hydroxyursolic acid [13849-91-7] C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). Colorless thin acicular crystals (methanol–water), mp 293–295°C, [ $\alpha$ ]<sub>D</sub><sup>32</sup> = +6.1° (c = 0.69, pyridine); mp 301–303°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +37° (c = 2.0, THF). **Pharm:** Antibacterial (*Staphylococcus aureus*, MIC = 25 $\mu$ g/mL, var. *Streptococcus*, MIC = 12.5–25 $\mu$ g/mL; *Bacillus pyocyaneus*, MIC = 25 $\mu$ g/mL); cytotoxic (P<sub>388</sub>, ED<sub>50</sub> = 2.9 $\mu$ g/mL); cytotoxic inactive (HSC-2, IC<sub>50</sub> > 200 $\mu$ g/mL; HGF, IC<sub>50</sub> > 200 $\mu$ g/mL)<sup>[5160]</sup>. **Source:** CHI NAN *Syzygium buxifolium*, DI YU *Sanguisorba officinalis*, MI DIE XIANG *Rosmarinus officinalis*, WU LING ZHI *Trogopterus xanthipes*; *Pteromys volans*, SHE MEI *Duchesnea indica*, WU SE MEI *Lantana camara*. **Ref:** 6, 600, 638, 900, 5160.

**17697 Pomolic acid-3 $\beta$ -*O*- $\alpha$ -L-2-acetoxyarabinopyranosyl-28-*O*- $\beta$ -D-glucopyranoside**

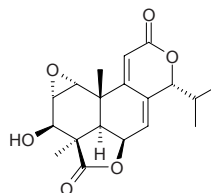
C<sub>43</sub>H<sub>68</sub>O<sub>14</sub> (809.01). **Pharm:** promotes biosynthesis of prostaglandin PGI<sub>2</sub>. **Source:** GOU GU YE *Ilex cornuta*. **Ref:** 660.

**17698 Pomolic acid-28-*O*- $\beta$ -D-glucopyranoside**

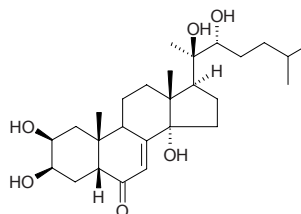
C<sub>36</sub>H<sub>58</sub>O<sub>9</sub> (634.86). **Source:** DI YU *Sanguisorba officinalis*. **Ref:** 3281.

**17699 Ponalactone A**

[33722-77-9] C<sub>19</sub>H<sub>22</sub>O<sub>6</sub> (346.39). **Pharm:** Inhibits mitosis (plant cells). **Source:** TAI WAN LUO HAN SONG *Podocarpus nakaii*. **Ref:** 658.

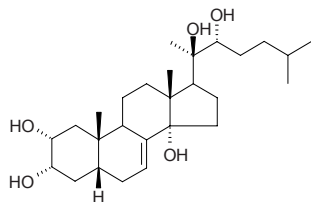
**17700 Ponasterone A**

[13408-56-5] C<sub>27</sub>H<sub>44</sub>O<sub>6</sub> (464.65). mp 259–260°C (dec). **Pharm:** Insect ecdysone. **Source:** DONG FANG GOU JI *Woodwardia orientalis*, DUAN YE LUO HAN SONG SHI *Podocarpus macrophyllus* var. *maki*, DUAN YE LUO HAN SONG YE *Podocarpus macrophyllus* var. *maki*, JUE *Pteridium aquilinum* var. *latiusculum*, LUO HAN SONG SHI *Podocarpus macrophyllus*, LUO HAN SONG YE *Podocarpus macrophyllus*, TAI WAN LUO HAN SONG *Podocarpus nakaii* (in 1966, the compound was isolated from the plant by K.Nakanishi et al.)<sup>[5505]</sup>, XIAO YE GUAN ZHONG *Matteuccia struthiopteris*, ZI QI *Osmunda japonica*, ZI SHAN *Taxus cuspidata*. **Ref:** 6, 658, 660, 5505.

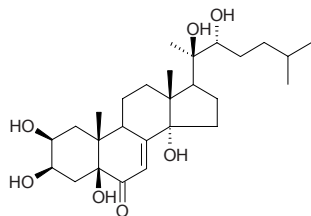


**17701 Ponasterone B**

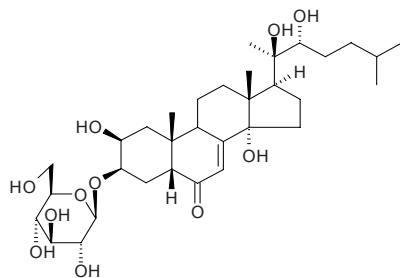
$C_{27}H_{46}O_5$  (450.66). Source: TAI WAN LUO HAN SONG *Podocarpus nakaii* (in 1966, the compound was isolated from the plant by K.Nakanishi et al.). Ref: 5505.

**17702 Ponasterone C**

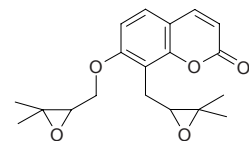
$C_{27}H_{44}O_7$  (480.65). Source: TAI WAN LUO HAN SONG *Podocarpus nakaii* (in 1966, the compound was isolated from the plant by K.Nakanishi et al.). Ref: 5505.

**17703 Ponasteroside A**

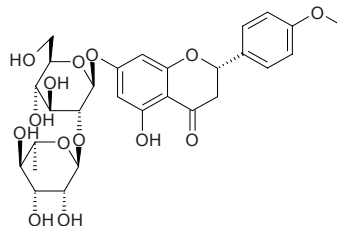
Warabisterone [20117-33-3]  $C_{33}H_{54}O_{11}$  (626.79). mp 278.0~279.5°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6.

**17704 Poncimarin**

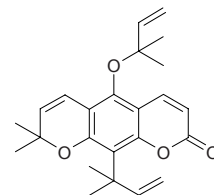
[55916-48-8]  $C_{19}H_{22}O_5$  (330.38). Needles (MeOH), mp 140°C,  $[\alpha]_D^{25} = -56.2^\circ$  ( $c = 9.4$ ,  $CHCl_3$ ). Source: GOU JU ZHI SHI *Poncirus trifoliata*. Ref: 3282.

**17705 Poncirin**

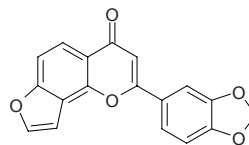
[14941-08-3]  $C_{28}H_{34}O_{14}$  (594.57). mp 211~212°C. Pharm: Bitter principle; passive cutaneous anaphylaxis inhibitor (inhibits IgE-induced  $\beta$ -hexosaminidase release from RBL-2H3 cells,  $IC_{50} > 500\mu\text{mol/L}$ , control Azelastine,  $IC_{50} = (35\pm 2)\mu\text{mol/L}$ ; PCA reaction inhibitor, 20mg/kg orl, InRt =  $(75.7\pm 7.8)\%$ )<sup>[5041]</sup>. Source: GOU JU *Poncirus trifoliata*, GOU JU YE *Poncirus trifoliata*, YOU<sup>(4)</sup> *Citrus grandis*, *Citrus* sp., *Eremocitrus* sp. Ref: 6, 658, 5041.

**17706 Pongfolin**

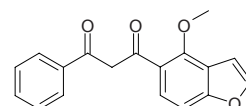
$C_{24}H_{28}O_4$  (380.49). Pharm: Antineoplastic (Raji cells, antitumor promotor, *in vivo*, inhibits TPA-induced EBV-EA activation, compound concentration = 500mol ratio/32 pmol TPA: EBV-EA-positive cells =  $(40.3\pm 2.3)\%$  (viability > 80%),  $\beta$ -Carotene, EBV-EA-positive cells =  $(34.3\pm 1.1)\%$  (viability > 80%), Curcumin, EBV-EA-positive cells =  $(22.8\pm 1.8)\%$  (viability > 80%), compound  $IC_{50} = 338\text{mol ratio}/32\text{ pmol TPA}$ ,  $\beta$ -Carotene,  $IC_{50} = 400\text{mol ratio}/32\text{ pmol TPA}$ , Curcumin,  $IC_{50} = 341\text{mol ratio}/32\text{ pmol TPA}$ ). Source: CHENG ZI *Citrus junos*, *Citrus medica* var. *etrog*, LI HUA JU *Citrus tachibana*, *Citrus rugulosa*, *Citrus jambhiri*, *Citrus tamurana*. Ref: 5048.

**17707 Pongaglabrone**

$C_{18}H_{10}O_5$  (306.28). Source: HONG E JI XUE TENG *Millettia erythrocalyx* (stem cortex: yield = 0.00045%dw). Ref: 4624.

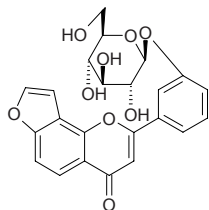
**17708 Pongamol**

Lanceolatin C [484-33-3]  $C_{18}H_{14}O_4$  (294.31). Yellow prismatic crystals (methanol), mp 130~131°C. Pharm: Nematocide (0.1mg/mL, cultured with larva of *toxocara canis*, in 6 hours RM = 0); sedative;  $LD_{50}$  (ip) = 17.14mg/kg. Source: SHUI LIU DOU *Pongamia pinnata*, HUI YE GEN *Tephrosia purpurea*. Ref: 900, 1521.

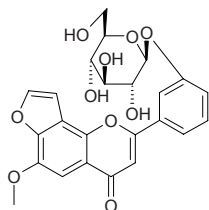


**17709 Pongamoside A**

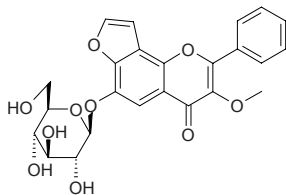
3'-*O*- $\beta$ -D-Glucopyranosyl[2'',3'':7,8]furanoflavone C<sub>23</sub>H<sub>20</sub>O<sub>9</sub> (440.41). Pale yellow crystals (DMSO), mp 259~260°C, [ $\alpha$ ]<sub>D</sub><sup>31</sup> = -33.6° (*c* = 0.280, pyridine). Source: SHUI LIU DOU *Pongamia pinnata* (fruit). Ref: 3790.

**17710 Pongamoside B**

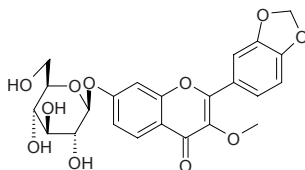
6-Methoxy-3'-*O*- $\beta$ -D-glucopyranosyl[2'',3'':7,8]furanoflavone C<sub>24</sub>H<sub>22</sub>O<sub>10</sub> (470.44). Pale yellow solid. Source: SHUI LIU DOU *Pongamia pinnata* (fruit). Ref: 3790.

**17711 Pongamoside C**

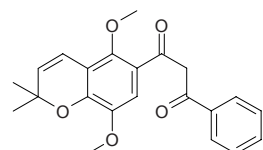
3-Methoxy-6-*O*- $\beta$ -D-glucopyranosyl[2'',3'':7,8]furanoflavone C<sub>24</sub>H<sub>22</sub>O<sub>10</sub> (470.44). White crystals (DMSO), mp 237~238°C, [ $\alpha$ ]<sub>D</sub><sup>31</sup> = -32.8° (*c* = 0.265, pyridine). Source: SHUI LIU DOU *Pongamia pinnata* (fruit). Ref: 3790.

**17712 Pongamoside D**

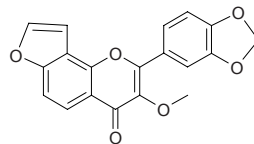
3-Methoxy-3',4'-methylenedioxy-7-*O*- $\beta$ -D-glucopyranosyl flavone C<sub>23</sub>H<sub>22</sub>O<sub>11</sub> (474.43). White crystals (DMSO), mp 214~215°C, [ $\alpha$ ]<sub>D</sub><sup>31</sup> = -56.6° (*c* = 0.265, pyridine). Source: SHUI LIU DOU *Pongamia pinnata* (fruit). Ref: 3790.

**17713 Ponganone I**

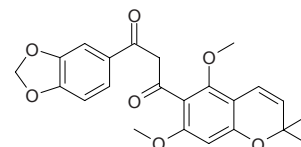
C<sub>22</sub>H<sub>22</sub>O<sub>5</sub> (366.42). Source: HONG E JI XUE TENG *Millettia erythrocalyx* (stem cortex: yield = 0.00010%dw). Ref: 4624.

**17714 Pongapin**

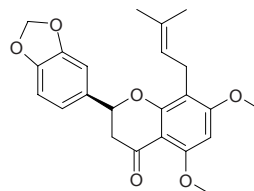
[481-99-2] C<sub>19</sub>H<sub>12</sub>O<sub>6</sub> (336.30). mp 190~191°C. Source: SHUI LIU DOU *Pongamia pinnata*. Ref: 6.

**17715 Pongapinone A**

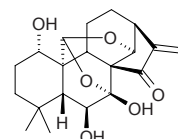
C<sub>23</sub>H<sub>22</sub>O<sub>7</sub> (410.43). Pharm: Cytotoxic (*in vitro*, Hepa1c1c7 mouse hepatoma cells, IC<sub>50</sub> = 23.8μg/mL, CD = 5μg/mL, CI = 4.8; control Sulforaphane, IC<sub>50</sub> = 2.1μg/mL, CD = 0.087μg/mL, CI = 24.1). Source: SHUI LIU DOU *Pongamia pinnata* (stem cortex: yield = 0.00052%). Ref: 4721.

**17716 Pongapinone B**

C<sub>23</sub>H<sub>24</sub>O<sub>6</sub> (396.44). Source: SHUI LIU DOU *Pongamia pinnata* (stem cortex: yield = 0.0059%). Ref: 4721.

**17717 Ponicidin**

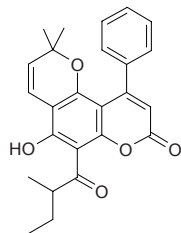
Rubescensine B [52617-37-5] C<sub>20</sub>H<sub>26</sub>O<sub>6</sub> (362.43). Colorless acicular crystals (methanol), mp 238~241; mp 236~241°C, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = -107° (*c* = 0.12, pyridine), mp 236~238°C, [ $\alpha$ ]<sub>D</sub><sup>17</sup> = -118° (*c* = 0.1, pyridine). Pharm: Antineoplastic (many types of transplanted tumor); cytotoxic (K562, IC<sub>50</sub> = 2.26μmol/L, control Cisplatin IC<sub>50</sub> = 3.84μmol/L; Bcap37, IC<sub>50</sub> = 6.76μmol/L, control Cisplatin IC<sub>50</sub> = 1.54μmol/L; BGC823, IC<sub>50</sub> = 55.17μmol/L, control Cisplatin IC<sub>50</sub> = 2.54μmol/L; BIU87, IC<sub>50</sub> = 13.26μmol/L, control Cisplatin IC<sub>50</sub> = 4.34μmol/L; CA, IC<sub>50</sub> = 0.06μmol/L, control Cisplatin IC<sub>50</sub> = 0.88μmol/L; CNE, IC<sub>50</sub> = 13.26μmol/L, control Cisplatin IC<sub>50</sub> = 6.54μmol/L; HeLa, IC<sub>50</sub> = 11.31μmol/L, control Cisplatin IC<sub>50</sub> = 3.60μmol/L)<sup>[4353]</sup>, cytotoxic (EAC, *in vitro*); anti-angiogenic (*in vitro*, 1.5μg/mL)<sup>[3001]</sup>; LD<sub>50</sub> (mus, ip) = 45.1mg/kg. Source: DONG LING CAO *Rabdosia rubescens* (leaf: mean content collected in Aug. = 0.206%<sup>[5508]</sup>), LU SHAN XIANG CHA CAI *Isodon rubescens* var. *lushanensis* (leaf), MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosia japonica*], XIAN MAI XIANG CHA CAI *Rabdosia nervosa*. Ref: 5, 504, 1521, 3001, 4067, 4353, 5508.



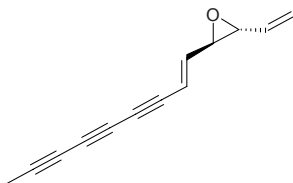


**17718 Ponnalide**

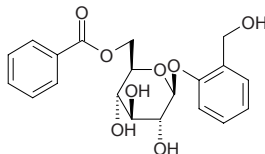
[5302-74-9] C<sub>25</sub>H<sub>24</sub>O<sub>5</sub> (404.47). Crystals, mp 159~160°C. Source: HAI TANG GUO *Calophyllum inophyllum*. Ref: 3283.

**17719 Ponticaepoxide**

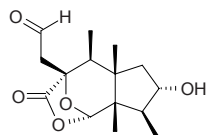
[3562-36-5] C<sub>13</sub>H<sub>10</sub>O (182.22). Crystals (pet. ether), mp 66°C, [α]<sub>D</sub><sup>23</sup> = +201° (c = 1.0, Me<sub>2</sub>CO). Source: HUANG HUA HAO *Artemisia annua*, *Achillea* spp., *Artemisia* spp., *Chrysanthemum* spp., *Tanacetum* spp., family Asteraceae spp. Ref: 3284, 3285, 3286.

**17720 Populin**

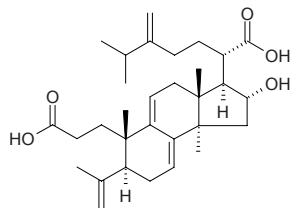
[99-17-2] C<sub>20</sub>H<sub>22</sub>O<sub>8</sub> (390.39). Crystals +2H<sub>2</sub>O (H<sub>2</sub>O), crystals (EtOH), mp 180°C, [α]<sub>D</sub> = -2° (c = 5, pyridine), [α]<sub>D</sub><sup>21</sup> = -29° (c = 20%, Me<sub>2</sub>CO aq.). Source: MAO BAI YANG *Populus tomentosa*, *Populus* spp., *Salix* spp. Ref: 1521, 3287.

**17721 Porellapinguisanolid**

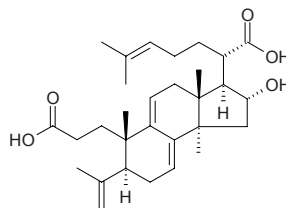
C<sub>15</sub>H<sub>22</sub>O<sub>5</sub> (282.34). Source: YE TAI *Trocholejeunea sandvicensis*. Ref: 3909.

**17722 Poricoic acid A**

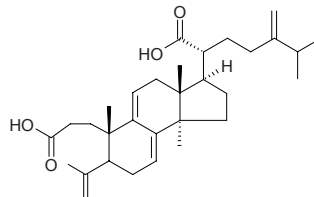
C<sub>31</sub>H<sub>46</sub>O<sub>5</sub> (498.71). Pharm: Cytotoxic (*in vitro*, for all NCI 60 hmn cancer cell lines, GI<sub>50</sub> = 15-30 μmol/L)<sup>[4616]</sup>; antineoplastic (EBV-EA induced by TPA, mol ratio/TPA = 1000, relative percentage of EBV-EA = 0% (positive control value 32 pmol, 20 ng TPA = 100%), viability of Raji cells = 70%; reference compound β-Carotene, relative percentage = 8.6%)<sup>[4616]</sup>. Source: FU LING *Poria cocos* (sclerotium: yield = 0.00050% dw)<sup>[4616]</sup>. Ref: 2, 4616.

**17723 Poricoic acid B**

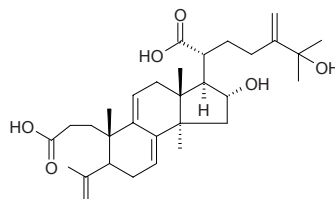
C<sub>30</sub>H<sub>44</sub>O<sub>5</sub> (484.68). Pharm: Antineoplastic (EBV-EA induced by TPA, mol ratio/TPA = 1000, relative percentage of EBV-EA = 0% (positive control value 32 pmol, 20 ng TPA = 100%), viability of Raji cells = 70%; reference compound β-Carotene, relative percentage = 8.6%). Source: FU LING *Poria cocos* (sclerotium: yield = 0.00066% dw). Ref: 2, 4616.

**17724 Poricoic acid C**

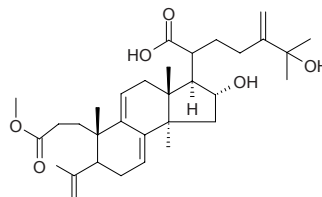
[151200-89-4] C<sub>31</sub>H<sub>46</sub>O<sub>4</sub> (482.71). Amorphous powder, [α]<sub>D</sub><sup>26</sup> = +40° (c = 0.5, MeOH). Source: FU LING *Poria cocos*. Ref: 3288.

**17725 Poricoic acid D**

[151200-90-7] C<sub>31</sub>H<sub>46</sub>O<sub>6</sub> (514.71). Amorphous powder, [α]<sub>D</sub><sup>26</sup> = +11° (c = 1, MeOH). Source: FU LING *Poria cocos*. Ref: 3288.

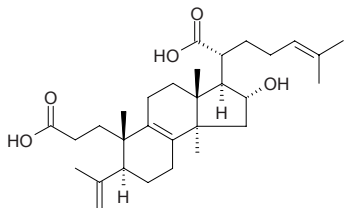
**17726 Poricoic acid DM**

[151200-91-8] C<sub>32</sub>H<sub>48</sub>O<sub>6</sub> (528.74). Amorphous powder, [α]<sub>D</sub><sup>26</sup> = +25° (c = 0.5, MeOH). Source: FU LING *Poria cocos*. Ref: 3288.

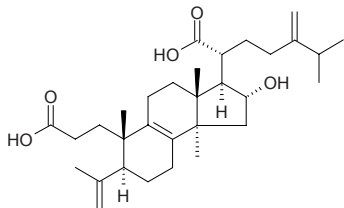


**17727 Poricoic acid G**

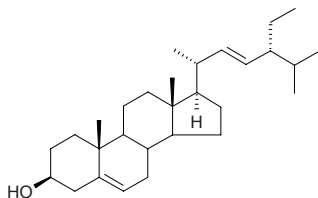
16 $\alpha$ -Hydroxy-3,4-seco-lanosta-4(28),8,24-triene-3,21-dioic acid C<sub>30</sub>H<sub>46</sub>O<sub>5</sub> (486.7). Colorless needles, mp 260°C (dec), [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +38° (c = 0.36, MeOH). **Pharm:** Cytotoxic (*in vitro*, HL-60, GI<sub>50</sub> = 39.3nmol/L; for all the other NCI 59 hmn cancer cell lines, GI<sub>50</sub> > 22 $\mu$ mol/L); antineoplastic (EBV-EA induced by TPA, mol ratio/TPA = 1000, relative percentage of EBV-EA = 0% (positive control value 32pmol, 20ng TPA = 100%), viability of Raji cells = 70%; reference compound  $\beta$ -Carotene, relative percentage = 8.6%). **Source:** FU LING *Poria cocos* (sclerotium: yield = 0.00033%dw). **Ref:** 4616.

**17728 Poricoic acid H**

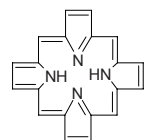
16 $\alpha$ -Hydroxy-3,4-seco-24-methyl-lanosta-4(28),8,24(24<sup>1</sup>)-triene-3,21-dioic acid C<sub>31</sub>H<sub>48</sub>O<sub>5</sub> (500.73). Colorless needles, mp 270°C (dec), [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +43° (c = 0.34, MeOH). **Pharm:** Antineoplastic (EBV-EA induced by TPA, mol ratio/TPA = 1000, relative percentage of EBV-EA = 0% (positive control value 32pmol, 20ng TPA = 100%), viability of Raji cells = 70%; reference compound  $\beta$ -Carotene, relative percentage = 8.6%). **Source:** FU LING *Poria cocos* (sclerotium: yield = 0.00028%dw). **Ref:** 4616.

**17729 Poriferasterol**

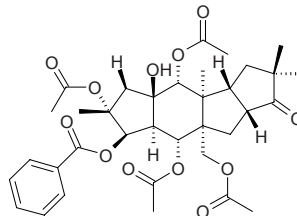
[481-16-3] C<sub>29</sub>H<sub>48</sub>O (412.71). Crystals (EtOH), mp 156°C, [ $\alpha$ ]<sub>D</sub> = -46° (CHCl<sub>3</sub>). **Source:** E ZHANG TENG *Schefflera arboricola*, Burrowing sponge *Cliona celata*, sponge *Haliclona variclona*, sponge *Sphaeciospongia vesparia*, green algae *Chlorella* spp., protozoon *Ochromonas malhamensis*. **Ref:** 1521, 3289.

**17730 Porphyrin**

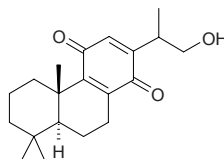
C<sub>20</sub>H<sub>14</sub>N<sub>4</sub> (310.36). **Source:** JI ZI KE *Gallus gallus domesticus*, ZHEN ZHU MU *Cristaria plicata*; *Hyriopsis cumingii*. **Ref:** 6, 3290.

**17731 Portlandicine**

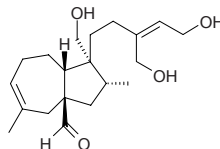
2 $\alpha$ ,5 $\alpha$ ,14 $\alpha$ ,17 $\alpha$ -Tetraacetoxy-3 $\beta$ -benzoyloxy-15 $\beta$ -hydroxy-9-oxoparaliane C<sub>35</sub>H<sub>44</sub>O<sub>12</sub> (656.73). Amorphous solid, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -57.7° (c = 0.10, CHCl<sub>3</sub>). **Pharm:** Multidrug resistance (MDR) reversing activity (hmn MDR1 gene transfected mouse lymphoma cells, FSC: forward scatter count = 529.87, DMSO control = 519.74; SSC: side scatter count = 244.47, DMSO control = 234.67; FL-1: fluorescence intensity = 17.00, DMSO control = 5.92). **Source:** BO TE LAN DA JI *Euphorbia portlandica* (whole herb). **Ref:** 4919.

**17732 Portlanquinol**

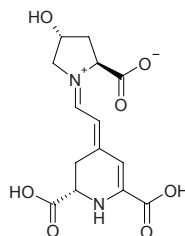
16-Hydroxy-abieta-8,12-diene-11,14-dione C<sub>20</sub>H<sub>28</sub>O<sub>3</sub> (316.44). Yellow oil, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +33.4° (c = 0.10, CHCl<sub>3</sub>). **Pharm:** P-glycoprotein inhibitor (hmn MDR1 gene transfected mouse lymphoma cells, reverses multidrug resistance (MDR), toxic). **Source:** BO TE LAN DA JI *Euphorbia portlandica* (whole herb). **Ref:** 5019.

**17733 Portulal**

[22571-65-9] C<sub>20</sub>H<sub>32</sub>O<sub>4</sub> (336.48). mp 113°C. **Pharm:** Plant growth regulator. **Source:** DA HUA MA CHI XIAN *Portulaca grandiflora*. **Ref:** 6, 658.

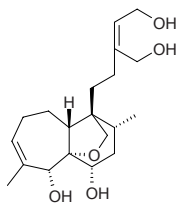
**17734 Portulaxanthine**

Portulaxanthin I [11042-69-6] C<sub>14</sub>H<sub>16</sub>N<sub>2</sub>O<sub>7</sub> (324.30). **Source:** DA HUA MA CHI XIAN *Portulaca grandiflora*. **Ref:** 658.

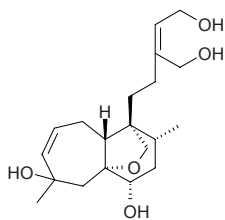


**17735 Portulene**

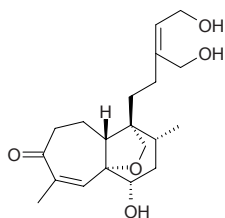
$C_{20}H_{32}O_5$  (352.48). Source: DA HUA MA CHI XIAN *Portulaca grandiflora*.  
Ref: 3291.

**17736 Portulenol**

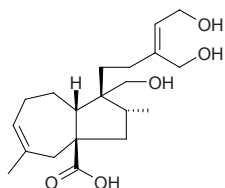
$C_{20}H_{32}O_5$  (352.48). Source: DA HUA MA CHI XIAN *Portulaca grandiflora*.  
Ref: 3291.

**17737 Portulenone**

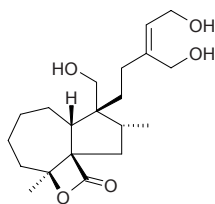
$C_{20}H_{30}O_5$  (350.46). Source: DA HUA MA CHI XIAN *Portulaca grandiflora*.  
Ref: 3291.

**17738 Portulic acid**

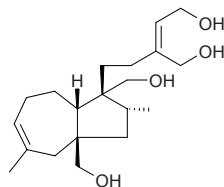
$C_{20}H_{32}O_5$  (352.48). Source: DA HUA MA CHI XIAN *Portulaca grandiflora*.  
Ref: 3292.

**17739 Portulic lactone**

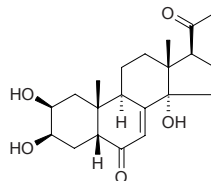
[98263-93-5]  $C_{20}H_{32}O_5$  (352.48). Oil,  $[\alpha]_D^{26.5} = +23.8^\circ$  ( $c = 0.58$ , EtOH).  
Source: DA HUA MA CHI XIAN *Portulaca grandiflora*. Ref: 3292.

**17740 Portulol**

$C_{20}H_{34}O_4$  (338.49). Source: DA HUA MA CHI XIAN *Portulaca grandiflora*. Ref: 3292.

**17741 Poststerone**

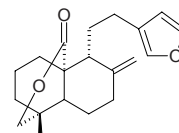
[10162-99-9]  $C_{21}H_{30}O_5$  (362.47). Source: MA NIU XI *Cyathula capitata*. Ref: 6.

**17742 Potamogetonin**

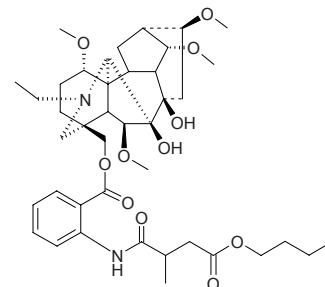
15,16-Epoxy-8(17),13(16),14-*ent*-labdatrien-20,19-olide  $C_{20}H_{26}O_3$  (314.43).

White amorphous powder,  $[\alpha]_D^{25} = -29.7^\circ$  ( $c = 0.34$ ,  $CHCl_3$ ). Pharm:

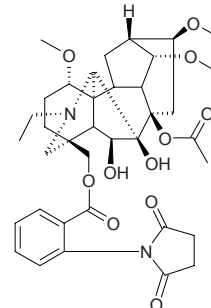
Phytotoxin (*Raphidocelis subcapitata*,  $IC_{50} = 28.58 \mu\text{mol/L}$ )<sup>[5184]</sup>. Source: FU YE YAN ZI CAI *Potamogeton natans*. Ref: 5184.

**17743 Potanidine A**

$C_{41}H_{60}N_2O_{11}$  (756.94). White amorphous powder,  $[\alpha]_D^{13} = +15.5^\circ$  ( $c = 1.0$ , methanol). Source: HEI SHUI CUI QUE *Delphinium potaninii*. Ref: 314.

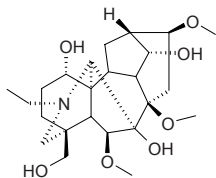
**17744 Potanidine B**

$C_{37}H_{48}N_2O_{11}$  (696.80). White amorphous powder,  $[\alpha]_D^{24} = +28.6^\circ$  ( $c = 0.07$ , chloroform). Source: HEI SHUI CUI QUE *Delphinium potaninii*. Ref: 314.

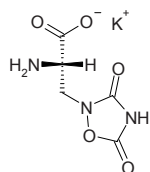


**17745 Potanine**

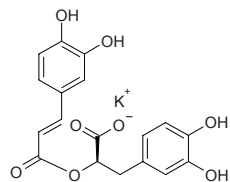
$C_{24}H_{39}NO_7$  (453.58). White amorphous powder. Source: E MEI CUI QUE HUA *Delphinium omeiense*. Ref: 2190.

**17746 Potassium quisqualate**

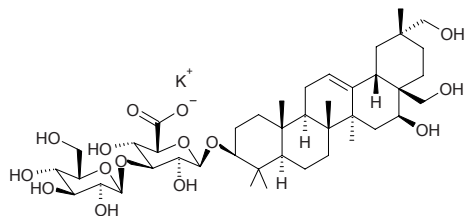
$C_5H_6KN_3O_5$  (227.22). Source: SHI JUN ZI *Quisqualis indica*, SHI JUN ZI YE *Quisqualis indica*. Ref: 3293, 3294.

**17747 Potassium rosmarinatate**

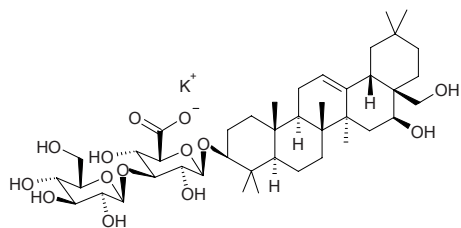
$C_{18}H_{15}KO_8$  (398.42). Tan amorphous powder. Source: XIN ZANG JIA ZI CAO *Arnebia euchroma*. Ref: 2187.

**17748 Potassium salt of 29-hydroxylongispinogenin 3-O-β-D-glucopyranosyl(1→3)-β-D-glucuronopyranoside**

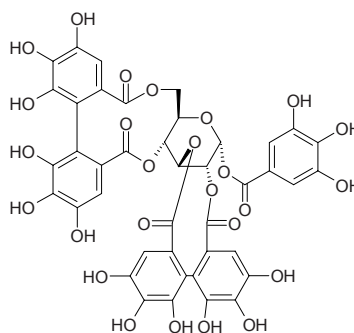
$C_{42}H_{67}KO_{15}$  (851.10). Amorphous powder, mp 290–293°C,  $[\alpha]_D^{20} = +10.3^\circ$  ( $c = 0.12$ , MeOH). Source: CHI GENG TENG *Gymnema sylvestri* (leaf: yield = 0.0055%dw). Ref: 3037.

**17749 Potassium salt of longispinogenin 3-O-β-D-glucopyranosyl(1→3)-β-D-glucuronopyranoside**

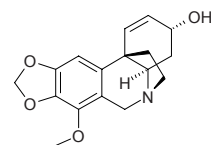
$C_{42}H_{67}KO_{14}$  (835.10). Amorphous powder, mp 305–310°C,  $[\alpha]_D^{20} = +18.1^\circ$  ( $c = 0.08$ , MeOH). Source: CHI GENG TENG *Gymnema sylvestri* (leaf: yield = 0.0020%dw). Ref: 3037.

**17750 Potentillin**

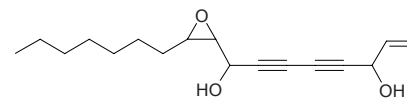
[82262-94-0]  $C_{41}H_{28}O_{26}$  (936.66). Off-white amorphous powder +5H<sub>2</sub>O,  $[\alpha]_D^{20} = +108^\circ$  ( $c = 0.7$ , EtOH). Source: JIN YING YE *Rosa laevigata*, JIN YING ZI *Rosa laevigata*, LONG YA CAO *Agrimonia pilosa*, RI BEN LONG YA CAO *Agrimonia japonica*, SHE HAN WEI LING CAI *Potentilla kleiniana*, *Rubus* spp. Ref: 2988, 2884, 2970, 3104.

**17751 Powelline**

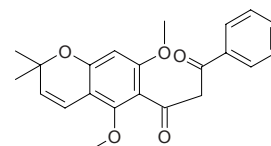
$C_{17}H_{19}NO_4$  (301.35). Source: GUAN MU WEN SHU LAN *Crinum macowanii* (bulb), *Crinum moorei*. Ref: 4000, 4952.

**17752 PQ-2**

[133921-58-1]  $C_{17}H_{24}O_3$  (276.38). Source: XI YANG SHEN *Panax quinquefolium*. Ref: 2, 1521.

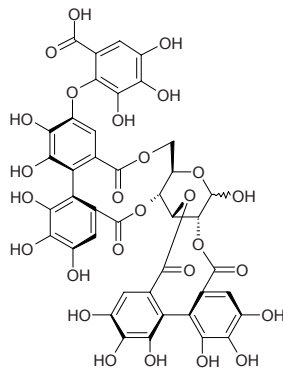
**17753 Praeacansone B**

$C_{22}H_{22}O_5$  (366.42). Pharm: Cytotoxic (*in vitro*, Hepa1c1c7 mouse hepatoma cells, IC<sub>50</sub> = 6.5 μg/mL, CD = 3.6 μg/mL, CI = 1.8; control Sulforaphane, IC<sub>50</sub> = 2.1 μg/mL, CD = 0.087 μg/mL, CI = 24.1). Source: SHUI LIU DOU *Pongamia pinnata* (stem cortex: yield = 0.00072%). Ref: 4721.

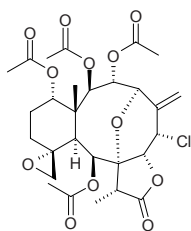


**17754 Praecoxin A**

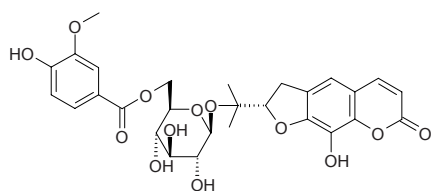
[85137-27-5]  $C_{41}H_{28}O_{27}$  (952.66). Light brown powder,  $[\alpha]_D^{22} = +45^\circ$  ( $c = 0.5$ , MeOH). **Pharm:** Antineoplastic ( $S_{180}$  *in vivo*, 5mg/kg ip, biotic prolonged rate = 70%). **Source:** CHI YANG *Alnus japonica*, HONG RU CAO *Euphorbia makinoi*, HU LI *Quercus aliena*, HU TAO REN *Juglans regia*, JING JIE HUA *Stachyurus praecox*, XIAO YE YING MAO QI MU *Alnus hirsute* var. *microphylla*, *Terminalia calamansanai*, *Tibouchina semidecandra*. **Ref:** 2685, 3408, 3635, 3636, 3637, 2686, 3638, 3639, 3640.

**17755 Praelolide**

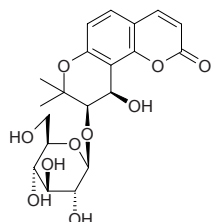
$C_{28}H_{35}ClO_{12}$  (599.04). White powder, mp 267~269°C,  $[\alpha]_D^{25} = -26^\circ$  ( $c = 2.4$ ,  $CHCl_3$ ). **Source:** CUI DENG XIN LIU SHAN HU *Junceella fragilis*, DENG XIN LIU SHAN HU *Junceella juncea* (yield = 0.00032%). **Ref:** 4411, 4781.

**17756 Praeroside I**

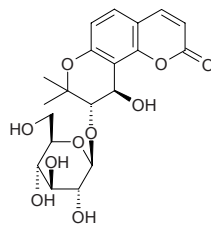
[121064-73-1]  $C_{28}H_{30}O_{13}$  (574.54). Crystals, mp 143~145°C (dec),  $[\alpha]_D^{24} = +202.3^\circ$  ( $H_2O$ ). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*. **Ref:** 3295.

**17757 Praeroside II**

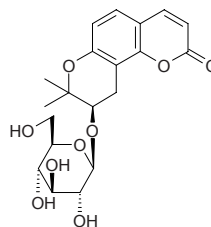
Campestrinoside [84458-87-7]  $C_{20}H_{24}O_{10}$  (424.41). mp 172~173°C,  $[\alpha]_D = -272.5^\circ$  (EtOH). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*, FEN CHA DANG GUI *Angelica furcijuga* (flower), PING DI XI FENG QIN *Seseli campestre*. **Ref:** 1521, 4454.

**17758 Praeroside III**

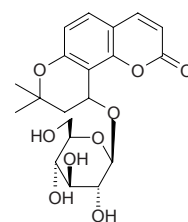
[117306-98-6]  $C_{20}H_{24}O_{10}$  (424.41). Crystals, mp 134.5~136°C (dec),  $[\alpha]_D^{24} = -31^\circ$  (MeOH). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*. **Ref:** 1521.

**17759 Praeroside IV**

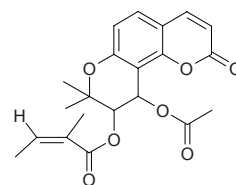
[117233-34-8]  $C_{20}H_{24}O_9$  (408.41). mp 115~116.5°C,  $[\alpha]_D^{24} = +4^\circ$  (MeOH). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*. **Ref:** 3356.

**17760 Praeroside V**

[117233-35-9]  $C_{20}H_{24}O_9$  (408.41). Crystals, mp 130~131.5°C,  $[\alpha]_D^{24} = 0^\circ$ . **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*. **Ref:** 3356.

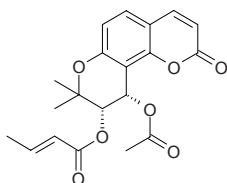
**17761 Praeruptorin A**

[73069-27-9]  $C_{21}H_{22}O_7$  (386.41). **Pharm:** Used in treatment of acute arrhythmia. **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum* (root: content = 0.1%<sup>[5501]</sup>). **Ref:** 658, 5501.

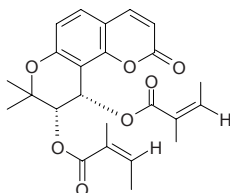


**17762 Praeruptorin C**

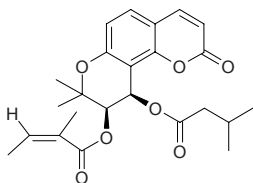
Pd-Ia C<sub>20</sub>H<sub>20</sub>O<sub>7</sub> (386.41). **Pharm:** Inhibits contraction of aorta strip *in vitro* (rbt, induced by Ca and K); inhibits contraction of blood vessel and cardiac muscle (*in vitro*); protects *in vitro* heart from damage during ischemic re-perfusion. **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum* (root: content scope of 7 origins = 0.040%~1.17%, mean content = 0.39%<sup>[5508]</sup>). **Ref:** 9, 658, 5501, 5508.

**17763 Praeruptorin D**

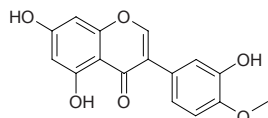
3'(S),4'(S)-Diangeloyloxy-3',4'-dihydroseselin; Pd-II [73069-28-0] C<sub>24</sub>H<sub>26</sub>O<sub>7</sub> (426.47). White needles (alcohol), mp 171~172°C, [α]<sub>D</sub><sup>24</sup> = +34.6° (c = 0.8, CHCl<sub>3</sub>). **Pharm:** Antineoplastic (mus, *in vivo*, TPA-induced skin tumor; *in vitro* inhibits phosphorylated action of phospholipid, then inhibits cancer cell's growth and metabolism); platelet aggregation inhibitor (induced by PAF, IC<sub>50</sub> = 0.05mmol/L). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum* (root: mean content = 0.543%<sup>[5508]</sup>), BIN HAI QIAN HU *Peucedanum japonicum*, GUANG XI QIAN HU *Peucedanum guangxiense*, SHUANG SE SUO ZI QIN *Pleurospermum govanianum* var. *bicolor*, TAI WAN QIAN HU *Peucedanum formosanum*. **Ref:** 557, 3296, 3297, 3298, 3299, 3300, 3301, 3357, 5508.

**17764 (+)-Praeruptorin E**

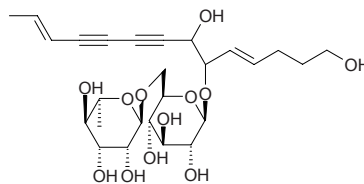
[78478-28-1] C<sub>24</sub>H<sub>28</sub>O<sub>7</sub> (428.46). White rhomboid crystals (absolute ethanol), mp 138~140°C, [α]<sub>D</sub> = +36° (c = 5.54, chloroform). **Pharm:** increases tolerance to anoxia (mus). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*, XUAN NIU XIE HAO *Seseli tortuosum*. **Ref:** 658, 5501.

**17765 Pratensein**

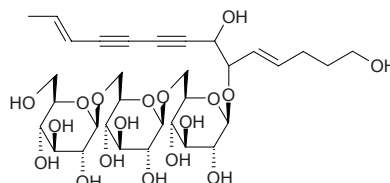
[2284-31-3] C<sub>16</sub>H<sub>12</sub>O<sub>6</sub> (300.27). mp 272~273°C. **Pharm:** Antihypercholesterolemic. **Source:** HUI HUI DOU *Cicer arietinum*, HONG CHE ZHOU CAO *Trifolium pratense*, ZHONG GUO XUAN FU HUA *Inula britannica* var. *chinensis*, XUAN FU HUA *Inula britannica*. **Ref:** 6, 658, 660.

**17766 Pratalin A**

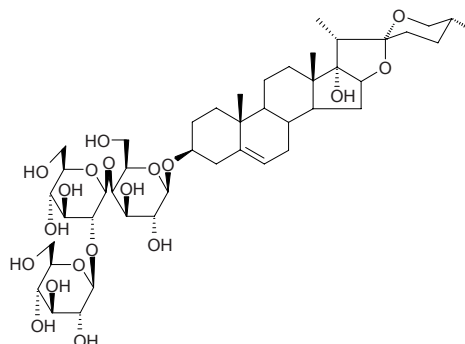
C<sub>26</sub>H<sub>38</sub>O<sub>12</sub> (542.59). **Source:** TONG CHUI YU DAI CAO *Pratia nummularia*. **Ref:** 3362.

**17767 Pratalin B**

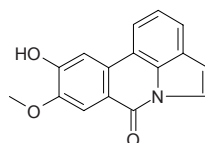
C<sub>32</sub>H<sub>48</sub>O<sub>18</sub> (720.73). **Source:** TONG CHUI YU DAI CAO *Pratia nummularia*. **Ref:** 3362.

**17768 Pratoside A**

[150205-55-3] C<sub>45</sub>H<sub>72</sub>O<sub>19</sub> (917.06). Powder (MeOH), [α]<sub>D</sub><sup>27</sup> = -129.3° (c = 0.75, MeOH). **Pharm:** Spermicidal (hmn, 1mg/mL, spermatoc activity = 43%, 2mg/mL, spermatoc activity = 0%). **Source:** KANG DING YU ZHU *Polygonatum prattii*. **Ref:** 3705, 1159.

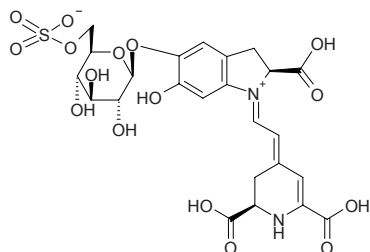
**17769 Pratorimine**

C<sub>16</sub>H<sub>11</sub>NO<sub>3</sub> (265.27). Pale brown needles (CH<sub>3</sub>CN-H<sub>2</sub>O), mp 224~226°C. **Pharm:** Cytotoxic (Meth-A cell, ED<sub>50</sub> = 4.1μg/mL, control Adriamycin, ED<sub>50</sub> < 0.09μg/mL; LLC cell, ED<sub>50</sub> > 10μg/mL, control Adriamycin, ED<sub>50</sub> = 0.1μg/mL). **Source:** RI BEN WEN SHU LAN *Crinum asiaticum* var. *japonicum* (bulb). **Ref:** 4125.

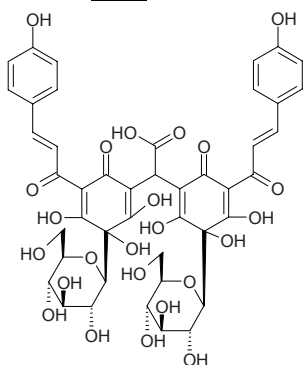


**17770 Prebetanin**

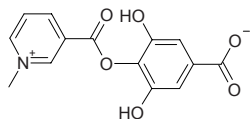
[13798-16-8] C<sub>24</sub>H<sub>26</sub>N<sub>2</sub>O<sub>16</sub>S (630.55). Source: TIAN CAI *Beta vulgaris*, MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*]. Ref: 658.

**17771 Precarthamin**

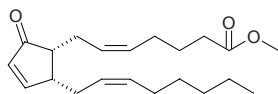
C<sub>44</sub>H<sub>44</sub>O<sub>24</sub> (956.83). Pharm: Yellow pigment; biosynthesis precursor of carthamin. Source: HONG HUA *Carthamus tinctorius*. Ref: 3303.

**17772 Precatorine**

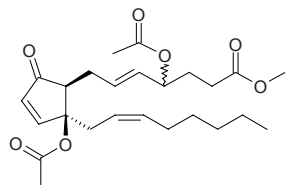
[36675-57-7] C<sub>14</sub>H<sub>11</sub>NO<sub>6</sub> (289.25). mp 218~220°C. Source: XIANG SI ZI *Abrus precatorius*. Ref: 6.

**17773 Preclavulone A methyl ester**

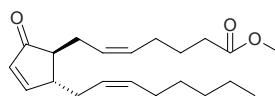
C<sub>21</sub>H<sub>32</sub>O<sub>3</sub> (332.49). Colorless viscous oil, [α]<sub>D</sub><sup>25</sup> = -13.9° (c = 0.05, THF), [α]<sub>D</sub><sup>25</sup> = -17.9° (c = 0.05, CHCl<sub>3</sub>). Source: CHONG SHENG RUAN SHAN HU *Clavularia viridis*. Ref: 4367.

**17774 Preclavulone A methyl ester derivative CPB51-909-3**

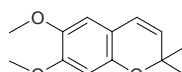
C<sub>25</sub>H<sub>36</sub>O<sub>7</sub> (448.56). Colorless viscous oil, [α]<sub>D</sub><sup>25</sup> = +22.8° (c = 0.08, CHCl<sub>3</sub>). Source: CHONG SHENG RUAN SHAN HU *Clavularia viridis*. Ref: 4367.

**17775 Preclavulone A methyl ester 12-isomer**

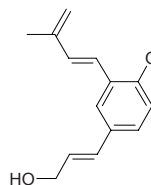
C<sub>21</sub>H<sub>32</sub>O<sub>3</sub> (332.49). Colorless viscous oil, [α]<sub>D</sub><sup>25</sup> = -49.8° (c = 0.08, THF), [α]<sub>D</sub><sup>25</sup> = -51.0° (c = 0.08, CHCl<sub>3</sub>). Source: CHONG SHENG RUAN SHAN HU *Clavularia viridis*. Ref: 4367.

**17776 Precocene II**

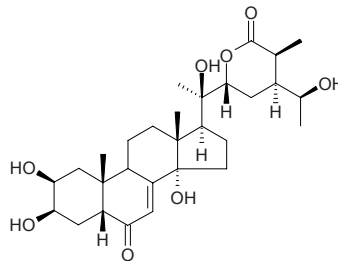
[644-06-4] C<sub>13</sub>H<sub>16</sub>O<sub>3</sub> (220.27). Pharm: Pesticide. Source: XIONG ER CAO *Ageratum houstonianum*, CHANG YE QIAN LI GUANG *Senecio longifolius*. Ref: 658.

**17777 Precolpuchol**

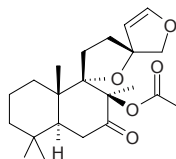
[194150-51-1] C<sub>14</sub>H<sub>16</sub>O<sub>2</sub> (216.28). Oil. Pharm: Antibacterial (*Staphylococcus aureus*, 0.5 μg); antifungal (*Cladosporium* sp., strongly inhibition). Source: MEI LI BU KU *Coleonema pulchellum*. Ref: 3706.

**17778 Precyasterone**

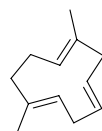
[27335-85-9] C<sub>29</sub>H<sub>44</sub>O<sub>8</sub> (520.67). Source: MA NIU XI *Cyathula capitata*. Ref: 6.

**17779 Pregaleopsin**

C<sub>22</sub>H<sub>32</sub>O<sub>5</sub> (376.50). White powder. Source: BO SI YI MU CAO *Leonurus persicus*. Ref: 2499.

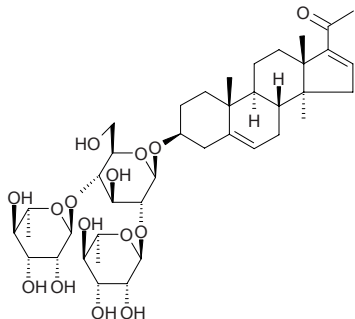
**17780 Pregeijerene B**

(E,E,E)-1,7-Dimethylcyclodeca-1,4,7-triene C<sub>12</sub>H<sub>18</sub> (162.28). Oil. Source: ZHI LI CI BAI *Juniperus erectopatens*. Ref: 2066.

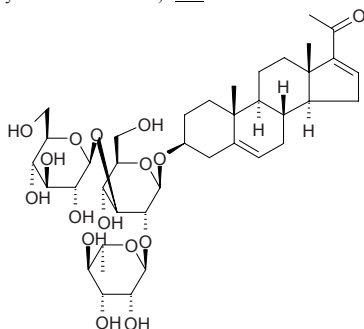


**17781 Pregna-5,16-dien-3 $\beta$ -ol-20-one 3-O- $\beta$ -chacotrioside**

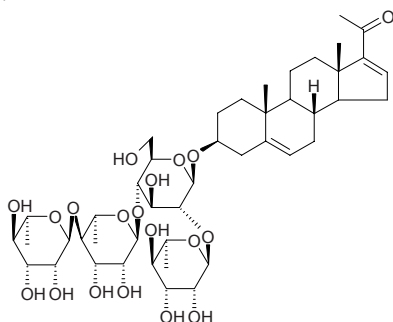
$C_{39}H_{60}O_{15}$  (768.90). mp 260–262°C (dec). Source: HAI JIN BI XIE *Dioscorea spongiosa* (Rhizome: yield = 0.0013%)<sup>[4692]</sup>, ZAO XIU *Paris polyphylla*. Ref: 6, 4692.

**17782 Pregnadienolone-3-O- $\beta$ -gracillimatriose**

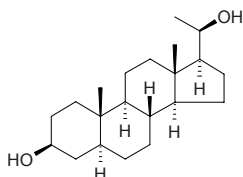
$C_{39}H_{60}O_{16}$  (784.90). Source: HAI JIN BI XIE *Dioscorea spongiosa* (Rhizome: yield = 0.000072%). Ref: 4692.

**17783 Pregna-5,16-dien-3 $\beta$ -ol-20-one-3 $\beta$ -O- $\alpha$ -L-rhamnopyranosyl (1→2)-[ $\alpha$ -L-rhamnopyranosyl (1→4)- $\alpha$ -L-rhamnopyranosyl (1→4)]- $\beta$ -D-glucopyranoside**

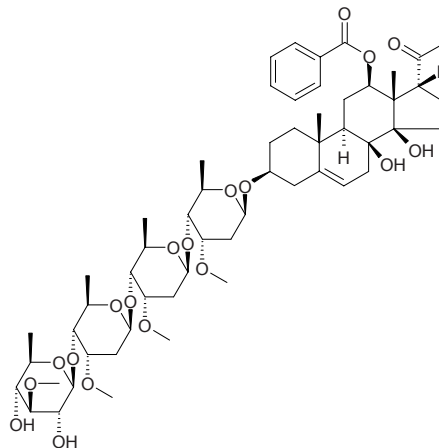
$C_{45}H_{70}O_{19}$  (915.05). Source: YUN NAN CHONG LOU *Paris polyphylla* var. *yunnanensis*. Ref: 2673.

**17784 5 $\alpha$ -Pregnane-3 $\beta$ ,20 $\beta$ -diol**

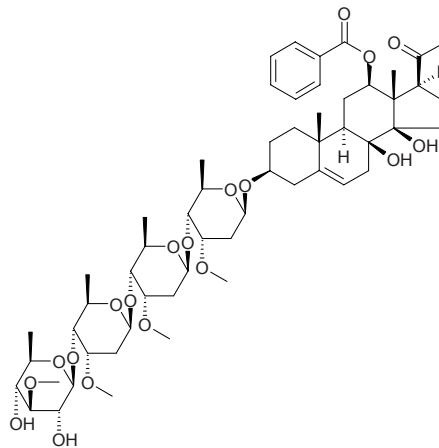
$C_{21}H_{36}O_2$  (320.52). Source: JIAN MA *Agave sisalana*. Ref: 6, 2983.

**17785 Pregnane glycoside AI**

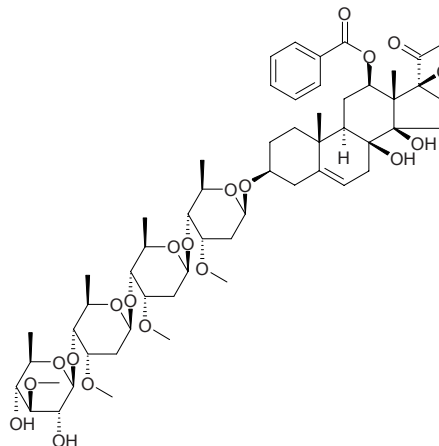
12-O-Benzoylneolon 3-O- $\beta$ -D-thevetopyranosyl-(1→4)- $\beta$ -D-cymaropyranosyl-(1→4)- $\beta$ -D-cymaropyranosyl-(1→4)- $\beta$ -D-cymaropyranoside  
 $C_{56}H_{84}O_{19}$  (1061.28). Amorphous powder,  $[\alpha]_D^{21} = -3.08^\circ$  ( $c = 2.26$ , MeOH). Source: *Araujia sericifera* (root). Ref: 4377.

**17786 Pregnane glycoside BI**

$C_{56}H_{84}O_{19}$  (1061.28). Amorphous powder,  $[\alpha]_D^{24} = +37.6^\circ$  ( $c = 1.58$ , MeOH). Source: *Araujia sericifera* (root). Ref: 4377.

**17787 Pregnane glycoside CI**

$C_{56}H_{84}O_{20}$  (1077.28). Amorphous powder,  $[\alpha]_D^{21} = +11.9^\circ$  ( $c = 2.2$ , MeOH). Source: *Araujia sericifera* (root). Ref: 4377.

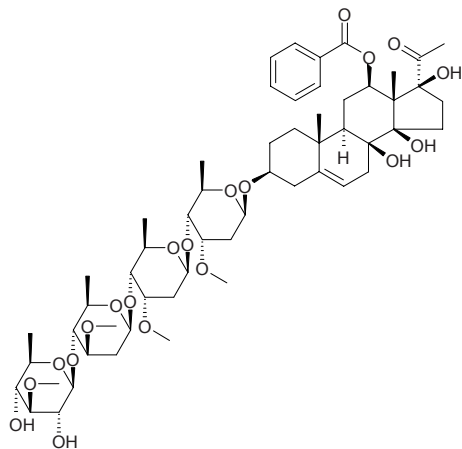




**17788 Pregnane glycoside CII**

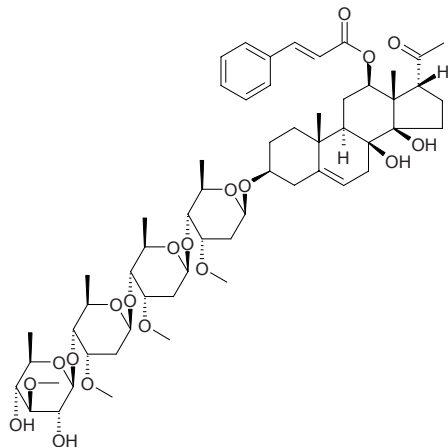
$C_{56}H_{84}O_{20}$  (1077.28). Amorphous powder,  $[\alpha]_D^{24} = -0.66^\circ$  ( $c = 0.38$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17789 Pregnane glycoside DI**

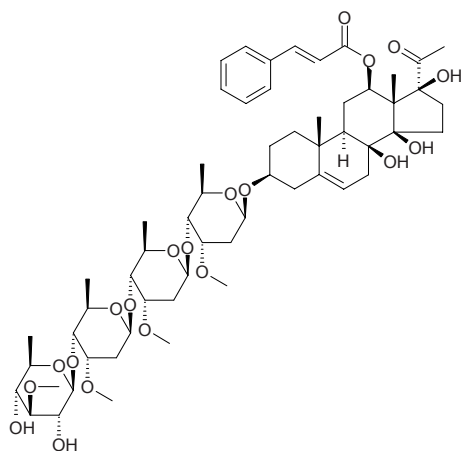
$C_{58}H_{86}O_{19}$  (1087.32). Amorphous powder,  $[\alpha]_D^{23} = +22.9^\circ$  ( $c = 1.52$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17790 Pregnane glycoside EI**

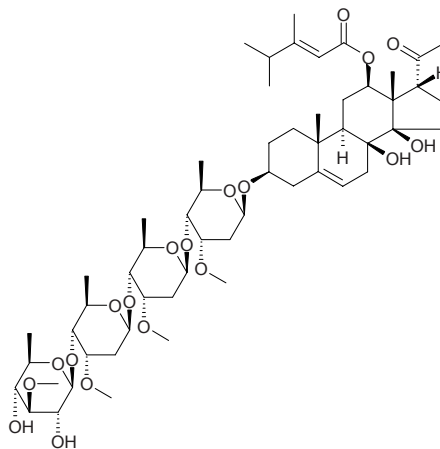
$C_{58}H_{86}O_{20}$  (1103.32). Amorphous powder,  $[\alpha]_D^{22} = +38^\circ$  ( $c = 0.78$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17791 Pregnane glycoside FI**

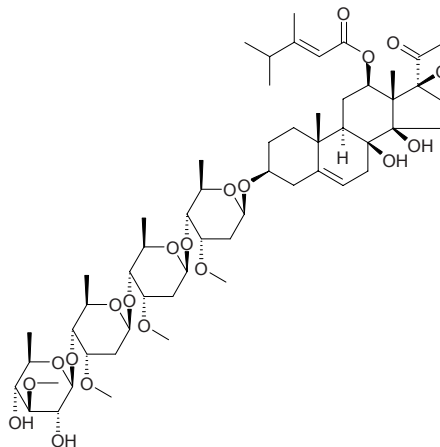
$C_{56}H_{90}O_{19}$  (1067.33). Amorphous powder,  $[\alpha]_D^{23} = +2.8^\circ$  ( $c = 0.98$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17792 Pregnane glycoside GI**

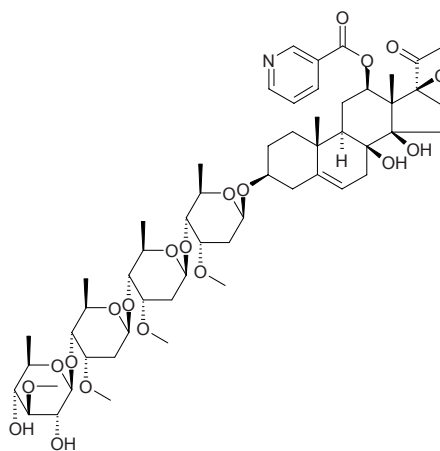
$C_{56}H_{90}O_{20}$  (1083.33). Amorphous powder,  $[\alpha]_D^{23} = +19^\circ$  ( $c = 0.81$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17793 Pregnane glycoside HI**

$C_{55}H_{83}NO_{20}$  (1078.27). Amorphous powder,  $[\alpha]_D^{23} = +10^\circ$  ( $c = 0.36$ , MeOH).

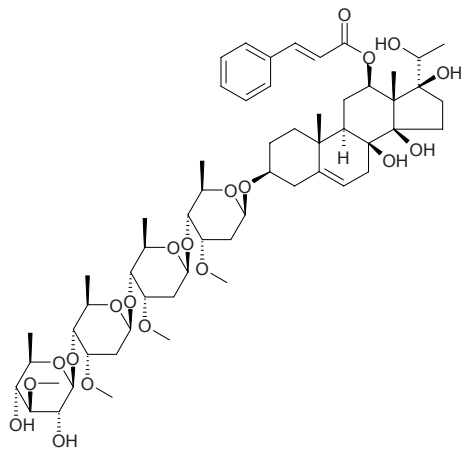
Source: *Araujia sericifera* (root). Ref: 4377.



**17794 Pregnane glycoside NI**

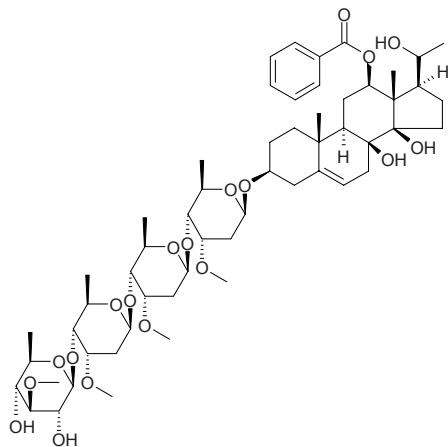
$C_{58}H_{88}O_{20}$  (1105.34). Amorphous powder,  $[\alpha]_D^{24} = +34^\circ$  ( $c = 0.27$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17795 Pregnane glycoside OI**

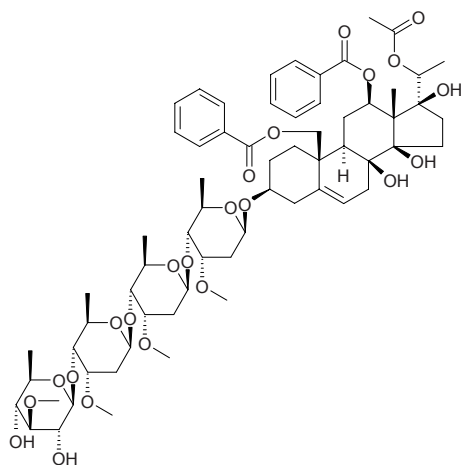
$C_{56}H_{86}O_{19}$  (1063.30). Amorphous powder,  $[\alpha]_D^{22} = +28.1^\circ$  ( $c = 1.67$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17796 Pregnane glycoside QI**

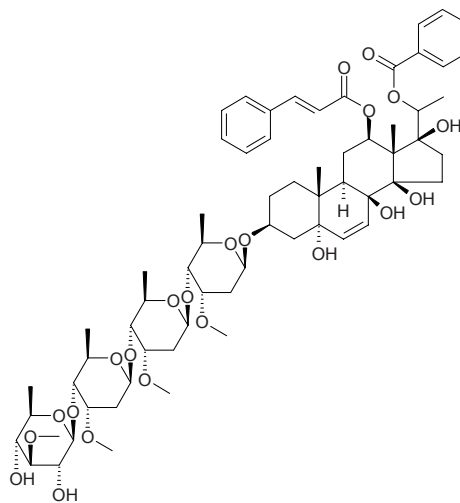
$C_{65}H_{92}O_{23}$  (1241.44). Amorphous powder,  $[\alpha]_D^{23} = +59.5^\circ$  ( $c = 1.36$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17797 Pregnane glycoside TI**

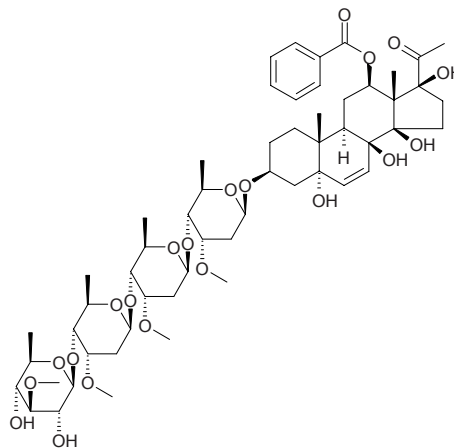
$C_{65}H_{92}O_{22}$  (1225.44). Amorphous powder,  $[\alpha]_D^{22} = +141^\circ$  ( $c = 1.67$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17798 Pregnane glycoside UI**

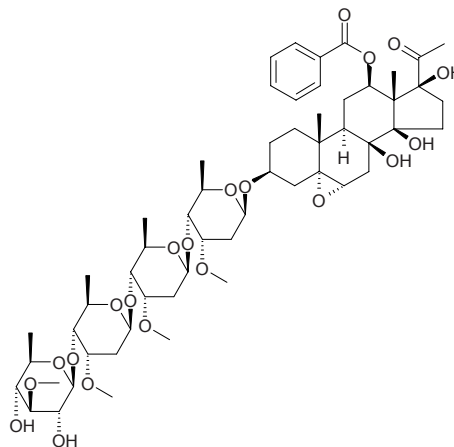
$C_{56}H_{84}O_{21}$  (1093.28). Amorphous powder,  $[\alpha]_D^{22} = +19^\circ$  ( $c = 0.72$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17799 Pregnane glycoside VI**

$C_{56}H_{84}O_{21}$  (1093.28). Amorphous powder,  $[\alpha]_D^{24} = +1.8^\circ$  ( $c = 0.56$ , MeOH).

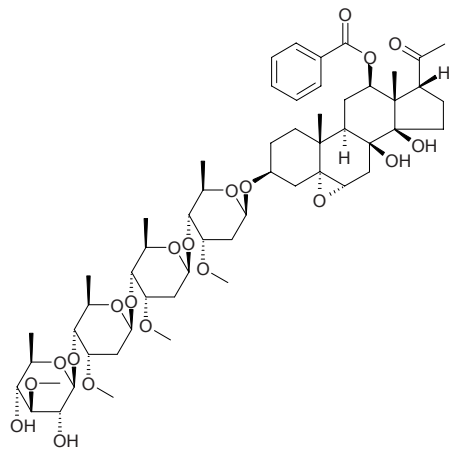
Source: *Araujia sericifera* (root). Ref: 4377.



**17800 Pregnane glycoside WI**

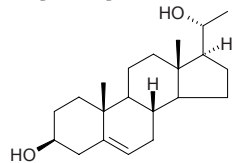
$C_{56}H_{84}O_{20}$  (1077.28). Amorphous powder,  $[\alpha]_D^{24} = -13^\circ$  ( $c = 0.51$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

**17801 5-Pregnene-3 $\beta$ ,20 $\alpha$ -diol**

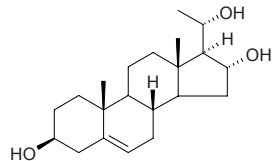
$C_{21}H_{34}O_2$  (318.50). mp 182°C,  $[\alpha]_D = -55.5^\circ$ . Source: XIANG JIA PI

*Periploca sepium*. Ref: 2498.

**17802 5-Pregnene-3 $\beta$ ,16 $\alpha$ ,20 $\alpha$ -triol**

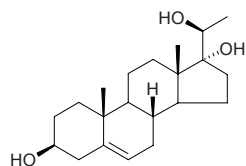
$C_{22}H_{36}O_3$  (348.53). mp 251°C,  $[\alpha]_D = -65.0^\circ$ . Source: XIANG JIA PI

*Periploca sepium*. Ref: 2498.

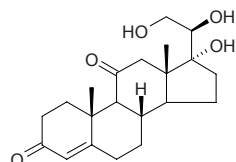
**17803 5-Pregnene-3 $\beta$ ,17 $\alpha$ ,20 $\alpha$ -triol**

$C_{21}H_{34}O_3$  (334.50). mp 230°C,  $[\alpha]_D = -69.2^\circ$ . Source: XIANG JIA PI

*Periploca sepium*. Ref: 2498.

**17804 4-Pregnene-17 $\alpha$ ,20 $\beta$ ,21-triol-3,11-dione**

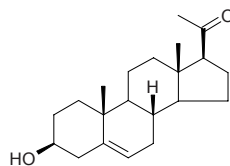
$C_{21}H_{30}O_5$  (362.47). Source: ZI HE CHE *Homo sapiens*. Ref: 660.

**17805 Pregnenolone**

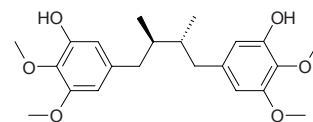
$C_{21}H_{32}O_2$  (316.49). Source: BAI XIAN PI *Dictamnus dasycarpus*, SHI LIU

YE *Punica granatum*, XIN JIANG GAO BEN *Conioselinum vaginatum*,

XING AN CHAI HU *Bupleurum sibiricum*. Ref: 3304, 3305, 3306, 3307.

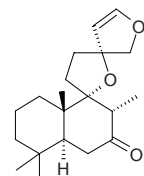
**17806 Pregomisin**

$C_{22}H_{30}O_6$  (390.48). Source: WU WEI ZI *Schisandra chinensis*. Ref: 2.

**17807 Prehispanolone**

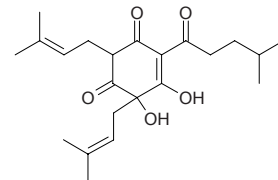
[132922-55-5]  $C_{20}H_{30}O_3$  (318.46). Source: YI MU CAO *Leonurus*

*heterophyllus* [Syn. *Leonurus artemisia*]. Ref: 2.

**17808 Prehumulone**

$C_{22}H_{32}O_5$  (376.50). Oil,  $[\alpha]_D^{23} = -172^\circ$  ( $c = 0.12$ , 2,2,3-trimethylpentane).

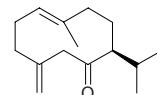
Source: PI JIU HUA *Humulus lupulus*. Ref: 3308.

**17809 Preisocalamendiol**

1(10),4(15)-Germacradien-6-one [25645-19-6]  $C_{15}H_{24}O$  (220.36). Oil. Source:

BAI CHANG *Acorus calamus*, KUAN YE KUO BAO JU *Baccharis latifolia*,

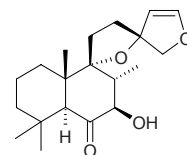
TOU HUA DU JUAN *Rhododendron capitatum*. Ref: 3309, 3310, 3311, 3312.

**17810 Preleoheterin**

9,13:15,16-Diepoxy-7-hydroxy-14-labden-6-one [151178-05-1]  $C_{20}H_{30}O_4$

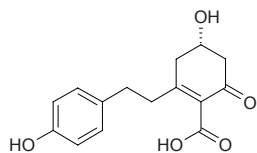
(334.46). Crystals; syrup,  $[\alpha]_D^{25} = -15.99^\circ$  ( $c = 0.5$ , EtOH). Source: YI MU

CAO *Leonurus heterophyllus* [Syn. *Leonurus artemisia*]. Ref: 1543, 2499.

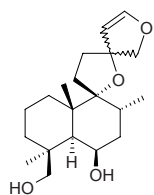


**17811 Prelunularic acid**

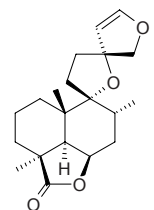
[85926-21-2] C<sub>15</sub>H<sub>16</sub>O<sub>5</sub> (276.29). Oil. Source: DI SUO LUO *Marchantia polymorpha*, SHE TAI *Conocephalum conicum*. Ref: 3313, 3314, 3315.

**17812 Premarrubenol**

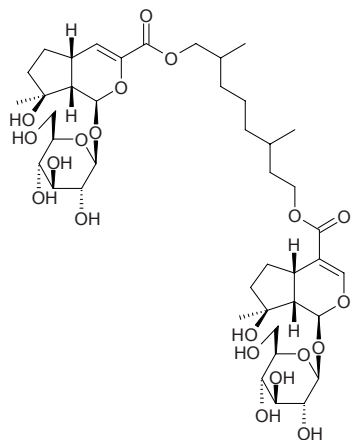
C<sub>20</sub>H<sub>32</sub>O<sub>4</sub> (336.48). Source: BAI HUA XIA ZHI CAO *Marrubium supinum* [Syn. *Lagopsis supina*], OU XIA ZHI CAO *Marrubium vulgare*. Ref: 1521, 5355.

**17813 Premarrubiin**

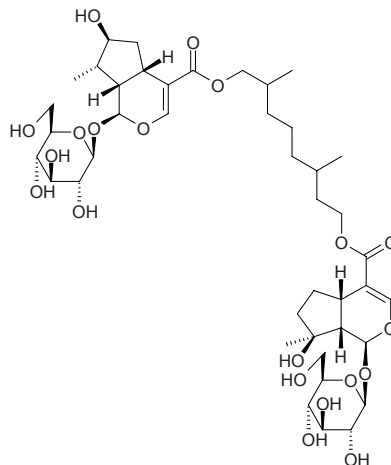
[72059-02-2] C<sub>20</sub>H<sub>28</sub>O<sub>4</sub> (332.44). Pharm: Astringent; antitussive (dispels phlegm). Source: OU XIA ZHI CAO *Marrubium vulgare*. Ref: 658, 5355.

**17814 Premnaodoroside A**

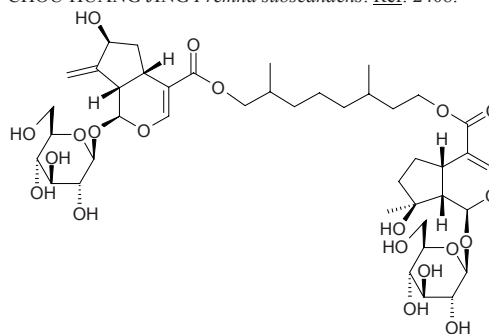
C<sub>42</sub>H<sub>66</sub>O<sub>20</sub> (890.98). [α]<sub>D</sub><sup>22</sup> = -96.9° (c = 2.07, MeOH). Source: PAN YUAN CHOU HUANG JING *Premna subscandens*. Ref: 2408.

**17815 Premnaodoroside B**

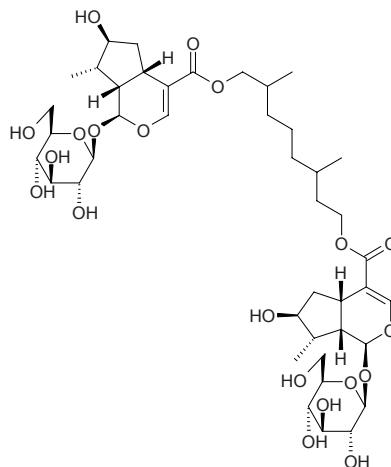
C<sub>42</sub>H<sub>66</sub>O<sub>20</sub> (890.98). [α]<sub>D</sub><sup>22</sup> = -96.9° (c = 1.14, MeOH). Source: PAN YUAN CHOU HUANG JING *Premna subscandens*. Ref: 2408.

**17816 Premnaodoroside C**

C<sub>42</sub>H<sub>64</sub>O<sub>20</sub> (888.97). [α]<sub>D</sub><sup>22</sup> = -85.7° (c = 1.59, MeOH). Source: PAN YUAN CHOU HUANG JING *Premna subscandens*. Ref: 2408.

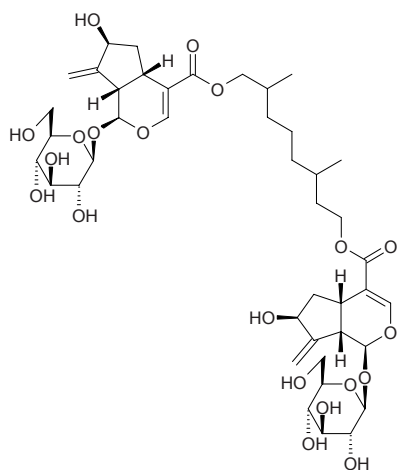
**17817 Premnaodoroside D**

[260803-62-1] C<sub>42</sub>H<sub>66</sub>O<sub>20</sub> (890.98). Amorphous powder, [α]<sub>D</sub><sup>25</sup> = -89.4° (c = 1.04, MeOH). Source: PAN YUAN CHOU HUANG JING *Premna subscandens*. Ref: 2408.

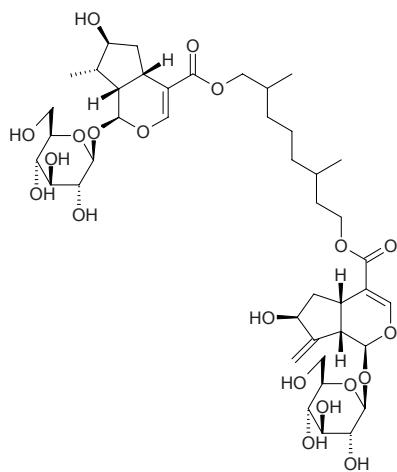


**17818 Premnaodoroside E**

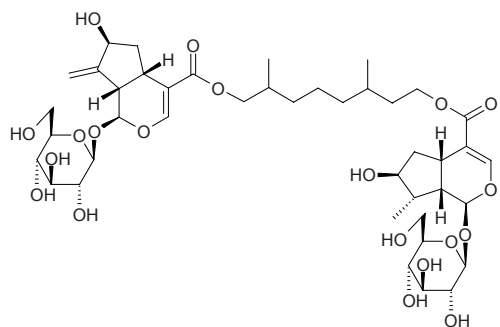
[260803-63-2] C<sub>42</sub>H<sub>62</sub>O<sub>20</sub> (886.95). Amorphous powder,  $[\alpha]_D^{25} = -28.9^\circ$  ( $c = 0.28$ , MeOH). Source: PAN YUAN CHOU HUANG JING *Premna subscandens*. Ref: 2408.

**17819 Premnaodoroside F<sub>1</sub>**

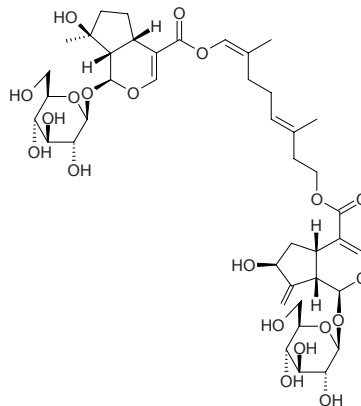
C<sub>42</sub>H<sub>64</sub>O<sub>20</sub> (888.97). Mixture with Premnaodoroside F<sub>2</sub>: amorphous powder,  $[\alpha]_D^{25} = -69.1^\circ$  ( $c = 1.88$ , MeOH). Source: PAN YUAN CHOU HUANG JING *Premna subscandens*. Ref: 2408.

**17820 Premnaodoroside F<sub>2</sub>**

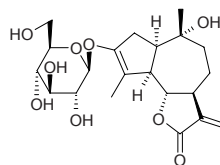
C<sub>42</sub>H<sub>64</sub>O<sub>20</sub> (888.97). Mixture with Premnaodoroside F<sub>1</sub>: amorphous powder,  $[\alpha]_D^{25} = -69.1^\circ$  ( $c = 1.88$ , MeOH). Source: PAN YUAN CHOU HUANG JING *Premna subscandens*. Ref: 2408.

**17821 Premnaodoroside G**

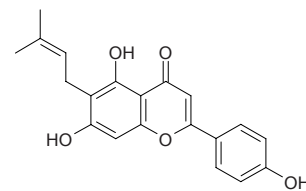
C<sub>42</sub>H<sub>60</sub>O<sub>20</sub> (884.93). Amorphous powder,  $[\alpha]_D^{25} = -46.6^\circ$  ( $c = 0.34$ , MeOH). Source: PAN YUAN CHOU HUANG JING *Premna subscandens*. Ref: 2408.

**17822 Prenantheside A**

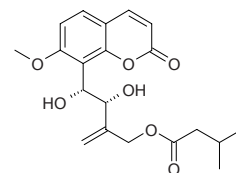
[112606-68-5] C<sub>21</sub>H<sub>30</sub>O<sub>9</sub> (426.47). Amorphous powder,  $[\alpha]_D^{25} = +10.3^\circ$  ( $c = 1.12$ , pyridine). Pharm: Cytotoxic (L-5178Y, ID<sub>50</sub> = 4.0 μg/mL). Source: QI YE PAN GUO JU *Prenanthes acerifolia*. Ref: 3707, 1738.

**17823 6-Prenylapigenin**

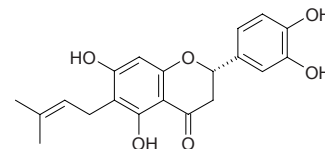
C<sub>20</sub>H<sub>18</sub>O<sub>5</sub> (338.36). Source: HUANG YAN MU *Chlorophora tinctoria*, *Dorstenia kameruniana*, *Erythrina vogelii*. Ref: 1521, 4421.

**17824 8-Prenylated coumarin microfalcatin isovalerate**

Micromarin B [260368-19-2] C<sub>20</sub>H<sub>24</sub>O<sub>7</sub> (376.41). Crystals (*n*-hexane-acetone), mp 100~105°C,  $[\alpha]_D^{24} = 0^\circ$  ( $c = 1.0$ , CHCl<sub>3</sub>). Source: XIAO GAN *Micromelum falcatum*. Ref: 2421.

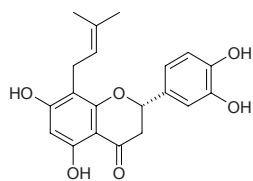
**17825 6-Prenylated eriodictyol**

C<sub>20</sub>H<sub>20</sub>O<sub>6</sub> (356.38). Source: *Glycyrrhiza* sp. Ref: 2431.

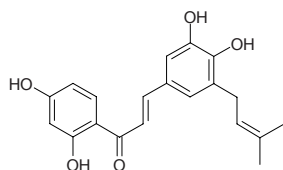


**17826 8-Prenylated eriodictyol**

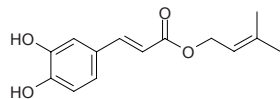
$C_{20}H_{20}O_6$  (356.38). **Source:** *Glycyrrhiza* sp. **Ref:** 2431.

**17827 5-Prenylbutein**

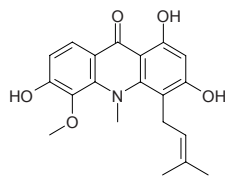
2',3,4,4'-Tetrahydroxy-5-prenylchalcone  $C_{20}H_{20}O_5$  (340.38). Amorphous powder. **Pharm:** Antimalarial (*Plasmodium falciparum* D6,  $IC_{50} = (10.3 \pm 1.3) \mu\text{g/mL}$ ; control Chloroquine,  $IC_{50} = (0.009 \pm 0.002) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.04 \pm 0.01) \mu\text{g/mL}$ ; *Plasmodium falciparum* W2,  $IC_{50} = (11.2 \pm 1.9) \mu\text{g/mL}$ , Chloroquine,  $IC_{50} = (0.08 \pm 0.003) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.21 \pm 0.01) \mu\text{g/mL}$ ). **Source:** A BI XI NI YA CI TONG *Erythrina abyssinica* (stem cortex). **Ref:** 3879.

**17828 Prenyl caffeate**

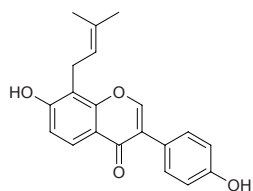
$C_{14}H_{16}O_4$  (248.28). **Pharm:** Allergenic. **Source:** *Populus* sp. **Ref:** 658.

**17829 Prenylcitpressine**

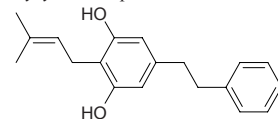
[81525-60-2]  $C_{20}H_{21}NO_5$  (355.39). Yellow slice substance (Et<sub>2</sub>O), mp 160–162°C. **Pharm:** Anti-inflammatory; antineoplastic (EBV-EA induced by TPA, InRt = 100% with molecular ratio of Euglobal-III/TPA 1000). **Source:** BAI YOU *Citrus grandis* f. *hakunikuju*, BIAN PING JU *Citrus depressa*, WEN DAN YOU *Citrus grandis* f. *buntan*, ZHOU CHANG JU *Citrus funadoko*, ZHU LUAN *Citrus decumana*. **Ref:** 3708, 3709, 3710, 3711, 3712, 3713.

**17830 8-Prenyldaidzein**

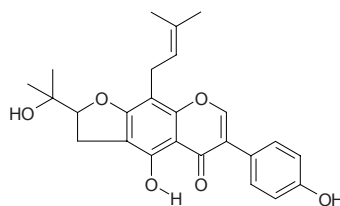
$C_{20}H_{18}O_4$  (322.36). **Pharm:** Cytotoxic (KB,  $IC_{50} > 75 \mu\text{mol/L}$ , control Helenalin,  $IC_{50} = (0.64 \pm 0.08) \mu\text{mol/L}$ , Melphalan,  $IC_{50} = (6.0 \pm 0.5) \mu\text{mol/L}$ ; Mono-Mac-6,  $IC_{50} > 75 \mu\text{mol/L}$ , Helenalin,  $IC_{50} = (3.1 \pm 0.3) \mu\text{mol/L}$ ; Jurkat-T,  $IC_{50} > 75 \mu\text{mol/L}$ , Helenalin,  $IC_{50} = (1.14 \pm 0.08) \mu\text{mol/L}$ , Melphalan,  $IC_{50} = (9.1 \pm 0.8) \mu\text{mol/L}$ ). **Source:** *Bituminaria morisiana* (leaf). **Ref:** 5077.

**17831 4-Prenyldihdropinosylvin**

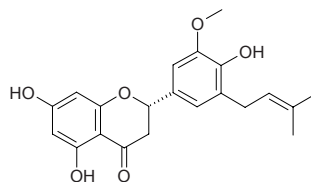
$C_{19}H_{22}O_2$  (282.39). **Pharm:** Antimicrobial. **Source:** MEI ZHOU GAN CAO *Glycyrrhiza lepidota*. **Ref:** 658.

**17832 8-Prenylerythrinin**

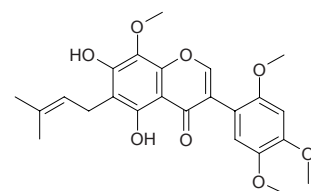
$C_{25}H_{26}O_6$  (422.48). **Pharm:** Cytotoxic (KB,  $EC_{50} = 13 \mu\text{g/mL}$ )<sup>[5220]</sup>. **Source:** CI TONG *Erythrina variegata* [Syn. *Erythrina indica*] (stem cortex). **Ref:** 5220.

**17833 5'-Prenylhomoeriodictyol**

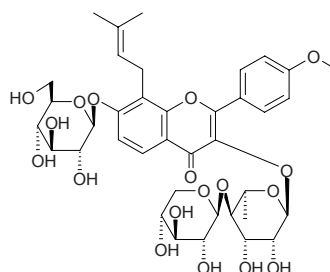
$C_{21}H_{22}O_6$  (370.41). **Pharm:** Antifungal (*Cladosporium cucumerinum*). **Source:** BO SHI CI TONG *Erythrina berteroaana*. **Ref:** 658.

**17834 6-Prenylisocaviunin**

[132923-42-3]  $C_{24}H_{26}O_8$  (442.47). Creamy amorphous powder, mp 182–183°C. **Pharm:** Estrogenic activity (rat). **Source:** CUI QUE YE DUAN GUAN CAO *Sopubia delphinifolia*. **Ref:** 3641.

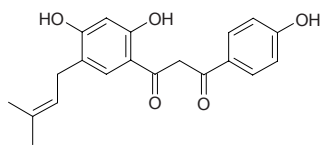
**17835 8-Prenylkaempferol-4'-methoxy-3-[xylosyl (1→4) rhamnoside]-7-glucoside**

$C_{38}H_{48}O_{18}$  (792.80). **Source:** WU SHAN YIN YANG HUO *Epimedium wushanense*. **Ref:** 3316.

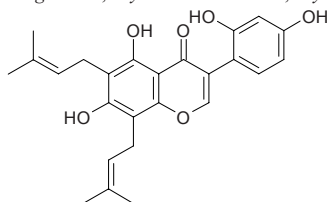


**17836 5'-Prenyllicodione**

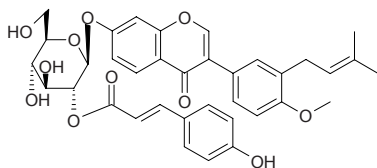
[107390-47-6] C<sub>20</sub>H<sub>20</sub>O<sub>5</sub> (340.38). Yellow needles, mp 130~135°C. Source: JI GAN CAO *Glycyrrhiza echinata* (cultured cell), ZHANG GUO GAN CAO *Glycyrrhiza inflata*. Ref: 3317, 3318.

**17837 8-Prenyluteone**

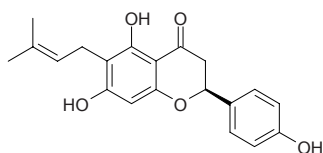
C<sub>25</sub>H<sub>26</sub>O<sub>6</sub> (422.48). Source: SAI NEI JIA ER CI TONG *Erythrina senegalensis*, *Erythrina eriotriocha*, *Erythrina vogelii*. Ref: 1521, 4421.

**17838 3'-Prenyl-4'-methoxy-isoflavone-7-O'-β-D-(2''-O-p-coumaroyl) glycopyranoside**

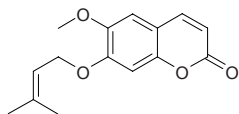
[126654-66-8] C<sub>36</sub>H<sub>36</sub>O<sub>11</sub> (644.68). Colorless microcrystals, mp 158~160°C. Pharm: Estrogenic activity. Source: CUI QUE YE DUAN GUAN CAO *Sopubia delphinifolia*. Ref: 3642.

**17839 6-Prenylnaringenin**

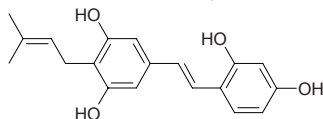
C<sub>20</sub>H<sub>20</sub>O<sub>5</sub> (340.38). Source: PI JIU HUA *Humulus lupulus* (strobile). Ref: 4789.

**17840 7-Prenyloxy-6-methoxycoumarin**

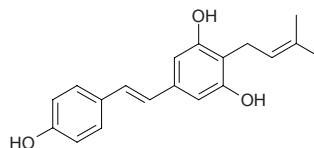
C<sub>15</sub>H<sub>16</sub>O<sub>4</sub> (260.29). mp 80~82°C (Me<sub>2</sub>CO). Source: SHA DI YUAN ZHI *Polygala sabulosa*. Ref: 5110.

**17841 4'-Prenyloxyresveratrol**

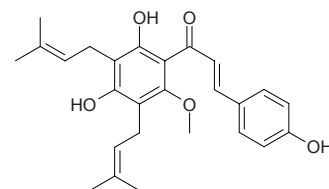
*trans*-4-Isopentenyl-3,5,2',4'-tetrahydroxystilbene C<sub>19</sub>H<sub>20</sub>O<sub>4</sub> (312.37). Pharm: Antifungal<sup>[658]</sup>; antimalarial (*Plasmodium falciparum*, EC<sub>50</sub> = 8.2 μg/mL, control Chloroquine diphosphate, EC<sub>50</sub> = 0.16 μg/mL, EC<sub>50</sub> = 3.1 μmol/L)<sup>[3963]</sup>. Source: QUAN YUAN GUI MU *Artocarpus integra* (aerial parts), SANG ZHI *Morus alba*. Ref: 658, 3963.

**17842 4-Prenylresveratrol**

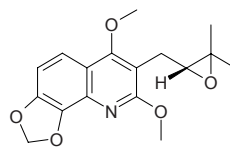
C<sub>19</sub>H<sub>20</sub>O<sub>3</sub> (296.37). Pharm: Antifungal (*Cladosporium cucumerinum*). Source: LUO HUA SHENG *Arachis hypogaea*. Ref: 658.

**17843 5'-Prenylxanthohumol**

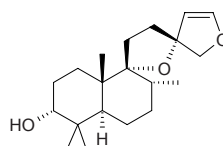
C<sub>26</sub>H<sub>30</sub>O<sub>5</sub> (422.53). Source: PI JIU HUA *Humulus lupulus* (strobile). Ref: 4789.

**17844 Preorixine**

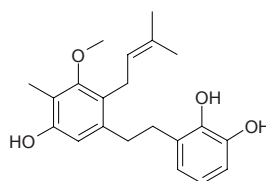
C<sub>17</sub>H<sub>19</sub>NO<sub>5</sub> (317.34). Pharm: NO production inhibitor inactive (RAW264.7 cells, LPS/IFN-γ-induced, 30 μmol/L; weak cytotoxic to RAW264.7 cells). Source: CHOU SHAN YANG *Orixa japonica* (stem: yield = 0.027%dw). Ref: 4774.

**17845 Preotostegindiol**

9(13),15(16)-Diepoxy-3α-hydroxy-16-dihydro-14bda-14-ene C<sub>20</sub>H<sub>32</sub>O<sub>3</sub> (320.48). White crystals. Source: QUAN YUAN YE AO TUO SI TE CAO *Otostegia integrifolia* (leaf). Ref: 3823.

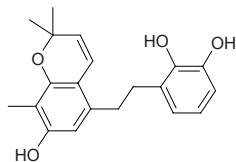
**17846 Preracemosol A**

C<sub>21</sub>H<sub>26</sub>O<sub>4</sub> (342.44). Brown viscous oil. Pharm: Antimalarial (*Plasmodium falciparum*, EC<sub>50</sub> = 18.0 μg/mL, control Chloroquine diphosphate, EC<sub>50</sub> = 0.16 μg/mL); cytotoxic inactive (KB, control Ellipticine, EC<sub>50</sub> = 0.3 μg/mL; BC, control Ellipticine, EC<sub>50</sub> = 0.3 μg/mL). Source: MA LA BA YANG TI JIA *Bauhinia malabarica* (root). Ref: 5092.

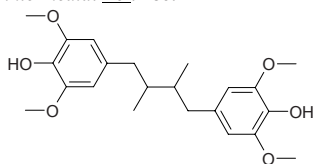


**17847 Preracemosol B**

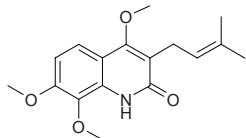
$C_{20}H_{22}O_4$  (326.40). Brown viscous oil. **Pharm:** Antimalarial (*Plasmodium falciparum*,  $EC_{50}$  = 3.0  $\mu$ g/mL, control Chloroquine diphosphate,  $EC_{50}$  = 0.16  $\mu$ g/mL); cytotoxic inactive (KB, control Ellipticine,  $EC_{50}$  = 0.3  $\mu$ g/mL; BC, control Ellipticine,  $EC_{50}$  = 0.3  $\mu$ g/mL). **Source:** MA LA BA YANG TI JIA *Bauhinia malabarica* (root). **Ref:** 5092.

**17848 Preschisanthrin**

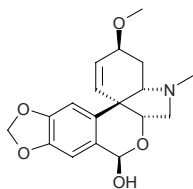
$C_{22}H_{30}O_6$  (390.48). White acicular crystals, mp 119~120°C,  $[\alpha]_D^{19}$  = 0° (MeOH). **Source:** ZHONG JIAN WU WEI ZI *Schisandra propinqua* var. *intermedia*. **Ref:** 486.

**17849 Preskimmianine**

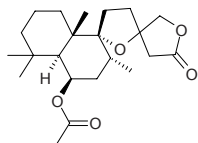
[38695-41-9]  $C_{17}H_{21}NO_4$  (303.36). mp 151~152°C. **Source:** BAI SE BAI XIAN *Dictamnus albus*, BAI XIAN PI *Dictamnus dasycarpus*, CHOU SHAN YANG *Orixa japonica*. **Ref:** 660, 3319.

**17850 Pretazettine**

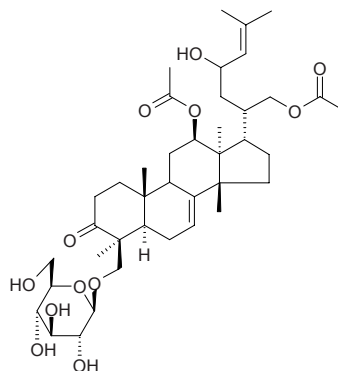
Isotazettine [17322-84-8]  $C_{18}H_{21}NO_5$  (331.37). mp 234~236°C. **Pharm:** Antineoplastic (HeLa, leukemia caused by Rauscher leukemia virus, inhibits biosynthesis of protein in eukaryotic cells). **Source:** DUO HUA SHUI XIAN *Narcissus tazetta*, GAN FENG CAO *Zephyranthes candida*, QUAN NENG HUA *Pancreatium biflorum*, SHI SUAN *Lycoris radiata* [Syn. *Amaryllis radiata*], SHUI XIAN GEN *Narcissus tazetta* var. *chinensis*. **Ref:** 5, 658.

**17851 Previtexilactone**

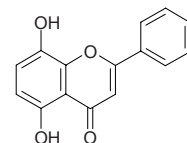
$C_{22}H_{34}O_5$  (378.51). Colorless prisms (hexane- $CHCl_3$ ), mp 224~225°C, mp 214~215°C,  $[\alpha]_D = -20.2^\circ$  ( $c = 0.85$ ,  $CHCl_3$ ). **Pharm:** Antitrypanosomal (epimastigotes of *Trypanosoma cruzi*, *in vitro*, MLC > 245  $\mu$ mol/L)<sup>[2550]</sup>. **Source:** MAN JING ZI *Vitex trifolia*. **Ref:** 2550.

**17852 Prieurianoside**

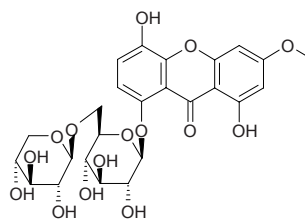
12 $\beta$ ,21-Diacetoxy-29- $\beta$ -D-glucopyranosyloxy-23 $\zeta$ -hydroxytirucalla-7,24-dien-3-one  $C_{40}H_{62}O_{12}$  (734.93). Microcrystals, mp 113~115°C,  $[\alpha]_D^{20} = -73.8^\circ$  (MeOH). **Pharm:** Cytotoxic inactive (KB,  $EC_{50}$  > 10  $\mu$ g/mL). **Source:** *Trichilia priuriana* (leaf). **Ref:** 3994.

**17853 Primetin**

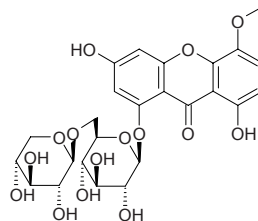
[548-58-3]  $C_{15}H_{10}O_4$  (254.25). **Pharm:** Allergenic. **Source:** CHANG BAI SHAN BAO CHUN *Primula modesta*, JIA NA DA BAO CHUN *Primula mistassinica*. **Ref:** 658.

**17854 8-O-Primeverosylbellidifolin**

$C_{25}H_{28}O_{15}$  (568.49). **Source:** RI BEN ZHANG YA CAI *Swertia japonica*. **Ref:** 2528.

**17855 1-O-Primeverosyl-3,8-dihydroxy-5-methoxyxanthone**

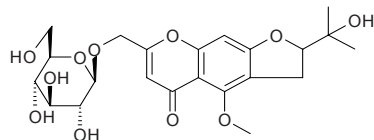
$C_{25}H_{28}O_{15}$  (568.49). Yellow crystals, mp 207~209°C,  $[\alpha]_D^{20} = -68.75^\circ$  ( $c = 0.08$ , DMSO). **Source:** XI DIAN ZHANG YA CAI *Swertia punctata*. **Ref:** 2155.



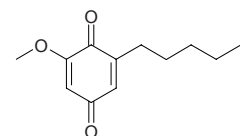


**17856 Prim-O-glucosylcimifugin**

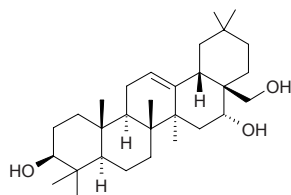
$C_{22}H_{28}O_{11}$  (468.42). Source: FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*]. Ref: 2.

**17857 Primin**

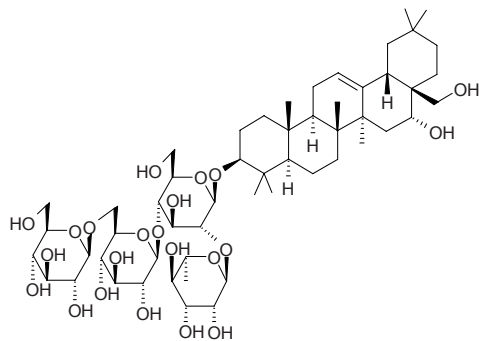
[15121-94-5]  $C_{12}H_{16}O_3$  (208.26). Pharm: Insect antifeedant; irritant (to skin); molluscicide (toxic to shellfish). Source: E BAO CHUN *Primula obconica*, GAO BAO CHUN *Primula elatior*, *Miconia* sp. Ref: 658.

**17858 Primulagenin A**

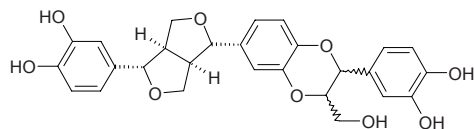
[465-95-2]  $C_{30}H_{50}O_3$  (458.73). mp 249.5~250.0°C. Source: TIE ZI *Myrsine africana*, ZHEN ZHU CAI *Lysimachia clethroides*. Ref: 6.

**17859 Primulasaponin**

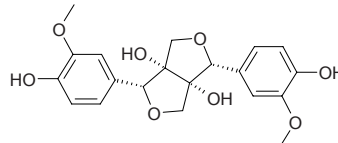
$C_{54}H_{90}O_{22}$  (1091.31). Pharm: Antibacterial; antineoplastic. Source: GAO BAO CHUN *Primula elatior*. Ref: 658.

**17860 Princepin**

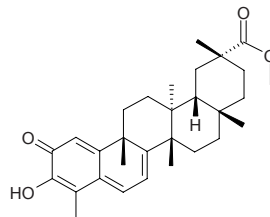
*rel*-((7 $\alpha$ ,7 $\alpha$ ,8 $\alpha$ ,8 $\alpha$ ,7 $\alpha$ ,8 $\beta$ )-4',7'':7,9':7',9'-Triepoxy-3',8''-oxy-8,8'-sesquieolignan-3,3'',4,4'',9''-pentaol and *rel*-((7 $\alpha$ ,7 $\alpha$ ,8 $\alpha$ ,8 $\alpha$ ,7 $\beta$ ,8 $\alpha$ )-4',7'':7,9':7',9'-Triepoxy-3',8''-oxy-8,8'-sesquieolignan-3,3'',4,4'',9''-pentaol)  $C_{27}H_{26}O_9$  (494.50). Colorless amorphous solid. Source: BA XI QIAO AN MU *Joannesia princeps* (seed). Ref: 3369.

**17861 Prinsepiol**

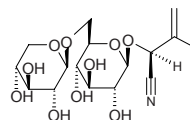
$C_{20}H_{22}O_8$  (390.39). Pharm: Antitubercular (*Mycobacterium tuberculosis*, MIC > 128 $\mu$ g/mL, cytotoxic, Vero cells, IC<sub>50</sub> = 13.0 $\mu$ g/mL, positive control Rifampin, MIC = 0.03 $\mu$ g/mL, IC<sub>50</sub> = 98.3 $\mu$ g/mL, SI = 3300). Source: SHU HUA JIE CAO *Valeriana laxiflora* (aerial parts and root). Ref: 4986.

**17862 Pristimerin**

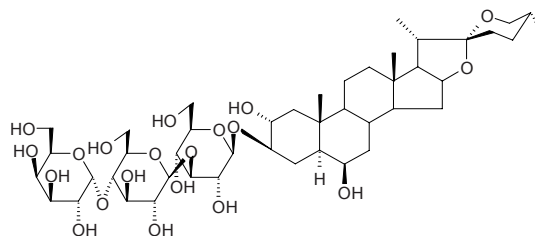
[1258-84-0]  $C_{30}H_{40}O_4$  (464.65). Orange crystals (methanol), mp 214~217°C. Pharm: Antineoplastic; cytotoxic (KB, IC<sub>50</sub> = (0.60±0.01) $\mu$ mol/L, control Podophyllotoxin, IC<sub>50</sub> = 0.014 $\mu$ mol/L)<sup>[3969]</sup>; cytotoxic (HeLa, ID<sub>50</sub> = 0.6 $\mu$ g/mL); antiamebic (used in treatment of dysentery); antibacterial (*Staphylococcus aureus*, *Diplococcus pneumoniae*, *Streptococcus pyogenes* and *Streptococcus varians*, 5~8 $\mu$ g/mL); antibacterial (*Bacillus cereus*, MIC = 8.62 $\mu$ mol/L, control Chloramphenicol, MIC = 6.19 $\mu$ mol/L; *Staphylococcus epidermidis*, MIC = 0.54 $\mu$ mol/L, Chloramphenicol, MIC = 12.38 $\mu$ mol/L; *Micrococcus luteus*, MIC = 8.62 $\mu$ mol/L, Chloramphenicol, MIC = 6.19 $\mu$ mol/L)<sup>[3969]</sup>; anti-inflammatory (modulator of cytokine network: inhibits LPS-stimulated IL-1 $\beta$  production on hmn monocytes, mean IC<sub>50</sub> = 56 nmol/L)<sup>[4416]</sup>; anti-inflammatory (NF- $\kappa$ B pathway)<sup>[4415]</sup>; anti-inflammatory (NO production inhibitor)<sup>[4415]</sup>. Source: BIAN SHUO TENG *Pristimera indica*, GAO MEI YING BAN *Crossopetalum gaumeri* (root), JIA NA LI MEI DENG MU *Maytenus canariensis*, QIAO CHA *Catha edulis*, *Prinostemma aspera*. Ref: 5, 661, 3969, 4416, 4415.

**17863 Proacaciberin**

[79197-21-0]  $C_{16}H_{25}NO_{10}$  (391.38). Pharm: Toxin. Source: XI BO JIN HE HUAN *Acacia sieberiana*. Ref: 658.

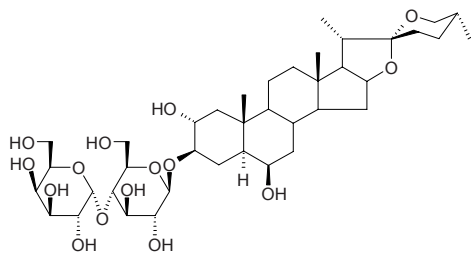
**17864 Proampeloside Bf<sub>1</sub>**

$C_{45}H_{74}O_{20}$  (935.08). Pharm: Antifungal (*Candida albicans*). Source: DA TOU SUAN *Allium ampeloprasum*. Ref: 2165.

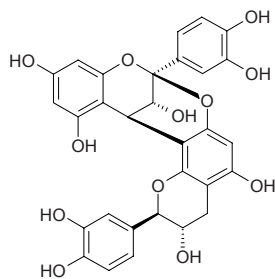


**17865 Proampeloside Bf<sub>2</sub>**

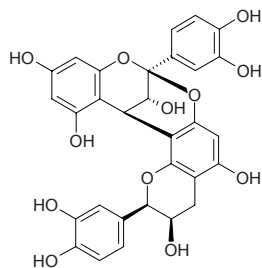
C<sub>39</sub>H<sub>64</sub>O<sub>15</sub> (772.94). **Pharm:** Antifungal (*Candida albicans*). **Source:** DA TOU SUAN *Allium ampeloprasum*. **Ref:** 2165.

**17866 Proanthocyanidin A<sub>1</sub>**

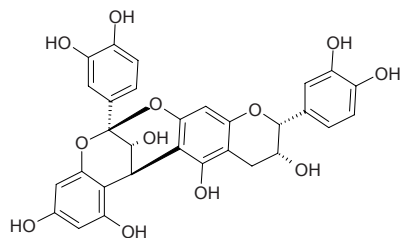
C<sub>30</sub>H<sub>24</sub>O<sub>12</sub> (576.52). Colorless needles (H<sub>2</sub>O), mp 280°C (dec), [α]<sub>D</sub><sup>22</sup> = +63.87° (c = 1.12, acetone). **Pharm:** Hyaluronidase inhibitor<sup>[2284]</sup>. **Source:** LUO HUA SHENG *Arachis hypogaea*, DAO NIAN ZI *Garcinia mangostana* (fruit hull). **Ref:** 2284,3066.

**17867 Proanthocyanidin A<sub>2</sub>**

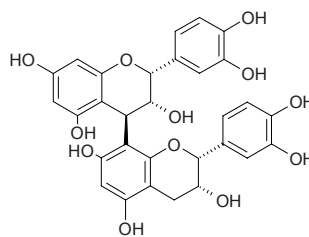
[41743-41-3] C<sub>30</sub>H<sub>24</sub>O<sub>12</sub> (576.52). Colorless needles (H<sub>2</sub>O), mp 273°C (dec), [α]<sub>D</sub> = +55.63° (c = 1.08, acetone). **Pharm:** Hyaluronidase inhibitor; tanning agent. **Source:** DAO NIAN ZI *Garcinia mangostana* (fruit hull)<sup>[3066]</sup>, LUO HUA SHENG *Arachis hypogaea*, OU ZHOU QI YE SHU *Aesculus hippocastanum*, SU DAN KE LE GUO *Cola acuminata*, YUE JU YE *Vaccinium vitis-idaea*. **Ref:** 658, 2284, 3066.

**17868 Proanthocyanidin A<sub>6</sub>**

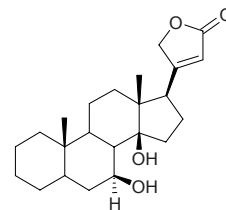
C<sub>30</sub>H<sub>24</sub>O<sub>12</sub> (576.52). Pale yellow amorphous powder, [α]<sub>D</sub><sup>21</sup> = +17.3° (c = 1.68, MeOH). **Source:** CHANG JIE ZHU *Parameria laevigata* (bark). **Ref:** 3523.

**17869 Proanthocyanidin B<sub>2</sub>**

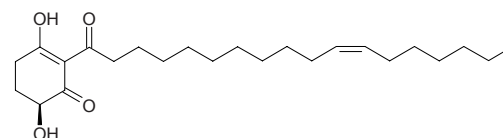
Procyanidin B<sub>2</sub> [29106-49-8] C<sub>30</sub>H<sub>26</sub>O<sub>12</sub> (578.53). Whitish amorphous powder, [α]<sub>D</sub> = +34.1° (c = 1.0, acetone), [α]<sub>D</sub> = +26° (H<sub>2</sub>O). **Pharm:** Anticomplement activity (IC<sub>50</sub> = 55.7μg/mL); antihypertensive (inhibits sympathetic nerve and relaxes blood vessels directly); inhibits promotor of cancer (mus skin cancer induced by TPA, 10μmol/L); protein kinase C inhibitor (rat cerebrum, IC<sub>50</sub> = 1μmol/L); reverse transcriptase inhibitor; antioxidant (DPPH scavenger, IC<sub>50</sub> = (0.96±0.09)μmol/L; control EGG, IC<sub>50</sub> = (1.13±0.08)μmol/L)<sup>[3848]</sup>; inhibits oxidation of LDL. **Source:** BING LANG *Areca catechu*, CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>, DAO NIAN ZI *Garcinia mangostana* (fruit hull)<sup>[3066]</sup>, DUAN MAO JIN XIAN CAO GEN *Antenoron neofiliforme*, DUN YE GUI PI *Cinnamomum bejolghota* [Syn. *Cinnamomum obtusifolium*; *Laurus bejolghota*], GUI ZHI *Cinnamomum cassia* [Syn. *Cinnamomum aromaticum*], HAI ZHOU GU SUI BU *Davallia mariesii*, LONG YAN YE *Euphoria longan* [Syn. *Dimocarpus longan*], LUO HUA SHENG *Arachis hypogaea* (seed), MAO HANG ZI SHAO *Campylotropis hirtella*, PO LUO MEN ZAO JIA *Cassia fistula*, PU<sup>(2)</sup> TAO *Vitis vinifera*, ROU GUI *Cinnamomum cassia* [Syn. *Cinnamomum aromaticum*], SHU LIANG *Dioscorea cirrhosa* [Syn. *Dioscorea pogonoides*], TIAN QIAO MAI GEN *Fagopyrum cymosum* [Syn. *Polygonum cymosum*], ZHANG SHU PI *Cinnamomum camphora*, *Aesculus* spp., *Cotoneaster* spp., *Crataegus* spp., *Malus* spp., occurs in many plants. **Ref:** 660, 900, 1521, 2604, 2871, 2893, 2908, 2963, 2976, 2977, 2982, 3066, 3848, 4893.

**17870 Proceragenin**

[144334-40-7] C<sub>23</sub>H<sub>34</sub>O<sub>4</sub> (374.53). Fine needles (MeOH), mp 254–255°C, [α]<sub>D</sub> = +6° (c = 1, alcohol). **Pharm:** Antibacterial (gram-positive and gram-negative bacteria). **Source:** CHANG NIU JIAO GUA *Calotropis procera*. **Ref:** 3643.

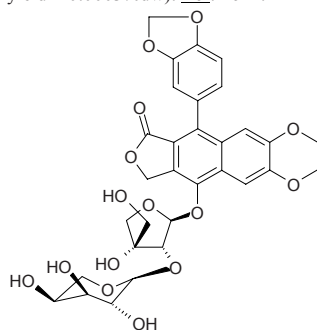
**17871 Proctorione C**

C<sub>24</sub>H<sub>40</sub>O<sub>4</sub> (392.58). **Pharm:** Cytotoxic (*in vitro*, HONE-1 cell line, 50μmol/L, cell growth InRt = 0%, IC<sub>50</sub> = 8.08μg/mL; NUGC-3 cell line, 50μmol/L, cell growth InRt = 0%, IC<sub>50</sub> = 10.3μg/mL)<sup>[3401]</sup>. **Source:** *Peperomia sui*. **Ref:** 3401.

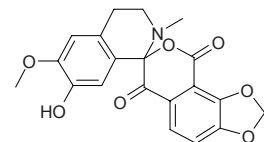


**17872 Procumbenoside A**

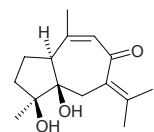
4-*O*- $\alpha$ -*L*-Arabinopyranosyl-(1" $\rightarrow$ 2")- $\beta$ -*D*-apiofuranosyldiphyllin C<sub>31</sub>H<sub>32</sub>O<sub>15</sub> (644.59). Colorless powder (MeOH),  $[\alpha]_D^{25} = -16^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Cytotoxic (*in vitro*, 212, ED<sub>50</sub> = 3.1  $\mu$ g/mL, control Cisplatin, ED<sub>50</sub> = 1.3  $\mu$ g/mL; CaSKi, not determined, control Actinomycin D, ED<sub>50</sub> = 0.0019  $\mu$ g/mL; Hep3B, ED<sub>50</sub> = 3.1  $\mu$ g/mL, control 5-Fluorouracil, ED<sub>50</sub> = 0.0715  $\mu$ g/mL; SiHa, not determined, control Actinomycin D, ED<sub>50</sub> = 0.00081  $\mu$ g/mL; HepG2, ED<sub>50</sub> = 3.9  $\mu$ g/mL, control 5-Fluorouracil, ED<sub>50</sub> = 0.033  $\mu$ g/mL; HT29, ED<sub>50</sub> = 6.7  $\mu$ g/mL, control 5-Fluorouracil, ED<sub>50</sub> = 0.074  $\mu$ g/mL; HCT116, no significant activity, control 5-Fluorouracil, ED<sub>50</sub> = 0.48  $\mu$ g/mL; MCF7, not determined; MCF7-ras, not determined). **Source:** JUE CHUANG *Rostellularia procumbens* [Syn. *Justicia procumbens*] (whole herb: yield = 0.0003%dw). **Ref:** 4612.

**17873 Procumbine**

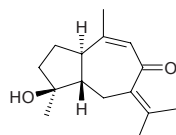
[109389-82-4] C<sub>20</sub>H<sub>17</sub>NO<sub>7</sub> (383.36). Orange-red needles, mp 191~192°C. **Source:** PING ZHAN JIAO HUI XIANG *Hypecoum procumbens*, XI GUO JIAO HUI XIANG *Hypecoum leptocarpum*. **Ref:** 3320, 3321.

**17874 Procurcumadiol**

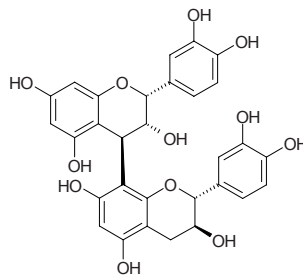
4 $\beta$ ,5 $\beta$ -Dihydroxy-7(11),9-guaiadien-8-one [129673-90-1] C<sub>15</sub>H<sub>22</sub>O<sub>3</sub> (250.34). Needles (C<sub>6</sub>H<sub>6</sub>), mp 150~150.5°C. **Source:** JIANG HUANG *Curcuma longa*. **Ref:** 1405.

**17875 Procurcumenol**

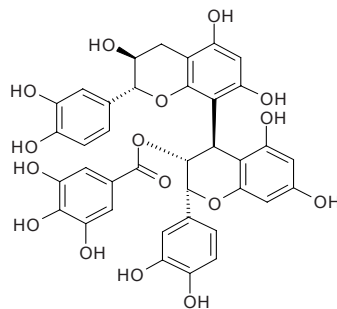
[21698-40-8] C<sub>15</sub>H<sub>22</sub>O<sub>2</sub> (234.34). **Pharm:** NO production inhibitor (mus peritoneal macrophages, induced by LPS, 100  $\mu$ mol/L, InRt = (67.8 $\pm$ 4.4)%, control *L*-NMMA, 100  $\mu$ mol/L, InRt = (79.2 $\pm$ 0.9)%,  $p < 0.01$ )<sup>[4150]</sup>, TNF- $\alpha$  production inhibitor (LPS-activated macrophages, mean IC<sub>50</sub> = 310.5  $\mu$ mol/L)<sup>[4416]</sup>. **Source:** PING E SHU *Curcuma zedoaria* [Syn. *Curcuma aeruginosa*]. **Ref:** 6, 4150, 4416.

**17876 Procyanidin B<sub>1</sub>**

[20315-25-7] C<sub>30</sub>H<sub>26</sub>O<sub>12</sub> (578.53). Yellowish powder, crystals (MeOH, deca-Ac compound), mp 231~232°C (deca-Ac compound), RI [25, D] = +110.9° ( $c = 2$ , acetone, deca-Ac compound). **Pharm:** Antineoplastic (tumor caused by TPA, 10  $\mu$ mol/L); antioxidant (inhibits free-radical induced lysis of rat red blood cells and exhibits strong and dose-dependent protection of cell membrane)<sup>[5341]</sup>; antioxidant (mitochondria of mus heart, inhibits oxygen consumption, IC<sub>50</sub> = 16.0  $\mu$ mol/L, inhibits formation of MDA, IC<sub>50</sub> = 15.5  $\mu$ mol/L, at 5 $\times$ 10<sup>-5</sup>~100 $\times$ 10<sup>-5</sup>%, pH 7~9, activity stronger than VC,  $\gamma$ -oryzanol, gallic acid and catechin); DPPH scavenger (stronger than VC and VE). **Source:** BING LANG *Areca catechu*, CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>, CHI DOU *Vigna angularis* [Syn. *Dolichus angularis*; *Phaseolus angularis*], DAN ZI SHAN *ZHA Crataegus monogyna*, HONG HUA LU TI CAO *Pyrola incarnata*, HUA GOU TENG *Uncaria sinensis*, HUANG YAO ZI *Dioscorea bulbifera*, KE KE *Theobroma cacao*, LUO HAN BAI *Thujopsis dolobrata*, LUO YE SONG *Larix gmelini*, MAO HANG ZI SHAO *Campylotropis hirtella*, MAO SHU *Dioscorea alata*, MAO ZHI HUA *Betula pubescens*, OU ZHOU QI YE SHU *Aesculus hippocastanum*, PU<sup>(2)</sup> TAO *Vitis vinifera*, ROU GUI *Cinnamomum cassia* [Syn. *Cinnamomum aromaticum*], SHU LIANG *Dioscorea cirrhosa* [Syn. *Dioscorea pogonoides*], YE CAO MEI *Fragaria vesca*, YUE JU YE *Vaccinium vitis-idaea*, ZHANG SHU PI *Cinnamomum camphora*, *Betula* spp., occurs in many plants. **Ref:** 660, 1521, 1555, 2871, 2893, 2963, 2977, 3103, 3322, 3323, 3324, 4893, 5341.

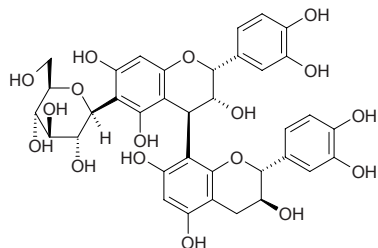
**17877 Procyanidin B<sub>1</sub> 3'-*O*-gallate**

C<sub>37</sub>H<sub>30</sub>O<sub>16</sub> (730.64).  $[\alpha]_D^{21} = -21^\circ$  (Me<sub>2</sub>CO). **Source:** CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>, DA HUANG *Rheum officinale*, HE SHOU WU *Polygonum multiflorum*, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. **Ref:** 2, 660, 1521, 2893, 4893.

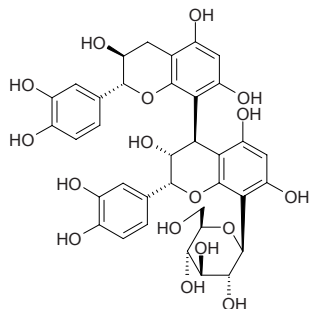


**17878 Procyanidin B<sub>1</sub>-6-C-β-D-glucopyranoside**

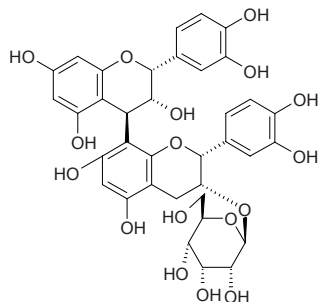
[105330-50-5] C<sub>36</sub>H<sub>36</sub>O<sub>17</sub> (740.68). Off-white amorphous powder +2H<sub>2</sub>O or tan powder +1H<sub>2</sub>O, [α]<sub>D</sub><sup>21</sup> = +12.5° (c = 1.1, Me<sub>2</sub>CO), [α]<sub>D</sub><sup>21</sup> = +45.1° (c = 0.79, MeOH). Source: ROU GUI *Cinnamomum cassia* [Syn. *Cinnamomum aromaticum*], *Rheum* spp. Ref: 3325, 2908.

**17879 Procyanidin B<sub>1</sub>-8-C-β-D-glucopyranoside**

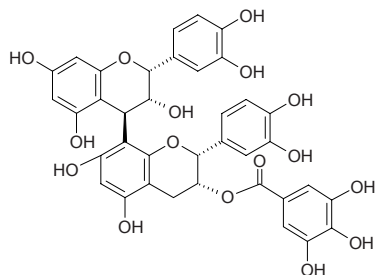
[105371-28-6] C<sub>36</sub>H<sub>36</sub>O<sub>17</sub> (740.68). Tan powder +1.5H<sub>2</sub>O, [α]<sub>D</sub><sup>19</sup> = +33.7° (c = 0.88, MeOH). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>. Ref: 2908, 3325, 4893.

**17880 Procyanidin B<sub>2</sub>-3''-O-β-D-allopyranoside**

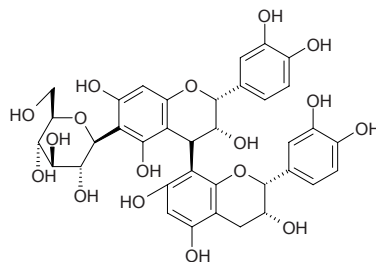
C<sub>36</sub>H<sub>36</sub>O<sub>17</sub> (740.68). Source: DAN YE XIN YUE JUE *Pronephrium simplex* [Syn. *Meniscium simplex*]. Ref: 660.

**17881 Procyanidin B<sub>2</sub>-3'-O-gallate**

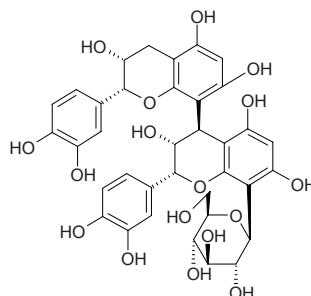
C<sub>37</sub>H<sub>30</sub>O<sub>16</sub> (730.64). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>, DUAN MAO JIN XIAN CAO GEN *Antenoron neofiliforme*, HONG HUA LU TI CAO *Pyrola incarnata*. Ref: 2893, 2976, 3103, 4893.

**17882 Procyanidin B<sub>2</sub>-6-C-glucopyranoside**

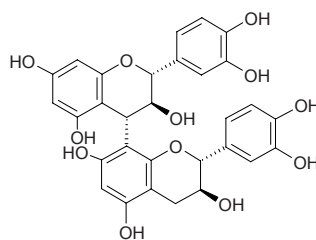
C<sub>36</sub>H<sub>36</sub>O<sub>17</sub> (740.68). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>. Ref: 3325, 4893.

**17883 Procyanidin B<sub>2</sub>-8-C-β-D-glucopyranoside**

C<sub>36</sub>H<sub>36</sub>O<sub>17</sub> (740.68). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>. Ref: 3325, 4893.

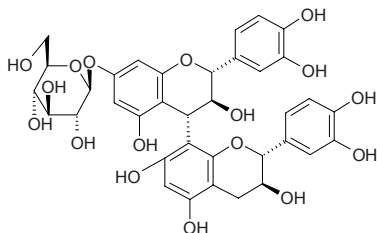
**17884 Procyanidin B<sub>3</sub>**

[20315-25-7] C<sub>30</sub>H<sub>26</sub>O<sub>12</sub> (578.53). Brown amorphous powder, [α]<sub>D</sub><sup>18</sup> = -158.0° (c = 0.5, acetone:H<sub>2</sub>O = 1:1). Pharm: Antioxidant (inhibits oxidation of LDL, at (0.00005~0.005)%, pH 7~9, activity stronger than VC, γ-oryzanol, gallic acid and catechin); DPPH scavenger (stronger than VC and VE); antioxidant (DPPH scavenger, IC<sub>50</sub> = (1.11±0.15) μmol/L; control EGG, IC<sub>50</sub> = (1.13±0.08) μmol/L)<sup>[3848]</sup>. Source: BING LANG *Areca catechu*, HONG HUA LU TI CAO *Pyrola incarnata*, HUANG HUA ER LIU *Salix caprea*, JIN YING ZI *Rosa laevigata*, LUO HUA SHENG *Arachis hypogaea* (seed), LUO YE SONG *Larix gmelini*, MAO ZHI HUA *Betula pubescens*, NIAN WEI LING CAI *Potentilla viscosa*, PU ER CHA *Camellia sinensis* var. *assamica*, PU<sup>(2)</sup> TAO *Vitis vinifera*, RUAN TIAO QI QIANG WEI *Rosa henryi*, YAN BAI CAI *Bergenia purpurascens*, YUE JU YE *Vaccinium vitis-idaea*, *Betula* spp. Ref: 1555, 3848.

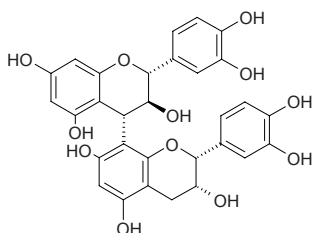


**17885 Procyanidin B<sub>3</sub>-7-*O*-β-D-glucopyranoside**

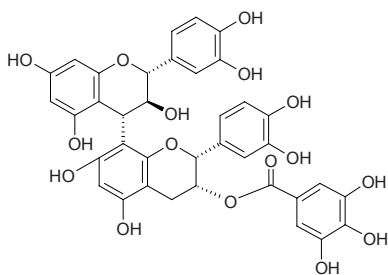
[105330-57-2] C<sub>36</sub>H<sub>36</sub>O<sub>17</sub> (740.68). Tan powder +1H<sub>2</sub>O, [α]<sub>D</sub><sup>19</sup> = -197.5° (c = 0.69, MeOH). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>. Ref: 1521, 3325, 4893.

**17886 Procyanidin B<sub>4</sub>**

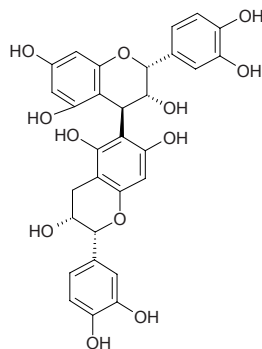
[29106-51-2] C<sub>30</sub>H<sub>26</sub>O<sub>12</sub> (578.53). mp 207~210°C. Pharm: Antioxidant; inhibits oxidation of LDL; antineoplastic (mus, TPA-induced skin tumor, 10 μmol/L with moderate action); antiulcerative; treatment of pediatric gastrointestinal functional disorder; antioxidant (DPPH scavenger, IC<sub>50</sub> = (1.02±0.09) μmol/L; control EGG, IC<sub>50</sub> = (1.13±0.08) μmol/L)<sup>[3848]</sup>. Source: FU PEN ZI *Rubus idaeus*, KUN MING SHAN HAI TANG *Tripterygium hypoglaucum*, LUO HUA SHENG *Arachis hypogaea* (seed). Ref: 612, 658, 1832, 1833, 3848.

**17887 Procyanidin B<sub>4</sub>-3'-*O*-gallate**

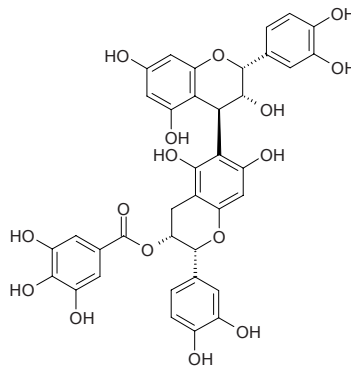
C<sub>37</sub>H<sub>30</sub>O<sub>16</sub> (730.64). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>. Ref: 2893, 4893.

**17888 Procyanidin B<sub>5</sub>**

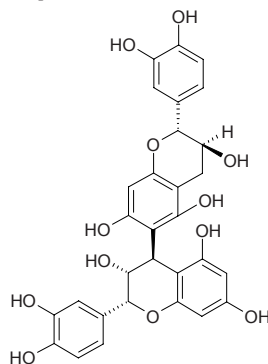
Proanthocyanidin B<sub>5</sub> [12798-57-1] C<sub>30</sub>H<sub>26</sub>O<sub>12</sub> (578.53). [α]<sub>D</sub> = +102° (H<sub>2</sub>O). Source: DAO NIAN ZI *Garcinia mangostana* (fruit hull)<sup>[3066]</sup>, DUN YE GUI PI *Cinnamomum bejolghota* [Syn. *Cinnamomum obtusifolium*; *Laurus bejolghota*], FU SHE SONG *Pinus radiata*, HAI ZHOU GU SUI BU *Davallia mariesii*, KE KE *Theobroma cacao*, MAO HANG ZI SHAO *Campylotropis hirtella*, OU ZHOU QI YE SHU *Aesculus hippocastanum*, ROU GUI *Cinnamomum cassia* [Syn. *Cinnamomum aromaticum*], SHU LIANG *Dioscorea cirrhosa* [Syn. *Dioscorea pogonoides*], TAI DA SONG *Pinus taeda*. Ref: 1521, 2604, 2871, 2908, 2963, 2977, 3066.

**17889 Procyanidin B<sub>5</sub> 3'-*O*-gallate**

C<sub>37</sub>H<sub>30</sub>O<sub>16</sub> (730.64). White powder, [α]<sub>D</sub><sup>22</sup> = 61° (c = 0.12, MeOH). Source: SHAN PU TAO *Vitis amurensis*. Ref: 772.

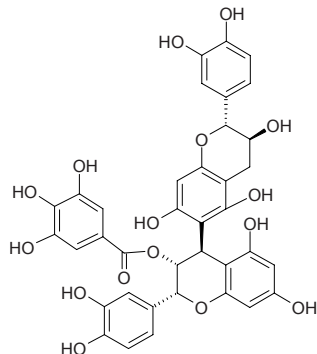
**17890 Procyanidin B<sub>7</sub>**

[12798-59-3] C<sub>30</sub>H<sub>26</sub>O<sub>12</sub> (578.53). [α]<sub>D</sub> = +142° (H<sub>2</sub>O). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>, HUANG HUA ER LIU *Salix caprea*, ROU GUI *Cinnamomum cassia* [Syn. *Cinnamomum aromaticum*], TAI DA SONG *Pinus taeda*, YUE JU YE *Vaccinium vitis-idaea*, ZHANG SHU PI *Cinnamomum camphora*. Ref: 1521, 2893, 2963, 3324, 4893.

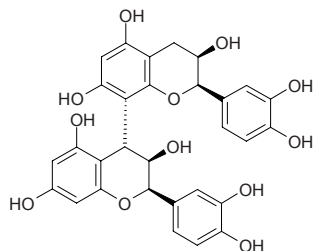


**17891 Procyanidin B<sub>7</sub>-3-O-gallate**

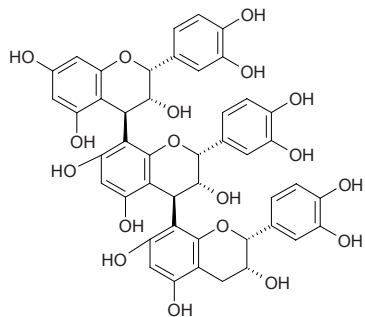
C<sub>37</sub>H<sub>30</sub>O<sub>16</sub> (730.64). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>. Ref: 2893, 4893.

**17892 Procyanidin C**

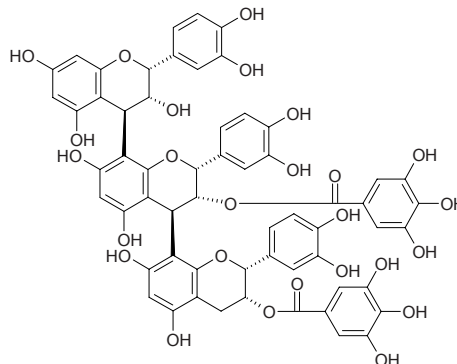
[35356-33-3] C<sub>30</sub>H<sub>26</sub>O<sub>12</sub> (578.53). mp 212~215°C, [α]<sub>D</sub><sup>27</sup> = -201° (methanol). Source: KUN MING SHAN HAI TANG *Tripterygium hypoglaucum*, HONG HUA LU TI CAO *Pyrola incarnata*. Ref: 612, 660.

**17893 Procyanidin C<sub>1</sub>**

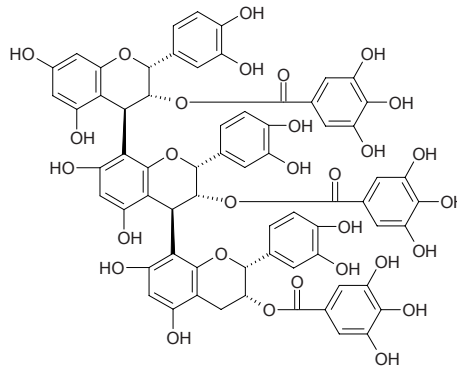
[65085-09-8] C<sub>45</sub>H<sub>38</sub>O<sub>18</sub> (866.79). [α]<sub>D</sub> = +102° (H<sub>2</sub>O). Source: MAO HANG ZI SHAO *Campylotropis hirtella*, ROU GUI *Cinnamomum cassia* [Syn. *Cinnamomum aromaticum*], SHU LIANG *Dioscorea cirrhosa* [Syn. *Dioscorea poganoides*], ZHANG SHU PI *Cinnamomum camphora*, occurs in many plants. Ref: 660, 1521, 2871, 2963, 2977.

**17894 Procyanidin C<sub>1</sub>-3',3''-di-O-gallate**

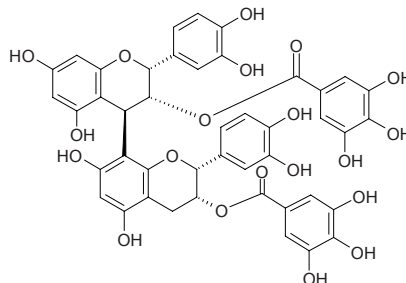
[106533-61-3] C<sub>59</sub>H<sub>46</sub>O<sub>26</sub> (1171.01). Tan amorphous powder +4H<sub>2</sub>O, [α]<sub>D</sub><sup>28</sup> = -5.5° (c = 0.64, Me<sub>2</sub>CO). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>. Ref: 2893, 4893.

**17895 Procyanidin C<sub>1</sub>-3,3',3''-tri-O-gallate**

[106533-62-4, 117772-85-7] C<sub>66</sub>H<sub>50</sub>O<sub>30</sub> (1323.12). Tan amorphous powder +3H<sub>2</sub>O, [α]<sub>D</sub><sup>28</sup> = +13.4° (c = 0.93, Me<sub>2</sub>CO). Pharm: Angiotensin I-converting enzyme inhibitor, ACEI (strong); xanthinoxidase inhibitor; antioxidant (peroxidized anion scavenger); cytotoxic (melanotic carcinoma RPMI-7951 ED<sub>50</sub> = 3.05 μg/mL). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>, HU ER CAO *Saxifraga stolonifera*. Ref: 1728, 2893, 3326, 3327, 4893.

**17896 Procyanidin B<sub>2</sub> 3,3'-di-O-gallate**

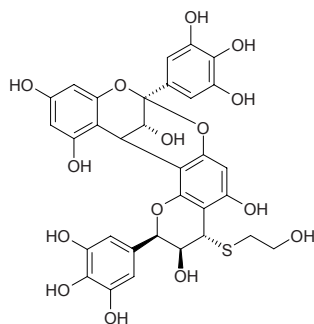
[79907-44-1] C<sub>44</sub>H<sub>34</sub>O<sub>20</sub> (882.75). Pharm: Antiviral (HSV-1, concentration for reducing spots by 50% PRD<sub>50</sub> = 15 μmol/L); cytotoxic (melanotic carcinoma RPMI-7951, ED<sub>50</sub> = 3.45 μg/mL); topoisomerase II inhibitor (*in vitro*, IC<sub>50</sub> = 12.5 μmol/L). Source: CHANG JI HUANG *Rheum* sp.<sup>[4893]</sup>, DA HUANG *Rheum officinale*, HONG HUA LU TI CAO *Pyrola incarnata*, TANG GU TE DA HUANG *Rheum tanguticum*, TIAN QIAO MAI GEN *Fagopyrum cymosum* [Syn. *Polygonum cymosum*], ZHANG YE DA HUANG *Rheum palmatum*. Ref: 2, 660, 1046, 1727, 1728, 2656, 2893, 3103, 4893.



**17897 Prodelphinidin A<sub>2</sub> 4'-(2-hydroxyethyl)thio ether**

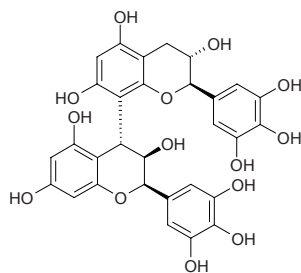
C<sub>32</sub>H<sub>28</sub>O<sub>15</sub>S (684.63). Red amorphous powder,  $[\alpha]_D = -18.6^\circ$  ( $c = 0.2$ , MeOH).

Source: XIAO GUO YE JIAO *Musa acuminata* (fruit). Ref: 3913.

**17898 Prodelphinidin B<sub>1</sub>**

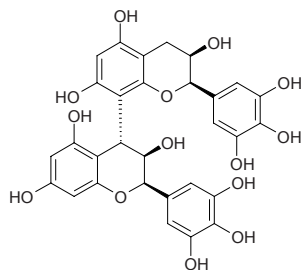
C<sub>30</sub>H<sub>26</sub>O<sub>14</sub> (610.53). Source: AN MO LE *Phyllanthus emblica* (leaf, branch).

Ref: 3094.

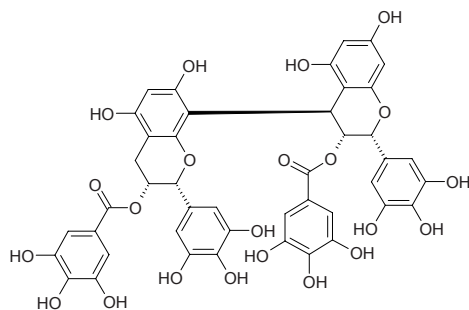
**17899 Prodelphinidin B<sub>2</sub>**

C<sub>30</sub>H<sub>26</sub>O<sub>14</sub> (610.53). Source: AN MO LE *Phyllanthus emblica* (leaf, branch).

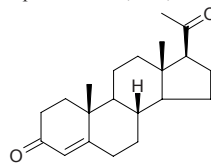
Ref: 3094.

**17900 Prodelphinidin B 23,3'-di-O-gallate**

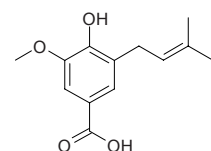
C<sub>44</sub>H<sub>34</sub>O<sub>22</sub> (914.75). Pharm: Anti-HSV-2 (*in vitro*, XTT and plaque reduction (PRA) assay, MOI (multiplicity of infection: Number of virus units (plaque forming units (PFU)) per cell) = 0.5, IC<sub>50</sub> = (5.3±0.1)μmol/L, CC<sub>50</sub> = (35.5±2.5)μmol/L, SI = 6.7, control Acyclovir IC<sub>50</sub> = (0.8±0.1)μmol/L, CC<sub>50</sub> > 1000μmol/L, SI > 1250; plaque reduction assay, IC<sub>50</sub> = (0.4±0.04)μmol/L, SI = 88.8, Acyclovir IC<sub>50</sub> = (0.4±0.1)μmol/L, SI > 2500). Source: YANG MEI SHU PI *Myrica rubra*. Ref: 5468.

**17901 Progesterone**

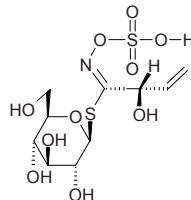
Pregn-4-ene-3,20-dione; Progestine; Progestone; Gestone; Nalutron; Luteol [57-83-0] C<sub>21</sub>H<sub>30</sub>O<sub>2</sub> (314.47). mp ( $\alpha$ ) 129~131°C, mp ( $\beta$ ) 121°C,  $[\alpha]_D^{20} (\beta) = +172\sim182^\circ$  ( $c = 2$ , dioxane), insoluble in water, soluble in ethanol, acetone, chloroform, dioxane.<sup>[5507]</sup> Pharm: Steroid hormone (responsible for preparing the inner lining of the uterus for pregnancy). Source: ZI HE CHE *Homo sapiens*. Ref: 6, 658, 5507.

**17902 Proglobleflowery acid**

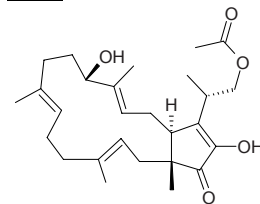
3-Methoxy-4-hydroxyl-5-(3'-methyl-2') butylenyl benzoic acid [146367-85-3] C<sub>13</sub>H<sub>16</sub>O<sub>4</sub> (236.27). White acicular crystals (ethanol-water), mp 141~142°C, hardly soluble in water, easily soluble in 5mol/L NaHCO<sub>3</sub>. Source: CHANG BAN JIN LIAN HUA *Trollius macropetalus*. Ref: 245.

**17903 Progoitrin**

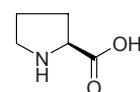
[585-95-5] C<sub>11</sub>H<sub>19</sub>NO<sub>10</sub>S<sub>2</sub> (389.40). Pharm: Causes goitre; feeding irritant (*Plutella maculipennis*); promotes oviposition (*Delia brassicae*); toxin (animal model). Source: YOU CAI ZI *Brassica napus* var. *napus*, JIE ZI *Brassica juncea*, GAN LAN *Brassica oleracea* var. *capitata*. Ref: 658.

**17904 Proliferin**

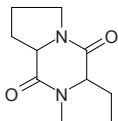
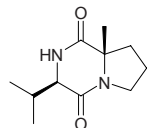
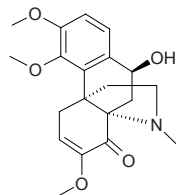
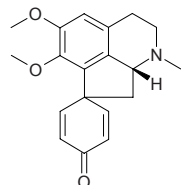
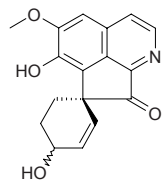
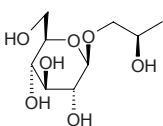
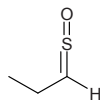
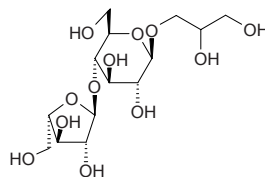
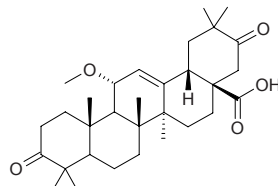
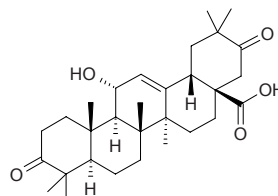
Fysaproliferin [152469-17-5] C<sub>27</sub>H<sub>40</sub>O<sub>5</sub> (444.61). Amorphous solid, mp 142~147°C,  $[\alpha]_D = -35^\circ$  ( $c = 0.255$ , methanol). Pharm: Toxin (*Artemia salina*) Source: DUN YE SHU YU *Dioscorea zingiberensis*. Ref: 1166.

**17905 Proline**

[147-85-3] C<sub>5</sub>H<sub>9</sub>NO<sub>2</sub> (115.13). Crystals (EtOH-Et<sub>2</sub>O), mp 220~222°C (dec),  $[\alpha]_D^{25} = -86.2^\circ$  ( $c = 1$ , H<sub>2</sub>O),  $[\alpha]_D = -60.4^\circ$  ( $c = 1$ , 5M HCl). Source: BAN XIA *Pinellia ternata* (dried tuber: content scope of 4 origins = 0.07%~0.74%, mean content = 0.52%)<sup>[5521]</sup>, occurs in many plants. Ref: 1521, 5521.



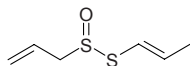


**17906 L-Prolyl-L-proline anhydride**C<sub>10</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub> (194.24). Source: ZHANG YE BAN XIA *Pinellia pedatisecta*.Ref: 477.**17907 L-Prolyl-L-valine anhydride**C<sub>11</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub> (210.28). Source: ZHANG YE BAN XIA *Pinellia pedatisecta*.Ref: 3328.**17908 Prometaphanine**[6858-85-1] C<sub>20</sub>H<sub>25</sub>NO<sub>5</sub> (359.43). Source: QIAN JIN TENG *Stephania**japonica*. Ref: 6, 1521.**17909 Pronuciferine**[2128-60-1] C<sub>19</sub>H<sub>21</sub>NO<sub>3</sub> (311.38). mp (+) 127~129°C, (±) 148~1451°C. Pharm:Local anesthetic. Source: GUANG YE DI BU RONG *Stephania glabra*, HE YE *Nelumbo nucifera*, LIAN ZI *Nelumbo nucifera*, LIAN ZI XIN *Nelumbo nucifera*, XIAN YE BA DOU *Croton linearis*. Ref: 6, 658.**17910 Prooxocryprochine**C<sub>17</sub>H<sub>15</sub>NO<sub>4</sub> (297.31). Yellow syrup, [α]<sub>D</sub><sup>20</sup> = -17.2° (c = 0.0193, MeOH). Source:HOU KE GUI *Cryptocarya chinensis* (wood). Ref: 3092.**17911 (2S)-Propane-1,2-diol 1-O-β-D-glucopyranoside**C<sub>9</sub>H<sub>18</sub>O<sub>7</sub> (238.24). Amorphous powder, [α]<sub>D</sub><sup>21</sup> = -8°. Source: HU SUI ZI*Coriandrum sativum*. Ref: 4302.**17912 Propanethial S-oxide**C<sub>3</sub>H<sub>6</sub>OS (90.15). Pharm: Lacrimator. Source: YANG CONG *Allium cepa*. Ref: 658.**17913 Propane-1-thiol**[107-03-9] C<sub>3</sub>H<sub>8</sub>S (76.16). Pharm: Flavorant. Source: BAI FAN DOU*Phaseolus vulgaris*, DA TOU SUAN *Allium ampeloprasum*, MA LING SHU *Solanum tuberosum*, WAN DOU *Pisum sativum*, YANG CONG *Allium cepa*.Ref: 658.**17914 Propane-2-thiol**[75-33-2] C<sub>3</sub>H<sub>8</sub>S (76.16). Pharm: Flavorant. Source: MA LING SHU *Solanum tuberosum*. Ref: 658.**17915 Propanetriol-α-L-arabinofuranosyl (1→4)-β-D-glucopyranoside**C<sub>14</sub>H<sub>26</sub>O<sub>12</sub> (386.36). Pharm: Antihypertensive. Source: HONG HUA*Carthamus tinctorius*. Ref: 3329.**17916 n-Propanol**[71-23-8] C<sub>3</sub>H<sub>8</sub>O (60.10). Source: SHENG JIANG *Zingiber officinale*. Ref: 2.**17917 Propapyriogenin A<sub>1</sub>**[72933-73-4] C<sub>31</sub>H<sub>46</sub>O<sub>5</sub> (498.71). Crystals (Et<sub>2</sub>O-C<sub>6</sub>H<sub>6</sub>), mp 142~145°C, [α]<sub>D</sub><sup>20</sup> = -30° (c = 0.1, EtOH). Source: TONG TUO MU *Tetrapanax papyriferus*. Ref: 3135.**17918 Propapyriogenin A<sub>2</sub>**[72933-74-5] C<sub>30</sub>H<sub>44</sub>O<sub>5</sub> (484.68). Pharm: Anti-inflammatory. Source: TONG TUO MU *Tetrapanax papyriferus*, YUAN YE CHAI HU *Bupleurum rotundifolium*. Ref: 658.

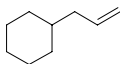


**17919 1-Propenylallylthiosulfinate**

$C_6H_{10}OS_2$  (162.27). Source: DA SUAN *Allium sativum*. Ref: 1392.

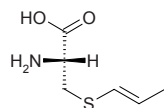
**17920 1-Propenyl-cyclohexane**

[2114-42-3]  $C_9H_{16}$  (124.23). Source: SHAN ZHA *Crataegus pinnatifida*. Ref: 2.

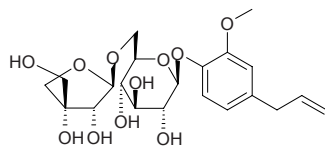
**17921 S-(1-Propenyl)-L-cystein**

[52438-09-2]  $C_6H_{11}NO_2S$  (161.22). Needles (EtOH aq.), mp 195°C (dec),  $[\alpha]_D^{10} = -15^\circ$  ( $c = 0.4$ , 2N HCl). Source: DA SUAN *Allium sativum*. Ref:

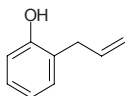
3110.

**17922 4-Propenyl-2-methoxyphenyl 6-O-β-D-apiofuranosyl (1→6)-β-D-glucopyranoside**

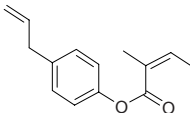
$C_{21}H_{30}O_{11}$  (458.47). Source: ZHONG HUA QING NIU DAN *Tinospora sinensis* (stem). Ref: 4292.

**17923 2-(2-Propenyl) phenol**

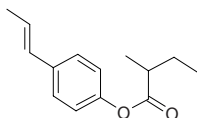
$C_9H_{10}O$  (134.18). Source: DA LIANG JIANG *Alpinia galanga*. Ref: 660.

**17924 4-(2-Propenyl)-phenyl angelate**

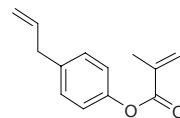
$C_{14}H_{16}O_2$  (216.28). Colorless oil. Pharm: Antimycobacterial (*Mycobacterium intracellulare*,  $IC_{50} = 7.0\mu g/mL$ , control Ciprofloxacin,  $IC_{50} = 0.25\mu g/mL$ ); antifungal (*Cryptococcus neoformans*,  $IC_{50} = 40\mu g/mL$ , control Amphotericin B,  $IC_{50} = 0.5\mu g/mL$ ); antimalarial (*Plasmodium falciparum* D6,  $IC_{50} = 2.2\mu g/mL$ , SI > 4.5, control Artemisinin,  $IC_{50} = 0.006\mu g/mL$ ; *Plasmodium falciparum* W2,  $IC_{50} = 1.8\mu g/mL$ , SI > 5.5, control Artemisinin,  $IC_{50} = 0.007\mu g/mL$ ). Source: *Pimpinella isaurica*. Ref: 5465.

**17925 4-(1-Propenyl)-phenyl 2-methylbutanoate**

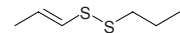
Anethol 2-methyl-butyrate  $C_{14}H_{18}O_2$  (218.30). Colorless oil. Source: *Pimpinella corymbosa*. Ref: 5465.

**17926 4-(1-Propenyl)-phenyl tiglate**

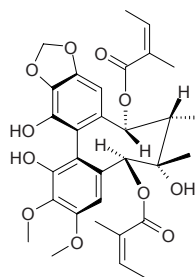
Anol tiglate  $C_{14}H_{16}O_2$  (216.28). Colorless oil. Pharm: Antimycobacterial (*Mycobacterium intracellulare*,  $IC_{50} = 15\mu g/mL$ , control Ciprofloxacin,  $IC_{50} = 0.25\mu g/mL$ ); antifungal (*Cryptococcus neoformans*,  $IC_{50} = 25\mu g/mL$ , control Amphotericin B,  $IC_{50} = 0.5\mu g/mL$ ). Source: *Pimpinella isaurica*. Ref: 5465.

**17927 Propenyl propyl disulfide**

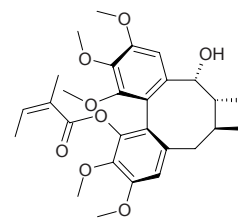
$C_6H_{12}S_2$  (148.29). Source: XI XIANG CONG *Allium schoenoprasum*. Ref: 6.

**17928 Propinquanin E**

$C_{31}H_{36}O_{11}$  (584.63). Colorless needles, mp 110~112°C,  $[\alpha]_D^{20} = +34^\circ C$  ( $c = 0.22$ ,  $CHCl_3$ ). Pharm: Cytotoxic (hmn hepatocellular carcinoma HepG2,  $IC_{50} = 35.95\mu mol/L$ , control Camptothecin,  $IC_{50} = 1.23\mu mol/L$ ; hmn oropharyngeal epidermoid carcinoma KB,  $IC_{50} = 46.23\mu mol/L$ , Camptothecin,  $IC_{50} = 1.78\mu mol/L$ ; hmn acute promyelocytic leukemia HL-60,  $IC_{50} = 32.53\mu mol/L$ , Camptothecin,  $IC_{50} = 1.35\mu mol/L$ ; hepatocellular carcinoma Bel7402,  $IC_{50} = 39.38\mu mol/L$ , Camptothecin,  $IC_{50} = 1.02\mu mol/L$ ). Source: HAN RUI WU WEI ZI *Schisandra propinqua* (stem: yield = 0.00086% dw). Ref: 2097.

**17929 Propinquanin F**

$C_{28}H_{36}O_8$  (500.59). Colorless needles, mp 109°C,  $[\alpha]_D^{20} = +8.5^\circ$  ( $c = 1.48$ ,  $CHCl_3$ ). Pharm: Cytotoxic (hmn hepatocellular carcinoma HepG2,  $IC_{50} = 59.91\mu mol/L$ , control Camptothecin,  $IC_{50} = 1.23\mu mol/L$ ; hmn oropharyngeal epidermoid carcinoma KB,  $IC_{50} = 42.98\mu mol/L$ , Camptothecin,  $IC_{50} = 1.78\mu mol/L$ ; hmn acute promyelocytic leukemia HL-60,  $IC_{50} = 60.02\mu mol/L$ , Camptothecin,  $IC_{50} = 1.35$  mol/L). Source: HAN RUI WU WEI ZI *Schisandra propinqua* (stem: yield = 0.0037% dw). Ref: 2097.

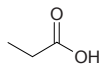
**17930 Propionaldehyde**

Propanal [123-38-6]  $C_3H_6O$  (58.08). Source: SHENG JIANG *Zingiber officinale*. Ref: 2.

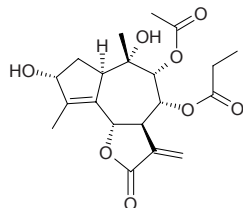


**17931 Propionic acid**

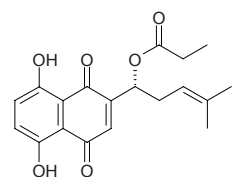
Propanoic acid [79-09-4] C<sub>3</sub>H<sub>6</sub>O<sub>2</sub> (74.08). bp 141.35°C. **Pharm:** Antifungal; antiseptic; inhibits molds. **Source:** BAI GUO *Ginkgo biloba*. **Ref:** 2, 658.

**17932 8 $\alpha$ -Propionyloxyanthemolide C**

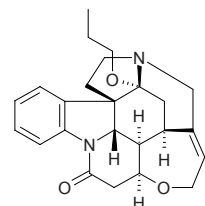
C<sub>20</sub>H<sub>26</sub>O<sub>8</sub> (394.43). Amorphous solid. **Source:** *Anthemis carpatica* (aerial parts). **Ref:** 3974.

**17933 Propionylshikonin**

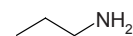
C<sub>19</sub>H<sub>20</sub>O<sub>6</sub> (344.37). **Source:** ZI CAO *Lithospermum erythrorhizon*. **Ref:** 2193.

**17934 16-Propoxystrychnine**

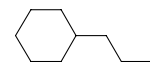
C<sub>24</sub>H<sub>28</sub>N<sub>2</sub>O<sub>3</sub> (392.50). mp 174~175°C. **Source:** LV SONG GUO *Strychnos ignatii*. **Ref:** 6.

**17935 Propylamine**

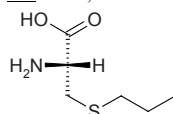
*n*-Propylamine [107-10-8] C<sub>3</sub>H<sub>9</sub>N (59.11). bp 49°C. **Source:** LING MAO XIANG *Viverra zibetha*. **Ref:** 6.

**17936 Propylcyclohexane**

[1678-92-8] C<sub>9</sub>H<sub>18</sub> (126.24). **Source:** SHAN ZHA *Crataegus pinnatifida*. **Ref:** 2.

**17937 S-Propyl-L-cystein**

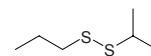
C<sub>6</sub>H<sub>13</sub>NO<sub>2</sub>S (163.24). [α]<sub>D</sub> = -24.9° (H<sub>2</sub>O). **Source:** DA SUAN *Allium sativum*. **Ref:** 1521, 3330.

**17938 2-N-Propyl-1,3-dioxolane**

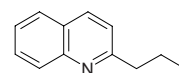
C<sub>5</sub>H<sub>11</sub>NO<sub>2</sub> (117.15). **Source:** AI YE *Artemisia argyi*. **Ref:** 1280.

**17939 Propyl isopropyl disulfide**

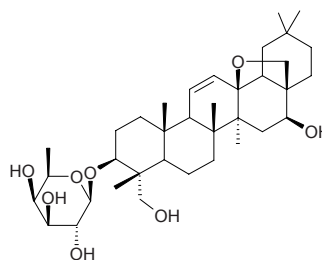
C<sub>6</sub>H<sub>14</sub>S<sub>2</sub> (150.31). **Source:** XIE BAI *Allium macrostemon*. **Ref:** 1391.

**17940 2-n-Propylquinoline**

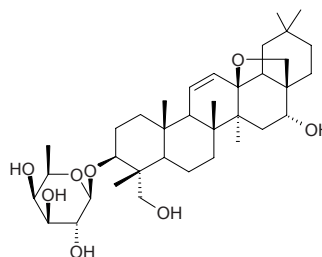
[1613-32-7] C<sub>12</sub>H<sub>13</sub>N (171.24). Oil. **Pharm:** Antileishmanial (*in vitro*: *Leishmania* sp. 2903 IC<sub>50</sub> = 50μg/mL, *Trypanosoma cruzi* IC<sub>50</sub> = 50μg/mL, mus-infected *Leishmania amazonensis*); antiplasmodial (*in vivo*: mus, infected by *Plasmodium vinckei*, 0.31mmol/L/kg, survival rate = 60%); plant growth and germination inhibitor (lettuce WO JU *Lactuca sativa*). **Source:** BAO PIAN TU LA SHU *Galipea bracteata*, CHANG HUA TU LA SHU *Galipea longiflora*. **Ref:** 3600, 3601, 3602, 3603.

**17941 Prosaikogenin F**

3-O-β-D-Fucopyranosyl saikogenin F C<sub>36</sub>H<sub>58</sub>O<sub>8</sub> (618.86). **Source:** ZHU YE CHAI HU *Bupleurum marginatum*. **Ref:** 660.

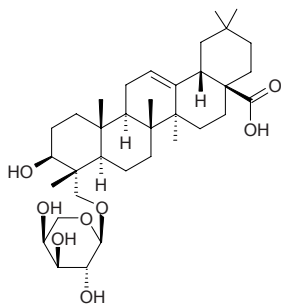
**17942 Prosaikogenin G**

C<sub>36</sub>H<sub>58</sub>O<sub>8</sub> (618.86). **Source:** WEN CHUAN CHAI HU *Bupleurum wenchuanense*. **Ref:** 3331.

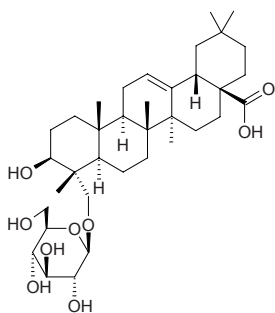


**17943 Prosapogenin CP<sub>0</sub>**

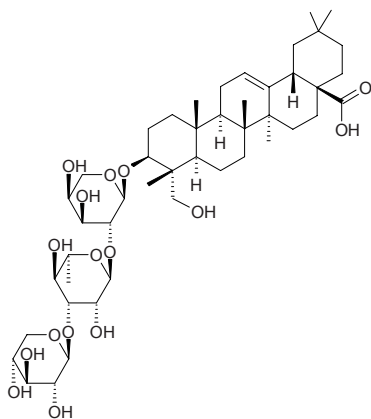
Hederagenin-23-*O*- $\alpha$ -*L*-arabinopyranoside C<sub>35</sub>H<sub>56</sub>O<sub>8</sub> (604.83). Source: WEI LING XIAN *Clematis chinensis*. Ref: 660.

**17944 Prosapogenin CP<sub>2a</sub>**

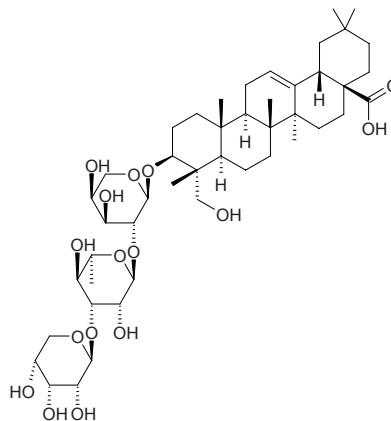
Hederagenin-23-*O*- $\beta$ -*D*-glucopyranoside C<sub>36</sub>H<sub>58</sub>O<sub>9</sub> (634.86). Source: WEI LING XIAN *Clematis chinensis*. Ref: 660.

**17945 Prosapogenin CP<sub>5</sub>**

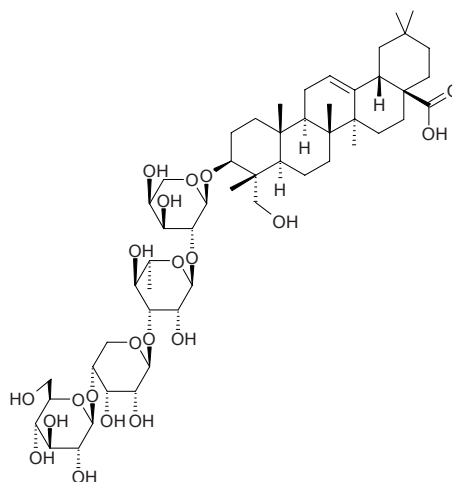
Hederagenin-3-*O*- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranoside C<sub>46</sub>H<sub>74</sub>O<sub>16</sub> (883.09). Source: YU ZHI ZI *Akebia quinata*. Ref: 660.

**17946 Prosapogenin CP<sub>6</sub>**

Hederagenin-3-*O*- $\beta$ -*D*-ribopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranoside C<sub>46</sub>H<sub>74</sub>O<sub>16</sub> (883.09). Source: WEI LING XIAN *Clematis chinensis*, XI ZANG TIE XIAN LIAN *Clematis tibetana* (aerial parts). Ref: 660, 3530.

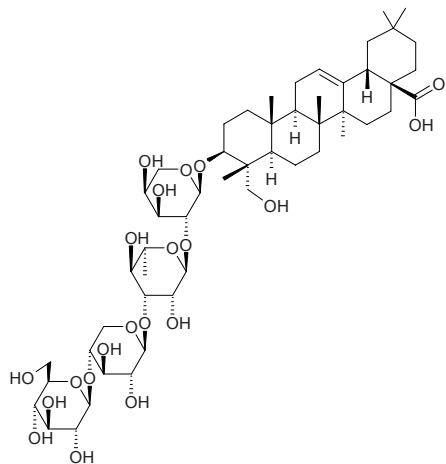
**17947 Prosapogenin CP<sub>8</sub>**

Hederagenin-3-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-ribopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranoside C<sub>52</sub>H<sub>84</sub>O<sub>21</sub> (1045.24). Source: WEI LING XIAN *Clematis chinensis*, XI ZANG TIE XIAN LIAN *Clematis tibetana* (aerial parts). Ref: 660, 3530.

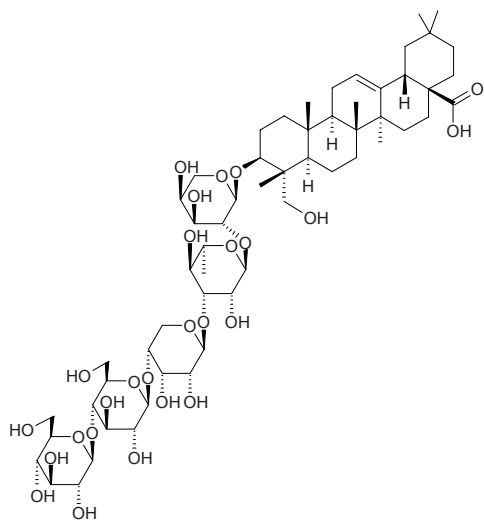


**17948 Prosapogenin CP<sub>8a</sub>**

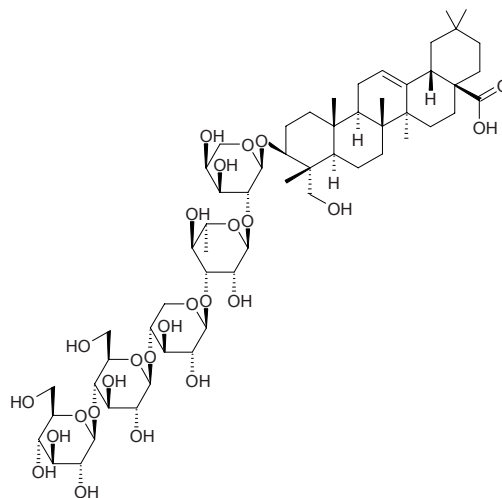
Hederagenin-3-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranoside C<sub>52</sub>H<sub>84</sub>O<sub>21</sub> (1045.24). Source: WEI LING XIAN *Clematis chinensis*. Ref: 660.

**17949 Prosapogenin CP<sub>10</sub>**

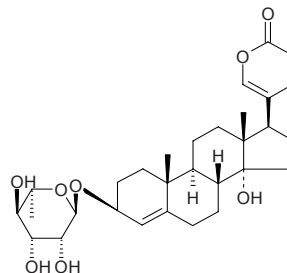
Hederagenin-3-*O*- $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 4)- $\beta$ -*D*-ribofuranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranoside C<sub>58</sub>H<sub>94</sub>O<sub>26</sub> (1207.38). Source: WEI LING XIAN *Clematis chinensis*, XI ZANG TIE XIAN LIAN *Clematis tibetana* (aerial parts). Ref: 660, 3530.

**17950 Prosapogenin CP<sub>10a</sub>**

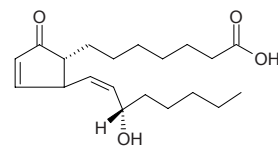
Hederagenin-3-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranoside C<sub>58</sub>H<sub>94</sub>O<sub>26</sub> (1207.38). Source: WEI LING XIAN *Clematis chinensis*. Ref: 660.

**17951 Proscillaridin A**

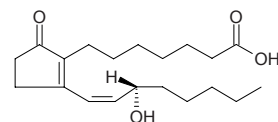
C<sub>30</sub>H<sub>42</sub>O<sub>8</sub> (530.66). mp 215–218°C. Source: MIAN ZAO ER *Scilla scilloides*. Ref: 6.

**17952 Prostaglandin A<sub>1</sub>**

[14152-28-4] C<sub>20</sub>H<sub>32</sub>O<sub>4</sub> (336.48). Colorless powder, mp 42–44°C, easily soluble in MeOH, alcohol, CHCl<sub>3</sub>; insoluble in water. Pharm: Antihypertensive; diuretic; antineoplastic; antiviral (poliomyelitis virus and Mayaro virus, inhibits reproduction); prostaglandin-like physio-activities. Source: FEN NIE CONG TOU *Allium cepa* var. *agrogatum*, XIE BAI *Allium macrostemon* (dried bulb: content = 0.589%<sup>[5508]</sup>). Ref: 3644, 3645, 3646, 3647, 3648, 5508.

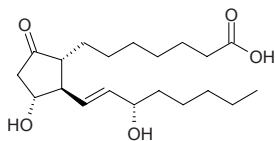
**17953 Prostaglandin B<sub>1</sub>**

[13345-51-2] C<sub>20</sub>H<sub>32</sub>O<sub>4</sub> (336.48). Yellowish oil. Pharm: Strengthens vasoconstriction (stronger than PGE<sub>2</sub> and PGF<sub>2a</sub>); prostaglandin-like physio-activities. Source: XIE BAI *Allium macrostemon*. Ref: 3645.

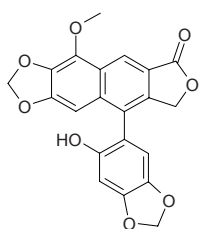


**17954 Prostaglandin E<sub>1</sub>**

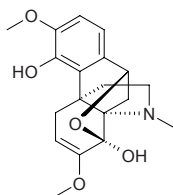
PGE<sub>1</sub> [745-65-3] C<sub>20</sub>H<sub>34</sub>O<sub>5</sub> (354.49). Crystals (EtOAc), mp 114–116.5°C, [ $\alpha$ ]<sub>D</sub><sup>24</sup> = –53.2° (*c* = 0.977, THF). Source: LU RONG *Cervus nippon*; *Cervus elaphus*. Ref: 1521, 3332, 5507.

**17955 Prostalidin A**

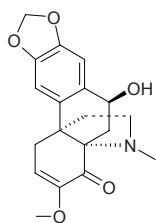
[73461-17-3] C<sub>21</sub>H<sub>14</sub>O<sub>8</sub> (394.34). Pharm: Antidepressant. Source: JUE CHUANG *Rostellularia procumbens* [Syn. *Justicia procumbens*]. Ref: 658.

**17956 Prostephabyssine**

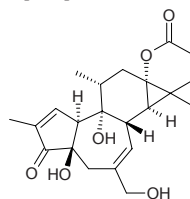
[36871-88-2] C<sub>19</sub>H<sub>23</sub>NO<sub>5</sub> (345.40). Pale-yellow glass. Source: FEN JI DU *Stephania longa*, *Stephania abyssinica*. Ref: 3333, 3334.

**17957 Prosteph aberrine**

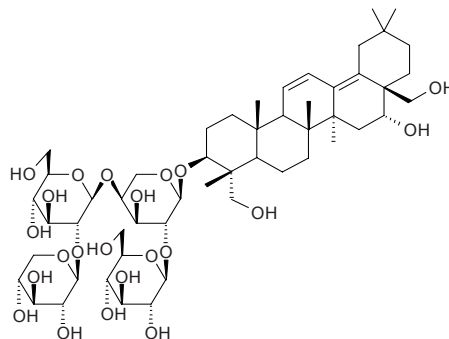
[105608-27-3] C<sub>19</sub>H<sub>21</sub>NO<sub>5</sub> (343.38). Light-yellow prisms (MeOH), mp 225°C (dec), [ $\alpha$ ]<sub>D</sub><sup>15</sup> = –219.1° (*c* = 0.25, CHCl<sub>3</sub>). Source: QIAN JIN TENG *Stephania japonica*. Ref: 3335.

**17958 Prostratin**

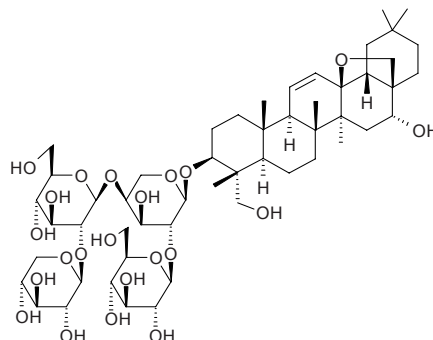
[60857-08-1] C<sub>22</sub>H<sub>30</sub>O<sub>6</sub> (390.48). Crystals (acetone), mp 225°C, 217–218°C, [ $\alpha$ ]<sub>D</sub> = +64° (*c* = 0.13, MeOH). Pharm: Anti-HIV (CEM-SS cells infected by HIV-1, has anti-HIV-1 activity, inhibits produce of viral antigen P24 and plasmodia); used in treatment of AIDS; sedative (mus, 20mg/kg orl, InRt = 92%, 1 mg/kg sc, InRt = 62%); analgesic (mus, 20mg/kg orl, InRt = 96%, 1 mg/kg sc, InRt = 48%); inhibits hyperplasia induced by PMA (mus); ornithine decarboxylase inhibitor; anti-inflammatory (inhibits edema and inflammation induced by PMA). Source: CAO WU JIU *Stillingia sylvatica* [Syn. *Sapium sylvatica*], JIAN JIAN AO YANG *Homalanthus acuminatus*, LANG DU DA JI *Euphorbia fischeriana*, PING WO DAO HUA *Pimelea prostrata*, XIA CHUI AO YANG *Homalanthus nutans*, ZONG ZHUANG JIA RUI XIANG *Daphnopsis racemosa*. Ref: 900.

**17959 Prostratoside D**

3-*O*-{ $\beta$ -*D*-Xylopyranosyl-(1→2)- $\beta$ -*D*-glucopyranosyl-(1→4)-[ $\beta$ -*D*-glucopyranosyl-(1→2)]- $\alpha$ -*L*-arabinopyranoside}-saikogenin C<sub>52</sub>H<sub>84</sub>O<sub>22</sub> (1061.24). White powder, mp 246–248°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = –21.0° (*c* = 0.58, MeOH). Source: DUO JIA CAO *Polycarpon prostratum*. Ref: 2136.

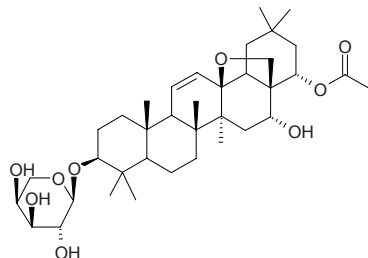
**17960 Prostratoside E**

3-*O*-{ $\beta$ -*D*-Xylopyranosyl-(1→2)- $\beta$ -*D*-glucopyranosyl-(1→4)-[ $\beta$ -*D*-glucopyranosyl-(1→2)]- $\alpha$ -*L*-arabinopyranoside}-saikogenin G C<sub>52</sub>H<sub>84</sub>O<sub>22</sub> (1061.24). White powder mp 223–226°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +14.7° (*c* = 0.51, MeOH). Source: DUO JIA CAO *Polycarpon prostratum*. Ref: 2136.

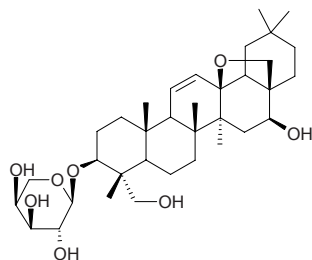


**17961 Prostratoside I**

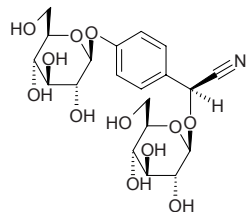
3-*O*- $\alpha$ -*L*-Arabinopyranosyl-16 $\alpha$ -hydroxy-22 $\alpha$ -acetoxy-saikogenin E  
 $C_{37}H_{58}O_{19}$  (646.87). White powder. Source: DUO JIA CAO *Polycarpon prostratum*. Ref: 2086.

**17962 Prostratoside J**

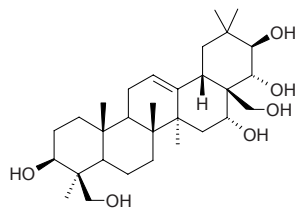
3-*O*- $\alpha$ -*L*-Arabinopyranosyl saikogenin F  $C_{35}H_{56}O_8$  (604.83). White powder.  
Source: DUO JIA CAO *Polycarpon prostratum*. Ref: 2086.

**17963 Proteacin**

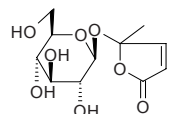
$C_{19}H_{27}NO_{12}$  (461.43). Pharm: Toxin. Source: AO ZHOU JIAN GUO  
*Macadamia ternifolia*. Ref: 658.

**17964 Protoescigenin**

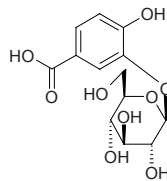
$C_{30}H_{50}O_6$  (506.73). mp 310°C. Source: RI BEN QI YE SHU *Aesculus turbinata*. Ref: 6, 660.

**17965 Protoanemonin hydrate glucoside**

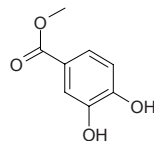
$C_{11}H_{16}O_8$  (276.25). Source: BAI HUA TENG *Clematis terniflora* [Syn. *Clematis maximowicziana*]. Ref: 6.

**17966 Protocatechuic acid-3-glucoside**

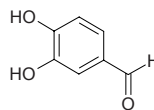
$C_{13}H_{16}O_9$  (316.27). Source: YE LI ZHI YE *Pyrus calleryana*. Ref: 6.

**17967 Protocatechuic acid methyl ester**

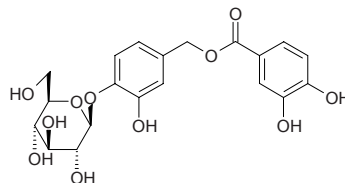
$C_8H_8O_4$  (168.15). Source: ZANG HONG HUA *Crocus sativus* (pollen). Ref: 4233.

**17968 Protocatechuic aldehyde**

Protocatechualdehyde; 3,4-Dihydroxybenzyl aldehyde [139-85-5]  $C_7H_6O_3$  (138.12). Light cream-color dacrular crystals (water), mp 153~154°C.  
Pharm: Coronary vasodilator. Source: AI NA XIANG *Blumea balsamifera* (leaf and twig: mean content = 0.0072%)<sup>[5508]</sup>, BAN XIA *Pinellia ternata*, BIAN FU GE GEN *Menispermum dauricum*, DAN SHEN *Salvia miltiorrhiza* (dried root: mean content of 9 origins = 0.0602%)<sup>[5508]</sup>, GAN XI SHU WEI CAO *Salvia przewalskii* (dried root: content = 0.065%)<sup>[5508]</sup>, HONG GEN CAO *Salvia prionitis* (dried root: content = 0.014%)<sup>[5508]</sup>, HUANG HUA SHU WEI CAO *Salvia flava* (dried root: content = 0.024%)<sup>[5508]</sup>, JI YE SHU WEI CAO *Salvia bulleyana* (dried root: content = 0.024%)<sup>[5508]</sup>, JIA LEI JUE MING *Cassia garrettiana* (heartwood), LAN YU BAI JI *Bletilla formosana* (whole herb), LI SE SHU WEI CAO *Salvia castanea* (dried root: content = 0.039%)<sup>[5508]</sup>, MAO DI HUANG SHU WEI CAO *Salvia digitaloides* (dried root: content = 0.014%)<sup>[5508]</sup>, NAN DAN SHEN *Salvia bowleyana* (dried root: content = 0.060%)<sup>[5508]</sup>, NI DAN SHEN *Salvia sinica* (dried root: content = 0.015%)<sup>[5508]</sup>, SAN YE SHU WEI CAO *Salvia trijuga* (dried root: content = 0.044%)<sup>[5508]</sup>, SANG HUANG *Phellinus igniarius* (sporocarp: yield = 0.0060%dw), SI JI QING *Ilex chinensis* [Syn. *Ilex purpurea*], TIAN MA *Gastrodia elata*, YUN NAN SHU WEI CAO *Salvia yunnanensis* (dried root: content = 0.022%)<sup>[5508]</sup>, ZI DAN SHEN *Salvia przewalskii* var. *mandarinorum* (dried root: content = %) <sup>[5508]</sup>, ZONG LV PI *Trachycarpus fortunei* (petiole and fibre of sheath, roasted petiole: mean content of 5 origins = 0.156%)<sup>[5508]</sup>.  
Ref: 2, 4, 6, 661, 1521, 3792, 4500, 4747, 5501, 5508.

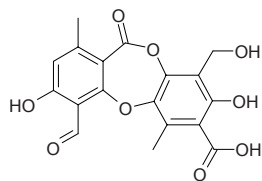
**17969 Protocatechuoyl calleryanin**

$C_{20}H_{22}O_{11}$  (438.39). Source: YE LI ZHI YE *Pyrus calleryana*. Ref: 6.

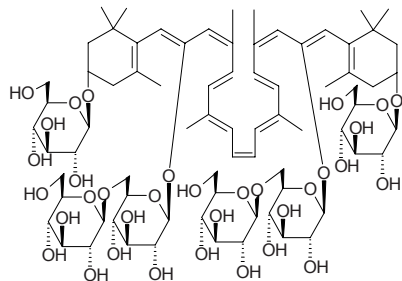


**17970 Protocetraric acid**

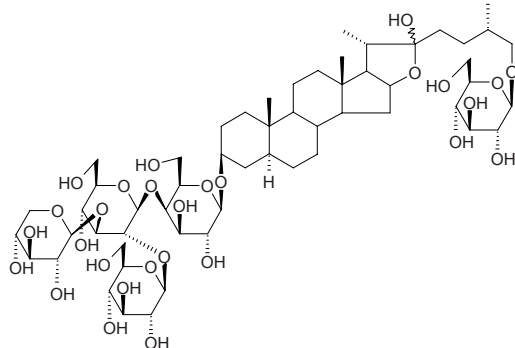
$C_{18}H_{14}O_9$  (374.31). Source: ZONG JUAN SHI RUI *Cladonia convoluta*. Ref: 5027.

**17971 Protocrocin**

$C_{76}H_{116}O_{34}$  (1573.75). Source: ZANG HONG HUA *Crocus sativus*. Ref: 6.

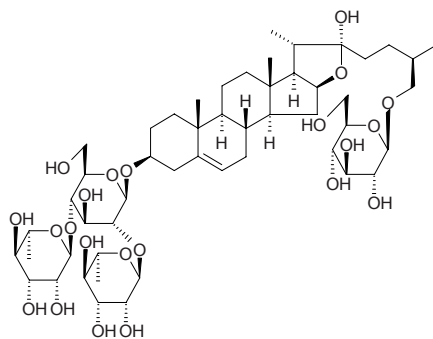
**17972 Protodesgalactotigonin**

$C_{56}H_{94}O_{28}$  (1215.36). Source: DA SUAN *Allium sativum*. Ref: 3336.

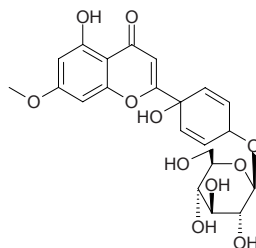
**17973 Protodioscin**

[54506-80-9]  $C_{51}H_{84}O_{22}$  (1049.23). Colorless rhombic crystals (water), mp 190~196°C (dec),  $[\alpha]_D = -79.8^\circ$  ( $c = 0.99$ , pyridine); mp 267~271°C (dec).

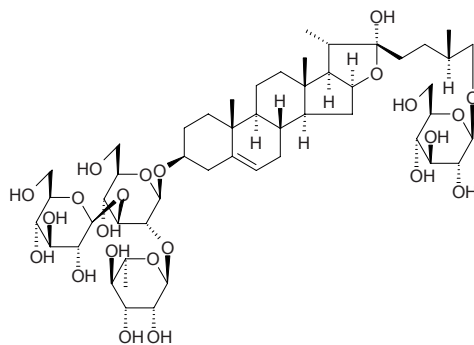
Pharm: Cytotoxic (hmn PC-6,  $IC_{50} = 1.53\mu\text{g/mL}$ , hmn MCF7,  $IC_{50} = 1.86\mu\text{g/mL}$ , hmn SW620,  $IC_{50} = 1.83\mu\text{g/mL}$ , hmn NUGC-3,  $IC_{50} = 1.69\mu\text{g/mL}$ , mus P<sub>388</sub>,  $IC_{50} = 1.67\mu\text{g/mL}$ ). Source: QIE ZI *Solanum melongena*, SHAN BI XIE *Dioscorea tokoro*, TIAN QIE ZI *Solanum indicum*, XIAN XI SHU YU *Dioscorea gracillima*, ZHANG LIU TOU *Costus speciosus*. Ref: 658, 900, 1462, 2730.

**17974 Protogenkwanin-4'-glucoside**

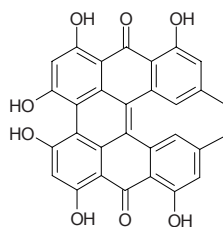
[78983-46-7]  $C_{22}H_{24}O_{11}$  (464.43). Needles (MeOH), mp 129~131°C,  $[\alpha]_D^{18} = -40^\circ$  ( $c = 1$ , pyridine). Source: GUANG NANG ZI BING JUE *Pseudophegopteris subaurita*, WEN JING *Equisetum arvense*, *Pseudophegopteris bukoensis*, *Pseudophegopteris hirtirachis*. Ref: 1521.

**17975 Protograccillin**

[54848-30-5]  $C_{51}H_{84}O_{23}$  (1065.22). White rhombic crystals, mp 223~225°C,  $[\alpha]_D^{25} = -75.1^\circ$  ( $c = 1.00$ , dimethylformamide). Pharm: Cytotoxic (K562 *in vitro*,  $IC_{50} = 3.3\mu\text{mol/L}$ , changes the shape of *Pyricularia oryzae* mycelium, MIC = 94.0 $\mu\text{mol/L}$ ). Source: CI JI LI *Tribulus terrestris*, DUN YE SHU YU *Dioscorea zingiberensis*, HAI JIN BI XIE *Dioscorea spongiosa* (Rhizome: yield = 0.000072%)<sup>[4692]</sup>, SHAN BI XIE *Dioscorea tokoro*, XIAN XI SHU YU *Dioscorea gracillima*, XIAO HUA DUN YE SHU YU *Dioscorea parviflora*, ZHANG LIU TOU *Costus speciosus*. Ref: 10, 15, 900, 4692.

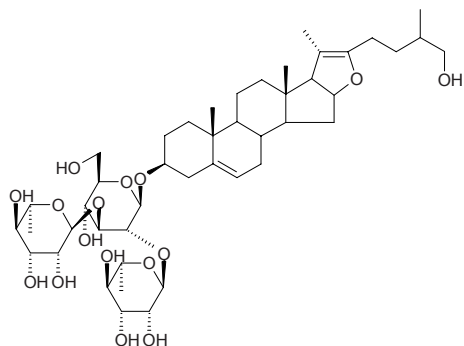
**17976 Protohypericin**

$C_{30}H_{18}O_8$  (506.47). Source: SHA DI YUAN ZHI *Polygala sabulosa* Ref: 5110.

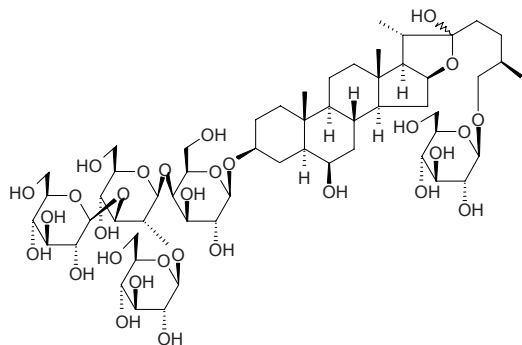


**17977 Protohypoglauaine A**

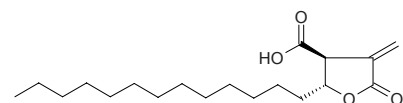
$C_{45}H_{72}O_{16}$  (869.07). **Source:** BI XIE *Dioscorea hypoglauca* [Syn. *Dioscorea collettii* var. *hypoglauca*]. **Ref:** 3337.

**17978 Proto-iso-erubioside B**

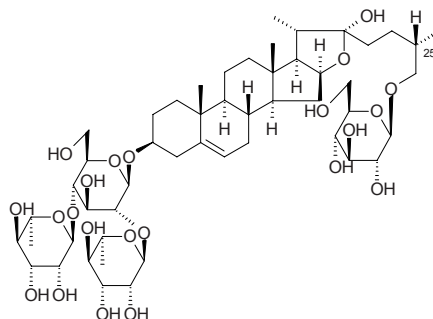
$C_{57}H_{96}O_{30}$  (1261.38). White powder, mp 218~220°C,  $[\alpha]_D^{20} = -26^\circ$  ( $c = 0.1$ ,  $C_5H_5N$ ). **Pharm:** Antithrombotic; used in treatment of stroke. **Source:** DA SUAN *Allium sativum*. **Ref:** 362.

**17979 Protolichesterinic acid**

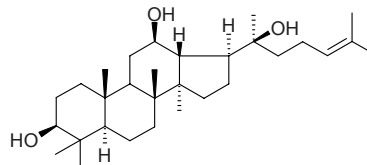
$C_{19}H_{32}O_4$  (324.46). **Pharm:** 5-LOX inhibitor (porcine leucocytes, *in vitro*,  $IC_{50} = 20.0\mu\text{mol/L}$ , control Zileuton,  $IC_{50} = 0.4\mu\text{mol/L}$ , LOX has been implicated in carcinogenesis in various cancer types); 12-LOX inhibitor (hmn platelet, *in vitro*); cytotoxic (acute promyelocytic leukemia (HL-60),  $EC_{50} = (8.1\pm 1.8)\mu\text{g/mL}$ , Zileuton,  $EC_{50} = (38.8\pm 12.3)\mu\text{g/mL}$ ; colorectal adenocarcinoma (WiDr),  $EC_{50} = (18.1\pm 6.2)\mu\text{g/mL}$ , Zileuton,  $EC_{50} > 80\mu\text{g/mL}$ ; erythro-leukemia (K562),  $EC_{50} = (10.7\pm 0.1)\mu\text{g/mL}$ , Zileuton,  $EC_{50} = (38.5\pm 5.4)\mu\text{g/mL}$ ; gastric adenocarcinoma (AGS),  $EC_{50} = (7.0\pm 0.9)\mu\text{g/mL}$ , Zileuton,  $EC_{50} = (70.5\pm 3.1)\mu\text{g/mL}$ ; breast carcinoma T47D,  $EC_{50} = (3.7\pm 1.6)\mu\text{g/mL}$ , Zileuton,  $EC_{50} = (23.9\pm 4.1)\mu\text{g/mL}$ ; ovarian adenocarcinoma (NIH:OVCAR-3),  $EC_{50} = (4.2\pm 1.3)\mu\text{g/mL}$ , Zileuton,  $EC_{50} = (53.1\pm 7.7)\mu\text{g/mL}$ ; pancreas cancer (Capan1),  $EC_{50} = (2.4\pm 0.9)\mu\text{g/mL}$ , Zileuton,  $EC_{50} = (12.9\pm 11.7)\mu\text{g/mL}$ ; pancreas cancer (Capan2),  $EC_{50} = (8.7\pm 4.5)\mu\text{g/mL}$ , Zileuton,  $EC_{50} > 80\mu\text{g/mL}$ ; pancreas cancer (PANC1),  $EC_{50} = (3.1\pm 0.8)\mu\text{g/mL}$ , Zileuton,  $EC_{50} = (46.6\pm 5.4)\mu\text{g/mL}$ ; prostatic cancer (PC3),  $EC_{50} = (2.6\pm 1.1)\mu\text{g/mL}$ , Zileuton,  $EC_{50} = (49.9\pm 9.0)\mu\text{g/mL}$ ; small cell lung cancer (NCI-H1417),  $EC_{50} = (4.2\pm 0.2)\mu\text{g/mL}$ , Zileuton,  $EC_{50} > 80\mu\text{g/mL}$ ; T-cell leukemia (Jurkat-T),  $EC_{50} = (4.3\pm 3.3)\mu\text{g/mL}$ , Zileuton,  $EC_{50} = (78.3\pm 5.0)\mu\text{g/mL}$ ). **Source:** BING DAO YI *Cetraria islandica*. **Ref:** 4082.

**17980 Protoneodioscin**

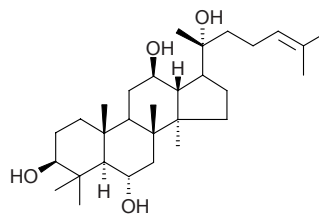
[60478-69-5]  $C_{51}H_{84}O_{22}$  (1049.22). White amorphous powder, mp 166~168°C (dec),  $[\alpha]_D^{13} = -70.1^\circ$  ( $c = 0.001$ , pyridine). **Pharm:** Cytotoxic (*in vitro*, K562,  $IC_{50} = 2.7\mu\text{mol/L}$ , changes the shape of *Pyricularia oryzae* mycelium, MIC =  $95.4\mu\text{mol/L}$ ). **Source:** BI XIE *Dioscorea hypoglauca* [Syn. *Dioscorea collettii* var. *hypoglauca*]. **Ref:** 3714.

**17981 Protopanaxadiol**

[6892-79-1]  $C_{30}H_{52}O_3$  (460.75). mp 236~238°C. **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 6.

**17982 Protopanaxatriol**

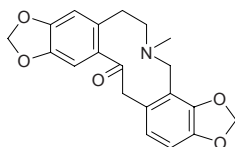
20(R)-Protopanaxatriol [1453-93-6]  $C_{30}H_{52}O_4$  (476.75). Colorless acicular crystals (chloroform-ether), mp 248~250°C; 233~235°C. **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], REN SHEN HUA LEI *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 6, 446.



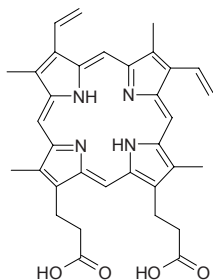


**17983 Protopine**

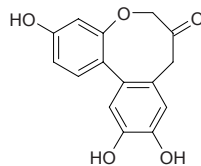
Biflorine [130-86-9]  $C_{20}H_{19}NO_5$  (353.38). Colorless prisms, mp 214–216°C. **Pharm:** Antibacterial; antimalarial; antiasthmatic; choleric (bile secretion promotor); smooth muscle relaxant; sedative; pregnancy terminator (mus, stops pregnancy in early stage); anti-HIV inactive (H9 lymphocytes, control AZT,  $IC_{50} = 500\mu\text{g/mL}$ ,  $EC_{50} = 0.0317\mu\text{g/mL}$ ,  $TI = 15,800$ )<sup>[5364]</sup>. **Source:** BAI QU CAI *Chelidonium majus* (whole herb: mean content of 5 origins = 0.035%)<sup>[5508]</sup>, BAN RUI TANG SONG CAO *Thalictrum petaloideum* (root: content < 0.001%)<sup>[5508]</sup>, CHANG JU YAN HU SUO *Corydalis longicalcarata* (rhizome: content = 0.28%)<sup>[5508]</sup>, CHI BAN YAN HU SUO *Corydalis remota* [Syn. *Corydalis bulbosa* var. *typica*] (rhizome: content = 0.02%)<sup>[5508]</sup>, DA YE TANG SONG CAO *Thalictrum faberi* (root: content < 0.001%)<sup>[5508]</sup>, DA ZAO *Ziziphus jujuba*, DONG BEI YAN HU SUO *Corydalis ambigua* var. *amurensis* [Syn. *Corydalis ambigua*] (rhizome: content = 0.02%)<sup>[5508]</sup>, DUI YE YUAN HU *Corydalis ledebouriana* (rhizome: content = 0.70%)<sup>[5508]</sup>, HUI LV YAN HU SUO *Corydalis adunca* (rhizome: content = 0.44%)<sup>[5508]</sup>, JI YING SU *Argemone mexicana*, JIAN JU ZI JIN *Corydalis suaveolens* [Syn. *Corydalis sheareri*], JIN SI MA WEI LIAN *Thalictrum glandulosissimum* (root: content < 0.005%)<sup>[5508]</sup>, KU DI DING *Corydalis bungeana* (whole herb with root: content scope of 8 origins = 0.056%–0.121%, mean content = 0.093%)<sup>[5508]</sup>, MA WEI LIAN *Thalictrum foliolosum* (root: content < 0.001%)<sup>[5508]</sup>, NAN TIAN ZHU ZI *Nandina domestica*, QUAN YE YAN HU SUO *Corydalis repens* (rhizome: content = 0.03%)<sup>[5508]</sup>, XIA TIAN WU *Corydalis decumbens* [Syn. *Corydalis amabilis*] (dried tuber: content scope = 0.35%–0.65%)<sup>[5508]</sup>, XIA XU TANG SONG CAO *Thalictrum atriplex* (root: content < 0.001%)<sup>[5508]</sup>, XIAO GUO TANG SONG CAO *Thalictrum microgynum* (root: content = 0.34%)<sup>[5508]</sup>, YAN GUO CAO *Thalictrum thunbergii* (root: content < 0.001%)<sup>[5508]</sup>, YAN HU SUO *Corydalis yanhusuo* [Syn. *Corydalis turtschaninovii* f. *yanhusuo*] (rhizome: mean content of 2 origins = 0.048%)<sup>[5508]</sup>, YING SHUI HUANG LIAN *Thalictrum simplex* [Syn. *Thalictrum simplex* var. *brevipes*] (root: content < 0.001%)<sup>[5508]</sup>, YING SU *Papaver somniferum*. **Ref:** 2, 658, 5364, 5501, 5508.

**17984 Protoporphyrin**

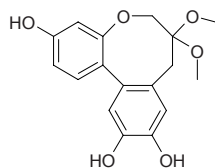
[553-12-8]  $C_{34}H_{34}N_4O_4$  (562.67). mp 225–230°C. **Source:** NIU XUE *Bos taurus domesticus*; *Bubalus bubalis*. **Ref:** 6.

**17985 Protosappanin A**

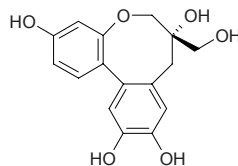
[102036-28-2]  $C_{15}H_{12}O_5$  (272.26). mp 250–252°C. **Pharm:** Xanthine oxidase inhibitor (competitive inhibitory activity in concentration-dependent manner,  $IC_{50} = 55.6\mu\text{mol/L}$ ,  $K_i = 34.7\mu\text{mol/L}$ , control Allopurinol,  $IC_{50} = 2.5\mu\text{mol/L}$ ,  $K_i = 1.80\mu\text{mol/L}$ )<sup>[4494]</sup>. **Source:** SU MU *Caesalpinia sappan* (heartwood). **Ref:** 508, 4494.

**17986 Protosappanin A dimethyl acetal**

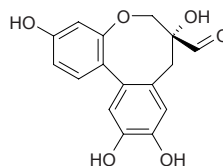
$C_{17}H_{18}O_6$  (318.33). Light yellow amorphous solid. **Pharm:** Xanthine oxidase inhibitor (competitive inhibitory activity in concentration-dependent manner,  $IC_{50} = 50.7\mu\text{mol/L}$ ,  $K_i = 26.9\mu\text{mol/L}$ , control Allopurinol,  $IC_{50} = 2.5\mu\text{mol/L}$ ,  $K_i = 1.80\mu\text{mol/L}$ ). **Source:** SU MU *Caesalpinia sappan* (heartwood). **Ref:** 4494.

**17987 Protosappanin B**

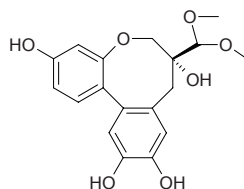
[102036-29-3]  $C_{16}H_{16}O_6$  (304.30). Amorphous powder,  $[\alpha]_D^{15} = -11.4^\circ$  (MeOH). **Source:** SU MU *Caesalpinia sappan* (heartwood). **Ref:** 3338, 4494.

**17988 Protosappanin C**

[111534-98-6]  $C_{16}H_{14}O_6$  (302.29).  $[\alpha]_D^{25} = -37.0^\circ$  ( $c = 5.32$ , MeOH). **Source:** RI BEN SU MU *Caesalpinia japonica*, SU MU *Caesalpinia sappan*. **Ref:** 1521, 3339.

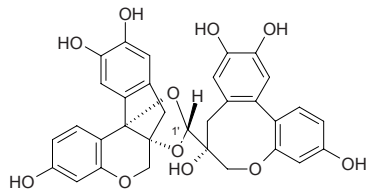
**17989 Protosappanin C dimethyl acetal**

$C_{18}H_{20}O_7$  (348.36). **Source:** SU MU *Caesalpinia sappan* (heartwood). **Ref:** 4494.

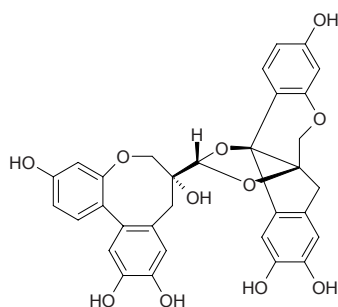


**17990 Protosappanin E<sub>1</sub>**

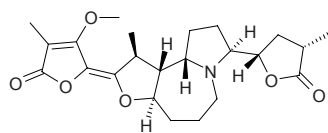
[130233-78-2] C<sub>32</sub>H<sub>26</sub>O<sub>11</sub> (586.56). An inseparable mixture with 1'-isomer Protosappanin E2 [Source](#): SU MU *Caesalpinia sappan*. [Ref](#): 3338.

**17991 Protosappanin E<sub>2</sub>**

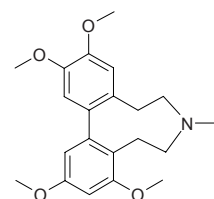
C<sub>32</sub>H<sub>26</sub>O<sub>11</sub> (586.56). Yellow amorphous solid,  $[\alpha]_D^{20} = -16.9^\circ$  ( $c = 0.175$ , MeOH). [Pharm](#): Xanthine oxidase inhibitor (competitive inhibitory activity in concentration-dependent manner, IC<sub>50</sub> = 18.9 μmol/L, K<sub>i</sub> = 10.6 μmol/L, control Allopurinol, IC<sub>50</sub> = 2.5 μmol/L, K<sub>i</sub> = 1.80 μmol/L). [Source](#): SU MU *Caesalpinia sappan* (heartwood). [Ref](#): 4494.

**17992 Protostemonine**

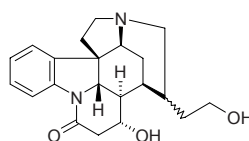
[27495-40-5] C<sub>23</sub>H<sub>31</sub>NO<sub>6</sub> (417.51). mp 172°C. [Pharm](#): Insecticidal (neonate larvae of *Spodoptera littoralis*, LC<sub>50</sub> = 17.7 mg/L, EC<sub>50</sub> = 2.2 mg/L). [Source](#): DI TANG BAI BU *Stemona kerrii*, WAN SHENG BAI BU *Stemona japonica* (in 1970, the compound was isolated from the plant by H.Irie et al.)<sup>[5505]</sup>, YIN DU ZHI NA BAI BU *Stemona cochinchinensis*, ZHI LI BAI BU *Stemona sessilifolia*, *Stemona curtisii*, *Stemona cf. pierrei* (underground parts). [Ref](#): 6, 660, 3409, 3751, 5505.

**17993 Protostephanine**

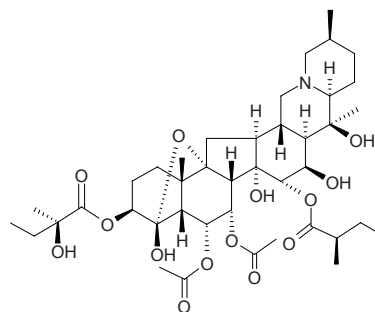
[549-28-0] C<sub>21</sub>H<sub>27</sub>NO<sub>4</sub> (357.45). mp 91°C. [Source](#): QIAN JIN TENG *Stephania japonica*. [Ref](#): 6.

**17994 Protostrychnine**

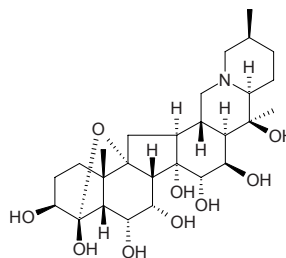
[71610-48-5] C<sub>21</sub>H<sub>26</sub>N<sub>2</sub>O<sub>3</sub> (354.45). [Source](#): MA QIAN ZI *Strychnos nux-vomica*. [Ref](#): 2.

**17995 Protoveratrine A**

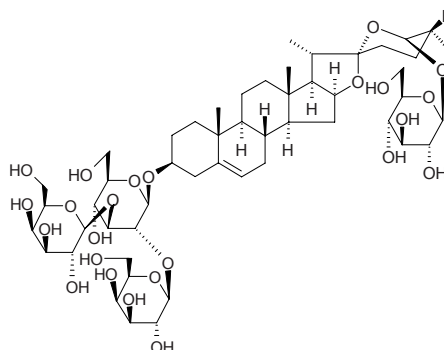
[143-57-7] C<sub>41</sub>H<sub>63</sub>NO<sub>14</sub> (793.96). Crystals (acetone), mp 267–269°C (dec),  $[\alpha]_D^{25} = -40.5^\circ$  (pyridine),  $[\alpha]_D^{25} = -10.5^\circ$  (chloroform). [Pharm](#): Antihypertensive; emetic. [Source](#): BAI LI LU *Veratrum album*. [Ref](#): 658.

**17996 Protoverine**

[76-45-9] C<sub>27</sub>H<sub>43</sub>NO<sub>9</sub> (525.65). [Pharm](#): Increases blood pressure. [Source](#): BAI LI LU *Veratrum album*. [Ref](#): 658.

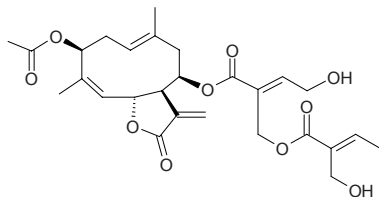
**17997 Protozingiberensisaponin**

C<sub>51</sub>H<sub>82</sub>O<sub>24</sub> (1079.21). [Source](#): DUN YE SHU YU *Dioscorea zingiberensis*. [Ref](#): 10.

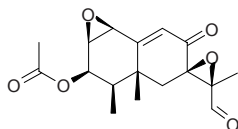


**17998 Provincialin**

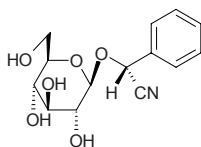
[40328-06-9] C<sub>27</sub>H<sub>34</sub>O<sub>10</sub> (518.57). Mucilage, difficult to crystallize, [ $\alpha$ ]<sub>D</sub> = -85° (*c* = 0.6, chloroform). **Pharm:** Antineoplastic; cytotoxic (KB, ED<sub>50</sub> = 3.5 μg/mL). **Source:** TU ER FENG *Liatriis provincialis*. **Ref:** 661.

**17999 PR toxin**

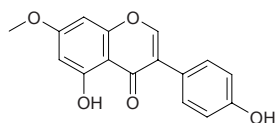
[56299-00-4] C<sub>17</sub>H<sub>20</sub>O<sub>6</sub> (320.35). **Pharm:** Supertoxic agent. **Source:** LOU DI QING MEI *Penicillium roqueforti*. **Ref:** 658.

**18000 Prunasin**

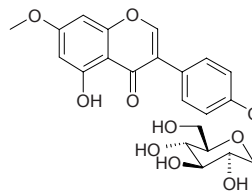
[99-18-3] C<sub>14</sub>H<sub>17</sub>NO<sub>6</sub> (295.29). **Pharm:** Plant growth stimulatory or inhibitory activity (radicle length: *Lactuca sativa*, 1 μmol/L, StRt or InRt < 10%, 10 μmol/L, InRt = (10~30)%, 100 μmol/L, InRt = (31~60)%, 1 mmol/L, InRt > 61%; *Raphanus sativus*, 1 μmol/L, StRt = (10~30)%, 10 μmol/L, StRt = (10~30)%, 100 μmol/L, InRt = (10~30)%, 1 mmol/L, InRt > 61%; *Allium cepa*, 1 μmol/L, StRt or InRt < 10%, 10 μmol/L, InRt = (31~60)%, 100 μmol/L, InRt = (10~30)%, 1 mmol/L, InRt = (31~60)%)<sup>[5217]</sup>; toxin. **Source:** OU ZHOU JUE *Pteridium aquilinum*, XI YANG JIE GU MU *Sambucus nigra*, XING REN *Prunus armeniaca*, JIAN ZI SU YE *Perilla frutescens* var. *acuta* [Syn. *Perilla frutescens* var. *purpurascens*], *Cystopteris* sp. **Ref:** 2, 658, 660, 5217.

**18001 Prunetin**

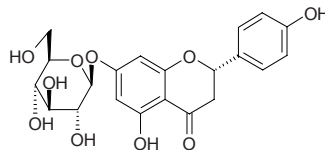
[552-59-0] C<sub>16</sub>H<sub>12</sub>O<sub>5</sub> (284.27). Colorless acicular crystals (methanol), mp 240°C; 208°C. **Pharm:** Antihypercholesterolemic (rat, hyperlipemia caused by triton WR1339). **Source:** AN GE LA ZI TAN *Pterocarpus angolensis*, GUANG GUO GAN CAO *Glycyrrhiza glabra*, MI SI KE HUANG TAN *Dalbergia miscolobium*, MU HU DIE *Oroxylum indicum*, PU DUN LI *Prunus puddun*, WEI RUI LI *Prunus verecunda*, MENG MAI ROU DOU KOU *Myristica malabarica* (heartwood). **Ref:** 661, 3906.

**18002 Prunetin 4'-O-β-D-glucopyranoside**

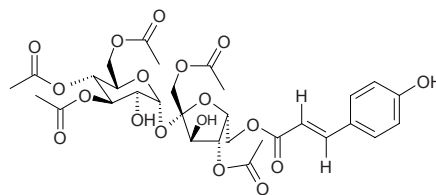
C<sub>22</sub>H<sub>22</sub>O<sub>10</sub> (446.41). **Source:** HUAI *Sophora japonica* (pericarp). **Ref:** 3080.

**18003 Prunin**

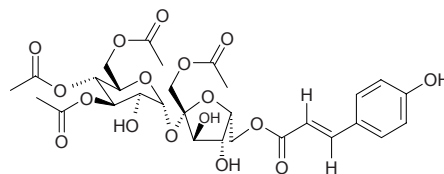
[529-55-5] C<sub>21</sub>H<sub>22</sub>O<sub>10</sub> (434.40). mp 224~226°C. **Pharm:** Antifungal (*Sporotrichum pulverulentum*). **Source:** FAN QIE *Lycopersicon esculentum*, TAO *Prunus persica*, MANG JING *Miscanthus sinensis*, YOU GAN YE *Phyllanthus emblica* (leaf and branch), *Abies* sp., *Pinus* sp., *Podocarpus* sp. **Ref:** 6, 658, 4205.

**18004 Prunose I**

1,4,3',4',6'-Penta-O-acetyl-6-O-p-coumaroylsucrose C<sub>31</sub>H<sub>38</sub>O<sub>18</sub> (698.64). White powder, [ $\alpha$ ]<sub>D</sub><sup>27</sup> = +26.9° (*c* = 1.00, MeOH). **Pharm:** Aldose reductase inhibitor (*in vitro*, rat lens aldose reductase, IC<sub>50</sub> = 58 μmol/L; control Epalrestat, IC<sub>50</sub> = 0.072 μmol/L); platelet aggregation inhibitor (induced by thrombin, *in vitro*, 0.1 mmol/L, InRt = 30.5%, 0.3 mmol/L, InRt = 48.1%; control Aspirin, 0.1 mmol/L, InRt = 15.8%, 1.0 mmol/L, InRt = 53.5%). **Source:** BAI MEI HUA *Prunus mume* (flower: yield = 0.016%fw). **Ref:** 4641.

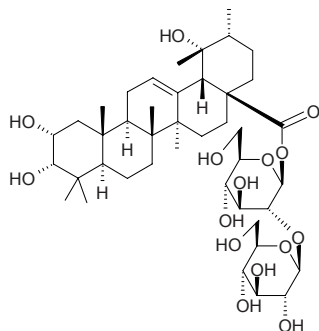
**18005 Prunose II**

1,3',4',6'-Tetra-O-acetyl-6-O-p-coumaroylsucrose C<sub>29</sub>H<sub>36</sub>O<sub>17</sub> (656.60). White powder, [ $\alpha$ ]<sub>D</sub><sup>28</sup> = +18.7° (*c* = 1.00, MeOH). **Pharm:** Aldose reductase inhibitor (*in vitro*, rat lens aldose reductase, IC<sub>50</sub> > 100 μmol/L, 100 μmol/L InRt = 21%; control Epalrestat, IC<sub>50</sub> = 0.072 μmol/L); platelet aggregation inhibitor (induced by thrombin, *in vitro*, 0.1 mmol/L, InRt = 27.9%, 0.3 mmol/L, InRt = 44.0%; control Aspirin, 0.1 mmol/L, InRt = 15.8%, 1.0 mmol/L, InRt = 53.5%). **Source:** BAI MEI HUA *Prunus mume* (flower: yield = 0.0084%fw). **Ref:** 4641.

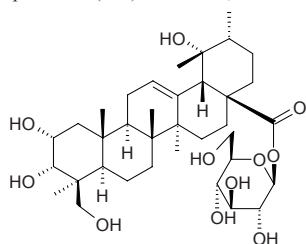


**18006 Pruvuloside A**

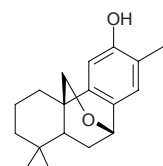
$C_{42}H_{68}O_{15}$  (813.00). Source: XIA KU CAO *Prunella vulgaris*. Ref: 2508.

**18007 Pruvuloside B**

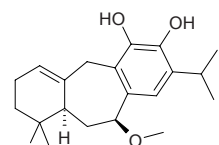
2 $\alpha$ ,3 $\alpha$ ,19 $\alpha$ ,24-Tetrahydroxyurs-12-en-28-oic acid 28-O- $\beta$ -D-glucopyranoside  
 $C_{36}H_{58}O_{11}$  (666.86). White amorphous powder. Source: XIA KU CAO  
*Prunella vulgaris*, YE SHENG SHAN YING TAO *Prunus serrulata* var.  
*spontanea* (leaf). Ref: 2508, 4263.

**18008 Przewalskin**

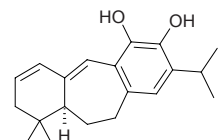
$C_{18}H_{24}O_2$  (272.39). Source: GAN XI SHU WEI CAO *Salvia przewalskii*. Ref:  
 1521, 4538.

**18009 Przewalskin C**

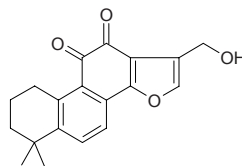
$C_{21}H_{30}O_3$  (330.47). White amorphous powder,  $[\alpha]_D^{21.6} = -192.08^\circ$  ( $c = 0.05$ ,  
 $CHCl_3$ ). Source: GAN XI SHU WEI CAO *Salvia przewalskii*. Ref: 4538.

**18010 Przewalskin D**

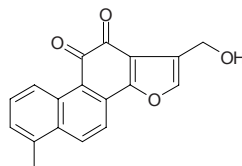
$C_{20}H_{26}O_2$  (298.43). White amorphous powder,  $[\alpha]_D^{21.7} = +6.70^\circ$  ( $c = 0.29$ ,  
 $CHCl_3$ ). Source: GAN XI SHU WEI CAO *Salvia przewalskii*. Ref: 4538.

**18011 Przewaquinone A**

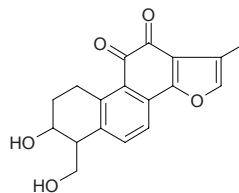
[76843-23-7]  $C_{19}H_{18}O_4$  (310.35). mp 173~175°C (dec). Pharm: Cytotoxic  
 (hum: A549, SK-OV-3, SK-MEL-2, XF-498, HCT15,  $IC_{50} = 0.8\sim 2.3\mu g/mL$ );  
 antineoplastic (mouse Lewis lung cancer, melanoma B16 and S180, 120 or  
 150mg/kg ip, InRt = (35.8~67.8)%), mouse P388, biotic prolonged rate > 100%);  
 antibacterial (*Staphylococcus aureus* 209P); tuberculostatic (hum,  
*Mycobacterium tuberculosis* H37Rv, MIC = 1mg/L). Source: ZI DAN SHEN  
*Salvia przewalskii* var. *mandarinorium*. Ref: 5, 658, 721, 1697, 1698.

**18012 Przewaquinone B**

[76829-01-1]  $C_{18}H_{12}O_4$  (292.29). mp 242~243°C. Pharm: Antineoplastic.  
Source: DAN SHEN *Salvia miltiorrhiza* (dried root: content = 0.002%<sup>[5508]</sup>),  
 GAN XI SHU WEI CAO *Salvia przewalskii* (dried root: content =  
 0.158%<sup>[5508]</sup>), HONG GEN CAO *Salvia prionitis* (dried root: content = trace)  
<sup>[5508]</sup>, HUANG HUA SHU WEI CAO *Salvia flava* (dried root: content = trace)  
<sup>[5508]</sup>, JI YE SHU WEI CAO *Salvia bulleyana* (dried root: content = trace)  
<sup>[5508]</sup>, LI SE SHU WEI CAO *Salvia castanea* (dried root: content =  
 0.018%<sup>[5508]</sup>), MAO DI HUANG SHU WEI CAO *Salvia digitaloides* (dried  
 root: content = trace)<sup>[5508]</sup>, NAN DAN SHEN *Salvia bowleyana* (dried root:  
 content = trace)<sup>[5508]</sup>, NI DAN SHEN *Salvia sinica* (dried root: content = trace)  
<sup>[5508]</sup>, SAN YE SHU WEI CAO *Salvia trijuga* (dried root: content =  
 0.003%<sup>[5508]</sup>), YUN NAN SHU WEI CAO *Salvia yunnanensis* (dried root:  
 content = 0.001%<sup>[5508]</sup>), ZI DAN SHEN *Salvia przewalskii* var. *mandarinorium*  
 (dried root: content = %)<sup>[5508]</sup>. Ref: 1697, 5508.

**18013 Przewaquinone F**

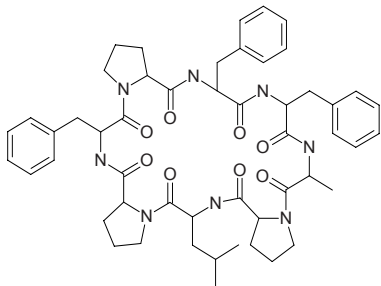
[96839-31-5]  $C_{18}H_{16}O_5$  (312.33). mp 199~203°C. Source: ZI DAN SHEN  
*Salvia przewalskii* var. *mandarinorium*. Ref: 2106.



**18014 Psammosilenin A**

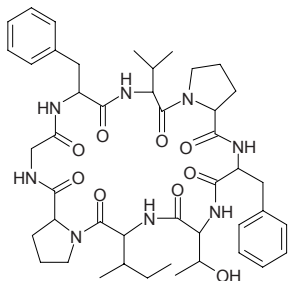
$C_{51}H_{64}N_8O_8$  (917.13). white powder,  $[\alpha]_D^{24} = -108.1^\circ$  ( $c = 0.39$ , MeOH).

Source: JIN TIE SUO *Psammosilene tunicoides*. Ref: 898.

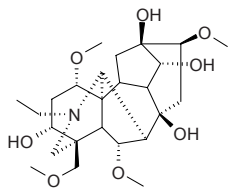
**18015 Psammosilenin B**

$C_{45}H_{62}N_8O_9$  (859.04). white powder,  $[\alpha]_D^{24} = -73.6^\circ$  ( $c = 0.39$ , MeOH).

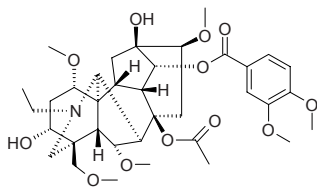
Source: JIN TIE SUO *Psammosilene tunicoides*. Ref: 898.

**18016 Pseudoaconine**

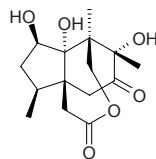
$C_{25}H_{41}NO_8$  (483.61). White amorphous powder. Source: GONG GA SHAN WU TOU *Aconitum liljestrandii*, GUA YE WU TOU *Aconitum hemsleyanum*. Ref: 2191, 2208.

**18017 Pseudoaconitine**

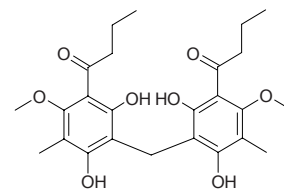
[127-29-7]  $C_{36}H_{51}NO_{12}$  (689.81). mp 214°C (dec). Pharm: Antihypertensive; toxin. Source: FA KANG WU TOU *Aconitum falconeri*, NI BO ER WU TOU *Aconitum ferox*, SUI ZHUANG WU TOU *Aconitum spicatum*, YA DONG WU TOU *Aconitum balfourii*. Ref: 6, 658, 660.

**18018 Pseudoanisatin**

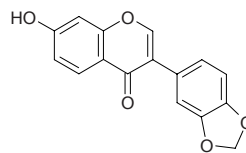
[31090-37-6]  $C_{15}H_{22}O_6$  (298.34). Crystals (EtOAc), mp 207~208. Source: HONG HUI XIANG *Illicium henryi*, MIN WAN BA JIAO *Illicium minwanense* (pericarp: yield = 0.00046%dw)<sup>[4697]</sup>, RI BEN MANG CAO *Illicium anisatum*. Ref: 100, 3358, 4697.

**18019 Pseudoaspidin**

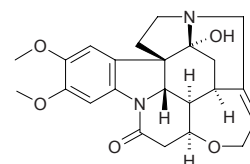
[478-28-4]  $C_{25}H_{32}O_8$  (460.53). Source: XIAN HE CAO *Agrimonia pilosa* var. *japonica*. Ref: 2, 1521.

**18020 Pseudobaptigenin**

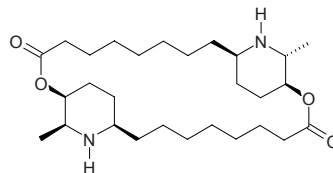
[90-29-9]  $C_{16}H_{10}O_5$  (282.26). Pharm: Germination inhibitor (embryo sheath of wheat, *in vitro*). Source: *Pterocarpus* sp., *Maackia* sp., *Dalbergia* sp. Ref: 658.

**18021 Pseudobrucine**

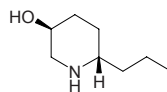
[560-30-5]  $C_{23}H_{26}N_2O_5$  (410.47). mp 258°C. Source: MA QIAN ZI *Strychnos nux-vomica*. Ref: 2.

**18022 Pseudocarpaine**

$\psi$ -Carpaine [3760-91-6]  $C_{28}H_{50}N_2O_4$  (478.72). mp 65~68°C. Source: FAN MU GUA YE *Carica papaya*. Ref: 6, 1521.

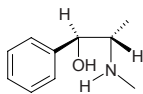
**18023 Pseudoconhydrine**

[140-55-6]  $C_8H_{17}O$  (143.23). Pharm: Toxin. Source: DU SHEN *Conium maculatum*. Ref: 658.

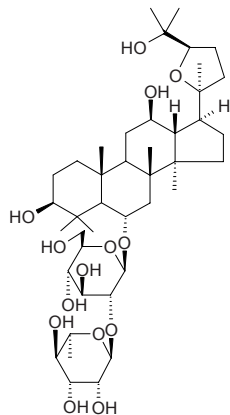


**18024 D-Pseudoephedrine**

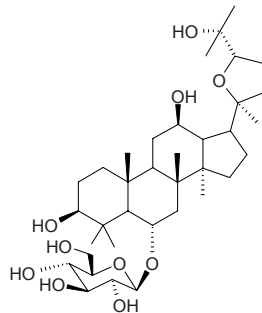
[90-82-4]  $C_{10}H_{15}NO$  (165.24). mp (+) 117~118°C. **Pharm:** Contracts blood vessels (peripheral); adrenergic  $\alpha$ -receptor agonist and  $\beta$ -receptor agonist (to produce sympathomimetic action); bronchial smooth muscle relaxant. **Source:** BAN ZI MA HUANG *Ephedra lepidosperma* (herbaceous twigs: content = 0.011%)<sup>[5508]</sup>, DAN ZI MA HUANG *Ephedra monosperma* (herbaceous twigs: content = 0.781%)<sup>[5508]</sup>, HUANG HUA ZI *Sida cordifolia*, LI JIANG MA HUANG *Ephedra likiangensis* (herbaceous twigs: mean content of 3 origins = 0.662%)<sup>[5508]</sup>, MA HUANG *Ephedra sinica* (herbaceous twigs: content scope = 0.037%~0.312%)<sup>[5501]</sup>, mean content of 5 origins = 0.169%<sup>[5508]</sup>, MO GUO MA HUANG *Ephedra przewalskii* (herbaceous twigs: mean content of 2 origins = 0.017%)<sup>[5508]</sup>, MU ZEI MA HUANG *Ephedra equisetina* (herbaceous twigs: content scope = 0.395%~0.654%)<sup>[5501]</sup>, mean content of 2 origins = 0.525%<sup>[5508]</sup>, SHAN LING MA HUANG *Ephedra gerardiana* (herbaceous twigs: content = 0.144%)<sup>[5508]</sup>, SHU ZHUANG MA HUANG *Ephedra procera* (herbaceous twigs: content = 0.19%)<sup>[5508]</sup>, SHUANG SUI MA HUANG *Ephedra distachya* (herbaceous twigs: content = 0.018%)<sup>[5508]</sup>, XI ZANG ZHONG MA HUANG *Ephedra intermedia* var. *tibetica* (herbaceous twigs: content = 0.070%)<sup>[5508]</sup>, XI ZI MA HUANG *Ephedra regeliana* (herbaceous twigs: content = 0.10%)<sup>[5508]</sup>, YI ZHU AI MA HUANG *Ephedra minuta* var. *dioeca* (herbaceous twigs: mean content of 2 origins = 0.230%)<sup>[5508]</sup>, ZANG MA HUANG *Ephedra saxatilis* (herbaceous twigs: content = 0.062%)<sup>[5508]</sup>, ZHONG MA HUANG *Ephedra intermedia* (herbaceous twigs: content scope = 0.798%~1.163%)<sup>[5501]</sup>, mean content of 3 origins = 0.958%<sup>[5508]</sup>, *Ephedra tweediana* (herbaceous twigs: content = 0.011%)<sup>[5508]</sup>. **Ref:** 2, 6, 658, 660, 1521, 5501, 5508.

**18025 Pseudoginsenoside F<sub>11</sub>**

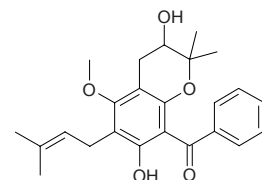
Ginsenoside A  $C_{42}H_{72}O_{14}$  (801.03). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], ZHU JIE SAN QI *Panax pseudo-ginseng* var. *japonicus* (underground part: yield = 0.0038%dw)<sup>[4610]</sup>. **Ref:** 2, 1521, 4610.

**18026 (24S)-Pseudoginsenoside RT<sub>4</sub>**

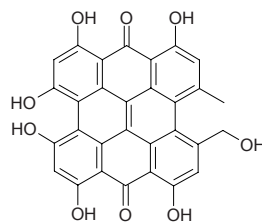
$C_{36}H_{62}O_{10}$  (654.89). **Source:** ZHU JIE SAN QI *Panax pseudo-ginseng* var. *japonicus* (underground part: yield = 0.013%dw). **Ref:** 4610.

**18027 Pseudoguttiaphenone-A**

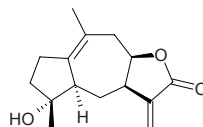
2,2-Dimethyl-8-benzoyl-3,7-dihydroxy-5-methoxy-6-(3-methyl-2-butenyl)-3,4-dihydrobenzopyran  $C_{24}H_{28}O_5$  (396.49).  $[\alpha]_D^{25} = +2.48^\circ$  ( $c = 1.1$ ,  $CHCl_3$ ). **Source:** FEI JI TENG HUANG *Garcinia pseudoguttifera* (heartwood). **Ref:** 3911.

**18028 Pseudohypericin**

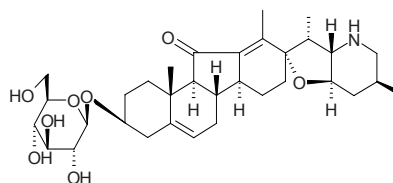
[55954-61-5]  $C_{30}H_{16}O_9$  (520.46). **Pharm:** Antiviral (retrovirus, *in vitro* and *in vivo*). **Source:** SAN LENG YE JIN SI TAO *Hypericum triquetrifolium*. **Ref:** 658.

**18029 Pseudovalin**

[1461-34-3]  $C_{15}H_{20}O_3$  (248.33). **Pharm:** Antifungal (*Candida albicans* and *Saccharomyces cerevisiae*). **Source:** *Iva microcephala*. **Ref:** 658.

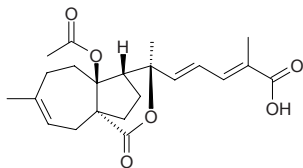
**18030 Pseudojervine**

[36069-05-3]  $C_{33}H_{49}NO_8$  (587.76). mp 300~301°C (dec). **Source:** LI LU *Veratrum nigrum*. **Ref:** 6.

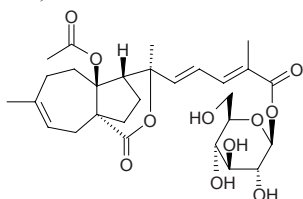


**18031 Pseudolaric acid A**

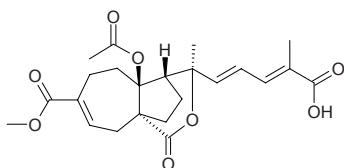
[82508-32-5] C<sub>22</sub>H<sub>28</sub>O<sub>6</sub> (388.46). mp 219°C (benzene). **Pharm:** Antifungal; LD<sub>50</sub> (mus, iv) = 485(430~548)mg/kg; LD<sub>50</sub> (mus, ip) = 396(347-453)mg/kg; LD<sub>50</sub> (mus, sc) = 311(303~319)mg/kg; LD<sub>50</sub> (rat orl) = 219(193~250)mg/kg. **Source:** TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*] (root cortex: yield = 0.0063%dw). **Ref:** 3340, 3341, 3342, 4637.

**18032 Pseudolaric acid A-O-β-D-glucopyranoside**

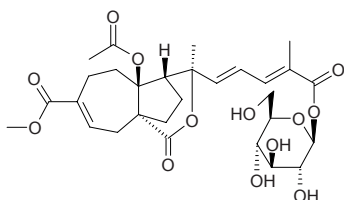
C<sub>28</sub>H<sub>38</sub>O<sub>11</sub> (550.61). **Source:** TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*] (root cortex: yield = 0.0027%dw). **Ref:** 3343, 4637.

**18033 Pseudolaric acid B**

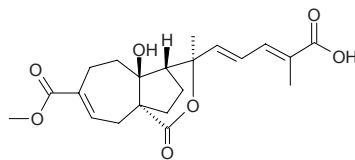
[82508-31-4] C<sub>23</sub>H<sub>28</sub>O<sub>8</sub> (432.47). Colorless powder, mp 139~141°C; crystals, mp 165~167°C (anhydro~benzene), [α]<sub>D</sub><sup>27.5</sup> = -37.3° (c = 0.0233, MeOH). **Pharm:** Anti-fertility agent (mus, rbt, dog); antifungal; cytotoxic (*in vitro*, P<sub>388</sub>, IC<sub>50</sub> = 0.32μg/mL; A549, IC<sub>50</sub> = 0.86μg/mL)<sup>[4762]</sup>; LD<sub>50</sub> (mus, iv) = 423(404~442)mg/kg; LD<sub>50</sub> (mus, ip) = 316(285~351)mg/kg; LD<sub>50</sub> (rat, orl) = 130(114~149)mg/kg. **Source:** TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*] (root cortex: yield = 0.096%dw). **Ref:** 3340, 3341, 3342, 3344, 4637, 4762.

**18034 Pseudolaric acid B-O-β-D-glucopyranoside**

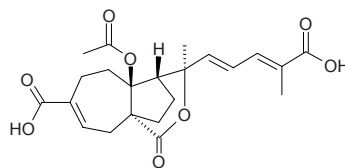
C<sub>29</sub>H<sub>38</sub>O<sub>13</sub> (594.62). **Pharm:** Cytotoxic (culture hmn liver cancer cell strain SMMC-7721, 10μg/mL, kill rate = 42.9%, InRt on cell proliferation = 56.7%~96.9%, InRt on protein content = 64.5%). **Source:** TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*] (root cortex: yield = 0.0954%dw). **Ref:** 3343, 3345, 4637.

**18035 Pseudolaric acid C**

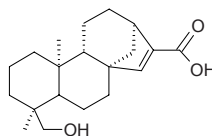
Desacetyl pseudolaric acid B [82601-41-0] C<sub>21</sub>H<sub>26</sub>O<sub>7</sub> (390.44). Colorless needles (MeOH), mp 198~200°C, [α]<sub>D</sub><sup>25</sup> = -78.6° (c = 0.2, MeOH); crystals, mp 220~222°C (CHCl<sub>3</sub>). **Pharm:** Antifungal. **Source:** TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. **Ref:** 3340, 3341, 3342, 3344.

**18036 Pseudolaric acid C<sub>2</sub>**

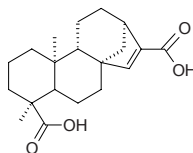
C<sub>22</sub>H<sub>26</sub>O<sub>8</sub> (418.45). **Pharm:** Antifungal. **Source:** TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. **Ref:** 3359, 3341, 3342.

**18037 Pseudolaric acid D**

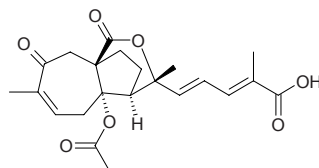
C<sub>20</sub>H<sub>30</sub>O<sub>3</sub> (318.46). **Source:** TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. **Ref:** 3346.

**18038 Pseudolaric acid E**

C<sub>20</sub>H<sub>28</sub>O<sub>4</sub> (332.44). **Source:** TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. **Ref:** 3346.

**18039 Pseudolaric acid F**

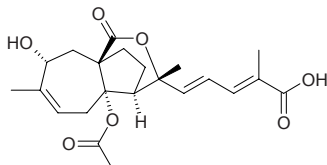
C<sub>22</sub>H<sub>26</sub>O<sub>7</sub> (402.45). White amorphous powder, [α]<sub>D</sub><sup>20</sup> = +25.1° (c = 0.93, Me<sub>2</sub>CO). **Source:** TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*] (root cortex: yield = 0.00021%dw). **Ref:** 4637.



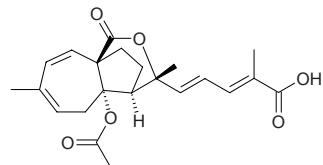


**18040 Pseudolaric acid G**

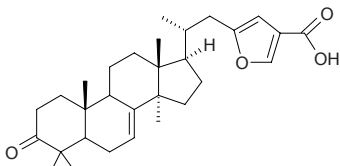
$C_{22}H_{28}O_7$  (404.46). White amorphous powder,  $[\alpha]_D^{20} = -17.4^\circ$  ( $c = 0.71$ ,  $Me_2CO$ ). Source: TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*] (root cortex: yield = 0.000033%dw). Ref: 4637.

**18041 Pseudolaric acid H**

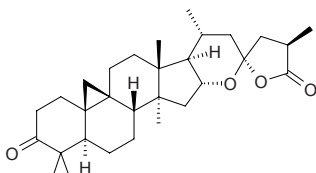
$C_{22}H_{26}O_6$  (386.45). Gum,  $[\alpha]_D^{20} = +11.5^\circ$  ( $c = 0.56$ ,  $Me_2CO$ ). Source: TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*] (root cortex: yield = 0.000046%dw). Ref: 4637.

**18042 Pseudolarifuroic acid**

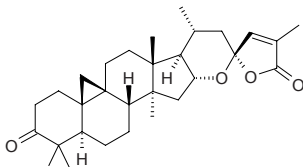
$C_{30}H_{42}O_4$  (466.67). Source: TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. Ref: 3347.

**18043 Pseudolarolide A**

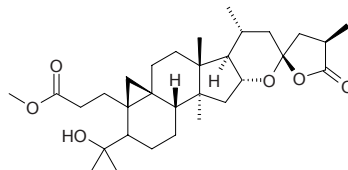
$C_{30}H_{44}O_4$  (468.68). Plates (MeOH), mp 257–259°C. Source: TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. Ref: 3348.

**18044 Pseudolarolide B**

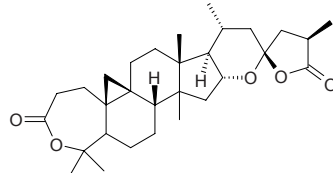
[151368-43-3]  $C_{30}H_{42}O_4$  (466.67). Needles ( $Me_2CO$ ), mp 229–231°C. Pharm: Cytotoxic (KB,  $ED_{50} = 0.49\mu g/mL$ , A549,  $ED_{50} = 0.67\mu g/mL$ , HCT8,  $ED_{50} = 0.73\mu g/mL$ , P<sub>388</sub>,  $ED_{50} = 0.79\mu g/mL$ ). Source: TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. Ref: 3348.

**18045 Pseudolarolide C**

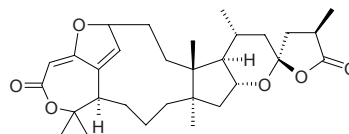
$C_{31}H_{48}O_6$  (516.72). Prisms ( $Me_2CO$ ), mp 205–207.5°C. Source: TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. Ref: 3348.

**18046 Pseudolarolide D**

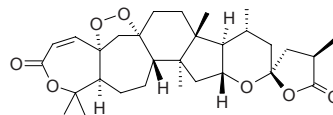
$C_{30}H_{44}O_5$  (484.68). Needles ( $Me_2CO$ ), mp 222–223°C. Source: TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. Ref: 3348.

**18047 Pseudolarolide E**

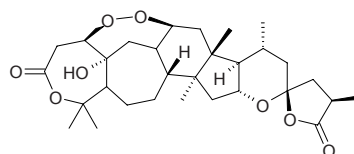
$C_{30}H_{42}O_6$  (498.67). Crystals, mp 209–210°C,  $[\alpha]_D = +2.5^\circ$  ( $c = 0.5$ , EtOH). Source: TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. Ref: 3349.

**18048 Pseudolarolide H**

$C_{30}H_{42}O_7$  (514.67). Prisms ( $Me_2CO$ ), mp 218–221°C. Source: TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. Ref: 3350.

**18049 Pseudolarolide I**

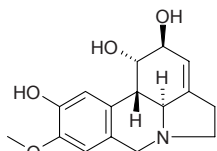
$C_{30}H_{44}O_8$  (532.68). Needles (MeOH), mp 203–205°C. Source: TU JING PI *Pseudolarix amabilis* [Syn. *Larix amabilis*; *Pseudolarix kaempferi*]. Ref: 3351.



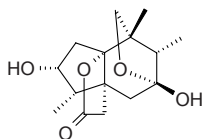


**18050 Pseudolycorine**

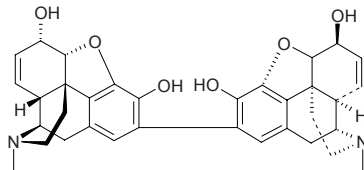
[29429-03-6]  $C_{16}H_{19}NO_4$  (289.33). mp 247~248°C. **Pharm:** Antineoplastic; antiviral (meningitis virus, EMC virus and Japanese encephalitis virus);  $LD_{50}$  (rat, ip) = 110mg/kg. **Source:** DA YI ZHI JIAN *Lycoris aurea*, SHI SUAN *Lycoris radiata* [Syn. *Amaryllis radiata*], SHUI XIAN GEN *Narcissus tazetta* var. *chinensis*, SHUI XIAN HUA *Narcissus tazetta* var. *chinensis*. **Ref:** 4, 5, 658.

**18051 Pseudomajucin**

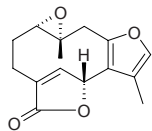
[125028-61-7]  $C_{15}H_{22}O_5$  (282.34). **Source:** DA BA JIAO *Illicium majus*, MIN WAN BA JIAO *Illicium minwanense* (pericarp: yield = 0.0073%dw), *Illicium merrillianum* (pericarp: yield = 0.037%dw). **Ref:** 1521, 3046, 4697.

**18052 Pseudomorphine**

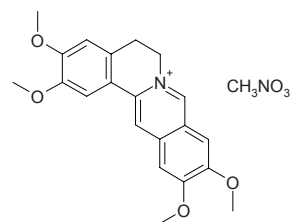
[125-24-6]  $C_{34}H_{36}N_2O_6$  (568.68). mp 327°C (dec). **Source:** YA PIAN *Papaver somniferum*. **Ref:** 6.

**18053 Pseudoneolinderane**

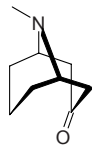
[20082-45-5]  $C_{15}H_{16}O_4$  (260.29). **Pharm:** Anti-HIV-1 inactive (HIV-1 IN inhibitor,  $IC_{50} > 100\mu\text{mol/L}$ , positive control Suramin,  $IC_{50} = 2.4\mu\text{mol/L}$ )<sup>[4224]</sup>. **Source:** DING HU DIAO ZHANG *Lindera chunii* (root). **Ref:** 4224.

**18054 Pseudopalmatine methyl nitrate**

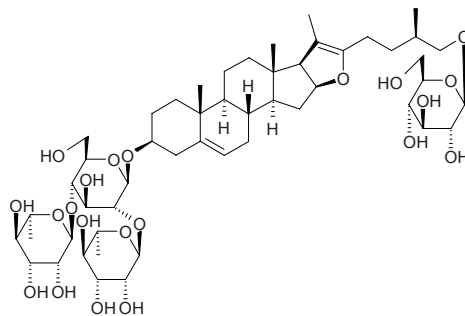
[153306-31-1]  $C_{22}H_{25}N_2O_7$  (429.45). Yellow needles, mp 276~277°C (dec). **Pharm:** Cytotoxic ( $P_{388}$ , 10 $\mu\text{g/mL}$ , InRt = 56%). **Source:** HUANG YE DI BU RONG *Stephania viridiflavens*. **Ref:** 3649.

**18055 Pseudopelletierine**

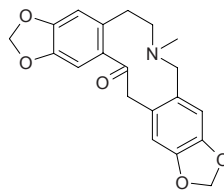
[552-70-5]  $C_9H_{15}NO$  (153.23). mp 54°C. **Source:** SHI LIU GEN *Punica granatum*. **Ref:** 6.

**18056 Pseudoprotodioscin**

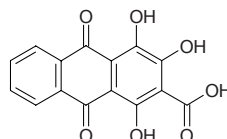
[102115-79-7]  $C_{51}H_{82}O_{21}$  (1031.21). Powder (MeOH-EtOAc), mp 174~176°C (dec),  $[\alpha]_D^{20} = -80.4^\circ$  ( $c = 1$ , pyridine),  $[\alpha]_D^{25} = -66.4^\circ$  ( $c = 0.1$ , pyridine). **Pharm:** Cytotoxic (*in vitro*: A375,  $IC_{50} = (7.38 \pm 2.32)\mu\text{mol/L}$ , control Mithramycin,  $IC_{50} = (0.37 \pm 0.05)\mu\text{mol/L}$ ; L929,  $IC_{50} = (6.75 \pm 3.62)\mu\text{mol/L}$ , Mithramycin,  $IC_{50} = (0.31 \pm 0.03)\mu\text{mol/L}$ ; HeLa,  $IC_{50} = (5.02 \pm 2.19)\mu\text{mol/L}$ , Mithramycin,  $IC_{50} = (0.19 \pm 0.03)\mu\text{mol/L}$ )<sup>[5000]</sup>. **Source:** BA QIA *Smilax china* [Syn. *Smilax japonica*], HUANG SHAN YAO *Dioscorea panthaica* (rhizome), QIAO BING BA QIA *Smilax stans* [Syn. *Smilax vaginata* var. *stans*], TIAN MEN DONG *Asparagus cochinchinensis* [Syn. *Asparagus lucidus*], WA SHI ZONG LV *Trachycarpus wagnerianus*. **Ref:** 3352, 2639, 3553, 5000.

**18057 Pseudopropine**

[24240-05-9]  $C_{20}H_{19}NO_5$  (353.38). White crystals, mp 201~203°C (acetone). **Pharm:** Cytotoxic ( $P_{388}$ ). **Source:** FEI JI AI JIAO *Fagara vitiensis*, PIAN CHI TANG SONG CAO *Thalictrum delavayi*. **Ref:** 3650, 3651.

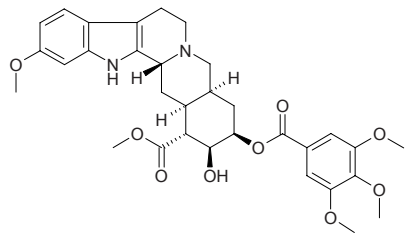
**18058 Pseudopurpurin**

[476-41-5]  $C_{15}H_8O_7$  (300.23). mp 222~224°C (dec). **Pharm:** Genotoxic (hamster, mutagenesis experiment on fibrocyte). **Source:** QIAN CAO GEN *Rubia cordifolia*. **Ref:** 6, 658.

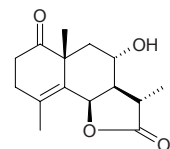


**18059 Pseudoreserpine 16,17-stereoisomer**

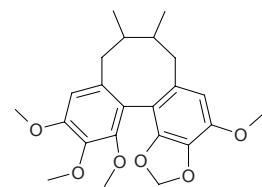
$C_{32}H_{38}N_2O_9$  (594.67). **Pharm:** Antihypertensive. **Source:** YUN NAN LUO FU MU *Rauvolfia yunnanensis*. **Ref:** 658.

**18060 Pseudosantonin**

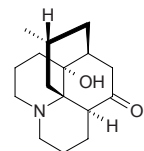
[474-05-5]  $C_{15}H_{20}O_4$  (264.32). mp 183~184°C. **Source:** HUANG HUA HAO *Artemisia annua*. **Ref:** 6.

**18061 Pseudo-γ-schisandrin**

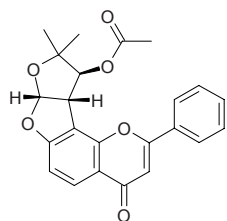
$C_{23}H_{28}O_6$  (400.48). mp 92~93°C. **Source:** WU WEI ZI *Schisandra chinensis*. **Ref:** 2.

**18062 Pseudoselagine**

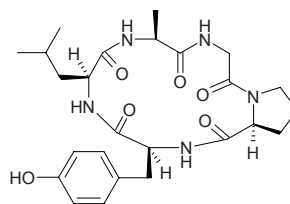
[21061-90-5]  $C_{16}H_{25}NO_2$  (263.38). mp 163°C. **Source:** XIAO JIE JIN CAO *Huperzia selago* [Syn. *Lycopodium selago*]. **Ref:** 6.

**18063 Pseudosmiglabrin**

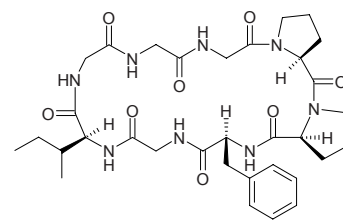
(-)-Pseudosemiglabrin [75444-25-6]  $C_{23}H_{20}O_6$  (392.41). Colorless lamellar crystals (methanol), mp 171~174°C; mp 181~183°C,  $[\alpha]_D^{25} = -384^\circ$  ( $c = 0.49$ , chloroform). **Pharm:** Platelet aggregation inhibitor (selective, caused by thromboxane  $A_2$ , 6.5 μg/mL, InRt = (85±5)%,  $IC_{50} = 12.5$  μmol/L). **Source:** HUI YE GEN *Tephrosia purpurea*. **Ref:** 900.

**18064 Pseudostellarin A**

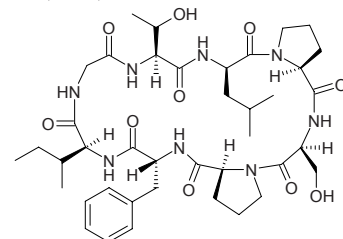
[156430-20-5]  $C_{25}H_{35}N_5O_6$  (501.58). Colorless needles, mp 151~153°C (MeOH),  $[\alpha]_D = -118.7^\circ$  ( $c = 0.92$ , MeOH). **Pharm:** Tyrosinase inhibitor ( $IC_{50} = 131$  μmol/L). **Source:** YI YE JIA FAN LV *Pseudostellaria heterophylla*. **Ref:** 3652, 3653, 3654.

**18065 Pseudostellarin B**

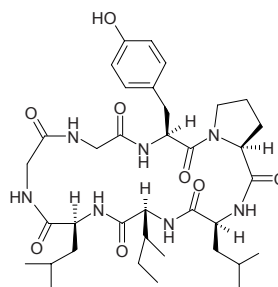
[156430-21-6]  $C_{33}H_{46}N_8O_8$  (682.78). Colorless needles, mp 167~169°C (MeOH),  $[\alpha]_D = -54.5^\circ$  ( $c = 0.32$ , MeOH). **Pharm:** Tyrosinase inhibitor ( $IC_{50} = 187$  μmol/L). **Source:** YI YE JIA FAN LV *Pseudostellaria heterophylla*. **Ref:** 3652, 3653, 3654.

**18066 Pseudostellarin C**

[156430-22-7]  $C_{40}H_{60}N_8O_{10}$  (812.97). Colorless needles, mp 185~187°C (MeOH),  $[\alpha]_D = -39.1^\circ$  ( $c = 0.52$ , MeOH). **Pharm:** Tyrosinase inhibitor ( $IC_{50} = 63$  μmol/L). **Source:** YI YE JIA FAN LV *Pseudostellaria heterophylla*. **Ref:** 3652, 3653, 3654.

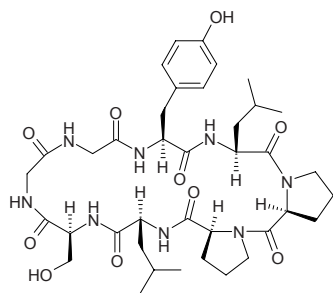
**18067 Pseudostellarin D**

[158335-65-0]  $C_{36}H_{55}N_7O_8$  (713.88). Colorless needles, mp 177~179°C (MeOH),  $[\alpha]_D = -64.8^\circ$  ( $c = 0.54$ , MeOH). **Pharm:** Tyrosinase inhibitor ( $IC_{50} = 100$  μmol/L); antineoplastic (inhibits formation of melanin,  $IC_{50} = 49$  μmol/L). **Source:** YI YE JIA FAN LV *Pseudostellaria heterophylla*. **Ref:** 3653, 3654.

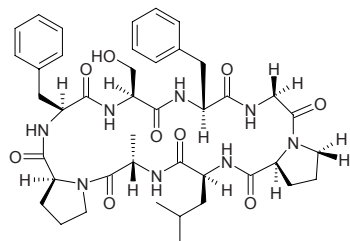


**18068 Pseudostellarin F**

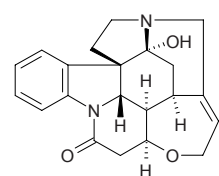
[158335-67-2]  $C_{38}H_{56}N_8O_{10}$  (784.92). Colorless needles, mp 169~171°C (MeOH),  $[\alpha]_D = -58.9^\circ$  ( $c = 0.98$ , MeOH). **Pharm:** Tyrosinase inhibitor ( $IC_{50} = 50\mu\text{mol/L}$ ). **Source:** YI YE JIA FAN LV *Pseudostellaria heterophylla*. **Ref:** 3653, 3654.

**18069 Pseudostellarin G**

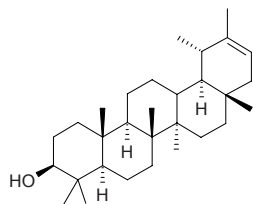
[156525-71-2]  $C_{42}H_{56}N_8O_9$  (816.96). Colorless needles, mp 265°C (dec),  $[\alpha]_D = -57.7^\circ$  ( $c = 0.78$ , MeOH). **Pharm:** Tyrosinase inhibitor ( $IC_{50} = 75\mu\text{mol/L}$ ); antineoplastic (inhibits formation of melanin,  $IC_{50} = 102\mu\text{mol/L}$ ). **Source:** YI YE JIA FAN LV *Pseudostellaria heterophylla*. **Ref:** 3655, 3654.

**18070 Pseudostrychnine**

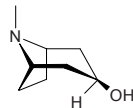
[465-62-3]  $C_{21}H_{22}N_2O_3$  (350.42). mp 266°C. **Source:** MA QIAN ZI *Strychnos nux-vomica*. **Ref:** 2, 542.

**18071 Pseudotaraxterol**

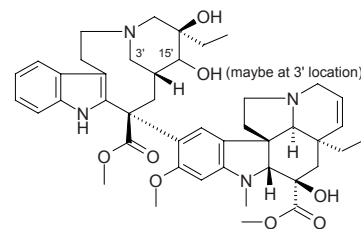
$C_{30}H_{50}O$  (426.73). **Pharm:** Antibacterial (*Escherichia coli*, IZD = 13~15mm, control Chloramphenicol, IZD = 16~20mm, DMSO (4%), IZD < 10mm; *Staphylococcus aureus*, IZD < 10mm, Chloramphenicol, IZD = 16~20mm, DMSO (4%), IZD < 10mm; *Bacillus subtilis*, IZD = 10~12mm; Chloramphenicol, IZD = 16~20mm, DMSO (4%), IZD < 10 mm). **Source:** MAO LIE FENG DOU CAI *Petasites tricholobus* (rhizome). **Ref:** 5315.

**18072 Pseudotropine**

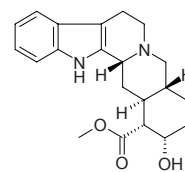
[135-97-7]  $C_8H_{15}NO$  (141.21). mp 108~109°C, bp 240~241°C. **Source:** MAN TUO LUO GEN *Datura metel*, MAO MAN TUO LUO GEN *Datura innoxia*. **Ref:** 6, 660.

**18073 Pseudovincalcaleukoblastine diol**

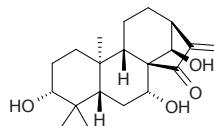
Pseudovincalastinediol [58511-80-1]  $C_{44}H_{56}N_4O_8$  (768.96). **Source:** CHANG CHUN HUA *Catharanthus roseus* [Syn. *Vinca rosea*; *Lochera rosea*]. **Ref:** 2, 1521.

**18074 Pseudoyohimbine**

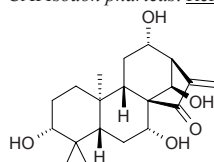
[84-37-7]  $C_{21}H_{26}N_2O_3$  (354.45). White powder,  $[\alpha]_D^{25.4} = +24.3^\circ$  ( $c = 0.8$ , pyridine). **Source:** YANG JIAO MIAN *Alstonia mairei*. **Ref:** 633.

**18075 Pseurata A**

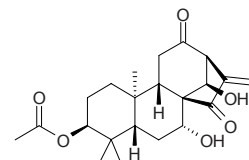
$C_{20}H_{30}O_4$  (334.46). mp 165~167°C. **Source:** CHUAN ZANG XIANG CHA CAI *Isodon pharicus*. **Ref:** 4067.

**18076 Pseurata B**

$C_{20}H_{30}O_5$  (350.46). mp 238~241°C. **Source:** CHUAN ZANG XIANG CHA CAI *Isodon pharicus*. **Ref:** 4067.

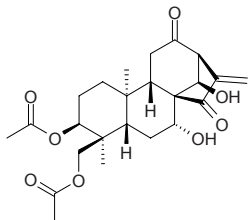
**18077 Pseurata C**

$C_{22}H_{30}O_6$  (390.48). mp 119~121°C. **Source:** CHUAN ZANG XIANG CHA CAI *Isodon pharicus*. **Ref:** 4067.

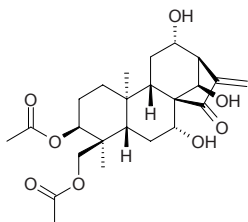


**18078 Pseurata D**

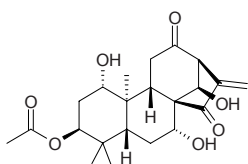
$C_{24}H_{32}O_8$  (448.52). mp 133~135°C. Source: CHUAN ZANG XIANG CHA CAI *Isodon pharicus*. Ref: 4067.

**18079 Pseurata E**

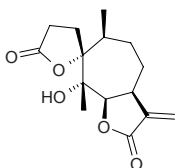
$C_{24}H_{34}O_8$  (450.53). mp 144~146°C. Source: CHUAN ZANG XIANG CHA CAI *Isodon pharicus*. Ref: 4067.

**18080 Pseurata F**

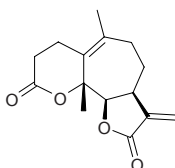
$C_{22}H_{30}O_7$  (406.48). mp 268~273°C. Source: CHUAN ZANG XIANG CHA CAI *Isodon pharicus*. Ref: 4067.

**18081 Psilostachyin**

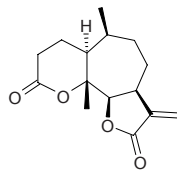
[3533-47-9]  $C_{15}H_{20}O_5$  (280.32). mp 212~214°C. Source: LUO SUI TUN CAO *Ambrosia psilostachya*, TUN CAO *Ambrosia artemisiifolia*. Ref: 526, 1521.

**18082 Psilostachyin B**

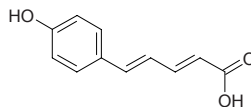
[6995-02-4]  $C_{15}H_{18}O_4$  (262.31). mp 117~119°C. Source: LUO SUI TUN CAO *Ambrosia psilostachya*, TUN CAO *Ambrosia artemisiifolia*. Ref: 526, 1521.

**18083 Psilostachyin C**

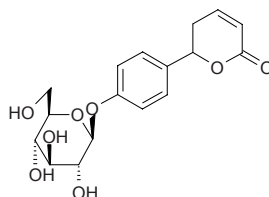
[6466-67-7]  $C_{15}H_{20}O_4$  (264.32). mp 225~226°C. Source: LUO SUI TUN CAO *Ambrosia psilostachya*, TUN CAO *Ambrosia artemisiifolia*. Ref: 526, 1521.

**18084 Psilotic acid**

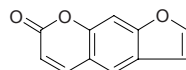
$C_{11}H_{10}O_3$  (190.20). Source: SHI SHUA BA *Psilotum nudum*. Ref: 3554.

**18085 Psilotin**

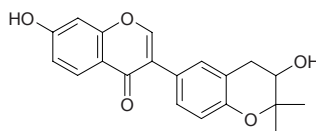
[4624-52-6]  $C_{17}H_{20}O_8$  (352.34). mp 130~131°C. Source: SHI SHUA BA *Psilotum nudum*. Ref: 6.

**18086 Psoralen**

7*H*-Furo[3,2-g][1]benzopyran-7-one; Ficin [66-97-7]  $C_{11}H_6O_3$  (186.17). mp 171°C; 189~190°C. Pharm: Antibacterial (*Mycobacterium tuberculosis*); antineoplastic; hemostatic; photosensitizer; antioxidant (DPPH scavenger,  $EC_{50} > 50\mu\text{g/mL}$ ,  $50\mu\text{g/mL}$  InRt = 41%, control Ascorbic acid,  $EC_{50} = 1.6\mu\text{g/mL} = 9.1\mu\text{mol/L}$ )<sup>[4154]</sup>; LD<sub>50</sub> (mus, orl) = 625mg/kg, (mus, sc) = 480mg/kg, (rat, orl) = 1330mg/kg, (rat, sc) = 830mg/kg. Source: BAI HUA QIAN HU *Peucedanum praeruptorum*, BEI SHA SHEN *Glehnia littoralis* (root: mean content of 6 origins = 0.00125%<sup>[5508]</sup>), BU GU ZHI *Psoralea corylifolia* (dried ripe fruit: content scope = 0.23%~0.98%<sup>[5501]</sup>, mean content of 10 origins = 0.420%<sup>[5508]</sup>), CHOU CAO *Ruta graveolens* (whole herb: mean content of 2 origins = 0.192%<sup>[5508]</sup>), CU YE RONG *Ficus simplicissima* (root: content = 0.062%<sup>[5508]</sup>), DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*], FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*] (dried root: content = 0.0012%<sup>[5508]</sup>), RUAN MAO DU HUO *Heracleum lanatum*, WU HUA GUO *Ficus carica*. Ref: 2, 4, 5, 268, 658, 4154, 5501, 5508.

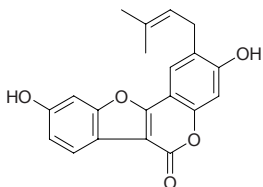
**18087 Psoralenol**

[70522-30-4]  $C_{20}H_{18}O_5$  (338.36). Source: BU GU ZHI *Psoralea corylifolia*. Ref: 2, 545.

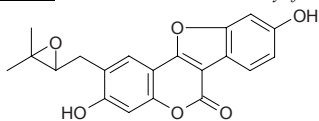


**18088 Psoralidin**

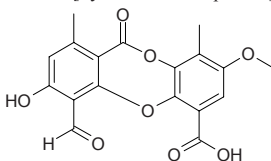
[18642-23-4] C<sub>20</sub>H<sub>16</sub>O<sub>5</sub> (336.35). mp 292°C (dec). **Pharm:** Antifungal; protein tyrosine phosphatase 1B (PTP1B) inhibitor (IC<sub>50</sub> = (9.4±0.5)μmol/L, control RK-682, IC<sub>50</sub> = 5.0μmol/L)<sup>[50491]</sup>; cytotoxic (SNU-1, IC<sub>50</sub> = 53μg/mL, SNU-16, IC<sub>50</sub> = 203μg/mL). **Source:** BU GU ZHI *Psoralea corylifolia* (dried ripe fruit: mean content of 7 origins = 1.502%<sup>[5508]</sup>). **Ref:** 2, 545, 1161, 1167, 5049, 5508.

**18089 Psoralidin-2',3'-oxide**

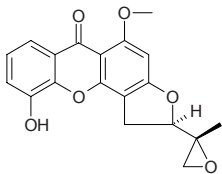
C<sub>20</sub>H<sub>16</sub>O<sub>6</sub> (352.35). Needles (EtOH, diacetate), mp 232~234°C (diacetate). **Source:** BU GU ZHI *Psoralea corylifolia*. **Ref:** 3555.

**18090 Psoromic acid**

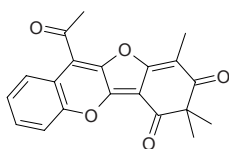
[7729-11-8] C<sub>18</sub>H<sub>14</sub>O<sub>8</sub> (358.31). mp 265°C. **Source:** TAI BAI HUA *Cladonia stellaris* [Syn. *Cladonia alpestris*]. **Ref:** 6.

**18091 Psorospermin**

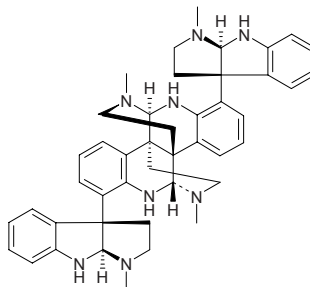
[74045-97-9] C<sub>19</sub>H<sub>16</sub>O<sub>6</sub> (340.34). Acicular crystals, mp 227~228°C. **Pharm:** Antineoplastic (mus P<sub>388</sub>, *in vivo*, 8mg/kg, biotic prolonged rate = 58%); cytotoxic (KB, ED<sub>50</sub> = 0.1μg/mL). **Source:** PU SUO MU *Psorospermum febrifugum*. **Ref:** 5, 658.

**18092 Psorothamnone A**

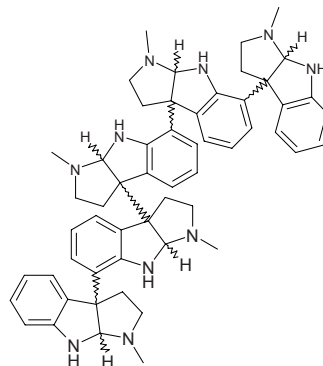
[208105-38-8] C<sub>20</sub>H<sub>16</sub>O<sub>5</sub> (336.35). Orange needles (EtOAc), mp 247~248°C (dec). **Pharm:** Protein kinase C inhibitor (IC<sub>50</sub> = 12μg/mL). **Source:** DENG XIN DAI ER DOU *Psorothamnus junceus*. **Ref:** 3656.

**18093 Psycholeine**

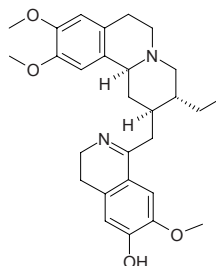
[144424-79-3] C<sub>44</sub>H<sub>50</sub>N<sub>8</sub> (690.94). [α]<sub>D</sub><sup>20</sup> = -150° (c = 0.4, alcohol). **Pharm:** Somatostatin antagonist. **Source:** YOU GAN LAN JIU JIE *Psychotria oleoides*. **Ref:** 3657, 3658.

**18094 Psychotridine**

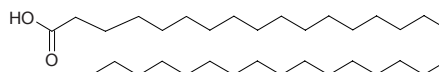
[51617-25-1] C<sub>55</sub>H<sub>62</sub>N<sub>10</sub> (863.17). **Pharm:** Anthelmintic; antitrypanosomal (*in vitro*). **Source:** BI CHUAN JIU JIE MU *Psychotria beccaroides*. **Ref:** 658.

**18095 Psychotrine**

[7633-29-6] C<sub>28</sub>H<sub>36</sub>N<sub>2</sub>O<sub>4</sub> (464.61). **Pharm:** Antiamebic; antitussive (dispels phlegm); emetic. **Source:** AN GE LA BA JIAO FENG *Alangium lamarkii*. **Ref:** 658.

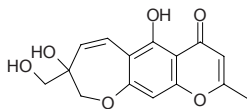
**18096 Psyllic acid**

C<sub>33</sub>H<sub>66</sub>O<sub>2</sub> (494.89). mp 94~95°C. **Source:** MI LA *Apis cerana*. **Ref:** 6.

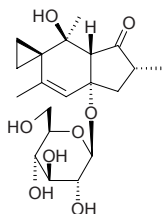


**18097 Ptaeroglycol**

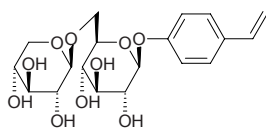
[18836-12-9] C<sub>15</sub>H<sub>14</sub>O<sub>6</sub> (290.28). Yellowish amorphous solid (alcohol), mp 234°C. **Pharm:** Cytotoxic (HeLa, ID<sub>50</sub> = 5 μg/mL); Antibacterial (5 mg/mL, *Staphylococcus aureus*, *Bacillus globisporus*). **Source:** BEI FEN NAI AO LE MU *Cneorum pulverulentum*, *Ptaeroxylon obliquum*. **Ref:** 1035, 3715, 3716, 3717.

**18098 Ptaquiloside**

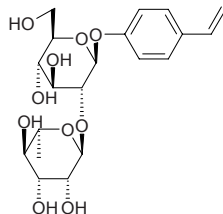
Aquilide A [87625-62-5] C<sub>20</sub>H<sub>30</sub>O<sub>8</sub> (398.46). Amorphous powder, mp 85–89°C, [α]<sub>D</sub><sup>22</sup> = -188° (c = 1.00, MeOH). **Pharm:** Potent carcinogen. **Source:** JIN MAO GOU *Cibotium barometz* [Syn. *Polypodium barometz*], WEI YE XI ZI JUE *Monachosorum flagellare*, WAN JUE *Dennstaedtia scabra* [Syn. *Dicksonia scabra*], CU MAO LIN GAI JUE *Microlepia strigosa* [Syn. *Trichomanes strigosa*], JI JUE *Hypolepis punctata* [Syn. *Polypodium punctatum*], JUE *Pteridium aquilinum* var. *latiusculum*, FENG WEI JUE *Pteris cretica* var. *nervosa* [Syn. *Pteris nervosa*]. **Ref:** 1521, 3102, 2931, 3556, 3557.

**18099 Ptelatoside A**

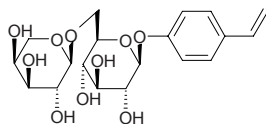
[90899-20-0] C<sub>19</sub>H<sub>26</sub>O<sub>10</sub> (414.41). Crystals (Me<sub>2</sub>CO aq.), mp 183–185°C, [α]<sub>D</sub><sup>22</sup> = -104° (c = 0.68, H<sub>2</sub>O). **Source:** OU ZHOU JUE *Pteridium aquilinum*. **Ref:** 3556.

**18100 Ptelatoside B**

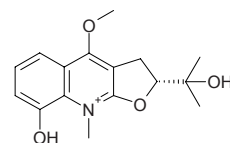
[90852-99-6] C<sub>20</sub>H<sub>28</sub>O<sub>10</sub> (428.44). Amorphous, [α]<sub>D</sub><sup>23</sup> = -94.8° (c = 1, H<sub>2</sub>O). **Source:** OU ZHOU JUE *Pteridium aquilinum*. **Ref:** 3556.

**18101 Ptelatoside C**

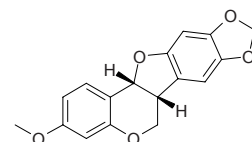
[98755-18-1] C<sub>19</sub>H<sub>26</sub>O<sub>10</sub> (414.41). Amorphous powder, [α]<sub>D</sub><sup>22</sup> = -67.3° (c = 0.79, H<sub>2</sub>O). **Source:** OU ZHOU JUE *Pteridium aquilinum*. **Ref:** 3557, 3556.

**18102 Pteleatin**

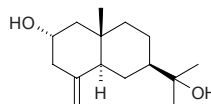
[34443-73-7] C<sub>16</sub>H<sub>20</sub>NO<sub>4</sub><sup>+</sup> (290.34). **Pharm:** Antibacterial (*Mycobacterium smegmatis* and *Staphylococcus aureus*, chloride); antifungal (*Candida albicans*, chloride). **Source:** YU JU *Ptelea trifoliata*. **Ref:** 658.

**18103 Pterocarpin**

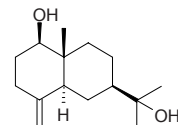
[524-97-0] C<sub>17</sub>H<sub>14</sub>O<sub>5</sub> (298.30). mp (+) 159–160°C, (-) 164–165°C, (±) 185–186°C. **Pharm:** Antineoplastic (S<sub>180</sub>); antifungal (*Curvularia lunata*, 20 μg/mL, InRt > 50%); hepatoprotective (mus primary cultured hepatocytes, antihepatotoxin induced by *D*-galactosamine (GalN), 100 μmol/L, InRt = (14.6±0.5)%, weak, control Silybin, 100 μmol/L, InRt = (77.0±5.5)%)<sup>[4095]</sup>. **Source:** SI ZI TAN *Pterocarpus santalinus*, ZI TAN *Pterocarpus indicus*, E SUN ZI TAN *Pterocarpus osun*, SHAN DOU GEN *Sophora subprostrata* [Syn. *Sophora tonkinensis*], GUANG BU DING GONG TENG *Erycibe expansa*. **Ref:** 5, 6, 658, 4095, 5505.

**18104 Pterocarpol**

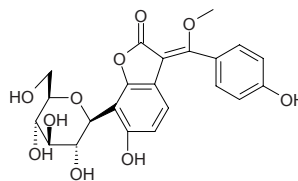
[21677-80-5] C<sub>15</sub>H<sub>26</sub>O<sub>2</sub> (238.37). mp 104–105°C. **Source:** ZI TAN *Pterocarpus indicus*. **Ref:** 6.

**18105 Pterocarpus marsupium sesquiterpene**

C<sub>15</sub>H<sub>26</sub>O<sub>2</sub> (238.37). **Source:** NANG ZHUANG ZI TAN *Pterocarpus marsupium* (heartwood). **Ref:** 3789.

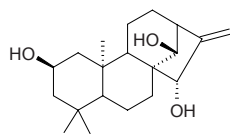
**18106 Pterisoauroside**

3-(*α*-Methoxy-4-hydroxybenzylidene)-6-hydroxybenzo-(2*H*)-furanone-7-*C*-*β*-*D*-glucopyranoside C<sub>22</sub>H<sub>22</sub>O<sub>10</sub> (446.41). Light yellow crystals, mp 197–199°C, [α]<sub>D</sub><sup>29</sup> = +11.4° (c = 0.07, MeOH). **Source:** NANG ZHUANG ZI TAN *Pterocarpus marsupium* (heartwood). **Ref:** 3789.

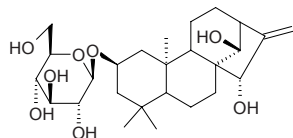


**18107 Pterokaurane P<sub>1</sub>**

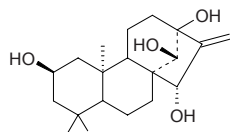
$C_{20}H_{32}O_3$  (320.48). Source: LI BING FENG WEI JUE *Pteris plumbea*. Ref: 3155.

**18108 Pterokaurane P<sub>1</sub>-2-O-β-D-glucoside**

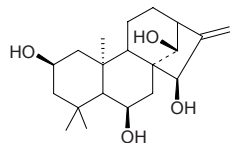
$C_{26}H_{42}O_8$  (482.62). Source: LI BING FENG WEI JUE *Pteris plumbea*. Ref: 3155.

**18109 Pterokaurane P<sub>2</sub>**

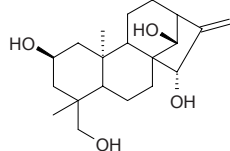
$C_{20}H_{32}O_4$  (336.48). Source: LI BING FENG WEI JUE *Pteris plumbea*. Ref: 3155.

**18110 Pterokaurane P<sub>3</sub>**

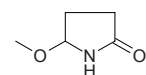
$C_{20}H_{32}O_4$  (336.48). Source: LI BING FENG WEI JUE *Pteris plumbea*. Ref: 3155.

**18111 Pterokaurane P<sub>4</sub>**

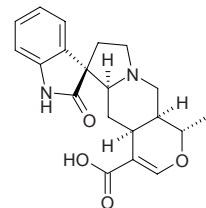
$C_{20}H_{32}O_4$  (336.48). Source: LI BING FENG WEI JUE *Pteris plumbea*. Ref: 3155.

**18112 Pterolactam**

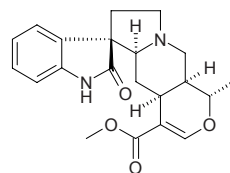
[63853-74-7]  $C_5H_9NO_2$  (115.13). mp 56~57°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6.

**18113 Pteropodic acid**

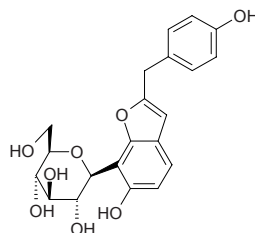
$C_{20}H_{22}N_2O_4$  (354.41). mp 227~229°C (dec),  $[\alpha]_D = -126^\circ$  ( $c = 0.1$ , MeOH). Source: HUA GOU TENG *Uncaria sinensis*. Ref: 3558, 5341.

**18114 Pteropodine**

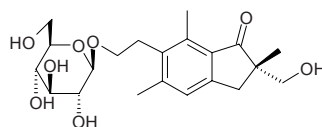
Uncarine C [5629-60-7]  $C_{21}H_{24}N_2O_4$  (368.43). White acicular crystals,  $[\alpha]_D^{17} = -123.8^\circ$  (chloroform). Pharm: Enhances phagocytic function (*in vitro*)<sup>[900]</sup>; cytotoxic (SK-MEL, KB, BT549, SK-OV-3 and Vero cell lines)<sup>[5341]</sup>; cytotoxic (mammalian cell lines,  $IC_{50} = 17\sim 51\mu\text{g/mL}$ )<sup>[5341]</sup>; cytotoxic and DNA damaging activity (RS321 yeast assay,  $IC_{12} = 140\mu\text{g/mL}$ ; RS322 yeast assay,  $IC_{12} = 120\mu\text{g/mL}$ )<sup>[5341]</sup>; immunostimulant (maybe by increasing phagocytosis of hmn granulocytes and macrophages and blocking proliferation of myeloid cell lines)<sup>[5341]</sup>; CNS activity (positively modulates both 5-HT2 receptor and muscarinic M1 receptor)<sup>[5341]</sup>. Source: BEI YUE GOU TENG *Uncaria homomalla* [Syn. *Uruparia homomalla*; *Uruparia tonkinensis*; *Uruparia lanosa* var. *parviflora*], BI LU GOU TENG *Uncaria tomentosa*, CHANG HUA GOU TENG *Uncaria longiflora*, DONG FANG GOU TENG *Uncaria orientalis*, DUAN RONG MAO GOU TENG *Uncaria velutina*, GOU TENG *Uncaria rhynchophylla* [Syn. *Nauclea rhynchophylla*], GUI YA NA GOU TENG *Uncaria guianensis*, HUA GOU TENG *Uncaria sinensis*, MIAN MAO GOU TENG *Uncaria lanosa*, PAN ZHI GOU TENG *Uncaria scandens* [Syn. *Nauclea pilosa*; *Uruparia pilosa*; *Uncaria pilosa*], *Uncaria bernaysii*, *Uncaria donisii*, *Uncaria perrottetii*, *Uncaria roxburghiana*, *Uncaria sterrophylla*. Ref: 900, 5341.

**18115 Pteroside**

6-Hydroxy-2-(4-hydroxybenzyl)-benzofuran-7-C-β-D-glucopyranoside  $C_{21}H_{22}O_8$  (402.40). Light brown crystals ( $H_2O:MeOH = 19:1$ ), mp 117~118°C,  $[\alpha]_D^{29} = +9.15^\circ$  ( $c = 0.295$ , MeOH). Source: NANG ZHUANG ZI TAN *Pterocarpus marsupium* (heartwood). Ref: 3789.

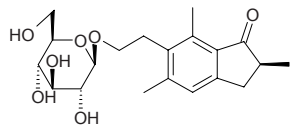
**18116 Pteroside A**

[35910-15-7]  $C_{21}H_{30}O_8$  (410.47). Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

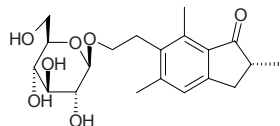


**18117 (2S)-Pteroside B**

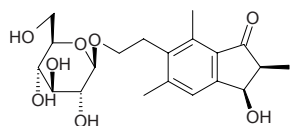
$C_{20}H_{28}O_7$  (380.44). mp 164~166°C,  $[\alpha]_D = -13.6^\circ$ . Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 3559.

**18118 Pteroside B**

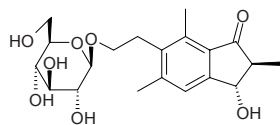
[29774-74-1]  $C_{20}H_{28}O_7$  (380.44). mp 119~121°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18119 (2S,3R)-Pteroside C**

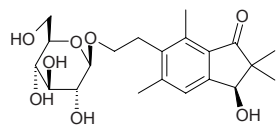
$C_{20}H_{28}O_8$  (396.44). Amorphous. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 3559.

**18120 Pteroside C**

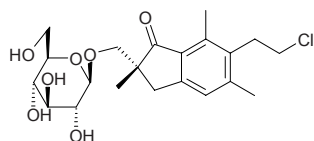
[35910-17-9]  $C_{20}H_{28}O_8$  (396.44). Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18121 Pteroside D**

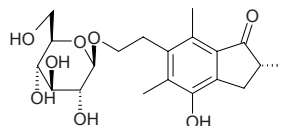
[35943-38-5]  $C_{21}H_{30}O_8$  (410.47). Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18122 (2S)-Pteroside K**

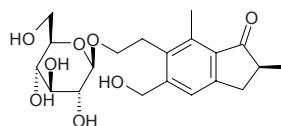
[69753-96-4]  $C_{21}H_{29}ClO_7$  (428.91). mp 94~96°C,  $[\alpha]_D = -26.4^\circ$ . Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 3559.

**18123 Pteroside M**

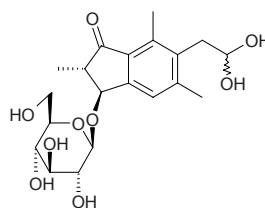
[52715-92-1]  $C_{20}H_{28}O_8$  (396.44). Crystals (EtOH), mp 192°C,  $[\alpha]_D^{18} = +129^\circ$  ( $c = 1.2$ , Me<sub>2</sub>CO aq.). Source: XIAO YE JI WEI *Onychium japonicum* [Syn. *Tricomanes japonicum*]. Ref: 1521, 3560.

**18124 Pteroside P**

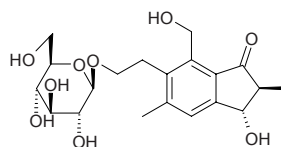
[54854-88-5]  $C_{20}H_{28}O_8$  (396.44). Crystals (CHCl<sub>3</sub>-MeOH), mp 191~193°C,  $[\alpha]_D = -14.9^\circ$  (MeOH). Source: OU ZHOU JUE *Pteridium aquilinum*. Ref: 3559.

**18125 Pteroside Q**

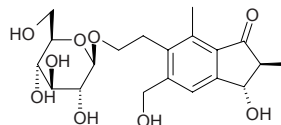
[54797-08-9]  $C_{20}H_{28}O_9$  (412.44). Syrup,  $[\alpha]_D^{25} = +24^\circ$  ( $c = 1$ , MeOH). Source: LI JUE *Histiopteris incisa*, SAN CHA FENG WEI JUE *Pteris wallichinan*, XIE YU FENG WEI JUE *Pteris oshimensis*. Ref: 1521, 3561.

**18126 Pteroside S**

[62043-50-9]  $C_{20}H_{28}O_9$  (412.44). Source: BIAN YI FENG WEI JUE *Pteris inaequalis*, JIN CHAI FENG WEI JUE *Pteris fauriei* [Syn. *Pteris fauriei* var. *minor*]. Ref: 1521, 3562.

**18127 Pteroside T**

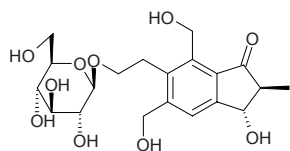
[62043-51-0]  $C_{20}H_{28}O_9$  (412.44). Crystals, mp 118~121°C,  $[\alpha]_D^{22} = +33^\circ$  ( $c = 1.2$ , MeOH). Source: BIAN YI FENG WEI JUE *Pteris inaequalis*, JIN CHAI FENG WEI JUE *Pteris fauriei* [Syn. *Pteris fauriei* var. *minor*]. Ref: 1521, 3562.



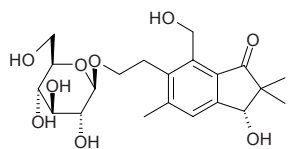


**18128 Pteroside U**

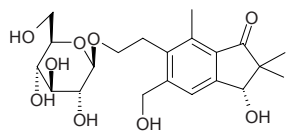
[62043-52-1] C<sub>20</sub>H<sub>28</sub>O<sub>10</sub> (428.44). Crystals, mp 149–151°C, [α]<sub>D</sub><sup>22</sup> = +2.3° (c = 0.865, MeOH). Source: JIN CHAI FENG WEI JUE *Pteris fauriei* [Syn. *Pteris fauriei* var. *minor*]. Ref: 1521, 3562.

**18129 Pteroside W**

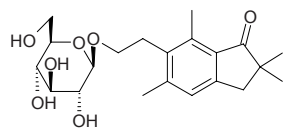
[62043-48-5] C<sub>21</sub>H<sub>30</sub>O<sub>9</sub> (426.47). Source: JIN CHAI FENG WEI JUE *Pteris fauriei* [Syn. *Pteris fauriei* var. *minor*]. Ref: 3562.

**18130 Pteroside X**

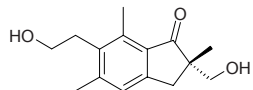
[62043-49-6] C<sub>21</sub>H<sub>30</sub>O<sub>9</sub> (426.47). Syrup, [α]<sub>D</sub><sup>21</sup> = -10.3° (c = 0.58, MeOH). Source: JIN CHAI FENG WEI JUE *Pteris fauriei* [Syn. *Pteris fauriei* var. *minor*]. Ref: 3562.

**18131 Pteroside Z**

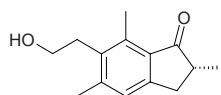
[35943-37-4] C<sub>21</sub>H<sub>30</sub>O<sub>7</sub> (394.47). Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18132 Pterosin A**

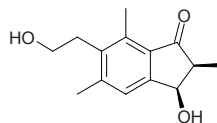
[35910-16-8] C<sub>15</sub>H<sub>20</sub>O<sub>3</sub> (248.32). mp 125–127°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18133 Pterosin B**

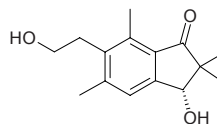
[34175-96-7] C<sub>14</sub>H<sub>18</sub>O<sub>2</sub> (218.30). mp 109–110°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18134 Pterosin C**

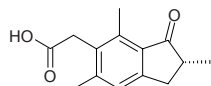
C<sub>14</sub>H<sub>18</sub>O<sub>3</sub> (234.30). mp 153–156°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18135 Pterosin D**

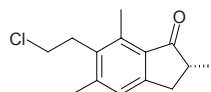
[61138-81-6] C<sub>15</sub>H<sub>20</sub>O<sub>3</sub> (248.32). mp 189–190°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18136 Pterosin E**

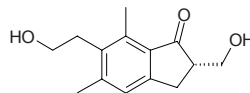
[52528-78-6] C<sub>14</sub>H<sub>16</sub>O<sub>3</sub> (232.28). mp 160–162°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18137 Pterosin F**

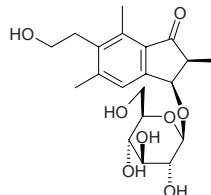
[34175-98-9] C<sub>14</sub>H<sub>17</sub>ClO (236.74). mp 66–67°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18138 Pterosin G**

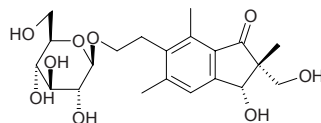
[35964-50-2] C<sub>14</sub>H<sub>18</sub>O<sub>3</sub> (234.30). mp 152–153°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18139 Pterosin C-3-O-glucoside**

C<sub>20</sub>H<sub>28</sub>O<sub>8</sub> (396.44). Source: FENG WEI CAO *Pteris multifida*. Ref: 3563.

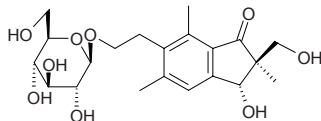
**18140 2R,3R-Pterosin L-2'-O-β-D-glucoside**

C<sub>21</sub>H<sub>30</sub>O<sub>9</sub> (426.47). Oil, [α]<sub>D</sub> = +18.4°. Source: JI JUE *Hypolepis punctata* [Syn. *Polypodium punctatum*]. Ref: 3564.

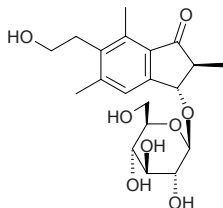


**18141 2S,3R-Pterosin L-2'-O-β-D-glucoside**

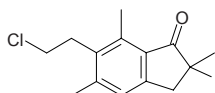
$C_{21}H_{30}O_9$  (426.47). Syrup,  $[\alpha]_D^{23} = -19.0^\circ$  ( $c = 1.21$ , MeOH). Source: JI JUE *Hypolepis punctata* [Syn. *Polypodium punctatum*]. Ref: 3564.

**18142 2S,3S-Pterosin C-3-O-β-D-glucoside**

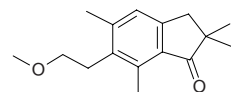
$C_{20}H_{28}O_8$  (396.44). Source: CU MAO LIN GAI JUE *Microlepia strigosa* [Syn. *Trichomanes strigosa*]. Ref: 3565.

**18143 Pterosin H**

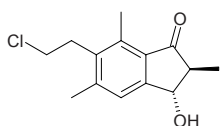
Hypolepin A [39004-41-6]  $C_{15}H_{19}ClO$  (250.77). mp 87.5~88°C. Source: JI JUE *Hypolepis punctata* [Syn. *Polypodium punctatum*]. Ref: 2931.

**18144 Pterosin I**

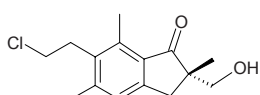
Hypolepin C  $C_{16}H_{22}O_2$  (246.35). Source: JI JUE *Hypolepis punctata* [Syn. *Polypodium punctatum*]. Ref: 2931.

**18145 Pterosin J**

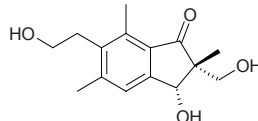
[41411-02-3]  $C_{14}H_{17}ClO_2$  (252.74). mp 136~137°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18146 Pterosin K**

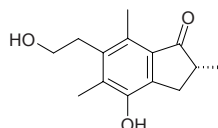
[41411-03-4]  $C_{15}H_{19}ClO_2$  (266.77). mp 85~87°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18147 Pterosin L**

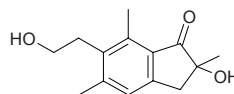
[41411-04-5]  $C_{15}H_{20}O_4$  (264.32). mp 139~141°C. Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 1521.

**18148 Pterosin M**

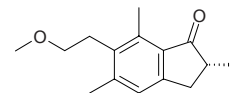
[52744-25-9]  $C_{14}H_{18}O_3$  (234.30). Crystals ( $H_2O$  or EtOAc), mp 187°C. Source: XIAO YE JI WEI *Onychium japonicum* [Syn. *Trichomanes japonicum*]. Ref: 1521, 3560.

**18149 Pterosin N**

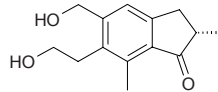
[54797-11-4]  $C_{14}H_{18}O_3$  (234.30). Crystals ( $Me_2CO$ ), mp 165~167°C,  $[\alpha]_D = -18.8^\circ$  (MeOH). Source: JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 1521, 2732.

**18150 Pterosin O**

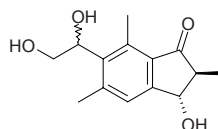
[54854-89-6]  $C_{15}H_{20}O_2$  (232.33). Crystals (hexane), mp 45~46°C; oil,  $[\alpha]_D = -14.1^\circ$  ( $CHCl_3$ ). Source: CU MAO LIN GAI JUE *Microlepia strigosa* [Syn. *Trichomanes strigosa*], FENG WEI CAO *Pteris multifida*, JIN JI WEI *Pteris dactylina*, OU ZHOU JUE *Pteridium aquilinum*. Ref: 1521, 2732, 3563.

**18151 Pterosin P**

[56374-2-2]  $C_{14}H_{18}O_3$  (234.30). Crystals ( $CHCl_3-C_6H_6$ ), mp 115~117°C,  $[\alpha]_D = +4.6^\circ$  (MeOH). Source: OU ZHOU JUE *Pteridium aquilinum*. Ref: 3559.

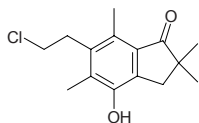
**18152 Pterosin Q**

[54797-09-0]  $C_{14}H_{18}O_4$  (250.30). Syrup,  $[\alpha]_D^{25} = +90^\circ$  ( $c = 1$ , MeOH). Source: LI JUE *Histiopteris incisa*, JIN JI WEI *Pteris dactylina*, XIE YU FENG WEI JUE *Pteris oshimensis*. Ref: 1521, 3563.

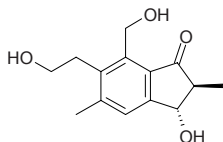


**18153 Pterisin R**

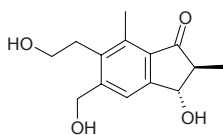
[76947-56-3] C<sub>15</sub>H<sub>19</sub>ClO<sub>2</sub> (266.77). mp 199.5~200°C. Source: JIN MAO GOU *Cibotium barometz* [Syn. *Polypodium barometz*]. Ref: 2932.

**18154 Pterisin S**

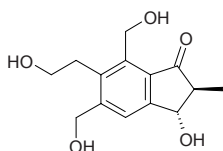
[56227-00-0] C<sub>14</sub>H<sub>18</sub>O<sub>4</sub> (250.30). mp 118~119°C, [α]<sub>D</sub><sup>25</sup> = +71° (c = 0.53, MeOH). Source: DA YE JING KOU BIAN CAO *Pteris cretica*, FENG WEI CAO *Pteris multifida*, FENG WEI JUE *Pteris cretica* var. *nervosa* [Syn. *Pteris nervosa*], *Pteris livida*, *Eriosorus flexuosus*, *Jamesonia scammanae*. Ref: 1521, 3563.

**18155 Pterisin T**

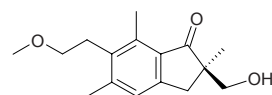
[56227-01-1] C<sub>14</sub>H<sub>18</sub>O<sub>4</sub> (250.30). Syrup, [α]<sub>D</sub><sup>24</sup> = +91° (c = 1, MeOH). Source: CHANG BING FENG WEI JUE *Pteris bella*, PING YU FENG WEI JUE *Pteris kiuschiuensis*, XIAN YU FENG WEI JUE *Pteris linearis*. Ref: 1521.

**18156 Pterisin U**

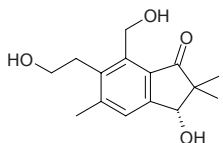
[56227-02-2] C<sub>14</sub>H<sub>18</sub>O<sub>5</sub> (266.30). mp 129~130°C, [α]<sub>D</sub><sup>21</sup> = +73.1° (c = 0.47, MeOH). Source: PING YU FENG WEI JUE *Pteris kiuschiuensis*. Ref: 1521.

**18157 Pterisin V**

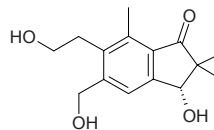
[56670-45-2] C<sub>16</sub>H<sub>22</sub>O<sub>3</sub> (262.35). Oil, [α]<sub>D</sub><sup>22</sup> = -4° (c = 0.69, MeOH). Source: WAN JUE *Dennstaedtia scabra* [Syn. *Dicksonia scabra*]. Ref: 2929, 2931.

**18158 Pterisin W**

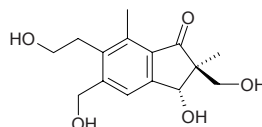
[62043-46-3] C<sub>15</sub>H<sub>20</sub>O<sub>4</sub> (264.32). Syrup, [α]<sub>D</sub><sup>21</sup> = +51.2° (c = 0.215, MeOH). Source: JIN CHAI FENG WEI JUE *Pteris fauriei* [Syn. *Pteris fauriei* var. *minor*]. Ref: 3562.

**18159 Pterisin X**

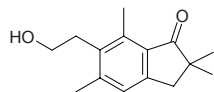
[62043-47-4] C<sub>15</sub>H<sub>20</sub>O<sub>4</sub> (264.32). Syrup, [α]<sub>D</sub><sup>21</sup> = +31.1° (c = 0.29, MeOH). Source: FENG YA JUE *Coniogramme japonica* [Syn. *Hemionitis japonica*], JIN CHAI FENG WEI JUE *Pteris fauriei* [Syn. *Pteris fauriei* var. *minor*]. Ref: 3562, 2932.

**18160 Pterisin Y**

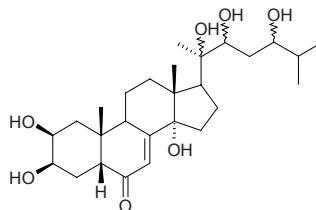
[76947-59-6] C<sub>15</sub>H<sub>20</sub>O<sub>5</sub> (280.32). Oil, [α]<sub>D</sub><sup>15</sup> = +62.2° (c = 1.35, MeOH). Source: FENG YA JUE *Coniogramme japonica* [Syn. *Hemionitis japonica*]. Ref: 2932.

**18161 Pterisin Z**

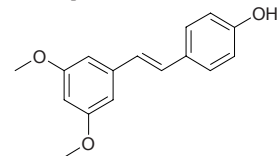
[34169-69-2] C<sub>15</sub>H<sub>20</sub>O<sub>2</sub> (232.33). mp 86~88°C. Source: JI JUE *Hypolepis punctata* [Syn. *Polypodium punctatum*], JIN MAO GOU *Cibotium barometz* [Syn. *Polypodium barometz*], JUE *Pteridium aquilinum* var. *latiusculum*. Ref: 6, 2732, 2931, 3102.

**18162 Pterosterone**

2,3,14,20,22,24-Hexahydroxycholest-7-en-6-one [18089-44-6] C<sub>27</sub>H<sub>44</sub>O<sub>7</sub> (480.65). Crystals +H<sub>2</sub>O, mp 229~230°C, [α]<sub>D</sub> = +7.4° (MeOH). Pharm: Insect ecdysone (molting hormone). Source: BEI MEI QIU ZI JUE *Onoclea sensibilis*, CANG BAI CHENG GOU FENG *Diploclisia glaucescens*, JUE *Pteridium aquilinum* var. *latiusculum*, LUO YAN CAO *Lemmaphyllum microphyllum*, XIAO YE GUAN ZHONG *Matteuccia struthiopteris*, *Vitex megapotamica*, *Lastrea thelpteris*. Ref: 6, 658, 660, 1521.

**18163 Pterostilbene**

[537-42-8] C<sub>16</sub>H<sub>16</sub>O<sub>3</sub> (256.30). mp 86°C. Pharm: Antifungal. Source: JIAN YE LONG XUE SHU *Dracaena cochinchinensis*, PU<sup>(2)</sup> TAO *Vitis vinifera*, QI LIN JIE *Daemonorops draco* (balsam: mean content = 1.03%)<sup>[5508]</sup>, SI ZI TAN *Pterocarpus santalinus*, ZI TAN *Pterocarpus indicus*. Ref: 6, 616, 658, 1521, 5508.

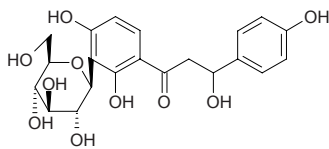


**18164 Pterosupin**

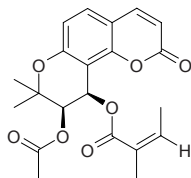
[81861-73-6]  $C_{21}H_{24}O_{10}$  (436.42). mp 165~167°C (benzene-EtOAc),  $[\alpha]_D^{26} = +51^\circ$  ( $c = 0.21$ , MeOH). **Pharm:** Antihypercholesterolemic

(hypercholesterolemic rat caused by meals, markedly reduces the level of cholesterol, LDL in serum, LDL, triglyceride and index of artery atherosclerosis, increases the level of and ratio between HDL and all-cholesterol). **Source:**

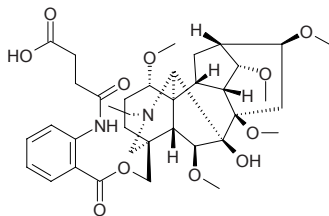
NANG ZHUANG ZI TAN *Pterocarpus marsupium*. **Ref:** 3659, 3660.

**18165 Pteryxin**

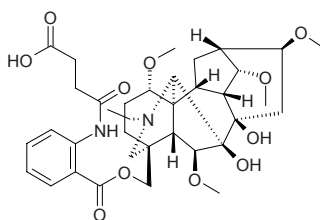
[13161-75-6]  $C_{21}H_{22}O_7$  (386.41). mp 82°C; 87~88°C. **Pharm:** Anti-atherosclerotic; antihypercholesterolemic (reduces the level of cholesterol and lecithin in serum); antispasmodic (rvt and mus intestine, induced by BaCl<sub>2</sub>, relaxes uterus *in vitro*); fish toxin; antihypertensive; slows heart rate; coronary vasodilator (increases coronary flow). **Source:** BEI FANG DANG GUI *Angelica ursina*, JI JI QIN *Zizia aptera*, LI JIANG QIAN HU *Peucedanum govianum* var. *bicolor*, MI HUA YAN FENG *Libanotis condensata*, MIAN MAO XIE HAO *Seseli ericephalum*. **Ref:** 4, 557, 658.

**18166 Puberaconitidine**

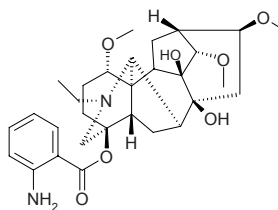
$C_{37}H_{52}N_2O_{11}$  (700.83). **Source:** NIU BIAN *Aconitum barbatum* var. *puberulum* [Syn. *Aconitum ochranthum*]. **Ref:** 660.

**18167 Puberaconitine**

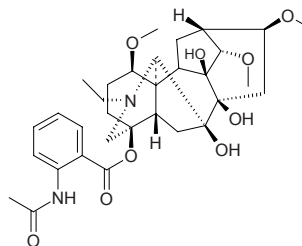
$C_{36}H_{50}N_2O_{11}$  (686.81). **Source:** NIU BIAN *Aconitum barbatum* var. *puberulum* [Syn. *Aconitum ochranthum*]. **Ref:** 660.

**18168 Puberanidine**

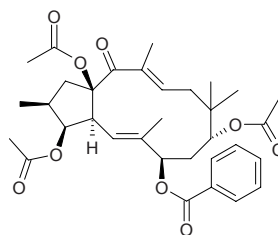
$C_{30}H_{42}N_2O_7$  (542.68). **Source:** BEI FANG WU TOU *Aconitum septentrionale*, GAN WAN WU TOU *Aconitum finetianum*, NIU BIAN *Aconitum barbatum* var. *puberulum* [Syn. *Aconitum ochranthum*]. **Ref:** 660, 1521.

**18169 Puberanine**

$C_{32}H_{44}N_2O_9$  (600.72). **Pharm:** Anti-inflammatory (modified assay of Berridge, 100µg/mL, InRt = 33.69%)<sup>[5271]</sup>; tyrosinase inhibitor (IC<sub>50</sub> = (205.2±0.2)µmol/L, control Kojic acid, IC<sub>50</sub> = (16.67±0.52)µmol/L, L-Mimosine, IC<sub>50</sub> = (3.68±0.02)µmol/L)<sup>[5271]</sup>; antioxidant (DPPH scavenger, 1µmol/L, ScRt = 12.2%; control 3-*t*-Butyl-4-hydroxyanisole, 1µmol/L, ScRt = 92.5%)<sup>[5271]</sup>. **Source:** NIU BIAN *Aconitum barbatum* var. *puberulum* [Syn. *Aconitum ochranthum*], *Aconitum leave* (aerial parts). **Ref:** 660, 1521, 5271.

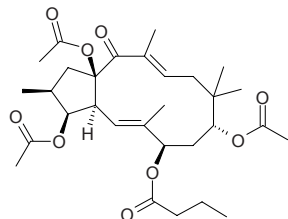
**18170 Pubescene A**

3β,9α,15β-Triacetoxo-7β-benzoyloxy-14-oxojatropha-5*E*,12*E*-diene  $C_{33}H_{42}O_9$  (582.70). Amorphous solid,  $[\alpha]_D^{25} = -48^\circ$  ( $c = 0.14$ , CHCl<sub>3</sub>). **Pharm:** Cytotoxic (inhibits growth of hmn cancer cells, MCF7, GI<sub>50</sub> > 50µmol/L, control Doxorubicin, GI<sub>50</sub> = (42.8±8.2)µmol/L; NCI-H460, GI<sub>50</sub> = (31.7±2.4)µmol/L, Doxorubicin, GI<sub>50</sub> = (94.0±8.7)µmol/L; SF268, GI<sub>50</sub> > 50µmol/L, Doxorubicin, GI<sub>50</sub> = (93.0±7.0)µmol/L)<sup>[5384]</sup>; multidrug resistance (MDR) reversing activities (16µmol/L, fluorescence intensity = 340.00, fluorescence activity ratio = 45.94, DMSO: 20µmol/L, fluorescence intensity = 5.84, fluorescence activity ratio = 0.78)<sup>[4928]</sup>. **Source:** DUAN ROU MAO DA JI *Euphorbia pubescens* (whole herb). **Ref:** 4928, 5384.

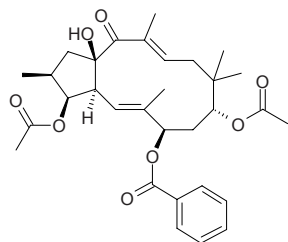


**18171 Pubescene B**

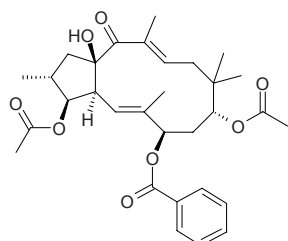
3 $\beta$ ,9 $\alpha$ ,15 $\beta$ -Triacetoxy-7 $\beta$ -butyroyloxy-14-oxojatropha-5E,12E-diene C<sub>30</sub>H<sub>44</sub>O<sub>9</sub> (548.68). Amorphous solid,  $[\alpha]_D^{25} = -20^\circ$  ( $c = 0.13$ , CHCl<sub>3</sub>). **Pharm:** Cytotoxic (inhibits growth of hmn cancer cells, MCF7, GI<sub>50</sub> > 50 $\mu$ mol/L, control Doxorubicin, GI<sub>50</sub> = (42.8 $\pm$ 8.2) $\mu$ mol/L; NCI-H460, GI<sub>50</sub> = (18.8 $\pm$ 2.5) $\mu$ mol/L, Doxorubicin, GI<sub>50</sub> = (94.0 $\pm$ 8.7) $\mu$ mol/L; SF268, GI<sub>50</sub> > 50 $\mu$ mol/L, Doxorubicin, GI<sub>50</sub> = (93.0 $\pm$ 7.0) $\mu$ mol/L)<sup>[5384]</sup>; Multidrug resistance (MDR) reversing activities (16 $\mu$ mol/L, fluorescence intensity = 142.67, fluorescence activity ratio = 19.76, DMSO: 20 $\mu$ mol/L, fluorescence intensity = 5.84, fluorescence activity ratio = 0.78)<sup>[4928]</sup>. **Source:** DUAN ROU MAO DA JI *Euphorbia pubescens* (whole herb). **Ref:** 4928, 5384.

**18172 Pubescene C**

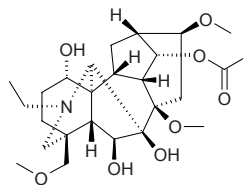
3 $\beta$ ,9 $\alpha$ -Diacetoxy-7 $\beta$ -benzoyloxy-15 $\beta$ -hydroxy-14-oxojatropha-5E,12E-diene C<sub>31</sub>H<sub>40</sub>O<sub>8</sub> (540.66). Amorphous solid,  $[\alpha]_D^{25} = -18^\circ$  ( $c = 0.11$ , CHCl<sub>3</sub>). **Pharm:** Multidrug resistance (MDR) reversing activities (16 $\mu$ mol/L, fluorescence intensity = 122.20, fluorescence activity ratio = 16.51, DMSO: 20 $\mu$ mol/L, fluorescence intensity = 5.84, fluorescence activity ratio = 0.78)<sup>[4928]</sup>; Cytotoxic (inhibits growth of hmn cancer cells, MCF7, GI<sub>50</sub> > 50 $\mu$ mol/L, control Doxorubicin, GI<sub>50</sub> = (42.8 $\pm$ 8.2) $\mu$ mol/L; NCI-H460, GI<sub>50</sub> = (33.3 $\pm$ 5.9) $\mu$ mol/L, Doxorubicin, GI<sub>50</sub> = (94.0 $\pm$ 8.7) $\mu$ mol/L; SF268, GI<sub>50</sub> > 50 $\mu$ mol/L, Doxorubicin, GI<sub>50</sub> = (93.0 $\pm$ 7.0) $\mu$ mol/L)<sup>[5384]</sup>. **Source:** DUAN ROU MAO DA JI *Euphorbia pubescens* (whole herb). **Ref:** 4928, 5384.

**18173 Pubescene D**

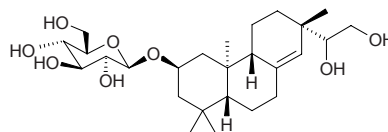
C<sub>31</sub>H<sub>40</sub>O<sub>8</sub> (540.66). Amorphous solid,  $[\alpha]_D^{25} = +20.9^\circ$  ( $c = 0.14$ , CHCl<sub>3</sub>). **Pharm:** Multidrug resistance (MDR) reversing activities (16 $\mu$ mol/L, fluorescence intensity = 243.71, fluorescence activity ratio = 32.93, DMSO: 20 $\mu$ mol/L, fluorescence intensity = 5.84, fluorescence activity ratio = 0.78). **Source:** DUAN ROU MAO DA JI *Euphorbia pubescens* (whole herb). **Ref:** 4928.

**18174 Pubescenine**

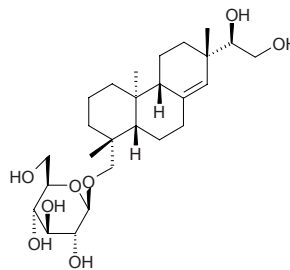
[116339-93-6] C<sub>26</sub>H<sub>41</sub>NO<sub>8</sub> (495.62). Crystals (EtOAc), mp 227–229°C,  $[\alpha]_D = -1.3^\circ$  ( $c = 0.15$ , EtOH). **Source:** DUAN ROU MAO FEI YAN CAO *Consolida pubescens*. **Ref:** 1521.

**18175 Pubeside A**

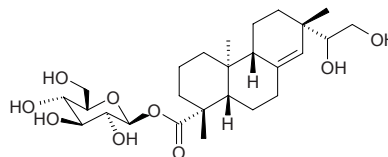
C<sub>26</sub>H<sub>44</sub>O<sub>8</sub> (484.64). mp 265–267°C,  $[\alpha]_D^{26} = -36.78^\circ$  ( $c = 0.2477$ , MeOH). **Source:** XI XIAN *Siegesbeckia orientalis* (aerial parts: yield = 0.00033%), XIAN GENG XI XIAN *Siegesbeckia orientalis* var. *pubescens* [Syn. *Siegesbeckia pubescens*]. **Ref:** 9, 4764.

**18176 Pubeside B**

*ent*-(15R),16,19-Trihydroxypimar-8(14)-ene 19-*O*- $\beta$ -D-glucopyranoside C<sub>26</sub>H<sub>44</sub>O<sub>8</sub> (484.64). White amorphous powder,  $[\alpha]_D^{25} = -34.5^\circ$  ( $c = 0.60$ , MeOH); mp 257–260°C,  $[\alpha]_D^{25} = -67.01^\circ$  ( $c = 0.237$ , MeOH). **Source:** XI XIAN *Siegesbeckia orientalis* (aerial parts: yield = 0.00033%), XIAN GENG XI XIAN *Siegesbeckia orientalis* var. *pubescens* [Syn. *Siegesbeckia pubescens*]. **Ref:** 9, 4438, 4764.

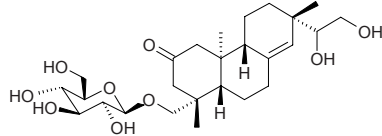
**18177 Pubeside C**

C<sub>26</sub>H<sub>42</sub>O<sub>9</sub> (498.62). mp 261–263°C,  $[\alpha]_D^{26} = -9.6^\circ$  ( $c = 0.626$ , MeOH). **Source:** XI XIAN *Siegesbeckia orientalis* (aerial parts: yield = 0.00033%), XIAN GENG XI XIAN *Siegesbeckia orientalis* var. *pubescens* [Syn. *Siegesbeckia pubescens*]. **Ref:** 9, 4764.

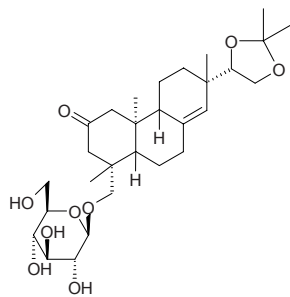


**18178 Pubeside D**

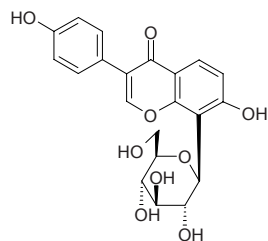
$C_{26}H_{42}O_9$  (498.62). mp 250~253°C. Source: XI XIAN *Siegesbeckia orientalis* (aerial parts: yield = 0.00047%), XIAN GENG XI XIAN *Siegesbeckia orientalis* var. *pubescens* [Syn. *Siegesbeckia pubescens*]. Ref: 9, 4764.

**18179 Pubeside E**

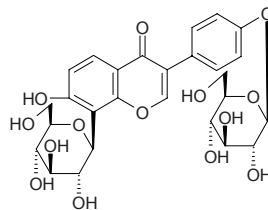
$C_{29}H_{46}O_9$  (538.68). mp 240~243°C. Source: XIAN GENG XI XIAN *Siegesbeckia orientalis* var. *pubescens* [Syn. *Siegesbeckia pubescens*]. Ref: 9.

**18180 Puerarin**

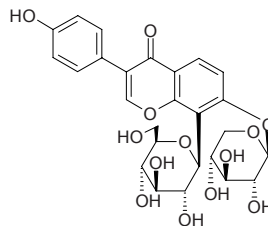
[3681-99-0]  $C_{21}H_{20}O_9$  (416.39). mp 187°C (dec). Pharm: Antihypertensive (conscious hypertensive essential rat HER, 100mg/kg); antiarrhythmic (against ventricular premature beat and tachycardia); antiarrhythmic (rbt, 10mg/kg, induced by  $CHCl_3$ -adrenalin);  $\beta$ -Adrenergic receptor blocker; anti-ischemia myocardial (rat, acute ischemia induced by hypophysin); improves barrier of microcirculation (mus, small intestine experiment); used in treatment of arterial blockage in retina; used in treatment of hypertension and angina pectoris (effective component in *Pueraria lobata* GE GEN); coronary vasodilator (increase of blood flow through coronary arteries, decrease of consumption of oxygen of cardiac muscle). Source: E MEI GE *Pueraria omeiensis* (root: mean content = 2.30%)<sup>[5508]</sup>, FEN GE *Pueraria lobata* var. *thomsonii* (root: mean content of 2 origins = 1.02%)<sup>[5508]</sup>, GAN GE TENG GEN *Pueraria thomsonii* (root: mean content of 2 origins = 1.03%)<sup>[5508]</sup>, GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*] (root: mean content = 3.19%)<sup>[5508]</sup>, HUANG MAO GE *Pueraria calycina* (root: content = 0.140%)<sup>[5508]</sup>, SAN LIE YE GE *Pueraria phaseoloides* (root: content = 2.92%)<sup>[5508]</sup>, SHI YONG GE *Pueraria edulis* (root: content = 0.25%)<sup>[5508]</sup>, YUN NAN GE TENG *Pueraria peduncularis* (root: content = 0.158%)<sup>[5508]</sup>, *Pueraria* spp. Ref: 4, 658, 660, 1521, 3113, 5501, 5508.

**18181 Puerarin-4'-O-D-glucoside**

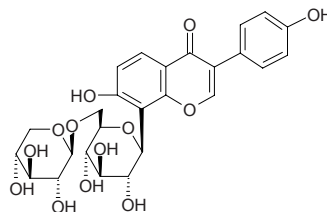
[117047-08-2]  $C_{27}H_{30}O_{14}$  (578.53). mp 187°C,  $[\alpha]_D^{22} = +28.8^\circ$  (NaOH aq.). Source: GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*]. Ref: 1521, 3109.

**18182 Puerarin-xyloside I**

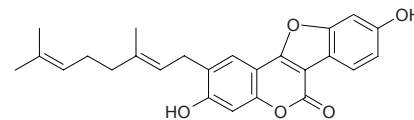
$C_{26}H_{28}O_{13}$  (548.51). Source: GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*]. Ref: 2.

**18183 Puerarin xyloside II**

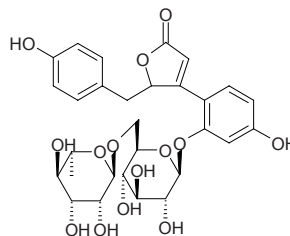
$C_{26}H_{28}O_{13}$  (548.51). Source: GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*]. Ref: 1298.

**18184 Puerarol**

$C_{25}H_{24}O_5$  (404.47). Needles, mp 237°C (dec). Source: GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*]. Ref: 2, 1521, 3109.

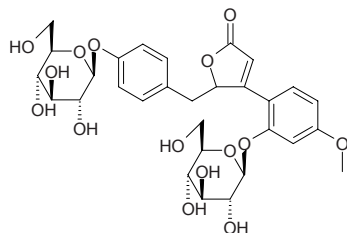
**18185 Pueroside A**

[100692-52-2]  $C_{29}H_{34}O_{14}$  (606.59). Needles, mp 183~185°C,  $[\alpha]_D = -107.5^\circ$  (MeOH). Source: GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*]. Ref: 3566, 1521.

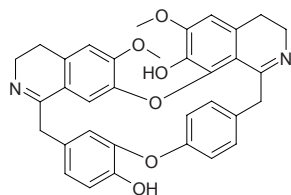


**18186 Pueroside B**

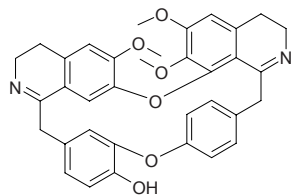
[100692-54-4] C<sub>30</sub>H<sub>36</sub>O<sub>15</sub> (636.61). Needles, mp 227~229°C, [ $\alpha$ ]<sub>D</sub> = -37.6° (MeOH). Source: GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*]. Ref: 3566, 1521.

**18187 Puertogaline A**

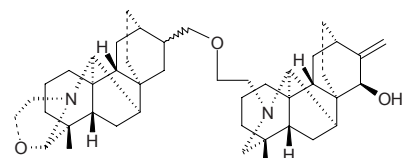
C<sub>34</sub>H<sub>30</sub>N<sub>2</sub>O<sub>6</sub> (562.63). Amorphous, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = 0° (*c* = 0.5, CHCl<sub>3</sub>:MeOH = 3:1). Pharm: Antitrypanosomal (inhibits trypomastigote form of *Trypanosoma cruzi*, strain Y, IC<sub>50</sub> = 136.3 μg/mL, IC<sub>90</sub> = 260.3 μg/mL). Source: *Guatteria boliviana* (stem cortex). Ref: 3976.

**18188 Puertogaline B**

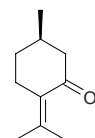
C<sub>35</sub>H<sub>32</sub>N<sub>2</sub>O<sub>6</sub> (576.66). Amorphous, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = 0° (*c* = 0.77, CHCl<sub>3</sub>). Pharm: Antitrypanosomal (inhibits trypomastigote form of *Trypanosoma cruzi*, strain Y, IC<sub>50</sub> = 43.9 μg/mL, IC<sub>90</sub> = 163.1 μg/mL); antimalarial (*Plasmodium falciparum* D6, LC<sub>50</sub> = 316.4 ng/mL, SI = 15; *Plasmodium falciparum* W2, LC<sub>50</sub> = 183.2 ng/mL, SI = 26); cytotoxic (KB, LC<sub>50</sub> = 4800 ng/mL). Source: *Guatteria boliviana* (stem cortex). Ref: 3976.

**18189 Pukeensine**

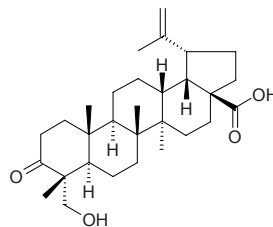
[144442-84-2] C<sub>44</sub>H<sub>64</sub>N<sub>2</sub>O<sub>3</sub> (669.01). Amorphous powder. Source: PU GE WU TOU *Aconitum pukeense*. Ref: 229.

**18190 Pulegone**

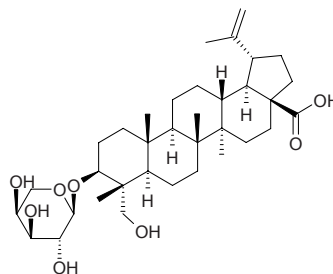
(*R*)-(+)-Pulegone [15932-80-6] C<sub>10</sub>H<sub>16</sub>O (152.24). bp (+) 224°C, (-) 109°C/20mmHg. Pharm: Anti-inflammatory; uterine relaxant (oxytocin- and PGF<sub>2a</sub>-stimulated contractions of isolated rat myometrium, oxytocin-stimulated, IC<sub>50</sub> = (21.8±2.1) μg/mL; PGF<sub>2a</sub>-stimulated, IC<sub>50</sub> = (12.7±4.6) μg/mL)<sup>[5066]</sup>. Source: CHAI HU *Bupleurum chinense*, HUA DONG LAN CI TOU *Echinops grijisii*, JIN XIAN CAO *Glechoma longituba*, JIN ZHAN JU *Calendula officinalis*, JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*], JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], XI YANG SHEN *Panax quinquefolium*, YU XIANG CAO *Mentha rotundifolia*, CHUN E BO HE *Mentha pulegium*. Ref: 2, 11, 658, 660, 5066.

**18191 Pulsatillilic acid**

23-Hydroxy-3-oxo-20(29)-lupen-28-oic acid C<sub>30</sub>H<sub>46</sub>O<sub>4</sub> (470.70). Source: BAI TOU WENG *Pulsatilla chinensis*. Ref: 2.

**18192 Pulsatilloside A**

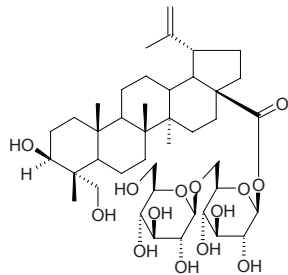
3-*O*- $\alpha$ -L-Arabinopyranosyl-3 $\beta$ ,23-dihydroxy-lup-20(29)-en-28-oic acid C<sub>35</sub>H<sub>56</sub>O<sub>8</sub> (604.83). Purity  $\geq$  98%, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = +102.5° (*c* = 0.15, CH<sub>3</sub>OH); amorphous powder, mp 160~165°C. Pharm: Anti-apoptosis (Protects PC12 Cells apoptosis Induced by sodium cyanide (NaCN, 10mmol/L) and glucose deprivation: MTT assay, control normal cells, survival rate = 100%, injured cells, survival rate = 73.9%, injured cells + 10.0 μg/mL Pulsatilloside A, survival rate = 99.2%; LDH release assay, control normal cells, LDH activity = (71.4±5.3) unit/mL, injured cells, LDH activity = (134.4±1.1) unit/mL, injured cells + 10.0 μg/mL Pulsatilloside A, LDH activity = (70.9±4.1) unit/mL; flow cytometry assay, control normal cells, apoptosis rate = (2.01±0.81)%, injured cells, apoptosis rate = (18.70±1.90)%, injured cells + 10.0 μg/mL Pulsatilloside A, apoptosis rate = (4.64±0.96)%)<sup>[5360]</sup>. Source: BAI TOU WENG *Pulsatilla chinensis*. Ref: 2, 9, 5360.



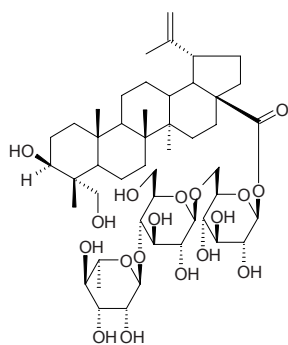


**18193 Pulsatilloside B**

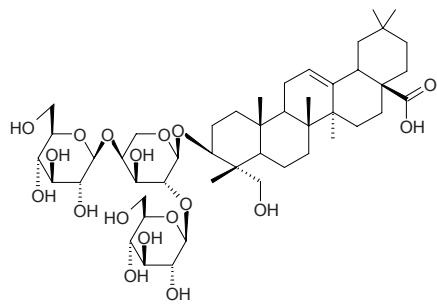
$C_{42}H_{68}O_{14}$  (797.00). Amorphous powder, mp 200–202°C. Source: BAI TOU WENG *Pulsatilla chinensis*. Ref: 9.

**18194 Pulsatilloside C**

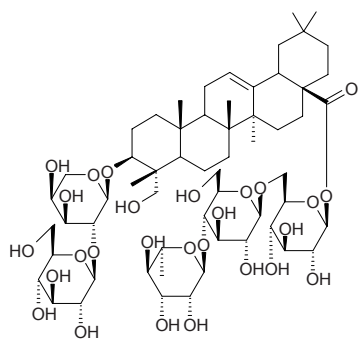
$C_{48}H_{78}O_{18}$  (943.15). Amorphous powder, mp 200–202°C,  $[\alpha]_D^{25} = -8.3^\circ$  ( $c = 0.522$ , MeOH). Source: BAI TOU WENG *Pulsatilla chinensis*. Ref: 9.

**18195 Pulsatilloside A**

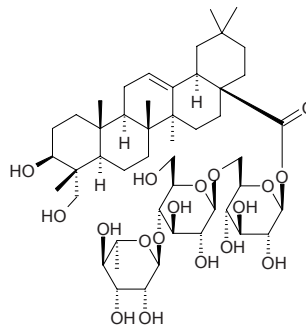
$C_{47}H_{76}O_{18}$  (929.12). Source: ZHONG E BAI TOU WENG *Pulsatilla campanella*. Ref: 3567, 3568.

**18196 Pulsatilloside B**

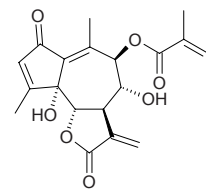
$C_{59}H_{96}O_{27}$  (1237.41). Source: ZHONG E BAI TOU WENG *Pulsatilla campanella*. Ref: 3567, 3568, 1521.

**18197 Pulsatilloside C**

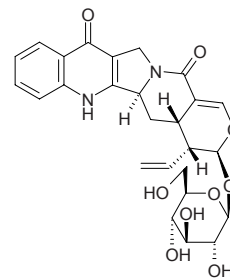
Kalopanaxsaponin G [57539-70-5]  $C_{48}H_{78}O_{18}$  (943.13). Colorless amorphous powder, mp 190–195°C; colorless acicular crystals (watery ethanol), mp 213–215°C (dec),  $[\alpha]_D = -2.8^\circ$  ( $c = 0.3$ , methanol). Pharm: Sedative (mus orl, 1mg/kg, inhibits spontaneous movement). Source: YE MU GUA *Stauntonia chinensis*. Ref: 900.

**18198 Pumilin**

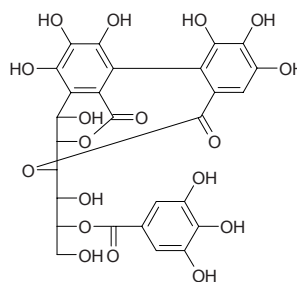
[1405-19-2]  $C_{20}H_{22}O_7$  (374.39). mp 248–249°C (dec). Source: AI SHENG BO LAN DI *Berlandiera pumila*. Ref: 1521.

**18199 Pumiloside**

$C_{26}H_{28}N_2O_9$  (512.52). Colorless amorphous solid, mp 307–308°C (MeOH),  $[\alpha]_D^{22} = -39.8^\circ$  ( $c = 0.15$ , MeOH); prisms, mp > 300°C. Source: DONG FANG WU TAN *Nauclea orientalis* (bark), DUAN XIAO SHE GEN CAO *Ophiorrhiza pumila*, LIU QIU SHE GEN CAO *Ophiorrhiza liukiensis* (whole herb), XI SHU *Camptotheca acuminata*. Ref: 1521, 3074, 4097, 4527.

**18200 Punicaacortein A**

[103488-35-3]  $C_{27}H_{22}O_{18}$  (634.47). Tan amorphous powder +0.5H<sub>2</sub>O,  $[\alpha]_D^{28} = -73.8^\circ$  ( $c = 0.6$ , MeOH). Source: SHI LIU PI *Punica granatum*. Ref: 3569, 3570.

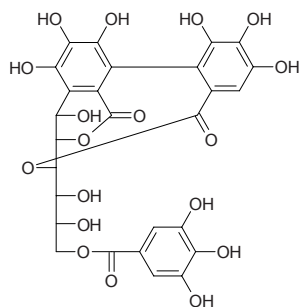




**18201 Punicacortein B**

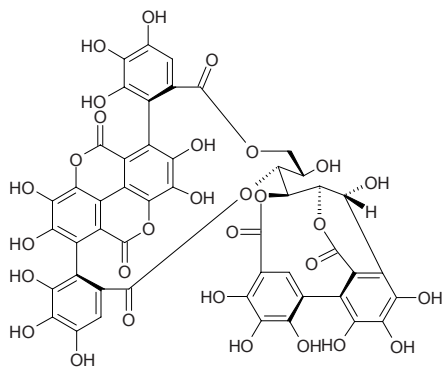
6-Galloyl-2,3-(*S*)-hexahydroxydiphenyl-*D*-glucose [103488-36-4] C<sub>27</sub>H<sub>22</sub>O<sub>18</sub> (634.47). Tan amorphous powder +0.5H<sub>2</sub>O, [α]<sub>D</sub><sup>28</sup> = +11.9° (*c* = 0.5, MeOH).

Source: SHI LIU PI *Punica granatum*. Ref: 3569, 3570.

**18202 Punicacortein C**

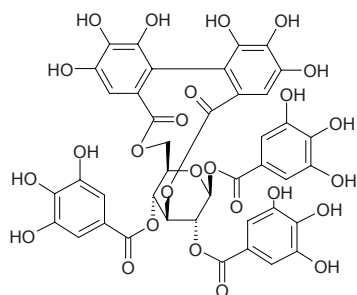
[103488-37-5] C<sub>48</sub>H<sub>28</sub>O<sub>30</sub> (1084.74). Yellow amorphous powder, [α]<sub>D</sub><sup>28</sup> = -37.7° (*c* = 1.2, H<sub>2</sub>O). Pharm: Cytotoxic (malanotic carcinoma RPMI-7951, ED<sub>50</sub> =

3.86 μg/mL); HIV reverse transcriptase inhibitor (IC<sub>50</sub> = 5 μmol/L, inhibits HIV replication); topoisomerase II inhibitor (IC<sub>100</sub> = 0.5 μmol/L); pesticide (dog roundworm larva). Source: QIAO MU ZHUANG LAN REN *Terminalia arborea*, SHI LIU PI *Punica granatum*. Ref: 3569, 3661, 3662, 1728, 1706, 3663.

**18203 Punicafolin**

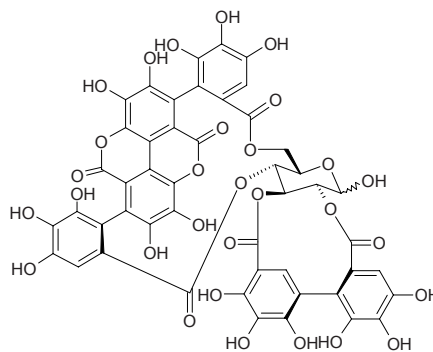
[88847-11-4] C<sub>41</sub>H<sub>30</sub>O<sub>26</sub> (938.67). White powder, mp 235–237°C (dec), [α]<sub>D</sub><sup>20</sup> = -59.5° (*c* = 0.4, methanol). Pharm: Hyaluronidase inhibitor (10 mmol/L, InRt = 96%); protein kinase C inhibitor (IC<sub>50</sub> = 4 μmol/L). Source: AN MO LE

*Phyllanthus emblica* (fruit juice)<sup>[3094]</sup>, ZE QI *Euphorbia helioscopia*, YE WU TONG *Mallotus japonicus*, SUAN SHI LIU *Punica granatum*. Ref: 900, 3094.

**18204 Punicalagin**

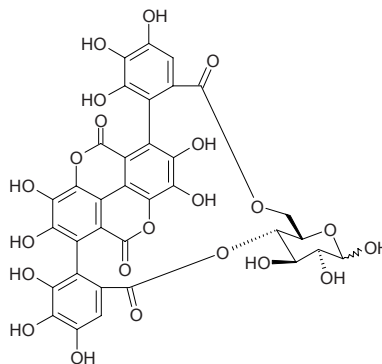
[65995-63-3] C<sub>48</sub>H<sub>28</sub>O<sub>30</sub> (1084.74). Yellow amorphous powder +1H<sub>2</sub>O, [α]<sub>D</sub><sup>20</sup> = -181° (*c* = 1.0, H<sub>2</sub>O), [α]<sub>D</sub><sup>28</sup> = +3.8° (*c* = 0.9, MeOH), anomeric mixture.

Pharm: Toxic to sheep and cattle. Source: SHI LIU PI *Punica granatum*, HE ZI *Terminalia chebula*. Ref: 3571, 3572, 3573, 3574.

**18205 Punicalin**

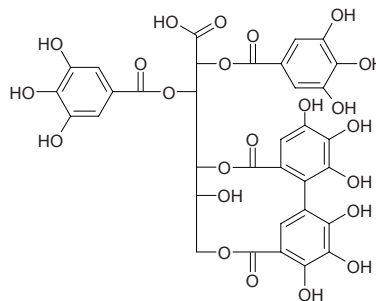
4,6-(*S,S*)-Gallagyl-*D*-glucose [65995-64-4] C<sub>34</sub>H<sub>22</sub>O<sub>22</sub> (782.54). Yellow amorphous powder +1H<sub>2</sub>O, [α]<sub>D</sub><sup>28</sup> = -81.1° (*c* = 0.6, H<sub>2</sub>O), anomeric mixture.

Source: SHI LIU PI *Punica granatum*. Ref: 3569.

**18206 Punigluconin**

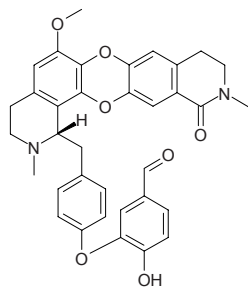
[103488-38-6] C<sub>34</sub>H<sub>26</sub>O<sub>23</sub> (802.57). Tan amorphous powder +2H<sub>2</sub>O, [α]<sub>D</sub><sup>25</sup> = +45.5° (*c* = 0.7, MeOH). Source: DA HUA ZI WEI *Lagerstroemia speciosa*

[Syn. *Munchausia speciosa*; *Lagerstroemia flos-reginae*], SHI LIU PI *Punica granatum*. Ref: 3569, 3575.

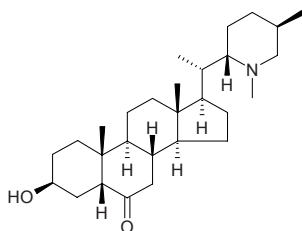


**18207 Punjabine**

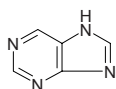
[84435-36-9] C<sub>35</sub>H<sub>32</sub>N<sub>2</sub>O<sub>7</sub> (592.65). [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -40° (c = 0.48, MeOH). Source: GOU QI XIAO BO *Berberis lycium*. Ref: 3576.

**18208 Puqietinone**

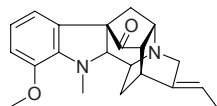
[133362-87-5] C<sub>28</sub>H<sub>47</sub>NO<sub>2</sub> (429.69). mp 240~245°C, [ $\alpha$ ]<sub>D</sub> = +29.4° (c = 0.64, CHCl<sub>3</sub>). Source: PU QI BEI MU *Fritillaria puqiensis*. Ref: 2201.

**18209 Purine**

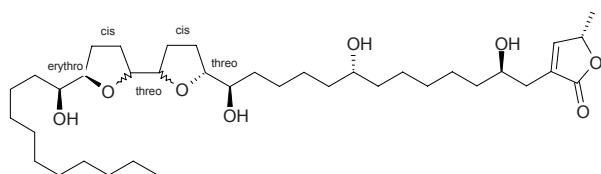
7*H*-Imidazo[4,5-*d*]pyrimidine [120-73-0] C<sub>5</sub>H<sub>4</sub>N<sub>4</sub> (120.11). mp 216~217°C. Source: LUO HUA SHENG *Arachis hypogaea*. Ref: 6.

**18210 Purpeline**

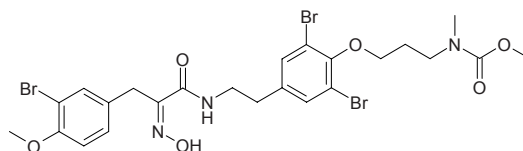
[2246-33-5] C<sub>21</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub> (336.44). Source: CUI TU LUO FU MU *Rauwolfia vomitoria*, KE MING XI LUO FU MU *Rauwolfia cumminsi*. Ref: 1521.

**18211 Purpuracenin**

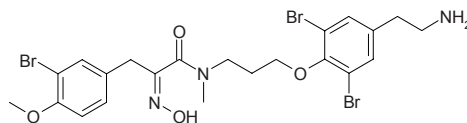
[227086-12-6] C<sub>37</sub>H<sub>66</sub>O<sub>8</sub> (638.93). Yellowish wax, mp 42~44°C, [ $\alpha$ ]<sub>D</sub> = +26° (c = 0.1, MeOH). Pharm: Cytotoxic (A549, ED<sub>50</sub> = 0.048 μg/mL; A498, ED<sub>50</sub> < 0.001 μg/mL; PC3, ED<sub>50</sub> < 0.001 μg/mL; BST, LC<sub>50</sub> = 3.0 μg/mL). Source: ZI FAN LI ZHI *Annona purpurea*. Ref: 3748.

**18212 Purpuramine K**

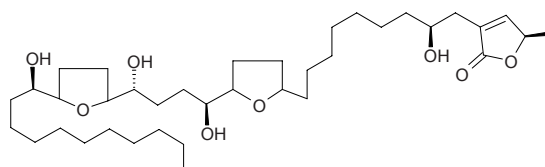
C<sub>24</sub>H<sub>28</sub>Br<sub>3</sub>N<sub>3</sub>O<sub>6</sub> (694.22). White solid, mp 190~195°C. Pharm: Antibacterial (disk susceptibility tests, standard NCCLS method, 50 μg/disk (control 30 μg/disk), gram-positive bacteria: *Staphylococcus aureus*, DIZ = 10mm, positive control Kanamycin, DIZ = 10mm, *Bacillus subtilis*, DIZ = 10mm, positive control Kanamycin, DIZ = 18mm, *Bacillus sphaericus*, DIZ = 9mm, positive control Kanamycin, DIZ = 20mm; gram-negative bacteria: *Chromobacterium violaceum*, DIZ = 8mm, positive control Kanamycin, DIZ = 17mm, *Klebsiella aerogenes*, DIZ = 11mm, positive control Kanamycin, DIZ = 15mm, *Pseudomonas aeruginosa*, DIZ = 12mm, positive control Kanamycin, DIZ = 27mm). Source: ZI SHA ROU HAI MIAN *Psammaphysilla purpurea*. Ref: 4372.

**18213 Purpuramine L**

C<sub>22</sub>H<sub>26</sub>Br<sub>3</sub>N<sub>3</sub>O<sub>4</sub> (636.18). White solid, mp 175~178°C. Pharm: Antibacterial (disk susceptibility tests, standard NCCLS method, 50 μg/disk (control 30 μg/disk), gram-positive bacteria: *Staphylococcus aureus*, DIZ = 14mm, positive control Kanamycin, DIZ = 10mm; *Bacillus subtilis*, DIZ = 14mm, positive control Kanamycin, DIZ = 18mm; *Bacillus sphaericus*, DIZ = 12mm, positive control Kanamycin, DIZ = 20mm; gram-negative bacteria: *Chromobacterium violaceum*, DIZ = 13mm, positive control Kanamycin, DIZ = 17mm; *Klebsiella aerogenes*, 10mm, positive control Kanamycin, DIZ = 15mm; *Pseudomonas aeruginosa*, DIZ = 16mm, positive control Kanamycin, DIZ = 27mm). Source: ZI SHA ROU HAI MIAN *Psammaphysilla purpurea*. Ref: 4372.

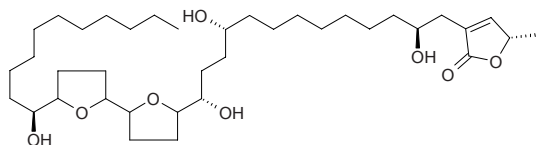
**18214 Purpureacin 1**

[150134-21-7] C<sub>37</sub>H<sub>66</sub>O<sub>8</sub> (638.93). White amorphous powder, [ $\alpha$ ]<sub>D</sub> = -3.3° (c = 0.12, MeOH). Pharm: Cytotoxic (BST, LC<sub>50</sub> = 0.53 μg/mL); antibacterial (*Bacillus subtilis*, MED = 20 μg); antifungal (yeast *Candida albicans*, MED = 0.05 μg); larvacide (larva of *stegomyia calopus*, LC<sub>100</sub> = 2.0 μg/mL). Source: ZI FAN LI ZHI *Annona purpurea*. Ref: 3664.

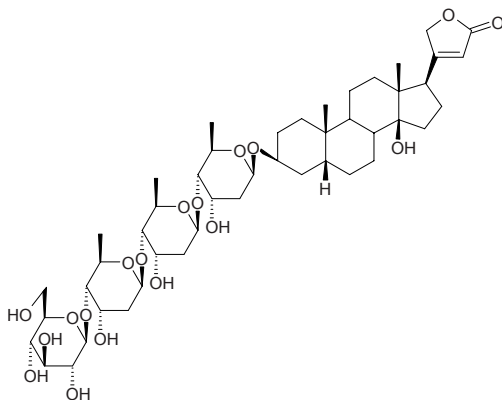


**18215 Purpureacin 2**

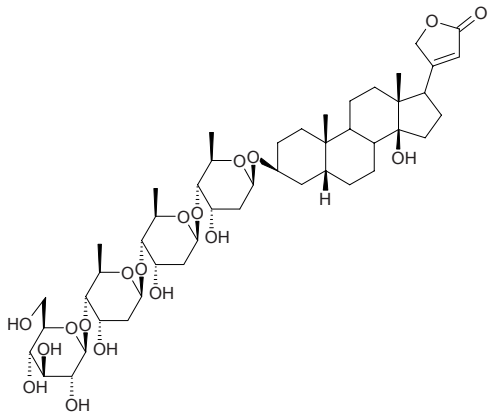
[149990-60-3] C<sub>37</sub>H<sub>66</sub>O<sub>8</sub> (638.93). White amorphous powder,  $[\alpha]_D^{20} = +6.5^\circ$  ( $c = 0.17$  MeOH). **Pharm:** Cytotoxic (BST, LC<sub>50</sub> = 0.38 μg/mL); antifungal (yeast *Candida albicans*, MED = 1 μg); larvicide (larva of *stegomyia calopus*, LC<sub>100</sub> = 1.0 μg/mL). **Source:** ZI FAN LI ZHI *Annona purpurea*. **Ref:** 3664.

**18216 Purpurea glycoside A**

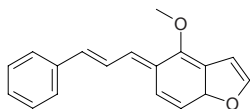
[19855-40-4] C<sub>47</sub>H<sub>74</sub>O<sub>18</sub> (927.10). Platelets (EtOH–Et<sub>2</sub>O) or amorphous substance, mp 270~280°C (dec),  $[\alpha]_D^{20} = +12^\circ$  (EtOH aq.). **Pharm:** Cardiotonic. **Source:** MAO DI HUANG *Digitalis purpurea* (dried leaf: content = 0.053%<sup>[5508]</sup>), *Digitalis* spp. **Ref:** 660, 1521, 5508.

**18217 Purpurea glycoside B**

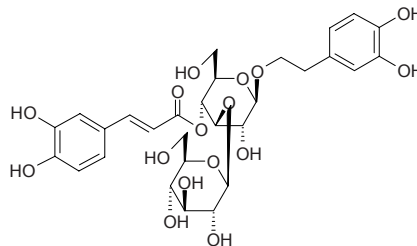
[19855-39-1] C<sub>47</sub>H<sub>74</sub>O<sub>18</sub> (927.10). Prisms or needles (CHCl<sub>3</sub>–MeOH–Et<sub>2</sub>O), mp 240°C (dec),  $[\alpha]_D^{20} = +15.5^\circ$  (EtOH aq.). **Source:** MAO DI HUANG *Digitalis purpurea* (dried leaf: content = 0.051%<sup>[5508]</sup>), *Digitalis* spp. **Ref:** 660, 1521, 5508.

**18218 Purpureamethide**

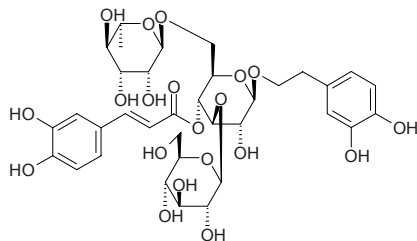
[83728-91-0] C<sub>18</sub>H<sub>16</sub>O<sub>2</sub> (264.33). Red crystals (C<sub>6</sub>H<sub>6</sub>–EtOAc), mp 127~128°C. **Source:** HUI YE *Tephrosia purpurea*. **Ref:** 3577.

**18219 Purpureaside A**

Plantamajoside; 3,4-Dihydroxy-β-phenethyl-O-β-D-glucopyranosyl-(1→3)-4-O-caffeoyl-β-D-glucopyranoside [104777-68-6] C<sub>29</sub>H<sub>36</sub>O<sub>16</sub> (640.60). Amorphous powder, mp 158~162°C; 142.7~152.0°C,  $[\alpha]_D^{24.8} = -43.88^\circ$  ( $c = 0.47$ , methanol),  $[\alpha]_D^{19} = -54.3^\circ$  ( $c = 0.8$ , MeOH). **Pharm:** Antiasthmatic; antibacterial (*Pseudomonas cepacia* and *Pseudomonas maltophilia* ED = 0.2~0.5 mg; *Corynebacterium fascians* MIC = 2.0 mg/mL; *Erwinia carotovora* var. *Carotovora* MIC = 1.0 mg/mL; *Escherichia coli*, *Staphylococcus aureus*, several plant pathogenic bacteria); anti-inflammatory (mus ears, caused by arachidonic acid, 1 mg/ear InRt = 12%, 2 mg/ear InRt = 25%); Δ<sup>5</sup>-lipoxygenase inhibitor (IC<sub>50</sub> = 0.373 μmol/L); cAMP phosphodiesterase inhibitor (*in vitro*, IC<sub>50</sub> = 160 μmol/L); decreases some hmn leukocyte functions. **Source:** CHANG YE CHE QIAN *Plantago lanceolata*, DA CHE QIAN *Plantago major*, CHE QIAN *Plantago asiatica*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], MAO DI HUANG *Digitalis purpurea*, PU FU JING TU ER CAO *Lagotis stolonifera*. **Ref:** 2, 658, 900, 3000, 3101, 5020.

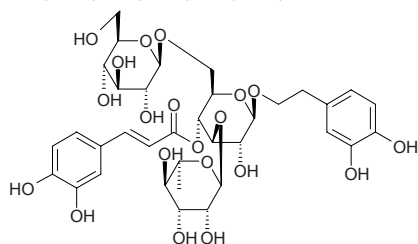
**18220 Purpureaside B**

3,4-Dihydroxy-β-phenethyl-O-β-D-glucopyranosyl-(1→3)-O-α-L-rhamnopyranosyl-(1→6)-4-O-caffeoyl-β-D-glucopyranoside [104777-69-7] C<sub>35</sub>H<sub>46</sub>O<sub>20</sub> (786.74). Amorphous powder,  $[\alpha]_D^{19} = -14^\circ$  ( $c = 1.0$ , MeOH);  $[\alpha]_D^{27} = -16^\circ$  ( $c = 1.0$ , MeOH). **Pharm:** Antibacterial (*Bacillus coli*, weak); decreases some hmn leukocyte functions. **Source:** GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], MAO DI HUANG *Digitalis purpurea*. **Ref:** 2, 2999, 3000.

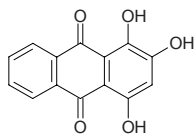


**18221 Purpureaside C**

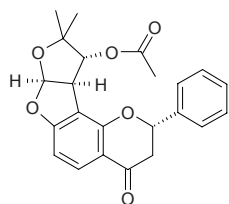
[108648-07-3] C<sub>35</sub>H<sub>46</sub>O<sub>20</sub> (786.74). Amorphous powder,  $[\alpha]_D^{27} = -16.3^\circ$  ( $c = 1.0$ , MeOH),  $[\alpha]_D^{24} = -60.3^\circ$  ( $c = 0.61$ , MeOH). **Pharm:** Anti-inflammatory (*in vivo*, swollen foot model caused by carrageenan); immunosuppressant (mus, 100mg/kg orl, inhibits formation of hemolytic patch formative cell HPFC in spleen, InRt = 26.3%); antibacterial (*Bacillus coli*); antihepatotoxin (anti-hepatotoxicity); immunosuppressant; antitrypanosomal (*Trypanosoma b. rhodesiense*, IC<sub>50</sub> = 8.9μg/mL, control Melarsoprol, IC<sub>50</sub> = 0.00098μg/mL; *Trypanosoma cruzi*, IC<sub>50</sub> > 90μg/mL, control Benznidazole, IC<sub>50</sub> = 1.06μg/mL)<sup>[5009]</sup>; antileishmanial (*Leishmania donovani*, IC<sub>50</sub> = 13.1μg/mL, control Miltefosine, IC<sub>50</sub> = 0.102μg/mL)<sup>[5009]</sup>; antimalarial (*Plasmodium falciparum*, IC<sub>50</sub> > 50μg/mL, control Artemisinin, IC<sub>50</sub> = 0.0022μg/mL)<sup>[5009]</sup>; cytotoxic (L-6, IC<sub>50</sub> > 90μg/mL, control Podophyllotoxin, IC<sub>50</sub> = 0.008μg/mL)<sup>[5009]</sup>. **Source:** GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], MAO DI HUANG *Digitalis purpurea*, ROU CONG RONG *Cistanche deserticola*, XIAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], YAN SHENG ROU CONG RONG *Cistanche salsa*, ZI DI HUANG *Rehmannia glutinosa* var. *purpurea*, ZONG KUI CAO SU *Phlomis brunneogaleata*. **Ref:** 2, 628, 658, 660, 1521, 3000, 3578, 1785, 3579, 3580, 5009.

**18222 Purpurin**

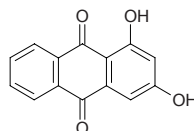
[81-54-9] C<sub>14</sub>H<sub>8</sub>O<sub>5</sub> (256.22). mp 263°C. **Pharm:** Genotoxic (hamster, mutagenesis experiment on fibrocyte); cytotoxic (KB, ED<sub>50</sub> = 3.1μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.12μg/mL; Hep3B, ED<sub>50</sub> > 25μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.14μg/mL; Colon205, ED<sub>50</sub> > 25μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.10μg/mL; HeLa, ED<sub>50</sub> > 25μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.11μg/mL)<sup>[4369]</sup>. **Source:** GUANG JING QIAN CAO *Rubia wallichiana* (stem), YANG QIAN CAO *Rubia tinctorum*, QIAN CAO GEN *Rubia cordifolia*, XIANG CHE YE CAO *Asperula odorata*, *Galium* sp. **Ref:** 6, 658, 4369.

**18223 (+)-Purpurin 2**

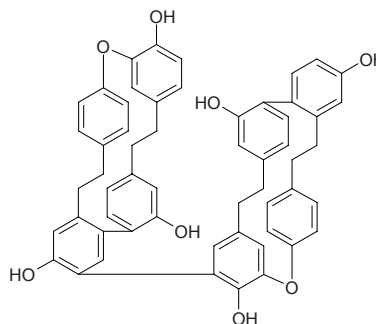
[93787-60-3] C<sub>23</sub>H<sub>22</sub>O<sub>6</sub> (394.43). Needles (pet. Ether-CHCl<sub>3</sub>), mp 145~146°C,  $[\alpha]_D^{27} = +20.3^\circ$  ( $c = 1.05$ , CHCl<sub>3</sub>). **Pharm:** Induces quinone reductase (mus hepatic cytochrome, CD = 5.6μmol/L, IC<sub>50</sub> > 50.7μmol/L, chemical preventive index (CI = IC<sub>50</sub>/CD) > 9.0). **Source:** HAN MI ER DUN HUI YE *Tephrosia hamiltonii*, HUI YE *Tephrosia purpurea*, HUI YE GEN *Tephrosia purpurea*. **Ref:** 3665, 3666, 1657.

**18224 Purpuroxanthin**

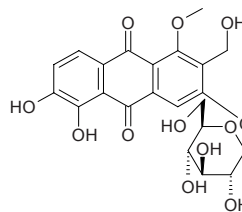
Xanthopurpurin; 1,3-Dihydroxy-9,10-anthraquinone [518-83-2] C<sub>14</sub>H<sub>8</sub>O<sub>4</sub> (240.22). mp 268~270°C. **Pharm:** Cytotoxic (KB, ED<sub>50</sub> = 6.57μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.12μg/mL; Hep3B, ED<sub>50</sub> = 1.7μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.14μg/mL; Colon205, ED<sub>50</sub> = 1.9μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.10μg/mL; HeLa, ED<sub>50</sub> > 25μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.11μg/mL)<sup>[4369]</sup>. **Source:** GUANG JING QIAN CAO *Rubia wallichiana* (stem), QIAN CAO GEN *Rubia cordifolia*, YANG JIAO TENG *Morinda umbellata*. **Ref:** 6, 660, 4369.

**18225 Pusalatin C**

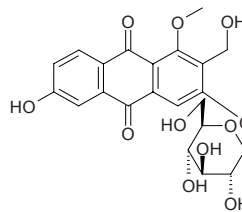
C<sub>56</sub>H<sub>46</sub>O<sub>8</sub> (846.99). **Source:** HU BAO TAI *Blasia pusilla*. **Ref:** 4549.

**18226 Putorinoside A**

2-Hydroxymethyl-1-methoxy-3,5,6-trihydroxyanthraquinone 3-O-β-glucopyranoside C<sub>22</sub>H<sub>22</sub>O<sub>12</sub> (478.41).  $[\alpha]_D^{20} = -96^\circ$  ( $c = 0.05$ , MeOH). **Source:** *Putoria calabrica*. **Ref:** 4197.

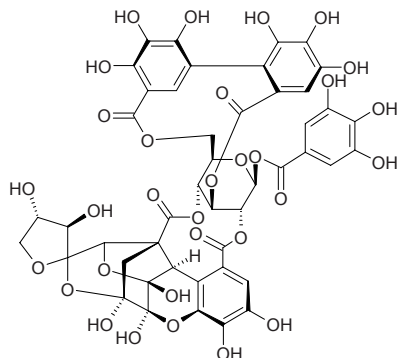
**18227 Putorinoside B**

2-Hydroxymethyl-1-methoxy-3,6-dihydroxyanthraquinone 3-O-β-glucopyranoside C<sub>22</sub>H<sub>22</sub>O<sub>11</sub> (462.41).  $[\alpha]_D^{20} = -56^\circ$  ( $c = 0.05$ , MeOH). **Source:** *Putoria calabrica*. **Ref:** 4197.

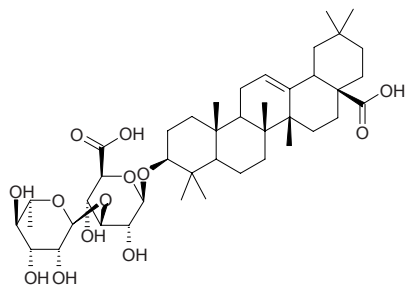


**18228 Putranjivain A**

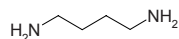
[131959-62-1]  $C_{46}H_{36}O_{31}$  (1084.76). Amorphous powder,  $[\alpha]_D = -89.0^\circ$  ( $c = 0.1$ , methanol). **Pharm:** HIV reverse transcriptase inhibitor ( $IC_{50} = 3.9\mu\text{mol/L}$ ). **Source:** AN MO LE *Phyllanthus emblica* (fruit juice)<sup>[3094]</sup>. **Ref:** 900, 3094.

**18229 Putranoside A**

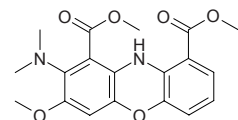
[51161-56-9]  $C_{42}H_{66}O_{13}$  (778.99). White amorphous powder, mp 261–272°C (dec). **Pharm:** Spermaticidal (1.0–1.3mg/mL); molluscicide (*Biomphalaria glabrata* snail EC = 3mg/L; 3mg/L, 100% killed); hemolytic (0.01mg/mL). **Source:** AI JI TIAN JING *Sesbania sesban*, JIANG GUO XIAN *Deeringia amaranthoides* [Syn. *Cladostachys frutescens*], MA DAO SI WO CI DOU *Swartzia madagascariensis*, NIU YAN PENG QI JU *Zexmenia bupthalmiflora*, PU YE SHAN YOU ZI *Opilia celtidifolia*, *Diospyros zombensis*, *Putranjiva roxburghii*. **Ref:** 3667, 3668, 3669, 3670, 3671, 3672, 3673.

**18230 Putrescine**

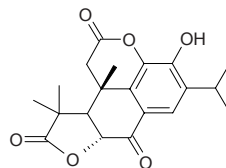
1,4-Diaminobutane [110-60-1]  $C_4H_{12}N_2$  (88.15). mp 27–28°C, bp 158–159°C. **Pharm:** Reagent used in biochemistry research. **Source:** JIANG *Glycine max*, MAI YA *Hordeum vulgare*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]<sup>[5508]</sup>. **Ref:** 6, 658, 5508.

**18231 Pycnosanguin**

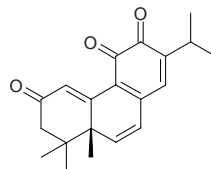
[133056-31-2]  $C_{19}H_{20}N_2O_6$  (372.38). Yellow needles, mp 246–249°C. **Source:** XUE HONG SHUAN JUN *Pycnoporus sanguineus*. **Ref:** 3581.

**18232 Pygmaeocin A**

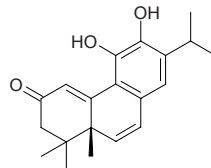
[122590-05-0]  $C_{20}H_{22}O_6$  (358.39). Crystals (MeOH), mp 281–283°C. **Source:** QIAN JIE CAO *Pygmaeopremna herbacea* [Syn. *Premna herbacea*]. **Ref:** 3119.

**18233 Pygmaeocin B**

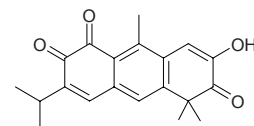
[128049-12-7]  $C_{20}H_{22}O_3$  (310.40). Purple solid ( $CH_2Cl_2$ ), mp 108.5–110°C. **Source:** QIAN JIE CAO *Pygmaeopremna herbacea* [Syn. *Premna herbacea*]. **Ref:** 3582.

**18234 Pygmaeocin C**

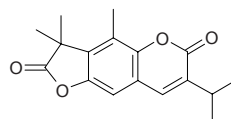
[128022-72-0]  $C_{20}H_{24}O_3$  (312.41). Yellow foam. **Source:** QIAN JIE CAO *Pygmaeopremna herbacea* [Syn. *Premna herbacea*]. **Ref:** 3582.

**18235 Pygmaeocine E**

[115333-92-1]  $C_{20}H_{20}O_4$  (324.38). Brownish-red prisms ( $CHCl_3$ –MeOH), mp 192–193°C. **Source:** QIAN JIE CAO *Pygmaeopremna herbacea* [Syn. *Premna herbacea*]. **Ref:** 3583.

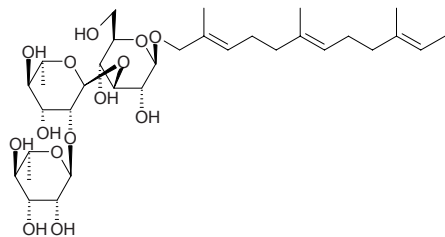
**18236 Pygmaeoherin**

[115028-58-5]  $C_{17}H_{18}O_4$  (286.33). Needles ( $CHCl_3$ –MeOH), mp 198–200°C. **Source:** QIAN JIE CAO *Pygmaeopremna herbacea* [Syn. *Premna herbacea*]. **Ref:** 3584.

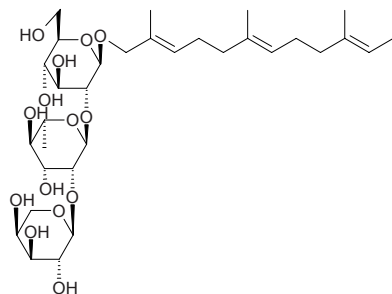


**18237 Pyishiauoside I<sub>b</sub>**

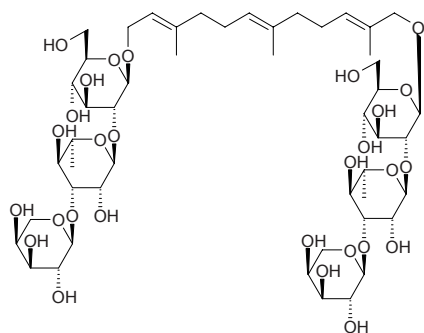
$C_{33}H_{56}O_{14}$  (676.81). Source: PI SHAO ZI *Sapindus delavayi* [Syn. *Pancovia delavayi*]. Ref: 3585.

**18238 Pyishiauoside II<sub>b</sub>**

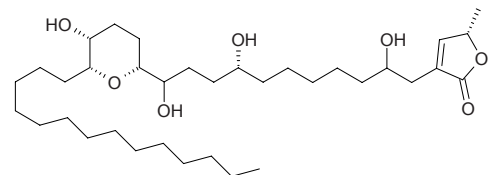
$C_{32}H_{54}O_{14}$  (662.78). Source: PI SHAO ZI *Sapindus delavayi* [Syn. *Pancovia delavayi*]. Ref: 3585.

**18239 Pyishiauoside IV<sub>b</sub>**

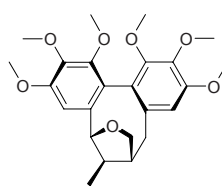
$C_{49}H_{82}O_{28}$  (1119.18). Source: PI SHAO ZI *Sapindus delavayi* [Syn. *Pancovia delavayi*]. Ref: 3585.

**18240 Pyragonicin**

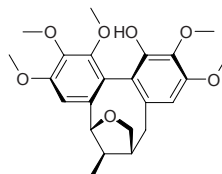
[209668-36-0]  $C_{35}H_{64}O_7$  (596.90). White amorphous wax,  $[\alpha]_D^{23} = -25.6^\circ$  ( $c = 0.008$ ,  $CHCl_3$ ). Pharm: Cytotoxic (PACA-2,  $ED_{50} = 0.058 \mu g/mL$ , BST,  $LC_{50} = 0.9 \mu g/mL$ , YFM,  $LC_{50} = 73.8 \mu g/mL$ ). Source: DA GE NA XIANG *Goniothalamus giganteus*. Ref: 3749.

**18241 Pyramidatin A**

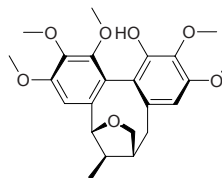
$C_{24}H_{30}O_7$  (430.50). Colorless crystals, mp 152~154°C ( $CHCl_3:EtOAc = 9:1$ ). Source: JIN ZI TA MU LAN *Magnolia pyramidata* (leaf). Ref: 5103.

**18242 Pyramidatin B**

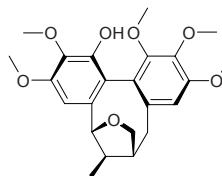
$C_{23}H_{28}O_7$  (416.48). Colorless crystals, mp 198~199°C ( $CHCl_3:EtOAc = 9:1$ ). Source: JIN ZI TA MU LAN *Magnolia pyramidata* (leaf). Ref: 5103.

**18243 Pyramidatin C**

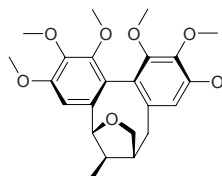
$C_{23}H_{28}O_7$  (416.48). Colorless oil. Source: JIN ZI TA MU LAN *Magnolia pyramidata* (leaf). Ref: 5103.

**18244 Pyramidatin D**

$C_{23}H_{28}O_7$  (416.48). Amorphous solid. Source: JIN ZI TA MU LAN *Magnolia pyramidata* (leaf). Ref: 5103.

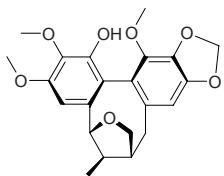
**18245 Pyramidatin E**

$C_{23}H_{28}O_7$  (416.48). Amorphous solid. Source: JIN ZI TA MU LAN *Magnolia pyramidata* (leaf). Ref: 5103.

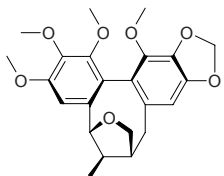


**18246 Pyramidatin F**

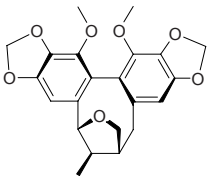
$C_{22}H_{24}O_7$  (400.43). Amorphous solid. Source: JIN ZI TA MU LAN *Magnolia pyramidata* (leaf). Ref: 5103.

**18247 Pyramidatin G**

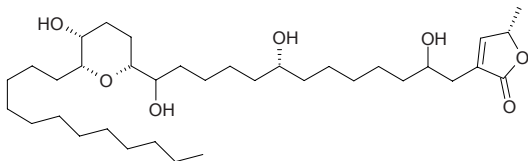
$C_{23}H_{26}O_7$  (414.46). Colorless oil. Source: JIN ZI TA MU LAN *Magnolia pyramidata* (leaf). Ref: 5103.

**18248 Pyramidatin H**

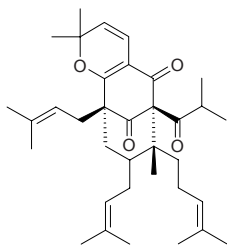
$C_{22}H_{22}O_7$  (398.42). Colorless crystals, mp 208~211°C (hexane-EtOAc). Source: JIN ZI TA MU LAN *Magnolia pyramidata* (leaf). Ref: 5103.

**18249 Pyranicin**

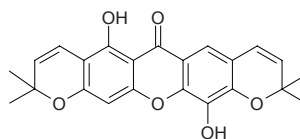
[209668-35-9]  $C_{35}H_{64}O_7$  (596.90). White amorphous wax,  $[\alpha]_D^{23} = -9.7^\circ$  ( $c = 0.008$ ,  $CHCl_3$ ). Source: DA GE NA XIANG *Goniothalamus giganteus*. Ref: 3749.

**18250 Pyrano-[7,28-b]hyperforin**

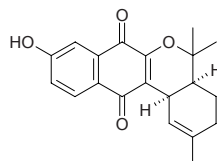
$C_{35}H_{50}O_4$  (534.79). Colorless viscous oil,  $[\alpha]_D^7 = +83.5^\circ$  ( $c = 0.28$ ,  $CHCl_3$ ). Source: GUAN YE LIAN QIAO *Hypericum perforatum* (aerial parts: yield = 0.00012%dw). Ref: 3032.

**18251 Pyranojacaeubin**

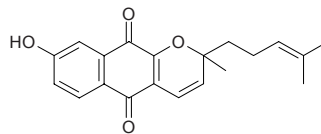
$C_{23}H_{20}O_6$  (392.41). Pharm: Antivirus (hmn coronavirus strain 229E (HCoV-229E), 15µg/mL). Source: *Calophyllum blancoi* (root). Ref: 4441.

**18252 Pyranokunthone A**

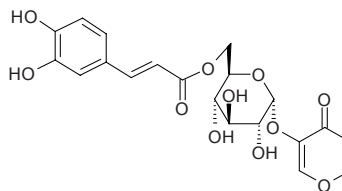
$C_{20}H_{20}O_4$  (324.38). Yellow solid,  $[\alpha]_D^{20} = -38^\circ$  ( $c = 0.04$ ,  $CHCl_3$ ). Pharm: Antimalarial (antiplasmodial); toxic (endothelial cell line ECV-304). Source: WU GAN DA YU YE QIU *Stereospermum kunthianum*. Ref: 2019.

**18253 Pyranokunthone B**

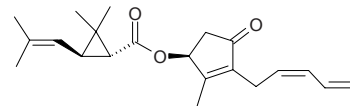
$C_{20}H_{20}O_4$  (324.38). Yellow solid,  $[\alpha]_D^{20} = 0^\circ$  ( $c = 0.2$ ,  $CHCl_3$ ). Pharm: Antimalarial (antiplasmodial); toxic (endothelial cell line ECV-304). Source: WU GAN DA YU YE QIU *Stereospermum kunthianum*. Ref: 2019.

**18254 1-(2'-γ-Pyranone)-6-caffeoyl-α-D-pyranoglucose**

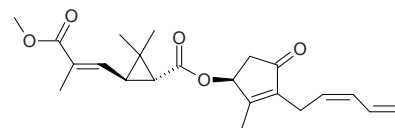
$C_{20}H_{20}O_{11}$  (436.38). Yellowish powder, mp 145~146°C. Source: DENG ZHAN XI XIN *Erigeron breviscapus*. Ref: 2115.

**18255 Pyrethrin I**

[121-21-1]  $C_{21}H_{28}O_3$  (328.46). bp 146~150°C/0.0005mmHg. Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*]. Ref: 6, 1521.

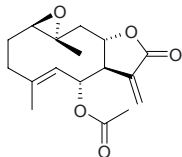
**18256 Pyrethrin II**

[121-29-9]  $C_{22}H_{28}O_5$  (372.47). bp 192~193°C/0.007mmHg. Pharm: Pesticide; LD<sub>50</sub> (rat, orl) = 1.2g/kg. Source: BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*]. Ref: 6, 658, 1521.

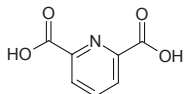


**18257 Pyrethrosin**

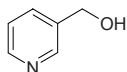
[28272-18-6] C<sub>17</sub>H<sub>22</sub>O<sub>5</sub> (306.36). **Pharm:** Dermatitic (causes contact dermatitis); molluscicide; plant growth regulator. **Source:** CHU CHONG JU *Chrysanthemum cinerariaefolium*, HONG HUA CHU CHONG JU *Chrysanthemum coccineum*. **Ref:** 658.

**18258 Pyridine-2,6-dicarboxylic acid**

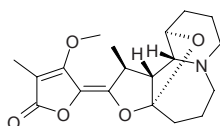
C<sub>7</sub>H<sub>5</sub>NO<sub>4</sub> (167.12). **Source:** YONG CHONG CAO *Cordyceps militaris*. **Ref:** 4784.

**18259 Pyridin-3-yl-methanol**

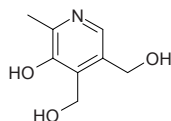
C<sub>6</sub>H<sub>7</sub>NO (109.13). **Source:** ZANG HONG HUA *Crocus sativus* (pollen), ZANG HONG HUA *Crocus sativus* (stigma: yield = 0.00007%dw). **Ref:** 4233, 4653.

**18260 Pyridostemin**

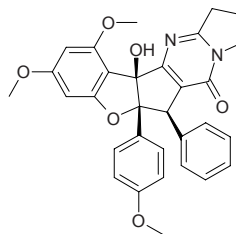
4-Methoxy-3-methyl-5-[(2Z,11aS)-3at,11t-epoxy-1c-methyl-(11ar,11bc)-dodecahydrofuro[3,2-c]pyrido[1,2-a]azepin-2-ylidene]-5H-furan-2-one C<sub>19</sub>H<sub>25</sub>NO<sub>5</sub> (347.41). Amorphous, [α]<sub>D</sub><sup>20</sup> = +473° (c = 0.4, MeOH). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*, LC<sub>50</sub> = 149mg/L, EC<sub>50</sub> = 96mg/L). **Source:** *Stemona* sp.(HG915). **Ref:** 3409.

**18261 Pyridoxine**

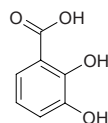
Vitamin B<sub>6</sub> [65-23-6] C<sub>8</sub>H<sub>11</sub>NO<sub>3</sub> (169.18). mp 160°C (sub). **Pharm:** Prevents atherosclerosis; coenzyme of amino transferase, decarboxylase, racemase and some other amino acids; improves appetite and symptoms in hepatitis patients; indispensable for cell growth (promotes biosynthesis of protein). **Source:** BA JIAO HUI XIANG *Illicium verum*, FENG MI *Apis cerana*, GAN ZHE *Saccharum sinensis*, MO GU *Agaricus campestris*, NIU RU *Bos taurus domesticus*; *Bubalus bubalis*, YU SHU SHU *Zea mays*. **Ref:** 6, 658.

**18262 Pyrimidinone**

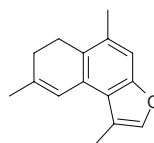
[15595-93-0] C<sub>31</sub>H<sub>28</sub>N<sub>2</sub>O<sub>6</sub> (524.57). Colorless lamellar crystals (dichloromethane-methanol), mp 256~257°C [α]<sub>D</sub><sup>20</sup> = -50.1° (c = 0.41, chloroform). **Pharm:** Antineoplastic (inhibits K-ras-NRK, IC<sub>50</sub> = 81ng/mL, induces normal conformation of cells and inhibits biosynthesis of protein in 10~30ng/mL); pesticide. **Source:** MI ZI LAN *Aglaia odorata*. **Ref:** 900.

**18263 o-Pyrocatechuic acid**

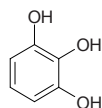
[303-38-8] C<sub>7</sub>H<sub>6</sub>O<sub>4</sub> (154.12). **Source:** BAI HUA YING SHAN HONG *Rhododendron mucronatum*. **Ref:** 6.

**18264 Pyrocurzerenone**

[20013-75-6] C<sub>15</sub>H<sub>16</sub>O (212.29). Crystals (pet. ether), mp 76.5~77.5°C. **Source:** PING E SHU *Curcuma zedoaria* [Syn. *Curcuma aeruginosa*]. **Ref:** 3586.

**18265 Pyrogallol**

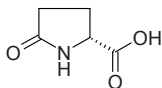
[87-66-1] C<sub>6</sub>H<sub>6</sub>O<sub>3</sub> (126.11). **Pharm:** Antifungal (microzyme, such as *Candida albicans*); antimutagenic; inhibits degradation of insulin. **Source:** CHANG JIAO DOU *Ceratonia siliqua*, JIAN YING XUAN GOU ZI *Rubus rigidus*, LONG YAN JING *Phyllanthus reticulatus*, MA SHI DA HUANG *Rheum maximowiczii*, MENG ZI CAO HU JIAO *Peperomia duclouxii* (whole herb: yield = 0.000061%)<sup>[4733]</sup>, XIANG CAO SHUI YANG ME *Geum urbanum*, *Rosa* sp. **Ref:** 658, 4733.



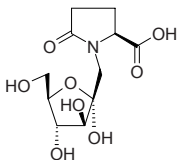


**18266 Pyroglutamic acid**

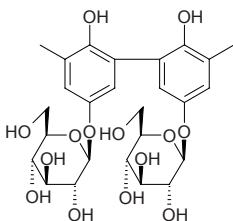
5-Oxoproline [4042-36-8] C<sub>5</sub>H<sub>7</sub>NO<sub>3</sub> (129.12). mp 182~183°C. Source: GOU QI YE *Lycium chinense*, MO GU *Agaricus campestris*, SHU DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. Ref: 6, 2928.

**18267 Pyroglutamic acid N-fructoside**

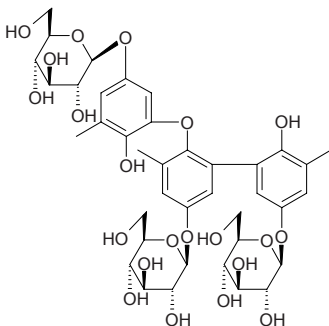
C<sub>11</sub>H<sub>17</sub>NO<sub>8</sub> (291.26). Source: DANG SHEN *Codonopsis pilosula*. Ref: 660.

**18268 Pyrolaside A**

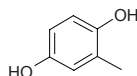
C<sub>26</sub>H<sub>34</sub>O<sub>14</sub> (570.55). White amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = 0° (c = 0.10, H<sub>2</sub>O). Source: YUAN YE LU TI CAO *Pyrola rotundifolia* (whole herb). Ref: 4498.

**18269 Pyrolaside B**

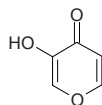
C<sub>39</sub>H<sub>50</sub>O<sub>21</sub> (854.82). White amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -47.4° (c = 0.10, H<sub>2</sub>O). Pharm: Antibacterial (*Staphylococcus aureus*, MIC = 35.0 µg/mL, control Bakuchiol, MIC = 20.0 µg/mL; *Micrococcus luteus*, MIC = 20.5 µg/mL, control Bakuchiol, MIC = 10.0 µg/mL). Source: YUAN YE LU TI CAO *Pyrola rotundifolia* (whole herb). Ref: 4498.

**18270 Pyrolin**

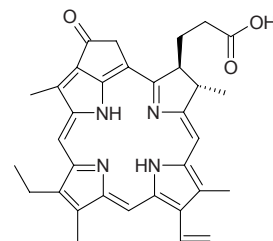
2,5-Dihydroxytoluene [95-71-6] C<sub>7</sub>H<sub>7</sub>O<sub>2</sub> (124.13). Lamellar crystals (benzene), mp 126~127°C, mp 124~125°C, bp 163°C/11mmHg. Pharm: Antibacterial (broad spectrum and low toxicity, *Staphylococcus aureus*, MIC = 125.0 µg/mL; *Enterococcus* sp., MIC = 125.0 µg/mL; *Bacillus typhosus*, MIC = 1000 µg/mL); antifungal; pesticide (curculio, grasshopper, housefly and cockroach); used in treatment of infectious diseases (infection of respiratory tract, urethra, digestive tract and wounds). Source: LU XIAN CAO *Pyrola calliantha* [Syn. *Pyrola rotundifolia* ssp. *chinensis*], PU TONG LU TI CAO *Pyrola decorata*, YUAN YE LU TI CAO *Pyrola rotundifolia*. Ref: 6, 660, 661, 5501.

**18271 Pyromeconic acid**

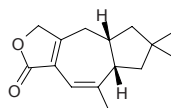
3-Hydroxy-4H-pyran-4-one [496-63-9] C<sub>5</sub>H<sub>4</sub>O<sub>3</sub> (112.09). mp 117°C, bp 227~228°C. Source: YI NIAN PENG *Erigeron annuus*. Ref: 6, 415, 1521.

**18272 Pyropheophorbide a**

[24533-72-0] C<sub>33</sub>H<sub>34</sub>N<sub>4</sub>O<sub>3</sub> (534.66). Crystals (Et<sub>2</sub>O), mp 210°C, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -342° (acetone). Pharm: Antiviral (HSV-2, EC<sub>50</sub> = 57 µg/mL); antineoplastic (concentrated in tumor tissue, produces cytotoxic activity under exposure of light with special wavelength). Source: DAN YE DONG FENG JU *Atalantia monophylla*. Ref: 1035, 3718, 3719.

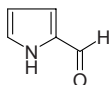
**18273 Pyrovellerolactone**

[68582-98-9] C<sub>15</sub>H<sub>20</sub>O<sub>2</sub> (232.33). Source: RONG BAI RU GU *Lactarius vellereus*, SI YANG PI ZHI RU GU *Lactarius pergamenus*, *Lactarius helvus*. Ref: 660, 1521.



**18274 Pyrrole-2-aldehyde**

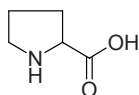
[1003-29-8] C<sub>5</sub>H<sub>5</sub>NO (95.10). mp 46~47°C. Source: CHA YE *Camellia sinensis* [Syn. *Thea sinensis*]. Ref: 6.

**18275 Pyrrolidine**

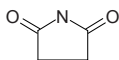
Tetrahydropyrrole [123-75-1] C<sub>4</sub>H<sub>9</sub>N (71.12). mp 88.5~89.0°C. Source: HU LUO BO *Daucus carota* var. *sativa*, HE SHI FENG *Daucus carota*. Ref: 6.

**18276 Pyrrolidine carboxylic acid**

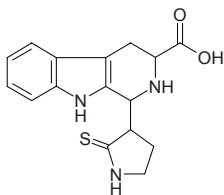
[609-36-9] C<sub>5</sub>H<sub>9</sub>NO<sub>2</sub> (115.13). mp (+) 215~220°C (dec), (-) 220~222°C (dec), (±) 213°C. Source: WU HUA GUO *Ficus carica*. Ref: 6.

**18277 Pyrrolidine-2,5-dione**

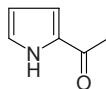
C<sub>4</sub>H<sub>5</sub>NO<sub>2</sub> (99.09). Source: REN SHEN LU *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 3587.

**18278 1-(2'-Pyrrolidinethion-3'-yl)-1,2,3,4-tetrahydro-β-carboline-3-carboxylic acid**

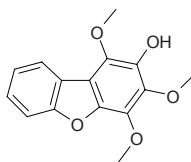
C<sub>16</sub>H<sub>17</sub>N<sub>3</sub>O<sub>2</sub>S (315.40). Source: LAI FU *Raphanus sativus*. Ref: 3588.

**18279 Pyrrolyl-α-methyl ketone**

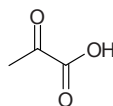
[1072-83-9] C<sub>6</sub>H<sub>7</sub>NO (109.13). Source: XIE CAO *Valeriana officinalis*. Ref: 6.

**18280 α-Pyrufuran**

[88256-05-7] C<sub>15</sub>H<sub>14</sub>O<sub>5</sub> (274.28). Pharm: Antifungal (*Cladosporium cucumerinum*). Source: XI YANG LI *Pyrus communis*. Ref: 658.

**18281 Pyruvic acid**

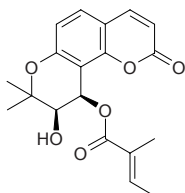
Pyroracemic acid [127-17-3] C<sub>3</sub>H<sub>4</sub>O<sub>3</sub> (88.06). Crystals or liquid with odour resembling acetic acid, mp 13.6°C, bp 165°C (partly dec), bp 65°C/10mmHg, pK<sub>a1</sub> = 2.39 (25°C). Source: FENG HUANG MU *Delonix regia*, HONG HAI JIAO *Capsicum annum*, HUI HUI DOU *Cicer arietinum*, JI CAI *Capsella bursa-pastoris*, JI MAO CAI *Pterocladia tenuis*, KUAN YE XIANG PU *Typha latifolia*, LAN HU LU BA *Trigonella caerulea*, PING GUO *Malus pumila*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SHUI LIAO *Polygonum hydropiper*, TAO YE LIAO *Polygonum persicaria*, WAN DOU *Pisum sativum*, ZI YANG TI JIA *Bauhinia purpurea*, ZUO JIANG CAO *Oxalis corniculata* [Syn. *Oxalis repens*]. Ref: 2, 660, 1521.



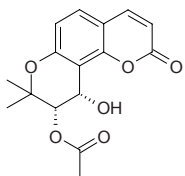
## Q

**18282 Qianhucoumarin A**

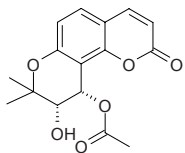
Lasertipin; 3'(*R*)-Hydroxy-4'(*R*)-tigloyloxy-3',4'-dihydroseselin C<sub>19</sub>H<sub>20</sub>O<sub>6</sub> (344.37). White prismatic crystals, mp 123~126°C,  $[\alpha]_D^{20} = +209.6^\circ$  ( $c = 0.5$ , CHCl<sub>3</sub>). **Pharm:** NO Production inhibitor (LPS-activated mouse peritoneal macrophages, 100μmol/L, InRt = (24.9±4.0)%), control *L*-NMMA, 100μmol/L, InRt = (79.2±0.9)%<sup>[4454]</sup>. **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*, FEN CHA DANG GUI *Angelica furcijuga* (flower). **Ref:** 268, 4454.

**18283 Qianhucoumarin B**

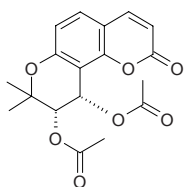
3'(*S*)-Acetoxy-4'(*S*)-hydroxy-3',4'-dihydroseselin C<sub>16</sub>H<sub>16</sub>O<sub>6</sub> (304.30). Colorless crystals (petroleum spirit-acetic ester), mp 159~161°C,  $[\alpha]_D^{20} = +3.9^\circ$  ( $c = 1.0$ , CHCl<sub>3</sub>). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*. **Ref:** 281.

**18284 Qianhucoumarin C**

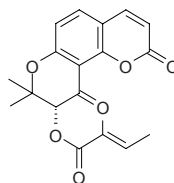
3'(*S*)-Hydroxy-4'(*S*)-acetoxy-3',4'-dihydroseselin C<sub>16</sub>H<sub>16</sub>O<sub>6</sub> (304.30). Colorless crystals (petroleum spirit-acetic ester), mp 186~188°C,  $[\alpha]_D^{20} = +7.6^\circ$  ( $c = 1.0$ , CHCl<sub>3</sub>). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*. **Ref:** 281.

**18285 Qianhucoumarin D**

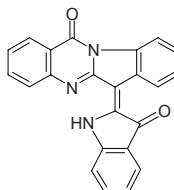
3'(*S*),4'(*S*)-Diacetoxy-3',4'-dihydroseselin C<sub>18</sub>H<sub>18</sub>O<sub>7</sub> (346.34). Colorless prismatic crystals, mp 160.5~162.5°C,  $[\alpha]_D^{20} = +4.0^\circ$  ( $c = 1.0$ , chloroform). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*. **Ref:** 290.

**18286 Qianhucoumarin E**

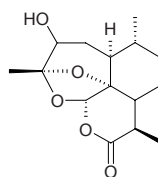
3'(*R*)-Tigloyloxy-4'-keto-3',4'-dihydroseselin C<sub>19</sub>H<sub>18</sub>O<sub>6</sub> (342.35). Colorless prismatic crystals, mp 103.5~105.5°C,  $[\alpha]_D^{20} = +19.6^\circ$  ( $c = 1.0$ , chloroform). **Source:** BAI HUA QIAN HU *Peucedanum praeruptorum*. **Ref:** 290.

**18287 Qingdainone**

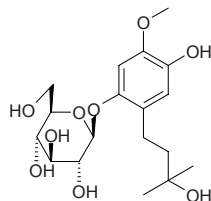
Indolo[2,1*b*]-quinazoline-6,12-dione [97457-31-3] C<sub>23</sub>H<sub>13</sub>N<sub>3</sub>O<sub>2</sub> (363.38). Dark purple acicular crystals, mp 278~280°C. **Pharm:** Antineoplastic (mus, Lewis lung cancer, B16 melanoma). **Source:** DA QING YE *Isatis indigotica*, LIAO LAN GUO *Polygonum tinctorium*, LIAO LAN YE *Polygonum tinctorium*, MA LAN YE *Baphicacanthus cusia* [Syn. *Strobilanthes cusia*], OU ZHOU SONG LAN *Isatis tinctoria*. **Ref:** 21, 660.

**18288 Qinghaosu IV**

Artemisinin IV C<sub>15</sub>H<sub>22</sub>O<sub>5</sub> (282.34). **Source:** HUANG HUA HAO *Artemisia annua*. **Ref:** 2, 660.

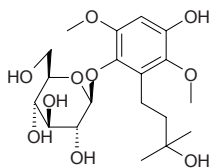
**18289 Qingjueine I**

2-(3'-Hydroxy-3'-methylbutyl)-4-hydroxy-5-methoxyphenol-1-*O*-β-*D*-glucopyranoside C<sub>18</sub>H<sub>28</sub>O<sub>9</sub> (388.42). Amorphous powder (EtOH), mp 212~214°C,  $[\alpha]_D^{20} = -38.24^\circ$  ( $c = 0.1$ , MeOH). **Source:** FENG WEI CAO *Pteris multifida*. **Ref:** 4550.

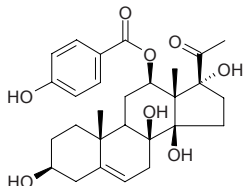


**18290 Qingjueine II**

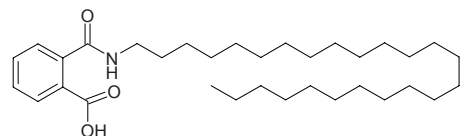
2-(3'-Hydroxy-3'-methylbutyl)-4-hydroxy-3,6-dimethoxyphenyl-1-*O*- $\beta$ -D-glucopyranoside C<sub>19</sub>H<sub>30</sub>O<sub>10</sub> (418.44). White amorphous powder (MeOH), mp 234~236°C,  $[\alpha]_D^{20} = -37.6^\circ$  ( $c = 0.1$ , MeOH). Source: FENG WEI CAO *Pteris multifida*. Ref: 4550.

**18291 Qingyangshengenin**

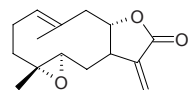
C<sub>28</sub>H<sub>36</sub>O<sub>8</sub> (500.59). Source: DUAN JIE SHEN *Cynanchum wallichii*, QING YANG SHEN *Cynanchum otophyllum*. Ref: 4038, 4039.

**18292 Qinjiaoamide**

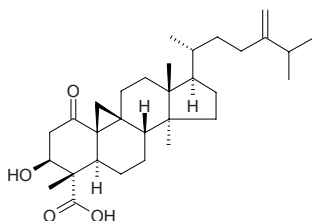
*N*-Pentacosyl-2-carboxy-benzoyl amide C<sub>33</sub>H<sub>57</sub>NO<sub>3</sub> (515.83). White needles, mp 103~105°C. Source: QIN JIAO *Gentiana macrophylla*. Ref: 4594.

**18293 Quadrangolide**

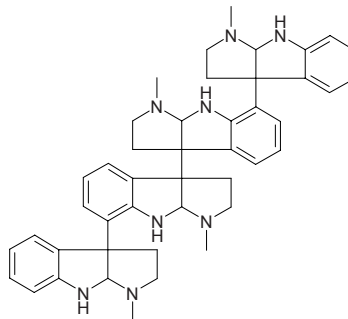
[110269-98-2] C<sub>15</sub>H<sub>20</sub>O<sub>3</sub> (248.32). Prisms (MeOH), mp 118~120°C,  $[\alpha]_D^{20} = +134.6^\circ$  ( $c = 0.575$ , CHCl<sub>3</sub>). Pharm: Anthelmintic (ants, 6.0mg/mL). Source: SI LENG ZE LAN *Eupatorium quadrangulare*, TAI PING YANG JIA ZE LAN *Mikania mendocina*. Ref: 4023, 4024.

**18294 Quadrangularic acid E**

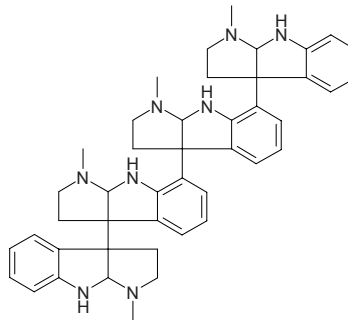
C<sub>31</sub>H<sub>48</sub>O<sub>4</sub> (484.73). Pharm: Anti-HIV-1 (syncytium assay: IC<sub>50</sub> = 18.5μg/mL, EC<sub>50</sub> = 6.8μg/mL; HIV-1 RT assay: 200μg/mL, InRt = 80.1%, IC<sub>50</sub> = 47.9μg/mL, control Fagaronine chloride, IC<sub>50</sub> = 10.9μg/mL, Nevirapine IC<sub>50</sub> = 1.8μg/mL). Source: TAI GUO ZHI ZI *Gardenia thailandica* (leaf and twig). Ref: 4963.

**18295 Quadrigemine A**

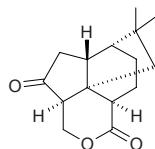
[69937-02-6] C<sub>44</sub>H<sub>50</sub>N<sub>8</sub> (690.94). White amorphous resinoid foam,  $[\alpha]_D^{23} = +32^\circ$  (alcohol). Pharm: Platelet aggregation inhibitor (hmn, induced by ADP, collagen, thrombin, EC = 1~10μmol/L, acts in late stage of platelet activation); Cytotoxic (rat, cultural liver cancer cell HTC, 5μmol/L, cellular death rate = 100%). Source: FU SI TE JIU JIE *Psychotria forsteriana*, *Hodgkinsonia frutescens*. Ref: 4014, 4015, 4016.

**18296 Quadrigemine B**

[69937-10-6] C<sub>44</sub>H<sub>50</sub>N<sub>8</sub> (690.94). White crystals (MeOH), mp 229~234°C,  $[\alpha]_D^{23} = +263^\circ$  (alcohol). Pharm: Platelet aggregation inhibitor (hmn, induced by ADP, collagen, thrombin, EC = 1~10μmol/L, acts in late stage of platelet activation); Cytotoxic (rat, cultural liver cancer cell HTC, 10μmol/L, cellular death rate = 100%). Source: FU SI TE JIU JIE *Psychotria forsteriana*, HUI ZHUANG JIU JIE *Psychotria rostrata*, *Hodgkinsonia frutescens*. Ref: 4014, 4015, 4016, 4017.

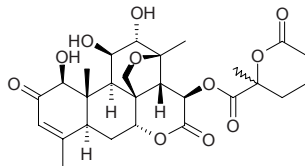
**18297 Quadrone**

[66550-08-1] C<sub>15</sub>H<sub>20</sub>O<sub>3</sub> (248.33). Pharm: Antineoplastic; cytotoxic. Source: *Aspergillus terreus*. Ref: 658.

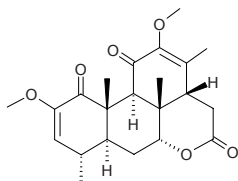


**18298 Quassimarin**

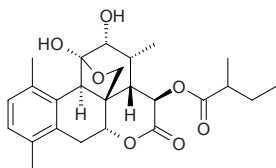
[59938-97-5]  $C_{27}H_{36}O_{11}$  (536.58). Acicular crystals (ethyl acetate–hexane), mp 237.5–238.5°C (dec),  $[\alpha]_D^{26} = +22.4^\circ$  ( $c = 0.29$ , chloroform). **Pharm:** Antineoplastic (mus,  $P_{388}$ , 4mg/kg, biotic prolonged rate = 65%, 50 $\mu$ g/kg, biotic prolonged rate > 25%); cytotoxic (KB,  $ED_{50} = 0.01\mu$ g/mL). **Source:** MEI ZHOU KU MU *Quassia amara*. **Ref:** 661, 658.

**18299 Quassin**

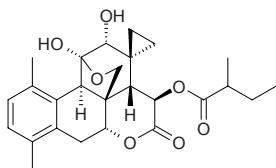
[76-78-8]  $C_{22}H_{28}O_6$  (388.46). **Pharm:** Anthelmintic (anti-pinworm *Ascaris vermicularis*); bitter principle (very bitter taste); inhibits heart (mammal, heart rate and amplitude); stomachic; LD (rbt, iv) = 0.14g. **Source:** KU MU *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], CHU BAI PI *Ailanthus altissima*, KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], MEI ZHOU KU MU *Quassia amara* (in 1836, the compound was first isolated from the plant by Winkler)<sup>[5505]</sup>. **Ref:** 12, 658, 5501, 5505.

**18300 Quassinoid PC03-579A**

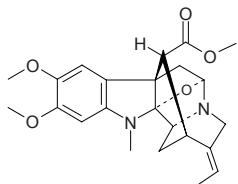
$C_{25}H_{32}O_7$  (444.53). Oil **Source:** GAO CHU *Ailanthus excelsa*. **Ref:** 2051.

**18301 Quassinoid PC03-579B**

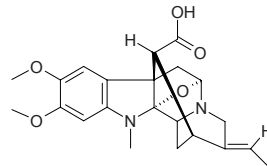
$C_{26}H_{32}O_7$  (456.54). Oil **Source:** GAO CHU *Ailanthus excelsa*. **Ref:** 2051.

**18302 Quaternine**

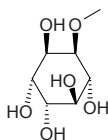
$C_{23}H_{28}N_2O_5$  (412.49). **Source:** DA YE TANG JIAO SHU *Alstonia macrophylla* (leaf: yield = 0.0003%). **Ref:** 3020.

**18303 Quaternine**

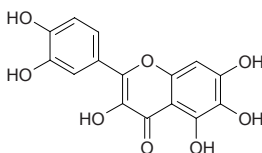
Alspopicalamine [57499-02-2]  $C_{23}H_{28}N_2O_5$  (412.49). Crystals (MeOH), mp 153°C,  $[\alpha]_D^{20} = -27^\circ$  ( $c = 0.4$ ,  $CHCl_3$ ). **Source:** CUI TU LUO FU MU *Rauwolfia vomitoria*, DA YE TANG JIAO SHU *Alstonia macrophylla*, SI SHU JI GU CHANG SHAN *Alstonia quaternata*, *Alstonia legouixiae*, *Rauwolfia oreogiton*, *Rauwolfia volkensii*. **Ref:** 660, 1521.

**18304 L-Quebrachitol**

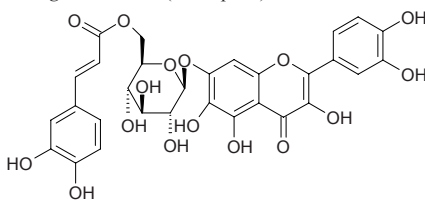
$C_7H_{14}O_6$  (194.19). mp (–) 191°C. **Pharm:** Biosynthetic precursor of some drugs. **Source:** XIANG JIAO SHU *Hevea brasiliensis*, AI YE *Artemisia argyi*. **Ref:** 6, 658.

**18305 Quercetagetin**

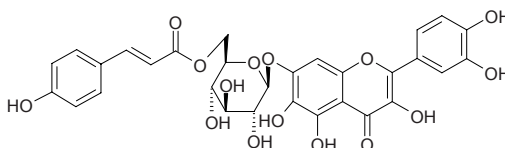
[90-18-6]  $C_{15}H_{10}O_8$  (318.24). mp 318–320°C. **Pharm:** Antibacterial (*Pseudomonas maltophilia* and *Enteromorpha cloacae*). **Source:** DA BAI DING CAO *Senecio oryzetorum*, HAI ER CHA *Acacia catechu*, KONG QUE CAO *Tagetes patula*. **Ref:** 6, 658.

**18306 Quercetagetin-7-O-(6-O-caffeoyl-β-D-glucopyranoside)**

$C_{30}H_{26}O_{16}$  (642.53). Yellow crystals, mp 198–200°C,  $[\alpha]_D = -248^\circ$  ( $c = 0.501$ , MeOH). **Pharm:** Antioxidant (DPPH scavenger,  $IC_{50} = (2.73 \pm 0.04)\mu$ mol/L, control Quercetin,  $IC_{50} = (6.11 \pm 0.53)\mu$ g/mL). **Source:** ZUI DA WAN SHOU JU *Tagetes maxima* (aerial parts). **Ref:** 5318.

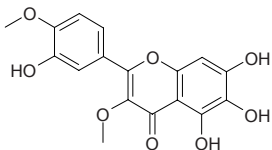
**18307 Quercetagetin-7-O-(6-O-p-coumaroyl-β-D-glucopyranoside)**

$C_{30}H_{26}O_{15}$  (626.53). Yellow powder, mp 224–226°C,  $[\alpha]_D = -193^\circ$  ( $c = 0.321$ , MeOH). **Pharm:** Antioxidant (DPPH scavenger,  $IC_{50} = (3.29 \pm 0.05)\mu$ mol/L, control Quercetin,  $IC_{50} = (6.11 \pm 0.53)\mu$ g/mL). **Source:** ZUI DA WAN SHOU JU *Tagetes maxima* (aerial parts). **Ref:** 5318.

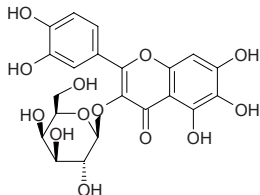


**18308 Quercetagenin-3,4'-dimethyl ether**

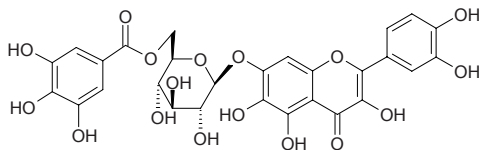
$C_{17}H_{14}O_8$  (346.30). Source: HUANG HUA HAO *Artemisia annua*. Ref: 2, 660.

**18309 Quercetagenin-3-galactoside**

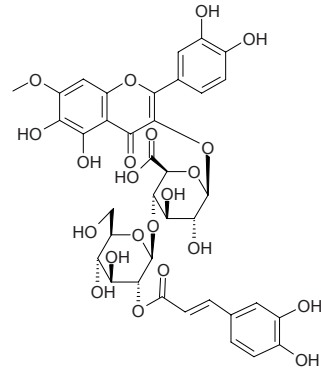
$C_{21}H_{20}O_{13}$  (480.39). mp 200°C. Source: DI YANG QUE *Lotus corniculatus*. Ref: 6.

**18310 Quercetagenin-7-O-(6-O-galloyl-β-D-glucopyranoside)**

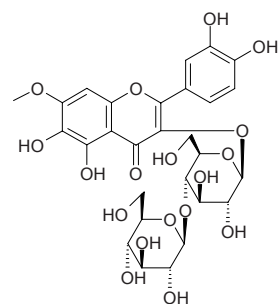
$C_{28}H_{24}O_{17}$  (632.49). Yellow amorphous powder,  $[\alpha]_D^{25} = -235^\circ$  ( $c = 0.085$ , MeOH). Pharm: Antioxidant (DPPH scavenger,  $IC_{50} = (6.91 \pm 0.02) \mu\text{mol/L}$ , control Quercetin,  $IC_{50} = (6.11 \pm 0.53) \mu\text{g/mL}$ ). Source: ZUI DA WAN SHOU JU *Tagetes maxima* (aerial parts). Ref: 5318.

**18311 Quercetagenin 7-methylether-3-O-[2-O-caffeoyl-β-D-glucopyranosyl(1→2)-O-β-D-glucuronopyranoside]**

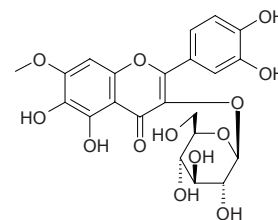
$C_{37}H_{36}O_{22}$  (832.69).  $[\alpha]_D^{25} = -30.6^\circ$  ( $c = 0.1$ , MeOH). Source: *Paepalanthus vellozioides*, *Paepalanthus latipes*. Ref: 2290.

**18312 Quercetagenin 7-methylether 3-O-cellobioside**

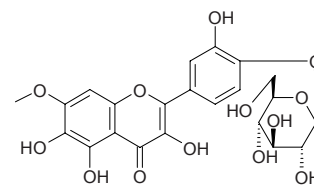
$C_{28}H_{32}O_{18}$  (656.56).  $[\alpha]_D^{25} = -11.4^\circ$  ( $c = 0.1$ , MeOH). Source: *Paepalanthus vellozioides*, *Paepalanthus latipes*. Ref: 2290.

**18313 Quercetagenin 7-methylether-3-O-β-D-glucopyranoside**

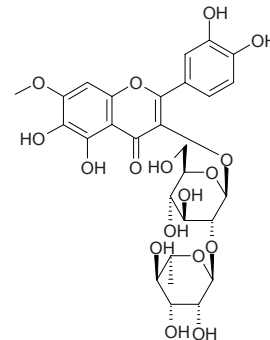
$C_{22}H_{22}O_{13}$  (494.41).  $[\alpha]_D^{25} = -12.5^\circ$  ( $c = 0.1$ , MeOH). Source: *Paepalanthus vellozioides*, *Paepalanthus latipes*. Ref: 2290.

**18314 Quercetagenin 7-methylether-4'-O-β-D-glucopyranoside**

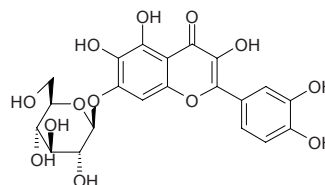
$C_{22}H_{22}O_{13}$  (494.41).  $[\alpha]_D^{25} = -7.4^\circ$  ( $c = 0.1$ , MeOH). Source: *Paepalanthus vellozioides*, *Paepalanthus latipes*. Ref: 2290.

**18315 Quercetagenin 7-methylether 3-O-neohesperidoside**

$C_{28}H_{32}O_{17}$  (640.56).  $[\alpha]_D^{25} = -47.2^\circ$  ( $c = 0.1$ , MeOH). Source: *Paepalanthus vellozioides*, *Paepalanthus latipes*. Ref: 2290.

**18316 Quercetagitrin**

Quercetagenin 7-O-β-D-glucopyranoside [548-75-4]  $C_{21}H_{20}O_{13}$  (480.39). mp 236–238°C (dec). Pharm: Antioxidant (DPPH scavenger,  $IC_{50} = (5.08 \pm 0.03) \mu\text{mol/L}$ , control Quercetin,  $IC_{50} = (6.11 \pm 0.53) \mu\text{g/mL}$ )<sup>[5318]</sup>. Source: DA BAI DING CAO *Senecio oryzetorum*, KONG QUE CAO *Tagetes patula*, XUAN FU HUA *Inula britannica*, ZUI DA WAN SHOU JU *Tagetes maxima* (aerial parts). Ref: 6, 660, 5318.



**18317 Quercetin**

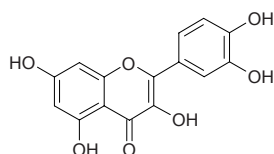
2,(3,4-Dihydroxyphenyl)-3,5,7-trihydroxy-4H-1-benzopyran-4-one [117-39-5]  
C<sub>15</sub>H<sub>10</sub>O<sub>7</sub> (302.24). Yellow acicular crystals (methanol), mp 313–314°C.

**Pharm:** Anti-HIV-1 (RT (RDDP)inhibitor, IC<sub>50</sub> = 43μmol/L, positive control Adriamycin, IC<sub>50</sub> = 27μmol/L; DDDP inhibitor, IC<sub>50</sub> > 100μmol/L, positive control Adriamycin, IC<sub>50</sub> = 6μmol/L; HIV-1 IN inhibitor, IC<sub>50</sub> = 15μmol/L, positive control suramin, IC<sub>50</sub> = 2.4μmol/L)<sup>[4187]</sup>; antiasthmatic (used as a cure for chronic bronchitis); antibacterial; antihepatotoxin; antihypertensive; anti-inflammatory (COX-1 inhibitor, 200μmol/L, InRt = (44±2)%, positive control Indomethacin, 1.7μmol/L, InRt = (43±3)%); antitussive; antiviral; coronary vasodilator (increases coronary flow); antitussive (dispels phlegm); antihypercholesterolemic; 5-HT inhibitor; smooth muscle relaxant; platelet aggregation inhibitor; 3',5'-cAMP-phosphodiesterase inhibitor; fatty acid synthetase inhibitor; aldose reductase inhibitor (eye lens); protein kinase C inhibitor; antihypertensive; reduces blood capillary brittleness; antioxidant (DPPH scavenger, EC<sub>50</sub> = 1.5μg/mL = 5.0μmol/L, control Ascorbic acid, EC<sub>50</sub> = 1.6μg/mL = 9.1μmol/L)<sup>[4154]</sup>; antioxidant (DPPH scavenger, IC<sub>50</sub> = 17.5μmol/L, control Vitamin E, IC<sub>50</sub> = 27.0μmol/L)<sup>[4502]</sup>; DPPH scavenger (IC<sub>50</sub> = (11.6±0.7)μmol/L, control Trolox, IC<sub>50</sub> = (25.4±0.8)μmol/L)<sup>[4244]</sup>; DPPH scavenger (SC<sub>50</sub> = 3.3μmol/L)<sup>[4247]</sup>; antioxidant (superoxide anion radical scavenger, superoxide dismutase method, IC<sub>50</sub> for Formazane formation activity = 72μmol/L)<sup>[4247]</sup>; antioxidant (DPPH scavenger, IC<sub>50</sub> = 3.7nmol/mL<sup>[3507]</sup>, IC<sub>50</sub> = (6.11±0.53)μg/mL<sup>[5318]</sup>, IC<sub>50</sub> = (9.7±0.8)μmol/L<sup>[5493]</sup>); antioxidant (DPPH scavenger, TLC, MIA < 0.05μg, IC<sub>50</sub> = 7μg/mL)<sup>[3785, 5247]</sup>; antioxidant (DPPH scavenger, TLC, MIA = 1μg)<sup>[5385]</sup>; antioxidant (chemiluminescence method, IC<sub>50</sub> = (0.53±0.01)μmol/L)<sup>[3764]</sup>; antioxidant (PMN cellular chemiluminescence assay, reduces oxidative burst FMLP-induced, IC<sub>50</sub> = (0.5±0.05)μmol/L)<sup>[5371]</sup>; IL-10-like activity (proliferation assay, dose-dependent, maximal at 30μg/mL)<sup>[4445]</sup>; aldose reductase inhibitor (IC<sub>50</sub> = 2.2μmol/L, control Epalrestat, IC<sub>50</sub> = 0.072μmol/L)<sup>[4530]</sup>; anti-inflammatory (modulator of cytokine network: inhibits LPS-stimulated TNF-α and IL-6 release in RAW264.7 macrophages, IC<sub>50</sub> = 1μmol/L)<sup>[4416]</sup>; leukocyte elastase MMP-2/9 inhibitor<sup>[4416]</sup>; TNF-α secretion inhibitor (LPS-stimulated RAW264.7 macrophages, IC<sub>50</sub> < 200μg/mL, by interfering with phosphorylation and activation of JNK/SAPK and its downstream substrates c-Jun and ATF-2, and ERK1/2 and p38 MAPK)<sup>[4416]</sup>; inhibits activation of transcription factor AP-1<sup>[4416]</sup>; TNF-α production inhibitor (murine macrophages, LPS-stimulated, IC<sub>50</sub> < 20μmol/mL)<sup>[4416]</sup>; anti-inflammatory (macrophages, COX-2 inhibitor, inhibits COX-2 expression)<sup>[4415]</sup>; anti-inflammatory (NF-κB pathway)<sup>[4415]</sup>; anti-inflammatory (NO production inhibitor, mus, macrophage-like cell line RAW264.7 activated by LPS/IFN, IC<sub>50</sub> = 26.8μmol/L)<sup>[2537, 2556]</sup>; anti-inflammatory (NO production inhibitor, mus, macrophage-like cell line, RAW264.7, activated by LPS and recombinant mouse IFN-γ, IC<sub>50</sub> = 24.8μmol/L)<sup>[2541]</sup>; xanthine oxidase inhibitor (IC<sub>50</sub> = 3.4μg/mL, IC<sub>50</sub> = 10μmol/L)<sup>[5250]</sup>; LD<sub>50</sub> (mus, orl) = 160mg/kg. **Source:** A LA BO JIAO JIN HE HUAN *Acacia nilotica*, BAI GUO *Ginkgo biloba*, BAI GUO YE *Ginkgo biloba* (leaf: mean content of 3 samples = 2.55%)<sup>[5508]</sup>, BEI SHA SHEN *Glehnia littoralis* (underground part), BIAN DI JIN *Hypericum wightianum* (dried whole herb: content = 0.1465%)<sup>[5508]</sup>, BIAN TAO *Mangifera persiciformis*, BIAN XU *Polygonum aviculare* (aerial parts: content = 0.0902%), CE BAI YE *Thuja orientalis* [Syn. *Platyclusus orientalis*; *Biota orientalis*] (dried leaf: content scope of 14 origins = 0.17%–0.33%,

mean content = 0.25%)<sup>[5508]</sup>, CHENG GAN SHENG MA *Eupatorium lindleyanum* (whole herb: mean content = 0.095%)<sup>[5508]</sup>, CHENG LIU *Tamarix chinensis*, CHUAN BA JIAO LIAN *Dysosma veitchii*, CI WU JIA *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*] (root and rhizome: content = 0.069%)<sup>[5508]</sup>, CU LIU GUO *Hippophae rhamnoides* (leaf: content = 0.016%)<sup>[5508]</sup>, DA JIN QIAN CAO *Lysimachia christinae*, DA TU SI ZI *Cuscuta japonica* (ripe fruit: mean content = 0.0141%)<sup>[5508]</sup>, DI JIN CAO *Euphorbia humifusa* (aerial parts: content = 0.0092%)<sup>[5508]</sup>, DU ZHONG YE *Eucommia ulmoides* (leaf: content = 0.019%)<sup>[5508]</sup>, DUO SUI LIAO *Polygonum polystachyum*, FENG JIAO *Apis mellifera ligustica* (bee glue: mean content of 5 beach samples = 0.41%)<sup>[5508]</sup>, GAO LIANG JIANG *Alpinia officinarum*, GUAN YE LIAN QIAO *Hypericum perforatum* (whole herb: mean content = 0.072%)<sup>[5508]</sup>, HONG HUA *Carthamus tinctorius* (flower: mean content of 4 origins = 0.49%)<sup>[5508]</sup>, HONG MA *Apocynum lancifolium*, HU ZHANG *Polygonum cuspidatum*, HUAI JIAO *Sophora japonica*, HUAI *Sophora japonica* (flower), HUANG HAI TANG *Hypericum ascyron* (dried whole herb: content = 0.1107%)<sup>[5508]</sup>, HUANG HUA HAO *Artemisia annua*, HUANG QI *Astragalus membranaceus* (Dried root: mean content of 5 origins = 0.018%)<sup>[5519]</sup>, HUANG SHU KUI HUA *Abelmoschus manihot*, JI WU BING JIN SI TAO *Hypericum subsessile* (dried whole herb: content = 0.0733%)<sup>[5508]</sup>, JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig: yield = 0.0099%dw<sup>[4723]</sup>, yield = 0.021%dw<sup>[3014]</sup>), JIAN YE YIN YANG HUO *Epimedium sagittatum*, JIN SI MEI *Hypericum patulum* (dried whole herb: content = 0.6401%)<sup>[5508]</sup>, KU HAO *Conyza blinii*, KUAN YE XIANG PU *Typha latifolia*, LANG PA CAO *Bidens tripartita* (whole herb: mean content = 0.061%)<sup>[5508]</sup>, LAO SHU LE *Acanthus ilicifolius*, LI JIANG QIAN HU *Peucedanum govanianum* var. *bicolor*, LIANG SHAN DU JUAN *Rhododendron huianum* (leaf: content = 0.048%)<sup>[5508]</sup>, LING NAN DU JUAN *Rhododendron mariae* (branchlet-leaf or flower: content = 0.6448%)<sup>[5508]</sup>, LU SHI DONG LING CAO *Isodon rubescens* var. *lushiensis* (leaf: yield = 0.00026%dw)<sup>[4732]</sup>, LU XIAN CAO *Pyrola calliantha* [Syn. *Pyrola rotundifolia* ssp. *chinensis*], LUO BU MA *Apocynum venetum* (dried leaf: content scope = 0.0073%–0.0277%)<sup>[5501]</sup>; content scope of 6 origins = 0.0018%–0.0165%, mean content = 0.0090%)<sup>[5529]</sup>, LUO YE SONG YE JIN SI TAO *Hypericum laricifolium* (aerial parts), MAN SHAN HONG *Rhododendron dauricum* (leaf: mean content of 11 origins = 0.099%)<sup>[5508]</sup>, MANG NIU ER MIAO *Erodium stephanianum*, MAO GUO DU JUAN *Rhododendron seniavinii* (branchlet-leaf or flower: content = 0.2097%)<sup>[5508]</sup>, MAO YAN CAO *Euphorbia lumulata* (whole herb), MU ZEI *Equisetum hiemale* (aerial parts: mean content = 0.179%)<sup>[5508]</sup>, NAN FANG TU SI ZI *Cuscuta australis* (ripe fruit: mean content = 0.0069%)<sup>[5508]</sup>, PI JIU HUA TU SI ZI *Cuscuta lupuliformis* (ripe fruit: mean content = 0.0061%)<sup>[5508]</sup>, PU HUANG *Typha angustata*, RI BEN HUANG BAI *Phellodendron japonicum* (leaf), RI BEN LU TI CAO *Pyrola japonica*, RU YUAN DU JUAN *Rhododendron lingii* (branchlet-leaf or flower: content = 0.1752%)<sup>[5508]</sup>, SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], SANG JI SHENG *Loranthus parasiticus* [Syn. *Loranthus chinensis*; *Taxillus chinensis*] (content = 0.027%)<sup>[5501]</sup>, SANG YE *Morus alba* (leaf: mean content = 0.0107%)<sup>[5508]</sup>, SHAN WO JU *Lactuca indica* (Fresh whole herb: yield = 0.00063%fw)<sup>[4689]</sup>, SHI WEI *Pyrrosia lingua* (dried leaf: mean content = 0.11%)<sup>[5508]</sup>, SHI ZHI JIA *Sedum sarmentosum* (whole herb: mean content of 10 origins = 0.131%)<sup>[5532]</sup>, SHUI MU XUE LIAN HUA *Saussurea medusa* (whole herb), TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii*

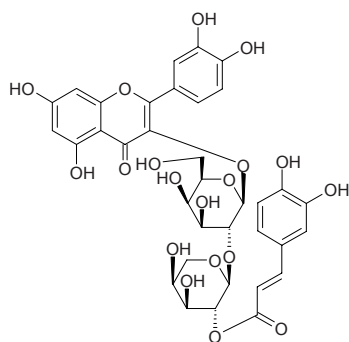


(leaf: yield = 0.00017%dw)<sup>[4722]</sup>, TU SI ZI *Cuscuta chinensis* (ripe fruit: content scope = 0.119%–0.204%<sup>[5501]</sup>, mean content = 0.150%<sup>[5508]</sup>), WEI LING CAI *Potentilla chinensis*, WEN GUAN MU *Xanthoceras sorbifolia* (stem and trunk: mean content = 0.011%<sup>[5508]</sup>), XI SHU *Camptotheca acuminata*, XIA YE XIANG PU *Typha angustifolia*, XIAN HE CAO *Agrimonia pilosa* var. *japonica*, XIAN REN ZHANG *Opuntia dillenii* (fresh stem), XUAN FU HUA *Inula britannica*, YANG PU TAO YE *Syzygium samarangense*, YAO YONG PU GONG YING *Taraxacum officinale*, YE XIA ZHU *Phyllanthus urinaria* (whole herb: mean content = 0.042%<sup>[5508]</sup>), YI BI LI YA LI *Quercus iberica*, YI ZHU QIAN MA *Urtica dioica*, YIN CHEN HAO *Artemisia capillaris*, YOU GAN YE *Phyllanthus emblica* (leaf and branch), YOU SE ZI JIN NIU *Ardisia colorata* (fruit), YU XING CAO *Houttuynia cordata*, YUAN BAO CAO *Hypericum sampsonii* (dried whole herb: content = 0.0079%<sup>[5508]</sup>), YUN SHI *Caesalpinia decapetala* (leaf), ZHAI YE BAN FENG HE *Pterospermum lanceaefolium*, ZHAN E JIN SI TAO *Hypericum lancasteri* (dried whole herb: content = 0.1595%<sup>[5508]</sup>), ZHAO SHAN BAI *Rhododendron micranthum* (leaf: content scope from Feb. to Nov. 0.10%–0.47%, mean content = 0.29%<sup>[5508]</sup>), ZHEN ZHU MEI *Sorbaria sorbifolia* (bark: content = 0.62%<sup>[5508]</sup>), ZHONG GUO SHA JI *Hippophae rhamnoides* subsp. *sinensis* (leaf: content = 0.006%<sup>[5508]</sup>), ZHONG GUO XUAN FU HUA *Inula britannica* var. *chinensis*, ZHONG YA SHA JI *Hippophae rhamnoides* subsp. *turkestanica* (leaf: content = 0.007%<sup>[5508]</sup>), ZI WAN *Aster tataricus* (root and rhizome: content = 0.0104%<sup>[5508]</sup>), occurs in many plants (esp. in fruits, for example detected in almost all studied in family Apiaceae spp.). Ref: 2, 4, 468, 475, 550, 557, 594, 604, 615, 658, 660, 2080, 2537, 2541, 2556, 3014, 3507, 3764, 3785, 4013, 4097, 4154, 4187, 4205, 4244, 4247, 4413, 4415, 4416, 4445, 4456, 4502, 4530, 4689, 4722, 4723, 4732, 5247, 5250, 5318, 5371, 5375, 5385, 5493, 5501, 5508, 5519, 5529, 5532.



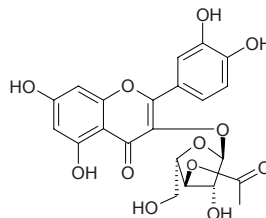
**18318 Quercetin-3-O-(2-E-caffeoyl)- $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranoside**

C<sub>35</sub>H<sub>34</sub>O<sub>19</sub> (758.65). Yellow amorphous powder,  $[\alpha]_D^{25} = -70^\circ$  ( $c = 0.1$ , MeOH). Source: LV TI GEN CAO *Helleborus viridis* (leaf). Ref: 3875.



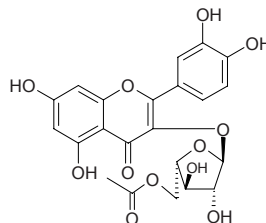
**18319 Quercetin-3-O- $\alpha$ -L-(3''-O-acetyl)-arabinofuranoside**

C<sub>22</sub>H<sub>20</sub>O<sub>12</sub> (476.40). Pharm: Hepatoprotective (primary cultures of rat hepatocytes, H<sub>2</sub>O<sub>2</sub>-induced toxicity, 50 $\mu$ mol/L, relative protection = 45.7%, H<sub>2</sub>O<sub>2</sub>-treated, relative protection = 0.0%, control, relative protection = 100%), positive control Silibinin, Relative protection = 74.9%). Source: RI BEN GUI DENG QING *Rodgersia podophylla* (aerial parts). Ref: 4996.



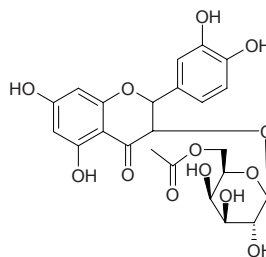
**18320 Quercetin-3-O- $\alpha$ -L-(5''-O-acetyl)-arabinofuranoside**

C<sub>22</sub>H<sub>20</sub>O<sub>12</sub> (476.40). Yellow powder, mp 186°C,  $[\alpha]_D^{20} = -96.3^\circ$  ( $c = 0.1$ , MeOH). Pharm: Hepatoprotective (primary cultures of rat hepatocytes, H<sub>2</sub>O<sub>2</sub>-induced toxicity, 50 $\mu$ mol/L, relative protection = 44.5%, H<sub>2</sub>O<sub>2</sub>-treated, relative protection = 0.0%, control, relative protection = 100%), positive control Silibinin, Relative protection = 74.9%). Source: RI BEN GUI DENG QING *Rodgersia podophylla* (aerial parts). Ref: 4996.



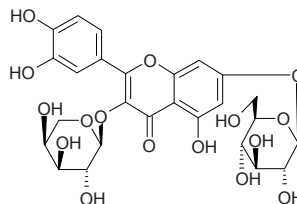
**18321 Quercetin-3-O-(6''-acetyl)- $\beta$ -D-galactopyranoside**

C<sub>23</sub>H<sub>24</sub>O<sub>13</sub> (508.44). Source: SAN XIAO CAO *Trifolium repens* (flower). Ref: 3970.



**18322 Quercetin-3-L-arabino-7-D-glucoside**

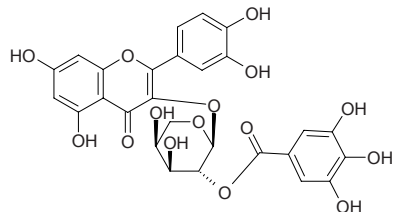
C<sub>26</sub>H<sub>28</sub>O<sub>16</sub> (596.50). Source: MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*]. Ref: 6.



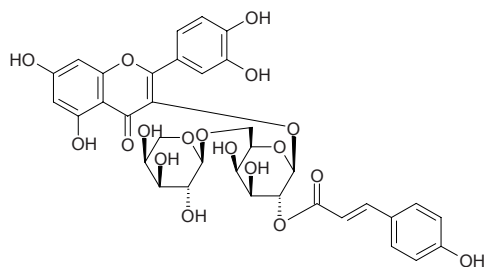


**18323 Quercetin-3-O- $\alpha$ -arabinopyranoside-2''-gallate**

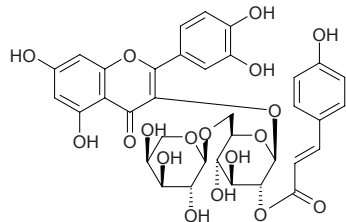
[128700-95-8] C<sub>27</sub>H<sub>22</sub>O<sub>15</sub> (586.47). Yellow prisms (MeOH-H<sub>2</sub>O), mp 192–193°C, [ $\alpha$ ]<sub>D</sub> = -125° (c = 0.33, MeOH). **Pharm:** antioxidant (rbt, peroxidation of erythrocytic membrane, IC<sub>50</sub> = 34  $\mu$ mol/L); xanthinoxidase inhibitor (IC<sub>50</sub> = 60  $\mu$ mol/L); SOD activity (activity = 90 units/mg). **Source:** CHANG HUI AN *Eucalyptus rostrata*, *Lasiobema japonica*. **Ref:** 1737, 4019, 4020.

**18324 Quercetin-3-O- $\alpha$ -L-arabinopyranosyl-(1→6)-[2''-O-(E)-p-coumaroyl]- $\beta$ -D-galactopyranoside**

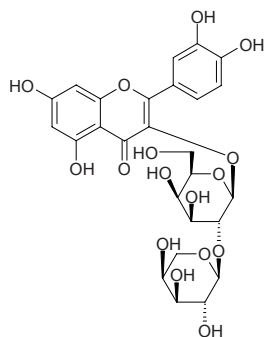
C<sub>35</sub>H<sub>34</sub>O<sub>18</sub> (742.65). Yellow solid, [ $\alpha$ ]<sub>D</sub><sup>17</sup> = -46° (c = 0.44, MeOH). **Source:** ZHAI YE YE WAN DOU *Vicia angustifolia*. **Ref:** 1917.

**18325 Quercetin-3-O- $\alpha$ -L-arabinopyranosyl-(1→6)-[2''-O-(E)-p-coumaroyl]- $\beta$ -D-glucopyranoside**

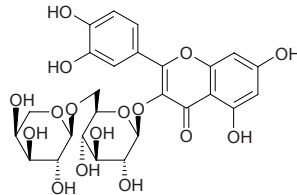
C<sub>35</sub>H<sub>34</sub>O<sub>18</sub> (742.65). Yellow solid, [ $\alpha$ ]<sub>D</sub><sup>17</sup> = -90° (c = 0.73, MeOH). **Source:** ZHAI YE YE WAN DOU *Vicia angustifolia*. **Ref:** 1917.

**18326 Quercetin-3-O- $\alpha$ -L-arabinopyranosyl-(1→2)- $\beta$ -D-galactopyranoside**

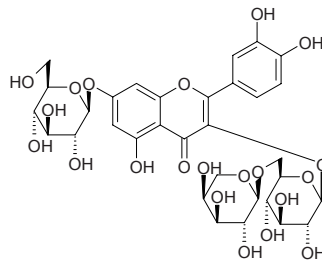
C<sub>26</sub>H<sub>28</sub>O<sub>16</sub> (596.50). Yellow amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -43° (c = 0.1, MeOH). **Source:** LV TI GEN CAO *Helleborus viridis* (leaf). **Ref:** 3875.



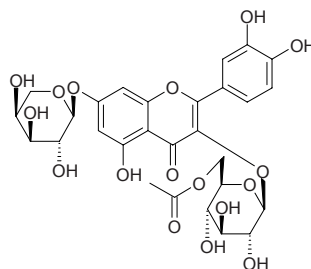
**18327 Quercetin-3-O- $\alpha$ -arabinopyranosyl(1'''→6'')- $\beta$ -glucopyranoside  $\beta$ -Vicianosyl-3-quercetin** C<sub>26</sub>H<sub>28</sub>O<sub>16</sub> (596.50). Yellow solid (MeOH), mp 200–202°C. **Source:** KU DI DING *Corydalis bungeana* (whole herb), XING CAI *Nymphoides peltatum*. **Ref:** 6, 3880.

**18328 Quercetin-3-O- $\alpha$ -arabinopyranosyl(1'''→6'')- $\beta$ -glucopyranoside 7-O- $\beta$ -glucopyranoside**

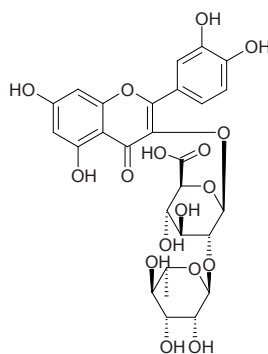
C<sub>32</sub>H<sub>38</sub>O<sub>21</sub> (758.65). Yellow solid (MeOH). **Source:** KU DI DING *Corydalis bungeana* (whole herb). **Ref:** 3880.

**18329 Quercetin-7-O- $\alpha$ -L-Arabinosyl-3-O- $\beta$ -D''-acetyl glucopyranoside**

C<sub>28</sub>H<sub>30</sub>O<sub>17</sub> (638.54). Yellow amorphous powder, mp 223–225°C, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = -26.19° (c = 0.420, DMSO). **Source:** HONG YA DA JI *Knoxia valerianoides*. **Ref:** 4841.

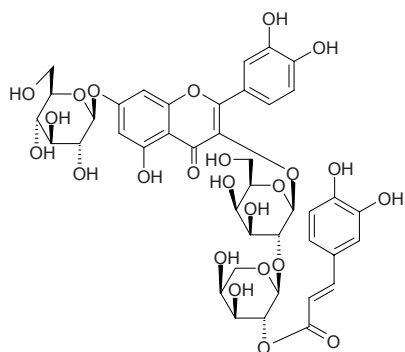
**18330 Quercetin-3-O-(2''-O-rhamnopyranosyl)- $\beta$ -glucuronopyranoside**

C<sub>27</sub>H<sub>28</sub>O<sub>17</sub> (624.51). **Pharm:** Antioxidant (DPPH scavenger, SC<sub>50</sub> = 5.0  $\mu$ mol/L, control Vitamin E, SC<sub>50</sub> = 5.2 mmol/L). **Source:** LAO YA SHI *Diospyros rhombifolia* (leaf). **Ref:** 4464.



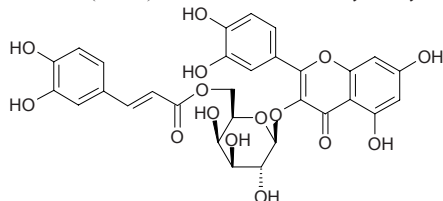
**18331 Quercetin-3-O-(2-E-caffeoyl)- $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranoside-7-O- $\beta$ -D-glucopyranoside**

C<sub>41</sub>H<sub>44</sub>O<sub>24</sub> (920.79). Yellow amorphous powder,  $[\alpha]_D^{25} = -42^\circ$  ( $c = 0.1$ , MeOH). Source: LV TI GEN CAO *Helleborus viridis* (leaf). Ref: 3875.



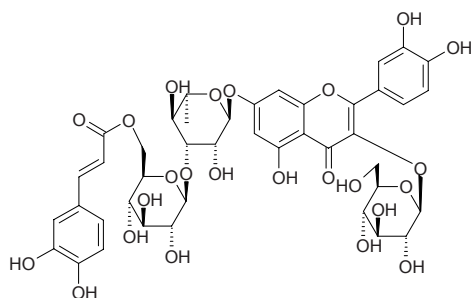
**18332 Quercetin-3-O- $\beta$ -D-(6''-caffeoyl galactoside)**

C<sub>30</sub>H<sub>26</sub>O<sub>15</sub> (626.53). Source: TIAN HU SUI *Hydrocotyle sibthorpioides*. Ref: 4036.



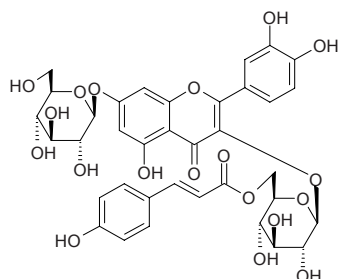
**18333 Quercetin-7-O-(6-trans-caffeoyl)- $\beta$ -glucopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -rhamnopyranoside-3-O- $\beta$ -glucopyranoside**

C<sub>42</sub>H<sub>46</sub>O<sub>23</sub> (934.82). Amorphous orange-yellow powder, mp 185~187°C,  $[\alpha]_D^{25} = -38.3^\circ$  ( $c = 0.1$ , MeOH). Source: *Aconitum napellus* ssp. *neomontanum* (flower). Ref: 5148.



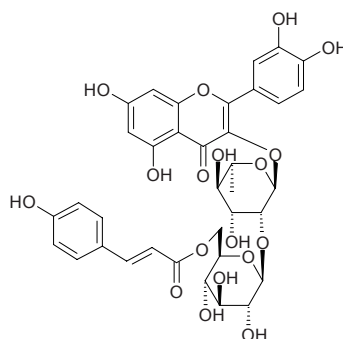
**18334 Quercetin-3-O- $\beta$ -(6''-E-p-coumaroyl)glucopyranoside)-7-O- $\beta$ -glucopyranoside**

C<sub>36</sub>H<sub>36</sub>O<sub>19</sub> (772.68). Faint yellow amorphous powder. Source: DUO YE BAI MAI GEN *Lotus polyphyllus*. Ref: 1973.



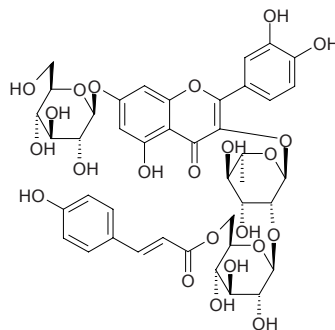
**18335 Quercetin-3-O- $\alpha$ -L-[6'''-p-coumaroyl-( $\beta$ -D)-glucopyranosyl-(1,2)-rhamnopyranoside]**

C<sub>36</sub>H<sub>36</sub>O<sub>18</sub> (756.68). Pharm: Antioxidant (DPPH scavenger, IC<sub>50</sub> = 14.0 $\mu$ g/mL, control Gallic acid, IC<sub>50</sub> = 3.6 $\mu$ g/mL; Cytochrome-C reduction, IC<sub>50</sub> = 13.2 $\mu$ g/mL, control Gallic acid, IC<sub>50</sub> = 3.0 $\mu$ g/mL). Source: BAI GUO YE *Ginkgo biloba*. Ref: 5239.



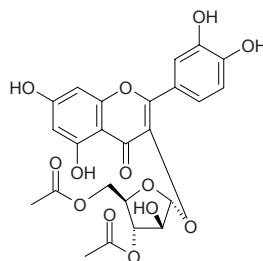
**18336 Quercetin-3-O- $\alpha$ -L-[6'''-p-coumaroyl-( $\beta$ -D)-glucopyranosyl-(1,2)-rhamnopyranoside]-7-O- $\beta$ -D-glucopyranoside**

C<sub>42</sub>H<sub>46</sub>O<sub>23</sub> (918.82). Pharm: Antioxidant (DPPH scavenger, IC<sub>50</sub> = 14.5 $\mu$ g/mL, control Gallic acid, IC<sub>50</sub> = 3.6 $\mu$ g/mL; Cytochrome-C reduction, IC<sub>50</sub> = 13.5 $\mu$ g/mL, control Gallic acid, IC<sub>50</sub> = 3.0 $\mu$ g/mL). Source: BAI GUO YE *Ginkgo biloba*. Ref: 5239.



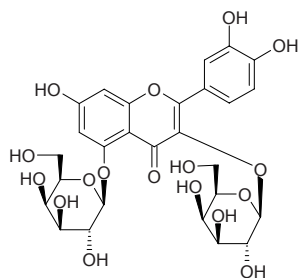
**18337 Quercetin-3-O- $\alpha$ -L-3'',5''-diacetyl-arabinofuranoside**

C<sub>24</sub>H<sub>22</sub>O<sub>13</sub> (518.44). Dark yellow powder,  $[\alpha]_D^{20} = -102.3^\circ$  ( $c = 0.17$ , MeOH). Source: RI BEN GUI DENG QING *Rodgersia podophylla* (aerial parts: yield = 0.00047%dw). Ref: 1179.

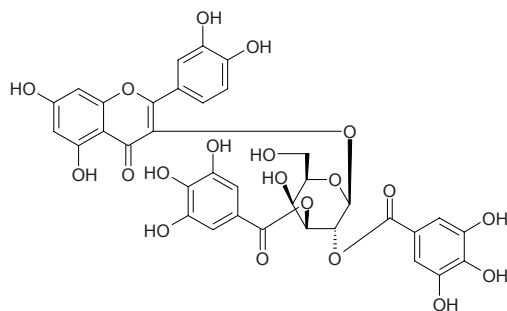


**18338 Quercetin-3,5-di-*D*-galactoside**

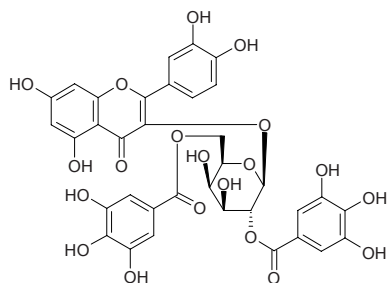
$C_{27}H_{30}O_{17}$  (626.53). mp 196~197°C, 219~220°C (solidifying), 270°C. Source: ZE QI *Euphorbia helioscopia*. Ref: 6.

**18339 Quercetin-3-*O*-(2'',3'''-digalloyl)- $\beta$ -*D*-galactopyranoside**

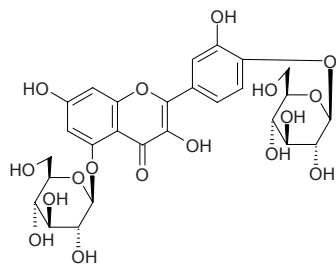
$C_{35}H_{28}O_{20}$  (768.60). Yellow amorphous powder,  $[\alpha]_D^{23} = -28.7^\circ$  ( $c = 0.30$ , MeOH). Pharm: Insulin-like activity (proliferation assay, dose-dependent, maximal at 30 $\mu$ g/mL). Source: MAO YAN CAO *Euphorbia lunulata* (whole herb). Ref: 4445.

**18340 Quercetin-3-*O*-(2'',6''-digalloyl)- $\beta$ -*D*-galactopyranoside**

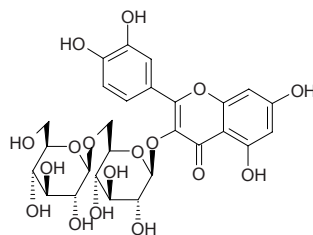
[200860-88-4]  $C_{35}H_{28}O_{20}$  (768.60). Yellow amorphous powder, mp 222~224°C (dec),  $[\alpha]_D^{21} = -45.9^\circ$  ( $c = 0.4$ , MeOH). Pharm: Anti-HIV (HIV-1 integrase inhibitor,  $IC_{50} = (24.2 \pm 6.6)\mu$ g/mL). Source: CHAO XIAN WU JIAO FENG *Acer okamotoanum*. Ref: 4025.

**18341 Quercetin-5,4'-di-*O*- $\beta$ -*D*-glucopyranoside**

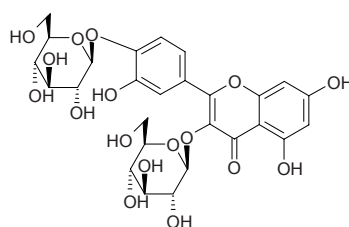
$C_{27}H_{30}O_{17}$  (626.53). Source: CAN JIAN *Bombyx mori*. Ref: 1983.

**18342 Quercetin-3-diglucoside**

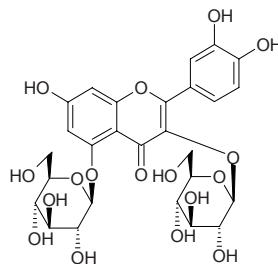
Meratin [27215-04-9]  $C_{27}H_{30}O_{17}$  (626.53). mp 182~184°C. Source: DUO SUI LIAO *Polygonum polystachyum*, FU SANG HUA *Hibiscus rosa-sinensis*, LA MEI HUA *Chimonanthus fragrans* [Syn. *Chimonanthus praecox*]. Ref: 6.

**18343 Quercetin-3,4'-diglucoside**

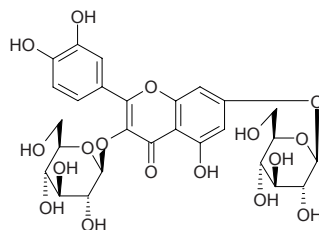
$C_{27}H_{30}O_{17}$  (626.53). Source: HU CONG *Allium ascalonicum*, YANG CONG *Allium cepa*. Ref: 6.

**18344 Quercetin-3,5-diglucoside**

$C_{27}H_{30}O_{17}$  (626.53). Source: NING MENG PI *Citrus limon*. Ref: 6, 660.

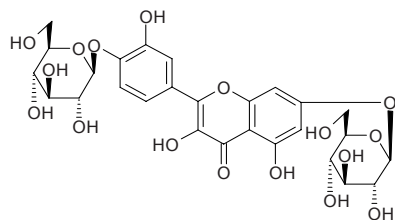
**18345 Quercetin-3,7-diglucoside**

Quercetin-3,7-di-*O*- $\beta$ -*D*-glucopyranoside  $C_{27}H_{30}O_{17}$  (626.53). mp 218~220°C. Pharm: Aldose reductase inhibitor (rat lens,  $IC_{50} = 84\mu$ mol/L, control Epalrestat,  $IC_{50} = 0.072\mu$ mol/L). Source: FU SANG HUA *Hibiscus rosa-sinensis*, YE JU HUA *Chrysanthemum indicum* (flower: yield = 0.0038%). Ref: 6, 4214.

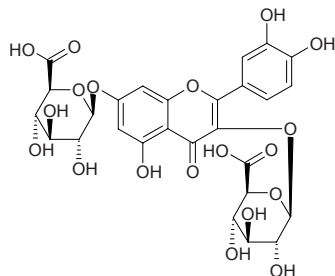


**18346 Quercetin-7,4'-diglucoside**

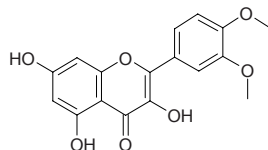
$C_{27}H_{30}O_{17}$  (626.53). Source: HU CONG *Allium ascalonicum*, YANG CONG *Allium cepa*. Ref: 6.

**18347 Quercetin-3,7-diglucuronide**

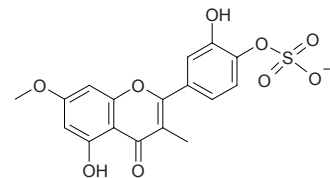
$C_{27}H_{26}O_{19}$  (654.50). Source: JIN JIN BANG *Potentilla reptans* var. *sericophylla*. Ref: 6.

**18348 Quercetin-3',4'-dimethyl ether**

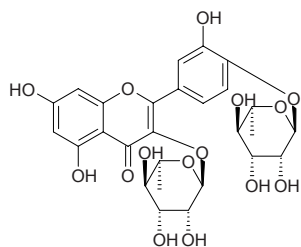
$C_{17}H_{14}O_7$  (330.30). Source: CHENG LIU *Tamarix chinensis* (dried tender branch-leaf: content = 0.115%<sup>[5508]</sup>), DUO ZHI CHENG LIU *Tamarix ramosissima* (dried tender branch-leaf: content = 0.064%<sup>[5508]</sup>). Ref: 115, 5508.

**18349 Quercetin-3-methyl-7-methyl ether-4'-sulfate**

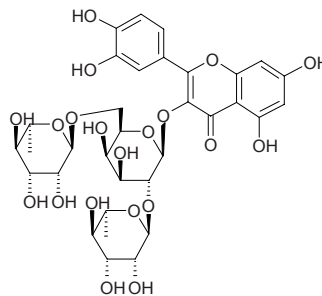
$C_{17}H_{13}O_9S$  (393.35). Source: RUI SHI QIAN NIU *Ipomoea regnellii*. Ref: 1891.

**18350 Quercetin-3,4'-di-O-α-L-rhamnopyranoside**

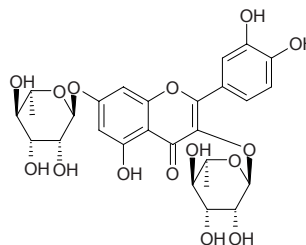
$C_{27}H_{30}O_{15}$  (594.53). Yellow amorphous powder. Source: SHUANG ZHONG ZI SHU LI *Rhamnus disperma*. Ref: 2380.

**18351 Quercetin-3-O-(2'',6''-α-L-dirhamnopyranosyl)-β-D-galactopyranoside**

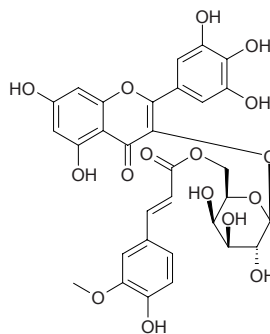
$C_{33}H_{40}O_{20}$  (756.67). Pharm: Aldose reductase inhibitor (*in vitro*, rat lens aldose reductase,  $IC_{50} > 30\mu\text{mol/L}$ ,  $30\mu\text{mol/L InRt} = 40\%$ ; control Epalrestat,  $IC_{50} = 0.072\mu\text{mol/L}$ ). Source: BAI MEI HUA *Prunus mume* (flower: yield = 0.010%fw). Ref: 4641.

**18352 Quercetin-3,7-α-L-dirhamnoside**

$C_{27}H_{30}O_{15}$  (594.53). mp 185~186°C. Source: NAN SHE TENG YE *Celastrus orbiculatus* [Syn. *Celastrus articulatus*]. Ref: 6.

**18353 Quercetin-3-O-(6''-feruloyl)-β-D-galactopyranoside**

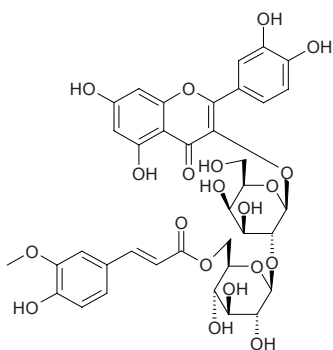
$C_{31}H_{28}O_{16}$  (656.56). Gum. Source: NIAN MAO LIAO *Polygonum viscosum* (whole herbs). Ref: 3955.



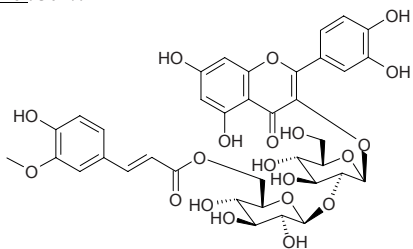
**18354 Quercetin-3-O-[(6-O-feruloyl)-β-D-glucopyranosyl-(1→2)-β-D-galactopyranoside]**

$C_{37}H_{38}O_{20}$  (802.70). Dark yellow amorphous powder, mp 207–210°C,  $[\alpha]_D^{25} = -0.058^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Anti-HIV-1 (RT (RDDP) inhibitor,  $IC_{50} = 20\mu\text{mol/L}$ , positive control Adriamycin,  $IC_{50} = 27\mu\text{mol/L}$ ; DDDP inhibitor,  $IC_{50} = 42\mu\text{mol/L}$ , positive control Adriamycin,  $IC_{50} = 6\mu\text{mol/L}$ ; HIV-1 IN inhibitor,  $IC_{50} = 5\mu\text{mol/L}$ , positive control Suramin,  $IC_{50} = 2.4\mu\text{mol/L}$ )<sup>[4187]</sup>; Neuroprotective (primary cultures of rat cortical cells, induced by *L*-glutamate, 0.1 $\mu\text{mol/L}$ , cell viability = (62.7±1.1)%,  $p < 0.001$ , 1.0 $\mu\text{mol/L}$ , cell viability = (72.9±3.3)%,  $p < 0.001$ , 10 $\mu\text{mol/L}$ , cell viability = (75.0±0.2)%,  $p < 0.001$ )<sup>[3027]</sup>.

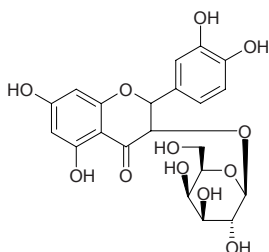
**Source:** HUANG HUA JIA ZHU TAO *Thevetia neriifolia* [Syn. *Thevetia peruviana*] (leaf), BAI HUA SHE SHE CAO *Oldenlandia diffusa* [Syn. *Hedyotis diffusa*] (whole herb: yield = 0.00036%). **Ref:** 4187, 3027.

**18355 Quercetin-3-O-[2-O-(6-O-E-feruloyl)-β-D-glucopyranosyl]-β-D-glucopyranoside**

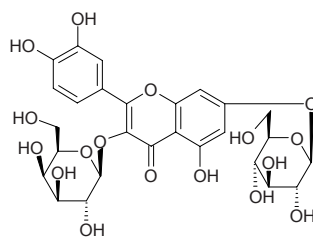
$C_{37}H_{38}O_{20}$  (802.7). **Pharm:** Neuroprotective (primary cultures of rat cortical cells, induced by *L*-glutamate, 0.1 $\mu\text{mol/L}$ , cell viability = (62.6±2.9)%,  $p < 0.001$ , 1.0 $\mu\text{mol/L}$ , cell viability = (71.5±1.6)%,  $p < 0.001$ , 10 $\mu\text{mol/L}$ , cell viability = (73.7±2.7)%,  $p < 0.001$ ). **Source:** BAI HUA SHE SHE CAO *Oldenlandia diffusa* [Syn. *Hedyotis diffusa*] (whole herb: yield = 0.00039%). **Ref:** 3027.

**18356 Quercetin-3-O-β-D-galactopyranoside**

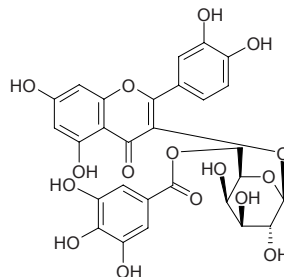
$C_{21}H_{22}O_{12}$  (466.40). **Source:** SAN XIAO CAO *Trifolium repens* (flower). **Ref:** 3970.

**18357 Quercetin-3-O-β-D-galactoside-7-O-β-D-glucoside**

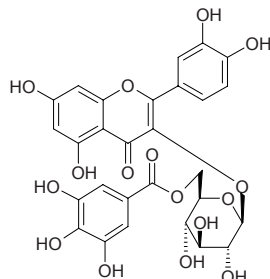
$C_{27}H_{30}O_{17}$  (626.53). **Source:** TU SI ZI *Cuscuta chinensis*. **Ref:** 4031.

**18358 Quercetin-3-O-(6''-galloyl)-galactoside**

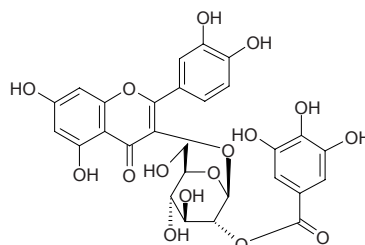
$C_{28}H_{24}O_{16}$  (616.49). **Pharm:** ACE inhibitor ( $IC_{50} = 160\mu\text{mol/L}$ , control Lisinopril,  $IC_{50} = 1\text{nmol/L}$ ); NEP inhibitor ( $IC_{50} = 120\mu\text{mol/L}$ , control Phosphoramidon,  $IC_{50} = 9\text{nmol/L}$ ); APN inhibitor inactive. **Source:** HONG KUAI ZI *Chamaenerion angustifolium* [Syn. *Epilobium angustifolium*]. **Ref:** 5034.

**18359 Quercetin-3-O-(6''-galloyl)-β-D-glucopyranoside**

$C_{28}H_{24}O_{16}$  (616.49).  $[\alpha]_D^{25} = -20.8^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Antifungal (*Candida albicans* ATCC2091, MIC > 200 $\mu\text{g/mL}$ , control Amphotericin B, MIC = 1 $\mu\text{g/mL}$ ; *Candida albicans* 32, MIC > 200 $\mu\text{g/mL}$ , Amphotericin B, MIC = 4 $\mu\text{g/mL}$ ; *Candida albicans* 19, MIC = 200 $\mu\text{g/mL}$ , Amphotericin B, MIC = 2 $\mu\text{g/mL}$ ); cytotoxic inactive (MIC > 200 $\mu\text{g/mL}$ ); antibacterial inactive. **Source:** *Baseonema acuminatum* (leaf). **Ref:** 5021.

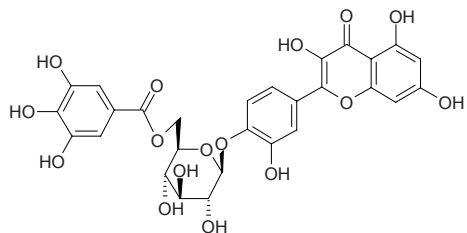
**18360 Quercetin-3-O-(2''-O-galloyl)-β-D-glucoside**

Quercetin-3-β-D-glucoside-2''-gallate  $C_{28}H_{24}O_{16}$  (616.49). **Source:** BAN DI JIN *Euphorbia maculata*, JIE LIAO *Polygonum nodosum*, YU LIAO *Polygonum lapathifolium*. **Ref:** 4032, 4033, 4034.

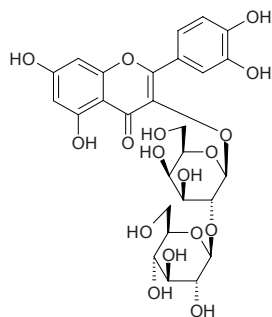


**18361 Quercetin-4'-*O*- $\beta$ -D-glucopyranoside-6''-gallate**

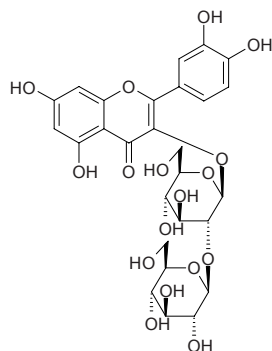
[149998-41-4] C<sub>28</sub>H<sub>24</sub>O<sub>16</sub> (616.49). Yellow powder. **Pharm:** Xanthinoxidase inhibitor (IC<sub>50</sub> = 1.3 $\mu$ mol/L); SOD activity (activity = 450units/mg). **Source:** CHANG HUI AN *Eucalyptus rostrata*. **Ref:** 1737, 4020, 4021, 4022.

**18362 Quercetin-3-*O*-[ $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranoside]**

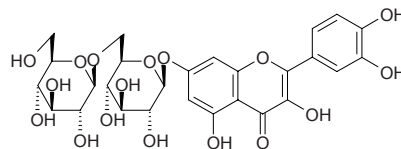
C<sub>27</sub>H<sub>30</sub>O<sub>17</sub> (626.53). **Pharm:** Neuroprotective (primary cultures of rat cortical cells, induced by *L*-glutamate, 0.1 $\mu$ mol/L, cell viability = (48.4 $\pm$ 0.7)%,  $p < 0.01$ , 1.0 $\mu$ mol/L, cell viability = (66.0 $\pm$ 1.6)%,  $p < 0.001$ , 10 $\mu$ mol/L, cell viability = (54.0 $\pm$ 2.9)%,  $p < 0.001$ )<sup>[3027]</sup>; anti-HIV-1 (RT (RDDP) inhibitor, IC<sub>50</sub> > 100 $\mu$ mol/L, positive control Adriamycin, IC<sub>50</sub> = 27 $\mu$ mol/L; DDDP inhibitor, IC<sub>50</sub> > 100 $\mu$ mol/L, positive control Adriamycin, IC<sub>50</sub> = 6 $\mu$ mol/L; HIV-1 IN inhibitor, IC<sub>50</sub> > 100 $\mu$ mol/L, positive control Suramin, IC<sub>50</sub> = 2.4 $\mu$ mol/L)<sup>[4187]</sup>. **Source:** BAI HUA SHE SHE CAO *Oldenlandia diffusa* [Syn. *Hedyotis diffusa*] (whole herb: yield = 0.00039%)<sup>[3027]</sup>, HUANG HUA JIA ZHU TAO *Thevetia nerifolia* [Syn. *Thevetia peruviana*] (leaf). **Ref:** 3027, 4187.

**18363 Quercetin-3-*O*-[ $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside]**

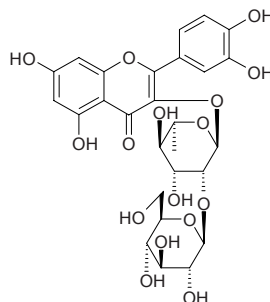
C<sub>27</sub>H<sub>30</sub>O<sub>17</sub> (626.53). **Pharm:** Anti-HIV-1 (RT (RDDP) inhibitor, IC<sub>50</sub> = 41 $\mu$ mol/L, positive control Adriamycin, IC<sub>50</sub> = 27 $\mu$ mol/L; DDDP inhibitor, IC<sub>50</sub> > 100 $\mu$ mol/L, positive control Adriamycin, IC<sub>50</sub> = 6 $\mu$ mol/L; HIV-1 IN inhibitor, IC<sub>50</sub> = 45 $\mu$ mol/L, positive control Suramin, IC<sub>50</sub> = 2.4 $\mu$ mol/L)<sup>[4187]</sup>. **Source:** HUANG HUA JIA ZHU TAO *Thevetia nerifolia* [Syn. *Thevetia peruviana*] (leaf)<sup>[4187]</sup>, LUO BU MA *Apocynum venetum* (dried leaf: content scope of 6 origins = 0.0%-0.569%, mean content = 0.230%)<sup>[5529]</sup>. **Ref:** 4187, 5529.

**18364 Quercetin-7-*O*- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside**

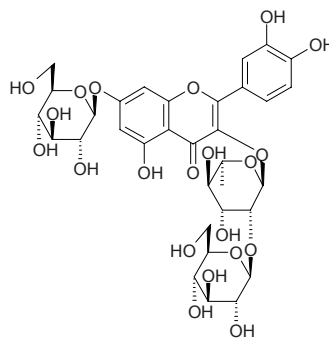
C<sub>27</sub>H<sub>30</sub>O<sub>17</sub> (626.53). Yellow powder, mp 220°C (dec). **Source:** BO NIANG HAO *Descurainia Sophia*. **Ref:** 2514, 2521.

**18365 Quercetin-3-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -L-rhamnopyranoside**

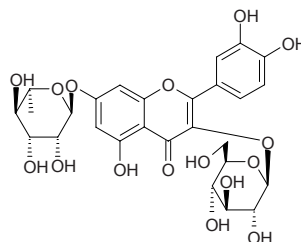
C<sub>27</sub>H<sub>30</sub>O<sub>16</sub> (610.53). **Pharm:** Antioxidant (DPPH scavenger, IC<sub>50</sub> = 16.1 $\mu$ g/mL, control Gallic acid, IC<sub>50</sub> = 3.6 $\mu$ g/mL; Cytochrome-C reduction, IC<sub>50</sub> = 14.8 $\mu$ g/mL, control Gallic acid, IC<sub>50</sub> = 3.0 $\mu$ g/mL). **Source:** BAI GUO YE *Ginkgo biloba*. **Ref:** 5239.

**18366 Quercetin-3-*O*- $\alpha$ -L-(2-*O*- $\beta$ -D-glucopyranosyl)rhamnopyranoside-7-*O*- $\beta$ -D-glucopyranoside**

C<sub>33</sub>H<sub>40</sub>O<sub>21</sub> (772.67). **Source:** SHUANG HUA FAN HONG HUA *Crocus chrysanthus-biflorus*. **Ref:** 2343.

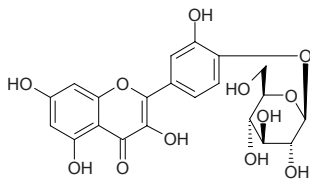
**18367 Quercetin-3- $\beta$ -D-glucopyranosyl-7- $\alpha$ -L-rhamnoside**

C<sub>27</sub>H<sub>30</sub>O<sub>16</sub> (610.53). mp 186~188°C. **Source:** TIAO JING CAO *Euonymus japonicus*, NAN SHE TENG YE *Celastrus orbiculatus* [Syn. *Celastrus articulatus*]. **Ref:** 6.

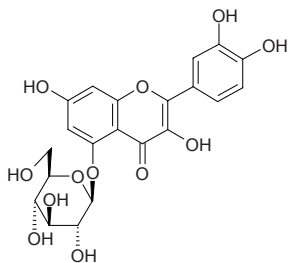


**18368 Quercetin-4'-glucoside**

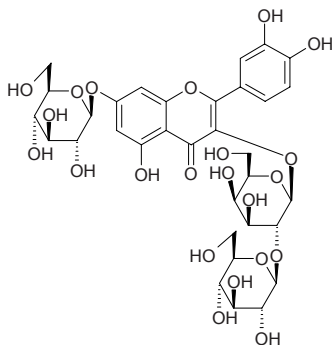
Spiraeoside [20229-56-5]  $C_{21}H_{20}O_{12}$  (464.39). mp 209~211°C. **Pharm:** Aldose reductase inhibitor (rat, eye lens, 10 $\mu$ mol/L InRt = 51.2%, 1 $\mu$ mol/L InRt = 8.9%); antioxidant (rbt, peroxidization of erythrocytic membrane, IC<sub>50</sub> = 162 $\mu$ mol/L); xanthinoxidase inhibitor (IC<sub>50</sub> = 1.3 $\mu$ mol/L, 2.5 $\mu$ mol/L); cAMP phosphodiesterase inhibitor (IC<sub>50</sub> = 100 $\mu$ mol/L); hyaluronidase inhibitor. **Source:** HU CONG *Allium ascalonicum*, MU FU RONG HUA *Hibiscus mutabilis*. **Ref:** 6, 1631, 1652, 1653, 1699, 1737.

**18369 Quercetin-5-O-β-D-glucoside**

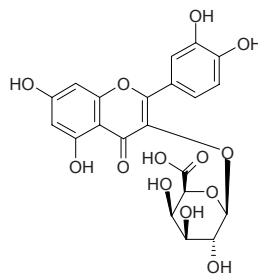
Saxifragin [34199-21-8]  $C_{21}H_{20}O_{12}$  (464.39). Yellow needles (MeOH-pyridine), mp 244~246°C, 264°C (dec),  $[\alpha]_D^{27} = -105^\circ$  ( $c = 0.575$ , pyridine). **Source:** HU ER CAO *Saxifraga stolonifera*, LU CAO *Rhaponticum carthamoides*. **Ref:** 1521, 4007, 4028.

**18370 Quercetin-3-O-β-D-glucosyl(1→2)-β-D-galactoside 7-O-β-D-glucoside**

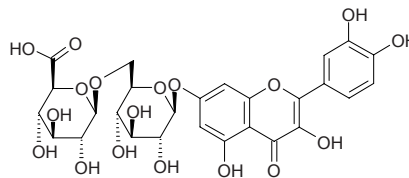
$C_{33}H_{40}O_{22}$  (788.67). Amorphous powder, mp 199~202°C,  $[\alpha]_D^{26} = -37^\circ$  ( $c = 0.09$ , H<sub>2</sub>O). **Source:** HU LU BA *Trigonella foenum-graecum* (stem). **Ref:** 5197.

**18371 Quercetin-3-O-glucuronide**

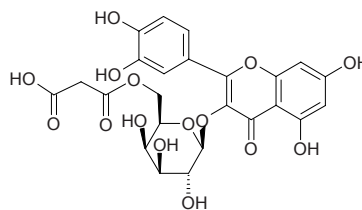
$C_{21}H_{18}O_{13}$  (478.37). **Pharm:** ACE inhibitor (IC<sub>50</sub> = 200 $\mu$ mol/L, control Lisinopril, IC<sub>50</sub> = 1nmol/L); NEP inhibitor (IC<sub>50</sub> = 250 $\mu$ mol/L, control Phosphoramidon, IC<sub>50</sub> = 9nmol/L); APN inhibitor inactive. **Source:** HONG KUAI ZI *Chamaenerion angustifolium* [Syn. *Epilobium angustifolium*]. **Ref:** 5034.

**18372 Quercetin-7-O-glucuronoglucoside**

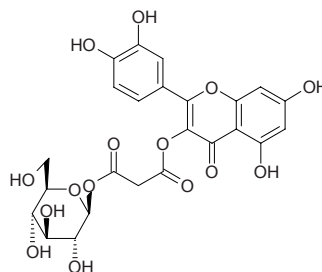
$C_{27}H_{28}O_{18}$  (640.51). **Source:** DA HUA XUAN FU HUA CAO *Imula britannica*. **Ref:** 4030.

**18373 Quercetin-3-O-(6''-malonyl)-D-galactoside**

$C_{24}H_{22}O_{15}$  (550.43). **Source:** ZHU ZONG CAO *Adiantum capillus-veneris*. **Ref:** 4029.

**18374 Quercetin-3-O-malonyl-β-D-glucoside**

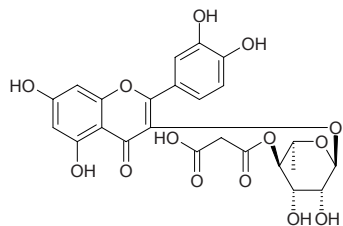
$C_{24}H_{22}O_{15}$  (550.43). **Source:** WO JU *Lactuca sativa*. **Ref:** 6.



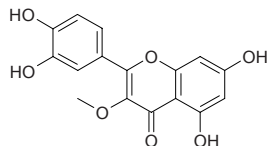


**18375 Quercetin-3-O-(4''-O-malonyl)- $\alpha$ -L-rhamnopyranoside**

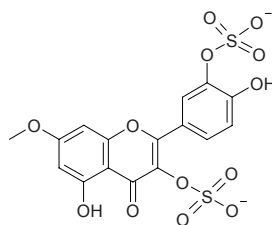
$C_{24}H_{22}O_{14}$  (534.43). Source: GAO SHAN CHA BIAO *Ribes alpinum* (leaf). Ref: 3541.

**18376 Quercetin-3-methyl ether**

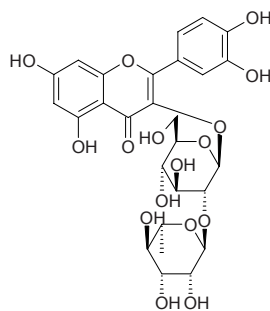
3-O-Methylquercetin; 3-MQ [1486-70-0]  $C_{16}H_{12}O_7$  (316.27). Green crystals, mp 267~277°C; 259°C. Pharm: Antiarrhythmic; antibacterial; antiviral (*in vitro*, 0.01  $\mu$ g/mL epidemic poliomyelitis virus I and Gesak virus B<sub>4</sub>, InRt = 90%); platelet aggregation inhibitor (due to collagen and arachidonic acid); cyclo-oxygenase inhibitor; PDE isozymes selective inhibitor (PDE subtypes 1, 5, 2, 4 from guinea pig lungs and PDE subtype 3 from guinea pig hearts, PDE Subtype 5, IC<sub>50</sub> = 86.9  $\mu$ mol/L; PDE Subtype 1, IC<sub>50</sub> = 31.9  $\mu$ mol/L; PDE Subtype 4, IC<sub>50</sub> = 28.5  $\mu$ mol/L; PDE Subtype 2, IC<sub>50</sub> = 18.6  $\mu$ mol/L; PDE Subtype 3, IC<sub>50</sub> = 1.6  $\mu$ mol/L; may has a potential in the treatment of asthma)<sup>[5383]</sup>; TNF- $\alpha$  production inhibitor (murine macrophages, LPS-stimulated)<sup>[4416]</sup>; total cAMP- and cGMP-phosphodiesterase (PDE) inhibitor (guinea pig trachea, at low concentrations)<sup>[4085]</sup>; PDE3 more selective inhibitor (than PDE4)<sup>[4085]</sup>; suppressive effects on ovalbumin (OVA)-induced airway hyperresponsiveness (*in vivo* and *in vitro*): (1)3-MQ (3~30  $\mu$ mol/kg, ip) significantly suppressed the enhanced pause (Penh) value induced by aerosolized methacholine (50mg/mL) in sensitized mouse after secondary allergen challenge; (2)3-MQ (3~30  $\mu$ mol/kg, ip) significantly suppressed total inflammatory cells, macrophages, neutrophils, and eosinophils, but not lymphocytes; (3)3-MQ (3  $\mu$ mol/kg, ip) significantly decreased the secretion of TNF- $\alpha$ , and at the highest dose (30  $\mu$ mol/kg, ip) even decreased the secretions of IL-4, IL-5, and TNF- $\alpha$ ; (4)3-MQ (1~10  $\mu$ mol/L) as well as Ro20-1724 (3~30  $\mu$ mol/L), a selective PDE4 inhibitor, significantly attenuated OVA (100  $\mu$ g/mL)-induced contractions; (5)3-MQ (30  $\mu$ mol/L) as well as milrinone (1~10  $\mu$ mol/L), a selective PDE3 inhibitor, significantly enhanced baseline contractions in isolated guinea pig left and right atria; (6)neither 3-MQ nor milrinone significantly affected baseline beating rate in the right atria; (7)3-MQ (3~30  $\mu$ mol/kg, ip) did not significantly affect systolic pressure in conscious mouse; (8)In conclusion, 3-MQ has both anti-inflammatory and bronchodilating effects, and has the potential for use in the treatment of asthma at a dose without affecting blood pressure)<sup>[4085]</sup>; DPPH scavenger (SC<sub>50</sub> = 6.0  $\mu$ mol/L)<sup>[4247]</sup>; antioxidant (superoxide anion radical scavenger, superoxide dismutase method, IC<sub>50</sub> for Formazane formation activity = 11  $\mu$ mol/L)<sup>[4247]</sup>. Source: E BU SHI CAO *Centipeda minima*, HUANG HUA HAO *Artemisia annua*, JI YING SU *Argemone mexicana*, TAI ZHONG SHU LI *Rhamnus nakaharai*, TAI ZHONG SHU LI *Rhamnus nakaharai*, XIAN REN ZHANG *Opuntia dillenii*. Ref: 2, 6, 658, 660, 900, 1320, 4085, 4247, 4416, 5383.

**18377 Quercetin-7-methyl ether-3,3'-disulfate**

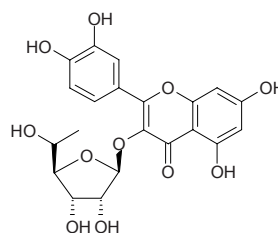
$C_{16}H_{10}O_{13}S_2$  (474.38). Source: RUAN YIN BEI TENG *Argyrea mollis*. Ref: 1891.

**18378 Quercetin-3-O-neohesperidoside**

Quercetin-3-O-(2''-O- $\alpha$ -rhamnopyranosyl)- $\beta$ -glucopyranoside [32453-36-4]  $C_{27}H_{30}O_{16}$  (610.53). Yellow crystals, mp 187~189°C. Pharm: Antithrombotic (promotes endothelial cells to produce protein, increases activity of TPA, against fibrin to damage endothelial cells); antioxidant (DPPH scavenger, SC<sub>50</sub> = 3.6  $\mu$ mol/L, positive control Vitamin E, SC<sub>50</sub> = 5.2  $\mu$ mol/L)<sup>[4464]</sup>; aldose reductase inhibitor (*in vitro*, rat lens aldose reductase, IC<sub>50</sub> = 18  $\mu$ mol/L; control Epalrestat, IC<sub>50</sub> = 0.072  $\mu$ mol/L)<sup>[4641]</sup>. Source: BAI MEI HUA *Prunus mume* (flower: yield = 0.0023%fw)<sup>[4641]</sup>, FAN SHI LIU YE *Psidium guajava*, HOU PI SHU *Lannea grandis* [Syn. *Lannea coromandelica*], JIN ZHAN JU *Calendula officinalis*, JIN ZHAN JU *Calendula officinalis* (flower), LAO YA SHI *Diospyros rhombifolia* (leaf), PU HUANG *Typha angustata*, XIA YE XIANG PU *Typha angustifolia*. Ref: 2, 55, 3551, 4003, 4004, 4005, 4464, 4641.

**18379 Quercetin-3- $\alpha$ -L-rhamnofuranoside**

$C_{21}H_{20}O_{11}$  (448.39). Source: GUI JIAN JIN JI ER *Caragana jubata*. Ref: 6.

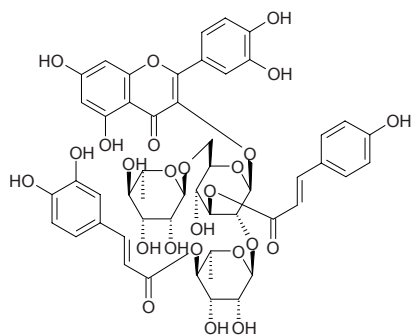




**18380 Quercetin-3-*O*- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 6)-[(4-*O*-*trans*-caffeoyl)- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)]-(3-*O*-*trans*-*p*-coumaroyl)- $\beta$ -D-galactopyranoside**

C<sub>51</sub>H<sub>52</sub>O<sub>25</sub> (1064.97). Yellow powder,  $[\alpha]_D^{28} = -117^\circ$  ( $c = 0.5$ , MeOH).

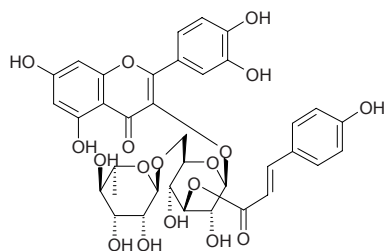
Source: JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (dried leaf, flower and twig; yield = 0.0028%dw). Ref: 3014.



**18381 Quercetin-3-*O*- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 6)-(3-*O*-*trans*-*p*-coumaroyl)- $\beta$ -D-galactopyranoside**

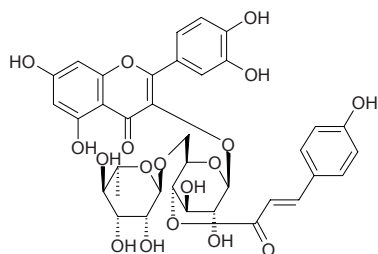
C<sub>36</sub>H<sub>36</sub>O<sub>18</sub> (756.68). Yellow powder,  $[\alpha]_D^{22} = -86^\circ$  ( $c = 0.6$ , MeOH). Source:

JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (dried leaf, flower and twig; yield = 0.00059%dw). Ref: 3014.



**18382 Quercetin-3-*O*- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 6)-(4-*O*-*trans*-*p*-coumaroyl)- $\beta$ -D-galactopyranoside**

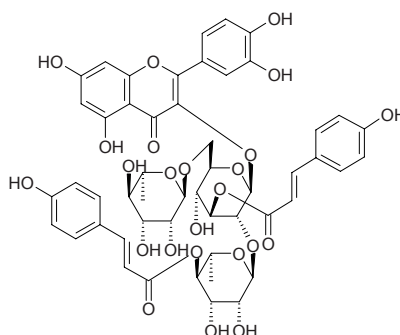
C<sub>36</sub>H<sub>36</sub>O<sub>18</sub> (756.68). Source: JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (dried leaf, flower and twig; yield = 0.014%dw). Ref: 3014.



**18383 Quercetin-3-*O*- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 6)-[(4-*O*-*trans*-*p*-coumaroyl)- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)]-(3-*O*-*trans*-*p*-coumaroyl)- $\beta$ -D-galactopyranoside**

C<sub>51</sub>H<sub>52</sub>O<sub>24</sub> (1048.97). Yellow powder,  $[\alpha]_D^{29} = -114^\circ$  ( $c = 1.0$ , MeOH).

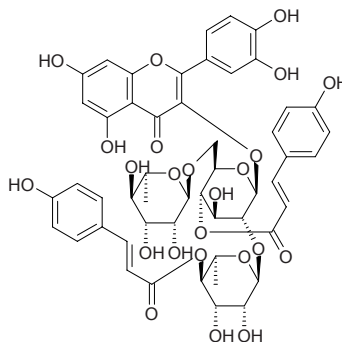
Source: JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (dried leaf, flower and twig; yield = 0.0016%dw). Ref: 3014.



**18384 Quercetin-3-*O*- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 6)-[(4-*O*-*trans*-*p*-coumaroyl)- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)]-(4-*O*-*trans*-*p*-coumaroyl)- $\beta$ -D-galactopyranoside**

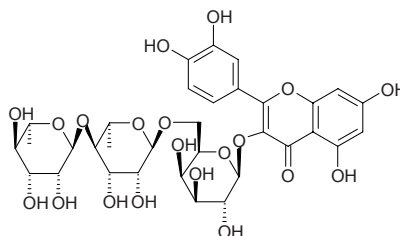
C<sub>51</sub>H<sub>52</sub>O<sub>24</sub> (1048.97). Yellow powder,  $[\alpha]_D^{25} = -300^\circ$  ( $c = 0.5$ , MeOH).

Source: JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (dried leaf, flower and twig; yield = 0.0077%dw). Ref: 3014.



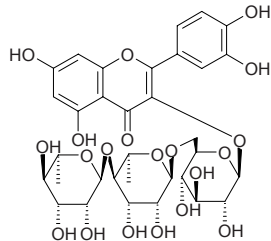
**18385 Quercetin-3-*O*-[ $\alpha$ -rhamnopyranosyl(1 $\rightarrow$ 4)-rhamnopyranosyl(1 $\rightarrow$ 6)]- $\beta$ -galactopyranoside**

C<sub>33</sub>H<sub>40</sub>O<sub>20</sub> (756.67). Source: MI HOU LI GEN *Actinidia arguta*, MU TIAN LIAO *Actinidia polygama*. Ref: 4040.



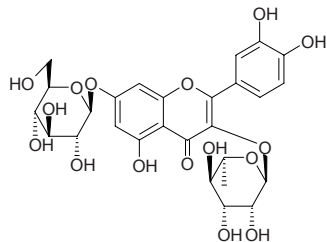
**18386 Quercetin-3-*O*-[ $\alpha$ -rhamnopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -rhamnopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -glucopyranoside]**

$C_{33}H_{40}O_{20}$  (756.67). Source: HUA LING CAO *Eschscholzia californica*. Ref: 1898.



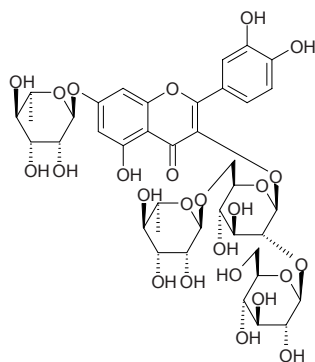
**18387 Quercetin-3-rhamnoside-7-glucoside**

$C_{27}H_{30}O_{16}$  (610.53). Source: MIAN TENG *Celastrus hypoleucus*. Ref: 6.



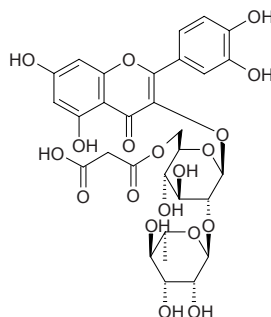
**18388 Quercetin-3-*O*-[ $\alpha$ -rhamnosyl (1 $\rightarrow$ 6)] [ $\beta$ -glucosyl (1 $\rightarrow$ 2)]- $\beta$ -glucoside-7-*O*- $\alpha$ -rhamnoside**

$C_{39}H_{50}O_{25}$  (918.82). Yellow powder. Source: *Warburgia ugandensis* (leaf). Ref: 3470.



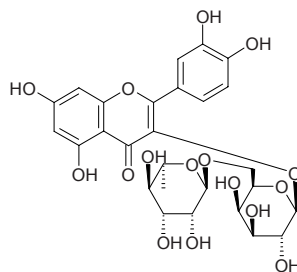
**18389 Quercetin-3-*O*-(2''-*O*- $\alpha$ -rhamnosyl-6''-*O*-malonyl)- $\beta$ -glucoside**

$C_{30}H_{32}O_{19}$  (696.58). Dark~yellow amorphous powder. Source: HU DIE HUA DOU *Clitoria ternatea*. Ref: 2064.



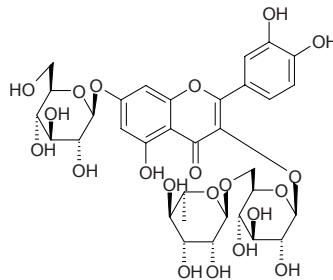
**18390 Quercetin-3-robinobioside**

Quercetin-3-*O*- $\alpha$ -*L*-rhamnopyranosyl(1 $\rightarrow$ 6)- $\beta$ -*D*-galactopyranoside  $C_{27}H_{30}O_{16}$  (610.53). Source: DENG LONG CAO *Physalis peruviana*, HUANG SHU KUI HUA *Abelmoschus manihot*, BAI MEI HUA *Prunus mume* (flower: yield = 0.0016%fw)<sup>[4641]</sup>, JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (dried leaf, flower and twig: yield = 0.0062%dw)<sup>[3014]</sup>. Ref: 3014, 4012, 4013, 4641.



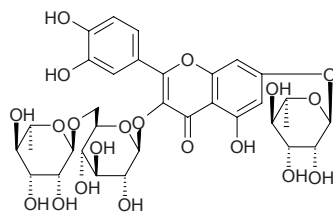
**18391 Quercetin-3-rutinoside-7-glucoside**

Quercetin-3-*O*-(6''-*O*- $\alpha$ -*L*-rhamnopyranosyl)- $\beta$ -*D*-glucopyranoside-7-*O*- $\beta$ -*D*-glucopyranoside  $C_{33}H_{40}O_{21}$  (772.67). Source: CAO WEN JING *Equisetum pratense*, DENG LONG CAO *Physalis peruviana*, GU JIE CAO *Equisetum palustre*, LV DOU *Onobrychis viciifolia* (leaf). Ref: 4042, 4043, 5084.



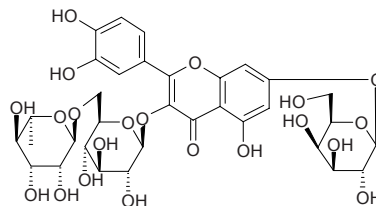
**18392 Quercetin-3-rutinoside-7-rhamnoside**

$C_{33}H_{40}O_{20}$  (756.67). Source: LIN WEN JING *Equisetum sylvaticum*. Ref: 4042.



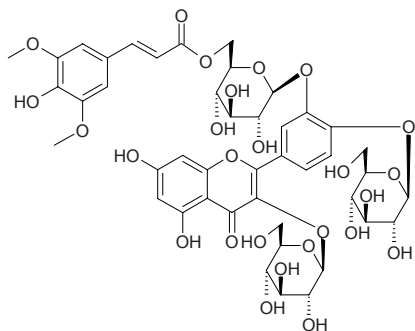
**18393 Quercetin-3-rutinosyl-7-galactoside**

$C_{33}H_{40}O_{21}$  (772.67). Source: HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*]. Ref: 2.



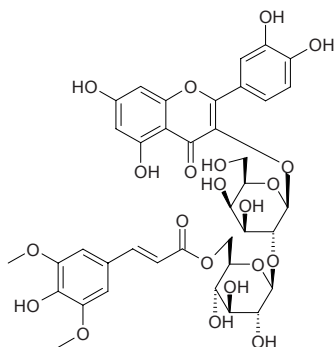
**18394 Quercetin-3'-(6-sinapoyl-O-β-D-glucopyranosyl)-3,4'-di-O-β-D-glucopyranoside**

C<sub>44</sub>H<sub>50</sub>O<sub>26</sub> (994.87). Source: ZHI MA CAI *Eruca sativa* (leaf). Ref: 5149.



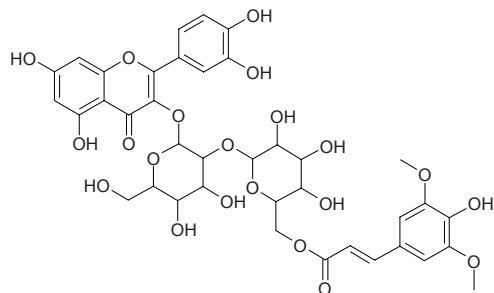
**18395 Quercetin-3-O-[(6-O-sinapoyl)-β-D-glucopyranosyl-(1→2)-β-D-galactopyranoside]**

C<sub>38</sub>H<sub>40</sub>O<sub>21</sub> (832.73). Pharm: Anti-HIV-1 (RT (RDDP) inhibitor, IC<sub>50</sub> = 33 μmol/L, positive control Adriamycin, IC<sub>50</sub> = 27 μmol/L; DDDP inhibitor, IC<sub>50</sub> = 69 μmol/L, positive control Adriamycin, IC<sub>50</sub> = 6 μmol/L; HIV-1 IN inhibitor, IC<sub>50</sub> = 7 μmol/L, positive control Suramin, IC<sub>50</sub> = 2.4 μmol/L). Source: HUANG HUA JIA ZHU TAO *Thevetia neriiifolia* [Syn. *Thevetia peruviana*] (leaf). Ref: 4187.



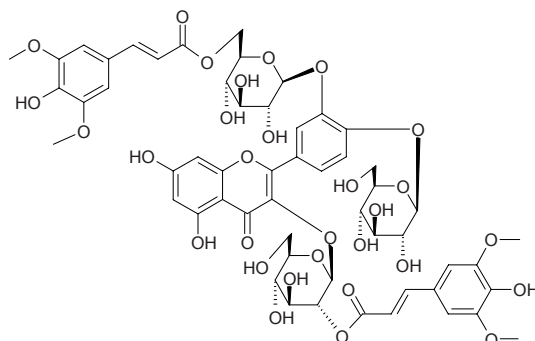
**18396 Quercetin-3-O-[2-O-(6-O-E-sinapoyl)-β-D-glucopyranosyl]-β-D-glucopyranoside**

C<sub>38</sub>H<sub>40</sub>O<sub>21</sub> (832.73). Yellowish powder, mp 208–210°C. Source: BAI HUA SHE SHE CAO *Oldenlandia diffusa* [Syn. *Hedyotis diffusa*]. Ref: 4882.



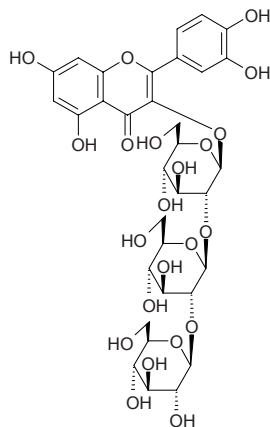
**18397 Quercetin-3-(2-sinapoyl-O-β-D-glucopyranosyl)-3'-(6-sinapoyl-O-β-D-glucopyranosyl)-4'-O-β-D-glucopyranoside**

C<sub>55</sub>H<sub>60</sub>O<sub>30</sub> (1201.07). Source: ZHI MA CAI *Eruca sativa* (leaf). Ref: 5149.



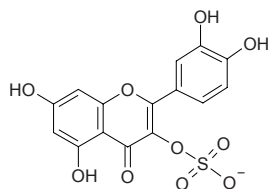
**18398 Quercetin-3-sophorotrioside**

C<sub>33</sub>H<sub>40</sub>O<sub>22</sub> (788.67). Pharm: Hepatoprotective (*in vitro*, mus primary cultured hepatocytes, inhibits liver cytotoxicity induced by GaIN, 100 μmol/L, InRt = (14.5±4.2)%, *p*<0.01); hepatoprotective (mus, *in vivo*, inhibits liver damage induced by GaIN, LPS or CCl<sub>4</sub>). Source: WAN DOU *Pisum sativum* (young seedpot). Ref: 4110.



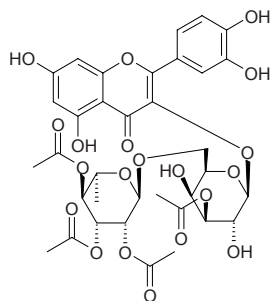
**18399 Quercetin-3-sulphate**

C<sub>15</sub>H<sub>9</sub>O<sub>10</sub>S (381.30). Source: DA HUA XUAN FU HUA CAO *Inula britannica*, SHUI LIAO *Polygonum hydropiper*. Ref: 1388, 4027.



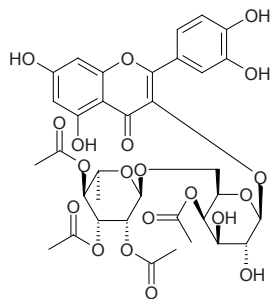
**18400 Quercetin-3-O-[(2,3,4-triacetyl- $\alpha$ -rhamnopyranosyl)-(1 $\rightarrow$ 6)]-3-acetyl- $\beta$ -galactopyranoside**

$C_{35}H_{38}O_{20}$  (778.68). **Pharm:** Anticomplement activity (classical pathway,  $IC_{50}$  = (36.4 $\pm$ 1.8) $\mu$ mol/L, control Dextrane sulphate,  $IC_{50}$  = (0.00019 $\pm$ 0.00005) $\mu$ mol/L); antioxidant (DPPH scavenger,  $IC_{50}$  = (17.8 $\pm$ 0.1) $\mu$ mol/L, control Quercetin,  $IC_{50}$  = (9.7 $\pm$ 0.8) $\mu$ mol/L). **Source:** SUI ZHUANG BAI JIN HUA *Centaurium spicatum*. **Ref:** 5493.



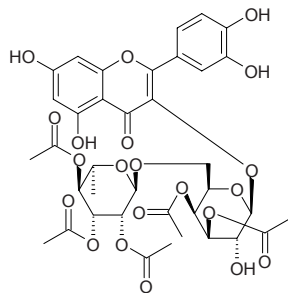
**18401 Quercetin-3-O-[(2,3,4-triacetyl- $\alpha$ -rhamnopyranosyl)-(1 $\rightarrow$ 6)]-4-acetyl- $\beta$ -galactopyranoside**

$C_{35}H_{38}O_{20}$  (778.68). **Pharm:** Anticomplement activity (classical pathway,  $IC_{50}$  = (22.8 $\pm$ 4.9) $\mu$ mol/L, control Dextrane sulphate,  $IC_{50}$  = (0.00019 $\pm$ 0.00005) $\mu$ mol/L); antioxidant (DPPH scavenger,  $IC_{50}$  = (14.3 $\pm$ 0.4) $\mu$ mol/L, control Quercetin,  $IC_{50}$  = (9.7 $\pm$ 0.8) $\mu$ mol/L). **Source:** SUI ZHUANG BAI JIN HUA *Centaurium spicatum*. **Ref:** 5493.



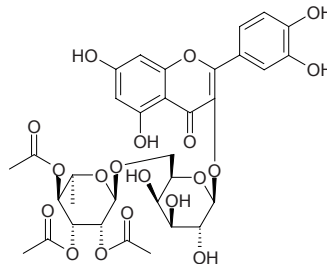
**18402 Quercetin-3-O-[(2,3,4-triacetyl- $\alpha$ -rhamnopyranosyl)-(1 $\rightarrow$ 6)]-3,4-diacetyl- $\beta$ -galactopyranoside**

$C_{37}H_{40}O_{21}$  (820.72). **Pharm:** Anticomplement activity (classical pathway,  $IC_{50}$  = 59.3 $\mu$ mol/L, control Dextrane sulphate,  $IC_{50}$  = (0.00019 $\pm$ 0.00005) $\mu$ mol/L); antioxidant (DPPH scavenger,  $IC_{50}$  = (25.8 $\pm$ 0.2) $\mu$ mol/L, control Quercetin,  $IC_{50}$  = (9.7 $\pm$ 0.8) $\mu$ mol/L). **Source:** SUI ZHUANG BAI JIN HUA *Centaurium spicatum*. **Ref:** 5493.



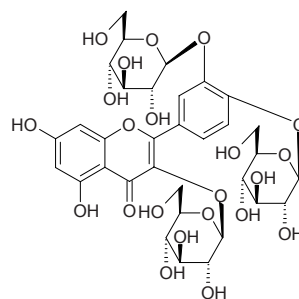
**18403 Quercetin-3-O-[(2,3,4-triacetyl- $\alpha$ -rhamnopyranosyl)-(1 $\rightarrow$ 6)]- $\beta$ -galactopyranoside**

$C_{33}H_{36}O_{19}$  (736.64). **Pharm:** Anticomplement activity (classical pathway,  $IC_{50}$  = (10.0 $\pm$ 0.9) $\mu$ mol/L, control Dextrane sulphate,  $IC_{50}$  = (0.00019 $\pm$ 0.00005) $\mu$ mol/L); antioxidant (DPPH scavenger,  $IC_{50}$  = (13.9 $\pm$ 0.3) $\mu$ mol/L, control Quercetin,  $IC_{50}$  = (9.7 $\pm$ 0.8) $\mu$ mol/L). **Source:** SUI ZHUANG BAI JIN HUA *Centaurium spicatum*. **Ref:** 5493.



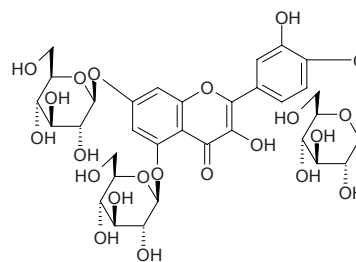
**18404 Quercetin-3,3',4'-tri- $O$ - $\beta$ -D-glucopyranoside**

$C_{33}H_{40}O_{22}$  (788.67). **Source:** ZHI MA CAI *Eruca sativa* (leaf). **Ref:** 5149.



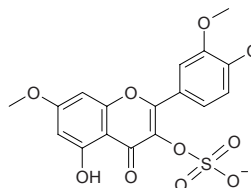
**18405 Quercetin-5,7,4'-tri- $O$ - $\beta$ -D-glucopyranoside**

$C_{33}H_{40}O_{22}$  (788.67). **Source:** CAN JIAN *Bombyx mori*. **Ref:** 1983.



**18406 Quercetin-3',4',7-trimethyl ether-3-sulfate**

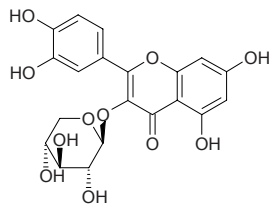
$C_{18}H_{15}O_{10}S$  (423.38). **Source:** RUI SHI QIAN NIU *Ipomoea regnellii*. **Ref:** 1891.



**18407 Quercetin-3- $\beta$ -D-xylopyranoside**

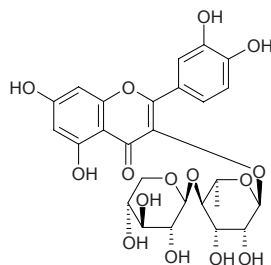
Reynoutrin [P00565in] C<sub>20</sub>H<sub>18</sub>O<sub>11</sub> (434.36). mp 210~211°C, 203~204°C.

**Source:** GUI JIAN JIN JI ER *Caragana jubata*, HU ZHANG *Polygonum cuspidatum*, ZHEN ZHU MEI *Sorbaria sorbifolia*, GAO CONG ZHEN ZHU MEI *Sorbaria arborea*, BA JIAO HUI XIANG *Illicium verum*, BI MA YE *Ricinus communis*, JIN JI LE *Cinchona ledgeriana*, KUO JIA HE HUAN *Albizzia lebbbeck*. **Ref:** 6, 660, 1521.

**18408 Quercetin-3-O- $\beta$ -D-xylose-(1 $\rightarrow$ 4)- $\alpha$ -L-rhamnoside**

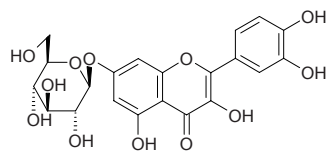
[196310-24-4] C<sub>26</sub>H<sub>28</sub>O<sub>15</sub> (589.50). Yellow needles. **Pharm:**

Anti-inflammatory (mus, 40mg/kg sc, edema InRt = 33%, with high therapy index). **Source:** LUO DI SHENG GEN *Bryophyllum pinnatum*. **Ref:** 4026.

**18409 Quercimeritrin**

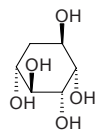
C<sub>21</sub>H<sub>20</sub>O<sub>12</sub> (464.39). **Pharm:** Anti-inflammatory (IL-5 inhibitor,

concentration-dependent manner, mean IC<sub>50</sub> = 27.3  $\mu$ mol/L)<sup>[4416]</sup>. **Source:** LU DI MIAN *Gossypium hirsutum* [Syn. *Gossypium mexicanum*], JI YAN CAO *Kummerowia striata*. **Ref:** 658, 4416.

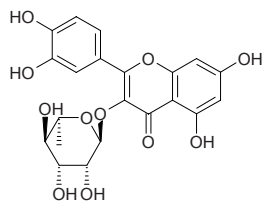
**18410 D-Quercitol**

C<sub>6</sub>H<sub>12</sub>O<sub>5</sub> (164.16). mp 235~237°C. **Source:** HU CONG *Allium ascalonicum*,

RU LAN *Stephania hernandifolia*, TIE ZI *Myrsine africana*, XI SHENG TENG *Cissampelos pareira*, OU ZHOU BAI LI *Quercus robur*, YANG YE AN *Eucalyptus populnea*. **Ref:** 6, 658.

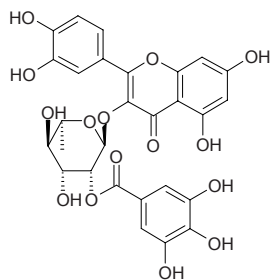
**18411 Quercitrin**

Quercetin-3-O- $\alpha$ -L-rhamnopyranoside C<sub>21</sub>H<sub>20</sub>O<sub>11</sub> (448.39). Yellow crystals, mp 166~168°C, mp 182~185°C, mp 178~182 °C. **Pharm:** Antibacterial (*Pseudomonas maltophilia* and *Enteromorpha cloacae*); antineoplastic; antihepatotoxin; anti-inflammatory; antimutagenic; antiviral (murine tissue and chicken embryo, vesicular stomatitis virus, influenza virus A); diuretic; hemostatic; aldose reductase inhibitor (eye lens, strong); antioxidant (3.125  $\mu$ g/mL, superoxide radical scavenging activity = 15.6%, control Urcumin 16.1%; 6.25  $\mu$ g/mL, DPPH radical scavenging activity = 11.6%, control Urcumin 50.0%)<sup>[4535]</sup>; inhibits cancer cell invasion inactive (MM1 cells, *in vitro*, 10  $\mu$ g/mL)<sup>[4329]</sup>; insect antifeedant (*Bombyx mor*); insect phagostimulant (*Gastrophysa atricycaea*); hepatoprotective (primary cultures of rat hepatocytes, H<sub>2</sub>O<sub>2</sub>-induced toxicity, 50  $\mu$ mol/L, relative protection = 57.3% (H<sub>2</sub>O<sub>2</sub>-treated, relative protection = 0.0%, control, relative protection = 100%), positive control Silibinin, Relative protection = 74.9%)<sup>[4996]</sup>; ACE inhibitor (IC<sub>50</sub> = 250  $\mu$ mol/L, control Lisinopril, IC<sub>50</sub> = 1 nmol/L); NEP inhibitor (IC<sub>50</sub> > 500  $\mu$ mol/L, control Phosphoramidon, IC<sub>50</sub> = 9 nmol/L); APN inhibitor inactive; inhibitory activity against NFAT transcription (IC<sub>50</sub> > 100  $\mu$ mol/L, positive control Cyclosporin A, IC<sub>50</sub> = (0.29  $\pm$  0.01)  $\mu$ mol/L)<sup>[2536]</sup>. **Source:** BAI GUO YE *Ginkgo biloba*, BIAN XU *Polygonum aviculare*, CE BAI YE *Thuja orientalis* [Syn. *Platyclusus orientalis*; *Biota orientalis*], CHI YANG *Alnus japonica* (leaf), DUO SUI LIAO *Polygonum polystachyum*, GUAN YE LIAN QIAO *Hypericum perforatum*, HEI ZI LI GUO JI SHENG *Scurrura atropurpurea*, HONG KUI ZI *Chamaenerion angustifolium* [Syn. *Epilobium angustifolium*], HU ZHANG *Polygonum cuspidatum*, HU ZHANG YE *Polygonum cuspidatum*, LING NAN DU JUAN *Rhododendron mariae* (branchlet-leaf or flower: content = 0.76%)<sup>[5508]</sup>, LONG YAN YE *Euphorbia longan* [Syn. *Dimocarpus longan*], MAN SHAN HONG *Rhododendron dauricum* (branchlet-leaf or flower: content = 0.42%)<sup>[5508]</sup>, MANG QI GU *Dicranopteris pedata* [Syn. *Polypodium pedatum*; *Dicranopteris dichotoma*], MAO YAN CAO *Euphorbia lunulata*, OU ZHOU QI YE SHU *Aesculus hippocastanum*, OU ZHOU YOU CAI *Brassica napus*, RI BEN GUI DENG QING *Rodgersia podophylla* (aerial parts), SAN BAI CAO *Saururus chinensis*, SANG JI SHENG *Loranthus parasiticus* [Syn. *Loranthus chinensis*; *Taxillus chinensis*], SHAN YING TAO *Prunus tomentosa*, SHUI LIAO *Polygonum hydropiper*, SHUI MA TIAO *Polygonum thunbergii*, TIAN QIAO MAI GEN *Fagopyrum cymosum* [Syn. *Polygonum cymosum*], YANG MEI SHU PI *Myrica rubra* (bark: yield = 0.0028%), YI ZHI HUANG HUA *Solidago virgaurea* var. *leiocarpa* [Syn. *Solidago decurrens*], YOU GAN YE *Phyllanthus emblica* (leaf and branch), YU XING CAO *Houttuynia cordata* (dried aerial parts: content = 0.026%)<sup>[5508]</sup>, ZHAI YE BAN FENG HE *Pterispermum lanceaefolium*, ZHUO SE LI *Quercus tinctoria*, ZI JIN NIU *Ardisia japonica*, occurs in many plants. **Ref:** 2, 6, 433, 658, 660, 2536, 4163, 4205, 4329, 4535, 4996, 5034, 5508.

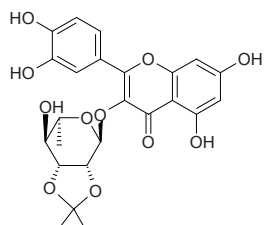


**18412 Quercitrin-2''-gallate**

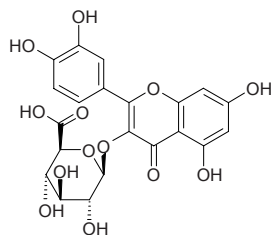
$C_{28}H_{24}O_{15}$  (600.49). Yellowish solid. Source: LUAN SHU *Koeleruteria paniculata*. Ref: 677.

**18413 Quercitrin derivative CPB-50-208-18**

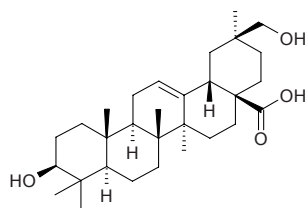
$C_{24}H_{24}O_{11}$  (488.45). Pharm: Inhibits degranulation and release of  $\beta$ -hexosaminidase (RBL-2H3 cells, 100 $\mu$ mol/L, InRt = (39.8 $\pm$ 1.4)%), control Curcumin, 100 $\mu$ mol/L, InRt = (62.6 $\pm$ 1.0)%,  $p < 0.01$ , did not affect the enzyme activity of  $\beta$ -hexosaminidase). Source: YANG MEI SHU PI *Myrica rubra* (bark: yield = 0.0059%). Ref: 4163.

**18414 Querciturone**

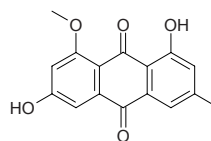
Quercetin-3-*O*- $\beta$ -glucuronopyranoside [22688-79-5]  $C_{21}H_{18}O_{13}$  (478.37). mp 190°C. Pharm: Antioxidant (DPPH scavenger,  $SC_{50} = 1.5\mu$ mol/L, positive control Vitamin E,  $SC_{50} = 5.2\text{mmol/L}$ )<sup>[4464]</sup>. Source: LAO YA SHI *Diospyros rhombifolia* (leaf), ZHU ZONG CAO *Adiantum capillus-veneris*. Ref: 6, 4464.

**18415 Queretaroic acid**

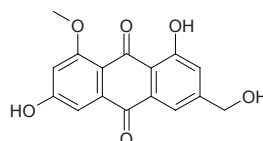
[511-82-0]  $C_{30}H_{48}O_4$  (472.71). mp 318~323°C. Source: SAN TAI HONG HUA *Clerodendron serratum*. Ref: 6.

**18416 Questin**

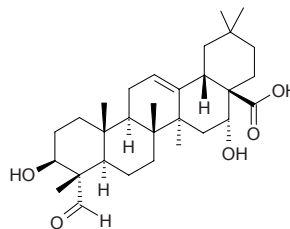
Emodin-1-monomethyl ether [3774-64-9]  $C_{16}H_{12}O_5$  (284.27). mp 301~303°C. Source: HE SHOU WU *Polygonum multiflorum*, HU ZHANG *Polygonum cuspidatum*, NIU XI XI *Rumex patientia*, YE JIAO TENG *Polygonum multiflorum*. Ref: 2, 6, 660.

**18417 Questinol**

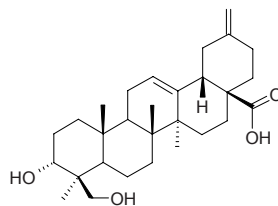
[35688-09-6]  $C_{16}H_{12}O_6$  (300.27). Source: HU ZHANG *Polygonum cuspidatum*. Ref: 2.

**18418 Quillaic acid**

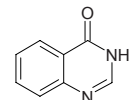
3,16-Dihydroxy-23-oxo-12-oleanen-28-oic acid [631-01-6]  $C_{30}H_{46}O_5$  (486.70). Crystals (EtOH), mp 294°C,  $[\alpha]_D^{25} = +56.1^\circ$  (pyridine). Source: HAN MAI PING CAO *Silene jensisensis*, JIN TIE SUO *Psammosilene tunicoides*, ZAO PI SHU *Quillaja saponaria*. Ref: 658, 1521, 4037.

**18419 Quinatic acid**

3,24-Dihydroxy-30-nor-12,20(29)-oleanadien-28-oic acid [119863-89-7]  $C_{29}H_{44}O_4$  (456.67). White powder; needles, mp 269~272°C,  $[\alpha]_D^{18} = +66.6^\circ$  ( $c = 0.375$ , pyridine). Source: E ZHANG TENG *Schefflera arboricola* (stem of branch), MU TONG *Akebia quinata*, SAN YE MU TONG *Akebia trifoliata* (stem), NA TENG *Stauntonia hexaphylla*. Ref: 1274, 1521, 4035, 4545, 4899.

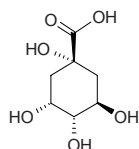
**18420 4-Quinazolone**

[491-36-1]  $C_8H_6N_2O$  (146.15). mp 211~212°C. Pharm: Cytotoxic inactive (*in vitro*, HONE-1 and NUGC cancer cell lines, no significant activity)<sup>[3069]</sup>. Source: CHANG SHAN *Dichroa febrifuga*, ZHONG GUO XIU QIU *Hydrangea chinensis* (root)<sup>[3069]</sup>. Ref: 6, 3069.

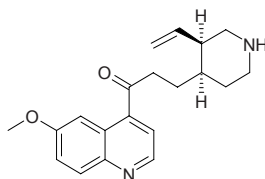


**18421 Quinic acid**

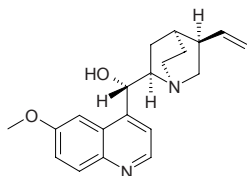
(1 $\alpha$ ,3 $\alpha$ ,4 $\alpha$ ,5 $\beta$ )-1,3,4,5-Tetrahydroxy-cyclohexanecarboxylic acid [77-95-2] C<sub>7</sub>H<sub>12</sub>O<sub>6</sub> (192.17). mp (–) 172°C. **Pharm:** Acidic component of common plants. **Source:** BAI GUO *Ginkgo biloba*, HE ZI *Terminalia chebula*, HE ZI YE *Terminalia chebula*, HUI XIANG JING YE *Foeniculum vulgare*, JIN JI LE *Cinchona ledgeriana*, MEI GUI HUA *Rosa rugosa*, NING MENG *Citrus limon*, NING MENG AN YE *Eucalyptus citriodora*, PU TAO TENG YE *Vitis vinifera*, TAO YE *Prunus persica*, WU HUA GUO *Ficus carica*, XIANG RI KUI ZI *Helianthus annuus*, YI ZHU QIAN MA *Urtica dioica*. **Ref:** 2, 6, 658, 660.

**18422 Quinicine**

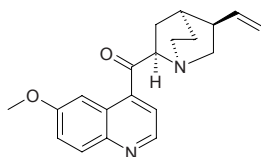
[845-5-9] C<sub>20</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub> (324.43). mp (+) 60°C. **Source:** JIN JI LE *Cinchona ledgeriana*. **Ref:** 6.

**18423 Quinidine**

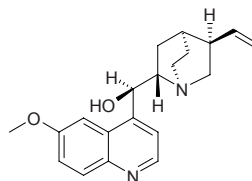
$\beta$ -Quinine [56-54-2] C<sub>20</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub> (324.43). mp (+) 174~175°C (anhydrate). **Pharm:** CYP2D6 inhibitor (IC<sub>50</sub> = 0.068  $\mu$ mol/L)<sup>[4449]</sup>, CYP2D6 inhibitor (*in vitro*, IC<sub>50</sub> = 0.082  $\mu$ mol/L)<sup>[4797]</sup>. **Source:** JIN JI LE *Cinchona ledgeriana*. **Ref:** 4, 4449, 4797.

**18424 Quinidinone**

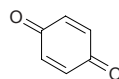
(8 $\alpha$ )-6'-Methoxycinchonan-9-one [84-31-1] C<sub>20</sub>H<sub>22</sub>N<sub>2</sub>O<sub>2</sub> (322.41). mp 108°C. **Source:** JIN JI LE *Cinchona ledgeriana*. **Ref:** 6.

**18425 Quinine**

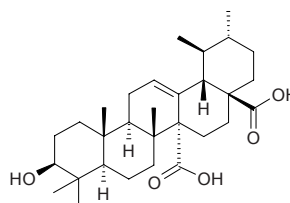
6-Methoxycinchonan-9-ol [130-95-0] C<sub>20</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub> (324.43). [ $\alpha$ ]<sub>D</sub><sup>15</sup> = –169° (ethanol), insoluble in water, soluble in benzene, ether, easily soluble in ethanol, chloroform.<sup>[5507]</sup> **Pharm:** Antimalarial (formerly used to treat malaria, now largely replaced by more effective, less toxic drugs); antimalarial (*Plasmodium falciparum* D6, LC<sub>50</sub> = 9.2ng/mL, SI > 2174; *Plasmodium falciparum* W2, LC<sub>50</sub> = 59.8ng/mL, SI > 334)<sup>[3976]</sup>; cytotoxic (KB, LC<sub>50</sub> > 20000ng/mL)<sup>[3976]</sup>; bitter principle (one of the bitterest substances, in 10  $\mu$ mol/L being extremely bitter); stimulates horses (used in horse racing). **Source:** HONG SE JIN JI NA SHU *Cinchona succirubra*, JIN JI LE *Cinchona ledgeriana*. **Ref:** 4, 658, 3976, 5507.

**18426 Quinone**

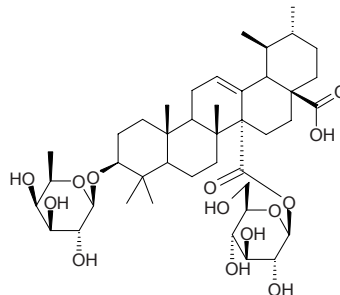
1,4-Benzoquinone [106-51-4] C<sub>6</sub>H<sub>4</sub>O<sub>2</sub> (108.10). Yellow crystals (pet. ether or H<sub>2</sub>O), mp 117°C, soluble in EtOH, Et<sub>2</sub>O. **Pharm:** Irritant (causes dermatitis and conjunctivitis); toxic (highly). **Source:** HUANG CHONG *Romalea microptera*, *Streptothris chromogena*. **Ref:** 1521.

**18427 Quinovic acid**

3-Hydroxy-12-ursene-27,28-dioic acid [465-74-7] C<sub>30</sub>H<sub>46</sub>O<sub>5</sub> (486.70). mp 298°C. **Source:** SHUI TUAN HUA *Adina pilulifera* [Syn. *Cephalanthus pilulifera*]. **Ref:** 6.

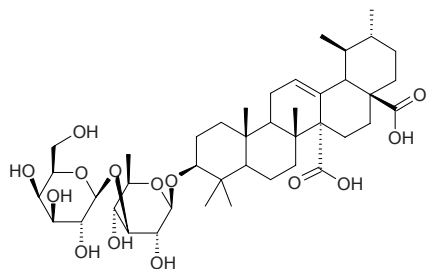
**18428 Quinovic acid 3 $\beta$ -O- $\beta$ -D-fucopyranosyl-(27-1)- $\beta$ -D-glucopyranosyl ester**

C<sub>42</sub>H<sub>66</sub>O<sub>14</sub> (794.99). **Source:** BI LU GOU TENG *Uncaria tomentosa*, GUI YA NA GOU TENG *Uncaria guianensis*. **Ref:** 5341.



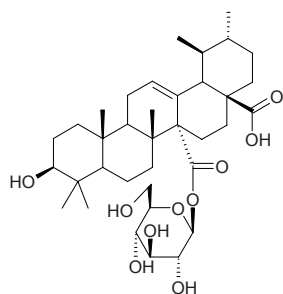
**18429 Quinovic acid 3-*O*- $\beta$ -*D*-galactopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-quinovopyranoside**

C<sub>42</sub>H<sub>66</sub>O<sub>14</sub> (794.99). Source: BI LU GOU TENG *Uncaria tomentosa*. Ref: 5341.



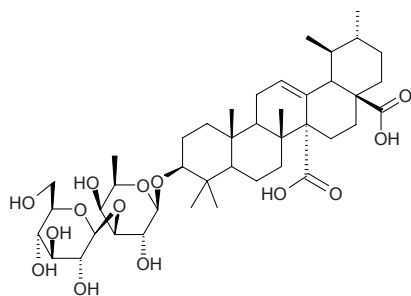
**18430 Quinovic acid 27-*O*- $\beta$ -*D*-glucopyranosyl ester**

C<sub>36</sub>H<sub>56</sub>O<sub>10</sub> (648.84). Source: BI LU GOU TENG *Uncaria tomentosa*. Ref: 5341.



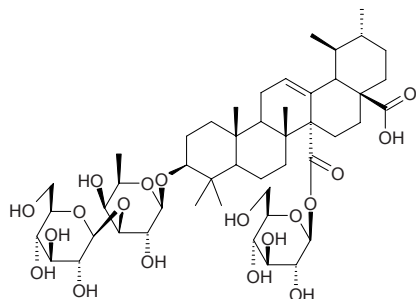
**18431 Quinovic acid 3 $\beta$ -*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-fucopyranoside**

C<sub>42</sub>H<sub>66</sub>O<sub>14</sub> (794.99). Source: BI LU GOU TENG *Uncaria tomentosa*. Ref: 5341.



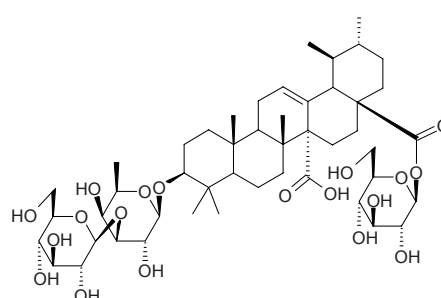
**18432 Quinovic acid 3 $\beta$ -*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-fucopyranosyl-(27-1)- $\beta$ -*D*-glucopyranosyl ester**

C<sub>48</sub>H<sub>76</sub>O<sub>19</sub> (957.13). Source: BI LU GOU TENG *Uncaria tomentosa*, GUI YA NA GOU TENG *Uncaria guianensis*. Ref: 5341.



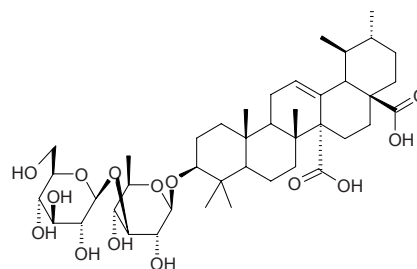
**18433 Quinovic acid 3 $\beta$ -*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-fucopyranosyl-(28-1)- $\beta$ -*D*-glucopyranosyl ester**

C<sub>48</sub>H<sub>76</sub>O<sub>19</sub> (957.13). Source: BI LU GOU TENG *Uncaria tomentosa*. Ref: 5341.



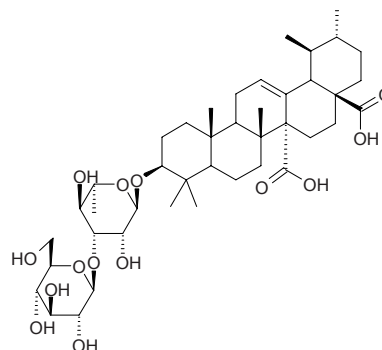
**18434 Quinovic acid 3-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-quinovopyranoside**

C<sub>42</sub>H<sub>66</sub>O<sub>14</sub> (794.99). Source: BI LU GOU TENG *Uncaria tomentosa*. Ref: 5341.



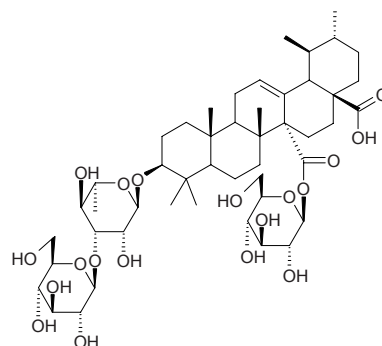
**18435 Quinovic acid 3-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranoside**

C<sub>42</sub>H<sub>66</sub>O<sub>14</sub> (794.99). Source: BI LU GOU TENG *Uncaria tomentosa*. Ref: 5341.



**18436 Quinovic acid 3-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranoside 27-*O*- $\beta$ -*D*-glucopyranosyl ester**

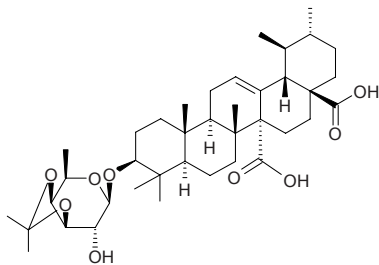
C<sub>48</sub>H<sub>76</sub>O<sub>19</sub> (957.13). Source: BI LU GOU TENG *Uncaria tomentosa*. Ref: 5341.



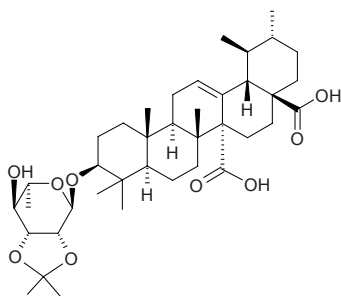


**18437 Quinovic acid-3 $\beta$ -O-(3',4'-O-isopropylidene)- $\beta$ -D-fucopyranoside**

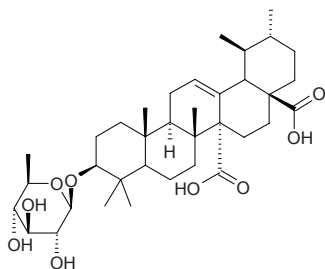
C<sub>39</sub>H<sub>60</sub>O<sub>9</sub> (672.91). White powder, mp 220°C (dec), [ $\alpha$ ]<sub>D</sub><sup>30</sup> = +48.77° (c = 0.611, MeOH). Source: XI YE SHUI TUAN HUA *Adina rubella*. Ref: 651.

**18438 Quinovic****acid-3 $\beta$ -(2',3'-O-isopropylidene)- $\alpha$ -L-rhamnopyranoside**

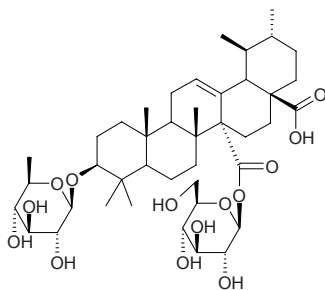
C<sub>39</sub>H<sub>60</sub>O<sub>9</sub> (672.91). White powder, mp 268~272°C (dec), [ $\alpha$ ]<sub>D</sub><sup>22</sup> = +47.29° (c = 0.317, MeOH). Source: XI YE SHUI TUAN HUA *Adina rubella*. Ref: 651.

**18439 Quinovic acid 3 $\beta$ -O- $\beta$ -D-quinovopyranoside**

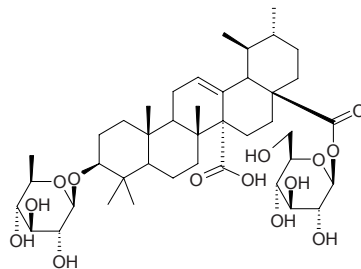
C<sub>36</sub>H<sub>56</sub>O<sub>9</sub> (632.84). Source: GUI YA NA GOU TENG *Uncaria guianensis*. Ref: 5341.

**18440 Quinovic acid 3-O- $\beta$ -D-quinovopyranoside 27-O- $\beta$ -D-glucopyranosyl ester**

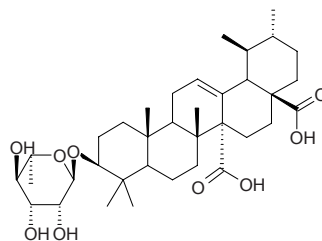
C<sub>42</sub>H<sub>66</sub>O<sub>14</sub> (794.99). Pharm: Anti-inflammatory (20mg/kg, InRt = 33%)<sup>[5341]</sup>. Source: BI LU GOU TENG *Uncaria tomentosa*. Ref: 5341.

**18441 Quinovic acid 3-O- $\beta$ -D-quinovopyranoside 28-O- $\beta$ -D-glucopyranosyl ester**

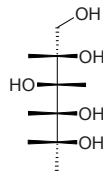
C<sub>42</sub>H<sub>66</sub>O<sub>14</sub> (794.99). Source: TUO YUAN GOU TENG *Uncaria elliptica*, JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig; yield = 0.0053%dw). Ref: 5341, 4723.

**18442 Quinovic acid 3 $\beta$ -O- $\alpha$ -L-rhamnopyranoside**

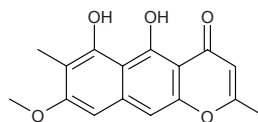
C<sub>36</sub>H<sub>56</sub>O<sub>9</sub> (632.84). Source: BI LU GOU TENG *Uncaria tomentosa*. Ref: 5341.

**18443 D-Quinovitrol**

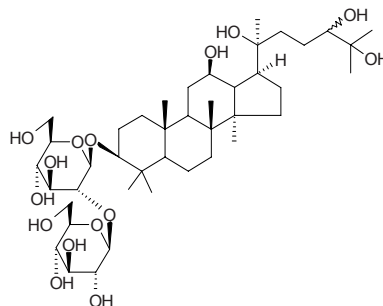
C<sub>6</sub>H<sub>14</sub>O<sub>5</sub> (166.18). Colorless syrup, [ $\alpha$ ]<sub>D</sub><sup>24</sup> = -11° (c = 0.2, MeOH). Source: SHE CHUANG ZI *Cnidium monnieri* (fruit). Ref: 5205.

**18444 Quinquangulin**

[64892-58-2] C<sub>16</sub>H<sub>14</sub>O<sub>5</sub> (286.29). Pharm: Cytotoxic (P<sub>388</sub>). Source: WU LENG JUE MING *Cassia quinquangula*. Ref: 658.

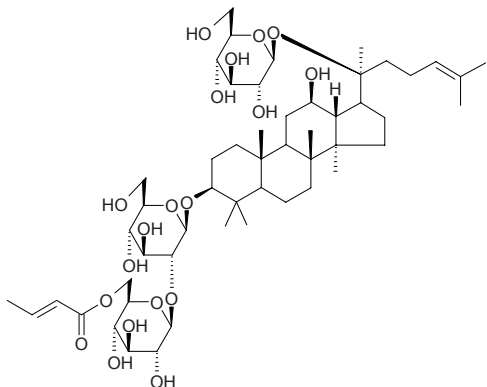
**18445 Quinquenoside F<sub>1</sub>**

C<sub>42</sub>H<sub>74</sub>O<sub>15</sub> (819.05). White amorphous powder, mp 237~238°C. Source: XI YANG SHEN *Panax quinquefolium*. Ref: 789.

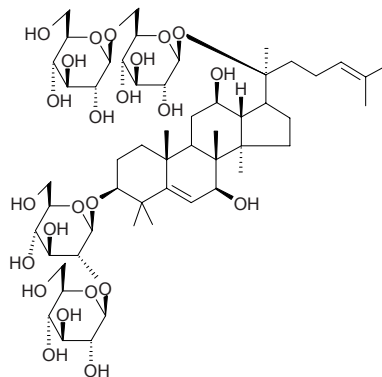


**18446 Quinquenoside I**

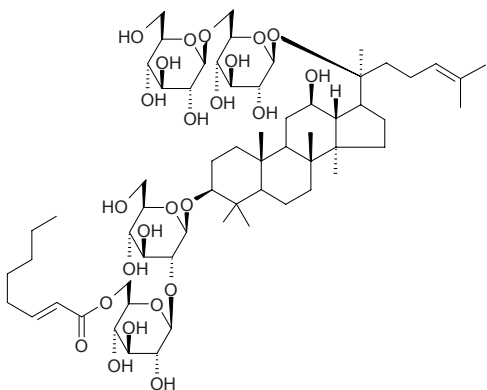
$C_{52}H_{86}O_{19}$  (1015.25). Source: SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 4139.

**18449 Quinquenoside IV**

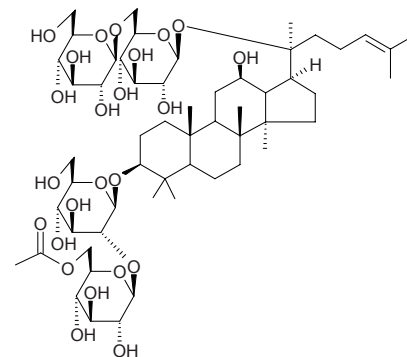
$C_{54}H_{90}O_{24}$  (1123.31). Pharm: Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level). Source: SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 4139.

**18447 Quinquenoside II**

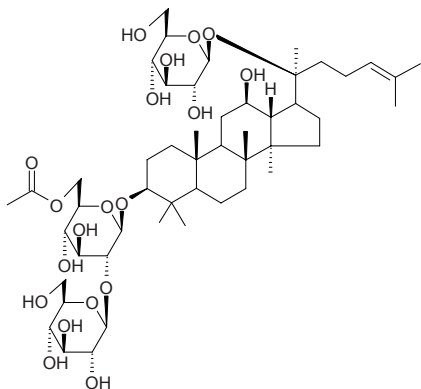
$C_{62}H_{104}O_{24}$  (1233.51). Source: SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 4139.

**18450 Quinquenoside R<sub>1</sub>**

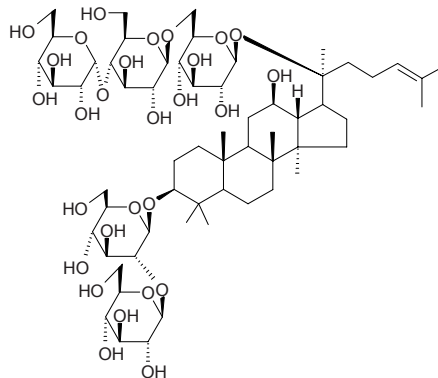
$C_{56}H_{94}O_{24}$  (1151.36). Source: REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], XI YANG SHEN *Panax quinquefolium*. Ref: 660.

**18448 Quinquenoside III**

$C_{50}H_{84}O_{19}$  (989.22). Pharm: Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level). Source: SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 4139.

**18451 Quinquenoside V**

$C_{60}H_{102}O_{28}$  (1271.47). Pharm: Immunological adjuvant activity (OVA-immunized mouse, ELISA assay, increases serum IgG level). Source: SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 4139.



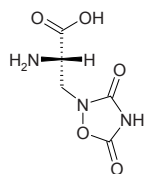
**18452 Quisqualic acid**

$\alpha$ -Amino-3,5-dioxo-1,2,4-oxadiazolidine-2-propanoic acid [52809-07-1]

C<sub>5</sub>H<sub>7</sub>N<sub>3</sub>O<sub>5</sub> (189.13). mp 187~188 (dec). **Pharm:** Anthelmintic (roundworm).

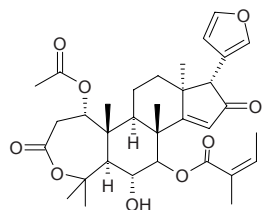
**Source:** SHI JUN ZI *Quisqualis indica*, MAO SHI JUN ZI *Quisqualis indica* var. *villosa* (in 1972 the compound was isolated from the plant)<sup>[5505]</sup>,

*Quisqualis fructus*. **Ref:** 1521, 5501, 5505.

**18453 Quivisianthone**

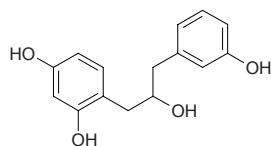
7-Deacetyl-7-angeloyl-16-ketohadalactone A C<sub>33</sub>H<sub>42</sub>O<sub>9</sub> (582.70). Pale

yellow gum,  $[\alpha]_D = +0.0^\circ$ . **Source:** *Quivisia papinae* (seed). **Ref:** 3759.

**18454 Quracol A**

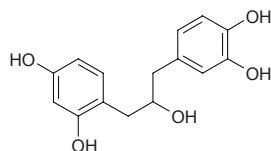
[108549-45-7] C<sub>15</sub>H<sub>16</sub>O<sub>4</sub> (260.29). mp 88~90°C,  $[\alpha]_D^{20} = 0^\circ$  ( $c = 0.01$ , alcohol).

**Pharm:** Ileal smooth muscle relaxant (gpg, *in vitro*, contraction induced by electrostimulation; 20 $\mu$ g/mL histamine antagonist). **Source:** NIU XUAN JIN HE HUAN *Acacia tortilis* ssp. *raddiana*. **Ref:** 4018.

**18455 Quracol B**

[108549-46-8] C<sub>15</sub>H<sub>16</sub>O<sub>5</sub> (276.29). mp 92~94°C,  $[\alpha]_D^{20} = 0^\circ$  ( $c = 0.05$ , alcohol).

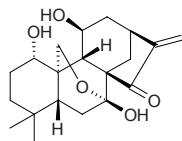
**Pharm:** Ileal smooth muscle relaxant (gpg, *in vitro*, contraction induced by electrostimulation; 20 $\mu$ g/mL histamine antagonist). **Source:** NIU XUAN JIN HE HUAN *Acacia tortilis* ssp. *raddiana*. **Ref:** 4018.



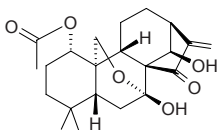
## R

**18456 Rabdocoetsin A**

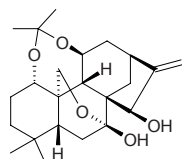
$C_{20}H_{28}O_5$  (348.44). mp 250–252°C,  $[\alpha]_D = -100^\circ$  ( $c = 0.40$ , MeOH);  $[\alpha]_D^{20} = -96.2^\circ$  ( $c = 0.09$ , MeOH). Source: XI ZHUI XIANG CHA CAI *Rabdosia coetsa*, ZI MAO XIANG CHA CAI *Isodon enanderianus* (aerial parts). Ref: 4067, 5475.

**18457 Rabdocoetsin B**

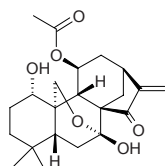
$C_{22}H_{30}O_6$  (390.48).  $[\alpha]_D^{20} = -75.2^\circ$  ( $c = 0.11$ , MeOH). Pharm: Cytotoxic (hmn tumor K562 cells,  $IC_{50} = 0.13\mu\text{g/mL}$ , control *cis*-Platin,  $IC_{50} = 0.52\mu\text{g/mL}$ )<sup>[5475]</sup>. Source: XI ZHUI XIANG CHA CAI *Rabdosia coetsa*, ZI MAO XIANG CHA CAI *Isodon enanderianus* (aerial parts). Ref: 660, 4067, 5475.

**18458 Rabdocoetsin C**

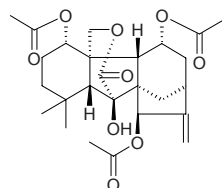
$C_{23}H_{34}O_5$  (390.52). mp 248–249°C. Source: XI ZHUI XIANG CHA CAI *Rabdosia coetsa*. Ref: 4067.

**18459 Rabdocoetsin D**

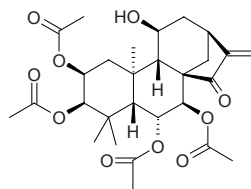
$C_{22}H_{30}O_6$  (390.48).  $[\alpha]_D^{20} = -96.1^\circ$  ( $c = 0.08$ , MeOH). Pharm: Cytotoxic (hmn tumor K562 cells,  $IC_{50} = 0.87\mu\text{g/mL}$ , control *cis*-Platin,  $IC_{50} = 0.52\mu\text{g/mL}$ )<sup>[5475]</sup>. Source: XI ZHUI XIANG CHA CAI *Rabdosia coetsa*, ZI MAO XIANG CHA CAI *Isodon enanderianus* (aerial parts). Ref: 660, 4067, 5475.

**18460 Rabdoepigibberellolide**

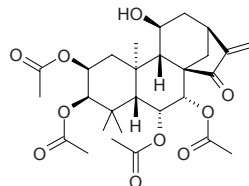
$C_{26}H_{34}O_9$  (490.56). mp 255.5–256.5°C,  $[\alpha]_D = -89^\circ$  ( $c = 0.28$ , MeOH). Source: SI GUO XIANG CHA CAI *Rabdosia shikokiana*. Ref: 4067.

**18461 Rabdoforrestin A**

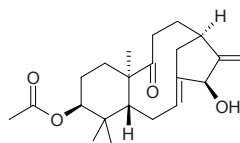
[117695-11-1]  $C_{28}H_{38}O_{10}$  (534.61). Pharm: Cytotoxic (MG cells, EAC cells). Source: MAO GENG XIA YE XIANG CHA CAI *Isodon angustifolius* var. *glabrescens* (leaf: yield = 0.0093%), ZI E XIANG CHA CAI *Isodon Forrestii* (leaf: yield = 0.28%). Ref: 4065, 4066.

**18462 Rabdoforrestin A'**

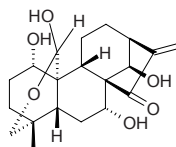
$C_{28}H_{38}O_{10}$  (534.61). mp 173–174°C,  $[\alpha]_D^{22} = -38.7^\circ$  ( $c = 0.58$ , MeOH). Source: ZI E XIANG CHA CAI *Isodon Forrestii*. Ref: 4067.

**18463 Rabdohakusin**

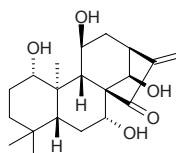
$C_{22}H_{32}O_4$  (360.50). mp 97–98°C,  $[\alpha]_D = +78.7^\circ$  ( $c = 0.127$ ,  $CHCl_3$ ). Source: YIN DI KUAN YE XIANG CHA CAI *Isodon umbrosa* var. *latifolia*. Ref: 4067.

**18464 Rabdoinflxin A**

$C_{20}H_{28}O_6$  (364.44). mp 214–216°C,  $[\alpha]_D^{24} = -115.7^\circ$  ( $c = 1.0$ , MeOH). Source: NEI ZHE XIANG CHA CAI *Isodon inflexa* [Syn. *Rabdosia inflexa*]. Ref: 4067.

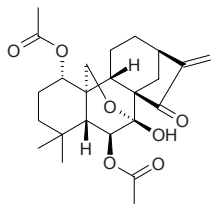
**18465 Rabdoinflxin B**

$C_{20}H_{30}O_5$  (350.46). mp 266–268°C,  $[\alpha]_D^{24} = -74.9^\circ$  ( $c = 0.45$ , MeOH). Source: NEI ZHE XIANG CHA CAI *Isodon inflexa* [Syn. *Rabdosia inflexa*]. Ref: 4067.

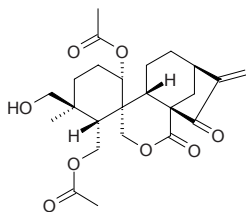


**18466 Rabdokaurin A**

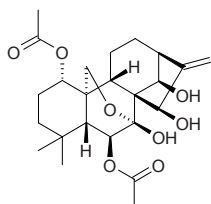
$C_{24}H_{32}O_7$  (432.52). mp 227–229°C,  $[\alpha]_D^{26} = +57.0^\circ$  ( $c = 0.84$ , MeOH). Source: CHANG GUAN XIANG CHA CAI *Rabdosia longituba*. Ref: 4067.

**18467 Rabdokaurin B**

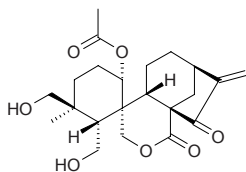
$C_{24}H_{32}O_8$  (448.52). Amorphous powder,  $[\alpha]_D^{26} = -93.6^\circ$  ( $c = 0.81$ , MeOH). Source: CHANG GUAN XIANG CHA CAI *Rabdosia longituba*. Ref: 4067.

**18468 Rabdokaurin C**

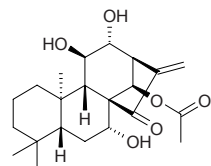
$C_{24}H_{34}O_8$  (450.53). mp 232–234°C,  $[\alpha]_D^{22} = -17.5^\circ$  ( $c = 1.16$ ,  $C_5H_5N$ ). Source: CHANG GUAN XIANG CHA CAI *Rabdosia longituba*. Ref: 4067.

**18469 Rabdokaurin D**

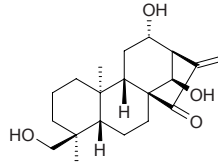
$C_{22}H_{30}O_7$  (406.48). mp 227–230°C,  $[\alpha]_D^{21} = +34.1^\circ$  ( $c = 0.62$ , MeOH). Source: CHANG GUAN XIANG CHA CAI *Rabdosia longituba*. Ref: 4067.

**18470 Rabdokunmin A**

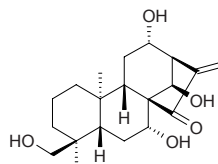
$C_{22}H_{32}O_6$  (392.50). mp 212–214°C,  $[\alpha]_D^{21} = -51.0^\circ$  ( $c = 0.51$ ,  $Me_2CO$ ). Source: KUN MING XIANG CHA CAI *Isodon kunmingensis*. Ref: 4067.

**18471 Rabdokunmin B**

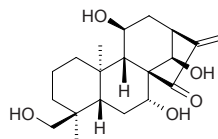
$C_{20}H_{30}O_4$  (334.46). mp 259.5–261.5°C,  $[\alpha]_D^{21} = -46.2^\circ$  ( $c = 0.52$ , MeOH). Source: KUN MING XIANG CHA CAI *Isodon kunmingensis*. Ref: 4067.

**18472 Rabdokunmin C**

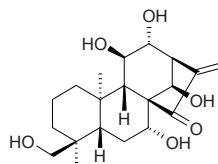
$7\alpha,12\alpha,14\beta,18$ -Tetrahydroxy-*ent*-kaur-16-en-15-one  $C_{20}H_{30}O_5$  (350.46). mp 145–146°C,  $[\alpha]_D^{21} = -85.7^\circ$  ( $c = 0.54$ , MeOH). Pharm: Cytotoxic (*in vitro*,  $P_{388}$ ,  $ED_{50} = 1.06\mu g/mL$ )<sup>[3012]</sup>. Source: KUN MING XIANG CHA CAI *Isodon kunmingensis*, WEI YE XIANG CHA CAI *Rabdosia excisa* (aerial parts: yield = 0.0024%dw). Ref: 3012, 4067.

**18473 Rabdokunmin D**

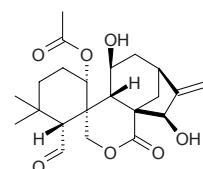
$C_{20}H_{30}O_5$  (350.46). mp 254–257°C,  $[\alpha]_D^{21} = -113.3^\circ$  ( $c = 0.57$ , MeOH). Source: KUN MING XIANG CHA CAI *Isodon kunmingensis*. Ref: 4067.

**18474 Rabdokunmin E**

$C_{20}H_{30}O_6$  (366.46). mp 286–288°C,  $[\alpha]_D^{21} = -110.5^\circ$  ( $c = 0.51$ , MeOH). Source: KUN MING XIANG CHA CAI *Isodon kunmingensis*. Ref: 4067.

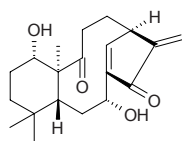
**18475 Rabdolasional**

$C_{22}H_{30}O_7$  (406.48).  $[\alpha]_D^{27} = +7.5^\circ$  ( $c = 0.27$ , MeOH). Source: CU GUO XIANG CHA CAI *Isodon lasiocarpa*. Ref: 4067.

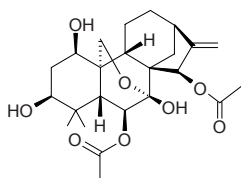


**18476 Rabdolatifolin**

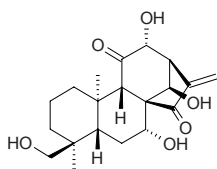
$C_{20}H_{28}O_4$  (332.44). Amorphous powder,  $[\alpha]_D^{21} = -45.1^\circ$  ( $c = 0.14$ , MeOH).  
**Source:** YIN DI KUAN YE XIANG CHA CAI *Isodon umbrosa* var. *latifolia*.  
**Ref:** 4067.

**18477 Rabdolongin A**

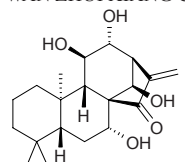
$C_{24}H_{34}O_8$  (450.53). mp 134–137°C,  $[\alpha]_D^{23} = -75.5^\circ$  ( $c = 1.02$ , MeOH). **Source:**  
 CHANG GUAN XIANG CHA CAI *Rabdosia longituba*. **Ref:** 660, 4067.

**18478 Rabdoloxin A**

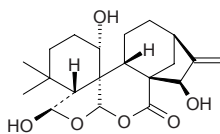
$C_{20}H_{28}O_6$  (364.44). mp 220–222°C,  $[\alpha]_D^{25} = -62.9^\circ$  ( $c = 0.70$ ,  $C_5H_5N$ ). **Source:**  
 WAN ZHUI XIANG CHA CAI *Isodon loxothyrsa*. **Ref:** 4067.

**18479 Rabdoloxin B**

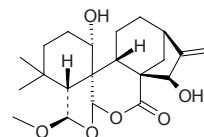
$C_{20}H_{30}O_5$  (350.46). mp 283–285°C,  $[\alpha]_D^{25} = -59.5^\circ$  ( $c = 0.84$ ,  $C_5H_5N$ ). **Source:**  
 WAN ZHUI XIANG CHA CAI *Isodon loxothyrsa*. **Ref:** 4067.

**18480 Rabdonervosin A**

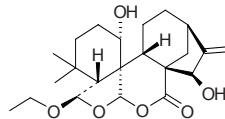
1 $\alpha$ ,6 $\beta$ ,15 $\beta$ -Trihydroxy-6,7-B-seco-ent-kaur-16-en-6,20-epoxy-7,20- $\delta$ -olide  
 $C_{20}H_{28}O_6$  (364.44). White acicular crystals (ethyl acetate), mp 312–314°C.  
**Source:** XIAN MAI XIANG CHA CAI *Rabdosia nervosa*. **Ref:** 496, 4067.

**18481 Rabdonervosin B**

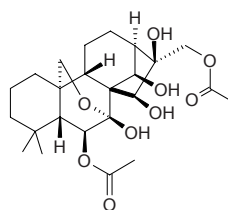
$C_{21}H_{30}O_6$  (378.47). White acicular crystals, mp 300–302°C. **Source:** XIAN  
 MAI XIANG CHA CAI *Rabdosia nervosa*. **Ref:** 828, 4067.

**18482 Rabdonervosin C**

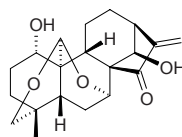
$C_{22}H_{32}O_6$  (392.5). White acicular crystals (ethyl acetate), mp 297–299°C.  
**Source:** XIAN MAI XIANG CHA CAI *Rabdosia nervosa*. **Ref:** 786.

**18483 Rabdophyllin H**

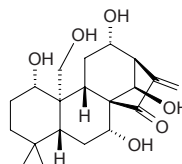
[102641-82-7]  $C_{24}H_{36}O_9$  (468.55). White crystals, mp 234–236°C, mp  
 220–222°C. **Pharm:** Antineoplastic (mus, EAC, biotic prolonged rate =  
 188.9%  $p < 0.01$ ); cytotoxic (hmn, liver cell strain QGY-7703, *in vitro*,  $IC_{50}$  =  
 3.87  $\mu$ g/mL). **Source:** DA YE XIANG CHA CAI *Rabdosia macrophylla* (leaf).  
**Ref:** 45, 1409, 4067.

**18484 Rabdoserrin A**

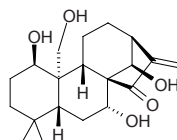
[96685-01-7]  $C_{20}H_{26}O_5$  (346.43). Colorless lamellar crystals  
 (chloroform–ethanol), mp 312–314°C,  $[\alpha]_D^{20} = -98.2^\circ$  ( $c = 1.4$ , DMF) **Pharm:**  
 Cytotoxic (HeLa, 4  $\mu$ g/mL, InRt = 87.6%). **Source:** NEI ZHE XIANG CHA  
 CAI *Isodon inflexa* [Syn. *Rabdosia inflexa*] (leaf: yield = 0.057%), XI  
 HUANG CAO *Rabdosia serra* (stem and leaf). **Ref:** 29, 900, 4067.

**18485 Rabdoserrin B**

[96685-00-6]  $C_{20}H_{30}O_6$  (366.46). mp 278–280°C,  $[\alpha]_D^{20} = -95.8^\circ$  ( $c = 0.6$ ,  
 pyridine). **Pharm:** Cytotoxic (*in vitro*,  $P_{388}$ ,  $ED_{50} = 1.01 \mu$ g/mL; HeLa)<sup>[3012]</sup>.  
**Source:** NEI ZHE XIANG CHA CAI *Isodon inflexa* [Syn. *Rabdosia inflexa*]  
 (leaf: yield = 0.011%), WEI YE XIANG CHA CAI *Rabdosia excisa* (aerial  
 parts: yield = 0.00053% dw), XI HUANG CAO *Rabdosia serra*. **Ref:** 660, 900,  
 3012, 4067.

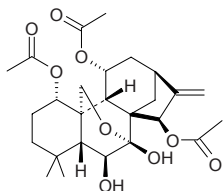
**18486 Rabdoserrin D**

$C_{20}H_{30}O_5$  (350.46). **Source:** XI HUANG CAO *Rabdosia serra*. **Ref:** 660,  
 4067.

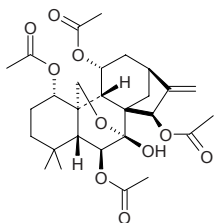


**18487 Rabdosiainin A**

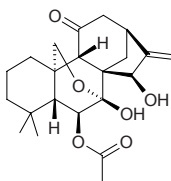
$C_{26}H_{36}O_9$  (492.57). Source: SI GUO XIANG CHA CAI *Rabdosisia shikokiana*.  
Ref: 660, 4067.

**18488 Rabdosiainin B**

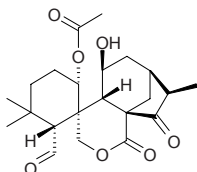
$C_{28}H_{38}O_{10}$  (534.61). Source: SI GUO XIANG CHA CAI *Rabdosisia shikokiana*.  
Ref: 660, 4067.

**18489 Rabdosiainin C**

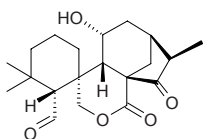
$C_{22}H_{30}O_6$  (390.48). mp 222~225°C,  $[\alpha]_D^{20} = -170^\circ$  ( $c = 0.15$ ,  $CHCl_3$ ). Source:  
SI GUO XIANG CHA CAI *Rabdosisia shikokiana*. Ref: 4067.

**18490 Rabdosichuanin A**

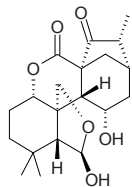
$C_{22}H_{30}O_7$  (406.48). mp 225~227°C,  $[\alpha]_D^{25} = +107.27^\circ$  ( $c = 0.55$ , MeOH).  
Source: SI CHUAN XIANG CHA CAI *Isodon setschwanensis*. Ref: 4067.

**18491 Rabdosichuanin B**

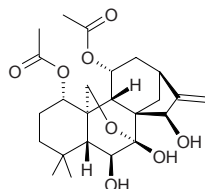
$C_{20}H_{28}O_5$  (348.33). mp 241~243°C,  $[\alpha]_D^{24} = -58.16^\circ$  ( $c = 0.576$ , MeOH).  
Source: SI CHUAN XIANG CHA CAI *Isodon setschwanensis*. Ref: 4067.

**18492 Rabdosichuanin C**

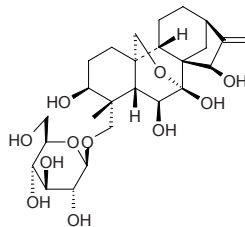
$C_{20}H_{28}O_6$  (364.44). mp 231~233°C,  $[\alpha]_D^{25} = -120.94^\circ$  ( $c = 0.55$ , MeOH).  
Source: SI CHUAN XIANG CHA CAI *Isodon setschwanensis*. Ref: 4067.

**18493 Rabdosichuanin D**

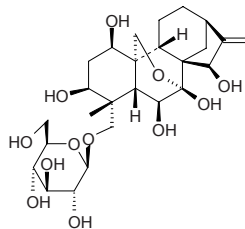
$C_{24}H_{34}O_8$  (450.53). mp 246~248°C,  $[\alpha]_D^{25} = -32.79^\circ$  ( $c = 0.427$ , MeOH).  
Source: SI CHUAN XIANG CHA CAI *Isodon setschwanensis*. Ref: 4067.

**18494 Rabdoside 1**

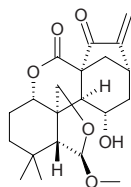
$C_{26}H_{40}O_{11}$  (528.60). mp 179~180°C,  $[\alpha]_D^{26.5} = -4.6^\circ$  ( $c = 1.0$ , MeOH). Source:  
MAO E XIANG CHA CAI *Rabdosisia eriocalyx*. Ref: 660, 4067.

**18495 Rabdoside 2**

$C_{26}H_{40}O_{12}$  (544.60). mp 170~171°C,  $[\alpha]_D^{26.5} = -4.5^\circ$  ( $c = 1.0$ , MeOH). Source:  
MAO E XIANG CHA CAI *Rabdosisia eriocalyx*. Ref: 660, 4067.

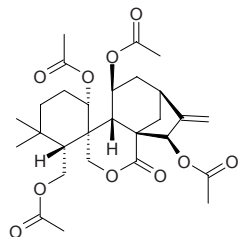
**18496 Rabdosin A**

$C_{21}H_{28}O_6$  (376.45). mp 200~202°C,  $[\alpha]_D^{13} = -40.1^\circ$  ( $c = 1.07$ ,  $C_5H_5N$ ). Source:  
MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosisia japonica*]. Ref:  
4067.

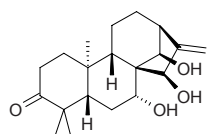


**18497 Rabdositate**

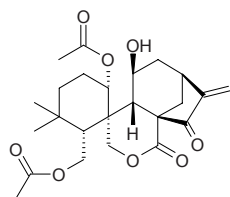
$C_{28}H_{38}O_{10}$  (534.61). mp 216~218°C,  $[\alpha]_D = -47.2^\circ$  ( $c = 0.44$ ,  $CHCl_3$ ). Source: MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosisia japonica*]. Ref: 4067.

**18498 Rabdositatol**

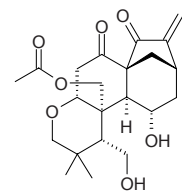
$C_{20}H_{30}O_4$  (334.46). mp 271~272.5°C,  $[\alpha]_D^{16} = -108^\circ$  ( $c = 0.001$ , MeOH). Source: MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosisia japonica*]. Ref: 4067.

**18499 Rabdosisin B**

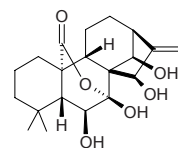
Exidonin  $C_{24}H_{32}O_8$  (448.52). mp 182~184°C,  $[\alpha]_D^{13} = 130.6^\circ$  ( $c = 2.20$ ,  $C_5H_5N$ ). Pharm: Cytotoxic (K562,  $IC_{50} = 4.61 \mu\text{mol/L}$ , control Cisplatin  $IC_{50} = 3.84 \mu\text{mol/L}$ ; Bcap37,  $IC_{50} = 15.84 \mu\text{mol/L}$ , Cisplatin  $IC_{50} = 1.54 \mu\text{mol/L}$ ; BGC823,  $IC_{50} = 10.93 \mu\text{mol/L}$ , Cisplatin  $IC_{50} = 2.54 \mu\text{mol/L}$ ; CA,  $IC_{50} > 100 \mu\text{mol/L}$ , Cisplatin  $IC_{50} = 0.88 \mu\text{mol/L}$ ; HeLa,  $IC_{50} > 100 \mu\text{mol/L}$ , Cisplatin  $IC_{50} = 3.60 \mu\text{mol/L}$ )<sup>[4353]</sup>. Source: LU SHAN XIANG CHA CAI *Isodon rubescens* var. *lushanensis* (leaf), MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosisia japonica*]. Ref: 5, 4067, 4353.

**18500 Rabdosisin C**

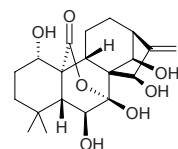
[82460-75-1]  $C_{22}H_{30}O_7$  (406.48). mp 266~268°C. Source: MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosisia japonica*]. Ref: 5.

**18501 Rabdoternin A**

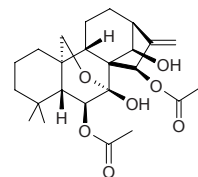
$C_{20}H_{28}O_6$  (364.44). Source: LU SHAN XIANG CHA CAI *Isodon rubescens* var. *lushanensis* (leaf), NIU WEI CAO *Isodon ternifolia*. Ref: 660, 4067, 4353.

**18502 Rabdoternin B**

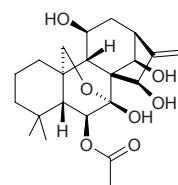
$C_{20}H_{28}O_7$  (380.44). Source: LU SHAN XIANG CHA CAI *Isodon rubescens* var. *lushanensis* (leaf), NIU WEI CAO *Isodon ternifolia*. Ref: 660, 4067, 4353.

**18503 Rabdoternin C**

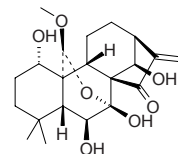
Rubescensin E  $C_{24}H_{34}O_7$  (434.53). Source: DONG LING CAO *Rabdosisia rubescens*, NIU WEI CAO *Isodon ternifolia*. Ref: 660, 1521, 4067.

**18504 Rabdoternin D**

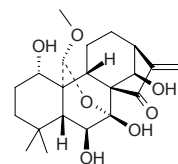
$C_{22}H_{32}O_7$  (408.50).  $[\alpha]_D = -43.3^\circ$  ( $c = 0.38$ , MeOH). Source: HAN SHENG XIANG CHA CAI *Isodon xerophilus* (leaf), NIU WEI CAO *Isodon ternifolia*. Ref: 4067, 5182.

**18505 Rabdoternin E**

$C_{21}H_{30}O_7$  (394.47).  $[\alpha]_D^{21} = -47.2^\circ$  ( $c = 0.67$ , MeOH). Source: NIU WEI CAO *Isodon ternifolia*. Ref: 4067.

**18506 Rabdoternin F**

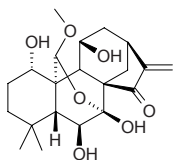
$C_{21}H_{30}O_7$  (394.47).  $[\alpha]_D^{26} = -78.8^\circ$  ( $c = 0.29$ , MeOH). Source: NIU WEI CAO *Isodon ternifolia*. Ref: 4067.



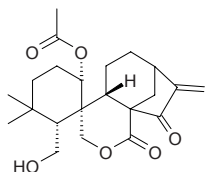


**18507 Rabdoternin G**

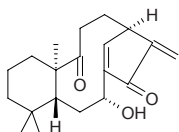
$C_{22}H_{30}O_7$  (394.47).  $[\alpha]_D^{26} = -103.0^\circ$  ( $c = 0.59$ , MeOH). Source: NIU WEI CAO *Isodon ternifolia*. Ref: 4067.

**18508 Rabdoternin H**

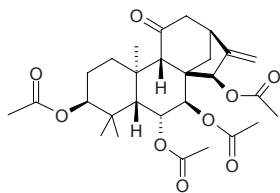
$C_{22}H_{30}O_6$  (390.48). Colorless needles (MeOH), mp 246~248°C,  $[\alpha]_D^{24.9} = +36.3^\circ$  ( $c = 0.903$ , MeOH). Source: CHONG YA YAO *Isodon ternifolius*. Ref: 2265.

**18509 Rabdoubrosanin**

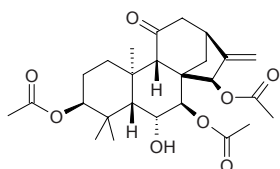
$C_{20}H_{28}O_3$  (316.44).  $[\alpha]_D^{22} = -40.6^\circ$  ( $c = 0.16$ , MeOH). Source: YIN DI XIANG CHA CAI *Isodon umbrosa*. Ref: 4067.

**18510 Rabyuennane A**

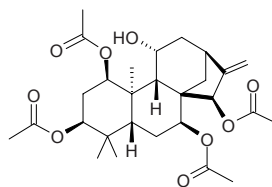
$C_{28}H_{38}O_9$  (518.61). Source: BU YU HONG *Rabdosia yuennanensis*. Ref: 660, 4067.

**18511 Rabyuennane B**

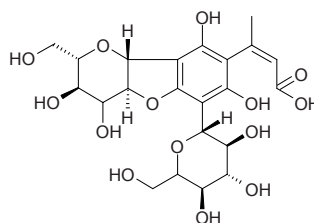
$C_{26}H_{36}O_8$  (476.57). Source: BU YU HONG *Rabdosia yuennanensis*. Ref: 660, 4067.

**18512 Rabyuennane C**

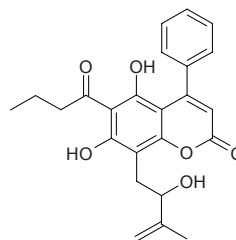
$C_{28}H_{40}O_9$  (520.63). Source: BU YU HONG *Rabdosia yuennanensis*. Ref: 660, 4067.

**18513 Racemosic acid**

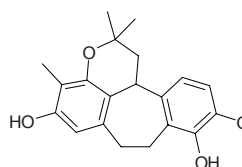
(*rel*)-4,6-Dihydroxy-5-[3-methyl-(*E*)-propenoic acid-3-yl]-7 $\beta$ -glucopyranosyl-{2 $\alpha$ ,3 $\beta$ -dihydrobenzofuran}-(3,2:b)-[4 $\alpha$ ,5 $\beta$ -dihydroxy-6 $\alpha$ -hydroxymethyltetrahydro]dropyran  $C_{27}H_{28}O_{14}$  (516.46). Pharm: Anti-Inflammatory (*in vitro*, COX-1 inhibitor,  $IC_{50} = (90.1 \pm 3.4) \mu\text{mol/L}$ , control Indomethacin,  $IC_{50} = (9.5 \pm 0.1) \mu\text{mol/L}$ ; 5-LOX inhibitor,  $IC_{50} = (18.5 \pm 0.3) \mu\text{mol/L}$ , Indomethacin,  $IC_{50} = 65.2 \mu\text{mol/L}$ ). Source: JU GUO RONG *Ficus racemosa* (bark). Ref: 4971.

**18514 Racemosol**

$C_{24}H_{24}O_6$  (408.46). Yellow prisms ( $C_6H_{14}$ :EtOAc = 9:1), mp 140.8°C,  $[\alpha]_D = 0^\circ$  ( $c = 0.8$ ,  $CHCl_3$ ). Source: ZONG ZHUANG TIE LI MU *Mesua racemosa*. Ref: 1871.

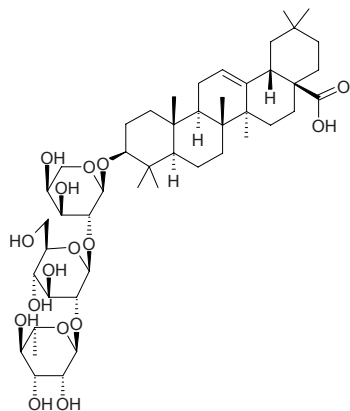
**18515 Racemosol‡**

[103805-86-3]  $C_{21}H_{24}O_4$  (340.42). Pharm: Cytotoxic (KB,  $EC_{50} = 15.0 \mu\text{g/mL}$ , control Ellipticine,  $EC_{50} = 0.3 \mu\text{g/mL}$ ; BC,  $EC_{50} = 6.1 \mu\text{g/mL}$ , Ellipticine,  $EC_{50} = 0.3 \mu\text{g/mL}$ )<sup>[5092]</sup>; antimalarial (*Plasmodium falciparum*,  $EC_{50} = 0.9 \mu\text{g/mL}$ , control Chloroquine diphosphate,  $EC_{50} = 0.16 \mu\text{g/mL}$ )<sup>[5092]</sup>. Source: MA LA BA YANG TI JIA *Bauhinia malabarica* (root), ZONG ZHUANG HUA YANG TI JIA *Bauhinia racemosa*. Ref: 1521, 5092.

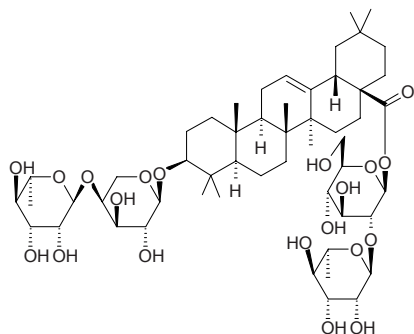


**18516 Raddeanin A**

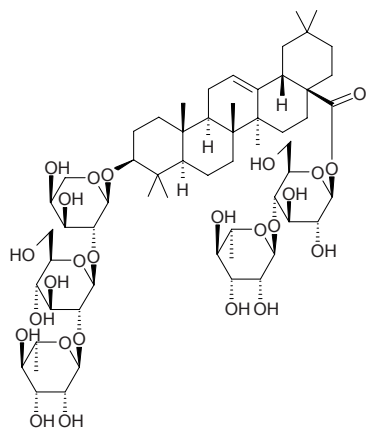
$C_{47}H_{76}O_{16}$  (897.12). Source: DUO BEI YIN LIAN HUA *Anemone raddeana* (dried rhizome: mean content = 0.32%<sup>[5508]</sup>). Ref: 660, 5508.

**18517 Raddeanin C**

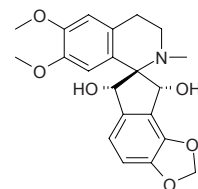
$C_{53}H_{86}O_{20}$  (1043.26). Source: DUO BEI YIN LIAN HUA *Anemone raddeana*. Ref: 660.

**18518 Raddeanin D**

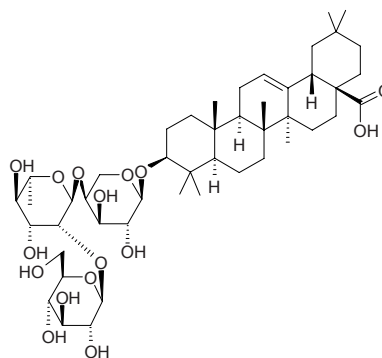
$C_{59}H_{96}O_{25}$  (1205.41). Source: DUO BEI YIN LIAN HUA *Anemone raddeana*. Ref: 660.

**18519 Raddeanine**

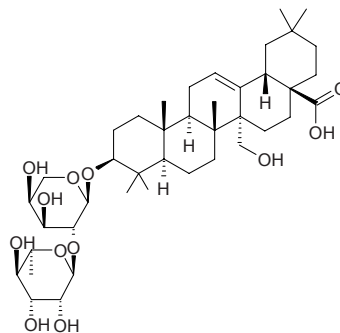
Sipeimine†  $C_{21}H_{23}NO_6$  (385.42). Source: KU MANG HUANG JIN *Corydalis govaniana*, XIAO HUANG ZI JIN *Corydalis ochotensis* var. *raddeana*. Ref: 660, 1521.

**18520 Raddeanin E**

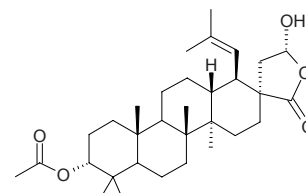
$C_{47}H_{76}O_{16}$  (897.12). Source: DUO BEI YIN LIAN HUA *Anemone raddeana*. Ref: 660.

**18521 Raddeanoside**

27-Hydroxyolean-12-en-28-oic-acid-3-O- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranoside  $C_{41}H_{66}O_{12}$  (750.98). White powder, mp 274–276°C. Source: DUO BEI YIN LIAN HUA *Anemone raddeana*. Ref: 2240.

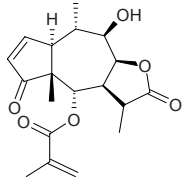
**18522 Radermasinin**

$C_{32}H_{50}O_5$  (514.75). Pharm: Cytotoxic. Source: CAI DOU SHU *Radermachera sinica*. Ref: 660, 1521.

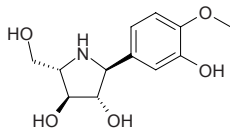


**18523 Radiatin**

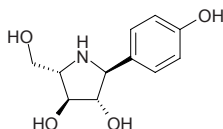
[25873-31-8] C<sub>19</sub>H<sub>24</sub>O<sub>6</sub> (348.40). mp 184~188°C, 202~204°C. **Pharm:** Antineoplastic (mus P<sub>388</sub>, *in vivo*, 25mg/kg, biotic prolonged rate = 61%); cytotoxic (mus, P<sub>388</sub> *in vitro*, ED<sub>50</sub> = 0.39µg/mL; mus, L<sub>1210</sub> *in vitro*, ED<sub>50</sub> = 1.2µg/mL; KB *in vitro*, ED<sub>50</sub> = 1.6µg/mL). **Source:** BAI LAI SHI JU *Baileya multiradiata*. **Ref:** 5, 658.

**18524 Radicamine A**

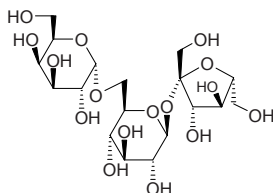
(2*S*,3*S*,4*S*,5*S*)-2-Hydroxymethyl-3,4-dihydroxy-5-(3-hydroxy-4-methoxyphenyl)-pyrrolidine C<sub>12</sub>H<sub>17</sub>NO<sub>5</sub> (255.27). Pale yellow oil, [α]<sub>D</sub> = +43.7° (c = 0.13, H<sub>2</sub>O). **Pharm:** α-Glucosidase inhibitor (IC<sub>50</sub> = 6.7µmol/L, control DMDP, IC<sub>50</sub> = 4.9µmol/L). **Source:** BAN BIAN LIAN *Lobelia chinensis* [Syn. *Lobelia radicans*]. **Ref:** 4134.

**18525 Radicamine B**

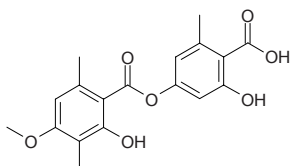
(2*S*,3*S*,4*S*,5*S*)-2-Hydroxymethyl-3,4-dihydroxy-5-(4-hydroxyphenyl)-pyrrolidine C<sub>11</sub>H<sub>15</sub>NO<sub>4</sub> (225.25). Pale yellow oil, [α]<sub>D</sub> = +72.0° (c = 0.10, H<sub>2</sub>O). **Pharm:** α-Glucosidase inhibitor (IC<sub>50</sub> = 9.3µmol/L, control DMDP, IC<sub>50</sub> = 4.9µmol/L). **Source:** BAN BIAN LIAN *Lobelia chinensis* [Syn. *Lobelia radicans*]. **Ref:** 4134.

**18526 Raffinose**

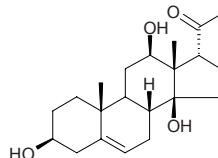
*D*-Raffinose pentahydrate [512-69-6] C<sub>18</sub>H<sub>32</sub>O<sub>16</sub> (504.45). mp 118~119°C. **Source:** CHE QIAN *Plantago asiatica*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 2, 660.

**18527 Ramalic acid**

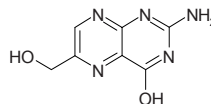
[500-37-8] C<sub>18</sub>H<sub>18</sub>O<sub>7</sub> (346.34). mp 203°C (dec). **Source:** SONG LUO *Usnea longissima*. **Ref:** 6.

**18528 Ramanone**

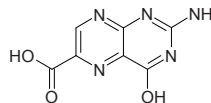
C<sub>21</sub>H<sub>32</sub>O<sub>4</sub> (348.49). **Source:** LUO MO ZI *Metaplexis japonica*. **Ref:** 660.

**18529 Ranachrome 3**

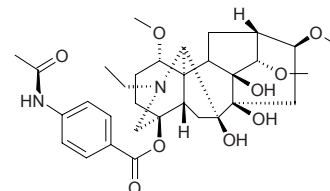
C<sub>7</sub>H<sub>7</sub>N<sub>5</sub>O<sub>2</sub> (193.17). **Source:** QING WA *Rana nigromaculata*; *Rana plancyi*. **Ref:** 6.

**18530 Ranachrome 5**

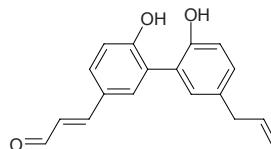
2-Amino-4-hydroxy-pteridine-6-carboxylic acid C<sub>7</sub>H<sub>5</sub>N<sub>5</sub>O<sub>3</sub> (207.15). **Source:** QING WA *Rana nigromaculata*; *Rana plancyi*, JIN YU *Carassius auratus*. **Ref:** 6.

**18531 Ranaconitine**

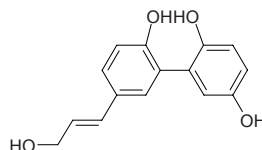
C<sub>32</sub>H<sub>44</sub>N<sub>2</sub>O<sub>9</sub> (600.72). **Source:** GAN WAN WU TOU *Aconitum finetianum*, GAO WU TOU *Aconitum sinomontanum*, NIU BIAN *Aconitum barbatum* var. *puberulum* [Syn. *Aconitum ochranthum*]. **Ref:** 660, 1521.

**18532 Randainal**

[87562-13-8] C<sub>18</sub>H<sub>16</sub>O<sub>3</sub> (280.33). **Source:** HOU PO *Magnolia officinalis*. **Ref:** 2.

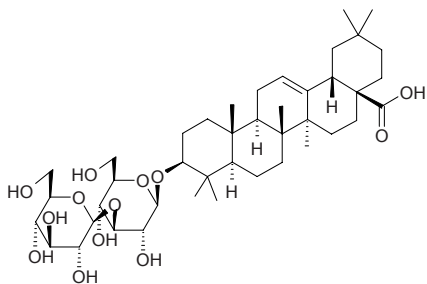
**18533 Randaiol**

5-Allyl-2,2',5'-trihydroxybiphenyl C<sub>15</sub>H<sub>14</sub>O<sub>4</sub> (258.28). **Source:** TAI WAN CHA MU *Sassafras randainense*. **Ref:** 427.

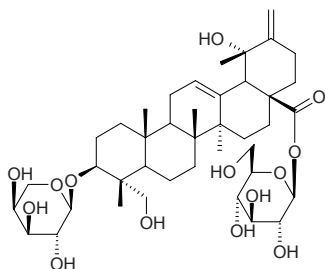


**18534 Radianin**

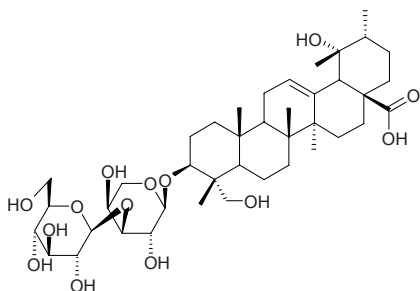
[72786-31-3] C<sub>42</sub>H<sub>68</sub>O<sub>13</sub> (780.79). Amorphous powder, mp 290~295°C (dec), [α]<sub>D</sub><sup>25</sup> = +0.22° (c = 0.036, methanol). Pharm: Immunoenhancer (*in vitro*, promotes multiplication of lymphocyte T in 10ng/mL~10pg/mL); hemolytic (ox erythrocyte, HC<sub>50</sub> = 2mg/L); molluscicide (planorbid test, LC<sub>50</sub> = 3mg/L). Source: LIAO DONG CONG MU *Aralia elata*. Ref: 900.

**18535 Radiansaponin I**

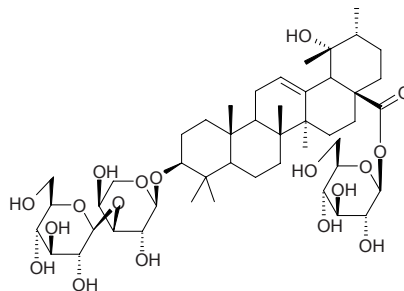
3-*O*- $\alpha$ -L-Arabinopyranosyl-3 $\beta$ ,19 $\alpha$ ,23-trihydroxyursa-12,20(30)-dien-28-oic acid 28- $\beta$ -D-glucopyranosyl ester C<sub>41</sub>H<sub>64</sub>O<sub>14</sub> (780.96). White powder, [α]<sub>D</sub><sup>20</sup> = +45.9° (c = 0.17, MeOH). Source: BA NA MA SHAN SHI LIU *Randia formosa* (leaf). Ref: 3951.

**18536 Radiansaponin II**

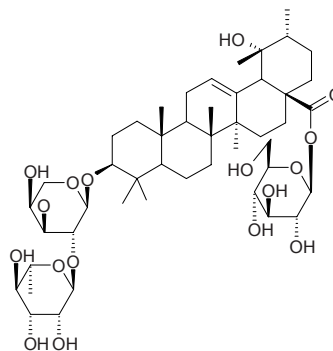
3-*O*- $\beta$ -D-Glucopyranosyl-(1→3)- $\alpha$ -L-arabinopyranosyl rotundic acid C<sub>41</sub>H<sub>66</sub>O<sub>14</sub> (782.97). White powder, [α]<sub>D</sub><sup>20</sup> = +10.9° (c = 0.12, MeOH). Source: BA NA MA SHAN SHI LIU *Randia formosa* (leaf). Ref: 3951.

**18537 Radiansaponin III**

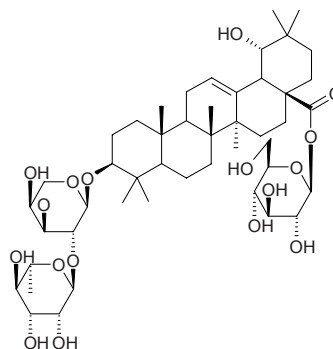
3-*O*- $\beta$ -D-Glucopyranosyl-(1→3)- $\alpha$ -L-arabinopyranosyl pomolic acid 28- $\beta$ -D-glucopyranosyl ester C<sub>47</sub>H<sub>76</sub>O<sub>18</sub> (929.12). White powder, [α]<sub>D</sub><sup>20</sup> = +6.67° (c = 0.33, MeOH). Source: BA NA MA SHAN SHI LIU *Randia formosa* (leaf). Ref: 3951.

**18538 Radiansaponin IV**

3-*O*- $\alpha$ -L-Rhamnopyranosyl-(1→2)- $\alpha$ -L-arabinopyranosyl pomolic acid 28- $\beta$ -D-glucopyranosyl ester C<sub>47</sub>H<sub>76</sub>O<sub>17</sub> (913.12). White powder, [α]<sub>D</sub><sup>20</sup> = -65° (c = 0.24, MeOH). Source: BA NA MA SHAN SHI LIU *Randia formosa* (leaf). Ref: 3951.

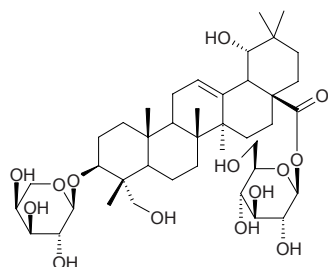
**18539 Radiansaponin V**

3-*O*- $\alpha$ -L-Rhamnopyranosyl-(1→2)- $\alpha$ -L-arabinopyranosyl siaresinolic acid 28- $\beta$ -D-glucopyranosyl ester C<sub>47</sub>H<sub>76</sub>O<sub>17</sub> (913.12). White powder, [α]<sub>D</sub><sup>20</sup> = -29.6° (c = 0.24, MeOH). Source: BA NA MA SHAN SHI LIU *Randia formosa* (leaf). Ref: 3951.

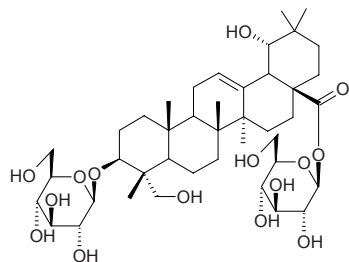


**18540 Randiasaponin VI**

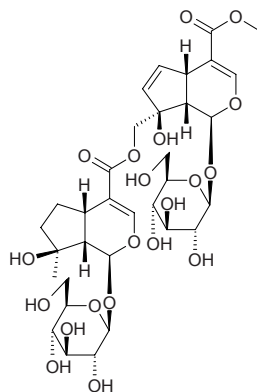
3-*O*- $\alpha$ -L-Arabinopyranosyl ilexosapogenin A 28- $\beta$ -D-glucopyranosyl ester  
 $C_{41}H_{66}O_{14}$  (782.97). White powder,  $[\alpha]_D^{20} = +7.1^\circ$  ( $c = 0.14$ , MeOH). Source:  
 BA NA MA SHAN SHI LIU *Randia formosa* (leaf). Ref: 3951.

**18541 Randiasaponin VII**

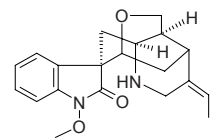
3-*O*- $\beta$ -D-Glucopyranosyl ilexosapogenin A 28- $\beta$ -D-glucopyranosyl ester  
 $C_{42}H_{68}O_{15}$  (813.00). White powder,  $[\alpha]_D^{20} = +16.6^\circ$  ( $c = 0.35$ , MeOH). Source:  
 BA NA MA SHAN SHI LIU *Randia formosa* (leaf). Ref: 3951.

**18542 Randinoside**

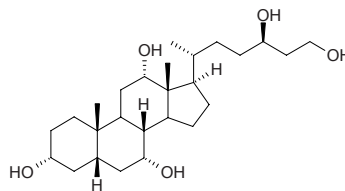
$C_{33}H_{46}O_{20}$  (762.72). White powder,  $[\alpha]_D^{20} = -6.5^\circ$  ( $c = 1.7$ , MeOH). Source:  
 SHAN SHI LIU *Randia spinosa*. Ref: 3380.

**18543 Rankinidine**

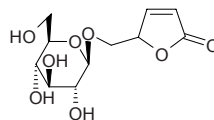
[106466-66-4]  $C_{20}H_{24}N_2O_3$  (340.43). mp 175~178°C,  $[\alpha]_D = -126^\circ$ . Source:  
 GOU WEN *Gelsemium elegans*. Ref: 294.

**18544 Ranol**

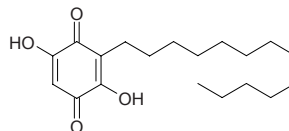
[67392-10-3]  $C_{26}H_{46}O_5$  (438.65). Source: HA SHI MA *Rana temporaria*  
*chensinensis*; *Rana amurensis*. Ref: 6.

**18545 Ranunculin**

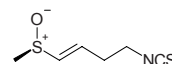
[644-69-9]  $C_{11}H_{16}O_8$  (276.25). mp 141~142°C. Pharm: Cytotoxic (RB,  $IC_{50} =$   
 $0.21 \mu\text{mol/L}$ , Bel7420,  $IC_{50} = 0.35 \mu\text{mol/L}$ ); antimutagenic (back mutation of  
*Salmonella typhimurium* TA<sub>100</sub> and TA<sub>102</sub> induced by mitomycin, InRt = 70%);  
 causes blistering in cuticle. Source: BAI TOU WENG *Pulsatilla chinensis*  
 (root: content = 0.66%<sup>[5501]</sup>), SHI LONG RUI *Ranunculus sceleratus*. Ref: 6,  
 658, 5501.

**18546 Rapanone**

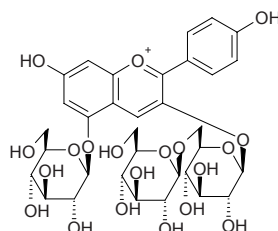
[573-40-0]  $C_{19}H_{30}O_4$  (322.45). Brown lamellar crystals (hexane-ethanol), mp  
 141~142°C; orange glittering lamellar crystals ( $CCl_4$ ), mp 137~142°C. Pharm:  
 Anthelmintic. Source: LA ZHU GUO *Aegiceras corniculatum*, DA WEI YAO  
*Heliotropium indicum*, ZHU SHA GEN *Ardisia crenata*, *Ardisia* sp., *Myrsine*  
 sp. Ref: 660, 658, 1521.

**18547 Raphanin**

$C_6H_9NOS_2$  (175.27). Pharm: Antibacterial (*Staphylococcus aureus*,  
*Escherichia coli*, EC = 1 mg/mL); antifungal; cytotoxic (shows potential  
 cancer protective properties) Source: LAI FU ZI *Raphanus sativus*. Ref: 1521,  
 5501.

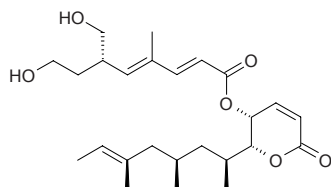
**18548 Raphanusin**

Rubrobrassicin [75093-88-8]  $C_{33}H_{41}O_{20}^+$  (757.68). Source: LAI FU *Raphanus*  
*sativus*. Ref: 660.

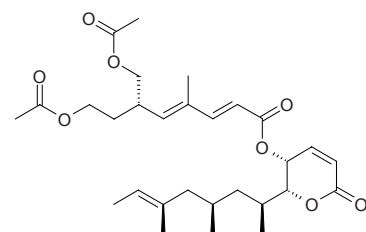


**18549 Rasfonin**

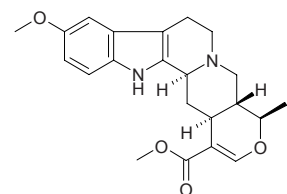
$C_{25}H_{38}O_6$  (434.58). White amorphous powder,  $[\alpha]_D^{24} = -223.6^\circ$  ( $c = 6.00$ , MeOH). **Pharm:** Immunosuppressant (mus splenic lymphocyte, ConA-induced proliferation,  $IC_{50} = 0.7\mu\text{g/mL}$ , control Cyclosporin,  $IC_{50} = 0.04\mu\text{g/mL}$ ; LPS-induced proliferation,  $IC_{50} = 0.5\mu\text{g/mL}$ , control Cyclosporin,  $IC_{50} = 0.07\mu\text{g/mL}$ ). **Source:** MAO SHU MEI *Trichurus terrophilus*. **Ref:** 4491.

**18550 Rasfonin diacetate**

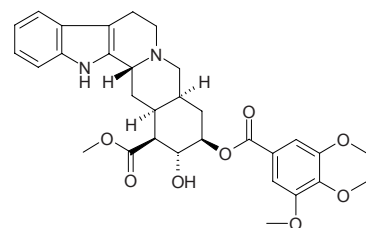
$C_{29}H_{42}O_8$  (518.65). Colorless amorphous powder,  $[\alpha]_D^{23} = -95.7^\circ$  ( $c = 0.72$ , MeOH). **Pharm:** Immunosuppressant (mus splenic lymphocyte, ConA-induced proliferation,  $IC_{50} = 6.0\mu\text{g/mL}$ , control Cyclosporin,  $IC_{50} = 0.04\mu\text{g/mL}$ ; LPS-induced proliferation,  $IC_{50} = 6.9\mu\text{g/mL}$ , control Cyclosporin,  $IC_{50} = 0.07\mu\text{g/mL}$ ). **Source:** MAO SHU MEI *Trichurus terrophilus*. **Ref:** 4491.

**18551 Raumitorine**

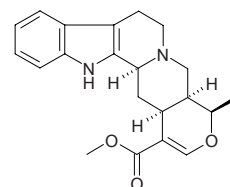
$C_{22}H_{26}N_2O_4$  (382.46). **Source:** CUI TU LUO FU MU *Rauwolfia vomitoria*. **Ref:** 660.

**18552 Raunescine**

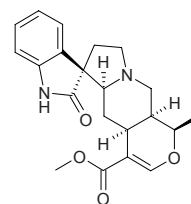
[117-73-7]  $C_{31}H_{36}N_2O_8$  (564.64). mp 160~170°C. **Pharm:** Antihypertensive; sedative; used in treatment of arrhythmia. **Source:** LUO FU MU *Rauwolfia verticillata*. **Ref:** 6, 658.

**18553 Rauniticine**

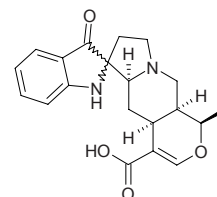
$C_{21}H_{24}N_2O_3$  (352.44). **Source:** GUANG LIANG LUO FU MU *Rauwolfia nitida*, MIAN MAO GOU TENG *Uncaria lanosa*, TUO YUAN GOU TENG *Uncaria elliptica*, XIA GOU TENG *Uncaria attenuata*. **Ref:** 1521, 5341.

**18554 Rauniticine oxindole A**

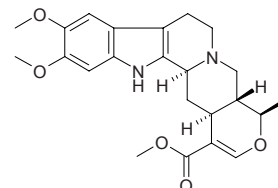
$C_{21}H_{24}N_2O_4$  (368.44). **Source:** TUO YUAN GOU TENG *Uncaria elliptica*. **Ref:** 5341.

**18555 Rauniticine pseudoindoxyl**

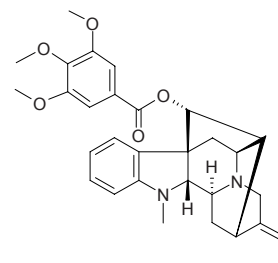
$C_{20}H_{22}N_2O_4$  (354.41). **Source:** TUO YUAN GOU TENG *Uncaria elliptica*. **Ref:** 5341.

**18556 Rauvanine**

$C_{23}H_{28}N_2O_5$  (412.49). **Source:** CUI TU LUO FU MU *Rauwolfia vomitoria*. **Ref:** 660.

**18557 Rauvomitine**

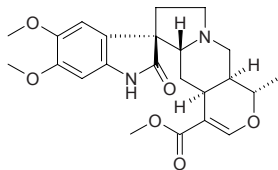
$C_{30}H_{34}N_2O_5$  (502.62). **Source:** CUI TU LUO FU MU *Rauwolfia vomitoria*, GANG GUO LUO FU MU *Rauwolfia obscura*. **Ref:** 660, 1521.



**18558 Rauvoxine**

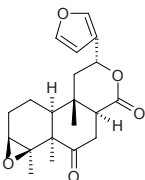
$C_{23}H_{28}N_2O_6$  (428.49). Source: CUI TU LUO FU MU *Rauvolfia vomitoria*.

Ref: 660.

**18559 Ravidin A**

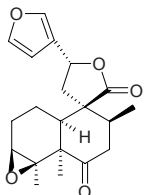
$C_{20}H_{24}O_5$  (344.41). Colorless crystals, mp 171~173°C,  $[\alpha]_D^{25} = -22.45^\circ$  ( $c = 0.530$ ,  $CHCl_3$ ). Source: QIAN HUI MAO GUAN JU *Nannoglottis ravida*

(root). Ref: 3852.

**18560 Ravidin B**

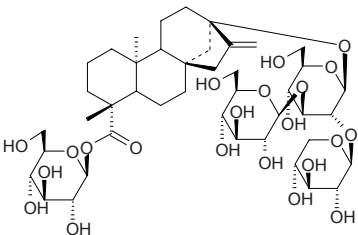
$C_{20}H_{24}O_5$  (344.41). White amorphous solid,  $[\alpha]_D^{25} = -77.50^\circ$  ( $c = 0.120$ ,  $CHCl_3$ ).

Source: QIAN HUI MAO GUAN JU *Nannoglottis ravida* (root). Ref: 3852.

**18561 Rebaudioside F**

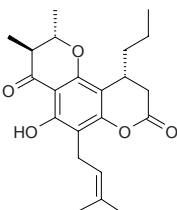
$C_{43}H_{68}O_{22}$  (937.01). Non-crystalline solid,  $[\alpha]_D = 25.5^\circ$  ( $c = 1.0$ , MeOH).

Source: TIAN YE JU *Eupatorium rebaudianum*. Ref: 1987.

**18562 Recedensolide**

$C_{22}H_{28}O_5$  (372.47). Yellow oil,  $[\alpha]_D^{25} = -76.1^\circ$  ( $c = 1.0$ ,  $CH_2Cl_2$ ). Pharm:

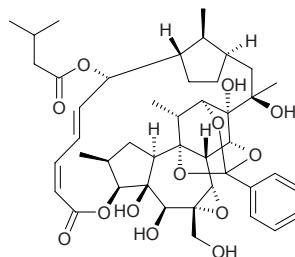
Cytotoxic (KB,  $ED_{50} = 6.81\mu g/mL$ , HeLa,  $ED_{50} = 6.27\mu g/mL$ , hmn medulloblastoma,  $ED_{50} = 12.49\mu g/mL$ , control Doxorubicin,  $ED_{50} = 0.15\mu g/mL$ ,  $0.14\mu g/mL$ ,  $0.19\mu g/mL$  respectively). Source: *Calophyllum blancoi* (seed). Ref: 4274.

**18563 Rediocide A**

$C_{44}H_{58}O_{13}$  (794.95). White powder, mp 193~195°C,  $[\alpha]_D^{30} = -124.0^\circ$  ( $c = 0.1$ ,

MeOH). Pharm: Acaricide (*Dermatophagoides pteronyssinus*, 7d,  $LC_{50} = 2.53\mu g/cm^2$ , control Benzyl benzoate,  $LC_{50} = 6.6\mu g/cm^2$ ). Source:

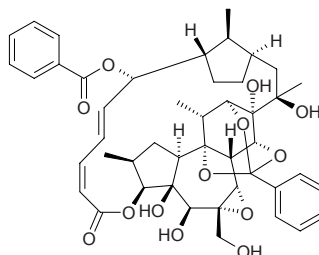
*Trigonostemon reidioides* (root). Ref: 4440.

**18564 Rediocide C**

$C_{46}H_{54}O_{13}$  (814.94). White powder, mp 191~193°C,  $[\alpha]_D^{30} = -46.0^\circ$  ( $c = 0.1$ ,

MeOH). Pharm: Acaricide (*Dermatophagoides pteronyssinus*, 7d,  $LC_{50} = 0.78\mu g/cm^2$ , control Benzyl benzoate,  $LC_{50} = 6.6\mu g/cm^2$ ). Source:

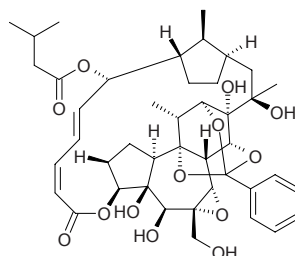
*Trigonostemon reidioides* (root). Ref: 4440.

**18565 Rediocide E**

$C_{43}H_{56}O_{13}$  (780.92). White powder, mp 197~198°C,  $[\alpha]_D^{30} = -14.0^\circ$  ( $c = 0.1$ ,

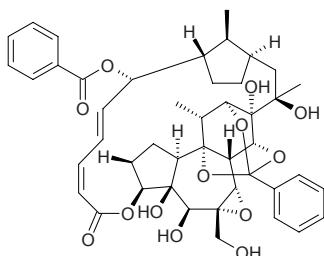
MeOH). Pharm: Acaricide (*Dermatophagoides pteronyssinus*, 7d,  $LC_{50} = 5.59\mu g/cm^2$ , control Benzyl benzoate,  $LC_{50} = 6.6\mu g/cm^2$ ). Source:

*Trigonostemon reidioides* (root). Ref: 4440.

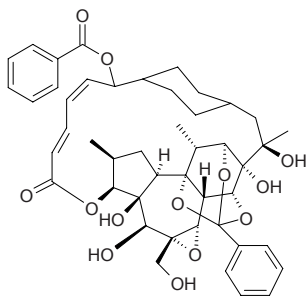


**18566 Rediocide F**

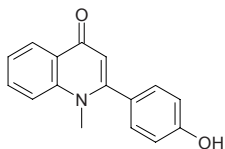
$C_{45}H_{52}O_{13}$  (800.91). White powder, mp 199–200°C,  $[\alpha]_D^{30} = -292.0^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Acaricide (*Dermatophagoides pteronyssinus*, 7d,  $LC_{50} = 0.92\mu\text{g}/\text{cm}^2$ , control Benzyl benzoate,  $LC_{50} = 6.6\mu\text{g}/\text{cm}^2$ ). **Source:** *Trigonostemon reidioides* (root). **Ref:** 4440.

**18567 Rediocide G**

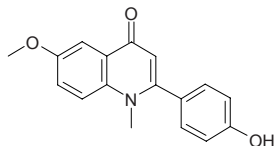
$C_{46}H_{54}O_{13}$  (814.94). White powder, mp >230°C (dec). **Pharm:** Cytotoxic. **Source:** *Trigonostemon reidioides* (root). **Ref:** 4519.

**18568 Reevesianine A**

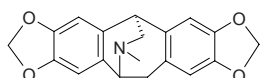
$C_{16}H_{13}NO_2$  (251.29). **Source:** YIN YU *Skimmia reevesiana*. **Ref:** 660.

**18569 Reevesianine B**

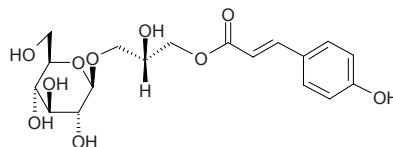
$C_{17}H_{15}NO_3$  (281.31). **Source:** YIN YU *Skimmia reevesiana*. **Ref:** 660.

**18570 Reframidine**

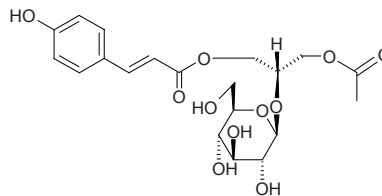
$C_{19}H_{17}NO_4$  (323.35). **Source:** LIE YE YE YING SU *Papaver nudicaule* var. *chinense*. **Ref:** 660.

**18571 Regalosite A**

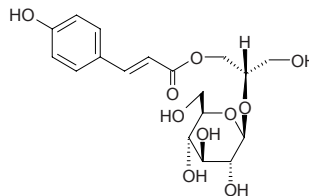
$C_{18}H_{24}O_{10}$  (400.39). **Source:** BAI HE *Lilium brownii* var. *viridulum* [Syn. *Lilium brownii* var. *colchesteri*], HEI BAI HE *Fritillaria camtschaticensis*, JUAN DAN *Lilium tigrinum* [Syn. *Lilium lancifolium*]. **Ref:** 660, 1521.

**18572 Regalosite B**

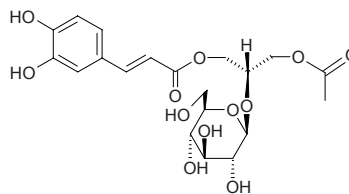
$C_{20}H_{26}O_{11}$  (442.42). **Source:** SHE XIANG BAI HE *Lilium longiflorum*. **Ref:** 660, 1521.

**18573 Regalosite D**

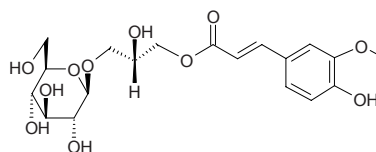
$C_{18}H_{24}O_{10}$  (400.39). **Source:** BAI HE *Lilium brownii* var. *viridulum* [Syn. *Lilium brownii* var. *colchesteri*], SHE XIANG BAI HE *Lilium longiflorum*. **Ref:** 660, 1521.

**18574 Regalosite E**

$C_{20}H_{26}O_{12}$  (458.42). **Source:** SHE XIANG BAI HE *Lilium longiflorum*. **Ref:** 660, 1521.

**18575 Regalosite F**

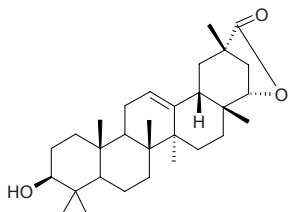
$C_{19}H_{26}O_{11}$  (430.41). **Source:** JUAN DAN *Lilium tigrinum* [Syn. *Lilium lancifolium*]. **Ref:** 660, 1521.



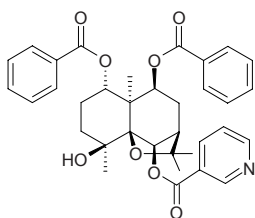


**18576 Regelide**

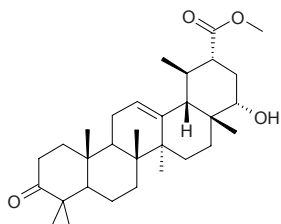
$C_{30}H_{46}O_3$  (454.70). Source: HEI MAN *Tripterygium regelii*, XIANG SI TENG *Abrus precatorius*. Ref: 660, 1521.

**18577 Regelidine**

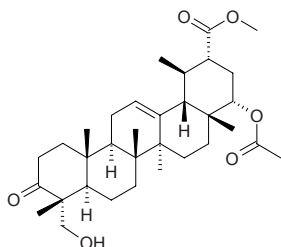
$C_{35}H_{37}NO_8$  (599.69). Source: HEI MAN *Tripterygium regelii*. Ref: 660, 1521.

**18578 Regelin**

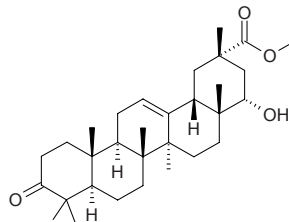
$C_{31}H_{48}O_4$  (484.73). Source: HEI MAN *Tripterygium regelii*, KUN MING SHAN HAI TANG *Tripterygium hypoglaucum*. Ref: 660, 1521.

**18579 Regelin C**

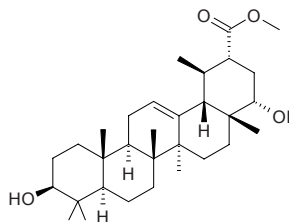
Methyl 3-oxo-22 $\alpha$ -acetoxy-23-hydroxy-urs-12-ene-30-oate [121880-06-6]  $C_{33}H_{50}O_6$  (542.76). Colorless massive crystals, mp 161~163°C,  $[\alpha]_D^{20} = +60^\circ$  ( $c = 0.5$ ,  $CHCl_3$ ). Source: HEI MAN *Tripterygium regelii*. Ref: 120.

**18580 Regelin D**

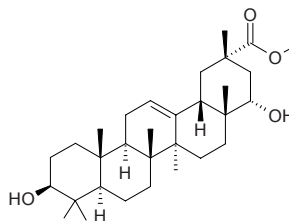
Methyl 3-oxo-22 $\alpha$ -hydroxy-olean-12-ene-29-oate [121880-07-7]  $C_{31}H_{48}O_4$  (484.73). Colorless acicular crystals, mp 197~198°C,  $[\alpha]_D^{20} = +54^\circ$  ( $c = 0.3$ ,  $CHCl_3$ ). Source: HEI MAN *Tripterygium regelii*, LEI GONG TENG *Tripterygium wilfordii*. Ref: 120, 1521.

**18581 Regelindiol A**

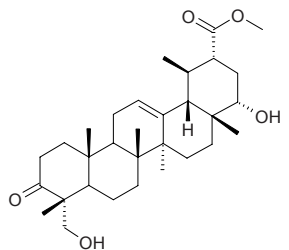
Methyl-3 $\beta$ ,22 $\alpha$ -dihydroxy-urs-12-ene-30-oate [121880-08-8]  $C_{31}H_{50}O_4$  (486.74). Colorless acicular crystals, mp 241~242°C,  $[\alpha]_D^{20} = +57^\circ$  ( $c = 0.2$ ,  $CHCl_3$ ). Source: HEI MAN *Tripterygium regelii*. Ref: 120.

**18582 Regelindiol B**

Methylabrusgenate; Methyl-3 $\beta$ ,22 $\alpha$ -dihydroxy-olean-12-ene-29-oate [84104-83-6]  $C_{31}H_{50}O_4$  (486.74). Colorless acicular crystals, mp 198~199°C,  $[\alpha]_D^{20} = +44^\circ$  ( $c = 0.2$ ,  $CHCl_3$ ). Source: HEI MAN *Tripterygium regelii*, XIANG SI TENG *Abrus precatorius*. Ref: 120, 1300.

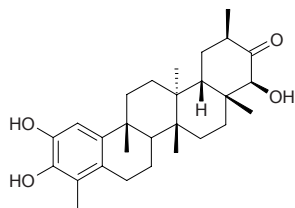
**18583 Regelinol**

$C_{31}H_{48}O_5$  (500.73). Source: HEI MAN *Tripterygium regelii*. Ref: 660, 1521.

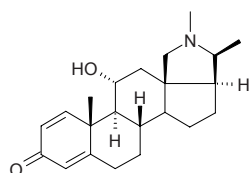


**18584 Regeol A**

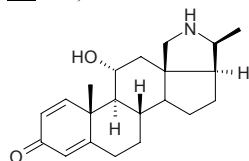
$C_{28}H_{40}O_4$  (440.63). **Pharm:** Antioxidant (DPPH scavenger, for  $40\mu\text{mol/L}$  DPPH radical,  $SC_{50} = 10\mu\text{mol/L}$ ). **Source:** SUO LA MU *Salacia prinoides* [Syn. *Salacia chinensis*] (stem). **Ref:** 4378.

**18585 Regholarrhenine A**

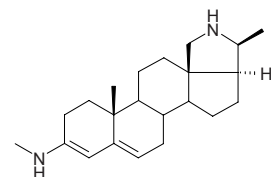
$C_{22}H_{31}NO_2$  (341.50). **Source:** ZHI XIE MU PI *Holarrhena antidysenterica*. **Ref:** 660, 1521.

**18586 Regholarrhenine B**

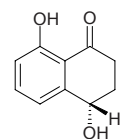
$C_{21}H_{29}NO_2$  (327.47). **Source:** ZHI XIE MU PI *Holarrhena antidysenterica*. **Ref:** 660, 1521.

**18587 Regholarrhenine C**

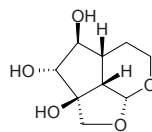
$C_{22}H_{34}N_2$  (326.53). **Source:** ZHI XIE MU PI *Holarrhena antidysenterica*. **Ref:** 660.

**18588 (-)-Regiolone**

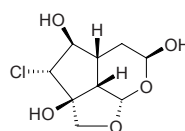
(4S)-4,8-Dihydroxy- $\alpha$ -tetralone  $C_{10}H_{10}O_3$  (178.19).  $[\alpha]_D^{26} = -11.3^\circ$  ( $c = 0.20$ , EtOH). **Pharm:** Cytotoxic inactive (MTT assay, HT29 cell line, MCF7 cell line)<sup>[4321]</sup>. **Source:** DONG BEI HU TAO *Juglans mandshurica* var. *sieboldiana* (fruit), HU TAO QIU *Juglans mandshurica* (root), HU TAO SHU PI *Juglans regia* (bark), HUANG QI II *Engelhardia roxburghiana* (root). **Ref:** 660, 4321, 4492, 5059.

**18589 Rehmaglutin A**

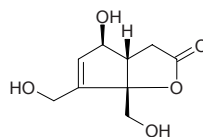
[103744-82-7]  $C_9H_{14}O_5$  (202.21). **Source:** GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], SHU DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. **Ref:** 2, 660.

**18590 Rehmaglutin B**

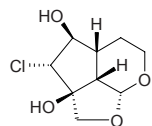
[103744-83-8]  $C_9H_{13}ClO_5$  (236.65). **Source:** GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. **Ref:** 2, 660.

**18591 Rehmaglutin C**

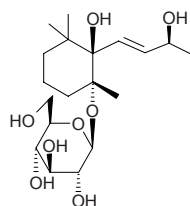
[103744-81-6]  $C_9H_{12}O_5$  (200.19). **Source:** GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. **Ref:** 2, 660.

**18592 Rehmaglutin D**

[103744-84-9]  $C_9H_{13}ClO_4$  (220.65). **Source:** GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], SHU DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. **Ref:** 2, 660, 5501.

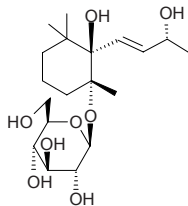
**18593 Rehmaionoside A**

[104112-06-3]  $C_{19}H_{34}O_8$  (390.48). **Source:** GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. **Ref:** 2.

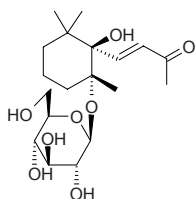


**18594 Rehmaionoside B**

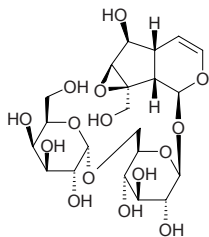
[104056-83-9] C<sub>19</sub>H<sub>34</sub>O<sub>8</sub> (390.48). Source: GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. Ref: 2.

**18595 Rehmaionoside C**

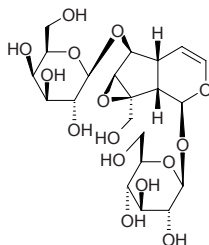
[104112-05-2] C<sub>19</sub>H<sub>32</sub>O<sub>8</sub> (388.46). Source: GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. Ref: 2.

**18596 Rehmannioside A**

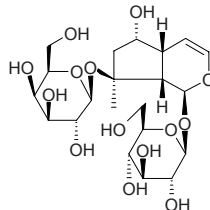
[81720-05-0] C<sub>21</sub>H<sub>32</sub>O<sub>15</sub> (524.48). Source: GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], SHU DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], XIAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. Ref: 2, 660.

**18597 Rehmannioside B**

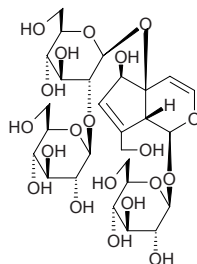
[81720-06-1] C<sub>21</sub>H<sub>32</sub>O<sub>15</sub> (524.48). Source: GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], SHU DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], XIAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. Ref: 2, 660.

**18598 Rehmannioside C**

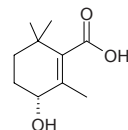
[81720-07-2] C<sub>21</sub>H<sub>34</sub>O<sub>14</sub> (510.50). Source: GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], SHU DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], XIAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. Ref: 2, 660.

**18599 Rehmannioside D**

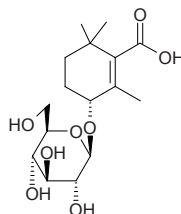
Melittoside 3''-O-β-glucopyranoside [81720-08-3] C<sub>27</sub>H<sub>42</sub>O<sub>20</sub> (686.62). Amorphous, [α]<sub>D</sub><sup>20</sup> = -36.1° (c = 0.7, MeOH). Pharm: Hypoglycemic (mus with spontaneous diabetes, orl, weak activity); antihepatotoxin (treatment of infection from hepatitis virus). Source: GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], KU LANG SHU *Clerodendrum inerme* (aerial parts), SHU DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], XIAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. Ref: 2, 660, 1787, 1788, 5186.

**18600 Rehmapicrogenin**

C<sub>10</sub>H<sub>16</sub>O<sub>3</sub> (184.24). Source: SHU DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. Ref: 660.

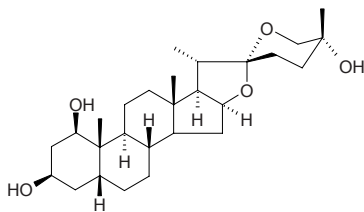
**18601 Rehmapicroside**

[104056-82-8] C<sub>16</sub>H<sub>26</sub>O<sub>8</sub> (346.38). Source: GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. Ref: 2.

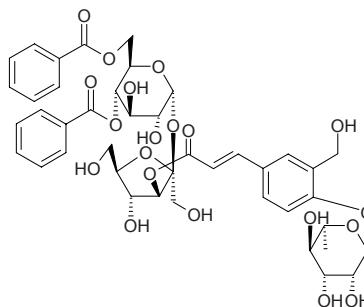


**18602 Reineckiagenin**

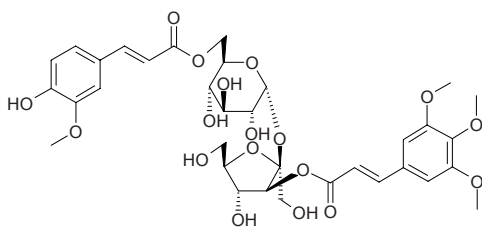
[6808-26-0]  $C_{27}H_{44}O_5$  (448.65). mp 278~280°C. Source: JI XIANG CAO *Reineckea carnea*. Ref: 6.

**18606 Reinosio D**

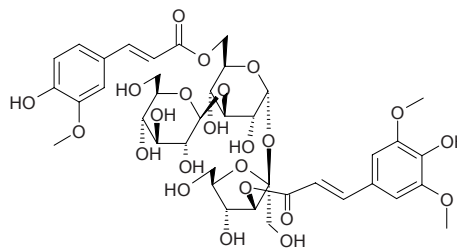
$C_{42}H_{48}O_{20}$  (872.84).  $[\alpha]_D = -51.1^\circ$ . Source: SHI YE CAO *Polygala reinii*, HUANG HUA YUAN ZHI *Polygala arillata*. Ref: 2184.

**18603 Reinosio A**

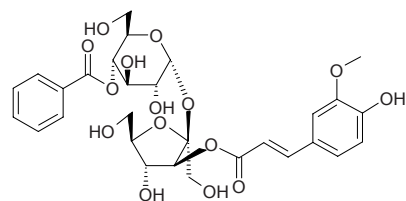
$C_{34}H_{42}O_{18}$  (738.70).  $[\alpha]_D = -4.8^\circ$ . Source: SHI YE CAO *Polygala reinii*. Ref: 2184.

**18607 Reinosio E**

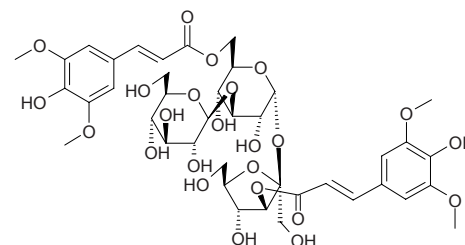
$C_{39}H_{50}O_{23}$  (886.82).  $[\alpha]_D = -52.2^\circ$ . Source: SHI YE CAO *Polygala reinii*. Ref: 2184.

**18604 Reinosio B**

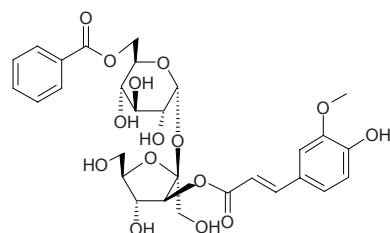
$C_{29}H_{34}O_{15}$  (622.59).  $[\alpha]_D = -51.8^\circ$ . Source: SHI YE CAO *Polygala reinii*. Ref: 2184.

**18608 Reinosio F**

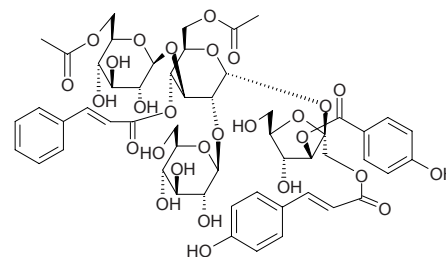
$C_{40}H_{52}O_{24}$  (916.85).  $[\alpha]_D = -59.0^\circ$ . Source: SHI YE CAO *Polygala reinii*. Ref: 2184.

**18605 Reinosio C**

$C_{29}H_{34}O_{15}$  (622.59).  $[\alpha]_D = -29.3^\circ$ . Source: SHI YE CAO *Polygala reinii*. Ref: 2184.

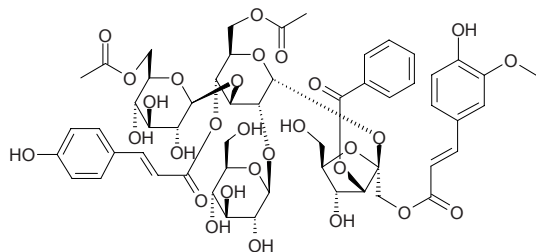
**18609 Reinosio G**

$C_{53}H_{62}O_{28}$  (1147.07).  $[\alpha]_D = -30.6^\circ$ . Source: GUANG LIANG YUAN ZHI *Polygala nitida*. Ref: 2184.

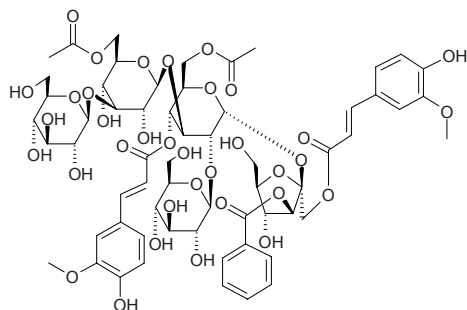


**18610 Reiniose H**

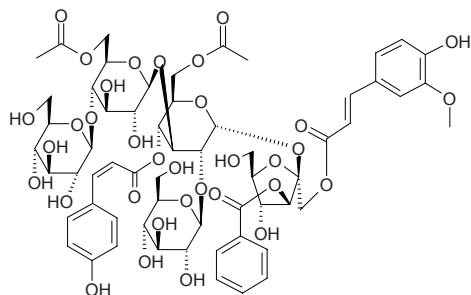
$C_{54}H_{64}O_{29}$  (1177.09).  $[\alpha]_D = -15.7^\circ$ . Source: GUANG LIANG YUAN ZHI *Polygala nitida*. Ref: 2184.

**18611 Reiniose I**

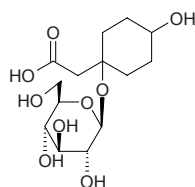
$C_{61}H_{76}O_{35}$  (1369.26).  $[\alpha]_D = -21.0^\circ$ . Source: SHI YE CAO *Polygala reinii*. Ref: 2184.

**18612 Reiniose J**

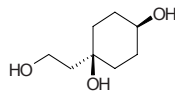
$C_{60}H_{74}O_{34}$  (1339.24).  $[\alpha]_D = +2.6^\circ$ . Source: SHI YE CAO *Polygala reinii*. Ref: 2184.

**18613 Rengynic acid 1'-O-β-D-glucoside**

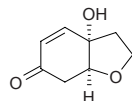
$C_{14}H_{24}O_9$  (336.34). White powder. Source: LIAN QIAO *Forsythia suspensa*. Ref: 2507.

**18614 Rengyol**

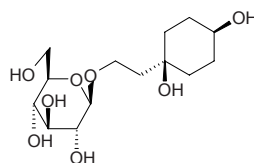
$C_8H_{16}O_3$  (160.21). Source: LIAN QIAO *Forsythia suspensa*, TONG LUO HAN *Milingtonia hortensis*. Ref: 660.

**18615 Rengyolone**

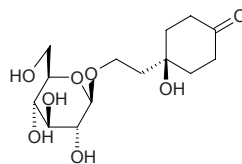
Halleridone; 3,3α,7,7α-Tetrahydro-3α-hydroxy-6(2H)-benzofuranone [ $93675-87-7$ ]  $C_8H_{10}O_3$  (154.17). Source: LIAN QIAO *Forsythia suspensa*, LING MU *Eurya japonica*, TONG LUO HAN *Milingtonia hortensis*. Ref: 660.

**18616 Rengyoside A**

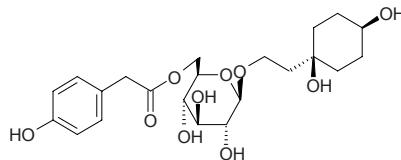
$C_{14}H_{26}O_8$  (322.36). Source: LIAN QIAO *Forsythia suspensa*, TONG LUO HAN *Milingtonia hortensis*. Ref: 660.

**18617 Rengyoside B**

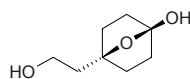
$C_{14}H_{24}O_8$  (320.34). Source: LIAN QIAO *Forsythia suspensa*, TONG LUO HAN *Milingtonia hortensis*. Ref: 660.

**18618 Rengyoside C**

$C_{22}H_{32}O_{10}$  (456.49). Source: LIAN QIAO *Forsythia suspensa*. Ref: 660.

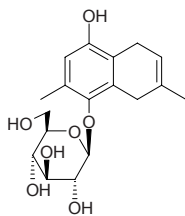
**18619 Rengyoxide**

$C_8H_{14}O_3$  (158.20). Source: LIAN QIAO *Forsythia suspensa*. Ref: 660.

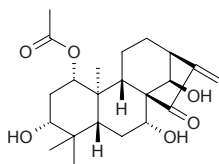


**18620 Renifolin**

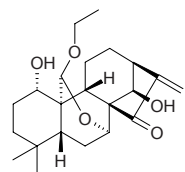
[36314-24-6]  $C_{18}H_{24}O_7$  (352.39). mp 236~238°C (dec). Source: LU XIAN CAO *Pyrola calliantha* [Syn. *Pyrola rotundifolia* ssp. *chinensis*], YUAN YE LU TI CAO *Pyrola rotundifolia*. Ref: 6, 660.

**18621 Reniformin B**

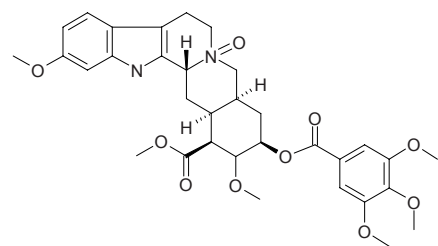
$C_{22}H_{32}O_6$  (392.50). mp 275~277°C,  $[\alpha]_D^{20} = -37.13^\circ$  ( $c = 0.1$ , EtOH). Source: SHEN XING XIANG CHA CAI *Isodon latifolia* var. *reniformis*. Ref: 4067.

**18622 Reniformin C**

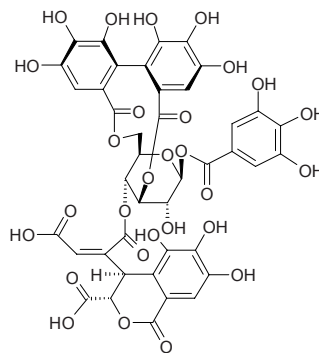
$C_{22}H_{32}O_5$  (376.50). mp 186.5~187.5°C,  $[\alpha]_D^{20} = -33.80^\circ$  ( $c = 0.1$ , EtOH). Source: SHEN XING XIANG CHA CAI *Isodon latifolia* var. *reniformis*. Ref: 4067.

**18623 Renoxidine**

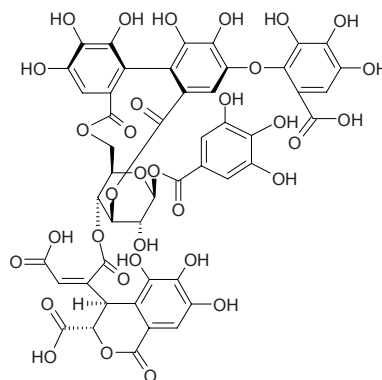
$C_{33}H_{40}N_2O_9$  (608.69). Pharm: Antiadrenergic; anticonvulsant; antineoplastic; sedative; antihypertensive. Source: CUI TU LUO FU MU *Rauwolfia vomitoria*, DA YE LUO FU MU *Rauwolfia macrophylla*, MAN CHANG CHUN HUA *Vinca minor*, SHU JI GU CHANG SHAN *Alstonia constricta*, YIN DU LUO FU MU *Rauwolfia serpentina*. Ref: 660, 1521.

**18624 Repandusinic acid A**

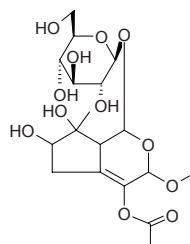
[125516-10-1]  $C_{41}H_{30}O_{28}$  (970.68). Brown amorphous powder,  $[\alpha]_D^{13} = -54.3^\circ$  ( $c = 0.9$ , methanol). Pharm: Topoisomerase II inhibitor ( $IC_{100} = 0.5 \mu\text{mol/L}$ ); HIV reverse transcriptase inhibitor ( $IC_{50} = 0.1 \mu\text{g/mL}$ ); low toxin (mus, orl, 100mg/kg, no dying). Source: LONG YAN YE *Euphoria longan* [Syn. *Dimocarpus longan*], SHI YAN FENG *Mallotus repandus* var. *chrysocarpus* [Syn. *Mallotus chrysocarpus*; *Mallotus repandus*], ZHU ZI CAO *Phyllanthus niruri*. Ref: 660, 900.

**18625 Repandusinic acid B**

$C_{48}H_{34}O_{33}$  (1138.79). Source: SHI YAN FENG *Mallotus repandus* var. *chrysocarpus* [Syn. *Mallotus chrysocarpus*; *Mallotus repandus*]. Ref: 660.

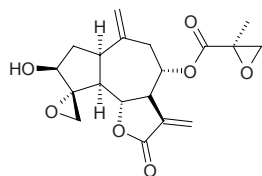
**18626 Reponside**

$C_{18}H_{28}O_{12}$  (436.42). Source: JIA LIAN QIAO *Duranta repens*. Ref: 660.

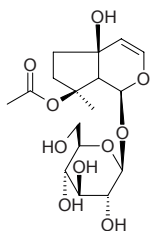


**18627 Repin**

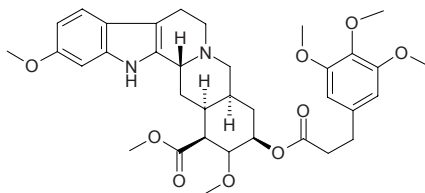
[11024-67-2] C<sub>19</sub>H<sub>22</sub>O<sub>7</sub> (362.37). Amorphous powder,  $[\alpha]_D^{25} = +54^\circ$  ( $c = 0.9$ , chloroform). **Pharm:** Antiprotozoal (amebic and *Trichomonas vaginalis*, 0.24–7.80 μg/mL). **Source:** DING YU JU *Acroptilon repens*. **Ref:** 661.

**18628 Reptoside**

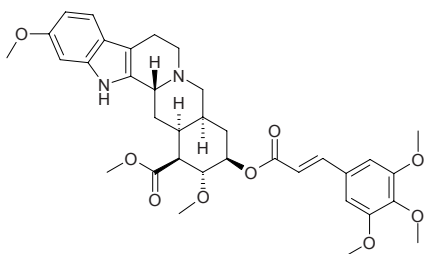
C<sub>17</sub>H<sub>26</sub>O<sub>10</sub> (390.39). **Source:** DU ZHONG *Eucommia ulmoides*, DU ZHONG YE *Eucommia ulmoides*, LONG TU ZHU *Clerodendrum thomsonae*, PU FU JIN GU CAO *Ajuga reptans*. **Ref:** 660.

**18629 Rescinnamidine**

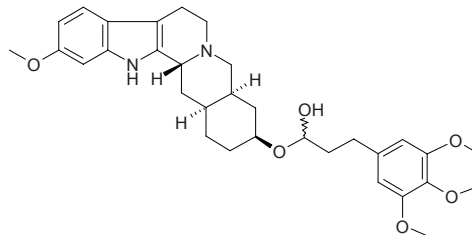
C<sub>35</sub>H<sub>44</sub>N<sub>2</sub>O<sub>9</sub> (636.75). **Source:** YIN DU LUO FU MU *Rauwolfia serpentina*. **Ref:** 660, 1521.

**18630 Rescinnamine**

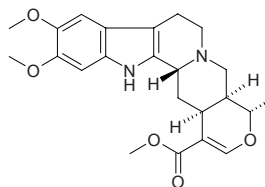
[84-34-4] C<sub>35</sub>H<sub>42</sub>N<sub>2</sub>O<sub>9</sub> (634.74). Tiny acicular crystals (benzene), mp 238–239°C (vacuum),  $[\alpha]_D^{24} = -97^\circ$  ( $c = 1$ , chloroform). **Pharm:** Antihypertensive; sedative. **Source:** CUI TU LUO FU MU *Rauwolfia vomitoria*, DAYE LUO FU MU *Rauwolfia macrophylla*, GUANG LIANG LUO FU MU *Rauwolfia nitida*, YIN DU LUO FU MU *Rauwolfia serpentina*. **Ref:** 661.

**18631 Rescinnaminol**

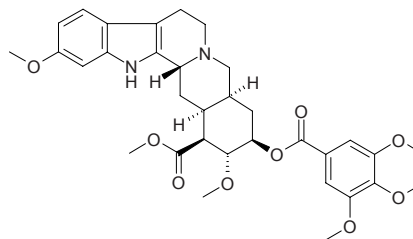
C<sub>32</sub>H<sub>42</sub>N<sub>2</sub>O<sub>6</sub> (550.70). **Source:** YIN DU LUO FU MU *Rauwolfia serpentina*. **Ref:** 660, 1521.

**18632 Reserpiline**

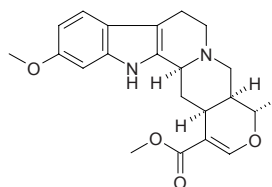
[131-02-2] C<sub>23</sub>H<sub>28</sub>N<sub>2</sub>O<sub>5</sub> (412.47). Amorphous powder,  $[\alpha]_D^{20} = -38^\circ$  (ethanol),  $\sim -14$  ( $c = 1.5$ , pyridine),  $\sim -12$  ( $c = 1.7$ , chloroform). **Pharm:** Antihypertensive. **Source:** YIN DU LUO FU MU *Rauwolfia serpentina*, GUANG LIANG LUO FU MU *Rauwolfia nitida*. **Ref:** 658.

**18633 Reserpine**

Serpasil; Serpax; Alserin [50-55-5] C<sub>33</sub>H<sub>40</sub>N<sub>2</sub>O<sub>9</sub> (608.69). Prismatic crystals, mp 264–265°C (dec),  $[\alpha]_D^{22} = -118^\circ$  (CHCl<sub>3</sub>), easily soluble in CHCl<sub>3</sub>, soluble in benzene, acetic ester, slightly soluble in ethanol, insoluble in water.<sup>[5507]</sup> **Pharm:** Antihypertensive (effective component in total alkaloids of Common Devilpepper, *Rauwolfia verticillata*, LUO FU MU); sedative. **Source:** CUI TU LUO FU MU *Rauwolfia vomitoria*, DIAN JI GU CHANG SHAN *Alstonia yunnanensis*, KUO YE LUO FU MU *Rauwolfia latifrons*, LUO FU MU *Rauwolfia verticillata*, PI LI LUO FU MU *Rauwolfia perakensis*, YIN DU LUO FU MU *Rauwolfia serpentina* (isolated from the plant firstly in 1952<sup>[5507]</sup>), YUN NAN LUO FU MU *Rauwolfia yunnanensis*. **Ref:** 5, 6, 658, 660, 5507.

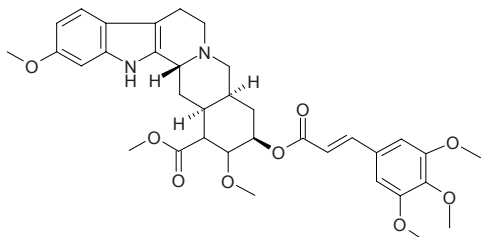
**18634 Reserpiline 1**

Pubescine C<sub>22</sub>H<sub>26</sub>N<sub>2</sub>O<sub>4</sub> (382.46). **Source:** DA CHANG CHUN HUA *Vinca herbacea* [Syn. *Vinca major*], LUO FU MU *Rauwolfia verticillata*, YIN DU LUO FU MU *Rauwolfia serpentina*. **Ref:** 660, 1521.

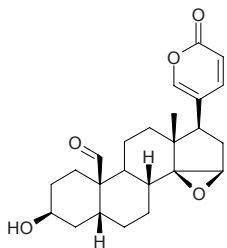


**18635 Reserpinine 2**

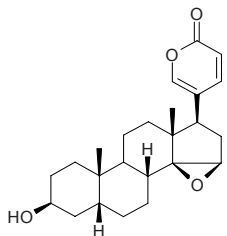
Anaprel  $C_{35}H_{42}N_2O_9$  (634.73). Source: CUI TU LUO FU MU *Rauwolfia vomitoria*, DA YE LUO FU MU *Rauwolfia macrophylla*, KA FU LA LUO FU MU *Rauwolfia caffra*, KE MING XI LUO FU MU *Rauwolfia cumminsii*, *Rauwolfia oreogiton*, *Rauwolfia volkensii*. Ref: 660, 1521.

**18636 Resibufagin**

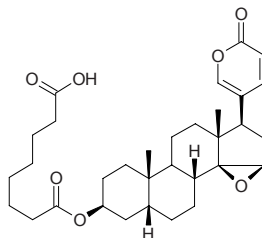
[20987-24-0]  $C_{24}H_{30}O_5$  (398.50). mp 210~212°C. Source: CHAN SU *Bufo bufo gargarizans*; *Bufo melanostictus*. Ref: 2, 6.

**18637 Resibufogenin**

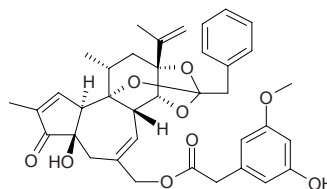
Bufogenin [465-39-4]  $C_{24}H_{32}O_4$  (384.52). mp 113~140°C, 155~168°C. Pharm: Cardiotoxic; increases blood pressure; respiratory stimulant; used in treatment of heart failure and breathing inhibition; cytotoxic (*in vitro*, KB,  $IC_{50}$  = 1.3  $\mu$ g/mL; HL-60,  $IC_{50}$  = 0.5  $\mu$ g/mL; MH-60,  $IC_{50}$  = 10  $\mu$ g/mL)<sup>[3082]</sup>; cytotoxic (*in vitro*, KB,  $IC_{50}$  = 1.34  $\mu$ g/mL; MH-60,  $IC_{50}$  = 10.48  $\mu$ g/mL)<sup>[4634]</sup>. Source: CHAN PI *Bufo bufo gargarizans*; *Bufo melanostictus*, CHAN SU *Bufo bufo gargarizans* (dried secretion: content = 0.51%<sup>[5508]</sup>); *Bufo melanostictus* (dried secretion: content = 0.05%<sup>[5508]</sup>), CHAN CHU *Bufo bufo gargarizans*; *Bufo melanostictus*. Ref: 2, 6, 617, 658, 3082, 4634, 5508.

**18638 Resibufogenin 3-hydrogen suberate**

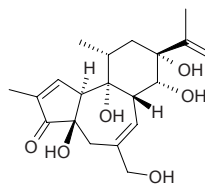
$C_{32}H_{44}O_7$  (540.70). Source: CHAN SU *Bufo bufo gargarizans*; *Bufo melanostictus*. Ref: 2.

**18639 Resiniferatoxin**

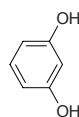
[57444-62-9]  $C_{37}H_{40}O_9$  (628.73). Pharm: Irritant (to skin). Source: SHU ZHI DA JI *Euphorbia resinifera*, PO SEN DA JI *Euphorbia poissonii*. Ref: 658.

**18640 Resiniferonol**

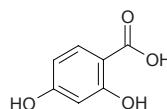
[57444-60-7]  $C_{20}H_{28}O_6$  (364.44). Pharm: Carcinogen assistant (ester derivatives); Irritant (to skin, ester derivatives). Source: SHU ZHI DA JI *Euphorbia resinifera*. Ref: 658.

**18641 Resorcinol**

[108-46-3]  $C_6H_6O_2$  (110.11). Source: GANG SONG *Pinus rigida*. Ref: 658.

**18642  $\beta$ -Resorcylic acid**

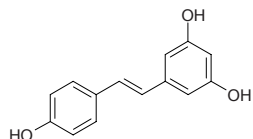
[89-86-1]  $C_7H_6O_4$  (154.12). mp 218~219°C. Source: CI HUAI HUA *Robinia pseudoacacia*. Ref: 6.



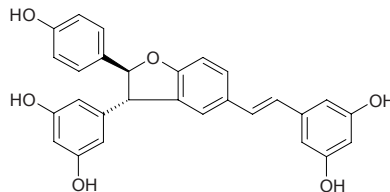


**18643 Resveratrol**

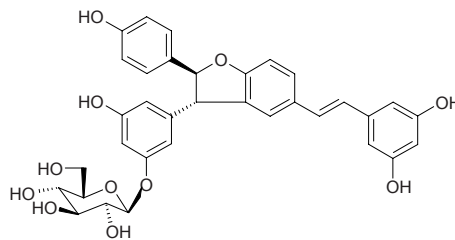
3,5,4'-Trihydroxystilbene [501-36-0] C<sub>14</sub>H<sub>12</sub>O<sub>3</sub> (228.25). Grey-white powder (methanol), mp 253~255°C (methanol), mp 261°C (diluted ethanol, dec), easily soluble in chloroform, ether, methanol, ethanol, acetone.<sup>[507]</sup> **Pharm:** Cytotoxic (cyclooxygenase-1 inhibitor)<sup>[5038]</sup>; COX-2 inhibitor (IC<sub>50</sub> = 1.3 μmol/L)<sup>[3869]</sup>; COX-1 inhibitor (IC<sub>50</sub> = 1.1 μmol/L)<sup>[3869]</sup>; COX-1 inhibitor (IC<sub>50</sub> = 0.25 μg/mL)<sup>[5030]</sup>; COX-2 inhibitor (IC<sub>50</sub> = 0.30 μg/mL)<sup>[5030]</sup>; antibacterial; antifungal; antihypercholesterolemic (inhibits liver damage, glycoside); antioxidant (inhibits lipid peroxidation, rat mitochondria of hepatocyte, induced by ADP and NADPH); antioxidant (DPPH radical scavenger, IC<sub>50</sub> = 38.9 μmol/L, control Vitamin E, IC<sub>50</sub> = 20.7 μmol/L, control BHT, IC<sub>50</sub> = 12.6 μmol/L)<sup>[3452]</sup>; antioxidant (superoxide anion scavenger, IC<sub>50</sub> = 51.1 μmol/L, control Vitamin E, 100 μmol/L, InRt < 50%, control BHT, IC<sub>50</sub> = 24.6 μmol/L)<sup>[3452]</sup>; antioxidant (lipid peroxidation inhibitor, IC<sub>50</sub> = 3.3 μmol/L, control Vitamin E, IC<sub>50</sub> = 5.3 μmol/L, control BHT, IC<sub>50</sub> = 1.0 μmol/L)<sup>[3452]</sup>; antioxidant (superoxide anion scavenger, 100 μmol/L, InRt = (50.5 ± 1.7)%, positive control (+)-Catechin, IC<sub>50</sub> = (3.67 ± 0.14) μmol/L)<sup>[4514]</sup>; anti-inflammatory (modulator of cytokine network: blocks TNF-α-induced cell-cell adhesion between HUVECs and THP-1 cells)<sup>[4416]</sup>; anti-inflammatory (COX-1/COX-2 inhibitor; prostanoid inhibitor via LOX pathway; K562 cells apoptosis via inhibition of both LOX and COX activity; causes a pronounced reduction in the *c-fos* and TGF-β1 expression in mouse skin stimulated by phorbol myristate acetate (PMA); inhibits COX-2 transcription and activity associated with inhibition of AP-1-mediated gene expression in PMA-treated mammary epithelial cells, by inhibiting signal transduction through PKC)<sup>[4415]</sup>; anti-inflammatory (NF-κB pathway)<sup>[4415]</sup>; anti-inflammatory (cultured cells, suppresses iNOS expression and NO production, by down-regulation of NF-κB binding activity via blockade of IκBα degradation)<sup>[4415]</sup>; phytoalexin<sup>[4415]</sup>; antiallergic<sup>[4415]</sup>; antioxidant<sup>[4415]</sup>; anti-carcinogenic<sup>[4415]</sup>; platelet aggregation inhibitor (2.5 μg/mL collagen-induced, IC<sub>50</sub> = (11.6 ± 2.1) μmol/L, *p* < 0.01; 6 μmol/L ADP-induced, IC<sub>50</sub> = (17.8 ± 3.3) μmol/L, *p* < 0.01)<sup>[5094]</sup>; aromatase inhibitor inactive (*in vitro*, IC<sub>50</sub> > 40 μmol/L; control Aminoglutethimide, IC<sub>50</sub> = 6.4 μmol/L)<sup>[3090]</sup>. **Source:** BAI LI LU *Veratrum album* (in 1940, isolated from the plant<sup>[5507]</sup>), CHI CHI JUE MING *Cassia dentata*, DA DA HE MIAN BAO GUO *Artocarpus dadah*, DUN YE CHE ZHOU CAO *Trifolium dubium*, FANG JI YE BA QIA *Smilax menispermoides*, GOU SHU *Broussonetia papyrifera*<sup>[3090]</sup>, HE SHOU WU *Polygonum multiflorum*, HU ZHANG *Polygonum cuspidatum* (root: content = 1.10%<sup>[5501]</sup>), LUO HUA SHENG *Arachis hypogaea*, MAO CI JIN JI ER *Caragana tibetica* (stem), MAO MAI LIAO *Pleuropterus ciliinervis*, MAO YE LI LU *Veratrum grandiflorum* (root), PU<sup>(2)</sup> TAO *Vitis vinifera*, QING MEI *Vatica rassak* (stem cortex), SA HA LIN YUN SHAN *Picea glehnii*, SHE PU TAO *Ampelopsis brevipedunculata*, TIAN SHAN DA HUANG *Rheum wittrockii*, WO SHI AN *Eucalyptus wandoo*, WU SU LI LI LU *Veratrum nigrum* var. *ussuriense*, XI BO LI YA HONG SONG *Pinus sibirica* (bark), XIAO YE MAI MA TENG *Gnetum parvifolium* [Syn. *Gnetum indicum*], YUN SHI *Caesalpinia decapetala* (leaf), ZHAO WA ZHE SHU *Cudrania javanensis*, *Vitis* spp., occurs in many plants. **Ref:** 193, 438, 552, 609, 658, 1521, 2233, 2234, 3090, 3452, 3869, 3950, 4186, 4415, 4416, 4456, 4514, 5030, 5038, 5094, 5501, 5507, 5508.

**18644 Resveratrol E-dehydromer**

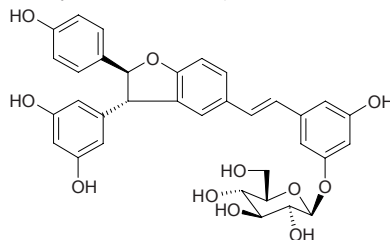
Anticancer Stilbenoid PMV70P691-144 C<sub>28</sub>H<sub>22</sub>O<sub>6</sub> (454.48). Oil, [α]<sub>D</sub><sup>20</sup> = -1.7° (*c* = 0.23, MeOH). **Pharm:** Anti-inflammatory (COX-1 inhibitor, IC<sub>50</sub> = 4.3 μmol/L; COX-2 inhibitor, IC<sub>50</sub> = 3.7 μmol/L)<sup>[3033]</sup>; cytotoxic (cyclooxygenase-1 inhibitor)<sup>[5038]</sup>; cytotoxic (cyclooxygenase-2 inhibitor)<sup>[5038]</sup>. **Source:** PU<sup>(2)</sup> TAO *Vitis vinifera* (cell cultures established from pulp fragments of young fruits: yield = 0.00048%fw). **Ref:** 3033, 5038.

**18645 Resveratrol (E)-dehydromer 11-O-β-D-glucopyranoside**

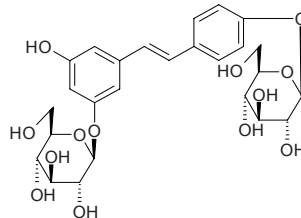
C<sub>34</sub>H<sub>32</sub>O<sub>11</sub> (616.63). Powder, [α]<sub>D</sub><sup>20</sup> = -18.9° (*c* = 0.38, MeOH). **Pharm:** Anti-inflammatory (COX-1 inhibitor, IC<sub>50</sub> = 5.2 μmol/L; COX-2 inhibitor, IC<sub>50</sub> = 7.5 μmol/L). **Source:** PU<sup>(2)</sup> TAO *Vitis vinifera* (cell cultures established from pulp fragments of young fruits: yield = 0.00056%fw). **Ref:** 3033.

**18646 Resveratrol (E)-dehydromer 11'-O-β-D-glucopyranoside**

C<sub>34</sub>H<sub>32</sub>O<sub>11</sub> (616.63). Powder, [α]<sub>D</sub><sup>20</sup> = -12.0° (*c* = 0.05, MeOH). **Source:** PU<sup>(2)</sup> TAO *Vitis vinifera* (cell cultures established from pulp fragments of young fruits: yield = 0.00002%fw). **Ref:** 3033.

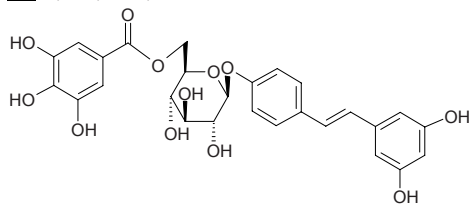
**18647 Resveratrol 3,4'-O,O'-di-β-D-glucopyranoside**

C<sub>26</sub>H<sub>32</sub>O<sub>13</sub> (552.54). Amorphous powder. [α]<sub>D</sub><sup>21</sup> = -74.7° (*c* = 3.53, MeOH). **Source:** WEI JING BAI HE *Schoenocaulon officinale* (rhizome). **Ref:** 4210.

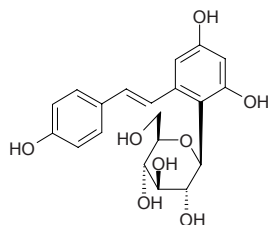


**18648 Resveratrol-4'-O-(6"-O-galloyl)-β-D-glucopyranoside**

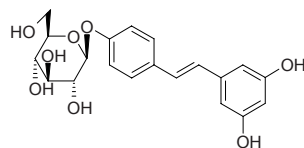
3,5,4'-Trihydroxystilbene-4'-(6"-galloyl)-glucoside C<sub>27</sub>H<sub>26</sub>O<sub>12</sub> (542.50).  
 Source: SI CHUAN CHAN DA HUANG *Rheum* sp.<sup>[2969]</sup>, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*.  
 Ref: 2, 660, 2969, 4063.

**18649 Resveratrol-10-C-β-glucopyranoside**

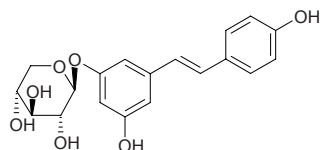
C<sub>20</sub>H<sub>22</sub>O<sub>8</sub> (390.39). White amorphous powder,  $[\alpha]_D^{24} = +23^\circ$  ( $c = 0.1$ , MeOH).  
 Source: YOU YONG PO LEI *Hopea utilis* (stem wood). Ref: 3546.

**18650 Resveratrol-4'-O-β-D-glucoside**

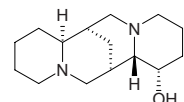
3,5,4'-Trihydroxystilbene-4'-glucoside; Resveratrolside C<sub>20</sub>H<sub>22</sub>O<sub>8</sub> (390.39).  
 Source: DA HUANG *Rheum officinale*, SI CHUAN CHAN DA HUANG *Rheum* sp.<sup>[2969]</sup>, TANG GU TE DA HUANG *Rheum tanguticum*, XI BO LI YA HONG SONG *Pinus sibirica*, ZHANG YE DA HUANG *Rheum palmatum*, *Rhizoma rhei*. Ref: 2, 660, 1521, 2969, 4063.

**18651 E-Resveratrol 3-O-β-D-xylopyranoside**

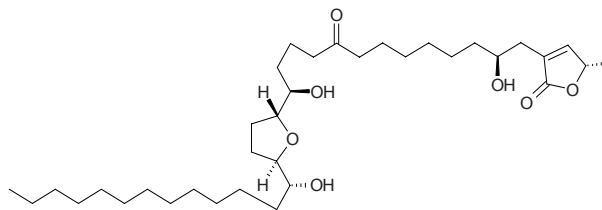
C<sub>19</sub>H<sub>20</sub>O<sub>7</sub> (360.37). White needles, mp 214~215°C;  $[\alpha]_D^{20} = -12.2^\circ$  ( $c = 0.02$ , CH<sub>3</sub>OH). Pharm: Vasodilator (rat aortic rings, inhibits Phenylephrine (Phe)-induced vasoconstriction in the presences of Indomethacin and N<sup>o</sup>-L-nitroarginine (L-NA) at 10μmol/L Ach, 10μmol/L, relaxation = (57±7)%, control Sodium nitroprusside, relaxation = (109±5)%<sup>[4086]</sup>.  
 Source: YI HUA *Lysidice rhodostegia* (root). Ref: 4086.

**18652 Retamine**

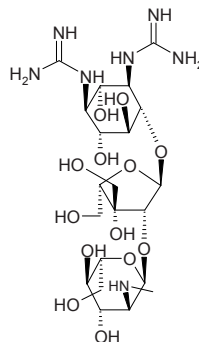
[2122-29-4] C<sub>15</sub>H<sub>26</sub>N<sub>2</sub>O (250.39). Pharm: Uterine stimulant; diuretic; antihypertensive. Source: family Fabaceae spp. Ref: 658.

**18653 Reticulacinone**

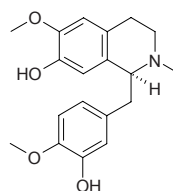
C<sub>35</sub>H<sub>62</sub>O<sub>7</sub> (594.88). Yellowish wax solid, mp 68~70°C. Source: NIU XIN FAN LI ZHI *Annona reticulata*. Ref: 432.

**18654 Reticulin**

[6835-00-3] C<sub>21</sub>H<sub>39</sub>N<sub>7</sub>O<sub>13</sub> (599.60). mp 200°C (dec). Source: YAN HU SUO *Corydalis yanhusuo* [Syn. *Corydalis turtschaninovii* f. *Yanhusuo*], YA PIAN *Papaver somniferum*. Ref: 6.

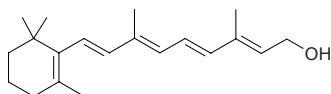
**18655 Reticuline**

Laudanosoline 4',6-dimethyl ethe [485-19-8] C<sub>19</sub>H<sub>23</sub>NO<sub>4</sub> (329.40). Yellowish powder, mp 146°C,  $[\alpha]_D^{16} = +98.4^\circ$  ( $c = 0.77$ , ethanol). Pharm: Platelet aggregation inhibitor (due to ADP and arachidonic acid); uterine relaxant; neuromuscular blocker (frog, MIC = 100μg/mL); promotes hair growth. Source: FAN LI ZHI *Annona squamosa*, HE BAO MU DAN GEN *Dicentra spectabilis*, HENG ZHOU WU YAO *Cocculus laurifolius*, HONG NAN PI *Machilus thunbergii*, MA WEI LIAN *Thalictrum foliolosum*, NIU XIN FAN LI ZHI *Annona reticulata*, YING SU *Papaver somniferum*, YOU GOU YING ZHAO *Artabotrys uncinatus* (root, stem and leaf)<sup>[3083]</sup>, YUAN HUA FAN LI ZHI *Annona glabra*, ZHANG MU *Cinnamomum camphora*, ZI HUA YU DENG CAO *Corydalis incisa*. Ref: 6, 658, 660, 900, 3083.

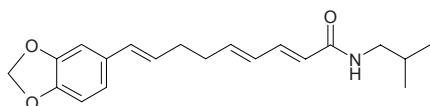


**18656 Retinol**

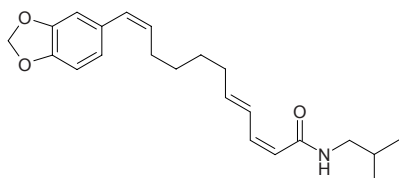
Vitamin A; Afaxin; Oleovitamin A [68-26-8] C<sub>20</sub>H<sub>30</sub>O (286.46). **Pharm:** Essential for growth, vision in dim light, and the maintenance of soft mucous tissue. **Source:** CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*], CU LIU GUO *Hippophae rhamnoides*, DAN YE MAN JING ZI *Vitex rotundifolia* [Syn. *Vitex trifolia* var. *simplicifolia*], DANG GUI *Angelica sinensis*, JI GUAN ZI *Celosia cristata* (seed), LU RONG *Cervus nippon*; *Cervus elaphus*, SHAN ZHU YU *Cornus officinalis* [Syn. *Macrocarpium officinale*], YE GU *Aeginetia indica*. **Ref:** 2, 658, 660, 1521.

**18657 Retrofractamide A**

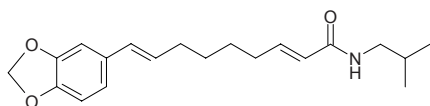
Piperamide B 9: 3(2*E*,4*E*,8*E*) C<sub>20</sub>H<sub>25</sub>NO<sub>3</sub> (327.43). **Source:** CHANG GUO BI BA *Piper retrofractum*, HU JIAO *Piper nigrum*. **Ref:** 660.

**18658 Retrofractamide B**

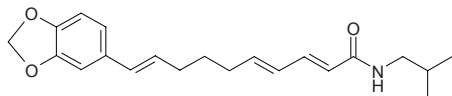
C<sub>22</sub>H<sub>29</sub>NO<sub>3</sub> (355.48). Colorless crystals. **Pharm:** Protective gastric lesions (rat, ethanol-induced, 25mg/kg orl, length = (39.9±13.3)mm, control, length = (118.6±16.2)mm, InRt = 66.4%; indomethacin-induced in rats, dose, 25mg/kg orl, length = (36.4±12.8)mm, control, length = (89.5±9.8)mm, InRt = 59.3%). **Source:** *Piper chaba* (fruit). **Ref:** 4935.

**18659 Retrofractamide C**

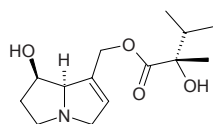
C<sub>20</sub>H<sub>27</sub>NO<sub>3</sub> (329.44). **Source:** CHANG GUO BI BA *Piper retrofractum*. **Ref:** 660.

**18660 Retrofractamide D**

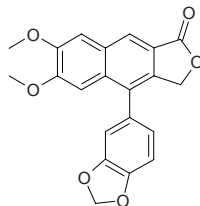
C<sub>21</sub>H<sub>27</sub>NO<sub>3</sub> (341.45). **Source:** CHANG GUO BI BA *Piper retrofractum*. **Ref:** 660.

**18661 Retrohoustine**

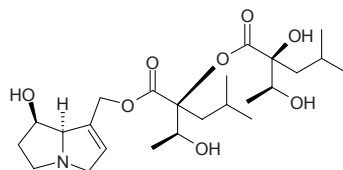
O<sup>9</sup>-(2*S*-2β-Hydroxy-2,3-dimethyl-butanoyl) C<sub>14</sub>H<sub>23</sub>NO<sub>4</sub> (269.34). **Source:** XIONG ER CAO *Ageratum houstonianum* (aerial parts). **Ref:** 5173.

**18662 Retrojusticidin B**

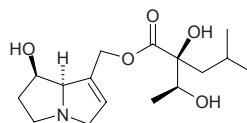
C<sub>21</sub>H<sub>16</sub>O<sub>6</sub> (364.36). **Pharm:** Anti-HIV (HIV-1 reverse transcriptase highly selective inhibitor, IC<sub>50</sub> = 5.5μmol/L, pharmacokinetic and Metabolic Studies in rats). **Source:** YIN DU SI LI LAN KA YE XIA ZHU *Phyllanthus myritifolius*. **Ref:** 4090.

**18663 Retronecine 2*S*-hydroxy-2*S*-(1*S*-hydroxyethyl)-2*S*-[(1'*S*-hydroxyethyl)-4-methylpentanoyl]-4-methylpentanoyl ester**

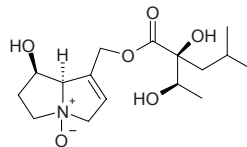
C<sub>24</sub>H<sub>41</sub>NO<sub>8</sub> (471.60). Red oil, [α]<sub>D</sub><sup>25</sup> = -4.0° (c = 0.1, MeOH). **Source:** CU MAO NIU SHE CAO *Anchusa strigosa*. **Ref:** 5441.

**18664 Retronecine 2*S*-hydroxy-2*S*-(1*S*-hydroxyethyl)-4-methylpentanoyl ester**

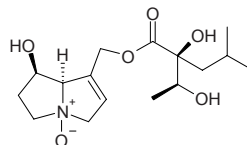
C<sub>16</sub>H<sub>27</sub>NO<sub>5</sub> (313.40). Yellow-orange oil, [α]<sub>D</sub><sup>25</sup> = +2.2° (c = 0.05, MeOH). **Source:** CU MAO NIU SHE CAO *Anchusa strigosa*. **Ref:** 5441.

**18665 Retronecine N-oxide 2*S*-hydroxy-2*S*-(1*R*-hydroxyethyl)-4-methylpentanoyl ester**

C<sub>16</sub>H<sub>27</sub>NO<sub>6</sub> (329.40). Red oil, [α]<sub>D</sub><sup>25</sup> = +2.3° (c = 0.1, MeOH). **Source:** CU MAO NIU SHE CAO *Anchusa strigosa*. **Ref:** 5441.

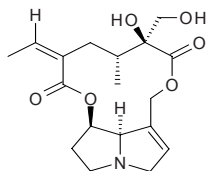
**18666 Retronecine N-oxide 2*S*-hydroxy-2*S*-(1*S*-hydroxyethyl)-4-methylpentanoyl ester**

Platynecine N-oxide 2*S*-hydroxy-2*S*-(1*S*-hydroxyethyl)-4-methyl-pentanoyl ester C<sub>16</sub>H<sub>27</sub>NO<sub>6</sub> (329.40). Orange oil, [α]<sub>D</sub><sup>25</sup> = +4° (c = 0.05, MeOH); [α]<sub>D</sub><sup>25</sup> = +3.0° (c = 0.1, MeOH). **Source:** CU MAO NIU SHE CAO *Anchusa strigosa* (flower, leaf and root). **Ref:** 5298, 5441.

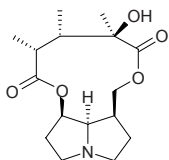


**18667 Retrorsine**

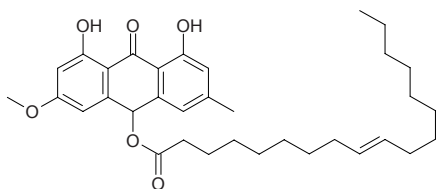
[480-54-6]  $C_{18}H_{25}NO_6$  (351.40). mp 207~208°C, 216.0~216.5°C. **Pharm:** Mutagen (drosophila and Ames experiments); Toxic (hepatic and pulmonary toxicity). **Source:** DA BAI DING CAO *Senecio oryzetorum*, FEI LV BIN QIAN LI GUANG *Senecio philippicus*, GUANG E ZHU SHI DOU *Crotalaria usaramoensis*, OU ZHOU QIAN LI GUANG *Senecio vulgaris*, WAN QU QIAN LI GUANG *Senecio retrorsus*, YING ZHAO DOU ZHU SHI DOU *Crotalaria spartioides*. **Ref:** 6, 658.

**18668 Retusine**

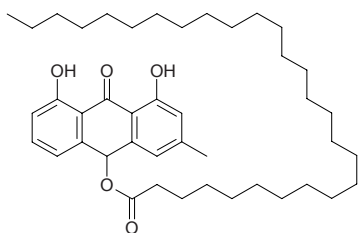
[480-86-4]  $C_{16}H_{25}NO_5$  (311.38). mp 163~164°C. **Pharm:** Cytotoxic (KB,  $ED_{50} = 41 \mu\text{g/mL}$ );  $\beta$ -glucuronidase inhibitor (rbt, neutrocyte,  $ED_{50} = 60 \mu\text{mol/L}$ );  $Ca^{2+}$ -ATPase inhibitor (brawn reticulum,  $100 \mu\text{mol/L}$ , InRt = 100%). **Source:** HUO XIANG *Agastache rugosus*. **Ref:** 505, 1767, 1768.

**18669 Revandchinone 1**

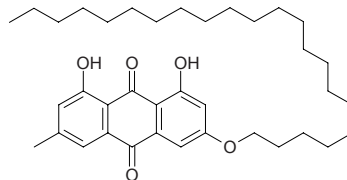
$C_{34}H_{46}O_6$  (550.74). Yellow needles (EtOAc), mp 214°C. **Source:** ZANG BIAN DA HUANG *Rheum emodi* [Syn. *Rheum australe*]. **Ref:** 2061.

**18670 Revandchinone 2**

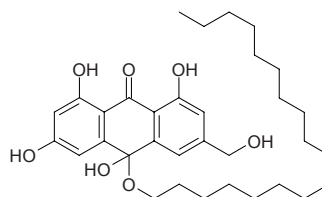
$C_{43}H_{66}O_5$  (663.00). Orange yellow needles (EtOAc), mp 201°C. **Source:** ZANG BIAN DA HUANG *Rheum emodi* [Syn. *Rheum australe*]. **Ref:** 2061.

**18671 Revandchinone 3**

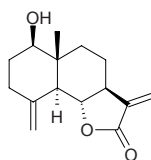
$C_{37}H_{54}O_5$  (578.84). Yellow needles (EtOAc), mp 220 °C. **Source:** ZANG BIAN DA HUANG *Rheum emodi* [Syn. *Rheum australe*]. **Ref:** 2061.

**18672 Revandchinone 4**

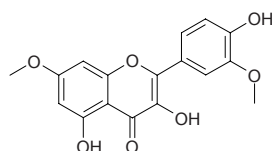
$C_{33}H_{48}O_7$  (556.75). yellow needles (EtOAc), mp 235 °C. **Source:** ZANG BIAN DA HUANG *Rheum emodi* [Syn. *Rheum australe*]. **Ref:** 2061.

**18673 Reynosin**

[28254-53-7]  $C_{15}H_{20}O_3$  (248.32). Colorless acicular crystals, mp 145~146°C. **Pharm:** Anti-inflammatory (modulator of cytokine network: inhibits formation of CINC-1, concentration-dependent manner, in NRK-52E rat kidney epithelial cells stimulated with LPS,  $IC_{50} = 1 \mu\text{mol/L}$ ; inhibits TNF- $\alpha$  production in LPS-activated RAW264.7 cells,  $IC_{50} = 87.4 \mu\text{mol/L}$ )<sup>[4416]</sup>; cytotoxic (KB ATCC CCL17,  $IC_{50} = 2.7 \mu\text{g/mL}$ )<sup>[5399]</sup>; cytotoxic (*in vitro*, HepG<sub>2</sub>,  $CD_{50} = 11 \mu\text{g/mL}$ ; HeLa,  $CD_{50} = 7.5 \mu\text{g/mL}$ ; OVCAR-3,  $CD_{50} = 7.5 \mu\text{g/mL}$ ; control Cisplatin, HepG<sub>2</sub>,  $CD_{50} = 2.8 \mu\text{g/mL}$ ; HeLa,  $CD_{50} = 5.2 \mu\text{g/mL}$ ; OVCAR-3,  $CD_{50} = 3 \mu\text{g/mL}$ ; without significant antibacterial effect)<sup>[4720]</sup>. **Source:** MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*] (root: yield = 0.0022%dw)<sup>[4720]</sup>, YUN NAN HAN XIAO *Michelia yunnanensis*, *Warionia saharae*. **Ref:** 426, 5399, 4416, 4720.

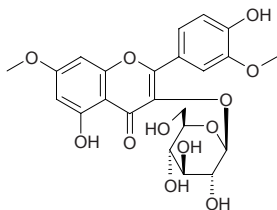
**18674 Rhamnazin**

[552-54-5]  $C_{17}H_{14}O_7$  (330.30). mp 216~218°C. **Pharm:** Antioxidant inactive (DPPH radical scavenger,  $10 \mu\text{mol/L}$ , ScRt = 8%; control BHT,  $10 \mu\text{mol/L}$ , ScRt = 43%,  $IC_{50} = 19.00 \mu\text{mol/L}$ )<sup>[4422]</sup>; antibacterial (*Staphylococcus aureus*, penicillin-sensitive strain ATCC 25923, MIC > 128  $\mu\text{g/mL}$ ; methicillin-resistant strain MRSA SK1, MIC > 128  $\mu\text{g/mL}$ )<sup>[4422]</sup>. **Source:** DUO SUI LIAO *Polygonum polystachyum*, TIAN SHAN ZHU ZI *Garcinia dulcis* (flower). **Ref:** 6, 4422.

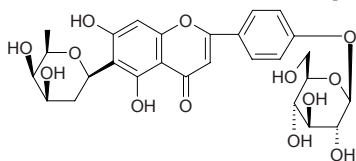


**18675 Rhamnazin-3-O-β-D-glucoside**

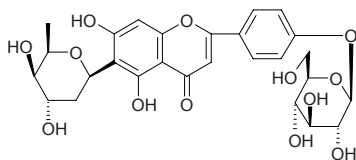
C<sub>23</sub>H<sub>24</sub>O<sub>12</sub> (492.44). **Source:** BING GUO HU JI SHENG *Viscum multinerve*, HU JI SHENG *Viscum coloratum*. **Ref:** 660.

**18676 Rhamnellaflavoside A**

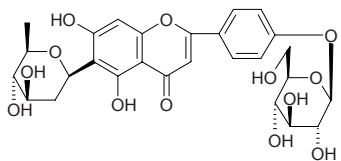
6-C-β-D-Oliopyranosyl-4'-O-β-D-glucopyranosylapigenin C<sub>27</sub>H<sub>30</sub>O<sub>13</sub> (562.53). Yellow amorphous powder, [α]<sub>D</sub><sup>26</sup> = +51.4° (c = 1.50, MeOH). **Source:** BU DUI CHENG MAO RU *Rhamnella inaequilatera* (leaf). **Ref:** 3770.

**18677 Rhamnellaflavoside B**

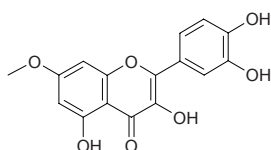
6-C-β-D-Boivinopyranosyl-4'-O-β-D-glucopyranosylapigenin C<sub>27</sub>H<sub>30</sub>O<sub>13</sub> (562.53). Yellow amorphous powder, [α]<sub>D</sub><sup>26</sup> = +4.1° (c = 0.50, MeOH). **Source:** BU DUI CHENG MAO RU *Rhamnella inaequilatera* (leaf). **Ref:** 3770.

**18678 Rhamnellaflavoside C**

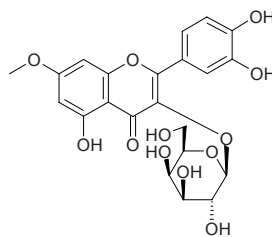
6-C-β-D-4-Epioliosyl-4'-O-β-D-glucopyranosylapigenin C<sub>27</sub>H<sub>30</sub>O<sub>13</sub> (562.53). Yellow amorphous powder, [α]<sub>D</sub><sup>26</sup> = +33.6° (c = 0.83, MeOH). **Source:** BU DUI CHENG MAO RU *Rhamnella inaequilatera* (leaf). **Ref:** 3770.

**18679 Rhamnetin**

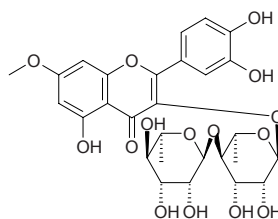
[90-19-7] C<sub>16</sub>H<sub>12</sub>O<sub>7</sub> (316.27). Yellow powdery crystals (MeOH), mp 288~290°C. **Pharm:** Allergenic (moderate activity); antibacterial (*Pseudomonas maltophilia* and *Enteromorpha cloacae*); antineoplastic; cytotoxic; mutagen (*Salmonella aertrycke* TA98). **Source:** DING XIANG *Syzygium aromaticum* [Syn. *Eugenia caryophyllata*], FENG JIAO *Apis mellifera ligustica*, GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*], HUANG HUA HAO *Artemisia annua*, XI YE TENG *Tetracera asiatica*. **Ref:** 2, 6, 463, 658, 660.

**18680 Rhamnetin-3-galactoside**

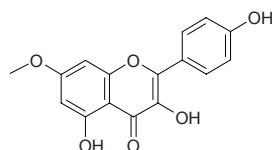
C<sub>22</sub>H<sub>22</sub>O<sub>12</sub> (478.41). **Source:** BIAN XU *Polygonum aviculare*. **Ref:** 660.

**18681 Rhamnetin-3-O-rhamnosyl (1→4)-rhamnopyranoside**

C<sub>28</sub>H<sub>32</sub>O<sub>15</sub> (608.56). **Source:** XIANG FU *Cyperus rotundus*. **Ref:** 660.

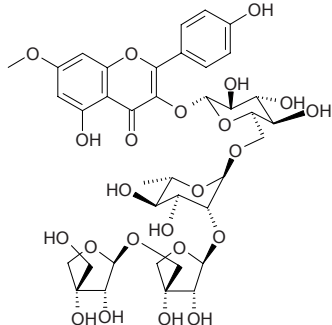
**18682 Rhamnocitrin**

Kaempferol-7-methylether [569-92-6] C<sub>16</sub>H<sub>12</sub>O<sub>6</sub> (300.27). Yellow amorphous powder, mp 225~227°C, mp 221~222°C. **Pharm:** Antioxidant (*in vitro*, PEP inhibitor, IC<sub>50</sub> = (32.64±0.84)μmol/L, control Bacitracin, IC<sub>50</sub> = (129.3±3.2)μmol/L)<sup>[4923]</sup>; cytotoxic inactive (Lu1, 20μg/mL, control Ellipticine, ED<sub>50</sub> = 0.02μg/mL; Col2, 20μg/mL, control Ellipticine, ED<sub>50</sub> = 0.3μg/mL; KB, 20μg/mL, control Ellipticine, ED<sub>50</sub> = 0.04μg/mL; LN CaP, 20μg/mL, control Ellipticine, ED<sub>50</sub> = 0.8μg/mL; KB in absence of 1μg/mL vinblastine, 20μg/mL, control Ellipticine, ED<sub>50</sub> = 0.3μg/mL; KB in presence of 1μg/mL vinblastine, 20μg/mL, control Ellipticine, ED<sub>50</sub> = 0.2μg/mL; BC1, 20μg/mL, control Ellipticine, ED<sub>50</sub> = 0.5μg/mL)<sup>[3479]</sup>. **Source:** GANG MAO CHENG LIU *Tamarix hispida* (aerial parts), HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*], HUANG HUA HAO *Artemisia annua*, NING MENG AN YE *Eucalyptus citriodora*, SHE GAN *Belamcanda chinensis* (rhizome), TU SHA REN *Alpinia japonica*, XI YE TENG *Tetracera asiatica*, YIN CHEN HAO *Artemisia capillaris*, *Alomia myriadenia* (aerial parts). **Ref:** 2, 6, 372, 660, 3479, 4128, 4923.



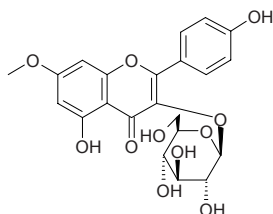
**18683 Rhannocitrin 3-O-apiosyl(1→5)-apiosyl(1→2)-[α-L-rhamnopyranosyl(1→6)]-β-D-glucopyranoside**

C<sub>38</sub>H<sub>48</sub>O<sub>23</sub> (872.79). Yellowish amorphous solid. Source: LENG ZHI HU JI SHENG *Viscum angulatum* (whole herb; yield = 0.00086%dw). Ref: 4626.



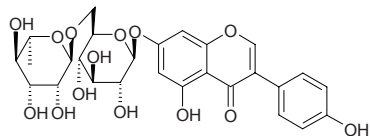
**18684 Rhannocitrin-3-O-β-D-glucoside**

C<sub>22</sub>H<sub>22</sub>O<sub>11</sub> (462.41). Source: BIAN JING HUANG QI *Astragalus complanatus*. Ref: 660.



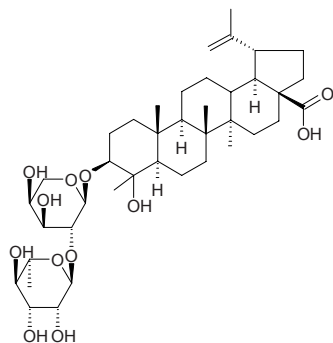
**18685 7-O-α-Rhamno(1→6)-β-glucosylgenistein**

C<sub>27</sub>H<sub>30</sub>O<sub>14</sub> (578.53). White amorphous powder, mp 216–219°C. Pharm: Anti-Inflammatory (inhibit brain liposomal peroxidation, 62.5μg/mL, optical density of DMSO control = (100.1±0.2)%); positive control Propyl gallate, 7.5μmol/mL, optical density of DMSO control = (20.6±0.2)%); granular release inhibitor. Source: PAN YUAN YU TENG *Derris scandens* (stem). Ref: 4984.



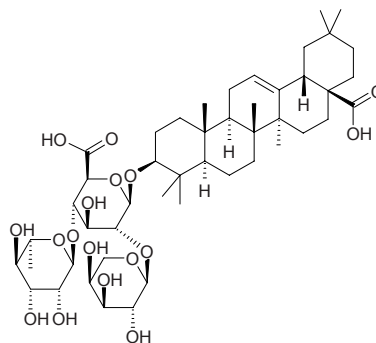
**18686 3-O-α-L-Rhamnopyranosyl(1→2)-α-L-arabinopyranosyl-3β,23-dihydroxylup-20(29)-en-28-oic-acid**

C<sub>40</sub>H<sub>64</sub>O<sub>12</sub> (736.95). Source: BAI TOU WENG *Pulsatilla chinensis*. Ref: 660.



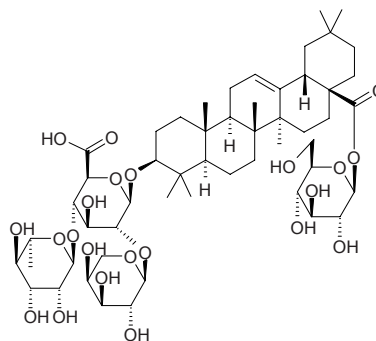
**18687 3-O-α-L-Rhamnopyranosyl-(1→4)-[α-L-arabinopyranosyl-(1→2)]-β-D-glucuronopyranosyl oleanolic acid**

C<sub>47</sub>H<sub>74</sub>O<sub>17</sub> (911.10). Amorphous powder, [α]<sub>D</sub><sup>23</sup> = -4.2° (c = 0.91, MeOH). Source: E ZHANG TENG *Schefflera arboricola*. Ref: 3381.



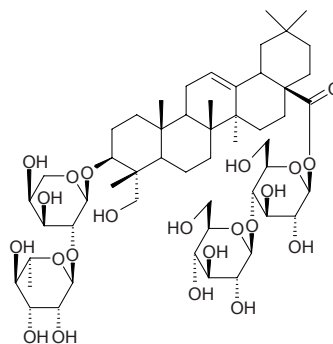
**18688 3-O-α-L-Rhamnopyranosyl-(1→4)-[α-L-arabinopyranosyl-(1→2)]-β-D-glucuronopyranosyl oleanolic acid 28-O-β-D-glucopyranosyl ester**

C<sub>53</sub>H<sub>84</sub>O<sub>22</sub> (1073.25). Amorphous powder, [α]<sub>D</sub><sup>23</sup> = -10.2° (c = 2.06, MeOH). Source: E ZHANG TENG *Schefflera arboricola*. Ref: 3381.



**18689 3β-O-(α-L-Rhamnopyranosyl(1→2)-α-L-arabinopyranosyl)-hederagenin-28-O-β-D-glucopyranosyl(1→4)-β-D-glucopyranosyl ester**

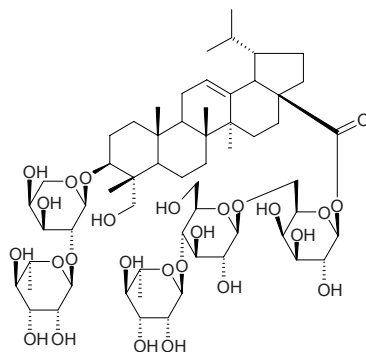
C<sub>53</sub>H<sub>86</sub>O<sub>22</sub> (1075.26). Source: YUAN YE E ZHANG CHAI *Schefflera rotundifolia* (aerial parts). Ref: 5036.



**18690** 3 $\beta$ -O-( $\alpha$ -Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -arabinopyranosyl)-23-hydroxylup-12-en-28-O-( $\alpha$ -rhamnopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -galactopyranosyl)ester

C<sub>59</sub>H<sub>96</sub>O<sub>26</sub> (1221.41). White amorphous powder,  $[\alpha]_D^{25} = +93^\circ$  ( $c = 1$ , MeOH).

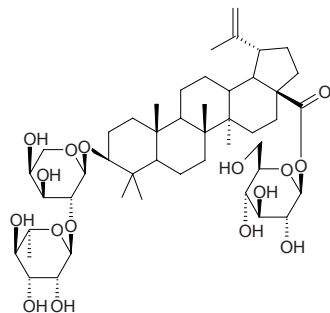
**Pharm:** Antiproliferative (*in vitro*, J774 cell line, IC<sub>50</sub> = 0.60 $\mu$ mol/L, control 6-Mercaptopurine, IC<sub>50</sub> = 0.003 $\mu$ mol/L; WEHI-164, IC<sub>50</sub> = 0.6 $\mu$ mol/L, 6-Mercaptopurine, IC<sub>50</sub> = 0.017 $\mu$ mol/L). **Source:** *Schefflera fagueti*. **Ref:** 5436.



**18691** 3 $\beta$ -D-O-( $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranosyl)-lup-20(29)-ene-28-O- $\beta$ -D-glucopyranosyl ester

C<sub>47</sub>H<sub>76</sub>O<sub>16</sub> (897.12). White powder,  $[\alpha]_D^{25} = +71^\circ$ , ( $c = 0.1$ , MeOH). **Pharm:**

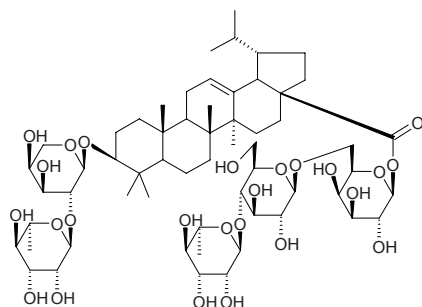
Cytotoxic (antiproliferative *in vitro*: J774.A1 cell line, IC<sub>50</sub> = 0.32 $\mu$ mol/L; HEK-293 cell line, IC<sub>50</sub> = 0.44 $\mu$ mol/L; WEHI-164 cell line, IC<sub>50</sub> = 0.79 $\mu$ mol/L; control 6-Mercaptopurine, J774.A1 cell line, IC<sub>50</sub> = 0.003 $\mu$ mol/L; HEK-293 cell line, IC<sub>50</sub> = 0.007 $\mu$ mol/L; WEHI-164 cell line, IC<sub>50</sub> = 0.015 $\mu$ mol/L). **Source:** YUAN YE E ZHANG CHAI *Schefflera rotundifolia* (aerial parts). **Ref:** 5036.



**18692** 3 $\beta$ -O-( $\alpha$ -Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -arabinopyranosyl)-lup-12-en-28-O-( $\alpha$ -rhamnopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -galactopyranosyl) ester

C<sub>59</sub>H<sub>96</sub>O<sub>25</sub> (1205.41). White amorphous powder,  $[\alpha]_D^{25} = +86^\circ$  ( $c = 1$ , MeOH).

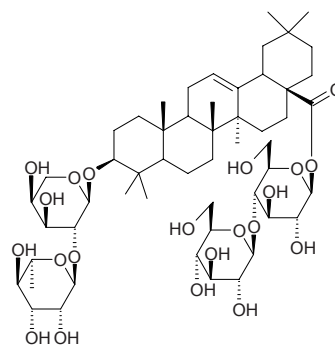
**Pharm:** Antiproliferative (*in vitro*, J774 cell line, IC<sub>50</sub> = 0.70 $\mu$ mol/L; control 6-Mercaptopurine, IC<sub>50</sub> = 0.003 $\mu$ mol/L) **Source:** *Schefflera fagueti*. **Ref:** 5436.



**18693** 3 $\beta$ -D-O-( $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranosyl)-olean-12-ene-28-O-( $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) ester

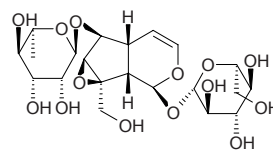
C<sub>53</sub>H<sub>86</sub>O<sub>21</sub> (1059.26). White powder,  $[\alpha]_D^{25} = +37^\circ$ , ( $c = 1$ , MeOH). **Pharm:**

Cytotoxic (antiproliferative *in vitro*: J774.A1 cell line, IC<sub>50</sub> = 0.45 $\mu$ mol/L; HEK-293 cell line, IC<sub>50</sub> = 1.85 $\mu$ mol/L; WEHI-164 cell line, IC<sub>50</sub> = 0.67 $\mu$ mol/L; control 6-Mercaptopurine, J774.A1 cell line, IC<sub>50</sub> = 0.003 $\mu$ mol/L; HEK-293 cell line, IC<sub>50</sub> = 0.007 $\mu$ mol/L; WEHI-164 cell line, IC<sub>50</sub> = 0.015 $\mu$ mol/L). **Source:** YUAN YE E ZHANG CHAI *Schefflera rotundifolia* (aerial parts). **Ref:** 5036.



**18694** 6-O- $\alpha$ -L-Rhamnopyranosylcatalpol

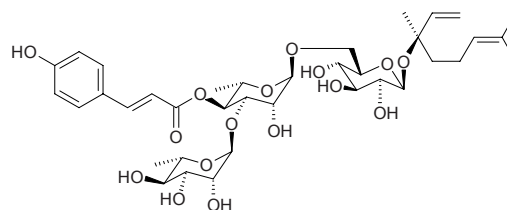
C<sub>21</sub>H<sub>32</sub>O<sub>14</sub> (508.48). **Source:** FEI LV BIN SHI ZI *Gmelina philippensis* (aerial parts). **Ref:** 3954.



**18695** (3S)-O- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 3)-[4-O-(*E*-coumaroyl)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl]-linalool

C<sub>37</sub>H<sub>54</sub>O<sub>16</sub> (754.83). White amorphous powder, mp 144–146°C,  $[\alpha]_D^{25} =$

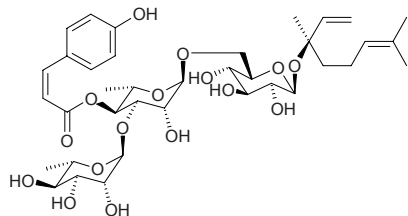
$-31.8^\circ$  ( $c = 0.67$ , MeOH). **Pharm:** Immunosuppressant inactive (hmm mononuclear cells antiproliferation, involving T lymphocytes, B lymphocytes, and macrophages isolated from peripheral blood, 100 $\mu$ mol/L). **Source:** TAI WAN PI PA *Eriobotrya deflexa* (leaf). **Ref:** 3064.





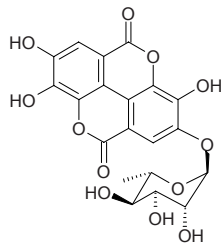
**18696 (3S)-O- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 3)-[4-O-(Z)-coumaroyl]- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl-linalool**

C<sub>37</sub>H<sub>54</sub>O<sub>16</sub> (754.83). White amorphous powder, mp 136–137°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = –87.4° (c = 0.39, MeOH). **Pharm:** Immunosuppressant inactive (hmn mononuclear cells antiproliferation, involving T lymphocytes, B lymphocytes, and macrophages isolated from peripheral blood, 100 $\mu$ mol/L). **Source:** TAI WAN PI PA *Eriobotrya deflexa* (leaf). **Ref:** 3064.



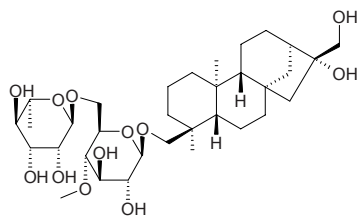
**18697 4-( $\alpha$ -Rhamnopyranosyl)ellagic acid**

C<sub>20</sub>H<sub>16</sub>O<sub>12</sub> (448.34). **Pharm:** Cytotoxic (*in vitro*, P<sub>388</sub>, IC<sub>50</sub> = 62 $\mu$ g/mL; P<sub>388</sub>/ADM, IC<sub>50</sub> = 53 $\mu$ g/mL; K562, IC<sub>50</sub> = 82 $\mu$ g/mL; K562/ADM, IC<sub>50</sub> = 67 $\mu$ g/mL; B16, IC<sub>50</sub> = 88 $\mu$ g/mL; HeLa, IC<sub>50</sub> = 86.5 $\mu$ g/mL; KB, IC<sub>50</sub> = 98 $\mu$ g/mL); HIV-1 protease inhibitor (IC<sub>50</sub> = 4.8 $\mu$ g/mL). **Source:** YUN NAN FENG CHE ZI *Combretum yunnanensis* (branch) **Ref:** 4693.



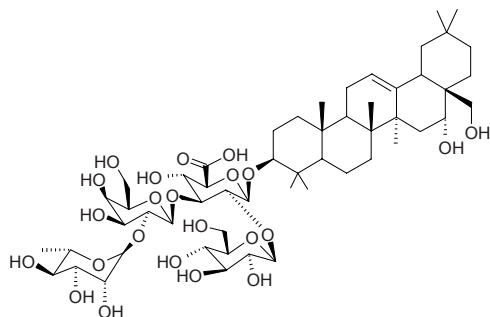
**18698 6'-O- $\alpha$ -L-Rhamnopyranosyl-4-epimicrolepin**

C<sub>33</sub>H<sub>56</sub>O<sub>12</sub> (644.81). **Source:** BIAN YUAN LIN GAI JUE *Microlepis marginata*. **Ref:** 660.



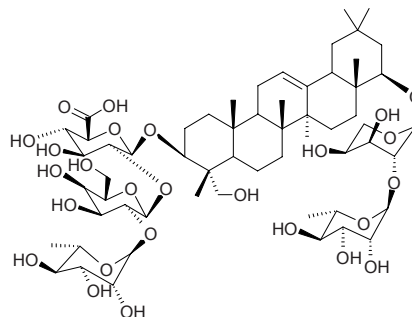
**18699 3-O-{ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 3)-[ $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)]- $\beta$ -D-glucuronopyranosyl}-primulagenin A**

C<sub>54</sub>H<sub>88</sub>O<sub>23</sub> (1105.29). **Source:** RI BEN HOU PI XIANG *Ternstroemia japonica* (fresh fruit; yield = 0.0021%fw). **Ref:** 4730.



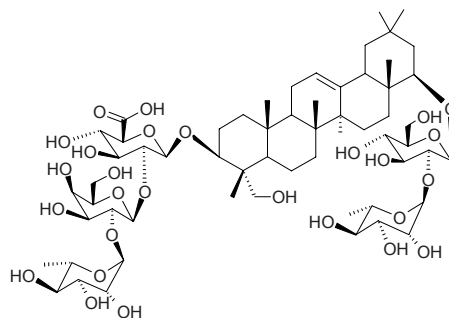
**18700 3-O-{{ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 2)]- $\beta$ -D-glucuronopyranosyl}-22-O- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranosyl]-3 $\beta$ ,22 $\beta$ ,24-trihydroxyolean-12-ene**

C<sub>59</sub>H<sub>96</sub>O<sub>26</sub> (1221.41). White amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = –14.20° (c = 0.50, MeOH). **Pharm:** Cytotoxic (*in vitro*, Hs740T, ED<sub>50</sub> = 3.53 $\mu$ g/mL; Hs756T, ED<sub>50</sub> = 2.47 $\mu$ g/mL; Hs578T, ED<sub>50</sub> = 2.39 $\mu$ g/mL; Hs742T, ED<sub>50</sub> = 17.51 $\mu$ g/mL; DU145, ED<sub>50</sub> = 3.12 $\mu$ g/mL; LNCaP-FGC, ED<sub>50</sub> = 27.5 $\mu$ g/mL). **Source:** DA DOU *Glycine max* (Soybean phytochemical concentrate; yield = 0.0039%dw). **Ref:** 4630.



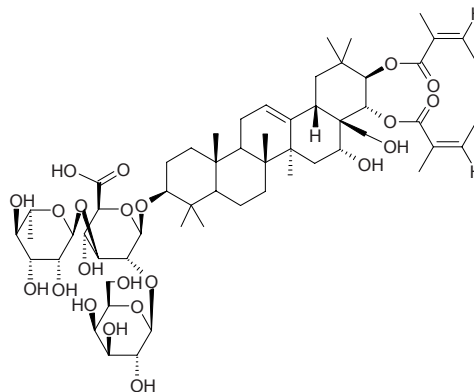
**18701 3-O-{{ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 2)]- $\beta$ -D-glucuronopyranosyl}-22-O- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl]-3 $\beta$ ,22 $\beta$ ,24-trihydroxyolean-12-ene**

C<sub>60</sub>H<sub>98</sub>O<sub>27</sub> (1251.43). White amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = –23.00° (c = 0.53, MeOH). **Pharm:** Cytotoxic (*in vitro*, Hs740T, ED<sub>50</sub> = 4.1 $\mu$ g/mL; Hs756T, ED<sub>50</sub> = 3.94 $\mu$ g/mL; Hs578T, ED<sub>50</sub> = 2.12 $\mu$ g/mL; Hs742T, ED<sub>50</sub> = 14.63 $\mu$ g/mL; DU145, ED<sub>50</sub> = 3.25 $\mu$ g/mL; LNCaP-FGC, ED<sub>50</sub> = 24.1 $\mu$ g/mL). **Source:** DA DOU *Glycine max* (Soybean phytochemical concentrate; yield = 0.0051%dw). **Ref:** 4630.



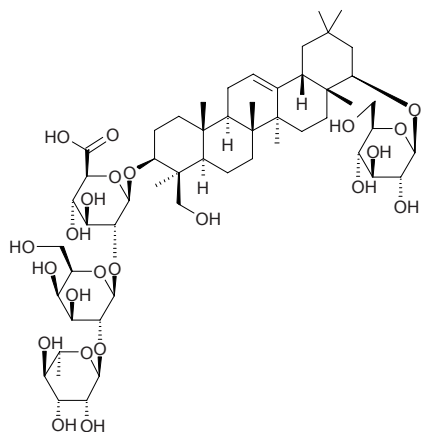
**18702 3-O- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 3)-[ $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 2)]- $\beta$ -D-glucuronopyranosyl-21 $\beta$ ,22 $\alpha$ -di-O-angeloylbarringtonol C**

C<sub>58</sub>H<sub>90</sub>O<sub>22</sub> (1139.35). [ $\alpha$ ]<sub>D</sub><sup>21</sup> = –10.0° (c = 0.66, MeOH). **Pharm:** Hemolytic. **Source:** NAN SU GE LAN JIA SHAN LUO *Harpullia austro-caledonica* (stem cortex). **Ref:** 5269.

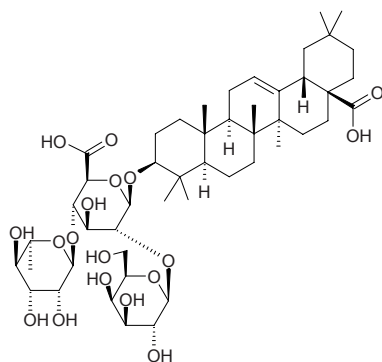




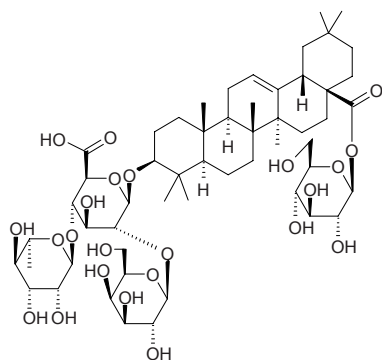
**18703 3-O-[ $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucuronopyranosyl]-22-O- $\beta$ -D-glucopyranosylsoyasapogenol B**  
[142449-92-1] C<sub>54</sub>H<sub>88</sub>O<sub>23</sub> (1105.29). White needles,  $[\alpha]_D^{25} = -13^\circ$  ( $c = 0.4$ , MeOH). Source: *Trifolium resupinatum*. Ref: 2339.



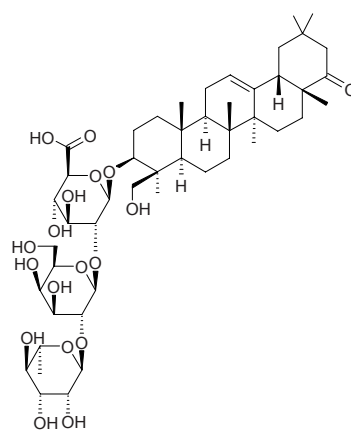
**18704 3-O- $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 4)- $\beta$ -D-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucuronopyranosyl oleanolic acid**  
C<sub>48</sub>H<sub>76</sub>O<sub>18</sub> (941.13). Amorphous powder,  $[\alpha]_D^{23} = -10.4^\circ$  ( $c = 1.95$ , MeOH). Source: E ZHANG TENG *Schefflera arboricola*. Ref: 3381.



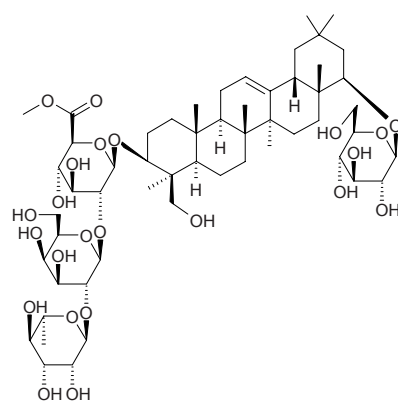
**18705 3-O- $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 4)- $\beta$ -D-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucuronopyranosyl oleanolic acid 28-O- $\beta$ -D-Glucopyranosylester**  
C<sub>54</sub>H<sub>86</sub>O<sub>23</sub> (1103.27). Amorphous powder,  $[\alpha]_D^{23} = -12.1^\circ$  ( $c = 1.28$ , MeOH). Source: E ZHANG TENG *Schefflera arboricola*. Ref: 3381.



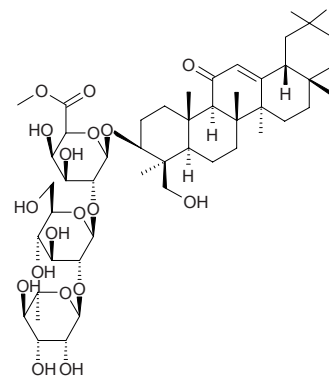
**18706 3-O-[ $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucuronopyranosyl] soyasapogenol E**  
C<sub>48</sub>H<sub>76</sub>O<sub>18</sub> (941.13). Source: GUANG JIN QIAN CAO *Desmodium styracifolium*. Ref: 660.



**18707 3-O- $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranosyl(1 $\rightarrow$ 2)-6-O-methyl- $\beta$ -D-glucuronopyranosyl-soyasapogenol B-22-O- $\beta$ -D-glucopyranoside**  
C<sub>55</sub>H<sub>90</sub>O<sub>23</sub> (1119.32). Source: BIAN JING HUANG QI *Astragalus complanatus*. Ref: 660.

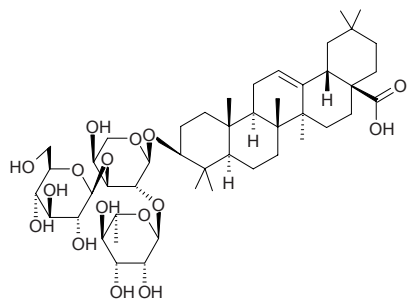


**18708 3-O- $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranosyl(1 $\rightarrow$ 2)-6-O-methyl- $\beta$ -D-glucuronopyranosyl-3 $\beta$ ,22 $\beta$ ,24-trihydroxy-11-oxo-olean-12-ene**  
C<sub>49</sub>H<sub>78</sub>O<sub>18</sub> (955.16). Source: BIAN JING HUANG QI *Astragalus complanatus*. Ref: 660.



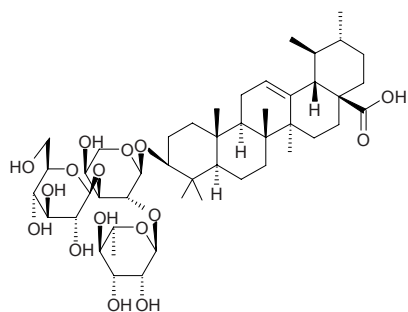
**18709 3-O-[ $\alpha$ -L-Rhamnopyranosyl (1 $\rightarrow$ 2)]-[ $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 3)]- $\alpha$ -L-arabinopyranosyl oleanolic acid**

Patrinia-glycoside B-II C<sub>47</sub>H<sub>76</sub>O<sub>16</sub> (897.12). Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 660.



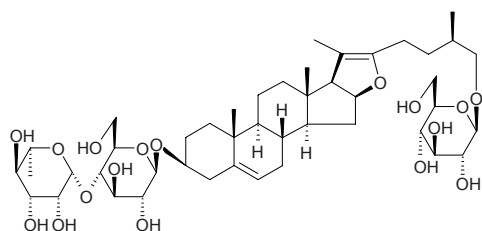
**18710 3-O-[ $\alpha$ -L-Rhamnopyranosyl (1 $\rightarrow$ 2)]-[ $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 3)]- $\alpha$ -L-arabinopyranosyl ursolic acid**

C<sub>47</sub>H<sub>76</sub>O<sub>16</sub> (897.12). Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 660.



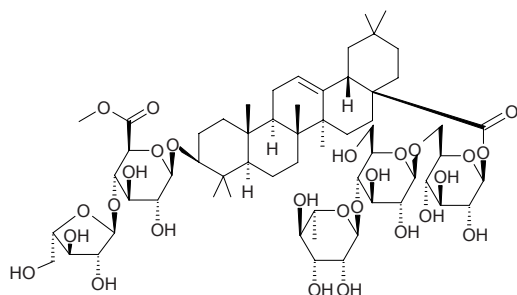
**18711 3-O-[ $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranosyl]-26-O-( $\beta$ -D-glucopyranosyl)-(25R)-furosta-5,20-dien-3 $\beta$ , 26-diol**

C<sub>45</sub>H<sub>72</sub>O<sub>17</sub> (885.07). Source: TIAN MEN DONG *Asparagus cochinchinensis* [Syn. *Asparagus lucidus*]. Ref: 660.



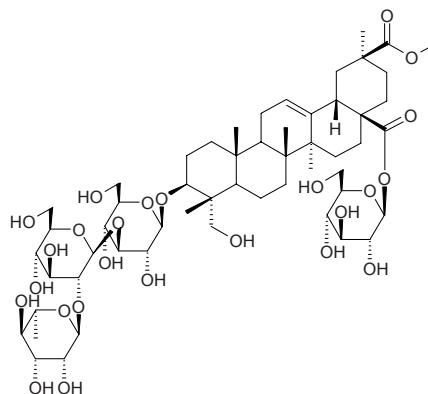
**18712  $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl-oleanate-3- $\alpha$ -L-arabinofuranosyl(1 $\rightarrow$ 4)-methyl-( $\beta$ -D-glucuronopyranoside)uronate**

C<sub>60</sub>H<sub>96</sub>O<sub>27</sub> (1249.42). Source: TONG HUA GEN *Tetrapanax papyriferus*. Ref: 660.



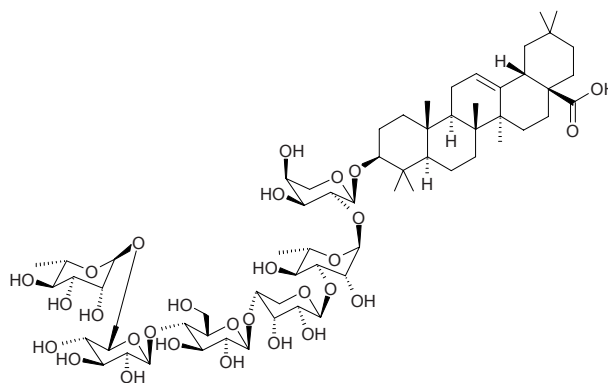
**18713 3-O-[ $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 2)]- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl] phytolaccagenic acid 28-O- $\beta$ -D-glucopyranosyl ester**

C<sub>55</sub>H<sub>88</sub>O<sub>25</sub> (1149.30). mp 227~230°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +5.3° (c = 0.7, MeOH). Source: CANG BAI CHENG GOU FENG *Diploclisia glaucescens*. Ref: 2054.



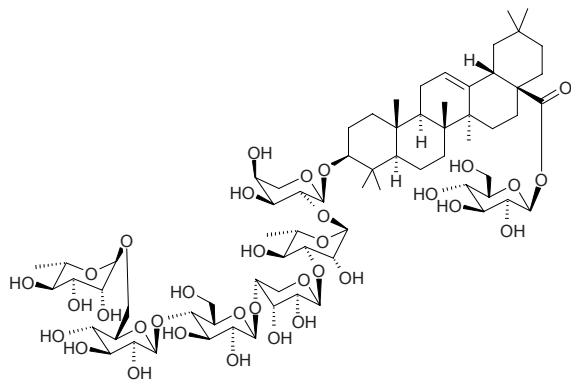
**18714 3 $\beta$ -[( $O$ - $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 6)- $O$ - $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)- $O$ - $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)- $O$ - $\beta$ -D-ribosepyranosyl(1 $\rightarrow$ 3)- $O$ - $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranosyl)oxy]olean-12-en-28-oic acid**

C<sub>64</sub>H<sub>104</sub>O<sub>29</sub> (1337.53). Amorphous solid, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -82.0° (c = 0.25, MeOH). Pharm: Cytotoxic (*in vitro*, HL-60, IC<sub>50</sub> = 2.8  $\mu$ mol/L; BSY1, IC<sub>50</sub> = 5.9  $\mu$ mol/L; U251, IC<sub>50</sub> = 6.3  $\mu$ mol/L; SF295 IC<sub>50</sub> = 6  $\mu$ mol/L; PC3, IC<sub>50</sub> = 6  $\mu$ mol/L; NCI-H460, IC<sub>50</sub> = 40  $\mu$ mol/L; OVCAR-3, IC<sub>50</sub> = 47  $\mu$ mol/L; OVCAR-8, IC<sub>50</sub> = 71  $\mu$ mol/L; stomach MKN28, IC<sub>50</sub> = 30  $\mu$ mol/L; no significant differential cellular sensitivities when it was evaluated in the Japanese Foundation for Cancer Research 39 cell line assay). Source: WEI LING XIAN *Clematis chinensis* (root: yield = 0.0087%). Ref: 4763.



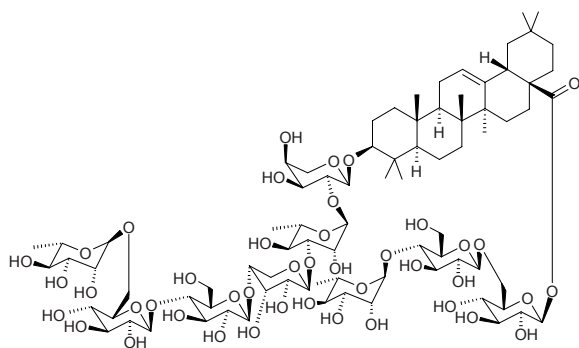
**18715** 3 $\beta$ -[(*O*- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 6)-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-*O*- $\beta$ -D-ribosepyranosyl-(1 $\rightarrow$ 3)-*O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranosyl)oxy]olean-12-en-28-oic acid  $\beta$ -D-glucopyranosyl ester

C<sub>70</sub>H<sub>114</sub>O<sub>34</sub> (1499.67). Amorphous solid,  $[\alpha]_D^{25} = -70.0^\circ$  ( $c = 0.25$ , MeOH). Source: WEI LING XIAN *Clematis chinensis* (root; yield = 0.00042%). Ref: 4763.



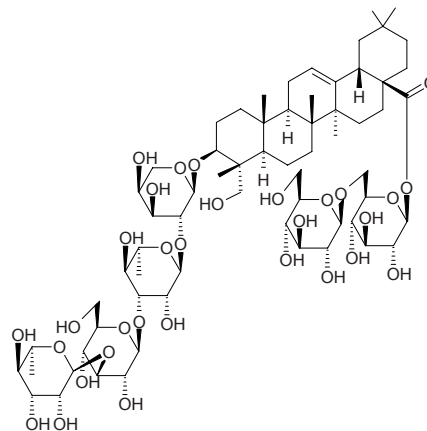
**18716** 3 $\beta$ -[(*O*- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 6)-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-*O*- $\beta$ -D-ribosepyranosyl-(1 $\rightarrow$ 3)-*O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranosyl)oxy]olean-12-en-28-oic acid *O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl ester

C<sub>82</sub>H<sub>134</sub>O<sub>43</sub> (1807.96). Amorphous solid,  $[\alpha]_D^{25} = -94.0^\circ$  ( $c = 0.25$ , MeOH). Pharm: Cytotoxic inactive (*in vitro*, HL-60, 20 $\mu$ mol/L; but it can be converted to the cytotoxic saponin 1 (3 $\beta$ -[(*O*- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 6)-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-*O*- $\beta$ -D-ribosepyranosyl-(1 $\rightarrow$ 3)-*O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranosyl)oxy]olean-12-en-28-oic acid) by cleavage of the C-28 triglycosyl ester linkage and is concluded to have a cytotoxic potentiality)). Source: WEI LING XIAN *Clematis chinensis* (root; yield = 0.11%). Ref: 4763.



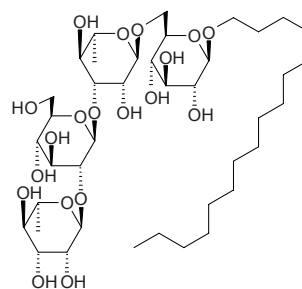
**18717** 3-*O*-2-*L*-Rhamnopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranosyl hederagenin 28-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl ester

C<sub>65</sub>H<sub>106</sub>O<sub>31</sub> (1385.55). White powder, mp 220–224°C,  $[\alpha]_D^{19} = -27.6^\circ$  ( $c = 0.2$ , methanol). Source: CHUAN XU DUAN *Dipsacus asperoides*. Ref: 211.



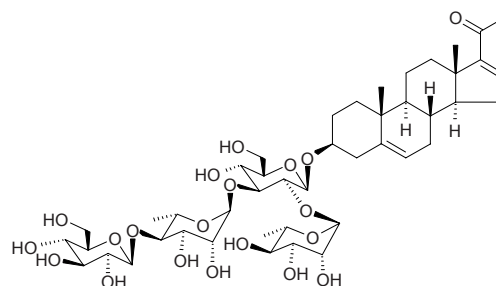
**18718** 1-*O*-[ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl]hexadecanol

C<sub>40</sub>H<sub>74</sub>O<sub>19</sub> (859.02).  $[\alpha]_D = -37.2^\circ$  ( $c = 0.492$ , CH<sub>3</sub>OH). Source: YAN SE LONG YAN *Dimocarpus fumatus*. Ref: 1853.

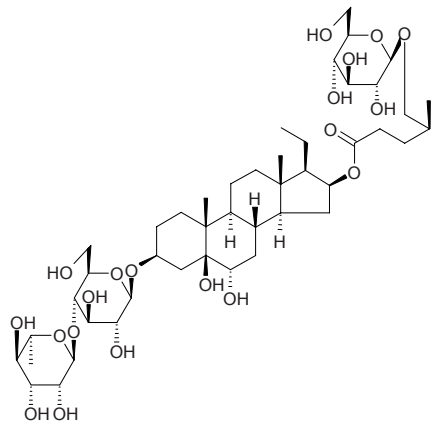


**18719** 3 $\beta$ -[(*O*- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)-*O*-[*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 3)]- $\beta$ -D-glucopyranosyl)oxy]pregna-5,16-dien-20-one

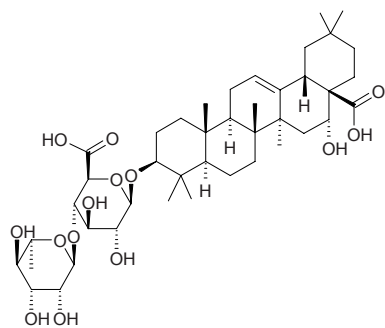
C<sub>45</sub>H<sub>70</sub>O<sub>20</sub> (931.05). Amorphous solid,  $[\alpha]_D^{25} = -44.0^\circ$  ( $c = 0.10$ , CHCl<sub>3</sub>:MeOH = 1:1). Source: JIAN GEN SHU *Tacca chantrieri* [Syn. *Tacca minor*; *Tacca esquirolii*] (rhizome; yield = 0.00041%dw). Ref: 4648.



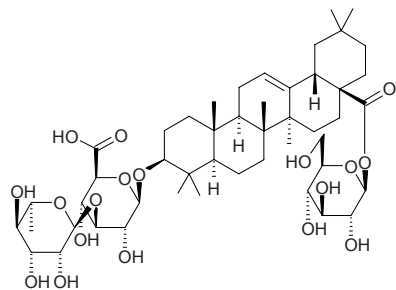
**18720 3-*O*- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl 3 $\beta$ ,5 $\beta$ ,6 $\alpha$ ,16 $\beta$ -tetrahydroxypregnane 16-(5-*O*- $\beta$ -D-glucopyranosyl-4(*S*)-methyl-5-hydroxypentanoic acid) ester**  
 C<sub>45</sub>H<sub>76</sub>O<sub>20</sub> (937.10). Amorphous powder,  $[\alpha]_D^{29} = -28.4^\circ$  ( $c = 0.15$ , pyridine).  
 Source: JIU ZI *Allium tuberosum*. Ref: 4262.



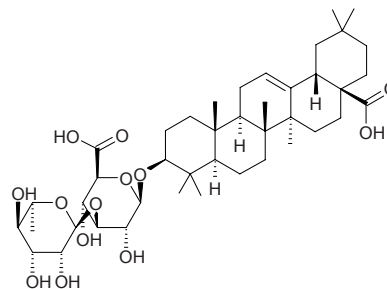
**18721 3-*O*-[ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucuronopyranosyl] echinocystic acid**  
 C<sub>42</sub>H<sub>66</sub>O<sub>14</sub> (794.99). Amorphous powder,  $[\alpha]_D^{23} = -27.8^\circ$  ( $c = 1.10$ , MeOH).  
 Source: E ZHANG TENG *Schefflera arboricola*. Ref: 3381.



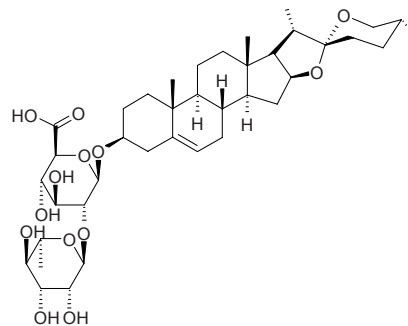
**18722 3-*O*-[ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-glucuronopyranosyl]-28-*O*-( $\beta$ -D-glucopyranosyl)-3 $\beta$ -hydroxyolean-12-en-28-oate**  
 C<sub>48</sub>H<sub>76</sub>O<sub>18</sub> (941.13). Source: JIU CENG FENG *Cladostachys amaranthoides* [Syn. *Achyranthes amaranthoides*; *Cladostachys frutescens*; *Deeringia amaranthoides*] (fruit). Ref: 660.



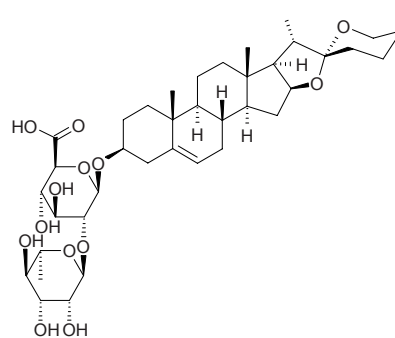
**18723 3-*O*- $\alpha$ -L-Rhamnopyranosyl (1 $\rightarrow$ 3)- $\beta$ -D-glucuronopyranosyl-3 $\beta$ -hydroxyolean-12-en-28-oate**  
 C<sub>42</sub>H<sub>66</sub>O<sub>13</sub> (778.99). Source: JIU CENG FENG *Cladostachys amaranthoides* [Syn. *Achyranthes amaranthoides*; *Cladostachys frutescens*; *Deeringia amaranthoides*] (fruit). Ref: 660.



**18724 3-*O*- $\alpha$ -L-Rhamnopyranosyl (1 $\rightarrow$ 2)- $\beta$ -D-glucuronopyranosyl-3 $\beta$ -hydroxy-25R-spirost-5-ene**  
 C<sub>39</sub>H<sub>60</sub>O<sub>13</sub> (736.91). Source: BAI MAO TENG *Solanum lyratum*. Ref: 660.



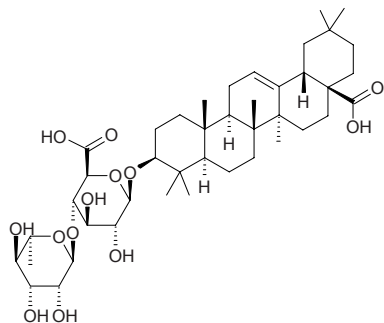
**18725 3-*O*- $\alpha$ -L-Rhamnopyranosyl (1 $\rightarrow$ 2)- $\beta$ -D-glucuronopyranosyl-3 $\beta$ -hydroxy-25S-spirost-5-ene**  
 C<sub>39</sub>H<sub>60</sub>O<sub>13</sub> (736.91). Source: BAI MAO TENG *Solanum lyratum*. Ref: 660.



**18726 3-O-[ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucuronopyranosyl] oleanolic acid**

C<sub>42</sub>H<sub>66</sub>O<sub>13</sub> (778.99). Amorphous powder,  $[\alpha]_D^{23} = -8.4^\circ$  ( $c = 2.34$ , MeOH).

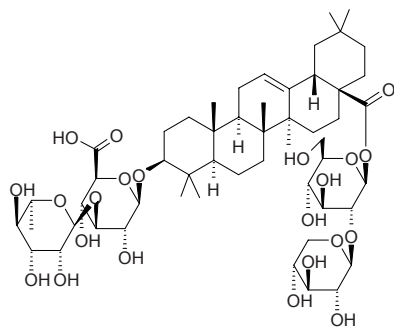
Source: E ZHANG TENG *Schefflera arboricola*. Ref: 3381.



**18727 3-O-[ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-glucuronopyranosyl]-28-O-[ $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl]-3 $\beta$ -hydroxy-olean-12-en-28-oate**

C<sub>53</sub>H<sub>84</sub>O<sub>22</sub> (1073.25). Source: JIU CENG FENG *Cladostachys amaranthoides*

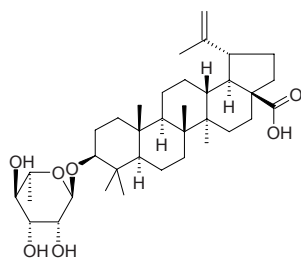
[Syn. *Achyranthes amaranthoides*; *Cladostachys frutescens*; *Deeringia amaranthoides*] (fruit). Ref: 660.



**18728  $\alpha$ -L-Rhamnopyranosyl-3 $\beta$ -hydroxy-lup-20(29)-en-28-oic acid**

C<sub>36</sub>H<sub>58</sub>O<sub>7</sub> (602.86). Source: XIAO HUA WU YA GUO *Dillenia pentagyna*.

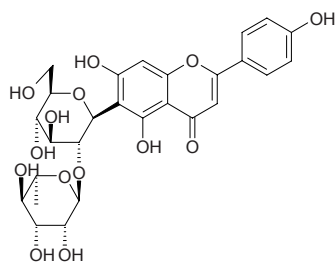
Ref: 1521.



**18729 2''-O- $\alpha$ -L-Rhamnopyranosylisovitexin**

C<sub>27</sub>H<sub>30</sub>O<sub>14</sub> (578.53).  $[\alpha]_D^{27} = -122.4^\circ$  ( $c = 0.65$ , pyridine). Source: RI BEN

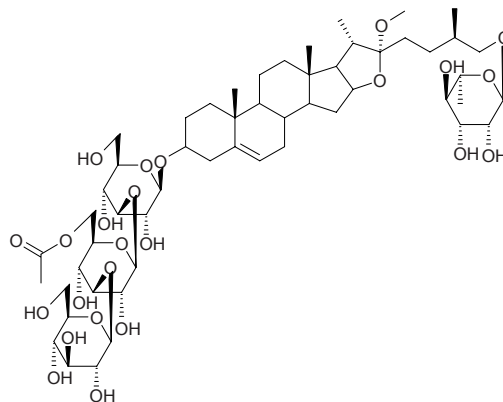
SHUANG HU DIE *Tripterospermum japonicum*. Ref: 3533.



**18730 (25R)-26-[( $\alpha$ -L-Rhamnopyranosyl)oxy]-22 $\alpha$ -methoxyfurost-5-en-3 $\beta$ -yl-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)-O-[6-acetyl- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)]-O- $\beta$ -D-glucopyranoside**

C<sub>54</sub>H<sub>88</sub>O<sub>24</sub> (1121.29). Amorphous powder,  $[\alpha]_D^{25} = -46^\circ$  ( $c = 0.05$ , MeOH).

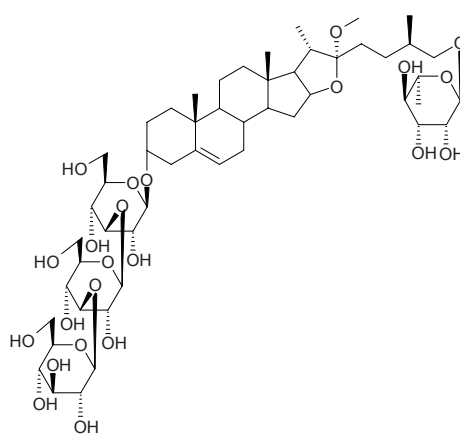
Source: LV TI GEN CAO *Helleborus viridis* (leaf). Ref: 3875.



**18731 (25R)-26-[( $\alpha$ -L-Rhamnopyranosyl)oxy]-22 $\alpha$ -methoxyfurost-5-en-3 $\beta$ -yl-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)-O- $\beta$ -D-glucopyranoside**

C<sub>52</sub>H<sub>86</sub>O<sub>23</sub> (1079.25). Amorphous powder,  $[\alpha]_D^{25} = -70^\circ$  ( $c = 0.1$ , MeOH).

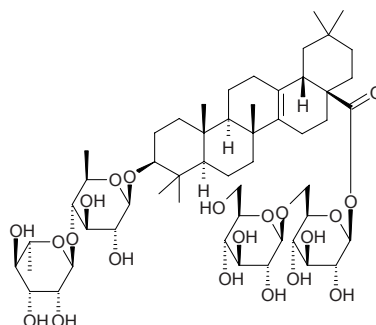
Source: LV TI GEN CAO *Helleborus viridis* (leaf). Ref: 3875.



**18732 3-O- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-quinovopyranosyl pyrocnicinolic acid 28-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl ester**

C<sub>53</sub>H<sub>86</sub>O<sub>21</sub> (1059.26). Amorphous powder,  $[\alpha]_D^{25} = -43^\circ$  ( $c = 0.5$ , MeOH).

Source: WU BING XIN WU TAN *Neonauclea sessilifolia* [Syn. *Nauclea sessilifolia*; *Adina sessilifolia*](root). Ref: 4405.

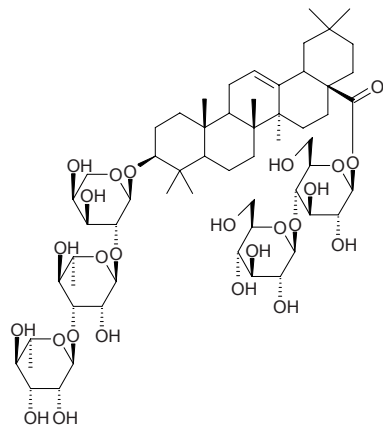


**18733** 3-*O*-( $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -L-rhamno-pyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -L-arabinopyranosyl)-olean-12-ene-28-*O*-( $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) ester

C<sub>59</sub>H<sub>96</sub>O<sub>25</sub> (1205.41). White powder,  $[\alpha]_D^{25} = +22^\circ$ , ( $c = 1$ , MeOH). **Pharm:** Cytotoxic (antiproliferative *in vitro*: J774.A1 cell line, IC<sub>50</sub> = 1.78  $\mu$ mol/L; HEK-293 cell line, IC<sub>50</sub> = 2.2  $\mu$ mol/L; control 6-Mercaptopurine, J774.A1 cell line, IC<sub>50</sub> = 0.003  $\mu$ mol/L; HEK-293 cell line, IC<sub>50</sub> = 0.007  $\mu$ mol/L).

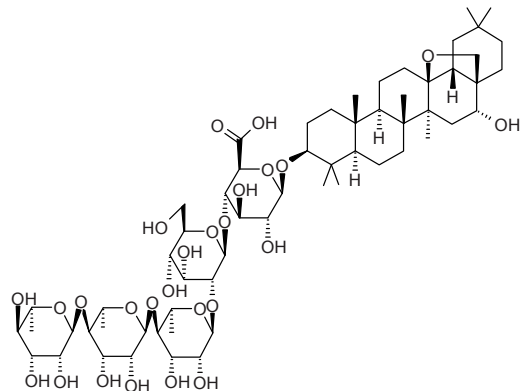
**Source:** YUAN YE E ZHANG CHAI *Schefflera roundifolia* (aerial parts).

**Ref:** 5036.



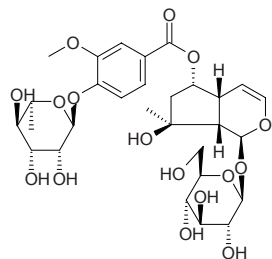
**18734** 3 $\beta$ -{*O*- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 4)-*O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)-[*O*- $\alpha$ -L-rham-nopyranosyl-(1 $\rightarrow$ 2)-*O*- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)-*O*- $\beta$ -D-glucuronopyranosyl]}-16 $\alpha$ -hydroxy-13 $\beta$ , 28-epoxyoleanane

C<sub>60</sub>H<sub>98</sub>O<sub>26</sub> (1235.43). **Source:** CI WU JIA *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*]. **Ref:** 2.



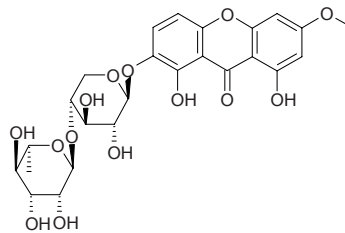
**18735** 6-*O*-(4''-*O*- $\alpha$ -L-Rhamnopyranosyl) vanilloylajugol

C<sub>29</sub>H<sub>40</sub>O<sub>16</sub> (644.63). **Source:** GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*]. **Ref:** 2.



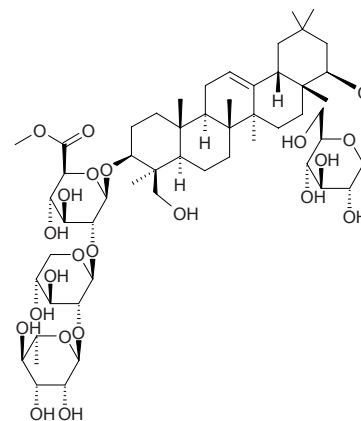
**18736** 2-*O*-[ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-xylopyranosyl]-1,8-dihydroxy-6-methoxyxanthone

C<sub>25</sub>H<sub>28</sub>O<sub>14</sub> (552.49). **Source:** RI BEN ZHANG YA CAI *Swertia japonica*. **Ref:** 2528.



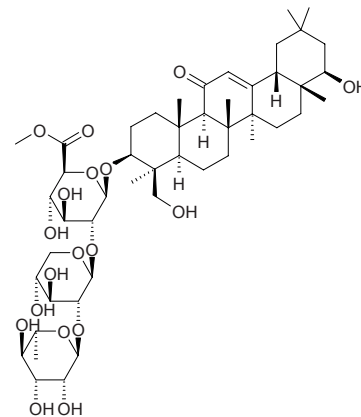
**18737** 3-*O*- $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 2)-6-*O*-methyl- $\beta$ -D-glucuronopyranosyl-soyasapogenol B 22-*O*- $\beta$ -D-glucopyranoside

C<sub>54</sub>H<sub>88</sub>O<sub>22</sub> (1089.29). **Source:** BIAN JING HUANG QI *Astragalus complanatus*. **Ref:** 660.



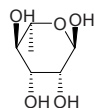
**18738** 3-*O*- $\alpha$ -L-Rhamnopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 2)-6-*O*-methyl- $\beta$ -D-glucuronopyranosyl-3 $\beta$ ,22 $\beta$ ,24-trihydroxy-11-oxo-olean-12-ene

C<sub>48</sub>H<sub>76</sub>O<sub>18</sub> (941.13). **Source:** BIAN JING HUANG QI *Astragalus complanatus*. **Ref:** 660.

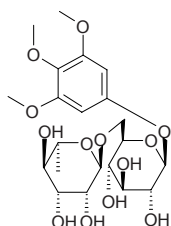


**18739 Rhamnose**

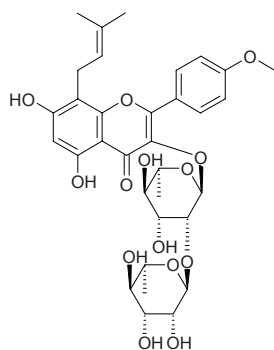
6-Deoxy-*L*-mannose [3615-41-6] C<sub>6</sub>H<sub>12</sub>O<sub>5</sub> (164.16). (L) White powdery crystals, mp 289–290°C (MeOH), mp (L) ( $\alpha$ ) 105°C, ( $\beta$ ) 123–125°C. Source: DANG SHEN *Codonopsis pilosula*, DONG BEI CI REN SHEN *Oplopanax elatus*, LU HUI *Aloe vera* [Syn. *Aloe barbadensis*], QIANG HUO *Notopterygium incisum*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], XIA YE XIANG PU *Typha angustifolia*. Ref: 2, 6, 450, 660.

**18740 1-[ $\alpha$ -*L*-Rhamnosyl-(1→6)- $\beta$ -*D*-glucopyranosyl]-3,4,5-trimethoxybenzene**

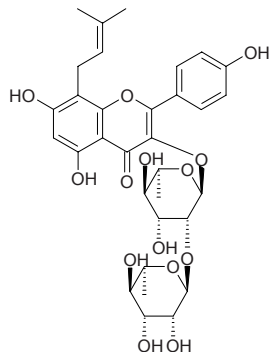
C<sub>21</sub>H<sub>32</sub>O<sub>13</sub> (492.48). Source: MAO GUO QI *Acer nikoense* (stem cortex: yield = 0.0010%). Ref: 4304.

**18741 2''-*O*-Rhamnosyl icariside II**

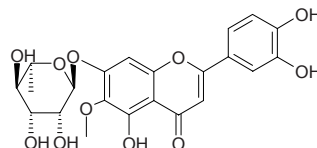
C<sub>33</sub>H<sub>40</sub>O<sub>14</sub> (660.68). Source: CHAO XIAN YIN YANG HUO *Epimedium koreanum*. Ref: 660.

**18742 2''-*O*-Rhamnosylkariside A**

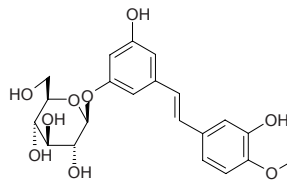
C<sub>32</sub>H<sub>38</sub>O<sub>14</sub> (646.65). Source: CHAO XIAN YIN YANG HUO *Epimedium koreanum*. Ref: 660.

**18743 7 $\alpha$ -*L*-Rhamnosyl-6-methoxyluteolin**

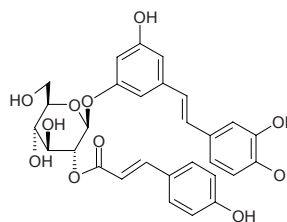
C<sub>22</sub>H<sub>22</sub>O<sub>11</sub> (462.41). Source: KONG XIN XIAN *Alternanthera philoxeroides*. Ref: 6.

**18744 Rhaponticin**

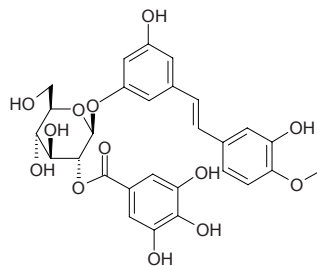
Rhapontigenin 3-*O*- $\beta$ -*D*-glucopyranoside [155-58-8] C<sub>21</sub>H<sub>24</sub>O<sub>9</sub> (420.42). Colorless needles (acetone), mp 245–247°C, mp 246–248°C, mp 231°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = –56° ( $c$  = 0.88, acetone:H<sub>2</sub>O = 1:1) (lit. [ $\alpha$ ]<sub>D</sub><sup>25</sup> = –56.3°). Pharm: Platelet aggregation inhibitor (2.5  $\mu$ g/mL collagen-induced, IC<sub>50</sub> = (52.3  $\pm$  4.1)  $\mu$ mol/L,  $p$  < 0.05, control *trans*-Resveratrol, IC<sub>50</sub> = (11.6  $\pm$  2.1)  $\mu$ mol/L,  $p$  < 0.01; 6  $\mu$ mol/L ADP-induced, IC<sub>50</sub> = (112  $\pm$  17)  $\mu$ mol/L,  $p$  < 0.05, *trans*-Resveratrol, IC<sub>50</sub> = (17.8  $\pm$  3.3)  $\mu$ mol/L,  $p$  < 0.01)<sup>[5094]</sup>. Source: DA HUANG *Rheum officinale*, ZHANG YE DA HUANG *Rheum palmatum*, *Rheum palaestinum* (aerial parts). Ref: 2, 660, 1521, 5094.

**18745 Rhaponticin 2''-*O*-*p*-coumarate**

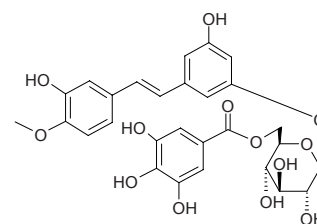
C<sub>30</sub>H<sub>30</sub>O<sub>11</sub> (566.57). Source: YU DA HUANG *Rheum* sp.<sup>[4064]</sup>. Ref: 660, 4064.

**18746 Rhaponticin 2''-*O*-gallate**

C<sub>28</sub>H<sub>28</sub>O<sub>13</sub> (572.53). Source: YU DA HUANG *Rheum* sp.<sup>[4064]</sup>. Ref: 660, 4064.

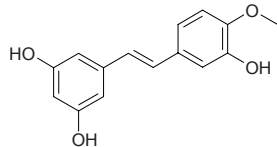
**18747 Rhaponticin 6''-*O*-gallate**

C<sub>28</sub>H<sub>28</sub>O<sub>13</sub> (572.53). Source: YU DA HUANG *Rheum* sp.<sup>[4064]</sup>. Ref: 660, 4064.

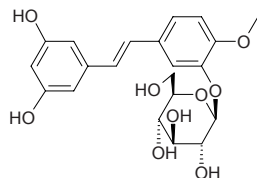


**18748 Rhapontigenin**

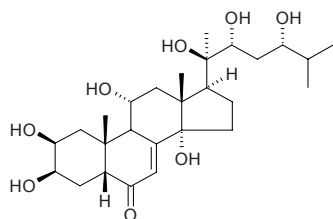
Pontigenin [500-65-2]  $C_{15}H_{14}O_4$  (258.28). mp 186~187°C. Source: DA HUANG *Rheum officinale*. Ref: 6.

**18749 Rhapontigenin 3'-O-β-D-glucopyranoside**

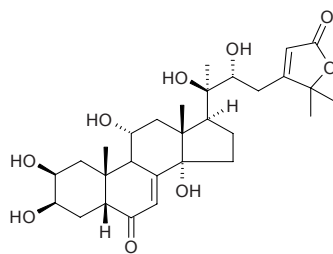
$C_{21}H_{24}O_9$  (420.42). Source: YU DA HUANG *Rheum* sp.<sup>[4064]</sup>. Ref: 660, 4064.

**18750 Rhapontisterone**

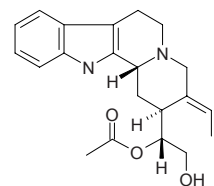
(20*R*,22*R*,24*S*)-2β,3β,11α,14α,20,22,24-Hepta-hydroxy-5β-cholest-7-en-6-one  $C_{27}H_{44}O_8$  (496.65). White acicular crystals, mp 234~236°C. Source: LOU LU *Rhaponticum uniflorum*. Ref: 194.

**18751 Rhapontisterone R<sub>1</sub>**

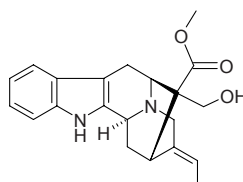
$C_{29}H_{42}O_9$  (534.65). Source: LOU LU *Rhaponticum uniflorum*. Ref: 365.

**18752 Rhazimanine**

$C_{21}H_{26}N_2O_3$  (354.45). Source: XIANG PI MU *Alstonia scholaris*. Ref: 660.

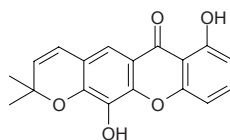
**18753 Rhazine**

[639-36-1]  $C_{21}H_{24}N_2O_3$  (352.44). mp 245.0~247.5°C (ethanol), 243~246°C (benzene). Source: XIANG PI MU *Alstonia scholaris*. Ref: 6.

**18754 Rheediachromenoxanthone**

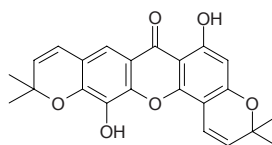
[82667-93-4]  $C_{18}H_{14}O_5$  (310.31). Crystals (Et<sub>2</sub>O-hexane), mp 223~224°C.

Pharm: Cytotoxic (P<sub>388</sub> ED<sub>50</sub> = 1.67μg/mL, control Mithramycin ED<sub>50</sub> = 0.06μg/mL; HT29 ED<sub>50</sub> = 4.68μg/mL, control Mithramycin ED<sub>50</sub> = 0.08μg/mL). Source: TAI WAN LV DAO TENG HUANG *Garcinia linii*, *Rheedia gardneriana*. Ref: 4094.

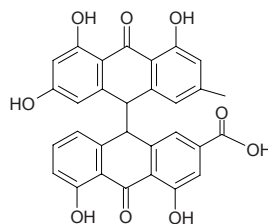
**18755 Rheediaxanthone A**

$C_{23}H_{20}O_6$  (392.41). Pharm: Antioxidant inactive (DPPH scavenger, 10μmol/L, ScRt = 8%; control BHT, 10μmol/L, ScRt = 43%, IC<sub>50</sub> = 19.00μmol/L)<sup>[4422]</sup>.

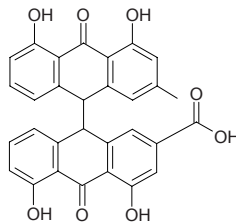
Source: HEI XIAN TIAO TENG HUANG *Garcinia nigrolineata* (stam bark), TIAN SHAN ZHU ZI *Garcinia dulcis* (flower). Ref: 3482, 4422.

**18756 Rheidin A**

Reidin A  $C_{30}H_{20}O_9$  (524.49). Source: DA HUANG *Rheum officinale*, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. Ref: 2, 660.

**18757 Rheidin B**

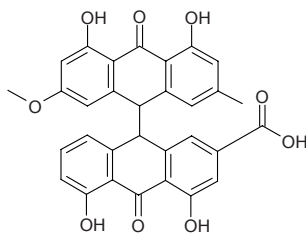
Reidin B  $C_{30}H_{20}O_8$  (508.49). Source: DA HUANG *Rheum officinale*, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. Ref: 2, 660.



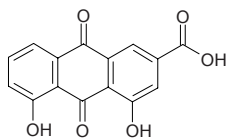


**18758 Rheidin C**

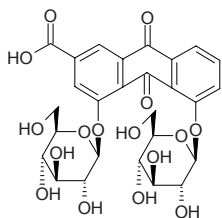
Rheidin C  $C_{31}H_{22}O_9$  (538.52). Source: DA HUANG *Rheum officinale*, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. Ref: 2, 660.

**18759 Rhein**

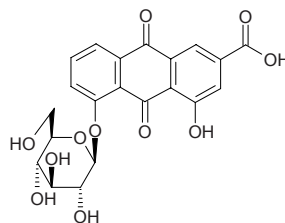
Cassic acid [478-43-3]  $C_{15}H_8O_6$  (284.23). mp 321–322°C. Pharm: Antineoplastic (mus, melanoma, 50mg/(kg·d), InRt = 76%, mammary cancer and EAC); antiproliferative (liver cancer cell HepG2,  $IC_{50}$  = 39.3  $\mu$ mol/L, control 5-FU, 200  $\mu$ mol/L, inhibition rate = 50%)<sup>[4915]</sup>; antibacterial (*Streptococcus* sp., *Staphylococcus aureus*, *Bacillus diphtheriae*, *Bacillus subtilis*, *Bacillus anthracis*, *B. typhosus*, *Bacillus paratyphosus*, and *Bacillus dysenteriae*, MIC = 15  $\mu$ g/mL); antifungal (dermatophyte); diuretic; laxative (very strong). Source: CHOU CAO *Ruta graveolens*, DA HUANG *Rheum officinale*, FAN XIE YE *Cassia angustifolia*, HE SHOU WU *Polygonum multiflorum* (dried tuberoid (preparing): content scope of 2 batch samples = 0.082%–0.094%, mean content = 0.088%)<sup>[5508]</sup>, HU ZHANG *Polygonum cuspidatum*, JIAN YE FAN XIE YE *Cassia acutifolia*, JUE MING ZI *Cassia tora*, SHAN BIAN DOU ZI *Cassia mimosoides*, SHE XIANG XUAN *Hemerocallis thunbergii*, TANG GU TE DA HUANG *Rheum tanguticum*, XUAN CAO GEN *Hemerocallis fulva* (root: mean content collected in Apr. To Jun. = 0.02016%)<sup>[5508]</sup>, ZANG BIAN DA HUANG *Rheum emodi* [Syn. *Rheum australe*] (stem and rhizome: content < 0.05%)<sup>[5508]</sup>, ZHANG YE DA HUANG *Rheum palmatum* (stem and rhizome: content scope = 0.50%–4.50%). Ref: 2, 4, 555, 658, 660, 4915, 5508.

**18760 Rhein diglucoside**

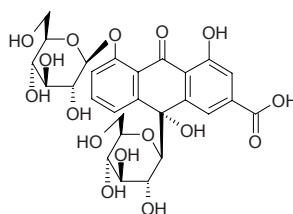
$C_{27}H_{28}O_{16}$  (608.51). Source: ZHANG YE DA HUANG *Rheum palmatum*. Ref: 6.

**18761 Rhein-8-O-β-D-glucopyranoside**

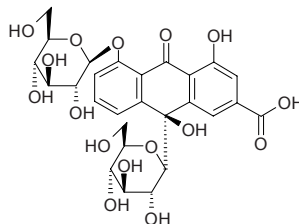
Rhein-8-monoglucoside  $C_{21}H_{18}O_{11}$  (446.37). mp 260–266°C. Source: DA HUANG *Rheum officinale*, TANG GU TE DA HUANG *Rheum tanguticum* (dried stem and rhizome: mean content of 3 origins = 1.07%)<sup>[5517]</sup>, ZHANG YE DA HUANG *Rheum palmatum* (dried stem and rhizome: mean content of 4 origins = 1.27%)<sup>[5517]</sup>. Ref: 2, 6, 660, 5517.

**18762 Rheinoside A**

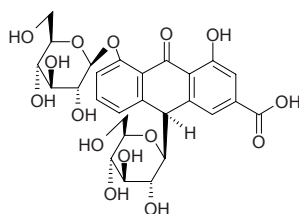
$C_{27}H_{30}O_{16}$  (610.53). Source: ZHANG YE DA HUANG *Rheum palmatum*, TANG GU TE DA HUANG *Rheum tanguticum*. Ref: 2, 660.

**18763 Rheinoside B**

$C_{27}H_{30}O_{16}$  (610.53). Source: ZHANG YE DA HUANG *Rheum palmatum*, TANG GU TE DA HUANG *Rheum tanguticum*. Ref: 2, 660.

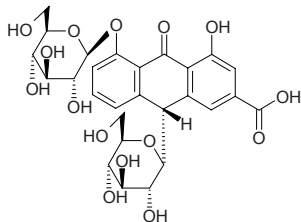
**18764 Rheinoside C**

$C_{27}H_{30}O_{15}$  (594.53). Source: ZHANG YE DA HUANG *Rheum palmatum*, TANG GU TE DA HUANG *Rheum tanguticum*. Ref: 2, 660.

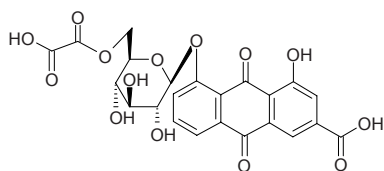


**18765 Rheinoside D**

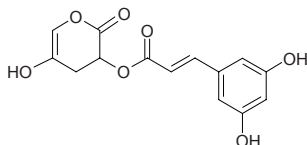
$C_{27}H_{30}O_{15}$  (594.53). Source: ZHANG YE DA HUANG *Rheum palmatum*, TANG GU TE DA HUANG *Rheum tanguticum*. Ref: 2, 660.

**18766 Rhein-8-O-β-D-(6'-oxalyl)-glucopyra-noside**

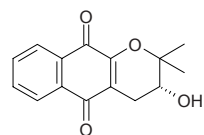
$C_{23}H_{18}O_{14}$  (518.39). Source: DA HUANG *Rheum officinale*, ZHANG YE DA HUANG *Rheum palmatum*, TANG GU TE DA HUANG *Rheum tanguticum*. Ref: 2, 660.

**18767 Rheumin**

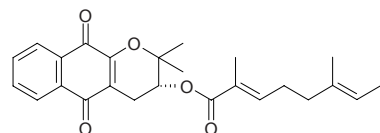
$C_{14}H_{12}O_7$  (292.25). Yellow acicular crystals, mp 245~248°C. Source: HE TAO DA HUANG *Rheum hotaense*. Ref: 818.

**18768 Rhinacanthin A**

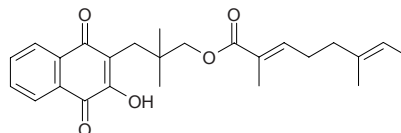
$C_{15}H_{14}O_4$  (258.28). Pharm: Cytotoxic (KB  $ED_{50}$  = 6.75 μg/mL;  $P_{388}$   $ED_{50}$  = 0.72 μg/mL; A549  $ED_{50}$  = 3.06 μg/mL; HT29  $ED_{50}$  = 2.17 μg/mL; HL-60  $ED_{50}$  = 1.16 μg/mL); platelet aggregation inhibitor (rbt: due to 10 μg/mL collagen, 50 μg/mL InRt = 100%; due to 100 μmol/L arachidonic acid, 100 μg/mL InRt = 100%). Source: BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.049% dw). Ref: 660, 1555.

**18769 Rhinacanthin B**

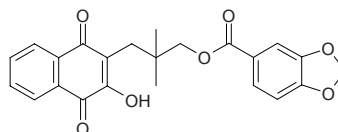
$C_{25}H_{28}O_5$  (408.50). Pharm: Cytotoxic (KB  $ED_{50}$  = 8.01 μg/mL;  $P_{388}$   $ED_{50}$  = 0.35 μg/mL; A549  $ED_{50}$  = 6.50 μg/mL; HT29  $ED_{50}$  = 3.01 μg/mL; HL-60  $ED_{50}$  = 2.57 μg/mL); platelet aggregation inhibitor (rbt: due to 10 μg/mL collagen, 50 μg/mL InRt = 87.8%, 100 μg/mL InRt = 100%; due to 2 ng/mL PAF, 100 μg/mL InRt = 63.1%). Source: BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.0058% dw). Ref: 660, 1555.

**18770 Rhinacanthin C**

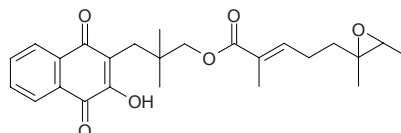
$C_{25}H_{30}O_5$  (410.51). Pharm: Cytotoxic (KB  $ED_{50}$  = 6.26 μg/mL;  $P_{388}$   $ED_{50}$  = 0.26 μg/mL; A549  $ED_{50}$  = 0.35 μg/mL; HT29  $ED_{50}$  = 0.68 μg/mL; HL-60  $ED_{50}$  = 0.68 μg/mL); platelet aggregation inhibitor (rbt: due to 10 μg/mL collagen, 100 μg/mL InRt = 75.2%; due to 100 μmol/L arachidonic acid, 100 μg/mL InRt = 100%); antiviral (hmn, CMV,  $EC_{50}$  = 0.02 μg/mL, SI = 28; mus, CMV,  $EC_{50}$  = 0.57 μg/mL, SI = 4.6). Source: BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.114% dw). Ref: 1555.

**18771 Rhinacanthin D**

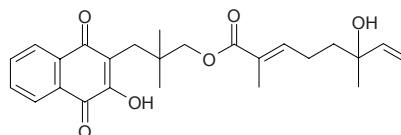
$C_{23}H_{20}O_7$  (408.41). Pharm: Cytotoxic (KB  $ED_{50}$  = 25.0 μg/mL;  $P_{388}$   $ED_{50}$  = 3.79 μg/mL; A549  $ED_{50}$  = 8.26 μg/mL; HT29  $ED_{50}$  = 8.89 μg/mL; HL-60  $ED_{50}$  = 11.8 μg/mL); antiviral (hmn, CMV,  $EC_{50}$  = 0.22 μg/mL; mus, CMV,  $EC_{50}$  = 9.5 μg/mL). Source: BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.0025%). Ref: 1555.

**18772 Rhinacanthin G**

$C_{25}H_{30}O_6$  (426.51). Pharm: Cytotoxic (KB  $ED_{50}$  = 4.45 μg/mL;  $P_{388}$   $ED_{50}$  = 0.14 μg/mL; A549  $ED_{50}$  = 0.75 μg/mL; HT29  $ED_{50}$  = 0.57 μg/mL; HL-60  $ED_{50}$  = 1.14 μg/mL); platelet aggregation inhibitor (rbt: due to 100 μmol/L arachidonic acid, 100 μg/mL InRt = (42.6±8.9)%). Source: BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.0046%). Ref: 1555.

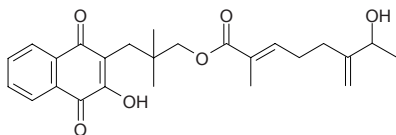
**18773 Rhinacanthin H**

$C_{25}H_{30}O_6$  (426.51). Pharm: Cytotoxic (KB  $ED_{50}$  = 23.8 μg/mL;  $P_{388}$   $ED_{50}$  = 6.43 μg/mL; A549  $ED_{50}$  = 9.97 μg/mL; HT29  $ED_{50}$  = 11.5 μg/mL; HL-60  $ED_{50}$  = 8.87 μg/mL); platelet aggregation inhibitor (rbt: due to 100 μmol/L arachidonic acid, 100 μg/mL InRt = (54.8±4.4)%; due to 10 μg/mL collagen, 100 μg/mL InRt = (31.0±3.9)%). Source: BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.0028%). Ref: 1555.

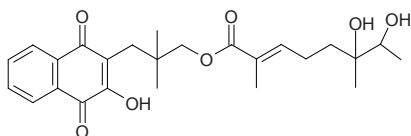


**18774 Rhinacanthin I**

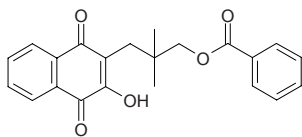
$C_{25}H_{30}O_6$  (426.51). **Pharm:** Cytotoxic (KB  $ED_{50}$  = 13.2 $\mu$ g/mL;  $P_{388}$   $ED_{50}$  = 4.88 $\mu$ g/mL; A549  $ED_{50}$  = 7.18 $\mu$ g/mL; HT29  $ED_{50}$  = 6.30 $\mu$ g/mL; HL-60  $ED_{50}$  = 5.12 $\mu$ g/mL); platelet aggregation inhibitor (rbt: due to 100 $\mu$ mol/L arachidonic acid, 100 $\mu$ g/mL InRt = (54.9 $\pm$ 8.2)%; due to 2ng/mL PAF, 100 $\mu$ g/mL InRt = (22.2 $\pm$ 3.9)%). **Source:** BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.0037%). **Ref:** 1555.

**18775 Rhinacanthin K**

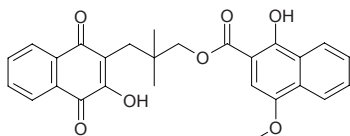
$C_{25}H_{30}O_7$  (444.53). **Pharm:** Cytotoxic (KB  $ED_{50}$  = 17.3 $\mu$ g/mL,  $P_{388}$   $ED_{50}$  = 3.17 $\mu$ g/mL, A549  $ED_{50}$  = 16.4 $\mu$ g/mL, HT29  $ED_{50}$  = 7.75 $\mu$ g/mL, HL-60  $ED_{50}$  = 6.81 $\mu$ g/mL); platelet aggregation inhibitor (rbt: due to 100 $\mu$ mol/L arachidonic acid, 100 $\mu$ g/mL InRt = (36.8 $\pm$ 8.9)%). **Source:** BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.0017%). **Ref:** 1555.

**18776 Rhinacanthin M**

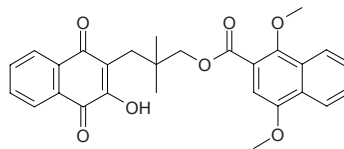
$C_{22}H_{20}O_5$  (364.40). **Pharm:** Cytotoxic (KB  $ED_{50}$  = 19.2 $\mu$ g/mL;  $P_{388}$   $ED_{50}$  = 3.95 $\mu$ g/mL; A549  $ED_{50}$  = 8.90 $\mu$ g/mL; HT29  $ED_{50}$  = 10.1 $\mu$ g/mL; HL-60  $ED_{50}$  = 19.9 $\mu$ g/mL); platelet aggregation inhibitor (rbt: due to 100 $\mu$ mol/L arachidonic acid, 100 $\mu$ g/mL InRt = (100 $\pm$ 1)%). **Source:** BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.0037%). **Ref:** 1555.

**18777 Rhinacanthin N**

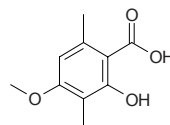
$C_{27}H_{24}O_7$  (460.49). **Pharm:** Cytotoxic (KB  $ED_{50}$  = 4.80 $\mu$ g/mL;  $P_{388}$   $ED_{50}$  = 0.71 $\mu$ g/mL; A549  $ED_{50}$  = 1.97 $\mu$ g/mL; HT29  $ED_{50}$  = 2.67 $\mu$ g/mL; HL-60  $ED_{50}$  = 1.38 $\mu$ g/mL). **Source:** BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.0012%). **Ref:** 1555.

**18778 Rhinacanthin Q**

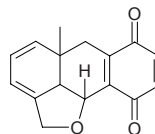
$C_{28}H_{26}O_7$  (474.52). **Pharm:** Cytotoxic ( $P_{388}$   $ED_{50}$  = 0.61 $\mu$ g/mL; A549  $ED_{50}$  = 3.61 $\mu$ g/mL; HT29  $ED_{50}$  = 7.60 $\mu$ g/mL; HL-60  $ED_{50}$  = 8.90 $\mu$ g/mL); platelet aggregation inhibitor (rbt: due to 100 $\mu$ mol/L arachidonic acid, 100 $\mu$ g/mL InRt = (55 $\pm$ 11)%; due to 10 $\mu$ g/mL collagen, 100 $\mu$ g/mL InRt = (20.4 $\pm$ 3.7)%). **Source:** BAI HE LING ZHI *Rhinacanthus nasutus* (root; yield = 0.00021%). **Ref:** 1555.

**18779 Rhizonic acid**

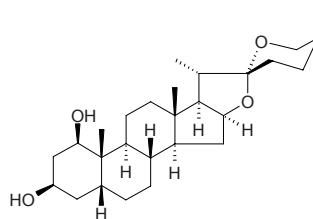
Coccellinic acid  $C_{10}H_{12}O_4$  (196.20). **Source:** DI TU YI *Rhizocarpon geographicum*, LI BIAN ZHI YI *Evernia prunastri*. **Ref:** 1521.

**18780 Rhizonone**

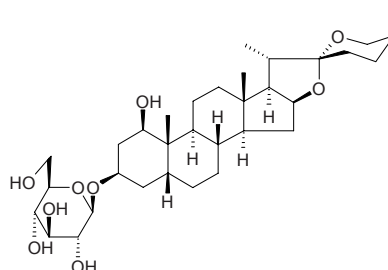
$C_{16}H_{14}O_3$  (254.29). Colorless oil. **Pharm:** Antifungal (*Cladosporium fulvum*, inhibits spore germination). **Source:** ZI CAO *Lithospermum erythrorhizon*. **Ref:** 2298.

**18781 Rhodeasapogenin**

[514-30-7]  $C_{27}H_{44}O_4$  (432.65). mp 293~295°C. **Source:** LING LAN *Convallaria keiskei* [Syn. *Convallaria majalis*]. **Ref:** 6.

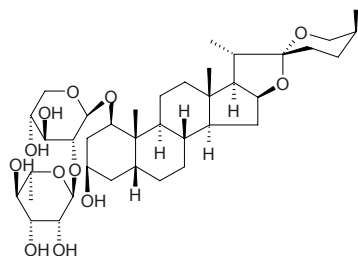
**18782 Rhodeasapogenin-3-O-β-D-glucopyranoside**

$C_{33}H_{54}O_9$  (594.79). **Source:** WAN NIAN QING GEN *Rhodea japonica* [Syn. *Orontium japonicum*]. **Ref:** 660.



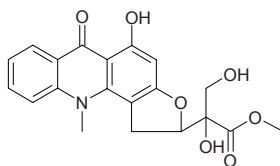
**18783 Rhodexasopogenin-1-O- $\alpha$ -L-rhamnopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-xylopyranoside**

C<sub>38</sub>H<sub>62</sub>O<sub>12</sub> (710.91). Source: WAN NIAN QING GEN *Rohdea japonica* [Syn. *Orontium japonicum*]. Ref: 660.



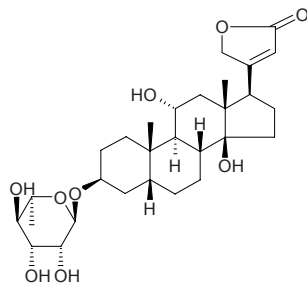
**18784 Rhodesiacidrone**

Methyl 2,3-dihydroxy-2-(5-hydroxy-11-methyl-6-oxo-1,2,6,11-tetrahydrofuro [2,3-c]acridin-2-yl) propanoate C<sub>20</sub>H<sub>19</sub>NO<sub>7</sub> (385.38). Yellow amorphous powder, [ $\alpha$ ]<sub>D</sub> = -47.7° (c = 0.1, MeOH). Pharm: Antileishmanial (*Leishmania major* promastigote, 10 $\mu$ mol/L, survival = (30.7 $\pm$ 3.2)%), 1 $\mu$ mol/L, survival = (96.0 $\pm$ 1.8)%, control Amphotericin B, 10 $\mu$ mol/L, survival = (0.2 $\pm$ 0.04)%, 1 $\mu$ mol/L, survival = (71.9 $\pm$ 4.4)%; *Leishmania major* amastigote, 10 $\mu$ mol/L, survival = (6.2 $\pm$ 0.7)%, 1 $\mu$ mol/L, survival = (48.6 $\pm$ 2.7)%, control Amphotericin B, 10 $\mu$ mol/L, survival = (0.4 $\pm$ 0.02)%, 1 $\mu$ mol/L, survival = (0.5 $\pm$ 0.03)%; antifungal inactive (silica gel TLC, *Cladosporium cucumerinum*, control Nystatin, MIA = 0.2 $\mu$ g). Source: *Thamnosma rhodesica* (root). Ref: 3797.



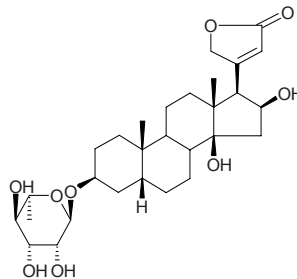
**18785 Rhodexin A**

[545-49-3] C<sub>29</sub>H<sub>44</sub>O<sub>9</sub> (536.67). mp 265°C (dec). Pharm: Cardiotonic; toxin (vertebrate). Source: WAN NIAN QING GEN *Rohdea japonica* [Syn. *Orontium japonicum*]. Ref: 6, 658.



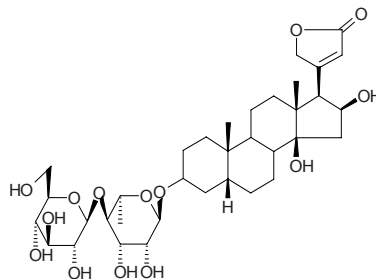
**18786 Rhodexin B**

[50906-58-6] C<sub>29</sub>H<sub>44</sub>O<sub>9</sub> (536.67). mp 262°C (dec). Source: WAN NIAN QING GEN *Rohdea japonica* [Syn. *Orontium japonicum*]. Ref: 660, 1521.



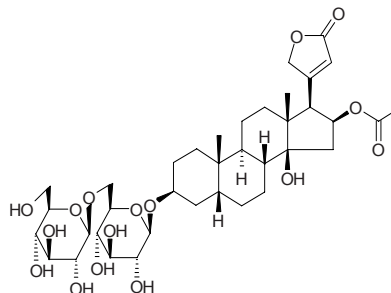
**18787 Rhodexin C**

[50906-57-5] C<sub>35</sub>H<sub>54</sub>O<sub>14</sub> (699.81). mp 275°C (dec). Source: WAN NIAN QING GEN *Rohdea japonica* [Syn. *Orontium japonicum*]. Ref: 660, 1521.



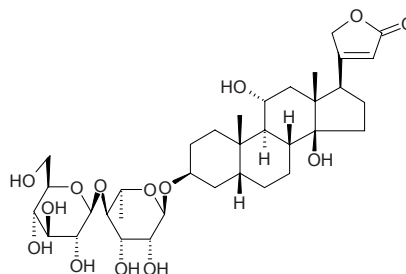
**18788 Rhodexin D**

C<sub>37</sub>H<sub>56</sub>O<sub>16</sub> (756.85). mp 181~184°C. Source: WAN NIAN QING GEN *Rohdea japonica* [Syn. *Orontium japonicum*]. Ref: 6.



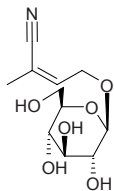
**18789 Rhodexoside**

C<sub>35</sub>H<sub>54</sub>O<sub>14</sub> (698.81). Source: WAN NIAN QING GEN *Rohdea japonica* [Syn. *Orontium japonicum*]. Ref: 660.

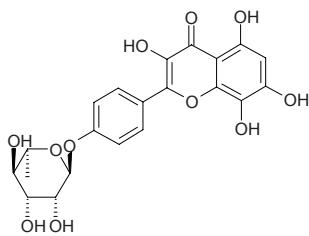


**18790 Rhodiocyanoside A**

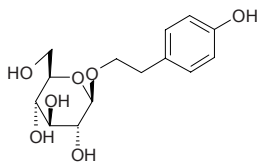
(Z)-4-( $\beta$ -D-Glucopyranosyloxy)-2-methyl-2-butenenitrile; Multifidin [168433-86-1] C<sub>11</sub>H<sub>17</sub>NO<sub>6</sub> (259.26). **Pharm:** Antiallergic (rat, passive skin allergy, 100mg/kg, 20min InRt = 26.9%). **Source:** SHENG DI HONG JING TIAN *Rhodiola sacra*. **Ref:** 742, 1726.

**18791 Rhodiolatuntoside**

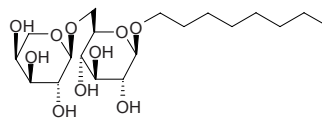
3,5,7,8-Tetrahydroxyl flavone 4'-O- $\alpha$ -L-rhamnopyranoside C<sub>21</sub>H<sub>20</sub>O<sub>11</sub> (448.39). Yellow amorphous powder, mp 350°C. **Source:** DE QIN HONG JING TIAN *Rhodiola atuntsuensis*. **Ref:** 885.

**18792 Rhodiolioside**

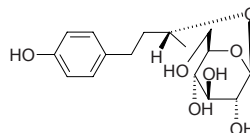
Salidroside; *p*-Hydroxyphenethyl- $\beta$ -D-glucoside [10338-51-9] C<sub>14</sub>H<sub>20</sub>O<sub>7</sub> (300.31). **Pharm:** Anti-inflammatory (inhibits production of COX metabolite PGE<sub>2</sub>, IC<sub>50</sub> = 72.1  $\mu$ mol/L; reduces TXB<sub>2</sub> level, IC<sub>50</sub> = 154  $\mu$ mol/L)<sup>[44151]</sup>. **Source:** DA HUA HONG JING TIAN *Rhodiola crenulata* [Syn. *Rhodiola euryphylla*] (root: content = 1.26%<sup>[5508]</sup>), HU SHENG HONG JING TIAN *Rhodiola subopposita* (whole herb: content = 0.25%<sup>[5508]</sup>), JI SHI HONG JING TIAN *Rhodiola algida* (root: content = 3.13%<sup>[5508]</sup>), KUO YE OU NV ZFEN *Phillyrea latifolia* (leaf), MA QIAN ZI *Strychnos nux-vomica*, NV ZHEN ZI *Ligustrum lucidum* (ripe fruit: content scope of 6 origins = 6.11%–9.17%; mean content = 7.22%<sup>[5508]</sup>), SHEN HONG HONG JING TIAN *Rhodiola coccinea* (root: content = 0.98%<sup>[5508]</sup>), SHENG DI HONG JING TIAN *Rhodiola sacra*, SI LIE HONG JING TIAN *Rhodiola quadrifida* (root: content = 2.12%<sup>[5508]</sup>), XI MA HONG JING TIAN *Rhodiola himalansis* (whole herb: content = 0.014%<sup>[5508]</sup>), XIA YE HONG JING TIAN *Rhodiola kirilowii* (root: content = 2.51%<sup>[5508]</sup>), YUAN CONG HONG JING TIAN *Rhodiola juparensis* (root: content = 0.64%<sup>[5508]</sup>), YUE JU YE *Vaccinium vitis-idaea*, YUN NAN HONG JING TIAN *Rhodiola yunnanensis* (whole herb: content = 0.031%<sup>[5508]</sup>). **Ref:** 2, 6, 218, 516, 660, 1521, 4415, 5508.

**18793 Rhodioctanoside**

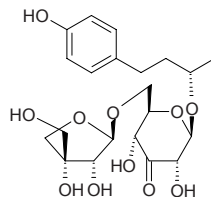
Octyl 6-O- $\alpha$ -L-arabinopyranosyl- $\beta$ -D-glucopyranoside [168288-07-1] C<sub>19</sub>H<sub>36</sub>O<sub>10</sub> (424.49). **Source:** SHENG DI HONG JING TIAN *Rhodiola sacra*. **Ref:** 742.

**18794 Rhododendrin**

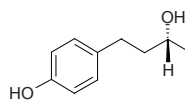
[497-78-9] C<sub>16</sub>H<sub>24</sub>O<sub>7</sub> (328.36). **Pharm:** Diuretic; causes perspiration. **Source:** NIU PI CHA *Rhododendron chrysanthum*, FU LEI SHI DU JUAN HUA *Rhododendron fauriei*, *Betula* sp. **Ref:** 658.

**18795 Rhododendroketoside**

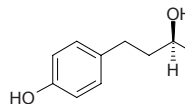
C<sub>21</sub>H<sub>30</sub>O<sub>11</sub> (458.47). White powder, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -84.6° (c = 0.20, EtOH). **Source:** MAO GUO QI *Acer nikoense* (stem cortex: yield = 0.0009%). **Ref:** 4304.

**18796 Rhododendrol**

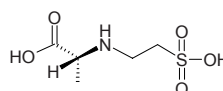
[501-96-2] C<sub>10</sub>H<sub>14</sub>O<sub>2</sub> (166.22). mp (-) 82°C. **Source:** BAI HUA YING SHAN HONG *Rhododendron mucronatum*, MAN SHAN HONG *Rhododendron dauricum*. **Ref:** 6.

**18797 (+)-Rhododendrol**

C<sub>10</sub>H<sub>14</sub>O<sub>2</sub> (166.22). **Pharm:**  $\beta$ -Hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase, 100  $\mu$ mol/L, InRt = (2.2 $\pm$ 0.5)%). **Source:** MAO GUO QI *Acer nikoense* (stem cortex). **Ref:** 4304.

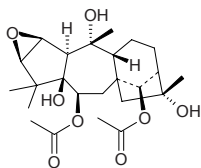
**18798 D-Rhodioc acid**

C<sub>5</sub>H<sub>11</sub>NO<sub>5</sub>S (197.21). **Source:** JIAO CHA CAI *Chondrus ocelladus*. **Ref:** 660.

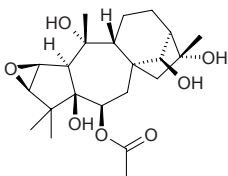


**18799 Rhodojaponin I**

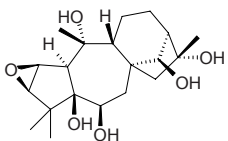
$C_{24}H_{36}O_8$  (452.55). Source: RI BEN DU JUAN HUA *Rhododendron japonicum* (in 1969, the compound was isolated from the plant). Ref: 5505.

**18800 Rhodojaponin II**

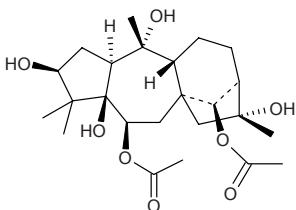
$C_{22}H_{34}O_7$  (410.51). Source: NAO YANG HUA *Rhododendron molle* (flower: yield = 0.0063%dw), RI BEN DU JUAN HUA *Rhododendron japonicum* (in 1969, the compound was isolated from the plant). Ref: 4780, 5505.

**18801 Rhodojaponin III**

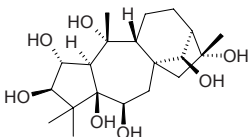
$C_{20}H_{32}O_6$  (368.47). Source: RI BEN DU JUAN HUA *Rhododendron japonicum* (the compound was isolated from the plant by Kuni Ito et al. in 1969)<sup>[5505]</sup>, NAO YANG HUA *Rhododendron molle* (flower: yield = 0.0042%dw)<sup>[4780]</sup>, NAO YANG HUA ZI *Rhododendron molle* (fruit). Ref: 660, 4780, 5505.

**18802 Rhodojaponin IV**

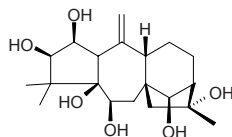
[30460-34-5]  $C_{24}H_{38}O_8$  (454.57). Pharm: Phytotoxin. Source: RI BEN DU JUAN HUA *Rhododendron japonicum*. Ref: 658.

**18803 Rhodojaponin VI**

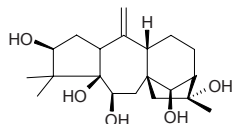
$C_{20}H_{34}O_7$  (386.49). Source: NAO YANG HUA *Rhododendron molle* (flower: yield = 0.0042%dw). Ref: 4780.

**18804 Rhodomollein I**

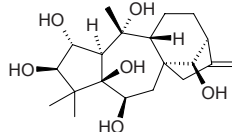
$C_{20}H_{32}O_6$  (368.47). Source: NAO YANG HUA ZI *Rhododendron molle* (fruit). Ref: 660.

**18805 Rhodomollein II**

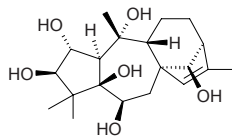
$C_{20}H_{32}O_5$  (352.48). Source: NAO YANG HUA ZI *Rhododendron molle* (fruit). Ref: 660.

**18806 Rhodomollein IX**

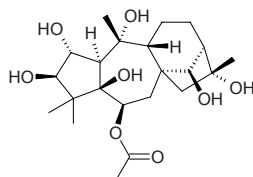
2 $\alpha$ ,3 $\beta$ ,5 $\beta$ ,6 $\beta$ ,10 $\alpha$ ,14 $\beta$ -Hexahydroxygrayan-16-ene  $C_{20}H_{32}O_6$  (368.47). Amorphous powder, mp 133~135°C,  $[\alpha]_D^{25} = -32.8^\circ$  ( $c = 0.24$ , MeOH). Source: NAO YANG HUA *Rhododendron molle* (flower: yield = 0.00021%dw). Ref: 4780.

**18807 Rhodomollein X**

2 $\alpha$ ,3 $\beta$ ,5 $\beta$ ,6 $\beta$ ,10 $\alpha$ ,14 $\beta$ -Hexahydroxygrayan-15-ene  $C_{20}H_{32}O_6$  (368.47). Amorphous powder, mp 223~224°C,  $[\alpha]_D^{25} = -11.0^\circ$  ( $c = 0.45$ , MeOH). Source: NAO YANG HUA *Rhododendron molle* (flower: yield = 0.00017%dw). Ref: 4780.

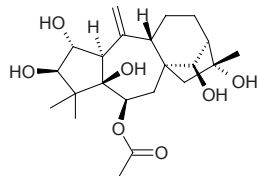
**18808 Rhodomollein XI**

6 $\beta$ -Acetoxy-2 $\alpha$ ,3 $\beta$ ,5 $\beta$ ,14 $\beta$ ,16 $\alpha$ -pentahydroxygrayanane  $C_{22}H_{36}O_8$  (428.53). Amorphous powder, mp 170~172°C,  $[\alpha]_D^{25} = -24.5^\circ$  ( $c = 0.89$ , MeOH). Source: NAO YANG HUA *Rhododendron molle* (flower: yield = 0.0042%dw). Ref: 173, 4780.

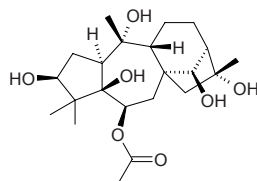


**18809 Rhodomollein XII**

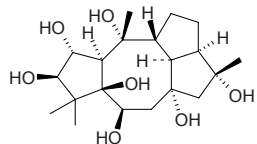
6 $\beta$ -Acetoxy-2 $\alpha$ ,3 $\beta$ ,5 $\beta$ ,14 $\beta$ ,16 $\alpha$ -pentahydroxygrayan-10(20)-ene C<sub>22</sub>H<sub>34</sub>O<sub>7</sub> (410.51). Amorphous powder, mp 75~77°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -14.5° (c = 1.09, MeOH). Source: NAO YANG HUA *Rhododendron molle* (flower: yield = 0.00013%dw). Ref: 4780.

**18810 Rhodomollein XIII**

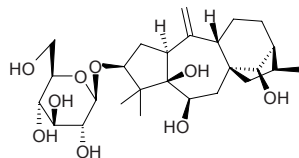
6 $\beta$ -Acetyloxy-3 $\beta$ ,5 $\beta$ ,10 $\alpha$ ,14 $\beta$ ,16 $\alpha$ -pentahydroxygrayanane C<sub>22</sub>H<sub>36</sub>O<sub>7</sub> (412.53). Amorphous powder, mp > 255°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -14.7° (c = 0.16, MeOH). Source: NAO YANG HUA *Rhododendron molle* (flower: yield = 0.00025%dw). Ref: 4780.

**18811 Rhodomollein XIV**

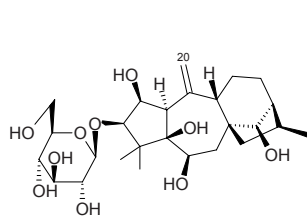
2 $\alpha$ ,3 $\beta$ ,5 $\beta$ ,6 $\beta$ ,8 $\alpha$ ,10 $\alpha$ ,16 $\alpha$ -Heptahydroxykalmene C<sub>20</sub>H<sub>34</sub>O<sub>7</sub> (386.49). Amorphous powder, mp 133~135°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -17.1° (c = 0.08, MeOH). Source: NAO YANG HUA *Rhododendron molle* (flower: yield = 0.00021%dw). Ref: 4780.

**18812 Rhodoside A**

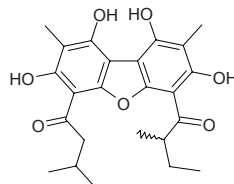
C<sub>26</sub>H<sub>42</sub>O<sub>9</sub> (498.62). Viscous syrup, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -31.2° (c = 0.50, MeOH). Source: NAO YANG HUA *Rhododendron molle*. Ref: 5396.

**18813 Rhodoside B**

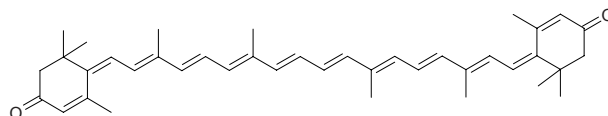
C<sub>26</sub>H<sub>42</sub>O<sub>10</sub> (514.62). Viscous syrup, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -26.9° (c = 1.18, MeOH). Source: NAO YANG HUA *Rhododendron molle*. Ref: 5396.

**18814  $\psi$ -Rhodomyrtxin**

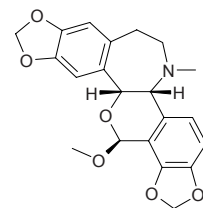
[24563-20-0] C<sub>24</sub>H<sub>28</sub>O<sub>7</sub> (428.49). Pharm: Toxin (mus). Source: DA GUO TAO JIN NIANG *Rhodomyrtus macrocarpa*. Ref: 658.

**18815 Rhodoxanthin**

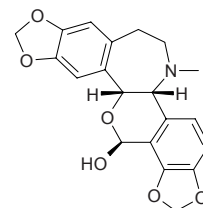
[116-30-3] C<sub>40</sub>H<sub>50</sub>O<sub>2</sub> (562.84). Source: FU YE YAN ZI CAI *Potamogeton natans*, JIANG GUO ZI SHAN *Taxus baccata*, *Equisetum* sp., *Adiantum* sp. Ref: 658.

**18816 Rhoeadine**

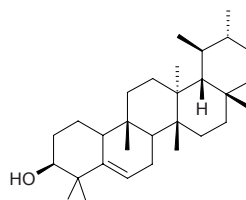
[2718-25-4] C<sub>21</sub>H<sub>21</sub>NO<sub>6</sub> (383.40). mp 256~257°C. Pharm: Cytotoxic (ascites carcinoma cells, *in vitro*); antitussive (dispels phlegm); sedative; toxin (induces spasm of tested animals in high dose); LD<sub>50</sub> (rat, ip) = 530mg/kg. Source: LI CHUN HUA *Papaver commutatum* [Syn. *Papaver rhoeas*], YA PIAN *Papaver somniferum*. Ref: 6, 658.

**18817 Rhoegenine**

[5574-77-6] C<sub>20</sub>H<sub>19</sub>NO<sub>6</sub> (369.38). mp 236~238°C. Source: LI CHUN HUA *Papaver commutatum* [Syn. *Papaver rhoeas*]. Ref: 6.

**18818 Rhoiptelenol**

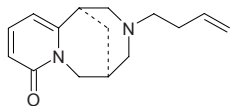
C<sub>30</sub>H<sub>50</sub>O (426.73). Source: YANG MEI SHU PI *Myrica rubra* (bark: yield = 0.0036%). Ref: 4163.



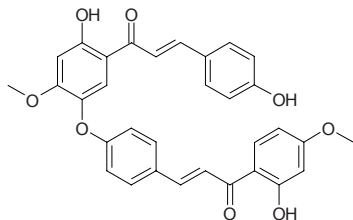


**18819 Rhombifoline**

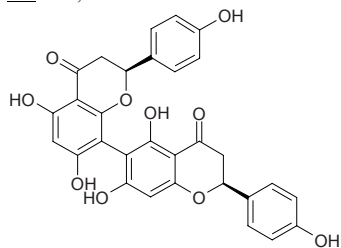
[529-78-2]  $C_{15}H_{20}N_2O$  (244.34). bp 120°C/0.2mmHg. Source: MU MA DOU *Thermopsis lanceolata*. Ref: 6.

**18820 Rhuschalcone 1**

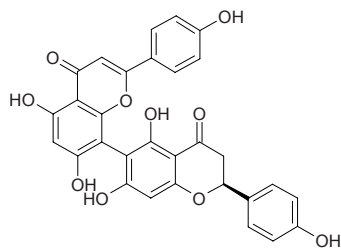
2',4'',2'''-Trihydroxy-4',4'''-dimethoxy-4-O-5'''-bichalcone  $C_{32}H_{26}O_8$  (538.56). Yellow needles (methanol), mp 232–234°C. Source: *Rhus pyroides* (twig). Ref: 3934.

**18821 Rhusflavanone**

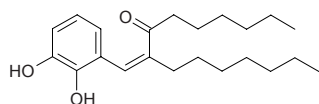
$C_{30}H_{22}O_{10}$  (542.50). Source: YE QI SHU ZI *Rhus sylvestris* (fruit and seed). Ref: 660, 1521.

**18822 Rhusflavone**

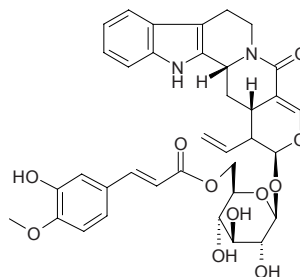
$C_{30}H_{20}O_{10}$  (540.49). Source: YE QI SHU ZI *Rhus sylvestris* (fruit and seed). Ref: 660.

**18823 Rhusone**

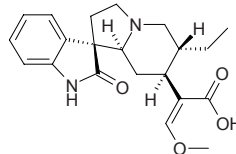
1-(2',3'-Dihydroxyphenyl)-2-n-heptyl-1-nonene-3-one  $C_{22}H_{34}O_3$  (346.51). Light grey amorphous powder, mp 60–62°C, soluble in liposoluble organic solvents, insoluble in water. Source: TAI SHAN YAN FU ZI *Rhus taishanensis*. Ref: 494.

**18824 Rhynchophine**

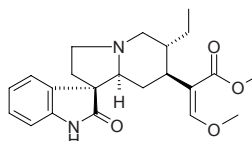
[84638-29-9]  $C_{36}H_{38}N_2O_{11}$  (674.71). Pharm: Anti-inflammatory<sup>[5341]</sup>, antiviral<sup>[5341]</sup>. Source: BI LU GOU TENG *Uncaria tomentosa*, GOU TENG *Uncaria rhynchophylla* [Syn. *Nauclea rhynchophylla*]. Ref: 2, 5341.

**18825 Rhynchophyllic acid**

$C_{21}H_{26}N_2O_4$  (370.45). Source: HUA GOU TENG *Uncaria sinensis*. Ref: 660, 5341.

**18826 Rhynchophylline**

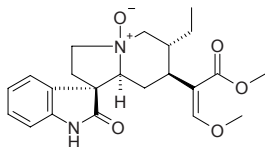
Mitrinermine [76-66-4]  $C_{22}H_{28}N_2O_4$  (384.48). Colorless acicular crystals (MeOH), mp 216°C,  $[\alpha]_D^{13} = -14.7^\circ$  ( $c = 2.5$ ,  $CHCl_3$ ), soluble in  $CHCl_3$ , acetone, ethanol, slightly soluble in ether, acetic ester, almost insoluble in petroleum ether.<sup>[5507]</sup> Pharm: Antihypertensive (spontaneous hypertensive rats)<sup>[5341]</sup>; smooth muscle relaxant (gpg colonic); antihypertensive (primary hypertensive rat, 50mg/kg perfusion in stomach, blood pressure reduced by 18mmHg; cat, iv, 20mg/kg, blood pressure reduced 32% and the action lasts 4h, in clinic for 254 patients treated, overall effective rate = 77.2%); reduces consumption of oxygen in myocardium; sedative (hypnotic, 100mg/kg, prolongation of thiopental-induced hypnosis)<sup>[5341]</sup>; slows heart rate; slows myocardial contractility; immunostimulant inactive<sup>[5341]</sup>; LD<sub>50</sub> (mus, ip)= 162.3mg/kg, (mus, sc)= 165mg/kg. Source: BAI GOU TENG *Uncaria sessilifrutus* [Syn. *Nauclea sessilifrutus*], BI LU GOU TENG *Uncaria tomentosa*, CHANG HUA GOU TENG *Uncaria longiflora*, DA YE GOU TENG *Uncaria macrophylla* (hooked stem-branch: mean content = 0.065%<sup>[5508]</sup>), FEI ZHOU GOU TENG *Uncaria africana*, GOU TENG *Uncaria rhynchophylla* [Syn. *Nauclea rhynchophylla*] (hooked stem-branch: mean content = 0.018%<sup>[5508]</sup>), GUI YA NA GOU TENG *Uncaria guianensis*, HOU YE GOU TENG *Uncaria callophylla*, HUA GOU TENG *Uncaria sinensis* (hooked stem-branch: mean content = 0.032%<sup>[5508]</sup>), MAO GOU TENG *Uncaria hirsuta* (hooked stem-branch: mean content = 0.020%<sup>[5508]</sup>), PI ZHEN YE GOU TENG *Uncaria lancifolia* (hooked stem-branch: mean content = 0.035%<sup>[5508]</sup>), PO LUO ZHOU GOU TENG *Uncaria borneensis*, SUAN GOU TENG *Uncaria acida*, TUO YUAN GOU TENG *Uncaria elliptica*, WU CI MAO ZHU MU *Mitragyna inermis*<sup>[5507]</sup>, XIA GOU TENG *Uncaria attenuata*, XIN XING GOU TENG *Uncaria cordata*, *Uncaria bernaysii*, *Uncaria kunstleri*, *Uncaria sterrophylla*, *Uncaria talbotii*. Ref: 4, 658, 660, 5341, 5501, 5507, 5508.



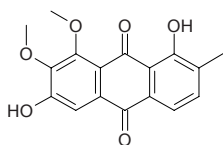


**18827 Rhynchophylline N-oxide**

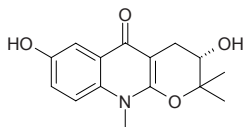
$C_{22}H_{28}N_2O_5$  (400.48). Source: FENG XIANG SHU YE *Cephalanthus occidentalis*, HUA GOU TENG *Uncaria sinensis*. Ref: 6, 660.

**18828 Rhynchotechol**

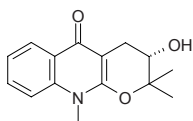
1,6-Dihydroxy-7,8-dimethoxy-2-methyl-9,10-anthraquinone [133086-78-9]  $C_{17}H_{14}O_6$  (314.30). Orange acicular crystals, mp 236.5~238.0°C. Source: MAO XIAN ZHU JU TAI *Rhynchotechum vestitum*. Ref: 168.

**18829 Ribalinidine**

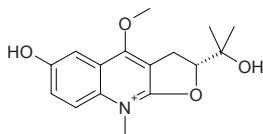
$C_{15}H_{17}NO_4$  (275.31). mp 257~258°C (dec). Source: CHOU CAO *Ruta graveolens*. Ref: 6.

**18830 Ribalinine**

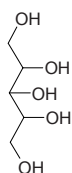
$C_{15}H_{17}NO_3$  (259.31). Source: SAN CHA KU *Evodia lepta* [Syn. *Ilex lepta*], YE HUA JIAO PI *Zanthoxylum simulans*. Ref: 660.

**18831 Ribalinium**

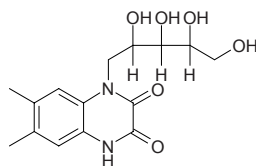
[6883-22-3]  $C_{16}H_{20}NO_4$  (290.34). Pharm: Antibacterial (*Mycobacterium smegmatis*). Source: CHOU CAO *Ruta graveolens*. Ref: 6, 658.

**18832 Ribitol**

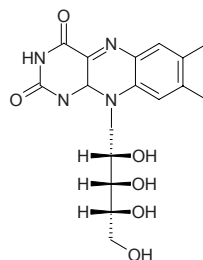
[488-81-3]  $C_5H_{12}O_5$  (152.15). mp 102°C. Source: E SHEN *Anthriscus sylvestris*. Ref: 6.

**18833 1-Ribityl-2,3-diketo-1,2,3,4-tetrahydro-6,7-dimethyl-quinoxaline**

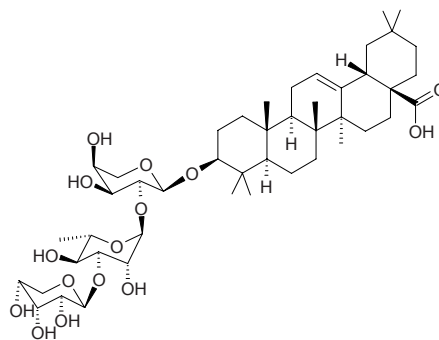
$C_{15}H_{20}N_2O_6$  (324.34). Colorless crystals, mp 259~261°C. Pharm: Antihypertensive (distinctly reduces blood pressure). Source: HONG HUA *Carthamus tinctorius*. Ref: 4580.

**18834 Riboflavine**

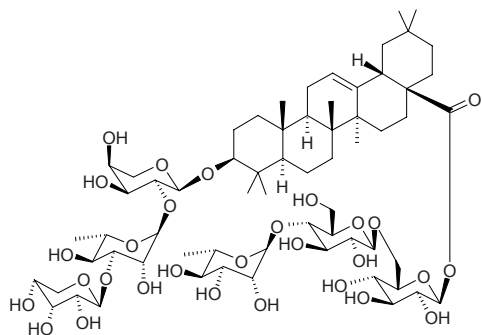
Vitamin B<sub>2</sub>; Vitamin G; 7,8-Dimethyl-10-*D*-ribityl-isoalloxazine; 6,7-Dimethyl-9-*D*-ribitylisoalloxazine [83-88-5]  $C_{17}H_{20}N_4O_6$  (376.38). mp 278~282°C. Pharm: Antineoplastic (rat, sarcoma 45); maintains normal vision; LD<sub>50</sub> (mus, ip) = 340mg/kg, (rat, ip) = 560mg/kg. Source: BAI GUO *Ginkgo biloba*, DA ZAO *Ziziphus jujuba*, GOU QI ZI *Lycium chinense*, LU GEN *Phragmites communis*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SANG YE *Morus alba* (leaf: content scope of 8 origins = 0.00069%~0.0049%, mean content = 0.0016%)<sup>[5508]</sup>, WU CI ZAO *Ziziphus jujuba* var. *inermis*, ZANG HONG HUA *Crocus sativus*. Ref: 2, 5, 661, 658, 5508.

**18835 3β-[(O-β-D-Ribopyranosyl-(1→3)-O-α-L-rhamnopyranosyl-(1→2)-α-L-arabinopyranosyl)oxy]olean-12-en-28-oic acid**

$C_{46}H_{74}O_{15}$  (867.09). Pharm: Cytotoxic (*in vitro*, HL-60, IC<sub>50</sub> = 2.3 μmol/L). Source: WEI LING XIAN *Clematis chinensis* (root: yield = 0.0004%). Ref: 4763.

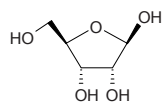


**18836** 3β-[(O-β-D-Ribopyranosyl-(1→3)-O-α-L-rhamnopyranosyl-(1→2)-α-L-arabinopyranosyl)oxy]olean-12-en-28-oic acid O-α-L-rhamnopyranosyl-(1→4)-O-β-D-glucopyranosyl-(1→6)-β-D-glucopyranosyl ester  
 $C_{64}H_{104}O_{29}$  (1337.53). Source: WEI LING XIAN *Clematis chinensis* (root: yield = 0.00064%). Ref: 4763.



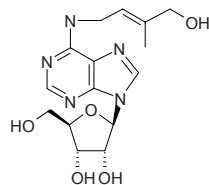
**18837 Ribose**

$C_5H_{10}O_5$  (150.13). mp (D) 86–87°C, 95°C. Source: FAN SHI LIU GAN *Psidium guajava*, DANG SHEN *Codonopsis pilosula*. Ref: 6, 660, 1521.



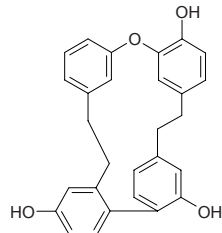
**18838 9-Ribosylzeatin**

$C_{15}H_{21}N_5O_5$  (351.37). Source: MI HOU TAO *Actinidia chinensis*. Ref: 660.



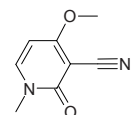
**18839 Riccardin C**

$C_{28}H_{24}O_4$  (424.50). Source: DI SUO LUO *Marchantia polymorpha*. Ref: 660.



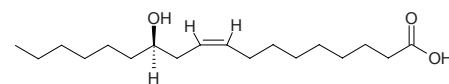
**18840 Ricinine**

Ricidine; 4-Methoxy-N-methyl-3-cyano-2-pyridone [524-40-3]  $C_8H_8N_2O_2$  (164.17). Columnar crystals, (ethanol), mp 201.5°C, slightly soluble in water, ethanol, chloroform, ether, soluble in hot water.<sup>[5507]</sup> Pharm: Toxin. Source: BI MA ZI *Ricinus communis*, BI MA YE *Ricinus communis*. Ref: 6, 658, 5507.



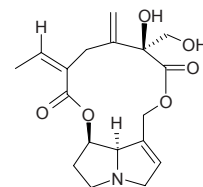
**18841 Ricinoleic acid**

(12*R*)-Hydroxy-*cis*-9-octadecenoic acid; Ricinolic acid [141-22-0]  $C_{18}H_{34}O_3$  (298.47). mp 5.5°C, bp 245°C/10mmHg. Pharm: Contraceptive; herbicide; inhibits biosynthesis of cholesterol (*in vitro*); inhibits transport of gall; laxative. Source: BI MA ZI *Ricinus communis*, BI MA YOU *Ricinus communis*, LING ZHI *Ganoderma lucidum*. Ref: 4, 658.



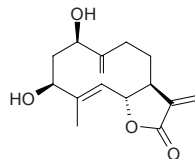
**18842 Riddelline**

[23246-96-0]  $C_{18}H_{23}NO_6$  (349.39). Pharm: Anticholinergic; hepatotoxin. Source: AI JI QIAN LI GUANG *Senecio aegypticus*, OU ZHOU QIAN LI GUANG *Senecio vulgaris*, RUI DE QIAN LI GUANG *Senecio riddellii*, SHA SHENG QIAN LI GUANG *Senecio eremophilus*, SHU MA *Crotalaria juncea*, TUN CAO QIAN LI GUANG *Senecio ambrosioides*. Ref: 658.



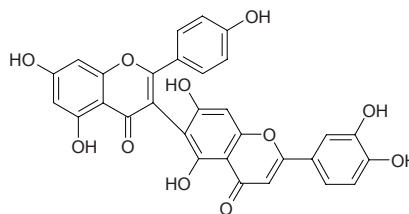
**18843 Ridentin**

[28148-84-7]  $C_{15}H_{20}O_4$  (264.32). mp 215–218°C (dec). Pharm: Antineoplastic; cytotoxic. Source: AI YE *Artemisia argyi*, SAN CHI HAO *Artemisia tridentata*, QING AI *Artemisia cana*, SAN LIE HAO *Artemisia tripartita*. Ref: 6, 658.



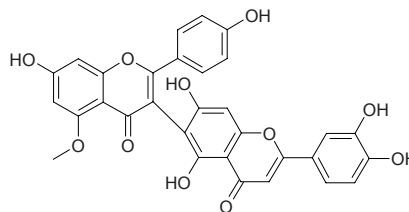
**18844 Ridiculuflavone A**

3''',4',4''',5,5'',7,7''-Heptahydroxy-3,6''-biflavone  $C_{30}H_{18}O_{11}$  (554.47). Yellow solid, mp 230.5–232.2°C,  $[\alpha]_D^{26} = +47.9^\circ$  ( $c = 0.046$ , MeOH). Source: *Aristolochia ridicula* (leaf). Ref: 5263.



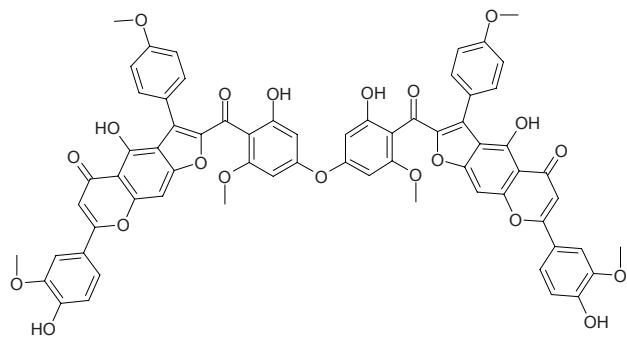
**18845 Ridiculuflavone B**

3''',4',4''',5'',7,7''-Hexahydroxy-5-methoxy-3,6''-biflavone  $C_{31}H_{20}O_{11}$  (568.50). Yellow solid, mp 224.1–225.7°C,  $[\alpha]_D^{25} = +18.2^\circ$  ( $c = 0.10$ , MeOH). Source: *Aristolochia ridicula* (leaf). Ref: 5263.

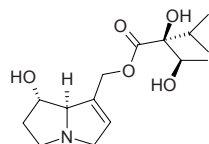


**18846 RidiculoflavonylchalconeA**

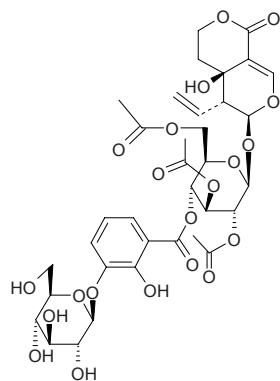
Oxy{bis[5''(4',5,7''-trihydroxy-3',4''-trimethoxy-7-*O*- $\alpha$ -6- $\beta$ -flavone-chalcone e)]} C<sub>66</sub>H<sub>46</sub>O<sub>21</sub> (1175.09). Yellow solid, mp 153.6–156.5°C, [ $\alpha$ ]<sub>D</sub><sup>28</sup> = –30.8° (*c* = 0.088, MeOH). Source: *Aristolochia ridicula* (leaf). Ref: 5263.

**18847 Rinderine**

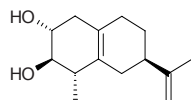
[6029-84-1] C<sub>15</sub>H<sub>25</sub>NO<sub>5</sub> (299.37). Pharm: Toxic (hepatic and pulmonary toxicity). Source: CHANG RUI LIU LI CAO *Solenanthes circinatus*, GAO ZE LAN *Eupatorium altissimum*, DA MAY YE ZE LAN *Eupatorium cannabinum*. Ref: 658.

**18848 Rindoside**

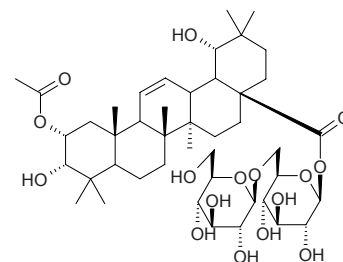
Gelidoside [128420-44-0] C<sub>35</sub>H<sub>42</sub>O<sub>21</sub> (798.71). Amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = –149.5° (*c* = 0.4, MeOH). [ $\alpha$ ]<sub>D</sub><sup>20</sup> = –102.8° (MeOH). Source: LONG DAN *Gentiana scabra*. Ref: 2, 1521.

**18849 Rishitin**

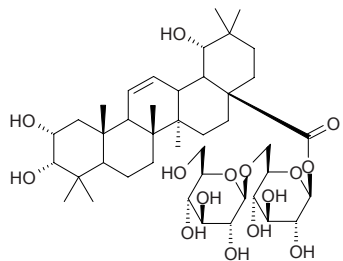
[18178-54-6] C<sub>14</sub>H<sub>22</sub>O<sub>2</sub> (222.33). Pharm: Antibacterial; antifungal; toxin (plants). Source: MA LING SHU *Solanum tuberosum*, YAN CAO *Nicotiana tabacum*. Ref: 658.

**18850 Rivaloside C**

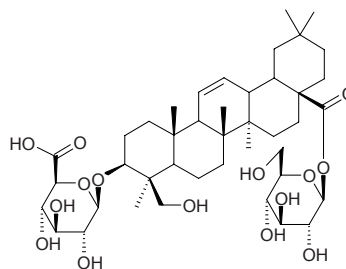
2 $\alpha$ -Acetoxy-3 $\alpha$ ,19 $\alpha$ -dihydroxy-olean-12-en-28-oic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>44</sub>H<sub>70</sub>O<sub>16</sub> (855.04). Amorphous solid, [ $\alpha$ ]<sub>D</sub> = –3.6° (*c* = 0.2, MeOH). Source: XI LIU ZHU YANG YANG *Galium rivale* (aerial parts). Ref: 3981.

**18851 Rivaloside D**

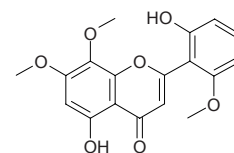
2 $\alpha$ ,3 $\alpha$ ,19 $\alpha$ -Trihydroxy-olean-12-en-28-oic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>42</sub>H<sub>68</sub>O<sub>15</sub> (813.00). Amorphous solid, [ $\alpha$ ]<sub>D</sub> = –25.9° (*c* = 0.1, MeOH). Source: XI LIU ZHU YANG YANG *Galium rivale* (aerial parts). Ref: 3981.

**18852 Rivaloside E**

3-*O*- $\beta$ -*D*-Glucuronosyl-24-hydroxy-olean-12-en-28-oic acid 28-*O*- $\beta$ -*D*-glucopyranoside C<sub>42</sub>H<sub>66</sub>O<sub>15</sub> (810.99). Amorphous solid, [ $\alpha$ ]<sub>D</sub> = –7.6° (*c* = 0.2, MeOH). Source: XI LIU ZHU YANG YANG *Galium rivale* (aerial parts). Ref: 3981.

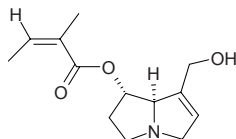
**18853 Rivularin**

C<sub>18</sub>H<sub>16</sub>O<sub>7</sub> (344.32). Source: BAN ZHI LIAN *Scutellaria barbata* [Syn. *Scutellaria rivularis*] (root). Ref: 660.

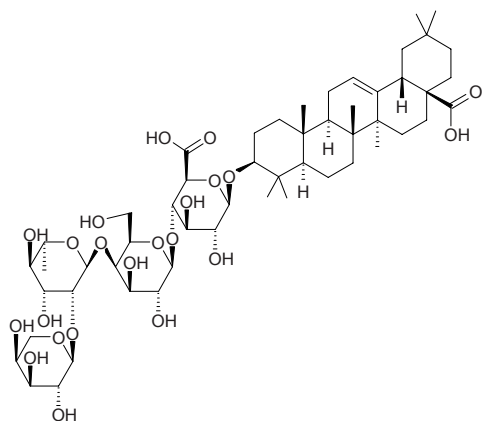


**18854 Rivularine**

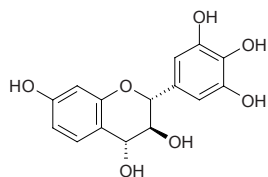
[723-78-4] C<sub>13</sub>H<sub>19</sub>NO<sub>3</sub> (237.30). **Pharm:** Hepatotoxin (sheep). **Source:** XI QIAN LI GUANG *Senecio rivularis*. **Ref:** 658.

**18855 Rivularinin**

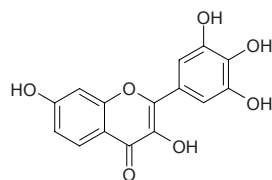
C<sub>53</sub>H<sub>84</sub>O<sub>22</sub> (1073.25). **Source:** HU ZHANG CAO *Anemone rivularis* (root). **Ref:** 660.

**18856 Robidandiol**

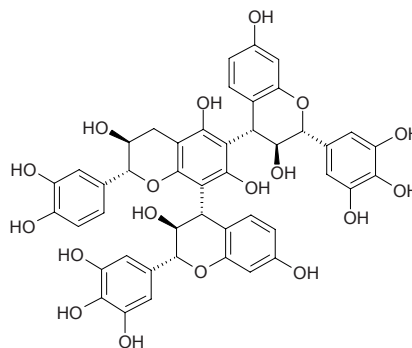
3,3',4,4',5',7-Hexahydroxyflavan [4382-45-0] C<sub>15</sub>H<sub>14</sub>O<sub>7</sub> (306.27). **Source:** A LA BO JIAO JIN HE HUAN *Acacia nilotica*. **Ref:** 5375.

**18857 Robinetin**

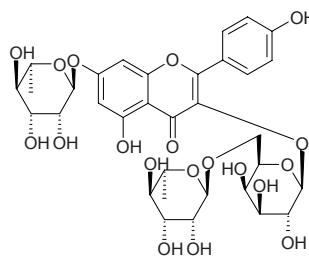
[490-31-3] C<sub>15</sub>H<sub>10</sub>O<sub>7</sub> (302.24). mp 325~330°C (dec). **Pharm:** Antibacterial (*Pseudomonas maltophilia* and *Enteromorpha cloacae*). **Source:** CI HUI HUA *Robinia pseudoacacia*, DAN ZHONG ZAO JIA *Gleditsia monosperma*, HEI JING SHU *Acacia mearnsii*, JI CAI *Capsella bursa-pastoris*, SI TU JI XUE TENG *Milletia stuhlmannii*. **Ref:** 6, 658.

**18858 Robinetinidol-(4α→8)-catechin-(6→4α)-robinetinidol**

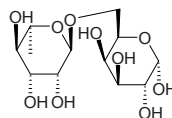
[85820-29-7] C<sub>45</sub>H<sub>38</sub>O<sub>18</sub> (866.79). **Pharm:** Tanning agent. **Source:** HEI JING SHU *Acacia mearnsii*. **Ref:** 658.

**18859 Robinin**

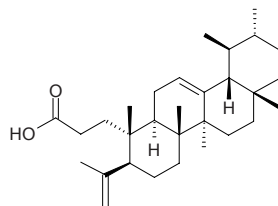
Kaempferol-3-*O*- $\alpha$ -L-rhamnopyranosyl-(1→6)- $\beta$ -D-galactopyranosyl-7-*O*- $\alpha$ -L-rhamnopyranoside [301-19-9] C<sub>33</sub>H<sub>40</sub>O<sub>19</sub> (740.68). mp ( $\alpha$ ) 195~197°C (water), ( $\beta$ ) 249~250°C (ethanol). **Pharm:** Antibacterial (*Pseudomonas maltophilia* and *Enteromorpha cloacae*); anti-inflammatory (rat, rbt); diuretic; LD (rat and mouse, ip) > 100mg/kg. **Source:** JIA DAN BAO JUN YANG HUI *Robinia pseudoacacia*, GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*], LIAN XING HUANG QI *Astragalus falcatus*, LUO FU MU *Rauvolfia verticillata*, LUO FU MU JING YE *Rauvolfia verticillata*, SI GUO HUANG QI *Astragalus shikokianus* (aerial parts), *Vigna* sp. **Ref:** 5, 6, 658, 3922.

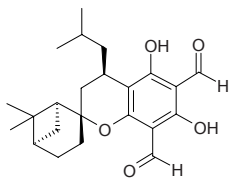
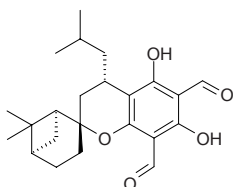
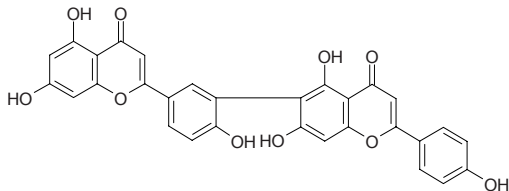
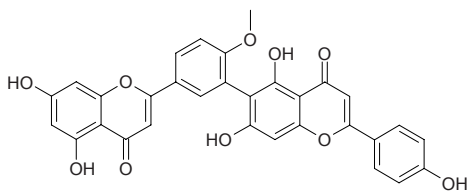
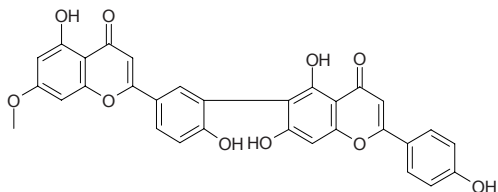
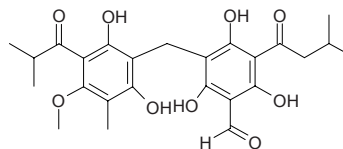
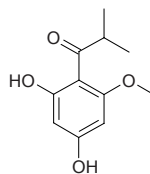
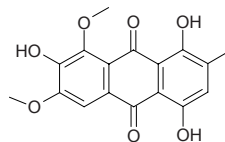
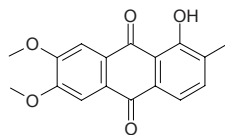
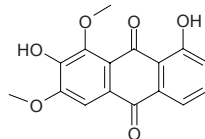
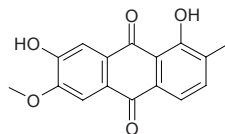
**18860 Robinobiose**

[17074-00-9] C<sub>12</sub>H<sub>22</sub>O<sub>10</sub> (326.30). **Source:** occurs in many plants (the sugar presents in various glycosides; esp. flavonoids). **Ref:** 660.

**18861 Roburic acid**

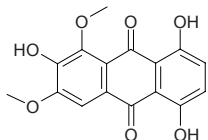
C<sub>30</sub>H<sub>48</sub>O<sub>2</sub> (440.72). **Source:** QIN JIAO *Gentiana macrophylla*. **Ref:** 660.



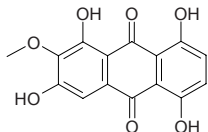
**18862 Robustadial A**[88130-99-8] C<sub>23</sub>H<sub>30</sub>O<sub>5</sub> (386.49). **Pharm:** Antimalarial (*Plasmodium berghei*).**Source:** DA YE AN YE *Eucalyptus robusta*. **Ref:** 658.**18863 Robustadial B**[88197-30-2] C<sub>23</sub>H<sub>30</sub>O<sub>5</sub> (386.48). **Source:** DA YE AN YE *Eucalyptus robusta*.**Ref:** 660.**18864 Robustaflavone**[49620-13-5] C<sub>30</sub>H<sub>18</sub>O<sub>10</sub> (538.47). **Pharm:** Cyclonucleotide phosphodiesteraseinhibitor. **Source:** JI MAO SONG *Podocarpus imbricatus*, *Araucaria* sp.,*Juniperus* sp., *Rhus* sp. **Ref:** 544, 658.**18865 Robustaflavone 4'-O-methyl ether**C<sub>21</sub>H<sub>22</sub>O<sub>10</sub> (552.50). Amorphous powder. **Source:** DA YE CAI *Selaginella**doederleinii*. **Ref:** 4567.**18866 Robustaflavone-7''-methyl ether**[136638-91-0] C<sub>31</sub>H<sub>20</sub>O<sub>10</sub> (552.50). **Pharm:** Cytotoxic (hmn, *in vitro*: BC-1 EC<sub>50</sub> = 3.3 μg/mL; HT1080 EC<sub>50</sub> = 0.9 μg/mL; Lu1 EC<sub>50</sub> = 0.4 μg/mL; Co1-2 EC<sub>50</sub> = 6.0 μg/mL; KB EC<sub>50</sub> = 3.6 μg/mL; drug-resistant KB+Vinblastine EC<sub>50</sub> = 8.9 μg/mL; drug-resistant KB EC<sub>50</sub> = 7.5 μg/mL; LNCaP EC<sub>50</sub> = 3.7 μg/mL; ZR-75-1 EC<sub>50</sub> = 1.4 μg/mL; U373 EC<sub>50</sub> = 0.7 μg/mL). **Source:** JI MAO SONG *Podocarpus imbricatus*. **Ref:** 544, 1811.**18867 Robustaol A**C<sub>25</sub>H<sub>30</sub>O<sub>9</sub> (474.52). Yellowish acicular crystals (petroleum ether), mp163–164°C. **Pharm:** Antimalarial (*Plasmodium berghei*). **Source:** DA YE ANYE *Eucalyptus robusta*, BO SHI AN *Eucalyptus berghei*. **Ref:** 658.**18868 Robustaol B**[102092-19-3] C<sub>11</sub>H<sub>14</sub>O<sub>4</sub> (210.23). Yellow acicular crystals, mp 138–142°C.**Pharm:** Antibacterial (*Staphylococcus aureus* and *Bacillus* sp., MIC = 63 μg/mL); Antiviral (HSV-1 virus and poliomyelitis 1, 5 μg/disk). **Source:** DAYE AN YE *Eucalyptus robusta*. **Ref:** 1067, 1181.**18869 Robustaquinone A**1,4,7-Trihydroxy-6,8-dimethoxy-1-methylantraquinone C<sub>17</sub>H<sub>14</sub>O<sub>7</sub> (330.30).**Source:** CU ZHUANG JIN JI NA *Cinchona robusta*. **Ref:** 2276.**18870 Robustaquinone B**1-Hydroxy-6,7-dimethoxy-2-methylantraquinone C<sub>17</sub>H<sub>14</sub>O<sub>5</sub> (298.30). **Source:**CU ZHUANG JIN JI NA *Cinchona robusta*. **Ref:** 2276.**18871 Robustaquinone C**2,8-Dihydroxy-1,3-dimethoxyanthraquinone C<sub>16</sub>H<sub>12</sub>O<sub>6</sub> (300.27). **Source:** CUZHUANG JIN JI NA *Cinchona robusta*. **Ref:** 2276.**18872 Robustaquinone D**1,7-Dihydroxy-6-methoxy-2-methylantraquinone C<sub>16</sub>H<sub>12</sub>O<sub>5</sub> (284.27). **Source:**CU ZHUANG JIN JI NA *Cinchona robusta*. **Ref:** 2276.

**18873 Robustaquinone E**

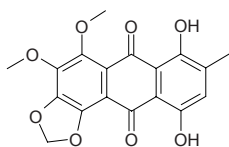
2,5,8-Trihydroxy-1,3-dimethoxyanthraquinone C<sub>16</sub>H<sub>12</sub>O<sub>7</sub> (316.27). [Source](#): CU ZHUANG JIN JI NA *Cinchona robusta*. [Ref](#): 2276.

**18874 Robustaquinone F**

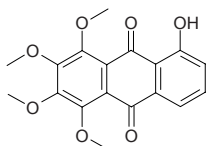
1,3,5,8-Tetrahydroxy-2-methoxyanthraquinone C<sub>15</sub>H<sub>10</sub>O<sub>7</sub> (302.24). [Source](#): CU ZHUANG JIN JI NA *Cinchona robusta*. [Ref](#): 2276.

**18875 Robustaquinone G**

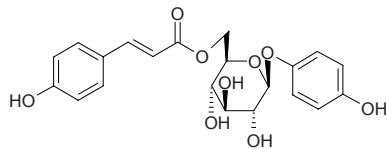
1,4-Dihydroxy-7,8-dimethoxy-2-methyl-5,6-methylenedioxyanthraquinone C<sub>18</sub>H<sub>14</sub>O<sub>8</sub> (358.31). [Source](#): CU ZHUANG JIN JI NA *Cinchona robusta*. [Ref](#): 2276.

**18876 Robustaquinone H**

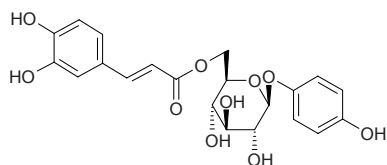
5-Hydroxy-1,2,3,4-tetramethoxyanthraquinone C<sub>18</sub>H<sub>16</sub>O<sub>7</sub> (344.32). [Source](#): CU ZHUANG JIN JI NA *Cinchona robusta*. [Ref](#): 2276.

**18877 Robustaside A**

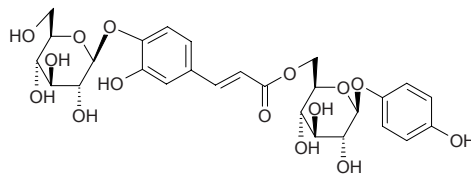
6'-(4"-Hydroxycinnamoyl)arbutin [148810-39-3] C<sub>21</sub>H<sub>22</sub>O<sub>9</sub> (418.40). Amorphous powder.  $[\alpha]_D = -34.3^\circ$  ( $c = 1.61$ , MeOH). [Source](#): YAO YONG HEI MIAN SHEN YE *Breynia officinalis* (leaf), YIN HUA *Grevillea robusta*, YIN HUA *Grevillea robusta* (leaf). [Ref](#): 1521, 2583, 3905.

**18878 Robustaside B**

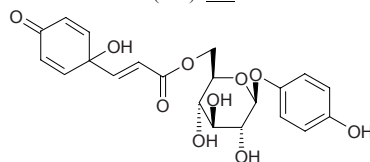
6'-(3",4"-Dihydroxycinnamoyl)arbutin C<sub>21</sub>H<sub>22</sub>O<sub>10</sub> (434.40). Amorphous powder.  $[\alpha]_D = -49.9^\circ$  ( $c = 6.95$ , MeOH). [Source](#): YIN HUA *Grevillea robusta* (leaf). [Ref](#): 3905.

**18879 Robustaside C**

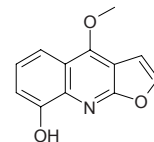
6'-(4"-O-β-Glucopyranosyl-3"-hydroxycinnamoyl)arbutin C<sub>27</sub>H<sub>32</sub>O<sub>15</sub> (596.55). Amorphous powder.  $[\alpha]_D = -57.2^\circ$  ( $c = 0.58$ , MeOH). [Source](#): YIN HUA *Grevillea robusta* (leaf). [Ref](#): 3905.

**18880 Robustaside D**

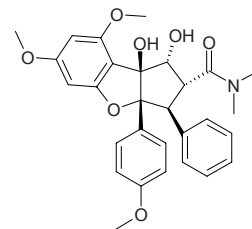
C<sub>21</sub>H<sub>22</sub>O<sub>10</sub> (434.40). Gum,  $[\alpha]_D = -46.1^\circ$  ( $c = 1.84$ , EtOH). [Source](#): YIN HUA *Grevillea robusta* (leaf). [Ref](#): 3905.

**18881 Robustine**

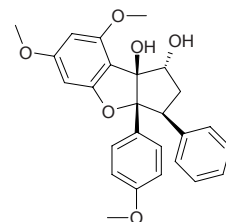
[2255-50-7] C<sub>12</sub>H<sub>9</sub>NO<sub>3</sub> (215.21). [Pharm](#): Potentiates hypnotic effect of barbiturates. [Source](#): GAO JIA SUO BAI XIAN *Dictamnus caucasicus*, FEI LONG ZHANG XUE *Toddalia asiatica* [Syn. *Toddalia aculeata*; *Paullinia asiatica*]. [Ref](#): 658.

**18882 Rocaglamide**

[84573-16-0] C<sub>29</sub>H<sub>31</sub>NO<sub>7</sub> (505.57). mp 129–130°C. [Pharm](#): Antineoplastic (leukemia); insecticidal. [Source](#): MI ZI LAN *Aglaia odorata*. [Ref](#): 1521.

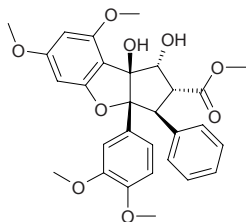
**18883 Rocaglamide derivative 1**

C<sub>26</sub>H<sub>26</sub>O<sub>6</sub> (434.49). [Pharm](#): Insecticidal (neonate larvae of *Spodoptera littoralis*, EC<sub>50</sub> = 0.80mg/L, LC<sub>50</sub> = 17.4mg/L; control Azadirachtin, EC<sub>50</sub> = 0.06mg/L, LC<sub>50</sub> = 0.7mg/L)<sup>[3978]</sup>. [Source](#): MI ZI LAN *Aglaia odorata*, *Aglaia spectabilis* (bark), *Aglaia duperreana*. [Ref](#): 3978.

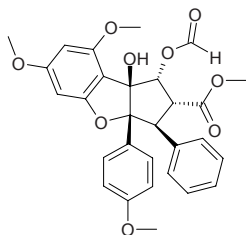


**18884 Rocaglamide derivative 4**

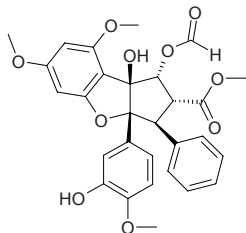
$C_{29}H_{30}O_9$  (522.56).  $[\alpha]_D^{20} = -164.5^\circ$  ( $c = 0.75$ , EtOH). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $EC_{50} = 0.88\text{mg/L}$ ,  $LC_{50} = 5.2\text{mg/L}$ , control Azadirachtin,  $EC_{50} = 0.06\text{mg/L}$ ,  $LC_{50} = 0.7\text{mg/L}$ ). **Source:** *Aglaia spectabilis* (bark). **Ref:** 3978.

**18885 Rocaglamide derivative 5**

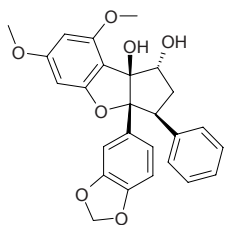
$C_{29}H_{28}O_9$  (520.54).  $[\alpha]_D^{20} = -140.9^\circ$  ( $c = 2.15$ , EtOH). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $EC_{50} = 0.30\text{mg/L}$ ,  $LC_{50} = 5.2\text{mg/L}$ , control Azadirachtin,  $EC_{50} = 0.06\text{mg/L}$ ,  $LC_{50} = 0.7\text{mg/L}$ ). **Source:** *Aglaia spectabilis* (bark). **Ref:** 3978.

**18886 Rocaglamide derivative 6**

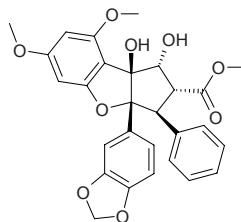
$C_{29}H_{28}O_{10}$  (536.54).  $[\alpha]_D^{20} = -37.4^\circ$  ( $c = 2.93$ , EtOH). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $EC_{50} = 0.30\text{mg/L}$ ,  $LC_{50} = 5.2\text{mg/L}$ , control Azadirachtin,  $EC_{50} = 0.06\text{mg/L}$ ,  $LC_{50} = 0.7\text{mg/L}$ ). **Source:** *Aglaia spectabilis* (bark). **Ref:** 3978.

**18887 Rocaglamide derivative 7**

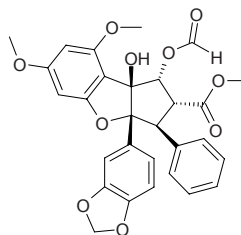
$C_{26}H_{24}O_7$  (448.48). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $EC_{50} = 4.10\text{mg/L}$ ,  $LC_{50} > 80.0\text{mg/L}$ , control Azadirachtin,  $EC_{50} = 0.06\text{mg/L}$ ,  $LC_{50} = 0.7\text{mg/L}$ ). **Source:** TUE YUAN MI ZI LAN *Aglaia elliptica*, *Aglaia spectabilis* (bark). **Ref:** 3978.

**18888 Rocaglamide derivative 8**

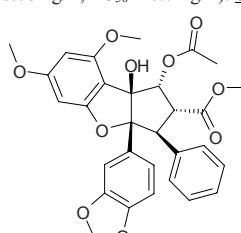
$C_{28}H_{26}O_9$  (506.51). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $EC_{50} = 0.69\text{mg/L}$ ,  $LC_{50} = 7.7\text{mg/L}$ , control Azadirachtin,  $EC_{50} = 0.06\text{mg/L}$ ,  $LC_{50} = 0.7\text{mg/L}$ ). **Source:** TUE YUAN MI ZI LAN *Aglaia elliptica*, *Aglaia spectabilis* (bark). **Ref:** 3978.

**18889 Rocaglamide derivative 9**

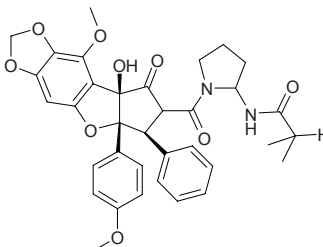
$C_{29}H_{26}O_{10}$  (534.52). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $EC_{50} = 0.27\text{mg/L}$ ,  $LC_{50} = 5.6\text{mg/L}$ , control Azadirachtin,  $EC_{50} = 0.06\text{mg/L}$ ,  $LC_{50} = 0.7\text{mg/L}$ ). **Source:** TUE YUAN MI ZI LAN *Aglaia elliptica*, *Aglaia spectabilis* (bark). **Ref:** 3978.

**18890 Rocaglamide derivative 10**

$C_{30}H_{28}O_{10}$  (548.55). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $EC_{50} = 0.25\text{mg/L}$ ,  $LC_{50} = 8.7\text{mg/L}$ , control Azadirachtin,  $EC_{50} = 0.06\text{mg/L}$ ,  $LC_{50} = 0.7\text{mg/L}$ ). **Source:** *Aglaia spectabilis* (bark). **Ref:** 3978.

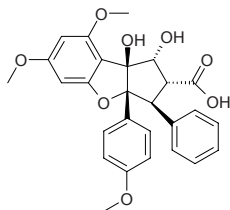
**18891 Rocaglamide derivative 11**

$C_{35}H_{36}N_2O_9$  (628.69). **Pharm:** Insecticidal (neonate larvae of *Spodoptera littoralis*,  $EC_{50} = 0.99\text{mg/L}$ ,  $LC_{50} = 6.5\text{mg/L}$ , control Azadirachtin,  $EC_{50} = 0.06\text{mg/L}$ ,  $LC_{50} = 0.7\text{mg/L}$ ). **Source:** *Aglaia spectabilis* (bark), *Aglaia oligophylla*. **Ref:** 3978.

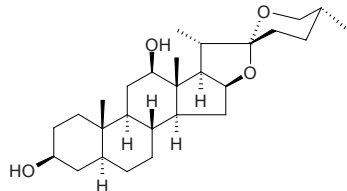


**18892 Rocagloic acid**

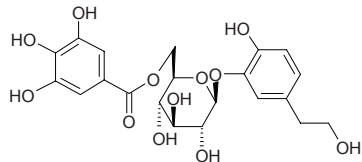
Ferrugin [143901-35-3]  $C_{27}H_{26}O_8$  (478.50). White powder, mp 145~146°C,  $[\alpha]_D^{22} = -47.6^\circ$  ( $c = 0.02$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic (A549,  $ED_{50} = 0.00074\mu\text{g/mL}$ ; HL-60,  $ED_{50} = 0.00084\mu\text{g/mL}$ ; HT29,  $ED_{50} = 0.00084\mu\text{g/mL}$ ; KB,  $ED_{50} = 0.0023\mu\text{g/mL}$ ; P<sub>388</sub>,  $ED_{50} = 0.0012\mu\text{g/mL}$ )<sup>[3031]</sup>. **Source:** DA YE SHU LAN *Aglai elliptifolia* (leaf: yield = 0.00035%dw). **Ref:** 3031, 4046.

**18893 Rockogenin**

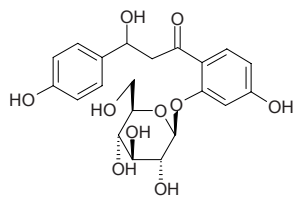
[16653-52-4]  $C_{27}H_{44}O_4$  (432.65). mp 208~210°C (methanol), 217~220°C (ether). **Source:** DONG YI HAO JIAN MA *Agave east-one*, FAN MA *Agave americana*, JIAN MA *Agave sisalana*. **Ref:** 10.

**18894 Rocymosin A**

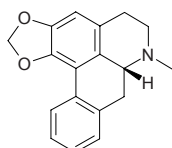
$C_{21}H_{24}O_{12}$  (468.42). **Source:** XIAO GUO QIANG WEI GEN *Rosa cymosa*. **Ref:** 660.

**18895 Rocymosin B**

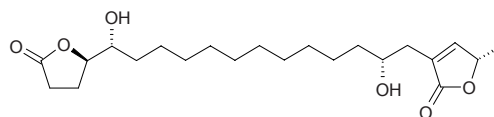
$C_{21}H_{24}O_{10}$  (436.42). **Source:** XIAO GUO QIANG WEI GEN *Rosa cymosa*. **Ref:** 660.

**18896 Roemerine**

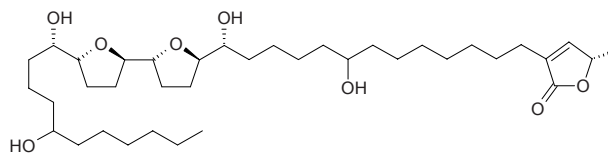
[548-08-3]  $C_{18}H_{17}NO_2$  (279.34). mp 102~103°C. **Source:** HE YE *Nelumbo nucifera*, HE GENG *Nelumbo nucifera*, HE YE DI *Nelumbo nucifera*. **Ref:** 6.

**18897 Rollicosin**

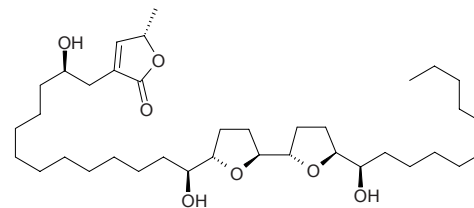
$C_{22}H_{36}O_6$  (396.53). White amorphous powder,  $[\alpha]_D^{24} = -26^\circ$  ( $c = 0.05$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic (HepG2,  $IC_{50} = 0.10\mu\text{g/mL}$ ; Hep2,2,15,  $IC_{50} = 0.021\mu\text{g/mL}$ ; control Adriamycin,  $IC_{50} = 0.045\mu\text{g/mL}$ ; the first compound of this type to contain lactone moieties on both sides of the aliphatic chain and to lack either tetrahydrofuran or tetrahydropyran rings, may serve as a new prototype molecule to develop Annonaceous acetogenins as potential antitumor agents). **Source:** NIAN ZHI LUO LIN *Rollinia mucosa* (Fresh, unripe fruit: yield = 0.000018%fw). **Ref:** 4679.

**18898 Rollimusin**

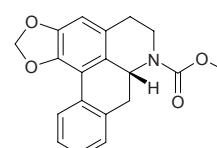
$C_{37}H_{66}O_8$  (638.93). Waxy solid,  $[\alpha]_D^{25} = -7.8^\circ$  ( $c = 0.55$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic (hmn hepatoma cell lines HepG2,  $IC_{50} = 0.0215\mu\text{g/mL}$ , control Adriamycin,  $IC_{50} = 0.241\mu\text{g/mL}$ ; hmn hepatoma cells transfected with hepatitis B virus Hep2,2,15,  $IC_{50} = 0.00145\mu\text{g/mL}$ , Adriamycin,  $IC_{50} = 0.450\mu\text{g/mL}$ ). **Source:** CI GUO FAN LI ZHI *Annona muricata*. **Ref:** 5377.

**18899 Rolliniastatin 1**

[111056-97-4]  $C_{37}H_{66}O_7$  (622.93). Oleaginous, mp 81~83°C (acetone),  $[\alpha]_{589\text{nm}} = +25.2^\circ$ ,  $[\alpha]_{578\text{nm}} = +26.2^\circ$ ,  $[\alpha]_{546\text{nm}} = +30.1^\circ$ ,  $[\alpha]_{436\text{nm}}^{28} = +48.5^\circ$ ,  $[\alpha]_{365\text{nm}} = +76.7^\circ$  ( $c = 1.03$ , dichloromethane). **Pharm:** Antineoplastic (P<sub>388</sub>,  $ED_{50} = 0.045\text{ng/mL}$ ); cytotoxic (BST,  $LD_{50} = 0.0049\mu\text{g/mL}$ ); larvicide (larva of *stegomyia calopus*,  $LD_{50} = 0.2\mu\text{g/mL}$ ); mitochondrial complex I selective inhibitor (NADH oxidase  $IC_{50} = (0.51\pm 0.03)\text{nmol/L}$ ,  $p < 0.001$ , control Rotenone,  $IC_{50} = (5.10\pm 0.09)\text{nmol/L}$ )<sup>[5024]</sup>. **Source:** MAO YE FAN LI ZHI *Annona cherimolia* (seed), NIU XIN FAN LI ZHI *Annona reticulata*. **Ref:** 900, 5024.

**18900 Romucosine**

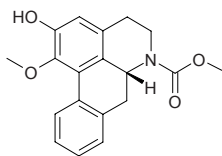
$C_{19}H_{17}NO_4$  (323.35). **Source:** NIAN ZHI LUO LIN *Rollinia mucosa*. **Ref:** 1521.



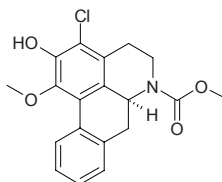


**18901 Romucosine A**

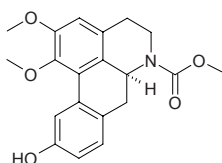
2-Hydroxy-1-methoxy-4,5,6a,7-tetrahydro-dibenzo[de,g]quinoline-6-carboxylic acidmethyl ester C<sub>19</sub>H<sub>19</sub>NO<sub>4</sub> (325.37). Brown amorphous powder,  $[\alpha]_D^{25} = -105^\circ$  ( $c = 0.1$ , CHCl<sub>3</sub>). **Pharm:** Platelet aggregation inhibitor (washed rabbit platelets, 100 $\mu$ g: 0.1U/mL thrombin-induced, AggRt = (89.0 $\pm$ 0.3)%,  $p < 0.001$ ; 10 $\mu$ mol/L AA-induced, AggRt = (0.0 $\pm$ 0.0)%,  $p < 0.001$ ; 10 $\mu$ mol/L collagen-induced, AggRt = (15.7 $\pm$ 5.2)%,  $p < 0.001$ ; 2ng/mL PAF-induced, AggRt = (37.0 $\pm$ 11.7)%,  $p < 0.001$ )<sup>[5143]</sup>. **Source:** NIAN ZHI LUO LIN *Rollinia mucosa*. **Ref:** 1521, 5143.

**18902 Romucosine B**

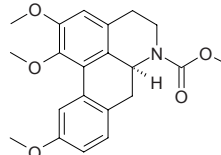
3-Chloro-2-hydroxy-4,5,6a,7-tetrahydro-dibenzo[de,g]quinoline-6-carboxylic acidmethyl ester C<sub>19</sub>H<sub>18</sub>ClNO<sub>4</sub> (359.81). White amorphous powder,  $[\alpha]_D^{25} = +153^\circ$  ( $c = 0.05$ , CHCl<sub>3</sub>). **Pharm:** Platelet aggregation inhibitor (washed rabbit platelets, 100 $\mu$ g: 0.1U/mL thrombin-induced, AggRt = (89.0 $\pm$ 0.3)%,  $p < 0.001$ ; 10 $\mu$ mol/L AA-induced, AggRt = (75.2 $\pm$ 3.2)%,  $p < 0.05$ ; 10 $\mu$ mol/L collagen-induced, AggRt = (87.2 $\pm$ 0.7)%,  $p < 0.01$ ; 2ng/mL PAF-induced, AggRt = (88.3 $\pm$ 0.9)%,  $p < 0.05$ )<sup>[5143]</sup>. **Source:** NIAN ZHI LUO LIN *Rollinia mucosa*. **Ref:** 1521, 5143.

**18903 Romucosine C**

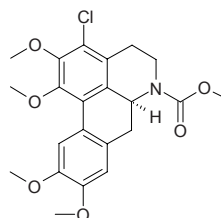
10-Hydroxy-1,2-dimethoxy-4,5,6a,7-tetrahydro-dibenzo[de,g]quinoline-6-carboxylic acidmethyl ester C<sub>20</sub>H<sub>21</sub>NO<sub>5</sub> (355.39). White amorphous powder,  $[\alpha]_D^{25} = +140^\circ$  ( $c = 0.05$ , CHCl<sub>3</sub>). **Pharm:** Platelet aggregation inhibitor (washed rabbit platelets, 100 $\mu$ g: 0.1U/mL thrombin-induced, AggRt = (90.4 $\pm$ 0.4)%,  $p < 0.01$ ; 10 $\mu$ mol/L AA-induced, AggRt = (21.1 $\pm$ 2.7)%,  $p < 0.001$ ; 10 $\mu$ mol/L collagen-induced, AggRt = (62.5 $\pm$ 7.9)%,  $p < 0.05$ ; 2ng/mL PAF-induced, AggRt = (87.4 $\pm$ 0.3)%,  $p < 0.001$ )<sup>[5143]</sup>. **Source:** NIAN ZHI LUO LIN *Rollinia mucosa*. **Ref:** 1521, 5143.

**18904 Romucosine D**

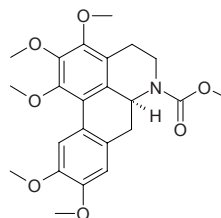
C<sub>21</sub>H<sub>23</sub>NO<sub>5</sub> (369.42). White amorphous powder,  $[\alpha]_D^{25} = +145^\circ$  ( $c = 0.05$ , CHCl<sub>3</sub>). **Pharm:** Platelet aggregation inhibitor (washed rabbit platelets, 100 $\mu$ g: 0.1U/mL thrombin-induced, AggRt = (87.2 $\pm$ 1.1)%,  $p < 0.001$ ; 10 $\mu$ mol/L AA-induced, AggRt = (0.0 $\pm$ 0.0)%,  $p < 0.001$ ; 10 $\mu$ mol/L collagen-induced, AggRt = (0.0 $\pm$ 0.0)%,  $p < 0.001$ ; 2ng/mL PAF-induced, AggRt = (6.1 $\pm$ 5.0)%,  $p < 0.001$ )<sup>[5143]</sup>. **Source:** NIAN ZHI LUO LIN *Rollinia mucosa*. **Ref:** 1521, 5143.

**18905 Romucosine F**

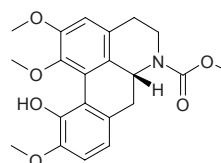
C<sub>22</sub>H<sub>24</sub>ClNO<sub>6</sub> (433.89). **Source:** NIAN ZHI LUO LIN *Rollinia mucosa*. **Ref:** 1521.

**18906 Romucosine G**

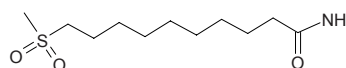
C<sub>23</sub>H<sub>27</sub>NO<sub>7</sub> (429.47). **Source:** NIAN ZHI LUO LIN *Rollinia mucosa*. **Ref:** 1521.

**18907 Romucosine H**

C<sub>21</sub>H<sub>23</sub>NO<sub>6</sub> (385.42). Brown amorphous powder, mp 230–233°C,  $[\alpha]_D^{24} = -43^\circ$  ( $c = 0.01$ , CHCl<sub>3</sub>). **Source:** MAO YE FAN LI ZHI *Annona cherimolia*. **Ref:** 751.

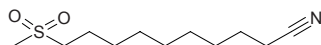
**18908 Rorifamide**

C<sub>11</sub>H<sub>23</sub>NO<sub>3</sub>S (249.37). **Source:** HAN CAI *Rorippa montana* [Syn. *Rorippa dubia*; *Sisymbrium dublium*]. **Ref:** 660.

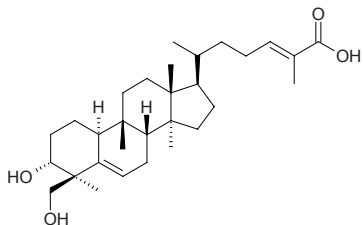


**18909 Rorifone**

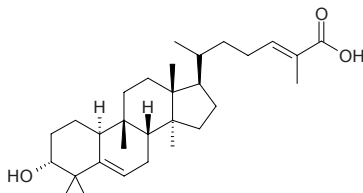
[53078-90-3] C<sub>11</sub>H<sub>21</sub>NO<sub>2</sub>S (231.36). mp 40~46°C, bp 188~192°C/1mmHg. Source: HAN CAI *Rorippa montana* [Syn. *Rorippa dubia*; *Sisymbrium dublium*]. Ref: 4.

**18910 Rosacea acid A**

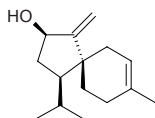
C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). White powder, mp 266~267°C (methanol), [α]<sub>D</sub><sup>18</sup> = +16.8° (c = 0.05, pyridine). Source: KU HONG GU *Russula rosacea*. Ref: 289.

**18911 Rosacea acid B**

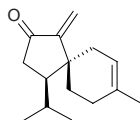
C<sub>30</sub>H<sub>48</sub>O<sub>3</sub> (456.72). White powder, mp 198~201°C (methanol), [α]<sub>D</sub><sup>18</sup> = +16.6° (c = 0.10, pyridine). Source: KU HONG GU *Russula rosacea*. Ref: 289.

**18912 Rosacorenon**

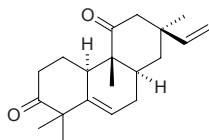
C<sub>15</sub>H<sub>24</sub>O (220.36). Source: MEI GUI HUA *Rosa rugosa*. Ref: 660.

**18913 Rosacorenone**

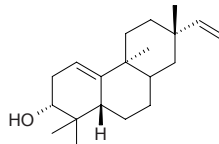
C<sub>15</sub>H<sub>22</sub>O (218.34). Source: MEI GUI HUA *Rosa rugosa*. Ref: 660.

**18914 5,15-Rosadiene-3,11-dione**

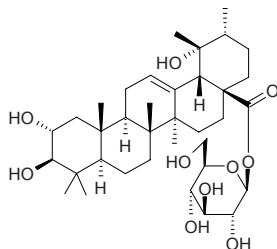
C<sub>20</sub>H<sub>28</sub>O<sub>2</sub> (300.44). Colorless oil, [α]<sub>D</sub><sup>20</sup> = +40.3° (c = 0.4, CHCl<sub>3</sub>). Source: *Tylimanthus renifolius*. Ref: 3491.

**18915 (3R)-ent-1(10),15-Rosadien-3-ol**

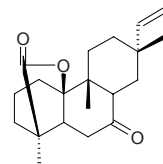
C<sub>20</sub>H<sub>32</sub>O (288.48). [α]<sub>D</sub><sup>20</sup> = +3.9° (c = 1.91, CHCl<sub>3</sub>). Source: *Heteroscyphus billardieri*, *Plagiochila deltoidea*. Ref: 4284.

**18916 Rosamultin**

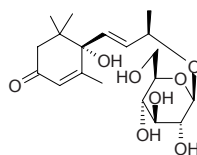
Tormentic acid β-D-glucopyranosyl ester; 2α,3β,19α-Trihydroxyurs-12-en-28-oic acid 28-β-D-glucopyranosyl ester [88515-58-6] C<sub>36</sub>H<sub>58</sub>O<sub>10</sub> (650.86). Pharm: Antihypercholesterolemic (mus, hyperlipemia caused by triton, reduces the level of cholesterol and triglyceride in serum); hemolytic; antiviral (*in vitro*); cytotoxic inactive (HSC-2, IC<sub>50</sub> > 200μg/mL; HGF, IC<sub>50</sub> > 200μg/mL)<sup>[5160]</sup>. Source: DI YU *Sanguisorba officinalis*, JIN YING ZI *Rosa laevigata*, SHE MEI *Duchesnea indica*. Ref: 660, 1560, 1561, 5160.

**18917 Rosenonolactone**

C<sub>20</sub>H<sub>28</sub>O<sub>3</sub> (316.44). Crystals, mp 214°C, [α]<sub>D</sub><sup>20</sup> = -107.5° (c = 1.2, CHCl<sub>3</sub>). Pharm: Prolyl endopeptidase inhibitor (flavobacterium origin, IC<sub>50</sub> = (675±0.03)μmol/L, control Z-pro-prolinal, IC<sub>50</sub> = (0.884±0.025)μmol/L)<sup>[4179]</sup>; thrombin inhibitor (bovine source, IC<sub>50</sub> = (875±0.02)μmol/L control Leupeptin, IC<sub>50</sub> = (45.4±0.03)μmol/L)<sup>[4179]</sup>. Source: JIA LIAN QIAO *Duranta repens* (whole herb). Ref: 4179, 1521.

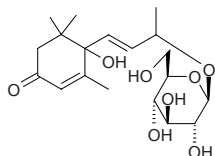
**18918 (6S,9R)-Roseoside**

[54835-70-0] C<sub>19</sub>H<sub>30</sub>O<sub>8</sub> (386.45). Amorphous powder, crystals (as tetra-Ac-compound), mp 153°C (tetra-Ac-compound), [α]<sub>D</sub> = +62° (c = 0.8, CHCl<sub>3</sub>, tetra-Ac-compound). Source: CHANG CHUN HUA *Catharanthus roseus* [Syn. *Vinca rosea*; *Lochera rosea*], CHA RU SHI WAN CUO *Asystasia intrusa*, JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig: yield = 0.0025%dw)<sup>[4723]</sup>, LIU QIU SHE GEN CAO *Ophiorrhiza liukiensis* (whole herb), PI PA YE *Eriobotrya japonica* (stem, leaf)<sup>[3061]</sup>, SANG YE *Morus alba* (leaf: yield = 0.0012%)<sup>[3507]</sup>, WU CI ZAO *Ziziphus jujuba* var. *inermis*. Ref: 2, 660, 1521, 2589, 3061, 3507, 4527, 4723.

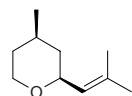


**18919 Roseoside II**

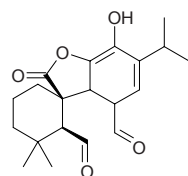
$C_{19}H_{30}O_8$  (386.45). Source: *Morus* sp. Ref: 2513.

**18920 Rose oxide**

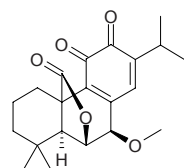
$C_{10}H_{18}O$  (154.25). Source: XIANG YE *Pelargonium graveolens*. Ref: 660.

**18921 Rosmadial**

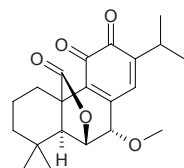
$C_{20}H_{26}O_5$  (346.43). Source: GAN XI SHU WEI CAO *Salvia przewalskii*, MI DIE XIANG *Rosmarinus officinalis*. Ref: 1521, 4538.

**18922 Rosmaquinone A**

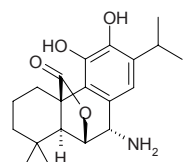
7β-Methoxyabieta-8,13-diene-11,12-dione-(20,6β)-olide  $C_{21}H_{26}O_5$  (358.44). Reddish yellow oil,  $[\alpha]_D^{25} = +3.2^\circ$  ( $c = 0.08$ , MeOH). Source: MI DIE XIANG *Rosmarinus officinalis* (aerial parts). Ref: 5306.

**18923 Rosmaquinone B**

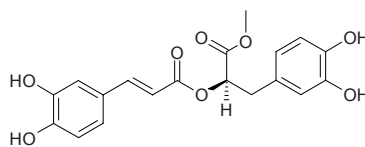
7α-Methoxyabieta-8,13-diene-11,12-dione-(20,6β)-olide  $C_{21}H_{26}O_5$  (358.44). Reddish yellow oil,  $[\alpha]_D^{25} = -6.1^\circ$  ( $c = 0.05$ , MeOH). Source: MI DIE XIANG *Rosmarinus officinalis* (aerial parts). Ref: 5306.

**18924 Rosmaricine**

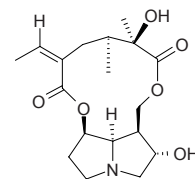
$C_{20}H_{27}NO_4$  (345.44). mp 199–200°C. Source: MI DIE XIANG *Rosmarinus officinalis*. Ref: 6.

**18925 Rosmarinic acid methyl ester**

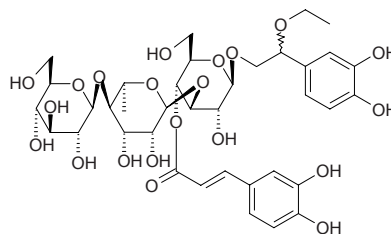
Methyl rosmarinate  $C_{19}H_{18}O_8$  (374.35). Pharm: Antioxidant (DPPDPPH scavenger,  $IC_{50} = 0.1456$ mmol/L, control Propyl gallate,  $IC_{50} = 0.03$ mol/L; superoxide radical inhibitor,  $IC_{50} = 0.443$ mmol/L, control Propyl gallate,  $IC_{50} = 0.106$ mmol/L; iron chelating assay,  $IC_{50} = 0.092$ mmol/L, control propyl gallate,  $IC_{50} = 0.064$ mmol/L)<sup>[4533]</sup>. Source: CHANG GUAN XIANG CHA CAI *Rabdosia longituba*, DAN SHEN *Salvia miltiorrhiza*, JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*], MING XIAN HUA ZHU CHANG ZHU LIU LI CAO *Lindelofia stylosa* (aerial parts). Ref: 660, 1458, 1459, 4533.

**18926 Rosmarinine**

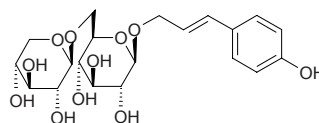
[520-65-0]  $C_{18}H_{27}NO_6$  (353.42). Source: MI DIE XIANG YE QIAN LI GUANG *Senecio rosmarinifolius*. Ref: 658.

**18927 Rossicaside F**

2-(3,4-Dihydroxyphenyl)-*R,S*-2-ethoxy-ethyl-*O*-β-*D*-glucopyranosyl(1→4)-*α*-*L*-rhamnopyranosyl(1→3)(4-*O*-*trans*-caffeoyl)-β-*D*-glucopyranoside  $C_{37}H_{50}O_{21}$  (830.80). Brown syrup,  $[\alpha]_D^{23} = -70.9^\circ$  ( $c = 0.79$ , H<sub>2</sub>O). Source: CAO CONG RONG *Boschniakia rossica* (whole herb: yield = 0.00036%). Ref: 1559.

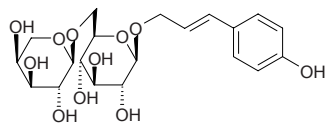
**18928 Rossicasin A**

*trans-p*-Coumaryl-(6'-*O*-β-*D*-xylopyranosyl)-*O*-β-*D*-glucopyranoside  $C_{20}H_{28}O_{11}$  (444.44). Colorless needles (MeOH), mp 168–170°C,  $[\alpha]_D^{23} = -92.5^\circ$  ( $c = 0.4$ , H<sub>2</sub>O). Source: CAO CONG RONG *Boschniakia rossica* (whole herb: yield = 0.00068%). Ref: 1559.

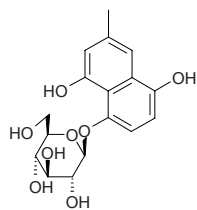


**18929 Rossicasin B**

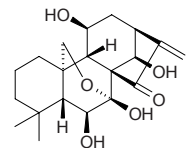
*trans-p*-Coumaryl-(6'-*O*- $\alpha$ -L-arabinopyranosyl)-*O*- $\beta$ -D-glucopyranoside  
 $C_{20}H_{28}O_{11}$  (444.44). Brown syrup,  $[\alpha]_D^{23} = -51.7^\circ$  ( $c = 0.29$ ,  $H_2O$ ). Source:  
 CAO CONG RONG *Boschniakia rossica* (whole herb; yield = 0.00014%).  
Ref: 1559.

**18930 Rossoliside**

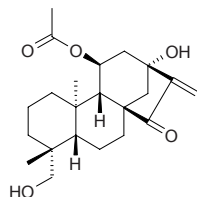
$C_{17}H_{20}O_8$  (352.34). Source: YUAN YE MAO GAO CAI *Drosera rotundifolia*.  
Ref: 660.

**18931 Rosthorin A**

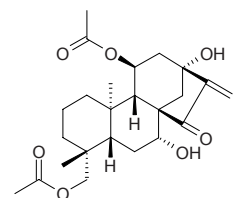
$C_{20}H_{28}O_6$  (364.44). mp 257~260°C,  $[\alpha]_D^{16} = -87.9^\circ$  ( $c = 0.38$ , MeOH). Pharm:  
 Cytotoxic (K562,  $IC_{50} = 5.20\mu g/mL$ , control Mitoxantrone,  $IC_{50} = 0.29\mu g/mL$ ;  
 HL-60,  $IC_{50} > 1000\mu g/mL$ , Mitoxantrone,  $IC_{50} = 0.29\mu g/mL$ ; HCT,  $IC_{50} =$   
 13.69 $\mu g/mL$ , Mitoxantrone,  $IC_{50} = 1.54\mu g/mL$ ; MKN28,  $IC_{50} = 0.92\mu g/mL$ ,  
 Mitoxantrone,  $IC_{50} = 0.02\mu g/mL$ )<sup>[5182]</sup>. Source: YING HUA XIANG CHA  
 CAI *Isodon rosthornii*, HAN SHENG XIANG CHA CAI *Isodon xerophilus*  
 (leaf). Ref: 4067, 5182.

**18932 Rosthorin A (Isodopharin C)**

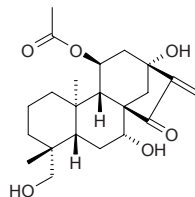
$C_{22}H_{32}O_5$  (376.50). mp 168~170°C,  $[\alpha]_D^{21} = -150.98^\circ$  ( $c = 0.51$ ,  $CHCl_3$ ).  
Source: YING HUA XIANG CHA CAI *Isodon rosthornii*. Ref: 4067.

**18933 Rosthorin B**

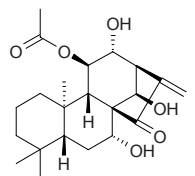
$C_{24}H_{34}O_7$  (434.53). mp 147~149°C,  $[\alpha]_D^{25} = -156.3^\circ$  ( $c = 0.56$ , MeOH).  
Source: YING HUA XIANG CHA CAI *Isodon rosthornii*. Ref: 4067.

**18934 Rosthorin C**

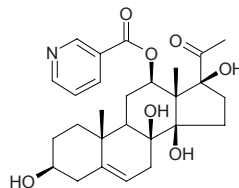
$C_{22}H_{32}O_6$  (392.50). mp 174~176°C. Source: YING HUA XIANG CHA CAI  
*Isodon rosthornii*. Ref: 4067.

**18935 Rosthorin D**

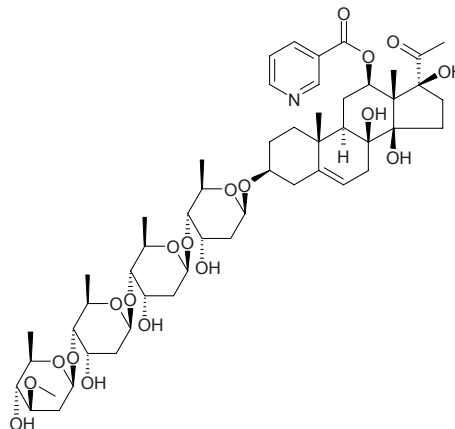
$C_{22}H_{32}O_6$  (392.50). mp 152~154°C. Source: YING HUA XIANG CHA CAI  
*Isodon rosthornii*. Ref: 4067.

**18936 Rostratamine**

$C_{27}H_{35}NO_7$  (485.58). Source: DUAN JIE SHEN *Cynanchum wallichii*, QING  
 YANG SHEN *Cynanchum otophyllum*. Ref: 660.

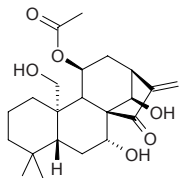
**18937 Rostratamine 3-O- $\beta$ -D-oleandropyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitoxopyranoside**

$C_{52}H_{77}NO_{19}$  (1020.19). Amorphous powder,  $[\alpha]_D^{24} = -4.6^\circ$  ( $c = 0.61$ , MeOH).  
Source: ROU HONG MA LI JIN *Asclepias incarnata* (aerial parts). Ref: 3925.

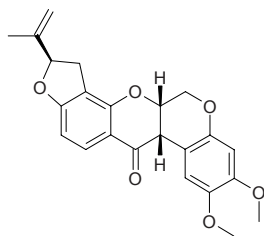


**18938 Rostronol F**

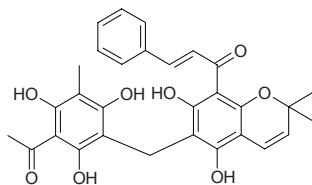
$C_{22}H_{32}O_6$  (392.50). Source: JIE XING YE TAI *Jungermannia truncata*. Ref: 4201.

**18939 Rotenone**

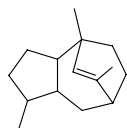
[83-79-4]  $C_{23}H_{22}O_6$  (394.43). mp (-) 163°C. Pharm: Mitochondrial respiratory chain complex I inhibitor ( $IC_{50} = (5.10 \pm 0.90) \text{ nmol/L}$ )<sup>[4954]</sup>; NADH oxidase inhibitor (submitochondrial particles from bovine heart,  $IC_{50} = (0.0051 \pm 0.0009) \mu\text{mol/L}$ )<sup>[5356]</sup>; mitochondrial complex I selective inhibitor (NADH oxidase,  $IC_{50} = (5.10 \pm 0.09) \text{ nmol/L}$ )<sup>[5024]</sup>; antiprotozoal; piscicide (adult zebra fishes *Brachydanio rerio*,  $LC_{100} = 1.0 \mu\text{g/mL}$ , time = 20~30min)<sup>[5393]</sup>; pesticide; anti-tumor promotor (*in vivo*, mouse skin tumor, inhibits TPA-induced EBV-EA activation, 100(mol ratio/32pmol TPA), EBV-EA positive cells = 69.2% viability, positive control  $\beta$ -Carotene, EBV-EA positive cells = 82.7% viability)<sup>[4982]</sup>; LD (dog, iv) = 0.5mg/kg; LD<sub>50</sub> (mus, ip) = 2.8mg/kg. Source: DI GUA ZI *Pachyrhizus erosus*, DOU SHU *Pachyrhizus erosus* (seed), HUI YE GEN *Tephrosia purpurea*, JI XUE TENG GEN *Millettia reticulata*, KU TAN ZI *Millettia pachycarpa*, MAO RUI HUA *Verbascum thapsus*, MAO YU TENG *Derris elliptica*, YU TENG *Derris trifoliata*, YU TENG *Derris trifoliata* (stem). Ref: 6, 658, 4180, 4954, 4982, 5024, 5356, 5393.

**18940 Rottlerin**

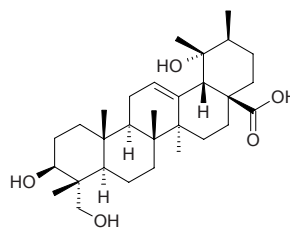
[82-08-6]  $C_{30}H_{28}O_8$  (516.55). mp 212°C. Pharm: Anthelmintic (veterinary); toxin; used in clinical treatment of cancer. Source: LV SONG QIU MAO *Mallotus philippinensis*. Ref: 6, 658.

**18941 Rotundene**

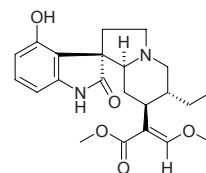
$C_{15}H_{24}$  (204.36). Source: KAN MAI NIANG ZHUANG SHA CAO *Cyperus alopecuroides* (essential oil). Ref: 5129.

**18942 Rotundic acid**

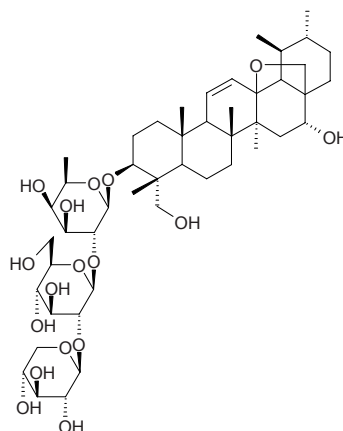
[20137-37-5]  $C_{30}H_{48}O_5$  (488.71). Source: JIU BI YING *Ilex rotunda*, SI JI QING *Ilex chinensis* [Syn. *Ilex purpurea*]. Ref: 6, 527.

**18943 Rotundifoline**

[6883-25-6]  $C_{22}H_{28}N_2O_5$  (400.48). mp 238~240°C. Source: BI LU GOU TENG *Uncaria tomentosa*, ER CHA GOU TENG *Uncaria gambir*, HOU YE GOU TENG *Uncaria callophylla*, TUO YUAN GOU TENG *Uncaria elliptica*, XIA GOU TENG *Uncaria attenuata*. Ref: 6, 5341.

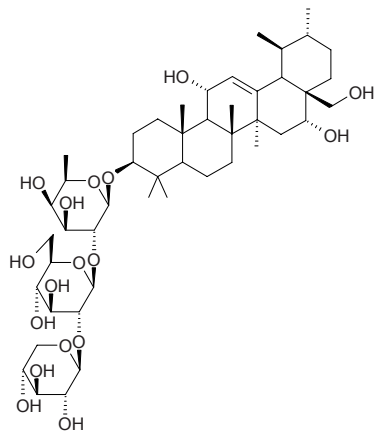
**18944 Rotundifolioside A**

13 $\beta$ ,28-Epoxy-16 $\alpha$ ,23-dihydroxyurs-11-en-3 $\beta$ -yl  $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-fucopyranoside  $C_{47}H_{76}O_{17}$  (913.12). White powder,  $[\alpha]_D^{24} = -62.0^\circ$  ( $c = 0.18$ , pyridine). Pharm: Cytotoxic (antiproliferative activity *in vitro*, MTT assay, hmn MK1,  $GI_{50} = 48 \mu\text{mol/L}$ ; hmn HeLa,  $GI_{50} = 71 \mu\text{mol/L}$ ; murine B16F10,  $GI_{50} = 31 \mu\text{mol/L}$ ). Source: YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). Ref: 4331.

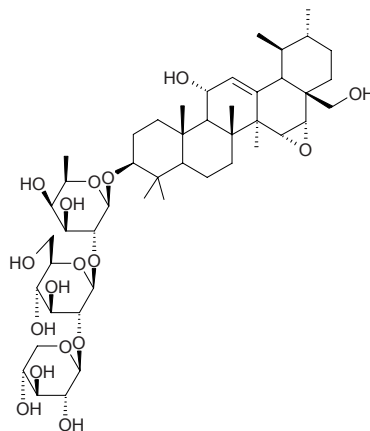


**18945 Rotundifolioside B**

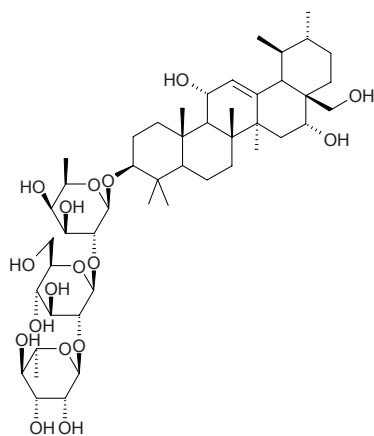
11 $\alpha$ ,16 $\alpha$ ,28-Trihydroxyurs-12-en-3 $\beta$ -yl  $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-fucopyranoside C<sub>47</sub>H<sub>78</sub>O<sub>17</sub> (915.14). White powder,  $[\alpha]_D^{24} = -60.5^\circ$  ( $c = 0.62$ , pyridine). **Pharm:** Cytotoxic inactive (antiproliferative activity *in vitro*, MTT assay, hmn MK1, GI<sub>50</sub> > 100 $\mu$ g/mL; hmn HeLa, GI<sub>50</sub> > 100 $\mu$ g/mL; murine B16F10, GI<sub>50</sub> > 100 $\mu$ g/mL). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

**18947 Rotundifolioside D**

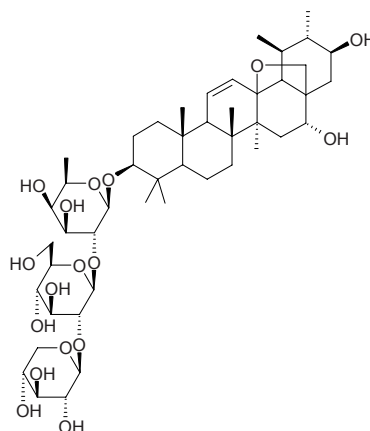
15 $\alpha$ ,16 $\alpha$ -Epoxy-11 $\alpha$ ,28-dihydroxyurs-12-en-3 $\beta$ -yl  $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-fucopyranoside C<sub>47</sub>H<sub>76</sub>O<sub>17</sub> (913.12). White powder,  $[\alpha]_D^{24} = -40.4^\circ$  ( $c = 1.11$ , pyridine). **Pharm:** Cytotoxic inactive (antiproliferative activity *in vitro*, MTT assay, hmn MK1, GI<sub>50</sub> > 100 $\mu$ g/mL; hmn HeLa, GI<sub>50</sub> > 100 $\mu$ g/mL; murine B16F10, GI<sub>50</sub> > 100 $\mu$ g/mL). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

**18946 Rotundifolioside C**

11 $\alpha$ ,16 $\alpha$ ,28-Trihydroxyurs-12-en-3 $\beta$ -yl  $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-fucopyranoside C<sub>48</sub>H<sub>80</sub>O<sub>17</sub> (929.16). White powder,  $[\alpha]_D^{24} = -93.0^\circ$  ( $c = 0.29$ , pyridine). **Pharm:** Cytotoxic inactive (antiproliferative activity *in vitro*, MTT assay, hmn MK1, GI<sub>50</sub> > 100 $\mu$ g/mL; hmn HeLa, GI<sub>50</sub> > 100 $\mu$ g/mL; murine B16F10, GI<sub>50</sub> > 100 $\mu$ g/mL). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

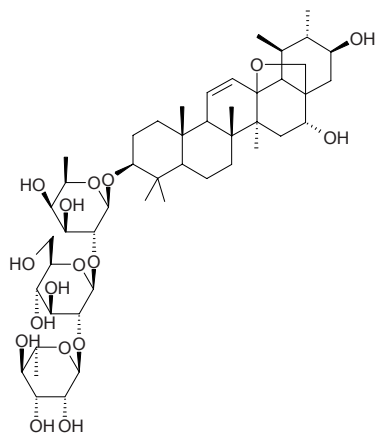
**18948 Rotundifolioside E**

13 $\beta$ ,28-Epoxy-16 $\alpha$ ,21 $\beta$ -dihydroxyurs-11-en-3 $\beta$ -yl  $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-fucopyranoside C<sub>47</sub>H<sub>76</sub>O<sub>17</sub> (913.12). White powder,  $[\alpha]_D^{24} = -16.8^\circ$  ( $c = 0.59$ , pyridine). **Pharm:** Cytotoxic inactive (antiproliferative activity *in vitro*, MTT assay, hmn MK1, GI<sub>50</sub> > 100 $\mu$ g/mL; hmn HeLa, GI<sub>50</sub> > 100 $\mu$ g/mL; murine B16F10, GI<sub>50</sub> > 100 $\mu$ g/mL). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

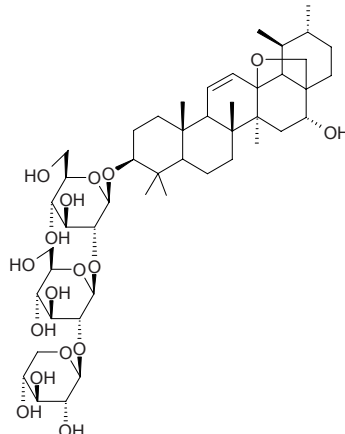


**18949 Rotundifolioside F**

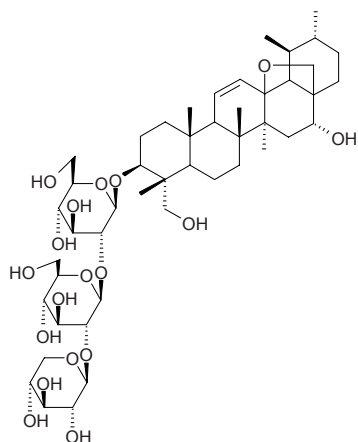
13 $\beta$ ,28-Epoxy-16 $\alpha$ ,21 $\beta$ -dihydroxyurs-11-en-3 $\beta$ -yl  $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-fucopyranoside C<sub>48</sub>H<sub>78</sub>O<sub>17</sub> (927.15). White powder,  $[\alpha]_D^{24} = -12.9^\circ$  ( $c = 0.47$ , pyridine). **Pharm:** Cytotoxic inactive (antiproliferative activity *in vitro*, MTT assay, hmn MK1, GI<sub>50</sub> > 100 $\mu$ g/mL, hmn HeLa, GI<sub>50</sub> > 100 $\mu$ g/mL, murine B16F10, GI<sub>50</sub> > 100 $\mu$ g/mL). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

**18951 Rotundifolioside H**

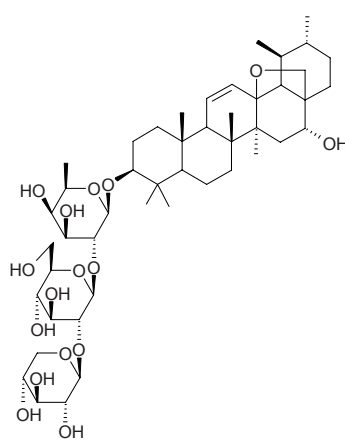
13 $\beta$ ,28-Epoxy-16 $\alpha$ -hydroxyurs-11-en-3 $\beta$ -yl  $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside C<sub>47</sub>H<sub>76</sub>O<sub>17</sub> (913.12). White powder,  $[\alpha]_D^{24} = -9.4^\circ$  ( $c = 0.64$ , pyridine). **Pharm:** Cytotoxic (antiproliferative activity *in vitro*, MTT assay, hmn MK1, GI<sub>50</sub> = 18 $\mu$ mol/L, hmn HeLa, GI<sub>50</sub> = 31 $\mu$ mol/L, murine B16F10, GI<sub>50</sub> = 18 $\mu$ mol/L). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

**18950 Rotundifolioside G**

13 $\beta$ ,28-Epoxy-16 $\alpha$ ,23-dihydroxyurs-11-en-3 $\beta$ -yl  $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside C<sub>47</sub>H<sub>76</sub>O<sub>18</sub> (929.12). White powder,  $[\alpha]_D^{24} = +3.8^\circ$  ( $c = 0.90$ , pyridine). **Pharm:** Cytotoxic (antiproliferative activity *in vitro*, MTT assay, hmn MK1, GI<sub>50</sub> = 84 $\mu$ mol/L; hmn HeLa, GI<sub>50</sub> > 100 $\mu$ g/mL; murine B16F10, GI<sub>50</sub> = 46 $\mu$ mol/L). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

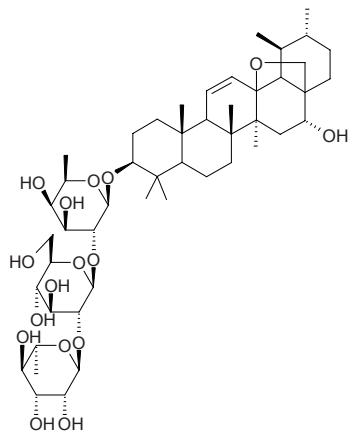
**18952 Rotundifolioside I**

13 $\beta$ ,28-Epoxy-16 $\alpha$ -hydroxyurs-11-en-3 $\beta$ -yl  $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-fucopyranoside C<sub>47</sub>H<sub>76</sub>O<sub>16</sub> (897.12). White powder,  $[\alpha]_D^{24} = -10.1^\circ$  ( $c = 0.99$ , pyridine). **Pharm:** Cytotoxic (antiproliferative activity *in vitro*, MTT assay, hmn MK1, GI<sub>50</sub> = 20 $\mu$ mol/L; hmn HeLa, GI<sub>50</sub> = 37 $\mu$ mol/L; murine B16F10, GI<sub>50</sub> = 18 $\mu$ mol/L). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

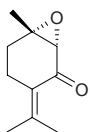


**18953 Rotundifolioside J**

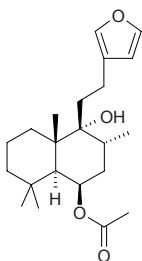
13 $\beta$ ,28-Epoxy-16 $\alpha$ -hydroxyurs-11-en-3 $\beta$ -yl  $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-fucopyranoside C<sub>48</sub>H<sub>78</sub>O<sub>16</sub> (911.15). White powder,  $[\alpha]_D^{24} = +31.3^\circ$  ( $c = 1.00$ , pyridine). **Pharm:** Cytotoxic (antiproliferative activity *in vitro*, MTT assay, hmn MK1, GI<sub>50</sub> = 16 $\mu$ mol/L; hmn HeLa, GI<sub>50</sub> = 21 $\mu$ mol/L; murine B16F10, GI<sub>50</sub> = 11 $\mu$ mol/L). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

**18954 Rotundifolone**

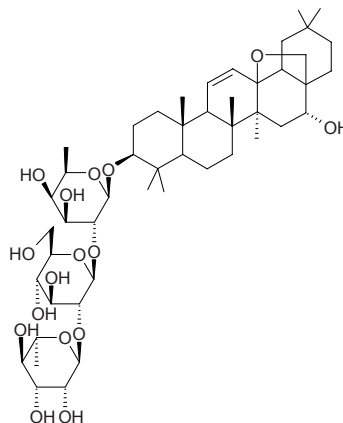
Piperitone oxide [5945-46-0] C<sub>10</sub>H<sub>14</sub>O<sub>2</sub> (166.22). Crystals, mp 27.5°C, bp 86°C/1mmHg,  $[\alpha]_D^{10} = +166.5^\circ$  (MeOH). **Source:** YU XIANG CAO *Mentha rotundifolia*, *Mentha* spp. **Ref:** 6, 2674, 3105.

**18955 Rotundifuran**

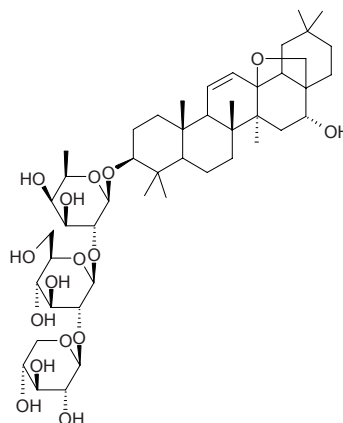
[50656-65-0] C<sub>22</sub>H<sub>34</sub>O<sub>4</sub> (362.51). **Source:** MAN JING ZI *Vitex trifolia*. **Ref:** 746.

**18956 Rotundioside F**

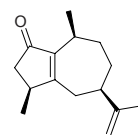
C<sub>48</sub>H<sub>78</sub>O<sub>16</sub> (911.15). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

**18957 Rotundioside G**

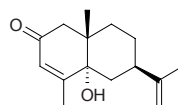
C<sub>47</sub>H<sub>76</sub>O<sub>16</sub> (897.12). **Source:** YUAN YE CHAI HU *Bupleurum rotundifolium* (fruit). **Ref:** 4331.

**18958 Rotundone**

[18374-76-0] C<sub>15</sub>H<sub>22</sub>O (218.34). bp 128–129°C/1mm **Source:** XIANG FU *Cyperus rotundus*. **Ref:** 6.

**18959  $\alpha$ -Rotunol**

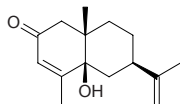
[24405-56-9] C<sub>15</sub>H<sub>22</sub>O<sub>2</sub> (234.34). mp ( $\alpha$ ) 87.5–88.5°C **Source:** XIANG FU *Cyperus rotundus*. **Ref:** 6.



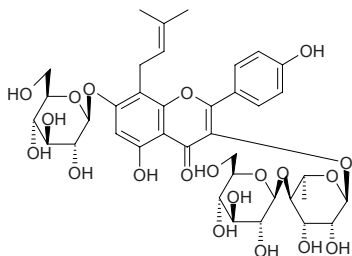


**18960  $\beta$ -Rotunol**

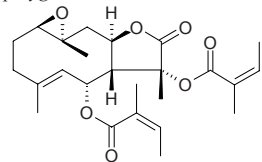
[24405-57-0]  $C_{15}H_{22}O_2$  (234.34). mp ( $\beta$ ) 118~119°C. Source: XIANG FU *Cyperus rotundus*. Ref: 6.

**18961 Rouhuoside**

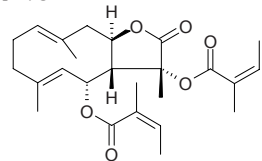
[131862-37-8]  $C_{38}H_{48}O_{20}$  (824.71). Source: WU SHAN YIN YANG HUO *Epimedium wushanense*, ROU MAO YIN YANG HUO *Epimedium pubescens*. Ref: 2, 660.

**18962 Rouyolide A**

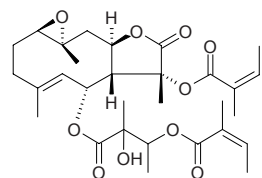
$C_{25}H_{34}O_7$  (446.55). Oil,  $[\alpha]_D^{25} = +75.3^\circ$  ( $c = 0.473$ ,  $CHCl_3$ ). Source: *Rouya polygama*. Ref: 3414.

**18963 Rouyolide B**

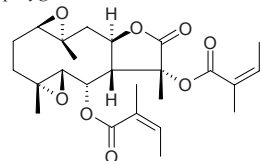
$C_{25}H_{34}O_6$  (430.55). Oil,  $[\alpha]_D^{25} = +57.3^\circ$  ( $c = 0.041$ ,  $CHCl_3$ ). Source: *Rouya polygama*. Ref: 3414.

**18964 Rouyolide C**

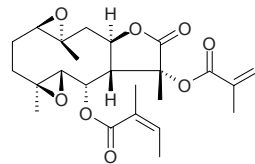
$C_{30}H_{42}O_{10}$  (562.66). Oil,  $[\alpha]_D^{25} = +141.4^\circ$  ( $c = 0.082$ ,  $CHCl_3$ ). Source: *Rouya polygama*. Ref: 3414.

**18965 Rouyolide D**

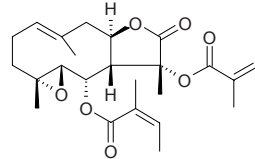
$C_{25}H_{34}O_8$  (462.54). Oil,  $[\alpha]_D^{25} = +16.6^\circ$  ( $c = 0.042$ ,  $CHCl_3$ ). Source: *Rouya polygama*. Ref: 3414.

**18966 Rouyolide E**

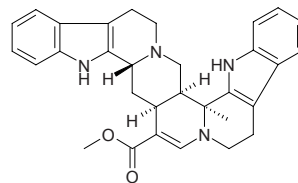
$C_{25}H_{34}O_8$  (462.54). Oil,  $[\alpha]_D^{25} = +2.95^\circ$  ( $c = 0.206$ ,  $CHCl_3$ ). Source: *Rouya polygama*. Ref: 3414.

**18967 Rouyolide F**

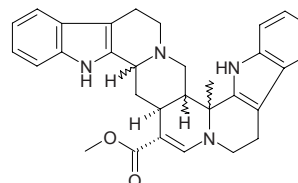
$C_{25}H_{34}O_7$  (446.55). Oil,  $[\alpha]_D^{25} = +85.5^\circ$  ( $c = 110$ ,  $CHCl_3$ ). Source: *Rouya polygama*. Ref: 3414.

**18968 Roxburghine**

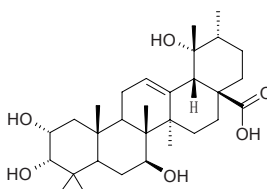
$C_{31}H_{32}N_4O_2$  (492.63). Source: ER CHA GOU TENG *Uncaria gambir*. Ref: 660.

**18969 Roxburghine X**

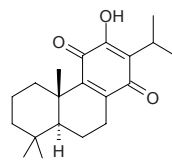
$C_{31}H_{32}N_4O_2$  (492.63). Source: TUO YUAN GOU TENG *Uncaria elliptica*. Ref: 5341.

**18970 Roxburic acid**

2 $\beta$ ,3 $\beta$ ,7 $\beta$ ,19 $\alpha$ -Tetrahydroxyurs-12-en-28-oic acid [108657-25-6]  $C_{30}H_{48}O_6$  (504.71). White amorphous powder, mp 292°C (dec),  $[\alpha]_D^{18} = 0^\circ$  ( $c = 0.1550$ , pyridine). Source: CI LI *Rosa roxburghii*. Ref: 74.

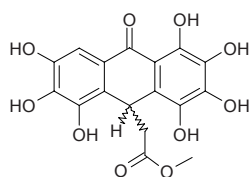
**18971 Royleanone**

$C_{20}H_{28}O_3$  (316.44). Source: XI MA XUAN FU HUA *Inula royleana*, XIN XI LAN LUO HAN SONG *Podocarpus ferrugineus*. Ref: 1521.

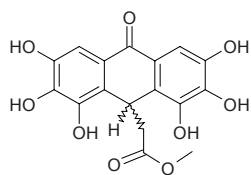


**18972 Rubanthrone A**

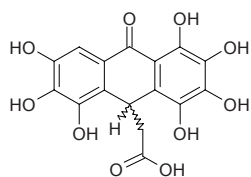
$C_{17}H_{14}O_{10}$  (378.30).  $[\alpha]_D = +6.1^\circ$  ( $c = 0.09$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus*, EC = 4.5mg/mL). **Source:** YU YE MAO MEI *Rubus ulmifolius*. **Ref:** 2017.

**18973 Rubanthrone B**

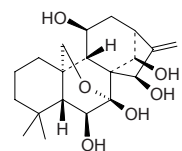
$C_{17}H_{14}O_9$  (362.30). **Source:** YU YE MAO MEI *Rubus ulmifolius*. **Ref:** 2010.

**18974 Rubanthrone C**

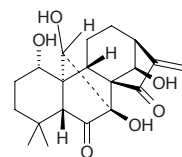
$C_{16}H_{12}O_{10}$  (364.27).  $[\alpha]_D = +2.1^\circ$  ( $c = 0.05$ , MeOH). **Source:** YU YE MAO MEI *Rubus ulmifolius*. **Ref:** 2010.

**18975 Rubescensin C**

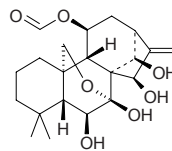
[81661-34-9]  $C_{20}H_{30}O_6$  (366.46). Crystals (MeOH), mp 239–241°C,  $[\alpha]_D^{25} = -68.6^\circ$  ( $c = 0.14$ , pyridine). **Source:** DONG LING CAO *Rabdosia rubescens*. **Ref:** 2087, 4067.

**18976 Rubescensin D**

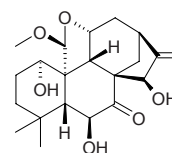
$C_{20}H_{26}O_6$  (362.43). mp 264–266°C,  $[\alpha]_D^{20} = -57.2^\circ$  ( $c = 0.236$ ,  $C_5H_5N$ ). **Source:** DONG LING CAO *Rabdosia rubescens*. **Ref:** 4067.

**18977 Rubescensin H**

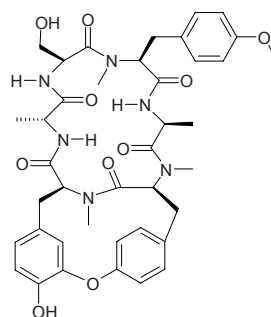
6 $\beta$ ,7 $\beta$ ,14 $\beta$ ,15 $R$ -Tetrahydroxy-11 $\beta$ -O-formyl-7 $\alpha$ ,20-epoxy-ent-kaur-16-ene  $C_{21}H_{30}O_7$  (394.47). Colorless crystals mp 140–142°C,  $[\alpha]_D^{28} = 11.9^\circ$  ( $c = 0.1265$ , MeOH). **Source:** DONG LING CAO *Rabdosia rubescens*. **Ref:** 879.

**18978 Rubescensin W**

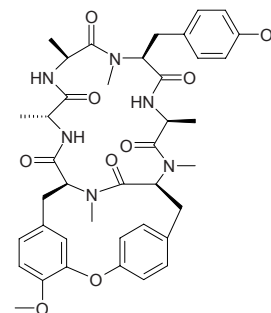
$C_{21}H_{30}O_6$  (378.47). Colorless cubes,  $[\alpha]_D^{26.9} = +57.69^\circ$  ( $c = 0.34$ , MeOH). **Pharm:** Cytotoxic inactive (K562 cells,  $IC_{50} = 38.96\mu\text{g/mL}$ , positive control *cis*-Platinum,  $IC_{50} = 1.14\mu\text{g/mL}$ ). **Source:** MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosia japonica*]. **Ref:** 4998.

**18979 Rubia akane RA-I**

$C_{40}H_{48}N_6O_{10}$  (772.86). **Source:** QIAN CAO GEN *Rubia cordifolia*. **Ref:** 660.

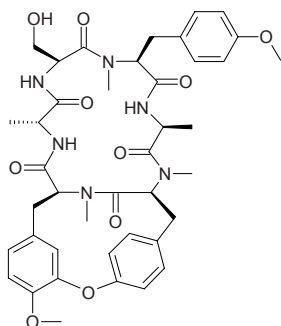
**18980 Rubia akane RA-II**

$C_{40}H_{48}N_6O_9$  (756.89). **Source:** QIAN CAO GEN *Rubia cordifolia*. **Ref:** 660.

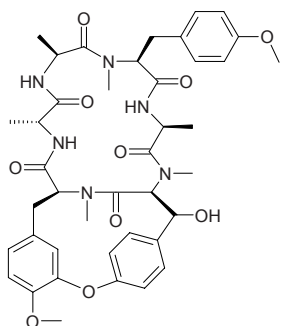


**18981 Rubia akane RA-III**

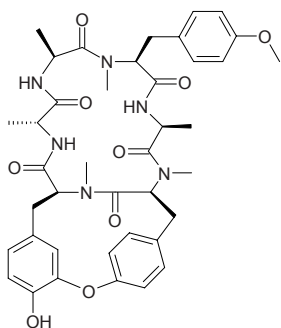
$C_{41}H_{50}N_6O_{10}$  (786.89). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

**18982 Rubia akane RA-IV**

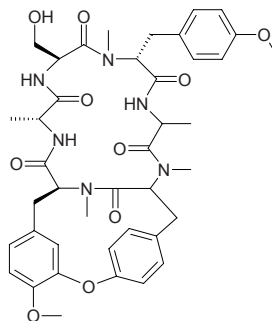
$C_{41}H_{50}N_6O_{10}$  (786.89). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

**18983 Rubia akane RA-V**

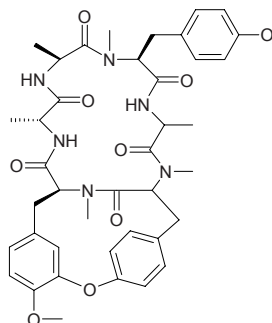
$C_{40}H_{48}N_6O_9$  (756.86). Pharm: Anti-inflammatory (inhibits nitric oxide production, LPS-activated mouse peritoneal macrophages,  $0.03\mu\text{mol/L}$ , InRt =  $(77.1\pm 1.9)\%$ ,  $IC_{50} = 0.015\mu\text{mol/L}$ , control Herbimycin A,  $IC_{50} = 0.094\mu\text{mol/L}$ );  $\beta$ -Hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase,  $100\mu\text{mol/L}$ , InRt =  $(1.2\pm 2.5)\%$ )<sup>[4347]</sup>. Source: QIAN CAO GEN *Rubia cordifolia*, XIAO HONG SHEN *Rubia yunnanensis* (root). Ref: 660, 4347.

**18984 Rubia akane RA-VI**

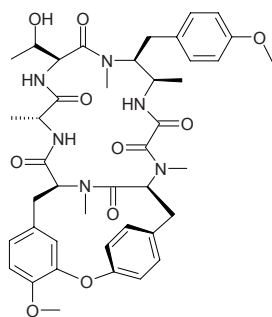
$C_{41}H_{50}N_6O_{10}$  (786.89). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

**18985 Rubia akane RA-VII**

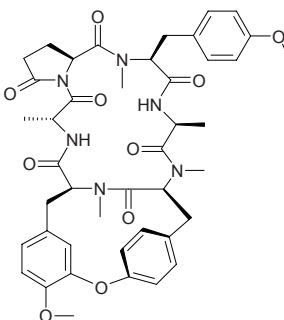
$C_{41}H_{50}N_6O_9$  (770.89). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

**18986 Rubia akane RA-VIII**

$C_{42}H_{52}N_6O_{10}$  (800.92). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

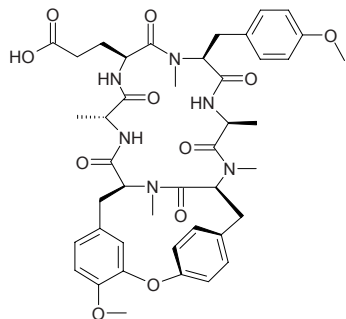
**18987 Rubia akane RA-IX**

$C_{43}H_{50}N_6O_{10}$  (810.91). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

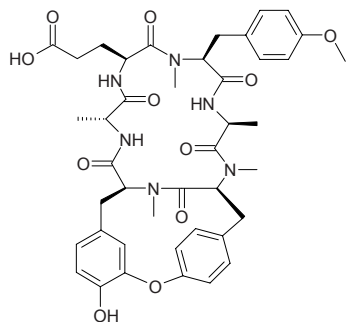


**18988 Rubia akane RA-X**

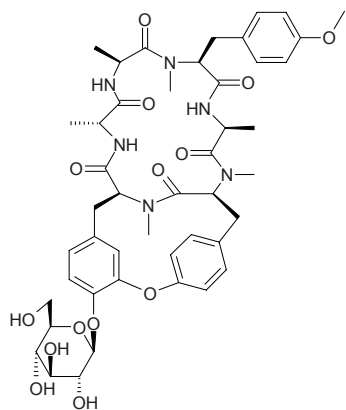
$C_{43}H_{52}N_6O_{11}$  (828.93). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

**18989 Rubia akane RA-XI**

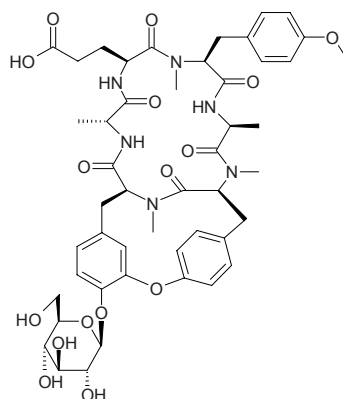
$C_{42}H_{50}N_6O_{11}$  (814.90). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

**18990 Rubia akane RA-XII**

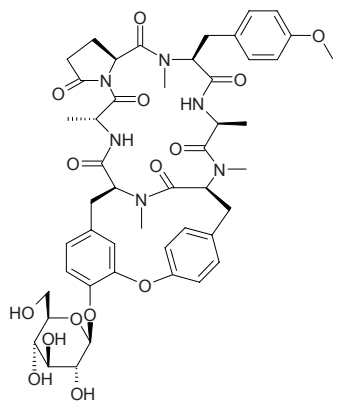
$C_{46}H_{58}N_6O_{14}$  (919.01). Pharm: Anti-inflammatory (inhibits nitric oxide production, LPS-activated mouse peritoneal macrophages,  $1\mu\text{mol/L}$ ,  $\text{InRt} = (54.0 \pm 4.2)\%$ ,  $\text{IC}_{50} = 0.85\mu\text{mol/L}$ , control *L*-NMMA,  $\text{IC}_{50} = 57\mu\text{mol/L}$ );  $\beta$ -hexosaminidase inhibitor (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase,  $100\mu\text{mol/L}$ ,  $\text{InRt} = (35.7 \pm 4.0)\%$ ,  $p < 0.01$ )<sup>[4347]</sup>. Source: QIAN CAO GEN *Rubia cordifolia*, XIAO HONG SHEN *Rubia yunnanensis* (root). Ref: 660, 4347.

**18991 Rubia akane RA-XIII**

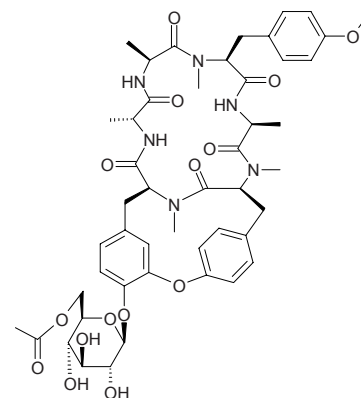
$C_{48}H_{60}N_6O_{16}$  (977.04). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

**18992 Rubia akane RA-XIV**

$C_{48}H_{58}N_6O_{15}$  (959.03). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

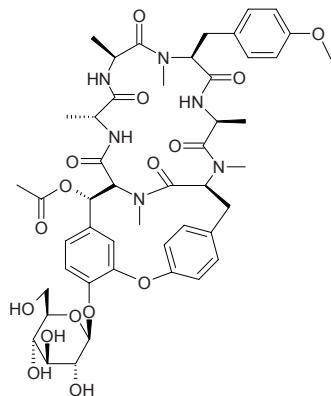
**18993 Rubia akane RA-XV**

$C_{48}H_{60}N_6O_{15}$  (961.04). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

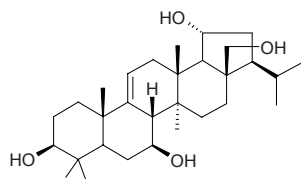


**18994 Rubia akane RA-XVI**

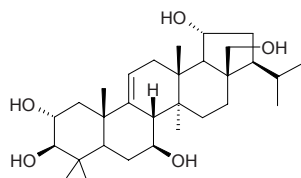
[150373-89-0] C<sub>48</sub>H<sub>60</sub>N<sub>6</sub>O<sub>16</sub> (977.04). Acicular crystals, mp 220°C (dec), [α]<sub>D</sub> = -179.7° (c = 0.06, methanol). **Pharm:** Cytotoxic (P<sub>388</sub>, ED<sub>50</sub> = 1.5 μg/mL). **Source:** QIAN CAO GEN *Rubia cordifolia* (root: yield = 0.0000036%dw). **Ref:** 660, 1105.

**18995 Rubiarbonol A**

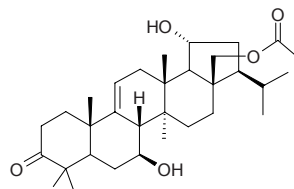
C<sub>30</sub>H<sub>50</sub>O<sub>4</sub> (474.73). **Pharm:** NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3 μmol/L, 10 μmol/L, 30 μmol/L, 100 μmol/L, InRt = 4.2%, -4.2%, 2.9%, 86.3%, respectively; control *L*-NMMA, 3 μmol/L, 10 μmol/L, 30 μmol/L, 100 μmol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively)<sup>[4691]</sup>; β-hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of β-hexosaminidase, 100 μmol/L, InRt = (1.2 ± 2.3)%)<sup>[4347]</sup>; platelet aggregation promoter or inhibitor (a promoter at low concentration of 30.9 μg/mL; a inhibitor at high concentration, 100 μmol/L AA induced: control AggRt = 87.1%, 100 μmol/L, AggRt = 83.8%; 10 μg/mL collagen induced: control AggRt = 91.0%, 100 μmol/L, AggRt = 89.6%; 0.1 U/mL thrombin induced: control AggRt = 91.7%, 100 μmol/L, AggRt = 90.7%; 2 ng/mL PAF induced: control AggRt = 92.6%, 100 μmol/L, AggRt = 91.3%)<sup>[4646]</sup>. **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.011%dw)<sup>[4691]</sup>. **Ref:** 4347, 4691, 4646.

**18996 Rubiarbonol F**

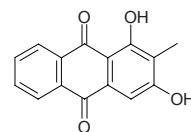
C<sub>30</sub>H<sub>50</sub>O<sub>5</sub> (490.73). **Pharm:** NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3 μmol/L, 10 μmol/L, 30 μmol/L, 100 μmol/L, InRt = 7.9%, 15.4%, 22%, 60%, respectively; control *L*-NMMA, 3 μmol/L, 10 μmol/L, 30 μmol/L, 100 μmol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively)<sup>[4691]</sup>; β-hexosaminidase inhibitor (RBL-2H3 cells, inhibits release of β-hexosaminidase, 100 μmol/L, InRt = (42.5 ± 2.9)%, *p* < 0.01)<sup>[4347]</sup>. **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.0020%dw)<sup>[4691]</sup>. **Ref:** 4347, 4691, 4646.

**18997 Rubiarbonone C'**

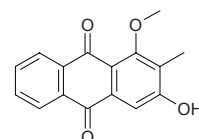
C<sub>32</sub>H<sub>50</sub>O<sub>5</sub> (514.75). **Pharm:** β-Hexosaminidase inhibitor (RBL-2H3 cells, inhibits release of β-hexosaminidase, 100 μmol/L, InRt = (15.1 ± 4.5)%). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root). **Ref:** 4347.

**18998 Rubiadin**

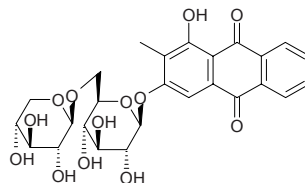
[117-02-2] C<sub>15</sub>H<sub>10</sub>O<sub>4</sub> (254.24). mp 270~271°C. **Pharm:** Cytotoxic (KB, ED<sub>50</sub> > 25 μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.12 μg/mL; Hep3B, ED<sub>50</sub> > 25 μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.14 μg/mL; Colon205, ED<sub>50</sub> > 25 μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.10 μg/mL; HeLa, ED<sub>50</sub> > 25 μg/mL, control Doxorubicin, ED<sub>50</sub> = 0.11 μg/mL)<sup>[4369]</sup>. **Source:** GUANG JING QIAN CAO *Rubia wallichiana* (stem), TU LIAN QIAO *Hymenodictyon excelsum*, YANG JIAO TENG *Morinda umbellata*. **Ref:** 6, 4369.

**18999 Rubiadin-1-methyl ether**

C<sub>16</sub>H<sub>12</sub>O<sub>4</sub> (268.27). mp 291°C. **Source:** TU LIAN QIAO *Hymenodictyon excelsum*, YANG JIAO TENG *Morinda umbellata*. **Ref:** 6.

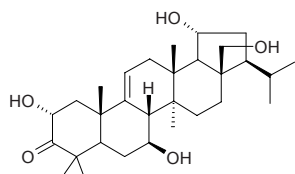
**19000 Rubiadin primeveroside**

C<sub>26</sub>H<sub>28</sub>O<sub>13</sub> (548.51). mp 248~250°C. **Source:** GUANG JING QIAN CAO *Rubia wallichiana* (stem), PENG ZI CAI *Galium verum*. **Ref:** 6, 4369.

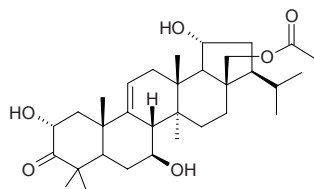


**19001 Rubianol A**

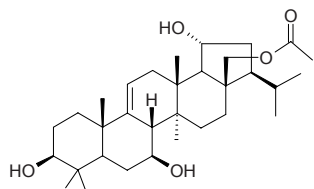
$C_{30}H_{48}O_5$  (488.71). White powder,  $[\alpha]_D^{25} = +10.0^\circ$  ( $c = 0.30$ , MeOH). **Pharm:**  $\beta$ -Hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase, 100  $\mu$ mol/L, InRt =  $(5.8 \pm 5.2)\%$ )<sup>[4347]</sup>; NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3  $\mu$ mol/L, 10  $\mu$ mol/L, 30  $\mu$ mol/L, 100  $\mu$ mol/L, InRt = -10.3%, 2.1%, 1.8%, 40.3%, respectively; control *L*-NMMA, 3  $\mu$ mol/L, 10  $\mu$ mol/L, 30  $\mu$ mol/L, 100  $\mu$ mol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively)<sup>[4691]</sup>. **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.0039%dw). **Ref:** 4347, 4691.

**19002 Rubianol B**

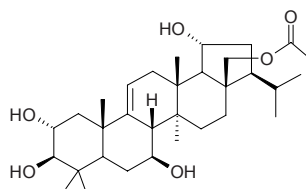
$C_{32}H_{50}O_6$  (530.75). **Pharm:**  $\beta$ -Hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase, 100  $\mu$ mol/L, InRt =  $(1.9 \pm 7.3)\%$ )<sup>[4347]</sup>; NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3  $\mu$ mol/L, 10  $\mu$ mol/L, 30  $\mu$ mol/L, 100  $\mu$ mol/L, InRt = -1.5%, 0.0%, -5.8%, 15.4%, respectively; control *L*-NMMA, 3  $\mu$ mol/L, 10  $\mu$ mol/L, 30  $\mu$ mol/L, 100  $\mu$ mol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively)<sup>[4691]</sup>. **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.0011%dw). **Ref:** 4347, 4691.

**19003 Rubianol C**

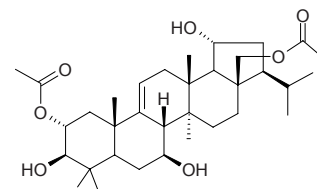
$C_{32}H_{52}O_5$  (516.77). White powder,  $[\alpha]_D^{25} = +36.4^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3  $\mu$ mol/L, 10  $\mu$ mol/L, 30  $\mu$ mol/L, 100  $\mu$ mol/L, InRt = 11.1%, 4.7%, -7.4%, 25.5%, respectively; control *L*-NMMA, 3  $\mu$ mol/L, 10  $\mu$ mol/L, 30  $\mu$ mol/L, 100  $\mu$ mol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively)<sup>[4691]</sup>;  $\beta$ -hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase, 100  $\mu$ mol/L, InRt =  $(0.3 \pm 5.9)\%$ )<sup>[4347]</sup>. **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.0092%dw)<sup>[4691]</sup>. **Ref:** 4347, 4691.

**19004 Rubianol D**

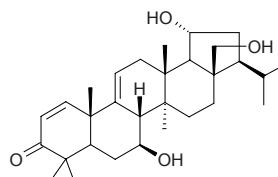
$C_{32}H_{52}O_6$  (532.77). White powder,  $[\alpha]_D^{25} = +63.6^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3  $\mu$ mol/L, 10  $\mu$ mol/L, 30  $\mu$ mol/L, 100  $\mu$ mol/L, InRt = 5.3%, 4.3%, -11.1%, 76.5%, respectively; control *L*-NMMA, 3  $\mu$ mol/L, 10  $\mu$ mol/L, 30  $\mu$ mol/L, 100  $\mu$ mol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively)<sup>[4691]</sup>;  $\beta$ -hexosaminidase inhibitor (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase, 100  $\mu$ mol/L, InRt =  $(39.7 \pm 2.4)\%$ ,  $p < 0.01$ )<sup>[4347]</sup>. **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.0041%dw)<sup>[4691]</sup>. **Ref:** 4347, 4691.

**19005 Rubianol E**

$C_{34}H_{54}O_7$  (574.81). White powder,  $[\alpha]_D^{25} = +18.1^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3  $\mu$ mol/L, 10  $\mu$ mol/L, 30  $\mu$ mol/L, 100  $\mu$ mol/L, InRt = 21.3%, -12%, -7.9%, 77.1%, respectively; control *L*-NMMA, 3  $\mu$ mol/L, 10  $\mu$ mol/L, 30  $\mu$ mol/L, 100  $\mu$ mol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively)<sup>[4691]</sup>;  $\beta$ -hexosaminidase inhibitor (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase, 100  $\mu$ mol/L, InRt =  $(17.5 \pm 4.7)\%$ )<sup>[4347]</sup>. **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.0053%dw)<sup>[4691]</sup>. **Ref:** 4347, 4691.

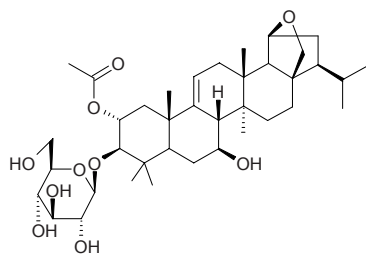
**19006 Rubianol G**

$C_{30}H_{46}O_4$  (470.70). White powder,  $[\alpha]_D^{25} = +206.1^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Anti-inflammatory (inhibits nitric oxide production, LPS-activated mouse peritoneal macrophages, 100  $\mu$ mol/L, InRt =  $(70.5 \pm 3.4)\%$ ,  $IC_{50} = 70$   $\mu$ mol/L, control *L*-NMMA,  $IC_{50} = 57$   $\mu$ mol/L);  $\beta$ -hexosaminidase inhibitor (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase, 100  $\mu$ mol/L, InRt =  $(21.4 \pm 3.4)\%$ ,  $p < 0.01$ ). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root). **Ref:** 4347.

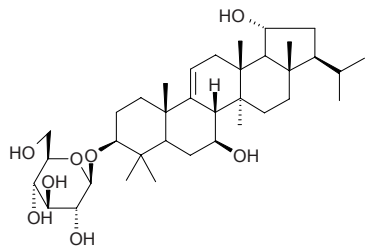


**19007 Rubianoside I**

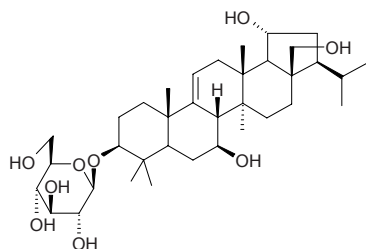
$C_{38}H_{60}O_{10}$  (676.90). White powder,  $[\alpha]_D^{25} = +10.9^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages,  $3\mu\text{mol/L}$ ,  $10\mu\text{mol/L}$ ,  $30\mu\text{mol/L}$ ,  $100\mu\text{mol/L}$ , InRt =  $-0.3\%$ ,  $-8\%$ ,  $1.5\%$ ,  $-3.2\%$ , respectively; control *L*-NMMA,  $3\mu\text{mol/L}$ ,  $10\mu\text{mol/L}$ ,  $30\mu\text{mol/L}$ ,  $100\mu\text{mol/L}$ , InRt =  $10.3\%$ ,  $15\%$ ,  $34.1\%$ ,  $63.1\%$ , respectively)<sup>[4691]</sup>;  $\beta$ -hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase,  $100\mu\text{mol/L}$ , InRt =  $(4.4\pm 1.6)\%$ )<sup>[4347]</sup>. **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root; yield =  $0.0018\%$ dw)<sup>[4691]</sup>. **Ref:** 4347, 4691.

**19008 Rubianoside II**

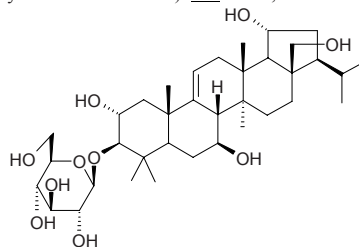
$C_{36}H_{60}O_8$  (620.87). White powder,  $[\alpha]_D^{25} = +2.2^\circ$  ( $c = 0.20$ , MeOH). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root). **Ref:** 4347.

**19009 Rubianoside III**

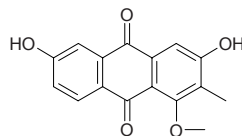
$C_{36}H_{60}O_9$  (636.87). White powder,  $[\alpha]_D^{25} = +3.5^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Anti-inflammatory (inhibits nitric oxide production, LPS-activated mouse peritoneal macrophages,  $3\mu\text{mol/L}$ , InRt =  $(10.3\pm 9.4)\%$ , control *L*-NMMA,  $IC_{50} = 57\mu\text{mol/L}$ );  $\beta$ -hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase,  $100\mu\text{mol/L}$ , InRt =  $(-2.9\pm 3.5)\%$ ). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root). **Ref:** 4347.

**19010 Rubianoside IV**

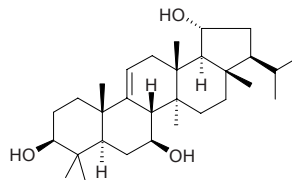
Rubiarboside F  $C_{36}H_{60}O_{10}$  (652.87). Colorless powder (MeOH), mp  $294\text{--}295^\circ\text{C}$ ,  $[\alpha]_D = +98.1^\circ$  ( $c = 0.05$ , MeOH); white powder,  $[\alpha]_D^{25} = +90.5^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Anti-inflammatory (inhibits nitric oxide production, LPS-activated mouse peritoneal macrophages,  $3\mu\text{mol/L}$ , InRt =  $(10.2\pm 5.3)\%$ , control *L*-NMMA,  $IC_{50} = 57\mu\text{mol/L}$ )<sup>[4347]</sup>;  $\beta$ -hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase,  $100\mu\text{mol/L}$ , InRt =  $(-3.4\pm 3.6)\%$ )<sup>[4347]</sup>. **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root; yield =  $0.00013\%$ dw). **Ref:** 4347, 4646.

**19011 Rubianthraquinone**

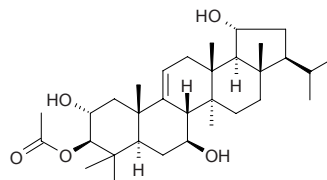
$C_{16}H_{12}O_5$  (284.27). Yellow powder. **Pharm:** Anti-inflammatory (inhibits nitric oxide production, LPS-activated mouse peritoneal macrophages,  $100\mu\text{mol/L}$ , InRt =  $(38.5\pm 2.1)\%$ , control *L*-NMMA,  $IC_{50} = 57\mu\text{mol/L}$ );  $\beta$ -hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase,  $100\mu\text{mol/L}$ , InRt =  $(4.4\pm 1.5)\%$ ). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root). **Ref:** 4347.

**19012 Rubiarbonol B**

$C_{30}H_{50}O_3$  (458.73). **Pharm:** Platelet aggregation inhibitor ( $100\mu\text{mol/L}$  AA induced: control AggRt =  $87.1\%$ ,  $150\mu\text{mol/L}$ , AggRt =  $80.4\%$ ,  $p < 0.01$ ;  $10\mu\text{g/mL}$  collagen induced: control AggRt =  $91.0\%$ ,  $100\mu\text{mol/L}$ , AggRt =  $82.2\%$ ,  $p < 0.01$ ,  $150\mu\text{mol/L}$ , AggRt =  $79.8\%$ ,  $p < 0.01$ ;  $0.1\text{U/mL}$  thrombin induced: control AggRt =  $91.7\%$ ,  $150\mu\text{mol/L}$ , AggRt =  $89.6\%$ ,  $p < 0.01$ ;  $2\text{ng/mL}$  PAF induced: control AggRt =  $92.6\%$ ,  $150\mu\text{mol/L}$ , AggRt =  $90.4\%$ ,  $p < 0.05$ ). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root; yield =  $0.000071\%$ dw). **Ref:** 4646.

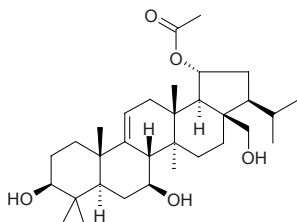
**19013 Rubiarbonol D**

$C_{32}H_{52}O_5$  (516.77). **Source:** QIAN CAO GEN *Rubia cordifolia*. **Ref:** 660.

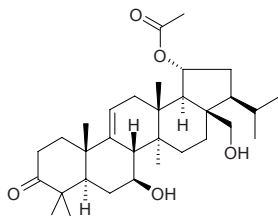


**19014 Rubiarbonol G**

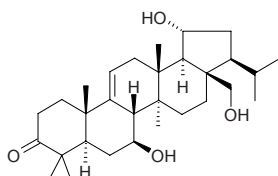
$C_{32}H_{52}O_5$  (516.77). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.000071%dw). **Ref:** 4646.

**19015 Rubiarbonone A**

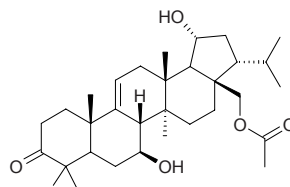
$C_{32}H_{50}O_5$  (514.75). **Pharm:** Platelet aggregation promoter or inhibitor (a promoter at low concentration of 28.4 $\mu$ g/mL; a inhibitor at high concentration, 100 $\mu$ mol/L AA induced: control AggRt = 87.1%, 100 $\mu$ mol/L, AggRt = 85.4%; 10 $\mu$ g/mL collagen induced: control AggRt = 91.0%, 100 $\mu$ mol/L, AggRt = 88.1%; 0.1U/mL thrombin induced: control AggRt = 91.7%, 100 $\mu$ mol/L, AggRt = 91.1%; 2ng/mL PAF induced: control AggRt = 92.6%, 100 $\mu$ mol/L, AggRt = 90.3%). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.00012%dw). **Ref:** 4646.

**19016 Rubiarbonone B**

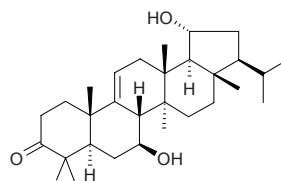
$C_{30}H_{48}O_4$  (472.71). **Pharm:** NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3 $\mu$ mol/L, 10 $\mu$ mol/L, 30 $\mu$ mol/L, 100 $\mu$ mol/L, InRt = -9.7%, -13.7%, 16.9%, 19.7%, respectively; control *L*-NMMA, 3 $\mu$ mol/L, 10 $\mu$ mol/L, 30 $\mu$ mol/L, 100 $\mu$ mol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively)<sup>[4691]</sup>;  $\beta$ -hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase, 100 $\mu$ mol/L, InRt = (5.2 $\pm$ 11.2)%<sup>[4347]</sup>). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.00024%–0.0041%dw). **Ref:** 4347, 4646, 4691.

**19017 Rubiarbonone C**

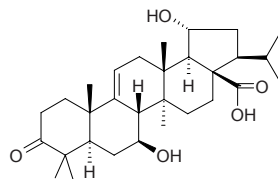
$C_{32}H_{55}O_5$  (514.75). **Pharm:** NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3 $\mu$ mol/L, 10 $\mu$ mol/L, 30 $\mu$ mol/L, 100 $\mu$ mol/L, InRt = 3.7%, -2.3%, 8%, 90.3%, respectively; control *L*-NMMA, 3 $\mu$ mol/L, 10 $\mu$ mol/L, 30 $\mu$ mol/L, 100 $\mu$ mol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.012%dw). **Ref:** 4691.

**19018 Rubiarbonone D**

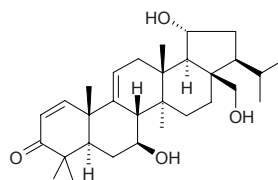
7 $\beta$ ,19 $\alpha$ -Dihydroxyarbor-9(11)-en-3-one  $C_{30}H_{48}O_3$  (456.72). Colorless needles (CHCl<sub>3</sub>), mp 231–232°C, [ $\alpha$ ]<sub>D</sub> = +94.4° (*c* = 0.03, CHCl<sub>3</sub>). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.000076%dw). **Ref:** 4646.

**19019 Rubiarbonone F**

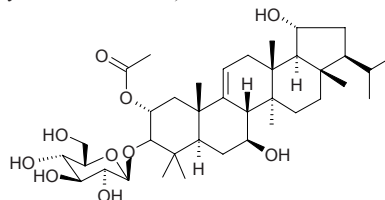
28-Carboxy-7 $\beta$ ,19 $\alpha$ -dihydroxyarbor-9(11)-en-3-one  $C_{30}H_{46}O_5$  (486.7). Colorless needles (MeOH), mp 253–254°C, [ $\alpha$ ]<sub>D</sub> = +26.4° (*c* = 0.06, MeOH). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.00006%dw). **Ref:** 4646.

**19020 Rubiarbonone E**

$C_{30}H_{46}O_4$  (470.70). Colorless powder (MeOH), mp 258–259°C, [ $\alpha$ ]<sub>D</sub> = +233.4° (*c* = 0.03, MeOH). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.000071%dw). **Ref:** 4646.

**19021 Rubiarboside A**

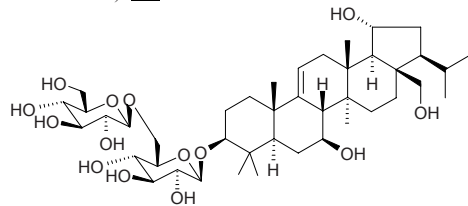
$C_{38}H_{62}O_{10}$  (678.91). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.00036%dw). **Ref:** 4646.



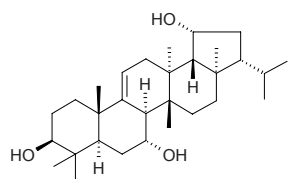


**19022 Rubiarboside G**

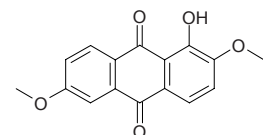
$C_{42}H_{70}O_{14}$  (799.02). Colorless powder (MeOH), mp > 290°C,  $[\alpha]_D = +56.4^\circ$  (c = 0.05, MeOH). Source: XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.00012%dw). Ref: 4646.

**19023 Rubiatriol**

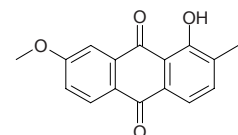
$C_{30}H_{50}O_3$  (458.73). Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 660.

**19024 Rubiawallin A**

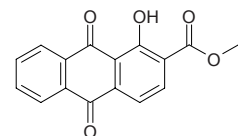
$C_{16}H_{12}O_5$  (284.27). Red needles (acetone), mp > 280°C. Source: GUANG JING QIAN CAO *Rubia wallichiana* (stem). Ref: 4369.

**19025 Rubiawallin B**

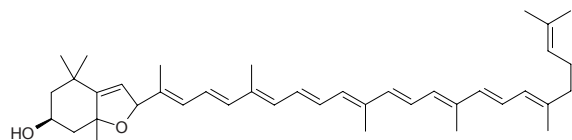
$C_{16}H_{12}O_4$  (268.27). Yellow needles (acetone), mp 136–137°C. Source: GUANG JING QIAN CAO *Rubia wallichiana* (stem). Ref: 4369.

**19026 Rubiawallin C**

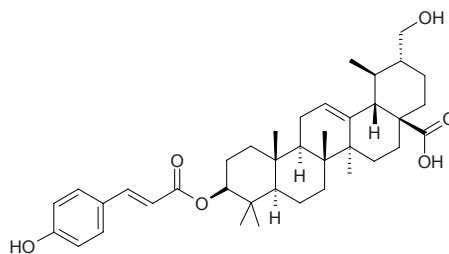
$C_{16}H_{10}O_5$  (282.26). Yellow needles (acetone), mp 136–137°C. Source: GUANG JING QIAN CAO *Rubia wallichiana* (stem). Ref: 4369.

**19027 Rubichrome**

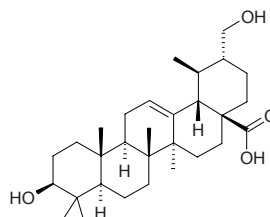
$C_{40}H_{56}O_2$  (568.89). mp 154°C (vaccum). Source: KONG QUE CAO *Tagetes patula*. Ref: 6, 1521.

**19028 Rubicoumaric acid**

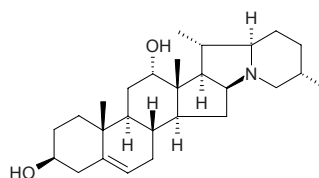
$C_{39}H_{54}O_6$  (618.86). Source: QIAN CAO TENG *Rubia cordifolia* (aerial parts). Ref: 660.

**19029 Rubifolic acid**

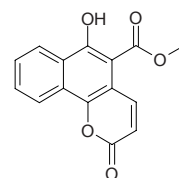
$C_{30}H_{48}O_4$  (472.71). Source: QIAN CAO TENG *Rubia cordifolia* (aerial parts). Ref: 660.

**19030 Rubijervine**

[79-58-3]  $C_{27}H_{43}NO_2$  (413.65). mp 242°C. Source: LI LU *Veratrum nigrum*. Ref: 6.

**19031 Rubilactone**

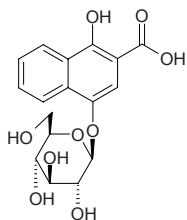
$C_{15}H_{10}O_5$  (270.24). Yellowish crystals, mp 216–218°C. Source: QIAN CAO GEN *Rubia cordifolia*. Ref: 226.



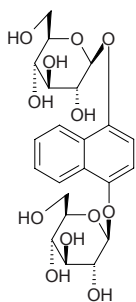
**19032 Rubinaphthin A**

2-Carboxyl-1,4-naphthohydroquinone-4-*O*- $\beta$ -*D*-glucopyranoside C<sub>17</sub>H<sub>18</sub>O<sub>9</sub> (366.33). Pale yellow powder (MeOH), mp 194–195°C, [ $\alpha$ ]<sub>D</sub> = –96.0° (c = 0.15, MeOH). **Pharm:**  $\beta$ -Hexosaminidase inhibitor (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase, 100 $\mu$ mol/L, InRt = (14.2 $\pm$ 6.3)%<sup>[4347]</sup>).

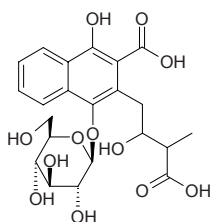
anti-inflammatory inactive (inhibits nitric oxide production, LPS-activated mouse peritoneal macrophages, 100 $\mu$ mol/L, InRt = (4.5 $\pm$ 5.2)%, control L-NMMA, IC<sub>50</sub> = 57 $\mu$ mol/L)<sup>[4347]</sup>. **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root). **Ref:** 4165, 4347.

**19033 Rubinaphthin B**

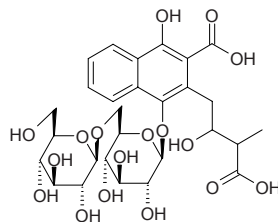
1,4-Naphthohydroquinone-1,4-di-*O*- $\beta$ -*D*-glucopyranoside C<sub>22</sub>H<sub>28</sub>O<sub>12</sub> (484.42). Pale yellow powder (MeOH), mp 272–273°C, [ $\alpha$ ]<sub>D</sub> = –183.3° (c = 0.075, MeOH). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root). **Ref:** 4165.

**19034 Rubinaphthin C**

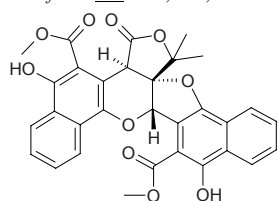
2-Carboxyl-3-(3'-carboxyl-2'-hydroxy)-butyl-1,4-naphthohydroquinone-4-*O*- $\beta$ -*D*-glucopyranoside C<sub>22</sub>H<sub>26</sub>O<sub>12</sub> (482.45). Orange syrup (MeOH), [ $\alpha$ ]<sub>D</sub> = –159.5° (c = 0.47, MeOH). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root). **Ref:** 4165.

**19035 Rubinaphthin D**

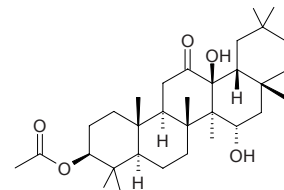
2-Carboxyl-3-(3'-carboxyl-2'-hydroxy)-butyl-1,4-naphthohydroquinone-4-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>28</sub>H<sub>36</sub>O<sub>17</sub> (644.59). Dark orange syrup (MeOH), [ $\alpha$ ]<sub>D</sub> = –48.0° (c = 0.38, MeOH). **Source:** XIAO HONG SHEN *Rubia yunnanensis* (root). **Ref:** 4165.

**19036 Rubioncolin B**

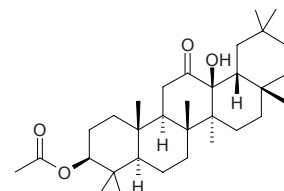
[132268-06-5] C<sub>31</sub>H<sub>24</sub>O<sub>10</sub> (556.53). Jacinth rhombic crystals, mp 235–236°C, [ $\alpha$ ]<sub>D</sub> = 0° (c = 0.3, chloroform). **Pharm:** Antineoplastic (S<sub>180</sub>, *in vivo*, 10mg/kg). **Source:** GOU MAO QIAN CAO *Rubia oncotricha*, QIAN CAO GEN *Rubia cordifolia*. **Ref:** 660, 958, 1016.

**19037 Rubiprasin A**

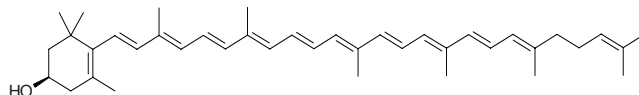
C<sub>32</sub>H<sub>52</sub>O<sub>5</sub> (516.77). **Source:** HEI GUO QIAN CAO *Rubia cordifolia* var. *pratensis*, QIAN CAO GEN *Rubia cordifolia*. **Ref:** 660, 1521.

**19038 Rubiprasin B**

C<sub>32</sub>H<sub>52</sub>O<sub>4</sub> (500.77). **Source:** HEI GUO QIAN CAO *Rubia cordifolia* var. *pratensis*, QIAN CAO GEN *Rubia cordifolia*. **Ref:** 660, 1521.

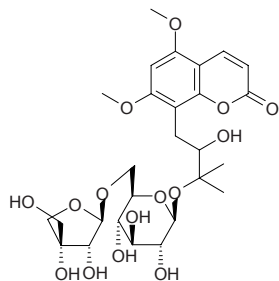
**19039 Rubixanthin**

[3763-55-1] C<sub>40</sub>H<sub>56</sub>O (552.89). mp 160°C. **Source:** JIN ZHAN JU *Calendula officinalis*, JU PI *Citrus reticulata*, KONG QUE CAO *Tagetes patula*, MEI GUI HUA *Rosa rugosa*, QUAN CHI QIANG WEI *Rosa canina*, XIANG RI KUI ZI *Helianthus annuus*, XING REN *Prunus armeniaca*, XIU HONG QIANG WEI *Rosa rubiginosa*, XUAN GOU ZI *Rubus chamaemorus*. **Ref:** 6.

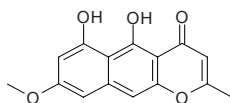


**19040 Rubricauloside**

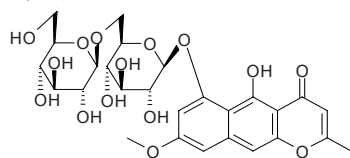
5,7-Dimethoxy-8-[2'-hydroxy-3'-methyl, 3'-*O*- $\beta$ -D-apiofuranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosylbutyl]-coumarin C<sub>27</sub>H<sub>38</sub>O<sub>15</sub> (602.59). White amorphous powder, mp 123–127°C,  $[\alpha]_D^{16} = -38.5^\circ$  ( $c = 0.31$ , DMSO). **Source:** YUN QIAN HU *Peucedanum rubricaulae*. **Ref:** 177, 476.

**19041 Rubrofusarin**

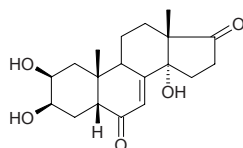
[3567-00-8] C<sub>15</sub>H<sub>12</sub>O<sub>5</sub> (272.26). mp 210–211°C. **Pharm:** Cytotoxic (P<sub>388</sub>); CNS depressant (animal model); toxin. **Source:** JUE MING ZI *Cassia tora*, WU LENG JUE MING *Cassia quinquangula*, MANG GUO *Mangifera indica*. **Ref:** 2, 658.

**19042 Rubrofusarin-6- $\beta$ -gentiobioside**

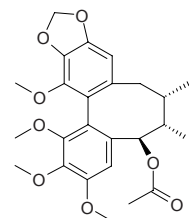
Rubrofusarin gentiobioside [24577-90-0] C<sub>27</sub>H<sub>32</sub>O<sub>15</sub> (596.55). **Pharm:** Antihepatotoxin (liver damage caused by galactosamine, stronger than silybin). **Source:** JUE MING ZI *Cassia tora*. **Ref:** 2, 725, 1686.

**19043 Rubrosterone**

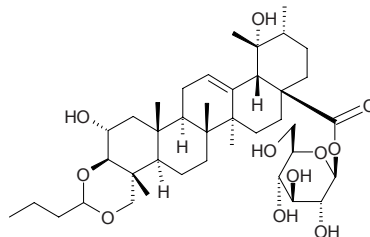
[19466-41-2] C<sub>19</sub>H<sub>26</sub>O<sub>5</sub> (334.42). **Source:** NIU XI *Achyranthes bidentata*. **Ref:** 2.

**19044 Rubschisantherin**

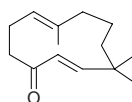
Acetylgomisin O [102637-03-6] C<sub>25</sub>H<sub>30</sub>O<sub>8</sub> (458.51). Amorphous powder,  $[\alpha]_D^{18} = -69^\circ$  (ethanol). **Source:** HONG HUA WU WEI ZI *Schisandra rubriflora*, WU WEI ZI *Schisandra chinensis*. **Ref:** 39.

**19045 Rubusside A**

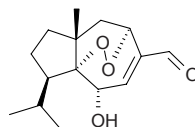
C<sub>40</sub>H<sub>64</sub>O<sub>11</sub> (720.95). Amorphous powder,  $[\alpha]_D^{25} = +30.5^\circ$  ( $c = 0.2$ , MeOH). **Source:** PU TONG XUAN GOU ZI *Rubus allegheniensis* (fruit). **Ref:** 4314.

**19046 Rudbeckianone**

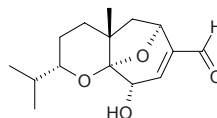
C<sub>14</sub>H<sub>22</sub>O (206.33). **Source:** JIN GUANG JU *Rudbeckia laciniata* (leaf), YU LIN CAI *Blainvillea acmella* [Syn. *Verbesina acmella*; *Eclipta latifolia*; *Blainvillea latifolia*] (root). **Ref:** 660.

**19047 Rugosal A**

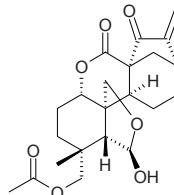
Rugosal [121387-05-1] C<sub>15</sub>H<sub>22</sub>O<sub>4</sub> (266.34). **Pharm:** Antimicrobial. **Source:** MEI GUI HUA *Rosa rugosa* (injured leaf). **Ref:** 658.

**19048 Rugosal D**

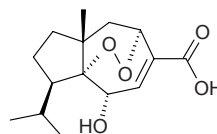
C<sub>15</sub>H<sub>22</sub>O<sub>4</sub> (266.34). **Source:** MEI GUI HUA *Rosa rugosa*. **Ref:** 660.

**19049 Rugosanin**

C<sub>22</sub>H<sub>28</sub>O<sub>7</sub> (404.46). mp 234–239°C,  $[\alpha]_D^{20} = -197.6^\circ$  ( $c = 0.21$ , C<sub>5</sub>H<sub>5</sub>N). **Source:** ZHOU YE XIANG CHA CAI *Isodon rugosus* [Syn. *Rabdosia rugosa*]. **Ref:** 4067.

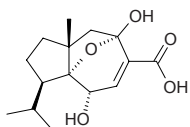
**19050 Rugosic acid A**

C<sub>15</sub>H<sub>22</sub>O<sub>5</sub> (282.34). **Source:** MEI GUI HUA *Rosa rugosa*. **Ref:** 660.

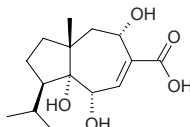


**19051 Rugosic acid B**

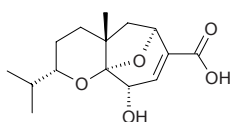
$C_{15}H_{22}O_5$  (282.34). Source: MEI GUI HUA *Rosa rugosa*. Ref: 660.

**19052 Rugosic acid C**

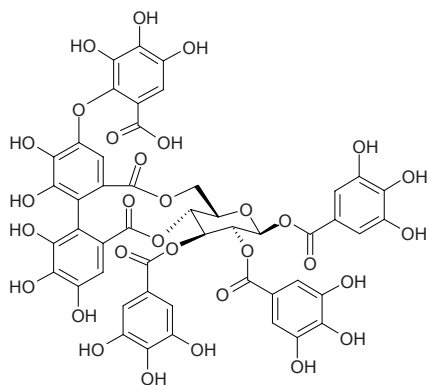
$C_{15}H_{24}O_5$  (284.36). Source: MEI GUI HUA *Rosa rugosa*. Ref: 660.

**19053 Rugosic acid D**

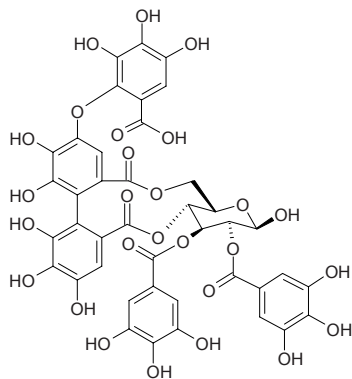
$C_{15}H_{22}O_5$  (282.34). Source: MEI GUI HUA *Rosa rugosa*. Ref: 660.

**19054 Rugosin A**

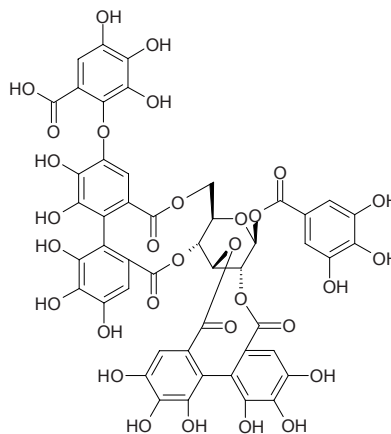
$C_{48}H_{34}O_{31}$  (1106.79). Source: MEI GUI HUA *Rosa rugosa* (receptacle). Ref: 660.

**19055 Rugosin B**

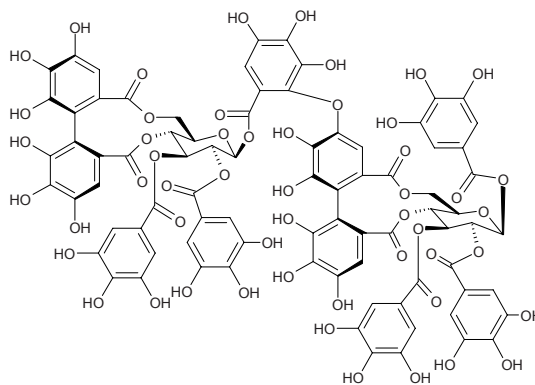
$C_{41}H_{30}O_{27}$  (954.68). Source: MEI GUI HUA *Rosa rugosa* (receptacle). Ref: 660.

**19056 Rugosin C**

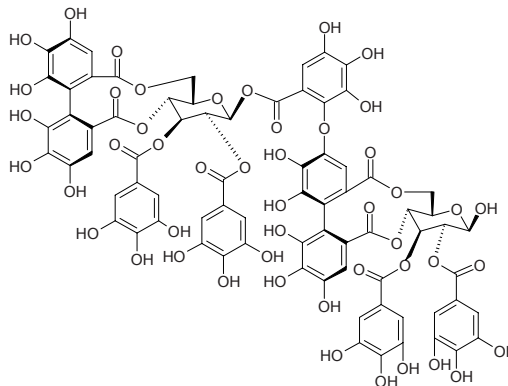
$C_{48}H_{32}O_{31}$  (1104.77). Pharm: Antioxidant (SOD-like activity,  $EC_{50} = 45.3 \mu\text{mol/L}$ , control Gallic acid,  $EC_{50} = 31.7 \mu\text{mol/L}$ , *L*-Ascorbic acid,  $EC_{50} = 34.6 \mu\text{mol/L}$ )<sup>[3408]</sup>; antioxidant (DPPH free radical scavenger,  $EC_{50} = 0.34 \mu\text{mol/L}$ , control Gallic acid,  $EC_{50} = 5.88 \mu\text{mol/L}$ , *L*-Ascorbic acid,  $EC_{50} = 6.25 \mu\text{mol/L}$ )<sup>[3408]</sup>. Source: HU TAO REN *Juglans regia*, MEI GUI HUA *Rosa rugosa* (receptacle). Ref: 660, 3408.

**19057 Rugosin D**

[84754-11-0]  $C_{82}H_{58}O_{52}$  (1875.35). Pharm: Antineoplastic (potent *in vivo*); cytotoxic ( $P_{388}$ ); CNS depressant; toxin. Source: LING *Trapa bispinosa*, MEI GUI HUA *Rosa rugosa* (receptacle), RI BEN MA SANG *Coriaria japonica*, XIAO GUO QIANG WEI GEN *Rosa cymosa*, XUAN GUO WEN ZI CAO *Filipendula ulmaria*. Ref: 658, 660, 1521.

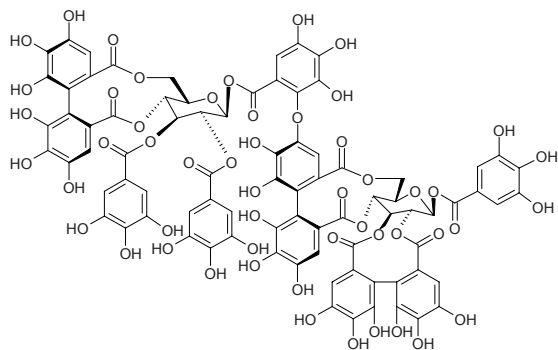
**19058 Rugosin E**

$C_{75}H_{54}O_{48}$  (1723.24). Source: MEI GUI HUA *Rosa rugosa* (receptacle). Ref: 660.

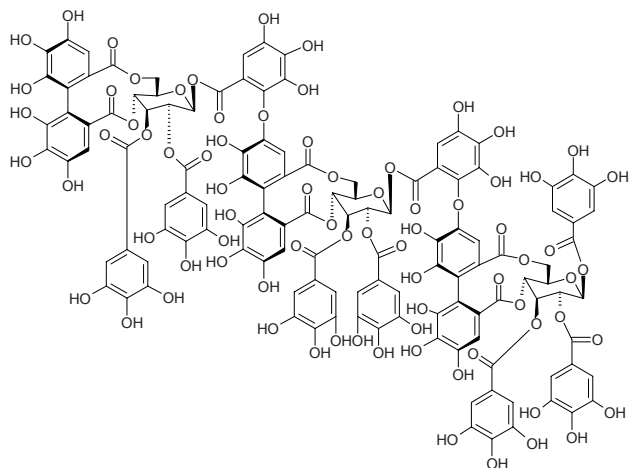


**19059 Rugosin F**

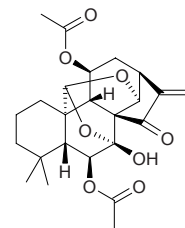
$C_{82}H_{56}O_{52}$  (1873.33). Source: MEI GUI HUA *Rosa rugosa* (receptacle). Ref: 660.

**19060 Rugosin G**

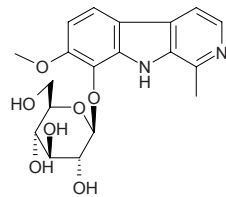
$C_{123}H_{86}O_{78}$  (2812.01). Light-tan amorphous powder +18H<sub>2</sub>O,  $[\alpha]_D = +109^\circ$  ( $c = 1$ , Me<sub>2</sub>CO). Source: MEI GUI HUA *Rosa rugosa* (receptacle). Ref: 660, 1521.

**19061 Rugosinin**

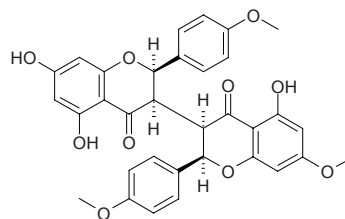
$C_{24}H_{30}O_8$  (446.50). Colorless prisms (EtOAc-hexane), mp 156~158°C,  $[\alpha]_D^{23} = -127^\circ$  ( $c = 0.4$ , MeOH). Pharm: Cytotoxic (DNA-damaging activity, mutant yeast strain RAD 52Y, IC<sub>12</sub> = 25µg/mL, control Streptonigrin, IC<sub>12</sub> = 0.4µg/mL; wild type yeast strain RAD+, IC<sub>12</sub> = 45µg/mL, control Streptonigrin, IC<sub>12</sub> = 1.0µg/mL)<sup>[5348]</sup>. Source: ZHOU YE XIANG CHA CAI *Isodon rugosus* [Syn. *Rabdosia rugosa*]. Ref: 5348.

**19062 Ruine**

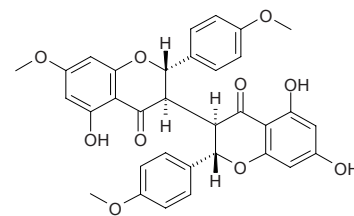
[32472-23-4]  $C_{19}H_{22}N_2O_7$  (390.40). mp 227~229°C. Source: LUO TUO PENG *Peganum harmala*. Ref: 6.

**19063 Ruixianglangdusu A**

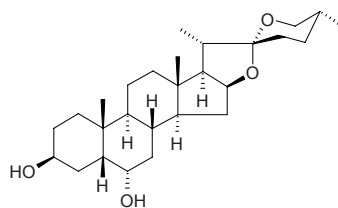
$C_{33}H_{28}O_{10}$  (584.59). White lamellar crystals,  $[\alpha]_D^{19} = +176^\circ$  ( $c = 0.106$ , MeOH). Source: LANG DU *Stellera chamaejasme*. Ref: 2125.

**19064 Ruixianglangdusu B**

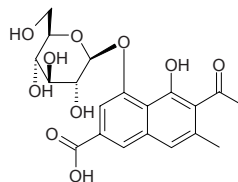
$C_{33}H_{28}O_{10}$  (584.59). Amorphous powder,  $[\alpha]_D^{15} = +181^\circ$  ( $c = 0.28$ , MeOH). Source: LANG DU *Stellera chamaejasme*. Ref: 2125.

**19065 Ruizgenin**

[74609-42-0]  $C_{27}H_{44}O_4$  (432.65). mp 221°C. Source: *Agave lecheguilla*. Ref: 2503.

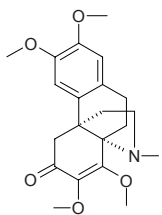
**19066 Rumexoside**

2-Acetyl-3-methyl-6-carboxy-1,8-dihydroxynaphthalene-8-*O*-β-*D*-glucopyranoside  $C_{20}H_{22}O_{10}$  (422.39). Amorphous. Source: NIU XI XI *Rumex patientia*. Ref: 5138.

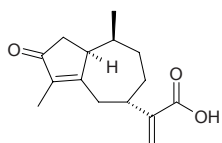


**19067 Runanine**

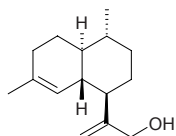
$C_{27}H_{27}NO_5$  (373.45). Source: JIN BU HUAN *Stephania sinica*. Ref: 660.

**19068 Rupestic acid**

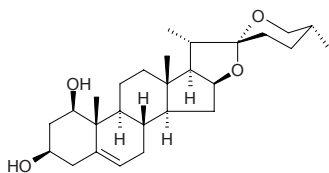
[115473-63-7]  $C_{15}H_{20}O_3$  (248.32). Colorless acicular crystals, mp 132~133°C,  $[\alpha]_D^{25} = +150^\circ$  ( $c = 0.176$ , ethanol). Source: XIN JIANG YI ZHI HAO *Artemisia rupestris* [Syn. *Artemisia dentata*; *Artemisia viridis*; *Artemisia viridifolia*] (whole herb: mean content of 3 batch samples = 0.158%<sup>[5518]</sup>). Ref: 96, 5518.

**19069 Rupestrenol**

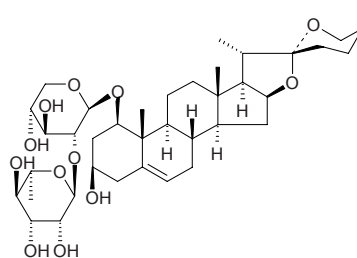
(+)-(1*R*\*,6*S*\*,7*S*\*,10*S*\*)-12-hydroxy-4,11(13)-cadinadiene  $C_{15}H_{24}O$  (220.36). Colorless solid, mp 50~52°C,  $[\alpha]_D = +43.9^\circ$  ( $c = 0.86$ ,  $CHCl_3$ ). Source: ZI BEI TAI *Plagiochasma rupestre*. Ref: 2392.

**19070 Ruscogenin**

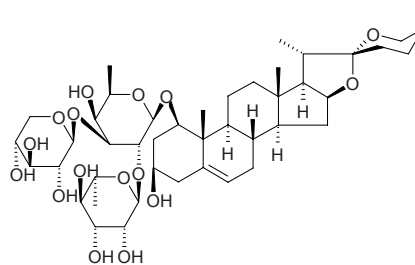
[35882-30-5]  $C_{27}H_{42}O_4$  (430.63). mp 205~211°C. Pharm: Anti-atherosclerosis; antihypertensive; antihypercholesterolemic (reduces the level of cholesterol in serum); used in treatment of pile. Source: BIAN JING YAN JIE CAO *Ophiopogon planiscapus*, CI JI LI *Tribulus terrestris*, JI LI GEN *Tribulus terrestris*, JIA YE SHU *Ruscus aculeatus*, KUO YE SHAN MAI DONG *Liriope platyphylla* (dried tuberoid: mean content = 0.014%<sup>[5508]</sup>), MAI DONG *Ophiopogon japonicus* (dried tuberoid: mean content = 0.033%<sup>[5508]</sup>), SHAN MAI DONG *Liriope spicata* (dried tuberoid: mean content = 0.021%<sup>[5508]</sup>). Ref: 6, 658, 5508.

**19071 25(S)-Ruscogenin 1-O- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-xylopyranoside**

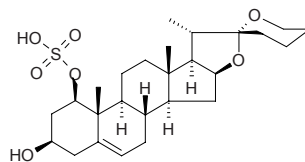
$C_{38}H_{60}O_{12}$  (708.89). White powder, mp 232~234°C (dec). Source: HU BEI SHAN MAI DONG *Liriope spicata* var. *prolifera*. Ref: 142.

**19072 25(S)-Ruscogenin 1-O-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)]-[ $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 3)]-[ $\beta$ -D-fucopyranoside**

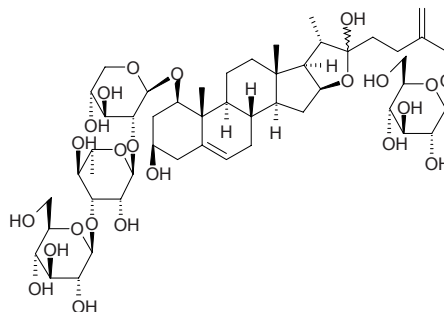
(25*S*)-Ruscogenin 1-*O*-{*O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-*O*-[ $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 3)]-[ $\beta$ -D-fucopyranoside} [125150-67-6]  $C_{44}H_{70}O_{16}$  (855.04). Colorless acicular crystals (methanol), mp 201~202°C (dec),  $[\alpha]_D^{23} = -93.4^\circ$  ( $c = 0.41$ , pyridine); colorless acicular crystals, mp 240~242°C,  $[\alpha]_D^{24} = -100.9^\circ$ . Pharm: cAMP phosphodiesterase inhibitor (*in vitro*,  $IC_{50} = 103\mu\text{mol/L}$ ). Source: HU BEI SHAN MAI DONG *Liriope spicata* var. *prolifera*, MAI DONG *Ophiopogon japonicus* (dried tuberoid: mean content = 0.099%<sup>[5508]</sup>). Ref: 142, 999, 1085, 1131, 5508.

**19073 Ruscogenin 1-O-sulfate**

$C_{27}H_{42}O_7S$  (510.70). Source: MAI DONG *Ophiopogon japonicus*. Ref: 660.

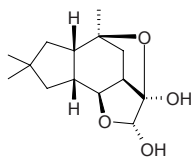
**19074 Ruscoside**

[51024-64-7]  $C_{50}H_{80}O_{23}$  (1049.18). Pharm: Anti-inflammatory. Source: JIA YE SHU *Ruscus aculeatus*, BIAN JING YAN JIE CAO *Ophiopogon planiscapus*. Ref: 658.

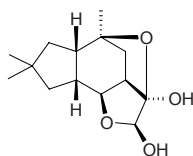


**19075 Russulanorol A**

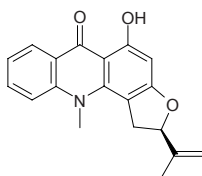
$C_{14}H_{22}O_4$  (254.33). Amorphous powder. Source: MEI WEI HONG GU *Russula delica* (sporocarp). Ref: 4374.

**19076 Russulanorol B**

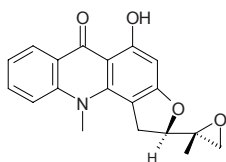
$C_{14}H_{22}O_4$  (254.33). Amorphous powder. Source: MEI WEI HONG GU *Russula delica* (sporocarp). Ref: 4374.

**19077 Rutacridone**

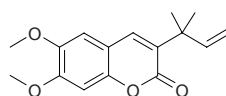
[17948-33-3]  $C_{19}H_{17}NO_3$  (307.35). Yellow amorphous powder, mp 161~162°C,  $[\alpha]_D = -44.9^\circ$  ( $c = 0.1$ , MeOH); yellow crystals. Pharm: Antileishmanial (*Leishmania major* promastigote, 10  $\mu\text{mol/L}$ , survival = (34.9±1.5)%, 1  $\mu\text{mol/L}$ , survival = (69.9±2.8)%, control Amphotericin B, 10  $\mu\text{mol/L}$ , survival = (0.2±0.04)%, 1  $\mu\text{mol/L}$ , survival = (71.9±4.4)%); *Leishmania major* amastigote, 10  $\mu\text{mol/L}$ , survival = (88.0±5.1)%, 1  $\mu\text{mol/L}$ , survival = (82.0±4.0)%, control Amphotericin B, 10  $\mu\text{mol/L}$ , survival = (0.4±0.02)%, 1  $\mu\text{mol/L}$ , survival = (0.5±0.03)%<sup>[3797]</sup>; antifungal inactive (silica gel TLC, *Cladosporium cucumerinum*, control Nystatin, MIA = 0.2  $\mu\text{g}$ )<sup>[3797]</sup>; algicidal (*Oscillatoria perornata*, LCIC > 100mg/L; *Selenastrum capricornutum*, LCIC > 100mg/L)<sup>[5328]</sup>. Source: CHOU CAO *Ruta graveolens*, *Thamnosma rhodesica* (root). Ref: 6, 3797, 5328.

**19078 Rutacridone epoxide**

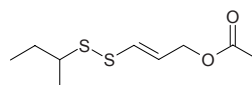
[77996-03-3]  $C_{19}H_{17}NO_4$  (323.35). Bright yellow powder. Pharm: Antibacterial; algicidal (*Oscillatoria perornata*, LCIC = 0.1mg/L,  $IC_{50} = 0.009 \mu\text{mol/L}$ ; *Selenastrum capricornutum*, LCIC = 1mg/L,  $IC_{50} = 0.00173 \mu\text{mol/L}$ )<sup>[5328]</sup>; antifungal (*Colletotrichum acutatum*, *Colletotrichum fragariae*, *Colletotrichum gloeosporioides*,  $IC_{50} = 0.125\text{--}1.0 \mu\text{mol/L}$ ; 0.5  $\mu\text{mol/L}$ , *Colletotrichum fragariae*, *Colletotrichum gloeosporioides*, GI = 100%; 1.0  $\mu\text{mol/L}$ , *Colletotrichum acutatum*, GI = 100%)<sup>[5328]</sup>. Source: CHOU CAO *Ruta graveolens*. Ref: 658, 5328.

**19079 Rutacultin**

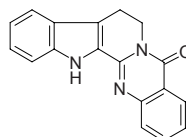
[31526-60-0]  $C_{16}H_{18}O_4$  (274.32). mp 100~102°C. Source: CHOU CAO *Ruta graveolens*. Ref: 6.

**19080 Rutadisulfide A**

$C_9H_{16}O_2S_2$  (220.35). Source: CHOU A WEI *Ferula foetida* (root: yield = 0.00038%). Ref: 4659.

**19081 Rutaecarpine**

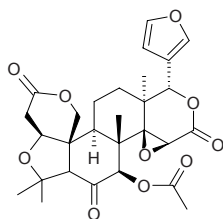
[84-26-4]  $C_{18}H_{13}N_3O$  (287.32). Acicular crystals (EtOAc), mp 259.5~260.0°C, 256°C Pharm: Antihypertensive (vasodilator, activates vanilloid receptors to evoke calcitonin gene-related peptide (CGRP) release)<sup>[5358]</sup>; analgesic; promotes uterine contraction (chloride,  $EC \leq 1.0 \mu\text{g/mL}$ ); raises body temperature; vanilloid receptor activator (to evoke calcitonin gene-related peptide (CGRP) release, CGRP alleviates cardiac anaphylactic injury)<sup>[4087]</sup>; a detail study on protective effects of rutaecarpine on cardiac anaphylaxis (the protective effects of rutaecarpine on cardiac anaphylactic injury are related to inhibition of TNF- $\alpha$  production by stimulation of CGRP release)<sup>[4087]</sup>; anti-inflammatory (RAW264.7 cells, inhibits LPS-induced PGE<sub>2</sub> production)<sup>[4415]</sup>. Source: BO SHI WU ZHU YU *Evodia rutaecarpa* var. *bodinieri* (dried and almost ripe fruit: content scope of 4 origins = 0.173%~0.568%, mean content = 0.331%)<sup>[5508]</sup>, RI BEN HUANG BAI *Phellodendron japonicum* (leaf), SHI HU<sup>(3)</sup> *Evodia rutaecarpa* var. *officinalis* (dried and almost ripe fruit: content scope of 14 origins = 0.119%~0.832%, mean content = 0.364%)<sup>[5508]</sup>, WU ZHU YU *Evodia rutaecarpa* (dried and almost ripe fruit: content scope of 14 origins = 0.392%~1.331%, mean content = 0.791%)<sup>[5508]</sup>, WU ZHU YU *Evodia rutaecarpa* (dried unripe fruit), YI HUA WU ZHU YU *Evodia baberi* (dried and almost ripe fruit: content scope of 2 origins = 0.087%~0.110%, mean content = 0.098%)<sup>[5508]</sup>. Ref: 2, 347, 661, 4087, 4415, 4502, 5358, 5501, 5508.



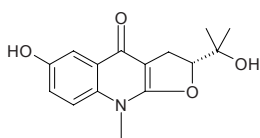


**19082 Rutaevin acetate**

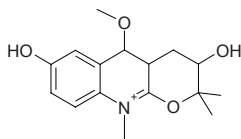
O-Acetylrutaevin [62306-81-4] C<sub>28</sub>H<sub>32</sub>O<sub>10</sub> (528.56). Source: WU ZHU YU *Evodia rutaecarpa*. Ref: 2.

**19083 Rutalinidine**

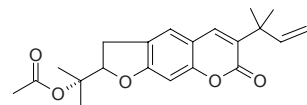
Ribaline [50894-68-3] C<sub>15</sub>H<sub>17</sub>NO<sub>4</sub> (275.31). Source: CHOU CAO *Ruta graveolens*. Ref: 6.

**19084 Rutalinium**

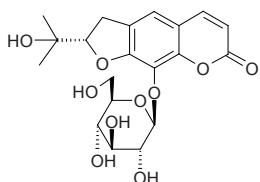
[27539-40-8] C<sub>16</sub>H<sub>22</sub>NO<sub>4</sub><sup>+</sup> (292.36). Source: CHOU CAO *Ruta graveolens*. Ref: 6.

**19085 Rutamarin**

Chalepin acetate [14882-94-1] C<sub>21</sub>H<sub>24</sub>O<sub>5</sub> (356.42). mp 107~108°C. Pharm: Antispasmodic (pig, contraction of coronary artery *in vitro* caused by acetyl-β-methylcholine, *in vitro* fundus ventriculi of rat, ileum of rat, gpg and rbt, spasm reduced by methylcholine and BaCl<sub>2</sub>); cytotoxic (HeLa, blocks DNA synthesis). Source: CHOU CAO *Ruta graveolens*, YAN JIAO CAO *Boeninghausenia albiflora*, RI BEN CHOU JIE CAO *Boeninghausenia japonica*. Ref: 5, 658.

**19086 Rutarin**

[20320-81-4] C<sub>20</sub>H<sub>24</sub>O<sub>10</sub> (424.41). Pharm: Antifungal. Source: CHOU CAO *Ruta graveolens*, SUI ZHUANG YUN XIANG *Ruta chalepensis*. Ref: 658.

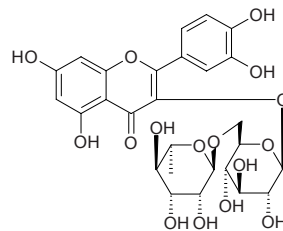
**19087 Rutin**

Quercetin-3-O-(6"-O-α-rhamnopyranosyl)-β-glucopyranoside; Quercetin-3-rutinoside; Rutoside; Sophorin [153-18-4] C<sub>27</sub>H<sub>30</sub>O<sub>16</sub> (610.53). Yellow crystals, +3H<sub>2</sub>O, mp 188~190°C, mp 214~215°C (dec, anhyd.), [α]<sub>D</sub><sup>23</sup> = +13.8° (EtOH), soluble in water, EtOH, acetone, insoluble in benzene, ether, chloroform.<sup>[5507]</sup> Pharm: Anti-inflammatory (rat, inflammation model induced by embedding woolball, sulfate of rutin being strong anti-inflammatory for edema due to heat stimulation in rat, free radical scavenger); antiviral (vesicular stomatitis virus, max. inhibition in 200μg/mL); aldose reductase inhibitor (*in vitro*, rat lens aldose reductase, IC<sub>50</sub> = 13μmol/L; control Epalrestat, IC<sub>50</sub> = 0.072μmol/L)<sup>[4641]</sup>; aldose reductase inhibitor (eye lens, 10μmol/L, InRt = 95%); insect antifeedant (*Heliothis zea*); insect phagostimulant (*Gastrophysa atrocynaea*); irritant of contact-ovipositing (*Papilio xuthus*); removes fat from liver of fatty infiltration; antioxidant (DPPH scavenger, EC<sub>50</sub> = 5.0μg/mL = 8.2μmol/L, control Ascorbic acid, EC<sub>50</sub> = 1.6μg/mL = 9.1μmol/L)<sup>[4154]</sup>; antioxidant (DPPH scavenger, SC<sub>50</sub> = 3.6μmol/L, positive control Vitamin E, SC<sub>50</sub> = 5.2mmol/L)<sup>[4464]</sup>; antioxidant (DPPH scavenger, SC<sub>50</sub> = 4.3μmol/L)<sup>[4247]</sup>; antioxidant (DPPH scavenger, IC<sub>50</sub> = (0.15±0.00)μmol/L)<sup>[3764]</sup>; antioxidant (Chemiluminescence Method, IC<sub>50</sub> = (0.11±0.01)μmol/L)<sup>[3764]</sup>; antioxidant (superoxide anion radical scavenger, superoxide dismutase method, IC<sub>50</sub> for Formazan formation activity = 15μmol/L)<sup>[4247]</sup>; antioxidant (DPPH scavenger, IC<sub>50</sub> = 16.2μg/mL, control Gallic acid, IC<sub>50</sub> = 3.6μg/mL; Cytochrome-C reduction, IC<sub>50</sub> = 14.9μg/mL, control Gallic acid, IC<sub>50</sub> = 3.0μg/mL)<sup>[5239]</sup>; inhibits cancer cell invasion inactive (MM1 cells, *in vitro*, 10μg/mL)<sup>[4329]</sup>; cytotoxic inactive (*in vitro*, LNCaP, IC<sub>50</sub> > 100μmol/L)<sup>[4607]</sup>; anti-inflammatory (macrophages, COX-2 inhibitor, inhibits COX-2 expression)<sup>[4415]</sup>; reduces blood capillary permeability and brittleness; used in treatment of blood capillary ailments<sup>[5341]</sup>. LD<sub>50</sub> (mus, iv) = 950mg/kg. Source: BAI GUO *Ginkgo biloba*, BAI MEI HUA *Prunus mume* (flower: yield = 0.0007%fw)<sup>[4641]</sup>, BEI SHA SHEN *Glehnia littoralis* (underground part), BIAN DI JIN *Hypericum wightianum* (dried whole herb: content = 0.0191%)<sup>[5508]</sup>, CHI AN *Eucalyptus camaldulensis*, CHOU CAO *Ruta graveolens* (dried aerial parts)<sup>[3073]</sup>, CU LIU GUO *Hippophae rhamnoides* (leaf: content = 0.238%)<sup>[5508]</sup>, DA ZAO *Ziziphus jujuba*, DUN BAO XUE LIAN *Saussurea nigrescens* (whole herb: content = 0.0051%)<sup>[5508]</sup>, FAN QIE *Lycopersicon esculentum* (fruit: yield = 0.00044%fw), GAN CAO *Glycyrrhiza uralensis*, GAN SU SHAN ZHA *Crataegus kansuensis* (dried ripe fruit: content = 0.027%), GUAN YE LIAN QIAO *Hypericum perforatum* (dried whole herb: content = 0.3095%)<sup>[5508]</sup>, GUANG ZHI GOU ER CHA *Berberis polyphylla* var. *leioclada*, HE YE FENG MAO JU *Saussurea graminea* (whole herb: content = 0.0515%)<sup>[5508]</sup>, HEI ZI LI GUO JI SHENG *Scurrula atropurpurea*, HONG HUA *Carthamus tinctorius* (flower: mean content of 4 origins = 1.24%)<sup>[5508]</sup>, HU BEI SHAN ZHA *Crataegus hupehensis* (dried ripe fruit: mean content of 5 origins = 0.012%)<sup>[5508]</sup>, HU ZHANG YE *Polygonum cuspidatum*, HUAI JIAO *Sophora japonica* (dried ripe fruit: content = 3.15%)<sup>[5508]</sup>, HUAI *Sophora japonica* (flower: content scope = 8%~28%)<sup>[5501]</sup>, mean content = 9.33%, bud: mean content = 22.08%)<sup>[5508]</sup>, HUAI *Sophora japonica* (pericarp)<sup>[3080]</sup>, HUANG HAI TANG *Hypericum ascyron* (dried whole herb: content = 0.0176%)<sup>[5508]</sup>, HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*], HUANG HUA HAO *Artemisia annua*, JI LI MIAO *Tribulus terrestris*, JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (dried leaf, flower and twig: yield = 0.0049%dw)<sup>[3014]</sup>, JIAN PU ZHAI GU KE *Erythroxyllum*



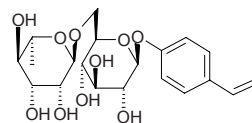
*cambodianum* (aerial parts), JIANG ZI SHA JI *Hippophae rhamnoides* subsp. *gyantsensis* (leaf: content = 0.009%)<sup>[5508]</sup>, JIAO GU LAN *Gynostemma pentaphyllum*, JIN SI MEI *Hypericum patulum* (dried whole herb: content = 0.2661%)<sup>[5508]</sup>, KU QIAO MAI *Fagopyrum tataricum* (seed: content = 4%)<sup>[5507]</sup>, KUAN DONG HUA *Tussilago farfara* (flower bud: content = 2.64%(wild); content = 1.62%(cultivate)<sup>[5508]</sup>), LAN YU LUO YE RONG *Ficus ruficaulis* var. *antaoensis* (leaf: yield = 0.0105%fw)<sup>[4794]</sup>, LANG DANG ZI *Hyoscyamus niger* (seed: yield = 0.001%dw)<sup>[4607]</sup>, LAO YA SHI *Diospyros rhombifolia* (leaf), LEI GUO SHA JI *Hippophae neurocarpa* (leaf: content = 0.271%)<sup>[5508]</sup>, LIAO NING SHAN ZHA *Crataegus sanguinea* (dried ripe fruit: content = 0.035%)<sup>[5508]</sup>, LU HUI *Aloe vera* [Syn. *Aloe barbadensis*], MAO GOU TENG *Uncaria hirsuta*, MAO GUO YI ZHI HUANG HUA *Solidago virgaurea*, MAO SHAN ZHA *Crataegus maximowiczii* (dried ripe fruit: content = 0.056%)<sup>[5508]</sup>, MEI HUA FENG MAO JU *Saussurea pulchella* (whole herb: content = 0.215%)<sup>[5508]</sup>, MIAN TOU YE *Kleinhovia hospita*, PU HUANG *Typha angustata*, QIAO MAI *Fagopyrum esculentum*, QIAO MAI JIE *Fagopyrum esculentum*, QU ZHOU HAI JIN SHA *Lygodium flexuosum* [Syn. *Lygodium pinnatifidum*; *Ophioglossum flexuosum*], SAI ER WEI YA SHI CAO *Achillea alexandri-regis*, SANG YE *Morus alba* (leaf: mean content = 0.364%)<sup>[5508]</sup>, SHAN LI HONG *Crataegus pinnatifida* var. *major* (dried ripe fruit: mean content of 4 origins = 0.007%), SHAN WO JU *Lactuca indica* (Fresh whole herb: yield = 0.0010%fw)<sup>[4689]</sup>, SHAN ZHA *Crataegus pinnatifida* (dried ripe fruit: content scope = 0.008%–0.22%)<sup>[5501]</sup>; mean content of 3 origins = 0.020%<sup>[5508]</sup>, SHU QU FENG MAO JU *Saussurea gnaphaloides* (whole herb: content = 0.0557%)<sup>[5508]</sup>, TIAN CONG *Philydrum lanuginosum*, TIAN QIAO MAI GEN *Fagopyrum cymosum* [Syn. *Polygonum cymosum*], TING JING BIAN DI JIN *Hypericum elodeoides* (dried whole herb: content = 0.0087%)<sup>[5508]</sup>, TUO YUAN GOU TENG *Uncaria elliptica*, WAN E JIN SI TAO *Hypericum curvisepalum* (dried whole herb: content = 0.0211%)<sup>[5508]</sup>, WU MAO SHAN ZHA *Crataegus pinnatifida* var. *psilosa* (dried ripe fruit: content = 0.033%)<sup>[5508]</sup>, XI ZANG SHA JI *Hippophae thibetana* (leaf: content = 0.018%)<sup>[5508]</sup>, XIAN HE CAO *Agrimonia pilosa* var. *japonica*, XIAN REN ZHANG *Opuntia dillenii* (fresh stem: yield = 0.00014%), XIANG TANG SONG CAO *Thalictrum foetidum*, XIAO HUA FENG MAO JU *Saussurea parviflora* (whole herb: content = 0.0564%)<sup>[5508]</sup>, XIAO JI *Cirsium setosum* [Syn. *Cerratula setosa*; *Cirsium segetum*; *Cephalanoplos segetum*] (whole herb or root: content scope of 6 origins = trace–0.64%, mean content = 0.154%)<sup>[5508]</sup>, XUE LIAN *Saussurea involucrata* (whole herb: content = 0.0704%)<sup>[5508]</sup>, YANG ZI XIAO LIAN QIAO *Hypericum faberi* (dried whole herb: content = 0.0661%)<sup>[5508]</sup>, YE SHAN ZHA *Crataegus cuneata* (dried ripe fruit: mean content of 2 origins = 0.167%)<sup>[5508]</sup>, YE WU TONG *Mallotus japonicus*, YE XIA ZHU *Phyllanthus urinaria*, YI MU CAO *Leonurus heterophyllus* [Syn. *Leonurus artemisia*], YI ZHU QIAN MA *Urtica dioica*, YOU GAN YE *Phyllanthus emblica* (leaf and branch), YU XING CAO *Houttuynia cordata*, YUN NAN SHA JI *Hippophae rhamnoides* subsp. *yunnanensis* (leaf: content = 0.202%)<sup>[5508]</sup>, YUN NAN SHAN ZHA *Crataegus scabrifolia* (dried ripe fruit: content = 0.010%)<sup>[5508]</sup>, ZHONG GUO SHA JI *Hippophae rhamnoides* subsp. *sinensis* (leaf: content = 0.352%)<sup>[5508]</sup>, ZHONG YA SHA JI *Hippophae rhamnoides* subsp. *turkestanica* (leaf: content = 0.389%)<sup>[5508]</sup>, *Polygonum* sp., *Saussurea amarafisch* (whole herb: content = 0.0723%)<sup>[5508]</sup>, *Saussurea prostrata* (whole herb: content = 0.109%)<sup>[5508]</sup>, *Saussurea soroseris* (whole herb: content = 0.0043%)<sup>[5508]</sup>, occurs in many plants (Presence in over 30 families. mostly

dicotyledons). Ref: 2, 4, 6, 231, 283, 594, 658, 660, 1521, 2545, 2986, 3014, 3018, 3073, 3080, 3764, 4154, 4205, 4247, 4329, 4415, 4461, 4464, 4607, 4641, 4689, 4794, 5239, 5341, 5501, 5507, 5508.



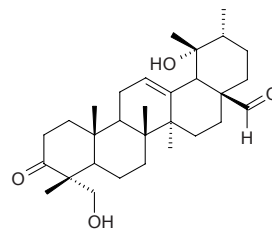
#### 19088 *p*- $\beta$ -Rutinosyloxy styrene

C<sub>20</sub>H<sub>28</sub>O<sub>10</sub> (428.44). Source: MANG QI GU *Dicranopteris pedata* [Syn. *Polypodium pedatum*; *Dicranopteris dichotoma*]. Ref: 660.



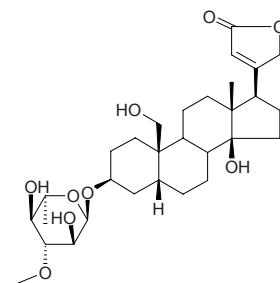
#### 19089 Rutundanonic acid

C<sub>30</sub>H<sub>46</sub>O<sub>4</sub> (470.70). Source: JIU BI YING *Ilex rotunda*. Ref: 2160.



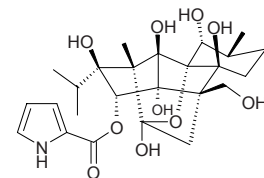
#### 19090 Ruvoside

C<sub>30</sub>H<sub>46</sub>O<sub>9</sub> (550.70). mp 232–234°C. Pharm: Cardiac glycoside (cat, cardiac bioactivity (0.0019±0.0055)mg/kg). Source: HUANG HUA JIA ZHU TAO *Thevetia nerifolia* [Syn. *Thevetia peruviana*]. Ref: 6, 658.



#### 19091 Ryanodine

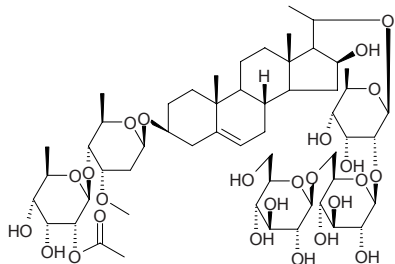
C<sub>25</sub>H<sub>35</sub>NO<sub>10</sub> (509.56). Crystals (CHCl<sub>3</sub>:Me<sub>2</sub>CO = 3:1), mp 180°C, [ $\alpha$ ]<sub>D</sub> = +9° (c = 0.7). Pharm: Cardiac contraction inhibitor (guinea-pig papillary muscle, causes a prolongation of the latency time and decrease of contraction force, EC<sub>50</sub> = 14nmol/L). Source: QU CHONG CAO *Spigelia anthelmia* (aerial parts). Ref: 5139.



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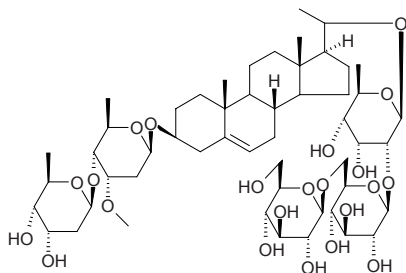
## 19092 S-4a

$C_{54}H_{88}O_{25}$  (1137.29). mp 182–184°C,  $[\alpha]_D = -16.24^\circ$ . Source: XIANG JIA PI *Periploca sepium*. Ref: 2498.



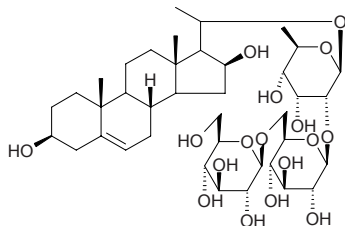
## 19093 S-5

$C_{52}H_{86}O_{22}$  (1063.25). mp 175–177°C,  $[\alpha]_D = -25.22^\circ$ . Source: XIANG JIA PI *Periploca sepium*. Ref: 2498.



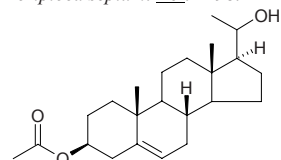
## 19094 S-10

$C_{39}H_{64}O_{17}$  (804.93). mp 167–169°C,  $[\alpha]_D = -2.6^\circ$ . Source: XIANG JIA PI *Periploca sepium*. Ref: 2498.



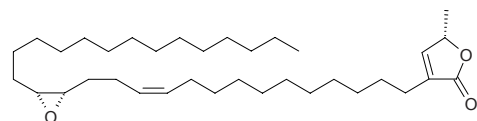
## 19095 S-20

$C_{23}H_{36}O_3$  (360.54). mp 165–167°C,  $[\alpha]_D = -65.2^\circ$ . Source: XIANG JIA PI *Periploca sepium*. Ref: 2498.



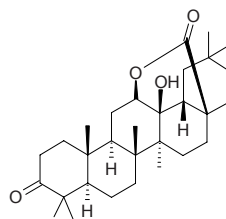
## 19096 Sabadelin

$C_{35}H_{62}O_3$  (530.88). White waxy solid,  $[\alpha]_D = +12^\circ$  ( $c = 0.19$ , MeOH). Source: CI GUO FAN LI ZHI *Annona muricata*. Ref: 2401.



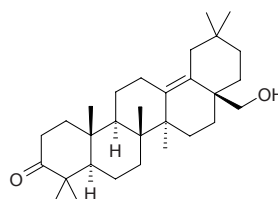
## 19097 Sabialactone

$C_{30}H_{46}O_4$  (470.70). Colorless granular crystals, mp 273–275°C,  $[\alpha]_D^{13} = +78.65^\circ$  ( $c = 0.09$ , chloroform). Source: JIAN YE QING FENG TENG *Sabia swinhoi*. Ref: 326, 403, 407, 377.



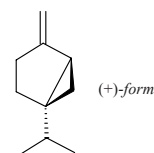
## 19098 Sabianone

$C_{30}H_{48}O_2$  (440.72). White amorphous powder, mp 185°C. Source: JIAN YE QING FENG TENG *Sabia swinhoi*. Ref: 326.



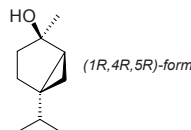
## 19099 Sabinene

4-Methylene-1-(1-methylethyl)bicyclo[3.1.0]hexane [3387-41-5]  $C_{10}H_{16}$  (136.24). bp (+) 163–165°C, (–) 162–166°C. Source: KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*], LIAO XI XIN *Asarum heterotropoides* var. *mandshuricum*, XI XIN *Asarum sieboldii*. Ref: 2, 660.



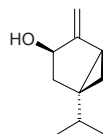
## 19100 Sabinene hydrate

$C_{10}H_{18}O$  (154.25). mp (+) 36.5–37.2°C. Source: JU PI *Citrus reticulata*. Ref: 2.



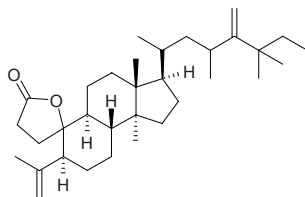
## 19101 Sabinol

$C_{10}H_{16}O$  (152.24). bp 208°C. Pharm: Anthelmintic; inhibits small intestinal movement (rbt, *in vitro*, immediately action). Source: CHOU BAI *Sabina vulgaris*, CHA ZI YUAN BAI *Juniperus sabina*, XIAO RU XIANG *Schinus terebinthifolius*. Ref: 6, 658.

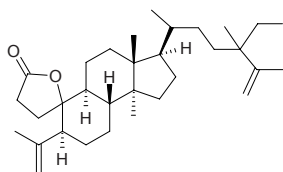


**19102 Sablaurin A**

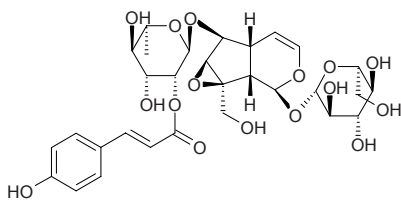
25-Ethyl,23-methyl-19-nor-24-methylene-3,4-seco-4(28)-lanosten-10,3-olide  
 $C_{32}H_{54}O_2$  (482.80). Creamy white solid. Source: *Sabal causerianum* (leaf). Ref: 3805.

**19103 Sablaurin B**

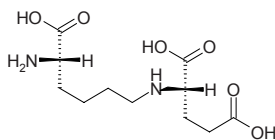
24-Ethyl,24-methyl-19-nor-3,4-seco-4(28),25(26)-lanostadiene-10,3-olide  
 $C_{32}H_{52}O_2$  (468.77). Creamy white solid. Source: *Sabal blackburniana* (leaf).  
Ref: 3805.

**19104 Saccatoside**

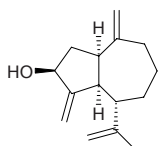
6-*O*-*α*-L-(2''-*O*-*trans*-*p*-Coumaroyl)rhamnopyranosylcatalpol  $C_{30}H_{38}O_{16}$   
 (654.63). Source: FEI LV BIN SHI ZI *Gmelina philippensis* (aerial parts),  
 NANG ZHUANG MAO RUI HUA *Verbascum saccatum*. Ref: 1521, 3954.

**19105 Saccharopine**

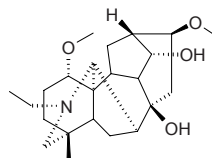
[13429-91-9]  $C_{11}H_{20}N_2O_6$  (276.29). Source: XIANG XUN *Lentinus edodes*,  
 YAN CAO *Nicotiana tabacum*. Ref: 660.

**19106 Saccogynol**

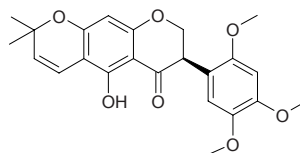
(+)-(1*R*\*,3*S*\*,5*R*\*,6*S*\*)-Saccogynol  $C_{15}H_{22}O$  (218.34). Source: *Saccogyna*  
*viticulosa* (essential oil). Ref: 3839.

**19107 Sachaconitine**

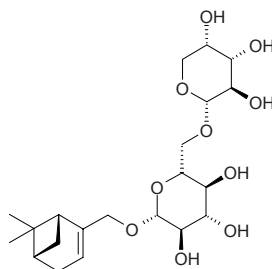
Vilmorrianine D  $C_{23}H_{37}NO_4$  (391.56). White amorphous powder. Source:  
 GONG GA SHAN WU TOU *Aconitum liljestrandii*, GUA YE WU TOU  
*Aconitum hemsleyanum*. Ref: 2191, 2208.

**19108 (R)-Saclenone**

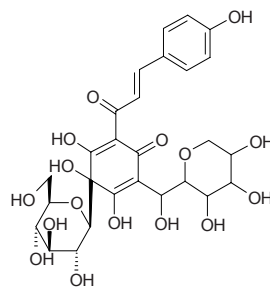
(*R*)-5-Hydroxy-2',4',5'-trimethoxy-2'',2''-dimethylpyrano[5'',6'':6,7]isoflavanon  
 $e$   $C_{23}H_{24}O_7$  (412.44). Amorphous powder,  $[\alpha]_D = -22^\circ$  ( $c = 0.1$ , MeOH).  
Source: *Erythrina saclexii* (stem cortex). Ref: 5097.

**19109 Sacranoside A**

$C_{21}H_{34}O_{10}$  (446.5). Source: SHENG DI HONG JING TIAN *Rhodiola sacra*.  
Ref: 742.

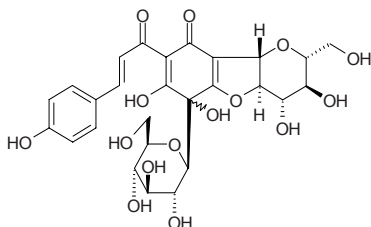
**19110 Saffloin A**

[78281-02-4]  $C_{27}H_{32}O_{16}$  (612.55). Source: HONG HUA *Carthamus tinctorius*  
 (flower: mean content of 4 origins = 1.17%<sup>[5526]</sup>). Ref: 660, 1545, 5526.

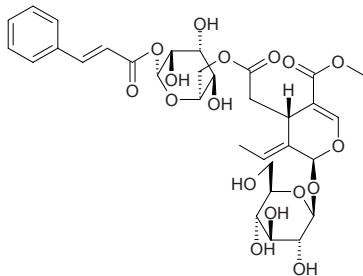


**19111 Safflower yellow A**

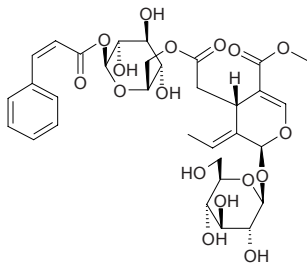
Safflor yellow A [85532-77-0]  $C_{27}H_{30}O_{15}$  (594.53). **Pharm:** Anticonvulsant (rat, ip, 1.1g/kg); sedative (mus, ip, 0.55g/kg, extends sleeping time induced by pentobarbital or aquachloral); inhibits blood capillary permeability (rat, ip, 1.1g/kg, induced by histamine); anti-inflammatory (rat, ip, 1.1g/kg, paw edema model caused by formaldehyde);  $LD_{50}$  (mus, iv) = 2.35g/kg. **Source:** HONG HUA *Carthamus tinctorius* (flower: mean content of 4 origins = 0.70%<sup>[5526]</sup>). **Ref:** 2, 5501, 5526.

**19112 Safghanoside A**

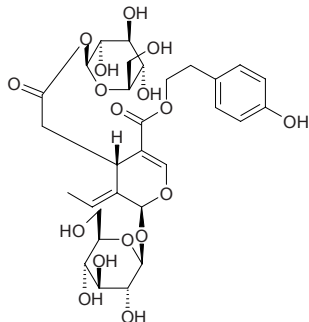
$C_{32}H_{40}O_{17}$  (692.67). Colorless amorphous powder,  $[\alpha]_D^{27} = -143^\circ$  ( $c = 0.96$ , MeOH). **Source:** A FU HAN DING XIANG *Syringa afghanica*. **Ref:** 2006.

**19113 Safghanoside B**

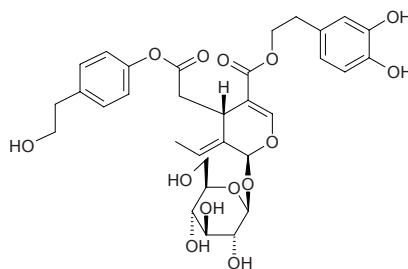
$C_{32}H_{40}O_{17}$  (692.67). Colorless amorphous powder,  $[\alpha]_D^{26} = -158^\circ$  ( $c = 0.33$ , MeOH). **Source:** A FU HAN DING XIANG *Syringa afghanica*. **Ref:** 2006.

**19114 Safghanoside C**

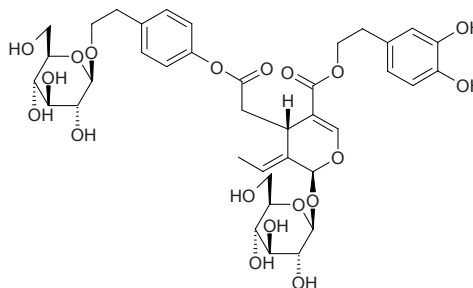
$C_{30}H_{40}O_{17}$  (672.64). Colorless amorphous powder,  $[\alpha]_D^{27} = -102^\circ$  ( $c = 0.83$ , MeOH). **Source:** A FU HAN DING XIANG *Syringa afghanica*. **Ref:** 2006.

**19115 Safghanoside D**

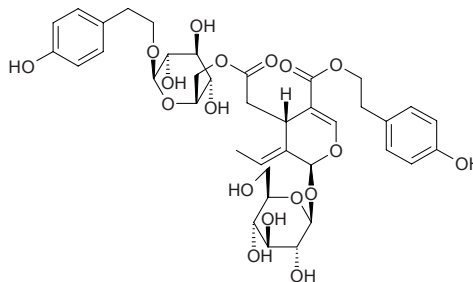
$C_{32}H_{38}O_{14}$  (646.65). Colorless amorphous powder,  $[\alpha]_D^{27} = -129^\circ$  ( $c = 1.05$ , MeOH). **Source:** A FU HAN DING XIANG *Syringa afghanica*. **Ref:** 2006.

**19116 Safghanoside E**

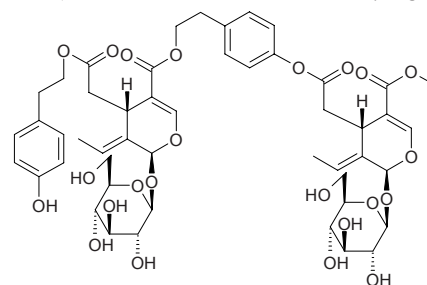
$C_{38}H_{48}O_{19}$  (808.79). Colorless amorphous powder,  $[\alpha]_D^{26} = -104^\circ$  ( $c = 0.69$ , MeOH). **Source:** A FU HAN DING XIANG *Syringa afghanica*. **Ref:** 2006.

**19117 Safghanoside F**

$C_{38}H_{48}O_{18}$  (792.80). Colorless amorphous powder,  $[\alpha]_D^{27} = -101^\circ$  ( $c = 0.27$ , MeOH). **Source:** A FU HAN DING XIANG *Syringa afghanica*. **Ref:** 2006.

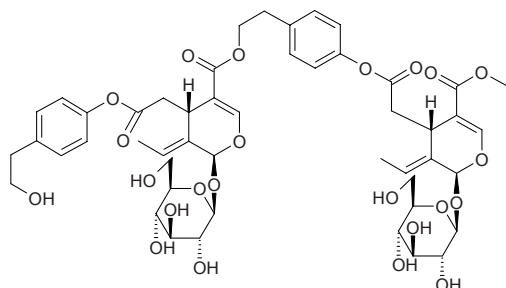
**19118 Safghanoside G**

$C_{49}H_{60}O_{23}$  (1017.01). Colorless amorphous powder,  $[\alpha]_D^{27} = -182^\circ$  ( $c = 0.62$ , MeOH). **Source:** A FU HAN DING XIANG *Syringa afghanica*. **Ref:** 2006.

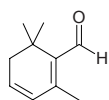


**19119 Safghanoside H**

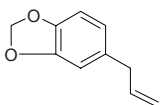
$C_{49}H_{60}O_{23}$  (1017.01). Colorless amorphous powder,  $[\alpha]_D^{28} = -142^\circ$  ( $c = 0.33$ , MeOH). Source: A FU HAN DING XIANG *Syringa afghanica*. Ref: 2006.

**19120 Safranal**

[116-26-7]  $C_{10}H_{14}O$  (150.22). bp 172°C. Source: ZANG HONG HUA *Crocus sativus*, GOU QI ZI *Lycium chinense*. Ref: 6, 660.

**19121 Saffrole**

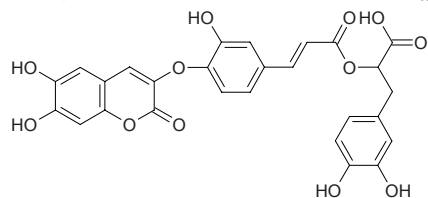
1,2-Methylenedioxy-4-allyl-benzene [94-59-7]  $C_{10}H_{10}O_2$  (162.19). Pharm: Antifungal (broad spectrum); carcinogen (liver, low dose); toxin (hmn). Source: DONG DU HUI *Illicium religiosum*, DU HENG *Asarum forbesii*, LIAN QIAO *Forsythia suspensa*, LIAO XI XIN *Asarum heterotropoides* var. *mandshuricum*, LIU YE MU LAN *Magnolia salicifolia*, LUO JI SHAN YUAN BAI *Juniperus scopulorum*, LUO LE *Ocimum basilicum*, MEI ZHOU CHA MU *Sassafras albidum*, ROU DOU KOU *Myristica fragrans* (kernel: content scope = 0.27%~0.39%, mean content = 0.31%<sup>[5508]</sup>), SHENG JIANG *Zingiber officinale*, XI XIN *Asarum sieboldii* (whole herb = content scope = 0.014%~0.96%)<sup>[5501]</sup>, ZHANG MU *Cinnamomum camphora*. Ref: 2, 658, 660, 5501, 5508.

**19122 Safynol**

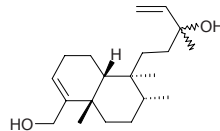
$C_{13}H_{12}O_2$  (200.24). Yellowish powder, mp 97~99°C. Pharm: Cytotoxic (HL-60,  $IC_{50} = 4.7 \mu\text{g/mL}$ , K562,  $IC_{50} = 6.0 \mu\text{g/mL}$ )<sup>[4596]</sup>; plant antitoxin<sup>[658]</sup>. Source: GUI ZHEN CAO *Bidens bipinnata* (whole herb), HONG HUA *Carthamus tinctorius*, *Centaurea* sp. Ref: 658, 4596.

**19123 Sagecoumarin**

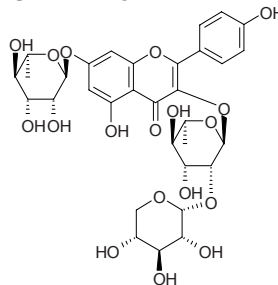
$C_{27}H_{20}O_{12}$  (536.45). Freeze-dried light-brown powder,  $[\alpha]_D^{20} = +52^\circ$  ( $c = 0.2$ , MeOH). Source: YAO YONG DAN SHEN *Salvia officinalis*. Ref: 2388.

**19124 Sagittariol**

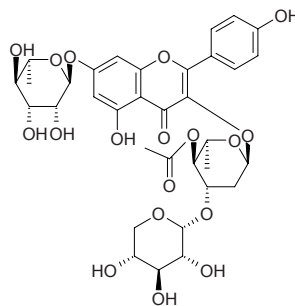
[56497-92-8]  $C_{20}H_{34}O_2$  (306.49). mp 109~110°C. Source: CI GU *Sagittaria sagittifolia*. Ref: 6, 1521.

**19125 Sagittatin A**

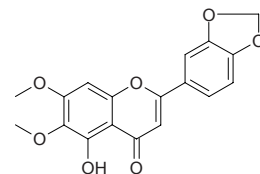
[124704-85-4]  $C_{32}H_{38}O_{18}$  (710.65). Source: JIAN YE YIN YANG HUO *Epimedium sagittatum*. Ref: 2, 660, 1521.

**19126 Sagittatin B**

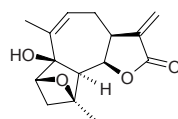
[124723-15-5]  $C_{34}H_{40}O_{18}$  (736.69). Source: JIAN YE YIN YANG HUO *Epimedium sagittatum*. Ref: 2, 1521.

**19127 Sagittin**

5-Hydroxy-6,7-dimethoxy-3',4'-methylene-dioxy-flavone  $C_{18}H_{14}O_7$  (342.31). Yellow acicular crystals, mp 254~257°C (230°C, sub). Source: JIAN YE YIN YANG HUO *Epimedium sagittatum*. Ref: 485, 660.

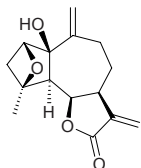
**19128 Saharanolide A**

5 $\alpha$ H-2,4 $\beta$ -Epoxy-1-hydroxyguaia-9(10),11(13)-dien-6 $\beta$ -12-olide  $C_{15}H_{18}O_4$  (262.31). Colorless gum,  $[\alpha]_D^{22} = -86^\circ$  ( $c = 0.1$ , EtOH). Pharm: Cytotoxic (*in vitro*, KB,  $IC_{50} = 3.3 \mu\text{g/mL}$ ). Source: *Warionia saharae* (leaf: yield = 0.0004%dw). Ref: 4620.

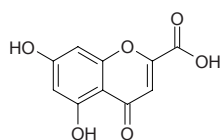


**19129 Saharanolide B**

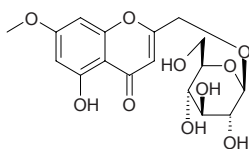
5 $\alpha$ H-2,4 $\beta$ -Epoxy-1-hydroxyguaia-10(14),11(13)-dien-6 $\beta$ ,12-olide C<sub>15</sub>H<sub>18</sub>O<sub>4</sub> (262.31). Colorless gum,  $[\alpha]_D^{22} = -86^\circ$  ( $c = 0.1$ , EtOH). **Pharm:** Cytotoxic (*in vitro*, KB, IC<sub>50</sub> = 5.5 $\mu$ g/mL). **Source:** *Warionia saharae* (leaf: yield = 0.0005%dw). **Ref:** 4620.

**19130 Saikochromic acid**

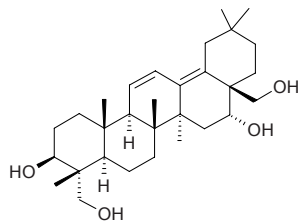
C<sub>10</sub>H<sub>6</sub>O<sub>6</sub> (222.16). Yellowish needles. **Source:** CHAI HU *Bupleurum chinense*. **Ref:** 8.

**19131 Saikochromoside A**

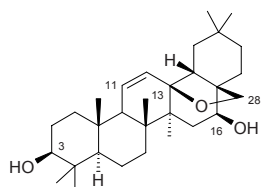
C<sub>17</sub>H<sub>20</sub>O<sub>10</sub> (384.34). White needles, mp 189–191°C. **Source:** CHAI HU *Bupleurum chinense*. **Ref:** 8.

**19132 Saikogenin D**

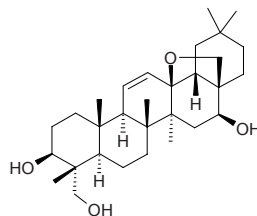
[5573-16-0] C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). **Source:** ZI HU *Bupleurum falcatum*. **Ref:** 2247.

**19133 Saikogenin E**

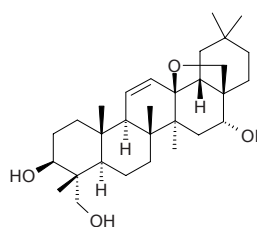
[13715-23-6] C<sub>30</sub>H<sub>48</sub>O<sub>3</sub> (456.72). mp 289°C (dec). **Source:** CHAI HU *Bupleurum chinense*. **Ref:** 2.

**19134 Saikogenin F**

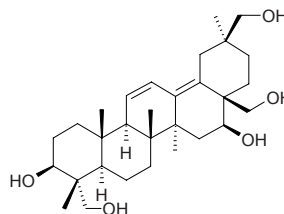
[14356-59-3] C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). mp 265–273°C. **Source:** CHAI HU *Bupleurum chinense*, XIAO YE HEI CHAI HU *Bupleurum smithii* var. *parvifolium*. **Ref:** 2, 598.

**19135 Saikogenin G**

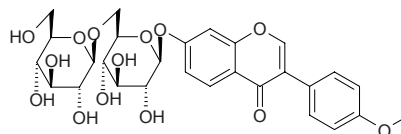
[18175-79-6] C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). mp 238–245°C. **Source:** CHAI HU *Bupleurum chinense*, XIAO YE HEI CHAI HU *Bupleurum smithii* var. *parvifolium*. **Ref:** 2, 598.

**19136 Saikogenin Q**

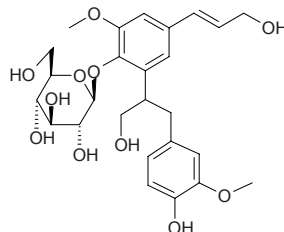
Olean-11,13(18)-diene-3 $\beta$ ,16 $\beta$ ,23,28,30-pentol [168146-19-8] C<sub>30</sub>H<sub>48</sub>O<sub>5</sub> (488.71). White powder, mp 302–304°C. **Source:** XIAO YE HEI CHAI HU *Bupleurum smithii* var. *parvifolium*, HEI CHAI HU *Bupleurum smithii*. **Ref:** 327, 1521, 2247.

**19137 Saikoisoflavonoside A**

C<sub>28</sub>H<sub>32</sub>O<sub>14</sub> (592.56). Yellow-white powder, mp 245–246°C. **Source:** HONG CHAI HU *Bupleurum scorzonerifolium*. **Ref:** 8.

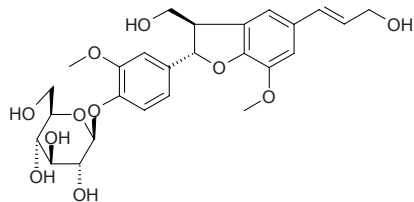
**19138 Saikolignanoside A**

C<sub>26</sub>H<sub>34</sub>O<sub>11</sub> (522.55). Yellow-white powder, mp 110–112°C,  $[\alpha]_D^{23} = +32.8^\circ$  ( $c = 0.131$ , MeOH). **Source:** HONG CHAI HU *Bupleurum scorzonerifolium*. **Ref:** 8.

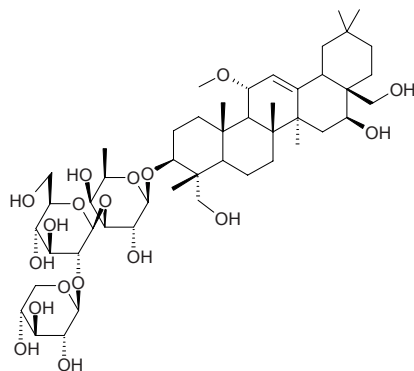


**19139 Saikolignanose D**

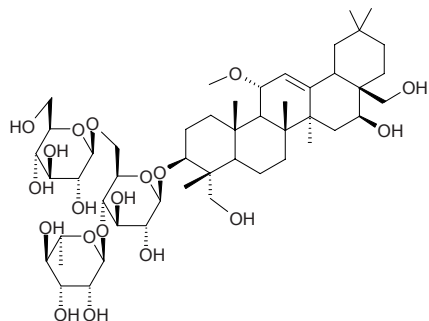
$C_{26}H_{32}O_{11}$  (520.54). Yellow-white powder, mp 102~104°C,  $[\alpha]_D^{28} = +0.63^\circ$  ( $c = 0.156\text{g}/100\text{ml}$  in MeOH). Source: HONG CHAI HU *Bupleurum scorzonerifolium*. Ref: 8.

**19140 Saikosaponin 15**

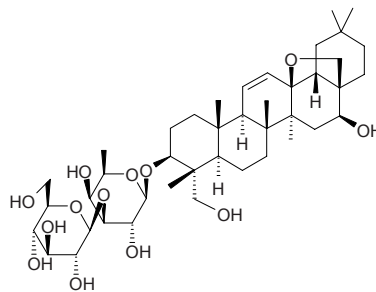
$C_{48}H_{80}O_{18}$  (945.16). Source: ZHAI ZHU YE CHAI HU *Bupleurum marginatum* var. *stenophyllum*. Ref: 660.

**19141 Saikosaponin 16**

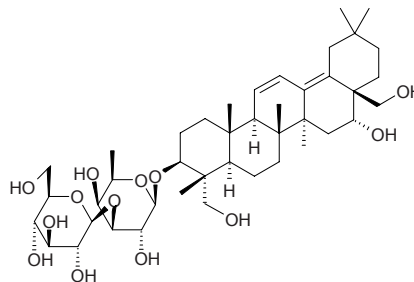
$C_{49}H_{82}O_{19}$  (975.19). Source: ZHAI ZHU YE CHAI HU *Bupleurum marginatum* var. *stenophyllum*. Ref: 660.

**19142 Saikosaponin A**

[20736-09-8]  $C_{42}H_{68}O_{13}$  (781.00). mp 225~232°C. Pharm: Antineoplastic (EAC); antihepatotoxin (rat, hepatotoxin induced by  $CCl_4$ ); anti-inflammatory; antiviral (influenza virus  $A_2$  *in vitro*, 50 $\mu\text{g}/\text{mL}$ , InRt = 69%); antihypercholesterolemic. Source: CHAI HU *Bupleurum chinense* (dried root: content scope = 0.11%~0.34%, mean content = 0.185%<sup>[5508]</sup>), HEI CHAI HU *Bupleurum smithii* (dried root: mean content = 0.470%<sup>[5508]</sup>), HONG CHAI HU *Bupleurum scorzonerifolium* (dried root: content scope = 0.03%~0.07%, mean content = 0.05%<sup>[5508]</sup>), XIAN YE CHAI HU *Bupleurum angustissimum* (dried root: content = 0.05%<sup>[5508]</sup>), XIAO YE HEI CHAI HU *Bupleurum smithii* var. *parvifolium* (dried root: content scope = 0.13%~0.24%, mean content = 0.176%<sup>[5508]</sup>), YIN ZHOU CHAI HU *Bupleurum yinchowense* (dried root: content scope = 0.08%~0.13%, mean content = 0.105%<sup>[5508]</sup>), ZHU YE CHAI HU *Bupleurum marginatum* (dried root: content = 0.41%<sup>[5508]</sup>), ZHUI YE CHAI HU *Bupleurum bicaule* (dried root: content scope = 0.07%~0.08%, mean content = 0.075%<sup>[5508]</sup>), ZI HU *Bupleurum falcatum* (dried root: content = 0.07%<sup>[5508]</sup>), *Bupleurum* spp. Ref: 5, 403, 598, 658, 660, 5426, 5501, 5508.

**19143 Saikosaponin B<sub>2</sub>**

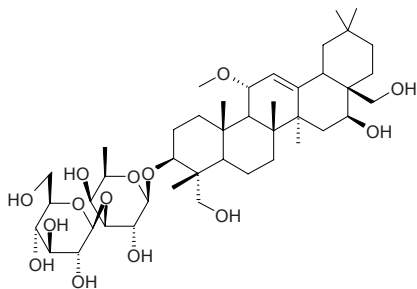
[58316-41-9]  $C_{42}H_{68}O_{13}$  (781.00). White powder (methanol-diethyl ether), mp 235~240°C,  $[\alpha]_D^{25} = -32.1^\circ$  ( $c = 0.518$ ). Pharm: Anti-inflammatory; cytotoxic ( $P_{388}$ ,  $ED_{50} = 0.3\mu\text{g}/\text{mL}$ , inhibits growth of B16 melanoma,  $MH_1C_1$  and  $EL_4$ , induces apoptosis of B16 melanoma); immunoenhancer (prolongs survival time of immunologic injury mus); inhibits lipolysis (selectively); stimulates synthesis of  $PGE_2$ . Source: DUO ZHI CHAI HU *Bupleurum polyclonum*, HEI CHAI HU *Bupleurum smithii*, LI JIANG CHAI HU *Bupleurum rockii*, YIN ZHOU CHAI HU *Bupleurum yinchowense*, ZI HU *Bupleurum falcatum*. Ref: 660, 900.



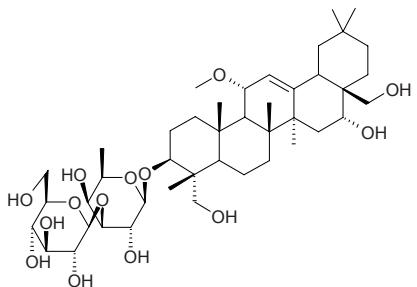


**19144 Saikosaponin B<sub>3</sub>**

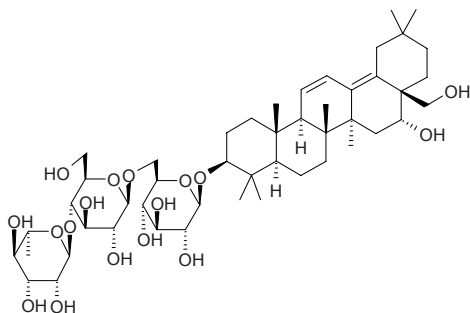
$C_{43}H_{72}O_{14}$  (813.04). Source: ZHAI ZHU YE CHAI HU *Bupleurum marginatum* var. *stenophyllum*, ZHU YE CHAI HU *Bupleurum marginatum*, ZI HU *Bupleurum falcatum*. Ref: 660.

**19145 Saikosaponin B<sub>4</sub>**

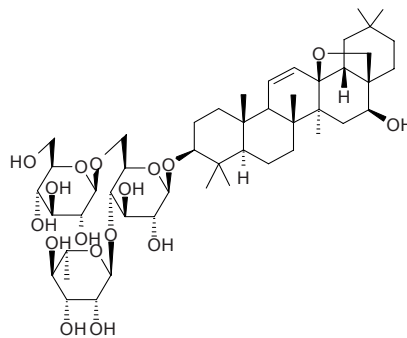
$C_{43}H_{72}O_{14}$  (813.04). Source: ZHAI ZHU YE CHAI HU *Bupleurum marginatum* var. *stenophyllum*, ZI HU *Bupleurum falcatum*. Ref: 660.

**19146 Saikosaponin BK<sub>1</sub>**

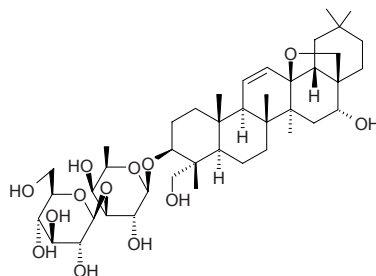
$C_{48}H_{78}O_{17}$  (927.15). Pharm: cytotoxic (*in vitro*, leukemia). Source: KUN MING CHAI HU *Bupleurum kunmingense*. Ref: 658.

**19147 Saikosaponin C**

[20736-08-7]  $C_{48}H_{78}O_{17}$  (927.15). mp 202~210°C. Pharm: Anti-HBV (significantly inhibits expression of HBsAg in 2,2,15 cells,  $p < 0.05$ ; inhibits secretion of HBsAg,  $IC_{50} = 11 \mu\text{g/mL}$ ; inhibits expression of HBV DNA,  $IC_{50} = 13.4 \mu\text{g/mL}$ )<sup>[5426]</sup>. Source: CHAI HU *Bupleurum chinense* (dried root: mean content = 0.430%<sup>[5508]</sup>), HEI CHAI HU *Bupleurum smithii* (dried root: mean content = 0.628%<sup>[5508]</sup>), HONG CHAI HU *Bupleurum scorzonerifolium*, ZHU YE CHAI HU *Bupleurum marginatum* (dried root: content = 0.26%<sup>[5508]</sup>), *Bupleurum* spp. Ref: 2, 403, 660, 5426, 5508.

**19148 Saikosaponin D**

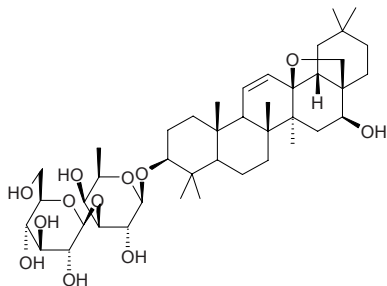
[20874-52-6]  $C_{42}H_{68}O_{13}$  (781.00). White powder, mp 212~218°C,  $[\alpha]_D^{23} = +37^\circ$  (ethanol),  $+36.8^\circ$  ( $c = 1.9$ , ethanol). Pharm: Antibacterial (*Bacillus pyocyaneus*); antineoplastic (EAC); antihepatotoxin (liver damage caused by  $\text{CCl}_4$  and galactosamine); anti-inflammatory ( $P < 0.001$ ); antiviral (measles virus and herpes simplex virus *in vitro*,  $> 5 \mu\text{mol/L}$ ); cytotoxic (KB,  $ED_{50} = 9.2 \mu\text{g/mL}$ ; P<sub>388</sub>,  $ED_{50} = 1.1 \mu\text{g/mL}$ ); cytotoxic (HepG2 hmn hepatocellular carcinoma cells,  $10 \mu\text{g/mL}$ )<sup>[5426]</sup>; immunoenhancer (prolongs life time of immunologically impaired animal); hemolytic (*in vivo*); antihypercholesterolemic; stimulates release of CRF and CRF gene express (in rat hypothalamus); stimulates synthesis of  $\text{PGE}_2$ . Source: CHAI HU *Bupleurum chinense* (dried root: content scope = 0.12%~0.35%, mean content = 0.217%<sup>[5508]</sup>), DA YE CHAI HU *Bupleurum longiradiatum*, HEI CHAI HU *Bupleurum smithii* (dried root: mean content = 0.227%<sup>[5508]</sup>), HONG CHAI HU *Bupleurum scorzonerifolium* (dried root: content scope = 0.05%~0.16%, mean content = 0.09%<sup>[5508]</sup>), XIAN YE CHAI HU *Bupleurum angustissimum* (dried root: content = 1.42%<sup>[5508]</sup>), XIAO YE HEI CHAI HU *Bupleurum smithii* var. *parvifolium* (dried root: content scope = 0.15%~0.26%, mean content = 0.21%<sup>[5508]</sup>), YIN ZHOU CHAI HU *Bupleurum yinchowense* (dried root: content scope = 0.14%~0.23%, mean content = 0.185%<sup>[5508]</sup>), ZHU YE CHAI HU *Bupleurum marginatum* (dried root: content = 0.44%<sup>[5508]</sup>), ZHUI YE CHAI HU *Bupleurum bicaule* (dried root: content scope = 1.74%~2.36%, mean content = 2.05%<sup>[5508]</sup>), ZI HU *Bupleurum falcatum* (dried root: content = 0.16%<sup>[5508]</sup>), *Bupleurum* spp. Ref: 5, 403, 598, 660, 900, 5426, 5501, 5508.



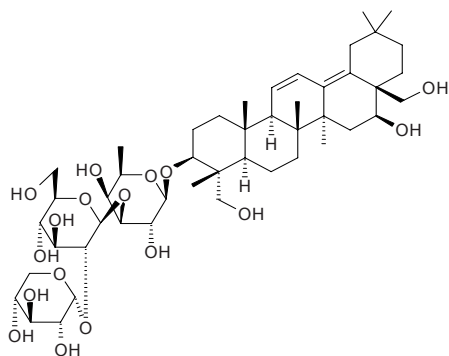


**19149 Saikosaponin E**

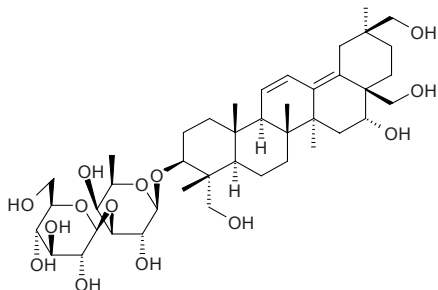
$C_{42}H_{68}O_{12}$  (765.00). Source: DUO ZHI CHAI HU *Bupleurum polyclonum*, LI JIANG CHAI HU *Bupleurum rockii*, ZHU YE CHAI HU *Bupleurum marginatum*, ZI HU *Bupleurum falcatum*. Ref: 660.

**19150 Saikosaponin K**

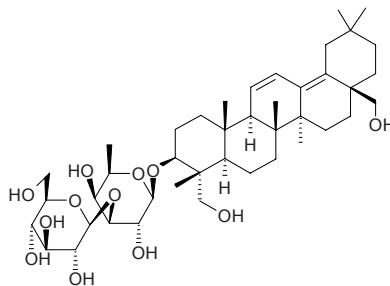
$3\beta,16\beta,23,28$ -Tetrahydroxyoleana-11,13(18)-dien-3-*O*- $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-fucopyranoside  $C_{47}H_{76}O_{17}$  (913.12). White powder, mp 241~245°C,  $[\alpha]_D^{21} = -20.9^\circ$  ( $c = 0.12$ , EtOH). Source: HEI CHAI HU *Bupleurum smithii*. Ref: 264.

**19151 Saikosaponin L**

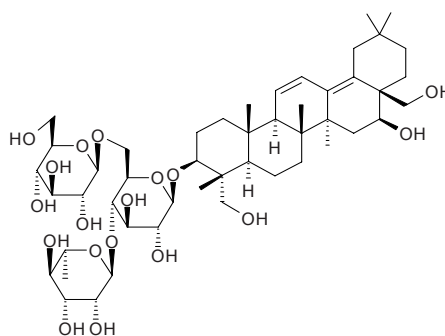
$3\beta,16\alpha,23,28,30$ -Pentahydroxyoleana-11,13(18)-dien-3-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-fucopyranoside  $C_{42}H_{68}O_{14}$  (797.00). White powder, mp 208~212°C. Source: HEI CHAI HU *Bupleurum smithii*. Ref: 264, 407.

**19152 Saikosaponin M**

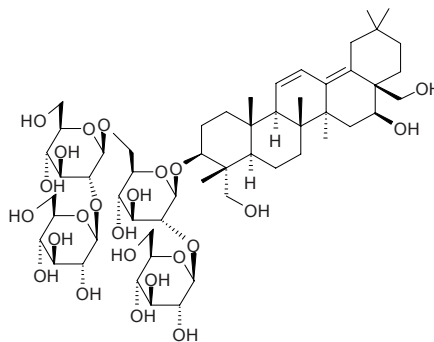
$3\beta,23,28$ -Trihydroxyoleana-11,13(18)-dien-3-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-fucopyranoside  $C_{42}H_{68}O_{12}$  (765.00). White powder, mp 205~210°C,  $[\alpha]_D^{21} = -117.6^\circ$  ( $c = 0.03$ , ethanol). Source: HEI CHAI HU *Bupleurum smithii*. Ref: 313.

**19153 Saikosaponin N**

$3\beta,16\beta,23,28$ -Tetrahydroxyoleana-11,13(18)-dien-3-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranoside  $C_{48}H_{78}O_{18}$  (943.15). White powder, mp 217~221°C,  $[\alpha]_D^{21} = +81.6^\circ$  ( $c = 0.10$ , ethanol). Source: HEI CHAI HU *Bupleurum smithii*. Ref: 313.

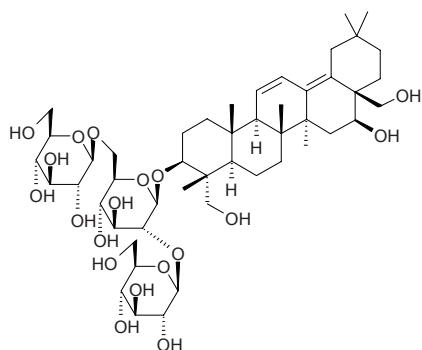
**19154 Saikosaponin O**

[179981-97-6]  $C_{54}H_{88}O_{24}$  (1121.29). Source: XIAO YE HEI CHAI HU *Bupleurum smithii* var. *parvifolium*. Ref: 2247.

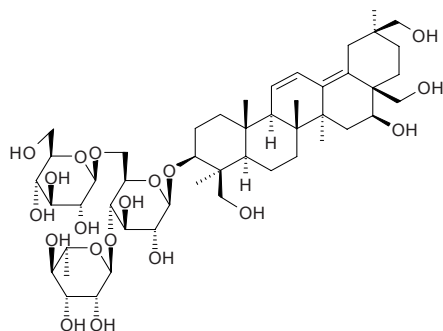


**19155 Saikosaponin P**

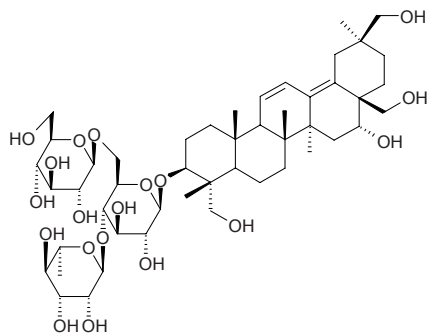
$C_{48}H_{78}O_{19}$  (959.15). Source: XIAO YE HEI CHAI HU *Bupleurum smithii* var. *parvifolium*. Ref: 2247.

**19156 Saikosaponin Q**

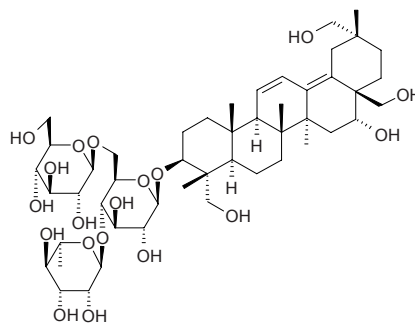
3 $\beta$ ,16 $\beta$ ,23,28,30-Pentahydroxyoleana-11,13,(18)-diene-3 $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)-[ $\alpha$ -L-rhamno-pyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranoside  $C_{48}H_{78}O_{19}$  (959.15). White powder, mp 224~227°C. Source: XIAO YE HEI CHAI HU *Bupleurum smithii* var. *parvifolium*. Ref: 327.

**19157 Saikosaponin Q<sub>1</sub>**

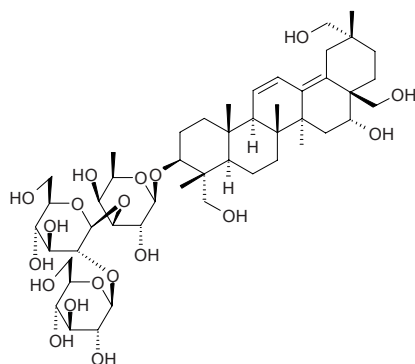
$C_{48}H_{78}O_{19}$  (958.15). White powder, mp 230~246°C. Source: CHAI HU *Bupleurum chinense*. Ref: 8.

**19158 Saikosaponin Q<sub>2</sub>**

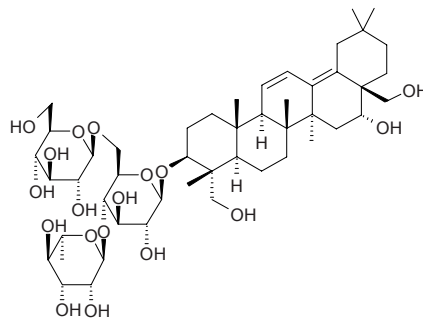
$C_{48}H_{78}O_{19}$  (959.15). Source: CHAI HU *Bupleurum chinense*. Ref: 2247.

**19159 Saikosaponin R**

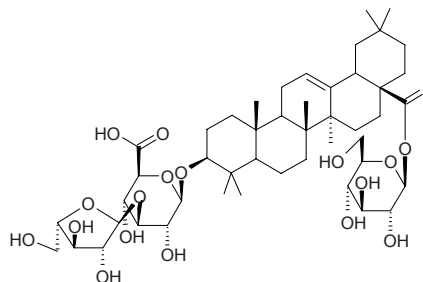
$C_{48}H_{78}O_{19}$  (959.15). Source: HONG CHAI HU *Bupleurum scorzoniferolium*. Ref: 2247.

**19160 Saikosaponin S**

$C_{48}H_{78}O_{18}$  (943.15). Source: HONG CHAI HU *Bupleurum scorzoniferolium*. Ref: 2247.

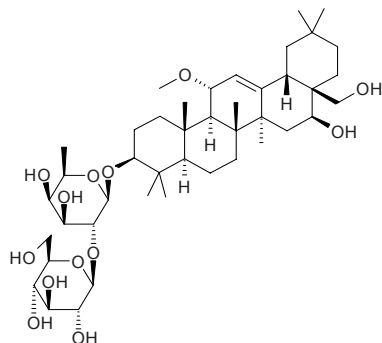
**19161 Saikosaponin S<sub>1</sub>**

$C_{47}H_{74}O_{18}$  (927.10). Source: CHAI HU *Bupleurum chinense*. Ref: 660.

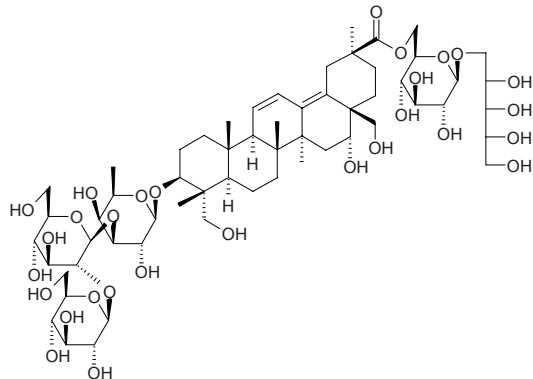


**19162 Saikosaponin T**

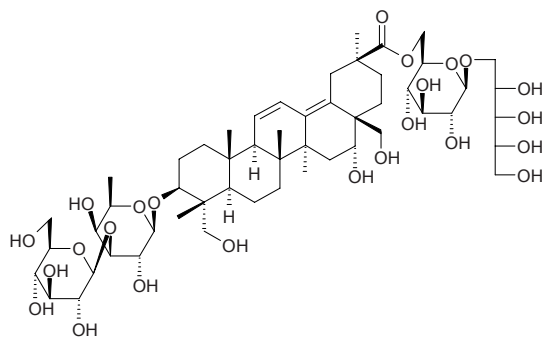
3 $\beta$ ,16 $\beta$ ,28-Trihydroxy-11- $\alpha$ - $\beta$ -methoxy-olean-12-ene-3-*O*- $\beta$ -*D*-glucosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-fucoside C<sub>43</sub>H<sub>72</sub>O<sub>13</sub> (797.05). White powder, mp 223~225°C, mp 237~240°C. Source: CHAI HU *Bupleurum chinense*, HONG CHAI HU *Bupleurum scorzonerifolium*. Ref: 403, 1521.

**19163 Saikosaponin U**

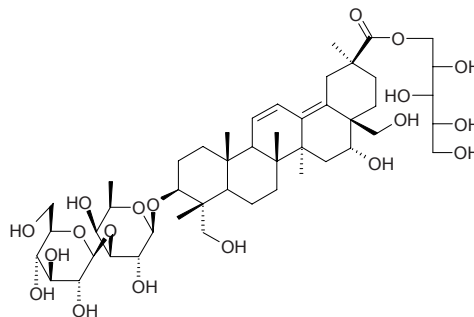
3-*O*-[ $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-fucopyranosyl]-3 $\beta$ ,16 $\alpha$ ,23,28-tetrahydroxy-olean-11,13(18)-dien-30-oic acid-30-*O*-[pentito(1 $\rightarrow$ 1)- $\beta$ -*D*-glucopyranosyl-6-ester C<sub>59</sub>H<sub>96</sub>O<sub>29</sub> (1269.41). White powder, mp 276~278°C. Source: HONG CHAI HU *Bupleurum scorzonerifolium*. Ref: 1879, 2247.

**19164 Saikosaponin V**

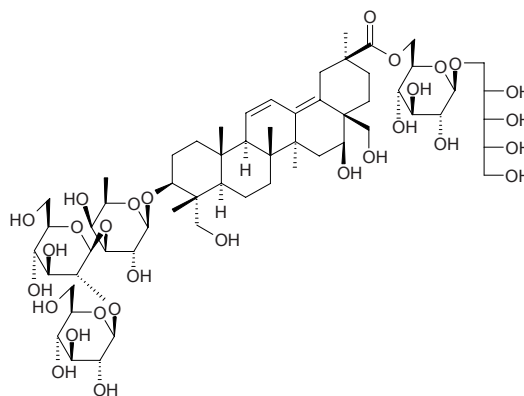
3-*O*-[ $\beta$ -*D*-Glucopyranosyl(1 $\rightarrow$ 3)- $\beta$ -*D*-fucopyranosyl]-3 $\beta$ ,16 $\alpha$ ,23,28-tetrahydroxy-olean-11,13(18)-dien-30-oic acid 30-*O*-[pentito(1 $\rightarrow$ 1)- $\beta$ -*D*-glucopyranosyl-6-ester C<sub>53</sub>H<sub>86</sub>O<sub>24</sub> (1107.26). White powder, mp 198~201°C. Source: CHAI HU *Bupleurum chinense*, HONG CHAI HU *Bupleurum scorzonerifolium*. Ref: 407, 1879.

**19165 Saikosaponin V<sub>1</sub>**

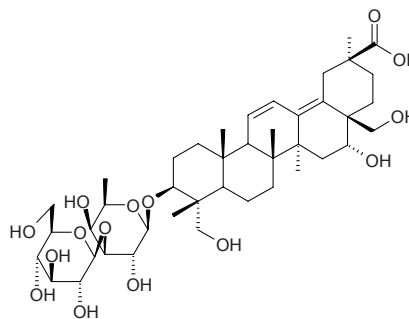
C<sub>47</sub>H<sub>76</sub>O<sub>19</sub> (945.12). White powder, mp 232~239°C. Source: CHAI HU *Bupleurum chinense*. Ref: 8.

**19166 Saikosaponin V<sub>2</sub>**

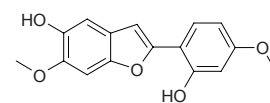
C<sub>59</sub>H<sub>96</sub>O<sub>29</sub> (1269.41). Source: CHAI HU *Bupleurum chinense*. Ref: 2247.

**19167 Saikosaponin X**

C<sub>42</sub>H<sub>66</sub>O<sub>15</sub> (810.99). White powder, mp 245~246°C. Source: HONG CHAI HU *Bupleurum scorzonerifolium*. Ref: 8.

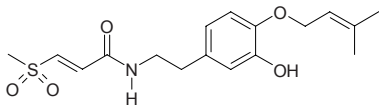
**19168 Sainfuran**

C<sub>16</sub>H<sub>14</sub>O<sub>5</sub> (286.29). Pharm: Antifungal (*Cladosporium cladosporioides*); insect antifeedant. Source: LV DOU *Onobrychis viciifolia*. Ref: 658.

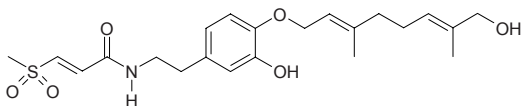


**19169 Sakambullin**

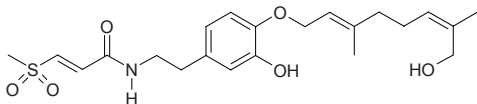
(*E*)-3-(Methylsulfonyl)-propenoic acid 3-hydroxy-4-(3-methyl-2-butenyloxy)-phenethyl amide C<sub>17</sub>H<sub>23</sub>NO<sub>5</sub>S (353.44). Colorless crystals (Et<sub>2</sub>O), mp 111~113°C. Source: LV ZI SHAN XIAO JU *Glycosmis chlorosperma* (leaf). Ref: 3956.

**19170 Sakerinol A**

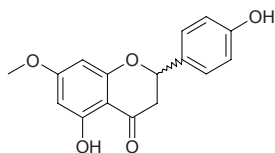
(*E*)-3-(Methylsulfonyl)-propenoic acid (2*E*,6*E*)-3-hydroxy-4-(8-hydroxy-3,7-dimethyl-2,6-octadienyloxy)-phenethyl amide C<sub>22</sub>H<sub>31</sub>NO<sub>6</sub>S (437.56). Colorless crystals (Et<sub>2</sub>O), mp 133~135°C. Source: LV ZI SHAN XIAO JU *Glycosmis chlorosperma* (leaf). Ref: 3956.

**19171 Sakerinol B**

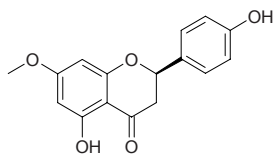
(*E*)-3-(Methylsulfonyl)-propenoic acid (2*E*,6*Z*)-3-hydroxy-4-(8-hydroxy-3,7-dimethyl-2,6-octadienyloxy)-phenethyl amide C<sub>22</sub>H<sub>31</sub>NO<sub>6</sub>S (437.56). Colorless crystals (Et<sub>2</sub>O), mp 98~100°C. Source: JIA ZONG ZHUANG HUA XU SHAN XIAO JU *Glycosmis pseudoracemosa* (leaf). Ref: 3956.

**19172 Sakuranetin**

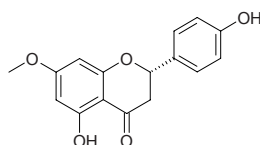
C<sub>16</sub>H<sub>14</sub>O<sub>5</sub> (286.29). Pharm: Antifungal (TLC bioautographic assay, *Cladosporium cladosporioides*, MA = 1.0μg, control Miconazole, MA = 1.0μg; *Cladosporium sphaerospermum*, MA = 1.0μg, control Miconazole, MA = 1.0μg). Source: CU YE MAI HU JIAO *Piper crassinervium*. Ref: 3440.

**19173 (R)-Sakuranetin**

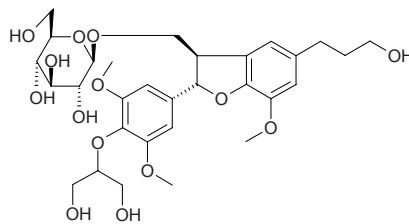
C<sub>16</sub>H<sub>14</sub>O<sub>5</sub> (286.29). mp 131~133°C. Source: RI BEN YING HUA *Prunus yedoensis*. Ref: 1521.

**19174 (S)-Sakuranetin**

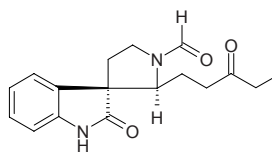
7-*O*-Methylnaringenin [2957-21-3] C<sub>16</sub>H<sub>14</sub>O<sub>5</sub> (286.29). mp 152~154°C. Pharm: Antifungal (*Ribes nigrum*, *Grossulariaceae* family); cytotoxic (HeLa, IC<sub>50</sub> = 93.1μg/mL, control Mitomycin C, IC<sub>50</sub> = 1.7μg/mL)<sup>[4092]</sup>; antifungal (*Candida albicans*, *Candida krusei*, MIC = 100μg/mL, control Nystatin, MIC = 2.0μg/mL)<sup>[5201]</sup>; antibacterial (*Staphylococcus aureus*, MIC ≈ 100μg/mL, control Chloramphenicol, MIC = 4.0μg/mL; *Mycobacterium smegmatis*, *Mycobacterium intracellulare*, *Mycobacterium xenopi*, MIC ≈ 100μg/mL, control Isoniazide, MIC = 10.0μg/mL)<sup>[5201]</sup>. Source: SHU ZHI YAN FU MU *Rhus retinorrhoea* (leaf), TIAN YE HAO *Artemisia campestris*, YING TAO *Prunus pseudocerasus*, *Juglans* sp., *Betula* sp., TUAN JI AI NA XIANG *Blumea glomerata*. Ref: 6, 658, 4092, 5201.

**19175 (-)-Sakuraresinoside**

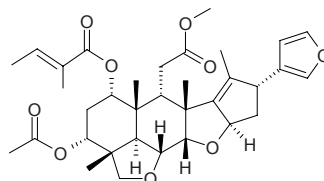
C<sub>30</sub>H<sub>42</sub>O<sub>14</sub> (626.66). White powder, [α]<sub>D</sub><sup>22</sup> = -8.8° (c = 0.20, EtOH). Source: MAO GUO QI *Acer nikoense* (stem cortex: yield = 0.0002%). Ref: 4304.

**19176 Salacin**

C<sub>17</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub> (300.36). Source: XIA GOU TENG *Uncaria attenuata*. Ref: 5341.

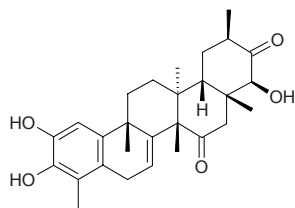
**19177 Salannin**

C<sub>34</sub>H<sub>44</sub>O<sub>9</sub> (596.73). Pharm: Insect antifeedant. Source: KU LIAN PI *Melia azedarach*. Ref: 658.

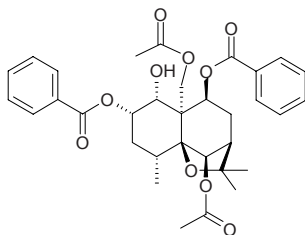


**19178 Salacinone B**

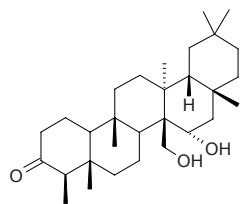
$C_{28}H_{36}O_5$  (452.60). Amorphous powder,  $[\alpha]_D^{26} = +69.4^\circ$  ( $c = 0.20$ ,  $CHCl_3$ ). Source: SUO LA MU *Salacia prinoides* [Syn. *Salacia chinensis*] (stem). Ref: 4378.

**19179 Salasol B**

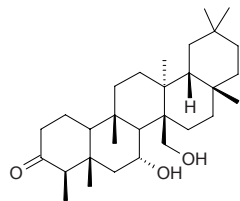
$C_{33}H_{38}O_{10}$  (594.66). White powder,  $[\alpha]_D^{26} = +59.0^\circ$  ( $c = 0.10$ ,  $CHCl_3$ ). Source: SUO LA MU *Salacia prinoides* [Syn. *Salacia chinensis*] (stem). Ref: 4378.

**19180 Salasone D**

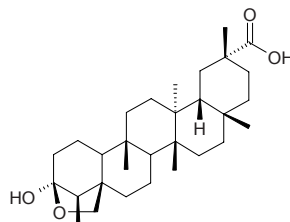
$C_{30}H_{50}O_3$  (458.73). White powder,  $[\alpha]_D^{22} = -19.6^\circ$  ( $c = 0.50$ ,  $CHCl_3$ ). Source: SUO LA MU *Salacia prinoides* [Syn. *Salacia chinensis*] (stem). Ref: 4378.

**19181 Salasone E**

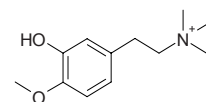
$C_{30}H_{50}O_3$  (458.73). White powder,  $[\alpha]_D^{23} = -18.5^\circ$  ( $c = 0.50$ ,  $CHCl_3$ ). Source: SUO LA MU *Salacia prinoides* [Syn. *Salacia chinensis*] (stem). Ref: 4378.

**19182 Salaspermic acid**

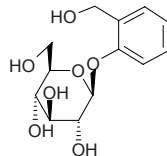
[71247-78-4]  $C_{30}H_{48}O_4$  (472.71). Pharm: Anti-HIV (inhibits HIV's replication in H9 lymphocyte,  $EC_{50} = 10\mu\text{mol/L}$ , for non-infected H9 lymphocyte  $IC_{50} = 53\mu\text{mol/L}$ ); HIV reverse transcriptase inhibitor; DPPH scavenger inactive (for  $40\mu\text{mol/L}$  DPPH radical,  $SC_{50} > 40\mu\text{mol/L}$ )<sup>[4378]</sup>. Source: LEI GONG TENG *Tripterygium wilfordii*, SUO LA MU *Salacia prinoides* [Syn. *Salacia chinensis*] (stem). Ref: 2, 1763, 4378.

**19183 Salicifoline**

[6882-07-1]  $C_{12}H_{20}NO_2^+$  (210.30). Source: BAI LAN HUA *Michelia alba*, HE HUA YU LAN *Magnolia grandiflora*, HOU PO *Magnolia officinalis*, RI BEN XIN YI *Magnolia kobus*, YE HE HUA *Magnolia coco*, YU LAN *Magnolia denudata* [Syn. *Magnolia heptapata*], ZI YU LAN PI *Magnolia liliiflora*. Ref: 6, 625, 1521.

**19184 Salicin**

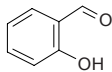
2-(Hydroxymethyl)phenyl- $\beta$ -D-glucopyranoside; Salicoside [138-52-3]  $C_{13}H_{18}O_7$  (286.28). White columnar crystals, mp  $199\text{--}202^\circ\text{C}$ ,  $[\alpha]_D^{20} = -45.6^\circ$  (EtOH), soluble in water, hot EtOH, insoluble in  $CHCl_3$ , ether.<sup>[5507]</sup> Pharm: Analgesic; antipyretic; antirheumatic; bitter principle (stomachic for sheep); local anesthetic. Source: BEI JING YANG *Populus beijingensis* (bark: content = 1.03%)<sup>[5508]</sup>, DA QING YANG *Populus ussuriensis* (bark: content = 1.42%)<sup>[5508]</sup>, DA YE YANG *Populus lasiocarpa* (bark: content = 0.52%)<sup>[5508]</sup>, HE BEI YANG *Populus hopeiensis* (bark: content = 1.89%)<sup>[5508]</sup>, JIA YANG *Populus canadensis* (bark: content = 0.69%)<sup>[5508]</sup>, JIAN GAN YANG *Populus nigra* var. *thevestina* (bark: content = 0.49%)<sup>[5508]</sup>, LIU BAI PI *Salix babylonica*, LIU ZHI *Salix babylonica*, MAO BAI YANG *Populus tomentosa* (bark: content = 0.57%)<sup>[5508]</sup>, QING YANG *Populus cathayana* (bark: content = 0.70%)<sup>[5508]</sup>, SHAN YANG *Populus davidiana* (bark: content = 1.87%)<sup>[5508]</sup>, SHUI YANG MU BAI PI *Salix purpurea*, SHUI YANG ZHI YE *Salix purpurea*, XIANG YANG *Populus koreana* (bark: content = 0.68%)<sup>[5508]</sup>, XIANG YE YANG *Populus adenopoda* (bark: content = 1.24%)<sup>[5508]</sup>, XIAO HEI YANG *Populus xiaohei* (bark: content = 0.72%)<sup>[5508]</sup>, XIAO QING YANG *Populus pseudo-simonii* (bark: content = 1.01%)<sup>[5508]</sup>, XIAO YE YANG *Populus simonii* (bark: content = 2.16%)<sup>[5508]</sup>, XIN JIANG YANG *Populus alba* var. *pyramidalis* (bark: content = 1.25%)<sup>[5508]</sup>, YIN BAI YANG *Populus alba* (bark: content = 2.63%)<sup>[5508]</sup>, YING YE JIA MI *Viburnum prunifolium*, *Populus* sp., *Salix* sp. (2%–4%; the compound was isolated from the plant in 1942)<sup>[5505]</sup>. Ref: 6, 269, 658, 5505, 5507, 5508.



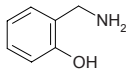
**19185 Salicylaldehyde**

$C_7H_6O_2$  (122.12). Source: CHA YE *Camellia sinensis* [Syn. *Thea sinensis*].

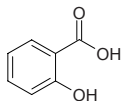
Ref: 660.

**19186 Salicylamine**

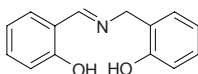
[932-30-9]  $C_7H_9NO$  (123.16). mp 129°C. Source: QIAO MAI *Fagopyrum esculentum*. Ref: 6.

**19187 Salicylic acid**

Phenol-2-carboxylic acid [69-72-7]  $C_7H_6O_3$  (138.12). mp 159°C, bp 211°C/20mmHg. Pharm: Anti-fertility agent (inhibits spermatogenesis); antiseptic; used in treatment of dermatosis and tinea. Source: BAN LAN GEN *Isatis indigotica* (dried root: mean content of 5 origins = 0.00063%)<sup>[5508]</sup>, BIAN FU GE GEN *Menispermum dauricum*, DA CHE QIAN *Plantago major*, DIAN BAI ZHU SHU *Gaultheria yunnanensis* (root: content scope of 3 origins = 0.0035%–0.0063%, mean content = 0.0050%)<sup>[5508]</sup>, HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*], HUANG HUA HAO *Artemisia annua*, KU BAO *Sauromatum guttatum*, MA LIU YE *Pterocarya stenoptera*, MIAN HUA *Gossypium herbaceum*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SHENG MA *Cimicifuga foetida*, XUAN FU HUA *Inula britannica*, YU JIN XIANG *Tulipa gesneriana*. Ref: 2, 658, 660, 3792, 5508.

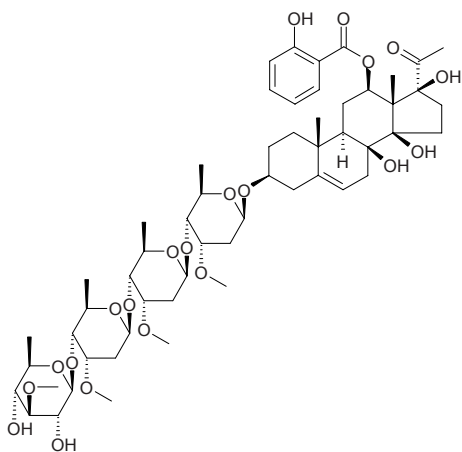
**19188 N-Salicylidene-salicylamine**

$C_{14}H_{13}NO_2$  (227.27). Source: QIAO MAI *Fagopyrum esculentum*. Ref: 6.

**19189 12-O-Salicyloyldeacetylmetaplexigenin**

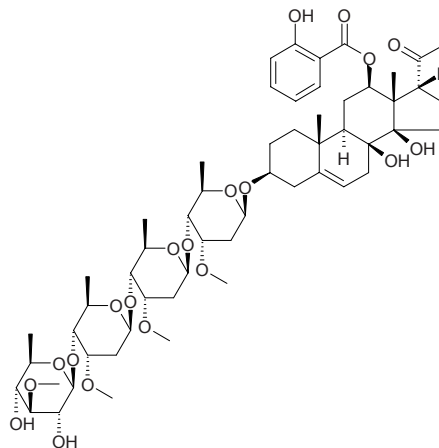
$C_{56}H_{84}O_{21}$  (1093.28). Amorphous powder,  $[\alpha]_D^{22} = +6.48^\circ$  ( $c = 1.06$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

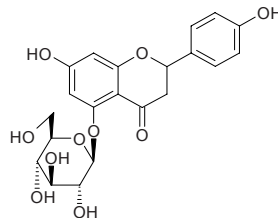
**19190 12-O-Salicyloyllineolon**

$C_{56}H_{84}O_{20}$  (1077.28). Amorphous powder,  $[\alpha]_D^{24} = -6.0^\circ$  ( $c = 0.39$ , MeOH).

Source: *Araujia sericifera* (root). Ref: 4377.

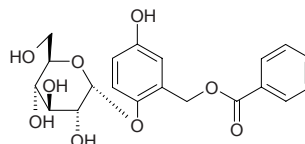
**19191 Salipurposide**

$C_{21}H_{22}O_{10}$  (434.40). mp 227°C. Source: SHUI YANG MU BAI PI *Salix purpurea*, TAO ZHI *Prunus persica*. Ref: 6.

**19192 Salireposide**

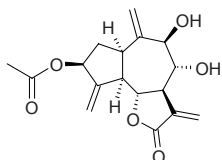
1-Benzoylmethyl-5-hydroxyphenyl- $\alpha$ -D-glucopyranoside  $C_{20}H_{22}O_9$  (406.39).

White powder,  $[\alpha]_D^{23} = -9.1^\circ$  ( $c = 0.21$ , MeOH). Pharm: Phosphodiesterase I inhibitor (*in vitro*,  $IC_{50} = (544 \pm 0.02) \mu\text{mol/L}$ , control Cysteine,  $IC_{50} = (274 \pm 0.07) \mu\text{mol/L}$ )<sup>[4093]</sup>; thymidine phosphorylase inhibitor (*in vitro*,  $IC_{50} = (354.2 \pm 5.7) \mu\text{mol/L}$ , control 7-Deazaxanthine,  $IC_{50} = (38.68 \pm 4.42) \mu\text{mol/L}$ )<sup>[4093]</sup>. Source: BEI JING YANG *Populus beijingensis* (bark: content = 0.05%)<sup>[5508]</sup>, DA QING YANG *Populus ussuriensis* (bark: content = 0.40%)<sup>[5508]</sup>, HE BEI YANG *Populus hopeiensis* (bark: content = 0.53%)<sup>[5508]</sup>, MAO BAI YANG *Populus tomentosa* (bark: content = 0.54%)<sup>[5508]</sup>, QING YANG *Populus cathayana* (bark: content = 0.22%)<sup>[5508]</sup>, SHAN YANG *Populus davidiana* (bark: content = 0.69%)<sup>[5508]</sup>, XIANG YANG *Populus koreana* (bark: content = 0.93%)<sup>[5508]</sup>, XIANG YE YANG *Populus adenopoda* (bark: content = 0.16%)<sup>[5508]</sup>, XIAO HEI YANG *Populus xiaohei* (bark: content = 0.09%)<sup>[5508]</sup>, XIAO QING YANG *Populus pseudo-simonii* (bark: content = 0.05%)<sup>[5508]</sup>, XIN JIANG YANG *Populus alba* var. *pyramidalis* (bark: content = 0.76%)<sup>[5508]</sup>, YIN BAI YANG *Populus alba* (bark: content = 0.80%)<sup>[5508]</sup>, ZHU ZI SHU *Symplocos racemosa*. Ref: 3374, 4093, 5508.

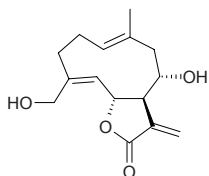


**19193 Salograviolide A**

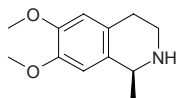
[145274-56-2] C<sub>17</sub>H<sub>20</sub>O<sub>6</sub> (320.35). **Pharm:** Antifungal (*Aspergillus niger*, MIC = 6.25 μg/mL; *Aspergillus ochraceus*, MIC = 3.13 μg/mL; *Penicillium ochrocloron*, MIC = 25 μg/mL; *Cladosporium cladosporioides*, MIC = 3.13 μg/mL; *Fusarium tricinctum*, MIC = 12.5 μg/mL; *Phomopsis helianthi*, MIC = 1.56 μg/mL, *Trichoderma viride*, inactive). **Source:** NI GU LA SHI CHE JU *Centaurea nicolai*. **Ref:** 2361.

**19194 Salonenolide**

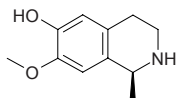
C<sub>15</sub>H<sub>20</sub>O<sub>4</sub> (264.33). **Pharm:** Antineoplastic; cytotoxic; insect antifeedant. **Source:** family Asteraceae spp. **Ref:** 658.

**19195 Salsolidine**

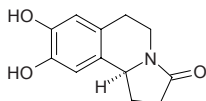
C<sub>12</sub>H<sub>17</sub>NO<sub>2</sub> (207.26). Lamellar crystals (water), mp 69~70°C, [α]<sub>D</sub> = -63° (ethanol), hydrochloride, white or yellowish crystals powder, mp 235~236°C, [α]<sub>D</sub><sup>18</sup> = -25 (water). **Pharm:** Antispasmodic (rat intestine, spasm caused by BaCl<sub>2</sub>); antihypertensive (inhibits vasomotorium in medulla); LD<sub>50</sub> (rat, ip) = 300 mg/kg. **Source:** ZHU MAO CAI *Salsola collina*. **Ref:** 661, 658.

**19196 Salsoline**

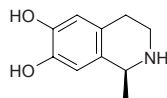
C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub> (193.25). Grass-yellow acicular crystals (methanol or ethanol), mp 221°C, [α]<sub>D</sub><sup>20</sup> = +34.5° (c = 1, 0.1 mol/L hydrochloric acid). **Pharm:** Analgesic; antihypertensive (inhibits vasomotorium in medulla); increases tolerance to anoxia (mus); LD<sub>50</sub> (mus, iv) = 140 mg/kg. **Source:** ZHU MAO CAI *Salsola collina*. **Ref:** 661.

**19197 Salsoline A**

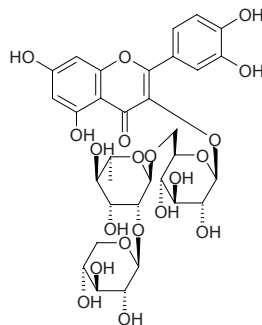
C<sub>12</sub>H<sub>13</sub>NO<sub>3</sub> (219.24). Light purple lamellar crystals (Me<sub>2</sub>CO), mp 257~259°C, [α]<sub>D</sub><sup>25</sup> = -82.6° (c = 0.1, MeOH). **Source:** ZHU MAO CAI *Salsola collina* (aerial parts). **Ref:** 4846.

**19198 (-)-Salsolinol**

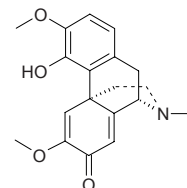
C<sub>10</sub>H<sub>13</sub>NO<sub>2</sub> (179.22). Unsteady hydrobromide, tiny cream-colored prismatic crystals (ethanol-ether), mp 195~198°C. **Pharm:** Analgesic; increases blood pressure and raises heart rate (rat, iv); monoamine oxidase inhibitor; neuromuscular blocker; stimulates atrium (gpg, *in vitro*). **Source:** FEN BA JIAO *Musa paradisiaca*, KE KE *Theobroma cacao*, NIU XIN FAN LI ZHI *Annona reticulata*, WU TOU *Aconitum carnichaeli*. **Ref:** 661.

**19199 Saluenin**

Cetin 3-*O*-β-*D*-xylopyranosyl-(1→2)-α-*L*-rhamnopyranosyl-(1→6)-β-*D*-glucopyranoside C<sub>32</sub>H<sub>38</sub>O<sub>20</sub> (742.65). Green-yellow powder. **Source:** NU JIANG SHAN CHA *Camellia saluenensis*. **Ref:** 889.

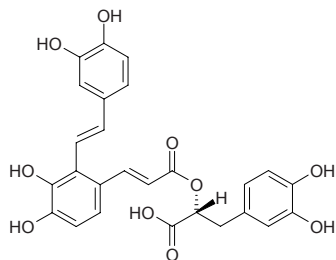
**19200 (-)-Salutaridine**

Sinoacutine [4090-18-0] C<sub>19</sub>H<sub>21</sub>NO<sub>4</sub> (327.38). mp 198°C. **Pharm:** Cytotoxic (*in vitro*, HepG<sub>2</sub>, IC<sub>50</sub> = 10.2 μg/mL; Hep2,2,15, IC<sub>50</sub> = 10.4 μg/mL)<sup>[3083]</sup>; analgesic (cat). **Source:** JU HUA HUANG LIAN *Corydalis pallida*, QING FENG TENG *Sinomenium acutum*, XI SHEN SHAN ZI JIN *Corydalis pallida* var. *tenuis*, XUE SAN SHU *Stephania dielsiana*, YOU GOU YING ZHAO *Artabotrys uncinatus* (root, stem, leaf), ZI HUA YU DENG CAO *Corydalis incisa*. **Ref:** 6, 658, 3083, 5501.

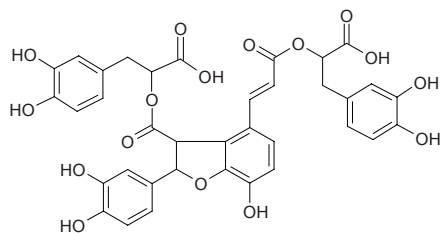


**19201 Salvianolic acid A**

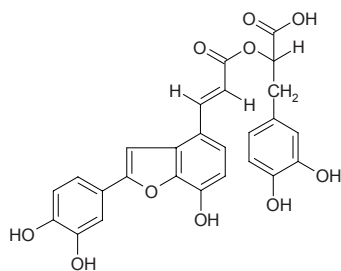
[96574-01-5] C<sub>26</sub>H<sub>22</sub>O<sub>10</sub> (494.46). Amorphous yellow compound,  $[\alpha]_D^{18} = +41^\circ$  ( $c = 0.099$ , ethanol). **Pharm:** Antineoplastic; free radical scavenger (against damage in mitochondria of rat hepatic and cardiac cells caused by oxygen free radicals); inhibits gastric secretion (rat); antioxidant (inhibits lipid peroxidation strongly, induced by vitamin C-nicotinamide ADP and Fe<sup>2+</sup>-cysteine in microsome of murine cerebral, hepatic and renal cells); antioxidant (*in vitro*, Cu<sup>2+</sup> induced LDL peroxidation assay, IC<sub>50</sub> = 0.59 μmol/L; control ProbucoI, IC<sub>50</sub> = 4.7 μmol/L)<sup>[4628]</sup>; H<sup>+</sup>, K<sup>+</sup>-ATPase inhibitor (inhibits secretion and ulcer, IC<sub>50</sub> = 0.52 μmol/L); pNPPase inhibitor (inhibits secretion and ulcer, IC<sub>50</sub> = 1.7 μmol/L); 5-lipoxygenase inhibitor (IC<sub>50</sub> = 0.38 μmol/L); aldose reductase inhibitor (eye lens, IC<sub>50</sub> = 9.80 nmol/L); protects against damage of cardiac muscle (rat, *in vitro*, caused by ischemia-perfusion); reduces learning disorder in mus caused by ischemia-perfusion; reverses action of potassium channel in myocardium membrane. **Source:** DAN SHEN *Salvia miltiorrhiza*, ZI DAN TENG *Tournefortia sarmentosa* (stem: yield = 0.00093%)<sup>[4628]</sup>. **Ref:** 658, 900, 4628.

**19202 Salvianolic Acid B**

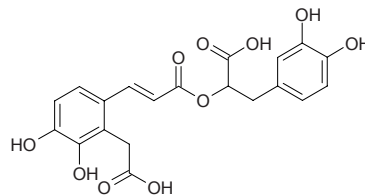
C<sub>36</sub>H<sub>33</sub>O<sub>16</sub> (718.63). Purity ≥ 96%. **Pharm:** Angiogenesis enhancer (*in vitro* murine SVR endothelial cells, up-regulation of vascular endothelial growth factor (VEGF) and its receptors VEGF-R1, VEGF-R2 gene)<sup>[5350]</sup>. **Source:** DAN SHEN *Salvia miltiorrhiza*. **Ref:** 5350.

**19203 Salvianolic acid C**

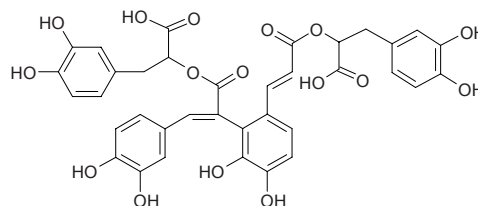
[115841-09-3] C<sub>26</sub>H<sub>20</sub>O<sub>10</sub> (492.44). Amorphous yellow compound,  $[\alpha]_D^{14} = +70^\circ$  ( $c = 0.12$ , ethanol). **Pharm:** Free radical scavenger; platelet aggregation inhibitor. **Source:** DAN SHEN *Salvia miltiorrhiza*. **Ref:** 900.

**19204 Salvianolic acid D**

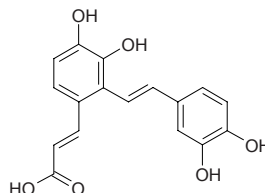
C<sub>20</sub>H<sub>18</sub>O<sub>10</sub> (418.36). **Source:** DAN SHEN *Salvia miltiorrhiza*. **Ref:** 660.

**19205 Salvianolic acid E**

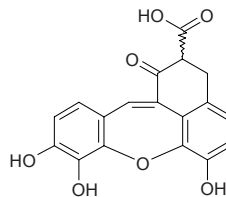
C<sub>36</sub>H<sub>30</sub>O<sub>16</sub> (718.63). **Source:** DAN SHEN *Salvia miltiorrhiza*. **Ref:** 660.

**19206 Salvianolic acid F**

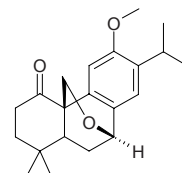
C<sub>17</sub>H<sub>14</sub>O<sub>6</sub> (314.3). **Pharm:** Antioxidant (*in vitro*, Cu<sup>2+</sup> induced LDL peroxidation assay, IC<sub>50</sub> = 5.44 μmol/L; control ProbucoI, IC<sub>50</sub> = 4.7 μmol/L)<sup>[4628]</sup>. **Source:** ZI DAN TENG *Tournefortia sarmentosa* (stem: yield = 0.00016%). **Ref:** 4628.

**19207 Salvianolic acid G**

C<sub>18</sub>H<sub>12</sub>O<sub>7</sub> (340.29). **Source:** DAN SHEN *Salvia miltiorrhiza*. **Ref:** 660.

**19208 Salvibracteone**

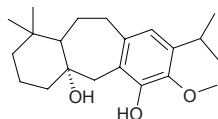
1-Oxo-12-methoxy-7,20-epoxyabieta-8,11,13-trienestructureforsalvibractone C<sub>21</sub>H<sub>28</sub>O<sub>3</sub> (328.46).  $[\alpha]_D = 0^\circ$  ( $c = 1.0$ , CHCl<sub>3</sub>). **Source:** BAO PIAN SHU WEI CAO *Salvia bracteata* (root). **Ref:** 2406.



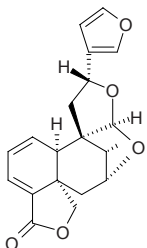


**19209 Salvicanol**

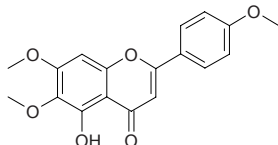
$C_{21}H_{32}O_3$  (332.49). Source: GAN XI SHU WEI CAO *Salvia przewalskii*, JIA NA LI SHU WEI CAO *Salvia canariensis*. Ref: 1521, 4538.

**19210 Salvifarcin**

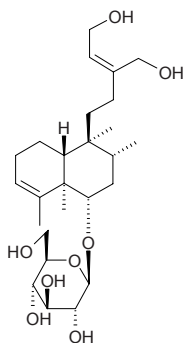
$C_{20}H_{20}O_5$  (340.38). Source: DUO SUI SHU WEI CAO *Salvia polystachya* (aerial parts). Ref: 3901.

**19211 Salvigenin**

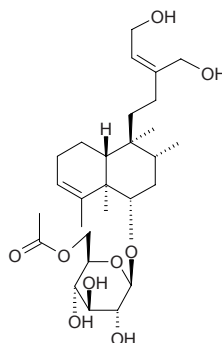
7-*O*-Methylpectolinarigenin; Psathyrotin [19103-54-9]  $C_{18}H_{16}O_6$  (328.32). Yellowish acicular crystals, mp 212–218°C (benzene–methanol). Pharm: Induces cell differentiation (mus myelocytic leukemia cells, strongly, in 50 μmol/L and 5 μmol/L, growing rate = 67% and 76% respectively, activity of macrophage the former > 10%); inhibits influenza virus sialoma (InRt = 8.2%); antioxidant inactive (ferric thiocyanate method, 0.5 mmol/L, peroxidation value = 100%, control BHA, 0.5 mmol/L, peroxidation value = 4.5%, control Vitamin E, 0.5 mmol/L, peroxidation value = 14.7%)<sup>[4508]</sup>. Source: CHI YANG *Alnus japonica*, JU PI *Citrus reticulata*, LIU JI NU *Artemisia anomala* (whole herb with flowers), MAO XU CAO *Clerodendranthus spicatus*, SHUI HU MAN *Clerodendron inerme*, TIAN SHE CAO *Lippia dulcis* (aerial parts), YANG SHI CAO *Achillea millefolium*. Ref: 660, 900, 4508.

**19212 Salvigreside A**

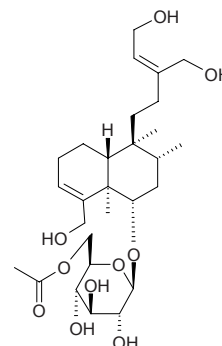
6 $\alpha$ -*O*-( $\beta$ -*D*-Glucopyranosyl)-15,16-dihydroxycleroda-3,13(14)-dien  $C_{26}H_{44}O_8$  (484.64). Colorless amorphous powder,  $[\alpha]_D^{20} = -17.8^\circ$  ( $c = 0.09$ , MeOH). Source: GE SHI SHU WEI CAO *Salvia greggii* (aerial parts). Ref: 3859.

**19213 Salvigreside B**

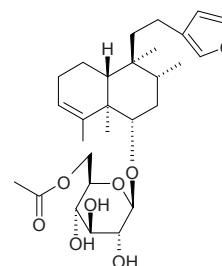
6 $\alpha$ -*O*-(6-*O*-Acetyl- $\beta$ -*D*-glucopyranosyl)-15,16-dihydroxycleroda-3,13(14)-dien  $C_{28}H_{46}O_9$  (526.67). Colorless amorphous powder,  $[\alpha]_D^{25} = -17.2^\circ$  ( $c = 0.61$ , MeOH). Source: GE SHI SHU WEI CAO *Salvia greggii* (aerial parts). Ref: 3859.

**19214 Salvigreside C**

6 $\alpha$ -*O*-(6-*O*-Acetyl- $\beta$ -*D*-glucopyranosyl)-15,16,18-trihydroxycleroda-3,13(14)-dien  $C_{28}H_{46}O_{10}$  (542.67). Colorless amorphous powder,  $[\alpha]_D^{25} = -12.5^\circ$  ( $c = 0.28$ , MeOH). Source: GE SHI SHU WEI CAO *Salvia greggii* (aerial parts). Ref: 3859.

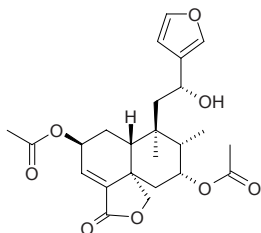
**19215 Salvigreside D**

6 $\alpha$ -*O*-(6-*O*-Acetyl- $\beta$ -*D*-glucopyranosyl)-15,16-epoxycleroda-3,13(16),14-trien  $C_{28}H_{42}O_8$  (506.64). Colorless amorphous powder,  $[\alpha]_D^{25} = -16.1^\circ$  ( $c = 0.74$ , MeOH). Source: GE SHI SHU WEI CAO *Salvia greggii* (aerial parts). Ref: 3859.

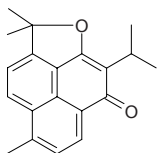


**19216 Salvigresin**

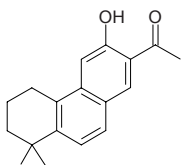
$C_{24}H_{30}O_8$  (446.50). Colorless prisms [*n*-hexane:EtOAc = 1:1], mp 242~245°C,  $[\alpha]_D^{25} = -118.6^\circ$  ( $c = 0.22$ ,  $CHCl_3$ ). Source: GE SHI SHU WEI CAO *Salvia greggii*. Ref: 3413.

**19217 Salvilenone**

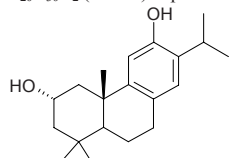
$C_{20}H_{20}O_2$  (292.38). mp 141°C. Source: DAN SHEN *Salvia miltiorrhiza*. Ref: 2090.

**19218 Salvinone**

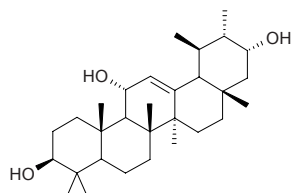
$C_{18}H_{20}O_2$  (268.36). Source: DAN SHEN *Salvia miltiorrhiza*. Ref: 660.

**19219 Salviol**

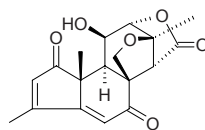
$C_{20}H_{30}O_2$  (302.46). mp 108°C. Source: DAN SHEN *Salvia miltiorrhiza*. Ref: 2.

**19220 Salvistamineol**

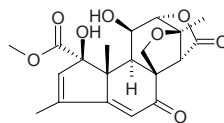
3β,11α,21α-Trihydroxyurs-12-ene  $C_{30}H_{50}O_3$  (458.73). mp 268~270°C,  $[\alpha]_D^{25} = +44^\circ$  ( $c = 0.16$ ,  $CHCl_3$ ). Pharm: Cytotoxic (A2780,  $IC_{50} = 21.0\mu g/mL$ , control Actinomycin D,  $IC_{50} = 0.001\mu g/mL$ ; LNCaP,  $IC_{50} > 20\mu g/mL$ ; KB,  $IC_{50} > 20\mu g/mL$ ; Col2,  $IC_{50} > 20\mu g/mL$ ; LU1,  $IC_{50} > 20\mu g/mL$ ). Source: XIONG RUI ZHUANG SHU WEI CAO *Salvia staminea*. Ref: 5400.

**19221 Samaderine A**

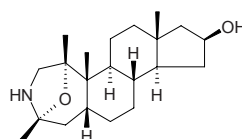
$C_{18}H_{18}O_6$  (330.34). Pharm: Cytotoxic (leukemia). Source: MA DAO HUANG LIAN SHU *Samadera madagascariensis* (leaf), family Simarubaceae spp. Ref: 658, 5334.

**19222 Samaderolactone A**

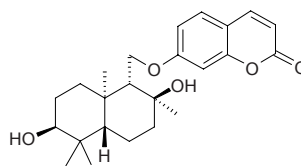
$C_{20}H_{22}O_8$  (390.39). Yellow amorphous solid,  $[\alpha]_D = +14^\circ$  ( $c = 0.066$ ,  $CHCl_3$ ). Source: MA DAO HUANG LIAN SHU *Samadera madagascariensis* (leaf). Ref: 5334.

**19223 Samandarine**

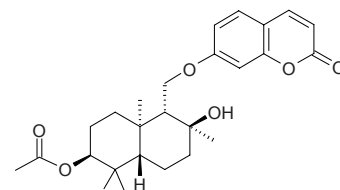
[467-51-6]  $C_{19}H_{31}NO_2$  (305.46). Pharm: Causes local paralysis; increases blood pressure; neurotoxin; LD (rbt) =  $1\mu g/kg$ . Source: BAN YUAN *Necturus maculosus*. Ref: 658.

**19224 Samarcandin**

$C_{24}H_{32}O_5$  (400.52). Source: A WEI *Ferula assafoetida* (root). Ref: 5243.

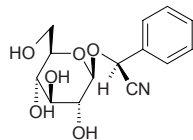
**19225 Samarcandin acetate**

$C_{26}H_{34}O_6$  (442.56). Source: *Ferula pseudooreoselinum*. Ref: 660.

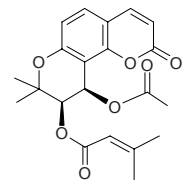


**19226 Sambunigrin**

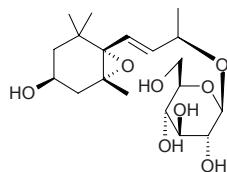
$C_{14}H_{17}NO_6$  (295.29). **Pharm:** Plant growth stimulatory or inhibitory activity (radicle length: *Lactuca sativa*,  $1\mu\text{mol/L}$ , StRt or InRt < 10%,  $10\mu\text{mol/L}$ , InRt = (10~30)%,  $100\mu\text{mol/L}$ , InRt = (31~60)%,  $1\text{mmol/L}$ , InRt > 61%; *Raphanus sativus*,  $1\mu\text{mol/L}$ , StRt = (10~30)%,  $10\mu\text{mol/L}$ , StRt = (10~30)%,  $100\mu\text{mol/L}$ , StRt or InRt < 10%,  $1\text{mmol/L}$ , InRt > 61%; *Allium cepa*,  $1\mu\text{mol/L}$ , StRt or InRt < 10%,  $10\mu\text{mol/L}$ , InRt = (10~30)%,  $100\mu\text{mol/L}$ , InRt = (31~60)%,  $1\text{mmol/L}$ , InRt = (31~60)%). **Source:** XI YANG JIE GU MU *Sambucus nigra*. **Ref:** 5217.

**19227 Samidin**

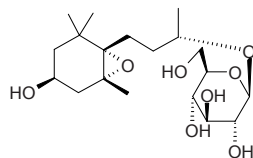
[477-33-8]  $C_{21}H_{22}O_7$  (386.41). Prismatic crystals(ethanol), mp 135~137°C,  $[\alpha]_D^{20} = +26^\circ$  ( $c = 1.0$ , chloroform),  $+100^\circ$  ( $c = 1.0$ , dioxane). **Pharm:** Coronary vasodilator; LD<sub>50</sub> (rat, orl) = 1469mg/kg. **Source:** CHI A MI *Ammi visnaga*, XUAN NIU XIE HAO *Seseli tortuosum*. **Ref:** 661.

**19228 Sammangaoside A**

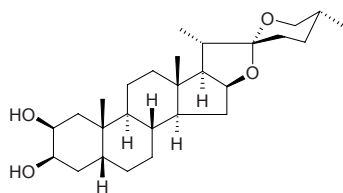
(3*S*,5*R*,6*S*,7*E*,9*S*)-3-Hydroxy-5,6-epoxy- $\beta$ -ionyl-9-*O*- $\beta$ -glucopyranoside  $C_{19}H_{32}O_8$  (388.46). Amorphous,  $[\alpha]_D^{20} = -99.1^\circ$  ( $c = 0.8$ , MeOH). **Source:** KU LANG SHU *Clerodendrum inerme* (aerial parts). **Ref:** 5186.

**19229 Sammangaoside B**

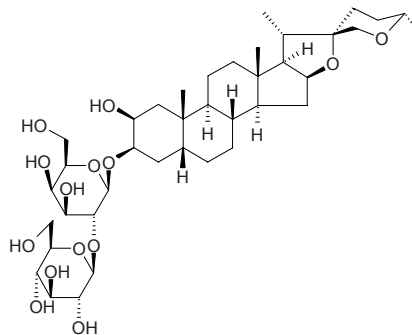
(3*S*,5*R*,6*S*,9*R*)-3-Hydroxy-5,6-epoxy- $\beta$ -dihydroionyl-9-*O*- $\beta$ -glucopyranoside  $C_{19}H_{34}O_8$  (390.48). Amorphous,  $[\alpha]_D^{20} = -35.0^\circ$  ( $c = 0.4$ , MeOH). **Source:** KU LANG SHU *Clerodendrum inerme* (aerial parts). **Ref:** 5186.

**19230 Samogenin**

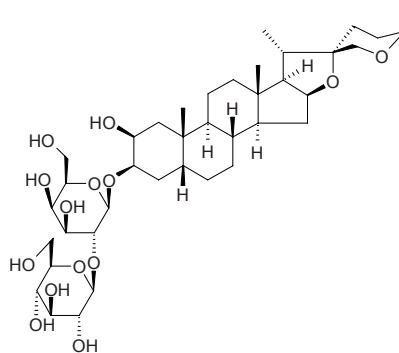
$C_{27}H_{44}O_4$  (432.65). mp 212°C. **Source:** *Agave yuccaeifolia*. **Ref:** 2503.

**19231 (25*R*)-Samogenin 3-*O*- $\beta$ -*D*-glucopyranosyl (1→2)- $\beta$ -*D*-galactopyranoside**

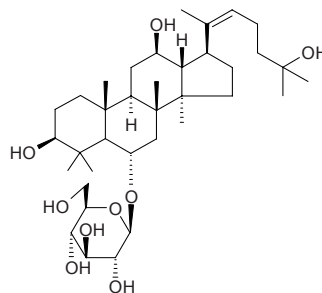
$C_{39}H_{64}O_{14}$  (756.94). White amorphous powder, mp 270~272°C. **Pharm:** Platelet aggregation inhibitor. **Source:** GUA LOU *Trichosanthes kirilowii*, XIE BAI *Allium macrostemon*. **Ref:** 2466.

**19232 (25*S*)-Samogenin 3-*O*- $\beta$ -*D*-glucopyranosyl (1→2)- $\beta$ -*D*-galactopyranoside**

$C_{39}H_{64}O_{14}$  (756.94). White amorphous powder. **Pharm:** Platelet aggregation inhibitor. **Source:** GUA LOU *Trichosanthes kirilowii*, XIE BAI *Allium macrostemon*. **Ref:** 2466.

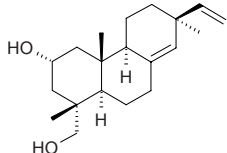
**19233 Sanchinoside B<sub>1</sub>**

Notoginsenoside B<sub>1</sub>  $C_{36}H_{62}O_9$  (638.89). White powder, mp 144~146°C. **Source:** SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. **Ref:** 28, 2762

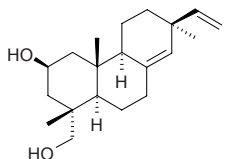


**19234 ent-8(14),15-Sandaracopimaradiene-2 $\alpha$ ,18-diol**

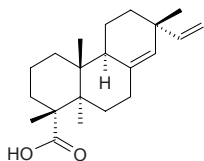
$C_{20}H_{32}O_2$  (304.48). Colorless crystals (methanol), mp 182°C,  $[\alpha]_D = +8.77^\circ$  ( $c = 0.001$ ,  $CHCl_3$ ). **Pharm:** Antileishmanial (*Leishmania donovani* promastigotes,  $IC_{50} = 16.8\mu\text{mol/L}$ , SI = 1.12, control Pentamidine,  $IC_{50} = 0.40\mu\text{mol/L}$ , SI = 0.42, amastigotes,  $IC_{50} > 90\mu\text{mol/L}$ , control Pentostam,  $IC_{50} = 9.75\mu\text{g/mL}$ ); antimalarial (*Plasmodium falciparum* K1,  $IC_{50} = 166\mu\text{mol/L}$ , SI = 0.29, control Chloroquine,  $IC_{50} = 0.59\mu\text{mol/L}$ , SI = 272.20); antitrypanosomal (*Trypanosoma brucei brucei* blood stream trypomastigotes,  $IC_{50} > 30\mu\text{mol/L}$ , control Pentamidine,  $IC_{50} = 0.00034\mu\text{mol/L}$ ); cytotoxic (KB cells,  $IC_{50} = 48\mu\text{mol/L}$ , control Pentamidine,  $IC_{50} = 0.17\mu\text{mol/L}$ ). **Source:** *Guarea rhopalocarpa* (leaf). **Ref:** 5127.

**19235 ent-8(14),15-Sandaracopimaradiene-2 $\beta$ ,18-diol**

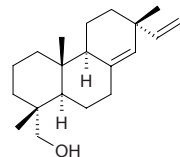
$C_{20}H_{32}O_2$  (304.48). Colorless crystals (methanol), mp 156°C,  $[\alpha]_D = +11.36^\circ$  ( $c = 0.001$ ,  $CHCl_3$ ). **Pharm:** Antileishmanial (*Leishmania donovani* promastigotes,  $IC_{50} = 49.7\mu\text{mol/L}$ , SI = 1.52, control Pentamidine,  $IC_{50} = 0.40\mu\text{mol/L}$ , SI = 0.42, amastigotes,  $IC_{50} > 90\mu\text{mol/L}$ , control Pentostam,  $IC_{50} = 9.75\mu\text{g/mL}$ ); antimalarial (*Plasmodium falciparum* K1,  $IC_{50} = 104\mu\text{mol/L}$ , SI = 0.73; control Chloroquine,  $IC_{50} = 0.59\mu\text{mol/L}$ , SI = 272.20); antitrypanosomal (*Trypanosoma brucei brucei* blood stream trypomastigotes,  $IC_{50} > 30\mu\text{mol/L}$ , control Pentamidine,  $IC_{50} = 0.00034\mu\text{mol/L}$ ); cytotoxic (KB cells,  $IC_{50} = 75.8\mu\text{mol/L}$ , control Pentamidine,  $IC_{50} = 0.17\mu\text{mol/L}$ ). **Source:** *Guarea rhopalocarpa* (leaf). **Ref:** 5127.

**19236 Sandaracopimaric acid**

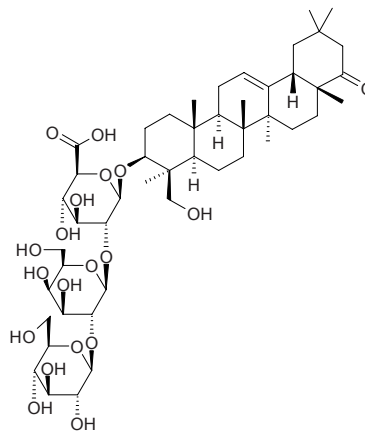
Cryptopimaric acid  $C_{20}H_{30}O_2$  (302.46). mp 170–172°C (MeOH– $CHCl_3$ ),  $[\alpha]_D^{25} = -18.1^\circ$  ( $c = 0.95$ ,  $CHCl_3$ ); mp 165–168°C,  $[\alpha]_D^{25} = -19.8^\circ$ . **Pharm:** Cytotoxic (EBV-EA inhibitor TPA-induced, mol ratio/TPA = 1000, InRt = 100%)<sup>[5352]</sup>. **Source:** QI LIN JIE *Daemonorops draco*, RI BEN XIANG BAI JING PI *Thuja standishii*. **Ref:** 660, 5352.

**19237 Sandaracopimarinol**

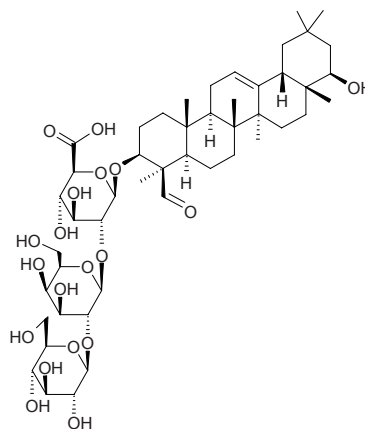
$C_{20}H_{32}O$  (288.48). mp 63–65°C. **Source:** LIU SHAN *Cryptomeria fortunei*. **Ref:** 6.

**19238 Sandosaponin A**

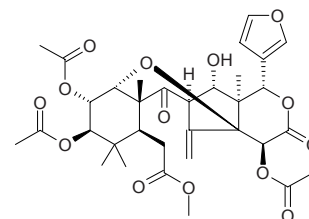
Soyasaponin Bd  $C_{48}H_{76}O_{19}$  (957.12). Colorless crystals (water–MeOH), mp 200–201°C,  $[\alpha]_D^{23} = -5.8^\circ$  ( $c = 0.8$ , MeOH). **Pharm:** Antihistamine (inhibits histamine release, rat peritoneum oozing cells, caused by antigen-antibody reaction,  $10\mu\text{mol/L}$ , InRt = 58.2%). **Source:** BAI FAN DOU *Phaseolus vulgaris*. **Ref:** 990.

**19239 Sandosaponin B**

$C_{48}H_{76}O_{19}$  (957.12). Colorless thin crystals (water–MeOH), mp 212–213°C,  $[\alpha]_D^{28} = +34.8^\circ$  ( $c = 0.3$ , methanol). **Pharm:** Antihistamine (inhibits histamine release, rat peritoneum oozing cells, caused by antigen-antibody reaction,  $10\mu\text{mol/L}$ , InRt = 59.4%). **Source:** BAI FAN DOU *Phaseolus vulgaris*. **Ref:** 990.

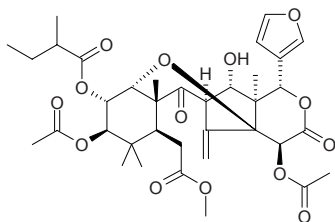
**19240 Sandrapin A**

$C_{33}H_{40}O_{14}$  (660.68). Colorless needles, mp 252–255°C,  $[\alpha]_D^{25} = +6.6^\circ$  ( $c = 1.1$ ,  $CHCl_3$ ). **Source:** YIN DU SHAN DAO LIAN YE *Sandoricum koetjape* [Syn. *Sandoricum indicum*]. **Ref:** 2585, 3494.

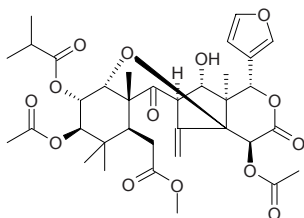


**19241 Sandrapin B**

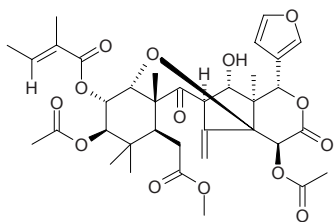
$C_{36}H_{46}O_{14}$  (702.76). Colorless needles, mp 210~213°C,  $[\alpha]_D^{25} = +6.0^\circ$  ( $c = 0.8$ ,  $CHCl_3$ ). Source: YIN DU SHAN DAO LIAN YE *Sandoricum koetjape* [Syn. *Sandoricum indicum*]. Ref: 2585, 3494.

**19242 Sandrapin C**

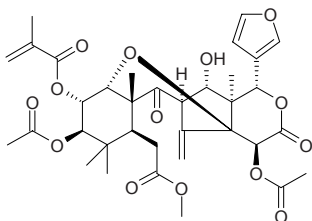
$C_{35}H_{44}O_{14}$  (688.73). Colorless needles, mp 205~208°C,  $[\alpha]_D^{25} = +7.0^\circ$  ( $c = 0.8$ ,  $CHCl_3$ ). Source: YIN DU SHAN DAO LIAN YE *Sandoricum koetjape* [Syn. *Sandoricum indicum*]. Ref: 2585, 3494.

**19243 Sandrapin D**

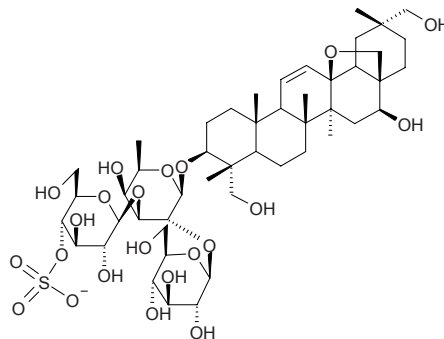
$C_{36}H_{44}O_{14}$  (700.74). Colorless needles, mp 209~211°C,  $[\alpha]_D = +12.5^\circ$  ( $c = 0.7$ , MeOH). Source: YIN DU SHAN DAO LIAN YE *Sandoricum koetjape* [Syn. *Sandoricum indicum*]. Ref: 2585.

**19244 Sandrapin E**

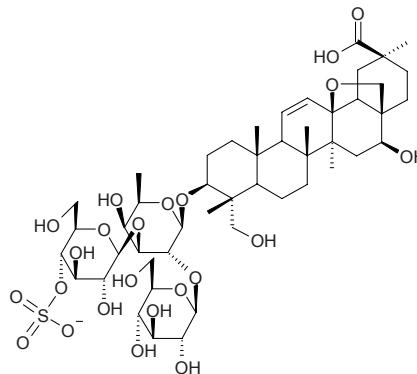
$C_{35}H_{42}O_{14}$  (686.72). Colorless needles, mp 209~210°C,  $[\alpha]_D = +11.5^\circ$  ( $c = 0.4$ , MeOH). Source: YIN DU SHAN DAO LIAN YE *Sandoricum koetjape* [Syn. *Sandoricum indicum*]. Ref: 2585.

**19245 Sandrosaponin II**

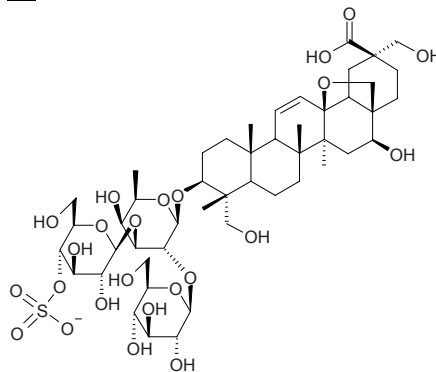
13,28-Epoxy-3 $\beta$ ,16 $\beta$ ,23,29-tetrahydroxyolean-11-en-3- $\beta$ -yl  $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-[4-O-sulfo- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)] $\beta$ -D-fucopyranoside  $C_{48}H_{77}O_{22}S^-$  (1038.20). Amorphous powder,  $[\alpha]_D = +47.8^\circ$  ( $c = 0.2$ , MeOH). Source: JIAN YING CHAI HU *Bupleurum rigidum* (aerial parts). Ref: 3985.

**19246 Sandrosaponin III**

13,28-Epoxy-3 $\beta$ ,16 $\beta$ ,23-trihydroxyolean-11-en-3- $\beta$ -yl-30-oic acid  $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-[4-O-sulfo- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)] $\beta$ -D-fucopyranoside  $C_{48}H_{75}O_{23}S^-$  (1052.18). Amorphous powder,  $[\alpha]_D = +53.5^\circ$  ( $c = 0.18$ , MeOH). Source: JIAN YING CHAI HU *Bupleurum rigidum* (aerial parts). Ref: 3985.

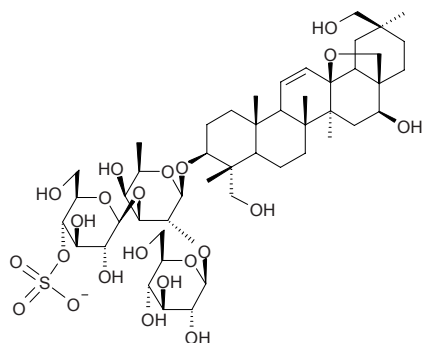
**19247 Sandrosaponin IV**

13,28-Epoxy-3 $\beta$ ,16 $\beta$ ,23,29-tetrahydroxyolean-11-en-3- $\beta$ -yl 30-oic acid  $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-[4-O-sulfo- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)] $\beta$ -D-fucopyranoside  $C_{48}H_{75}O_{24}S^-$  (1068.18). Amorphous powder,  $[\alpha]_D = +48.5^\circ$  ( $c = 0.1$ , MeOH). Source: JIAN YING CHAI HU *Bupleurum rigidum* (aerial parts). Ref: 3985.

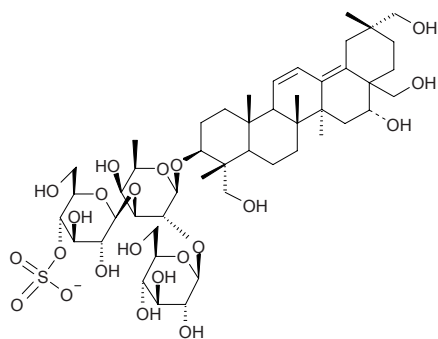


**19248 Sandrosaponin V**

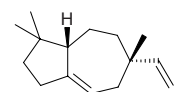
13,28-Epoxy-3 $\beta$ ,16 $\beta$ ,23,30-tetrahydroxyolean-11-en-3 $\beta$ -yl  $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-[4-O-sulfo- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)]- $\beta$ -D-fucopyranoside  
 $C_{48}H_{77}O_{22}S^-$  (1038.20). Amorphous powder,  $[\alpha]_D^{25} = +30.6^\circ$  ( $c = 0.07$ , MeOH).  
 Source: JIAN YING CHAI HU *Bupleurum rigidum* (aerial parts). Ref: 3985.

**19249 Sandrosaponin VI**

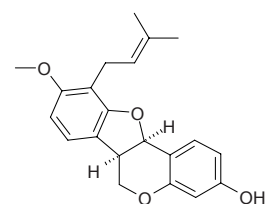
3 $\beta$ ,16 $\alpha$ ,23,28,29-Pentahydroxy-11,13(18)-oleanedien-3 $\beta$ -yl  $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-[4-O-sulfo- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)]- $\beta$ -D-fucopyranoside  
 $C_{48}H_{77}O_{22}S^-$  (1038.20). Amorphous powder,  $[\alpha]_D^{25} = +17.5^\circ$  ( $c = 0.14$ , MeOH).  
 Source: JIAN YING CHAI HU *Bupleurum rigidum* (aerial parts). Ref: 3985.

**19250 (+)-Sandvicene**

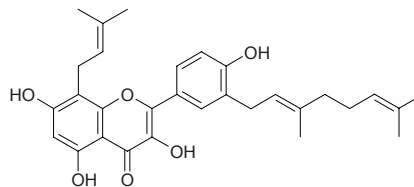
$C_{15}H_{24}$  (204.36). Source: YE TAI *Trocholejeunea sandvicensis*. Ref: 735.

**19251 Sandwicensin**

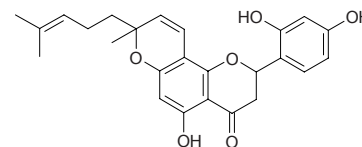
[74515-46-1]  $C_{21}H_{22}O_4$  (338.41). Source: HUI CI TONG *Erythrina glauca*.  
 Ref: 2268.

**19252 Sanggenol B**

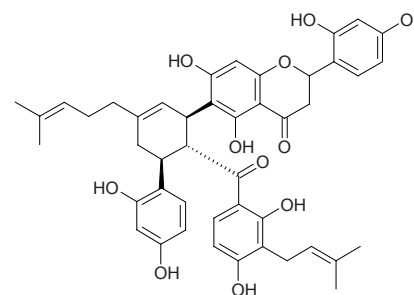
$C_{30}H_{34}O_6$  (490.60). Source: HUA SANG *Morus cathayana*. Ref: 2513.

**19253 Sanggenol L**

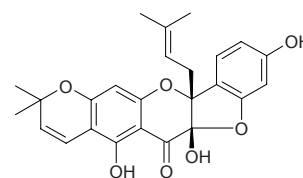
$C_{25}H_{26}O_6$  (422.48). A diastereomeric mixture: pale yellow amorphous solid,  
 $[\alpha]_D^{22} = -18^\circ$  ( $c = 0.1$ , MeOH). Source: MENG SANG *Morus mongolica*  
 (root cortex: yield = 0.00018%semi-dw). Ref: 3034.

**19254 Sanggenol M**

$C_{45}H_{46}O_{11}$  (762.86). A diastereomeric mixture: pale yellow amorphous solid,  
 $[\alpha]_D^{22} = -126^\circ$  ( $c = 0.1$ , MeCN). Pharm: Cytotoxic (racemic mixture, HSC-2,  
 $CC_{50} = 13\mu\text{mol/L}$ ,  $10\mu\text{g/mL}$ ; HSG,  $CC_{50} = 13\mu\text{mol/L}$ ,  $10\mu\text{g/mL}$ ; HGF,  $CC_{50} =$   
 $32\mu\text{mol/L}$ ,  $24\mu\text{g/mL}$ )<sup>[3034]</sup>. Source: MENG SANG *Morus mongolica* (root  
 cortex: yield = 0.0014%semi-dw). Ref: 3034.

**19255 Sanggenon A**

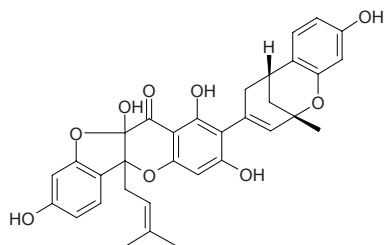
$C_{25}H_{24}O_7$  (436.47). Pharm: Protein kinase C inhibitor (inhibits protein kinase  
 C of teleocidin, a promotor of cancer, with dose-dependent relationship)<sup>[2513]</sup>;  
 ornithine decarboxylase inhibitor (inhibits reducing activity of ornithine  
 decarboxylase, ODC, a promotor of cancer)<sup>[2513]</sup>; cytotoxic (HSC-2,  $CC_{50} =$   
 $53\mu\text{mol/L}$ ,  $23\mu\text{g/mL}$ ; HSG,  $CC_{50} = 46\mu\text{mol/L}$ ,  $20\mu\text{g/mL}$ ; HGF,  $CC_{50} =$   
 $110\mu\text{mol/L}$ ,  $49\mu\text{g/mL}$ )<sup>[3034]</sup>. Source: HUA SANG *Morus cathayana* (root  
 cortex.), SANG BAI PI *Morus alba*. Ref: 660, 1521, 2513, 3034.



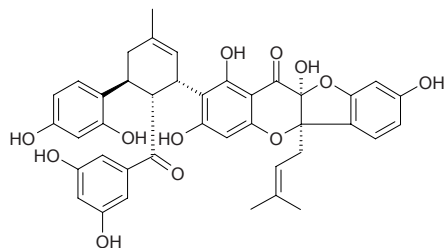
**19256 Sanggenon B**

$C_{33}H_{30}O_9$  (570.60). **Pharm:** Cytotoxic (HSC-2,  $CC_{50} = 39\mu\text{mol/L}$ ,  $22\mu\text{g/mL}$ ; HSG,  $CC_{50} = 47\mu\text{mol/L}$ ,  $27\mu\text{g/mL}$ ; HGF,  $CC_{50} = 98\mu\text{mol/L}$ ,  $56\mu\text{g/mL}$ )<sup>[3034]</sup>.

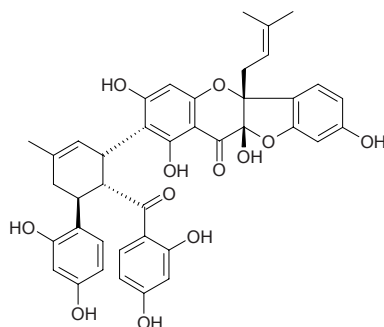
**Source:** HUA SANG *Morus cathayana* (root cortex), SANG BAI PI *Morus alba*. **Ref:** 660, 1521, 3034.

**19257 Sanggenon C**

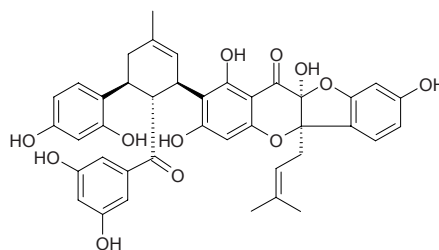
$C_{40}H_{36}O_{12}$  (708.73). **Pharm:** Antimicrobial (*Staphylococcus aureus*, *Bacillus subtilis*, *Trichophyton mentagrophytes*, *Pyricularia oryzae*); antihypertensive; cytotoxic (HSC-2,  $CC_{50} = 18\mu\text{mol/L}$ ,  $13\mu\text{g/mL}$ ; HSG,  $CC_{50} = 23\mu\text{mol/L}$ ,  $16\mu\text{g/mL}$ ; HGF,  $CC_{50} = 42\mu\text{mol/L}$ ,  $30\mu\text{g/mL}$ )<sup>[3034]</sup>. **Source:** HUA SANG *Morus cathayana* (root cortex), SANG BAI PI *Morus alba* (root cortex: content scope of 10 origins = 0.020%–0.55%, mean content = 0.130%)<sup>[5508]</sup>. **Ref:** 658, 3034, 5508.

**19258 Sanggenon C<sub>1</sub>**

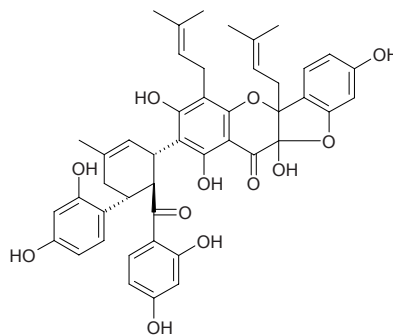
$C_{40}H_{36}O_{12}$  (708.73). **Source:** HUA SANG *Morus cathayana* (root cortex). **Ref:** 5169.

**19259 Sanggenon D**

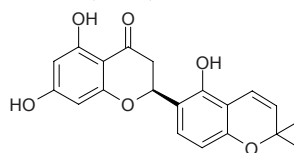
[81422-93-7]  $C_{40}H_{36}O_{12}$  (708.73). Amorphous powder, mp 175–185°C,  $[\alpha]_D^{26} = -145^\circ$  ( $c = 0.17$ , methanol). **Pharm:** Antimicrobial (*Staphylococcus aureus*, *Bacillus subtilis*, *Trichophyton mentagrophytes* and *Pyricularia oryzae*); inhibits teleocidin; protein kinase C inhibitor; antihypertensive (rat, iv, 0.5–2.0mg/kg); inhibits metabolism of arachidonic acid (in rat platelet aggregation, inhibits formation of HHT  $IC_{50} = 43.3\mu\text{mol/L}$  and thromboxane  $B_2$ ,  $IC_{50} = 48.3\mu\text{mol/L}$ ); cAMP phosphodiesterase inhibitor ( $IC_{50} = 26\mu\text{mol/L}$ ); anti-inflammatory (NO production inhibitor)<sup>[4415]</sup>; cytotoxic (HSC-2,  $CC_{50} = 44\mu\text{mol/L}$ ,  $31\mu\text{g/mL}$ ; HSG,  $CC_{50} = 64\mu\text{mol/L}$ ,  $45\mu\text{g/mL}$ ; HGF,  $CC_{50} = 140\mu\text{mol/L}$ ,  $100\mu\text{g/mL}$ )<sup>[3034]</sup>. **Source:** HUA SANG *Morus cathayana* (root cortex), SANG BAI PI *Morus alba*. **Ref:** 658, 900, 3034, 4415.

**19260 Sanggenon E**

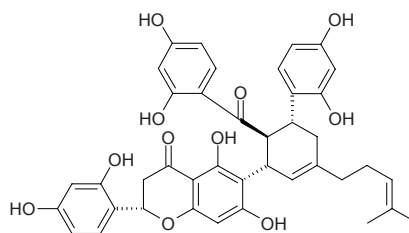
$C_{45}H_{44}O_{12}$  (776.85). **Source:** SANG BAI PI *Morus alba*. **Ref:** 660.

**19261 Sanggenon F**

$C_{20}H_{18}O_6$  (354.36). **Source:** SANG BAI PI *Morus alba*. **Ref:** 660.

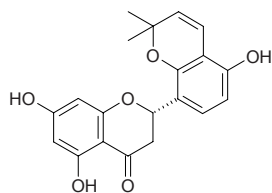
**19262 Sanggenon G**

Sanggenone G [85698-31-3]  $C_{40}H_{38}O_{11}$  (694.74). Amorphous powder,  $[\alpha]_D^{16} = -277^\circ$  ( $c = 0.93$ , MeOH). **Source:** MENG SANG *Morus mongolica* (root cortex: yield = 0.0018% semi-dw), SANG BAI PI *Morus alba*. **Ref:** 660, 2513, 3034.

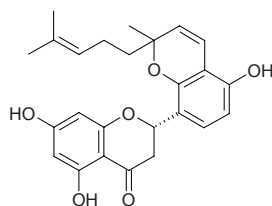


**19263 Sanggenon H**

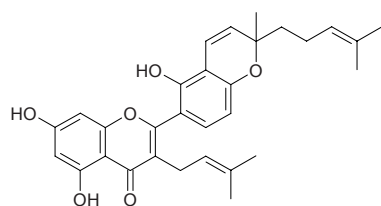
$C_{20}H_{18}O_6$  (354.36). Source: SANG BAI PI *Morus alba*. Ref: 660.

**19264 Sanggenon I**

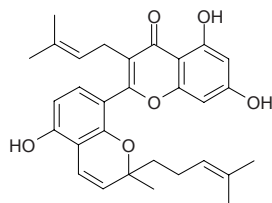
$C_{25}H_{26}O_6$  (422.48). Source: SANG BAI PI *Morus alba*. Ref: 660.

**19265 Sanggenon J**

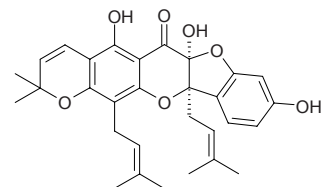
$C_{30}H_{32}O_6$  (488.59). Source: SANG BAI PI *Morus alba*, *Morus* sp. Ref: 660, 2513.

**19266 Sanggenon K**

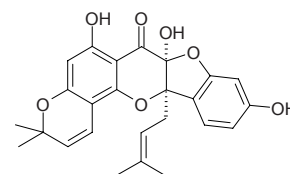
$C_{30}H_{32}O_6$  (488.59). Source: SANG BAI PI *Morus alba*. Ref: 660.

**19267 Sanggenon L**

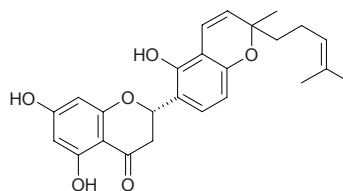
$C_{30}H_{32}O_7$  (504.59). Source: SANG BAI PI *Morus alba*. Ref: 660.

**19268 Sanggenon M**

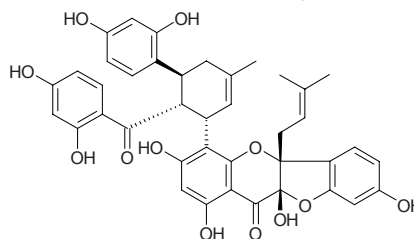
$C_{25}H_{24}O_7$  (436.47). Pharm: Cytotoxic (HSC-2,  $CC_{50}$  = 48  $\mu$ mol/L, 21  $\mu$ g/mL; HSG,  $CC_{50}$  = 53  $\mu$ mol/L, 23  $\mu$ g/mL; HGF,  $CC_{50}$  = 110  $\mu$ mol/L, 49  $\mu$ g/mL)<sup>[3034]</sup>. Source: HUA SANG *Morus cathayana* (root cortex), SANG BAI PI *Morus alba*. Ref: 660, 1521, 3034.

**19269 Sanggenon N**

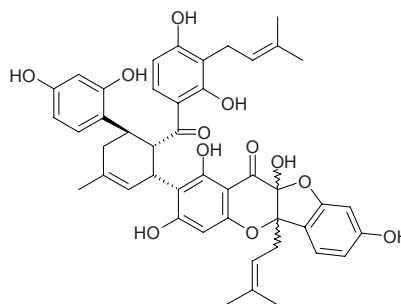
$C_{25}H_{26}O_6$  (422.48). Source: SANG BAI PI *Morus alba*. Ref: 660.

**19270 Sanggenon O**

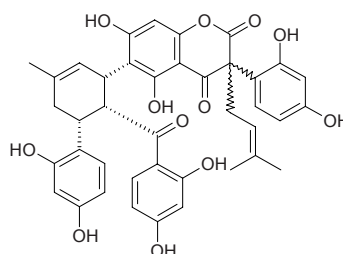
$C_{40}H_{36}O_{12}$  (708.73). Source: HUA SANG *Morus cathayana* (root cortex), SANG BAI PI *Morus alba*. Ref: 660, 5169.

**19271 Sanggenon P**

$C_{45}H_{44}O_{12}$  (776.85). Source: SANG BAI PI *Morus alba*. Ref: 660.

**19272 Sanggenon Q**

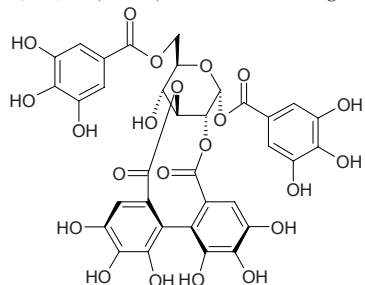
$C_{40}H_{36}O_{12}$  (708.73). Source: MENG SANG *Morus mongolica*. Ref: 2513.



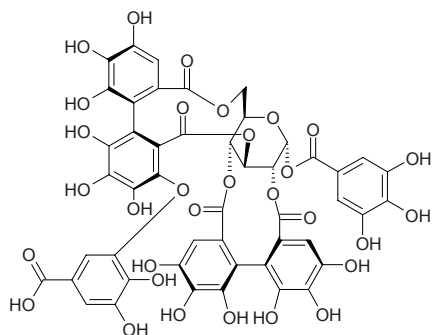


**19273 Sanguiin H<sub>1</sub>**

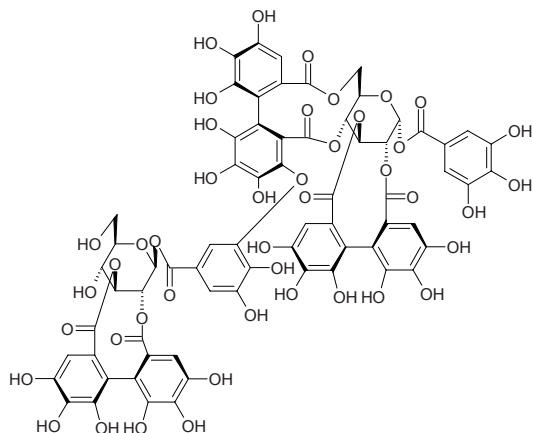
$C_{34}H_{26}O_{22}$  (786.57). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

**19274 Sanguiin H<sub>2</sub>**

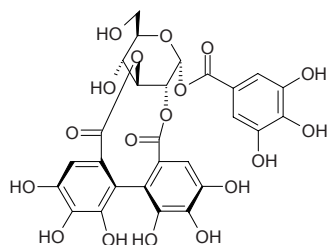
$C_{48}H_{32}O_{31}$  (1104.77). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

**19275 Sanguiin H<sub>3</sub>**

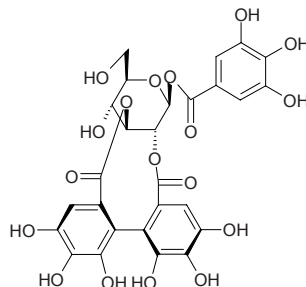
$C_{68}H_{48}O_{44}$  (1569.11). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

**19276 Sanguiin H<sub>4</sub>**

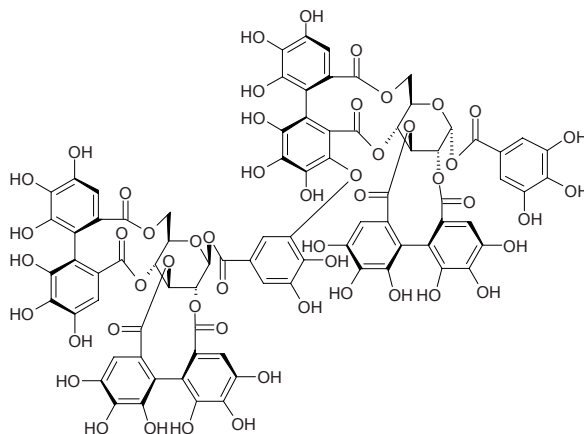
$C_{27}H_{22}O_{18}$  (634.47). Source: DI YU *Sanguisorba officinalis*, JIN YING ZI *Rosa laevigata*. Ref: 660.

**19277 Sanguiin H<sub>5</sub>**

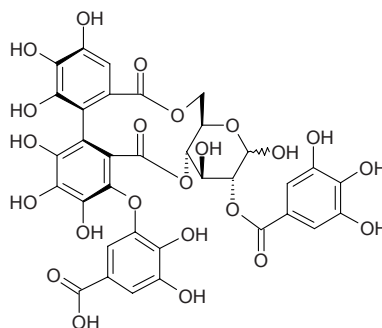
Isostrictinin  $C_{27}H_{22}O_{18}$  (634.47). Pharm: Antioxidant (SOD-like activity,  $EC_{50} = 47.3\mu\text{mol/L}$ , control Gallic acid,  $EC_{50} = 31.7\mu\text{mol/L}$ , *L*-Ascorbic acid,  $EC_{50} = 34.6\mu\text{mol/L}$ )<sup>[3408]</sup>; antioxidant (DPPH free radical scavenger,  $EC_{50} = 1.73\mu\text{mol/L}$ , control Gallic acid,  $EC_{50} = 5.88\mu\text{mol/L}$ , *L*-Ascorbic acid,  $EC_{50} = 6.25\mu\text{mol/L}$ )<sup>[3408]</sup>. Source: BAN LI *Castanea mollissima* (leaf), DI YU *Sanguisorba officinalis*, HU TAO REN *Juglans regia*, MEI GUI HUA *Rosa rugosa*. Ref: 660, 3408.

**19278 Sanguiin H<sub>6</sub>**

$C_{82}H_{54}O_{52}$  (1871.31). Pharm: Cytotoxic (HeLa,  $ED_{50} = 12\text{mmol/L}$ ); DNA topoisomerase inhibitor. Source: DI YU *Sanguisorba officinalis*. Ref: 660.

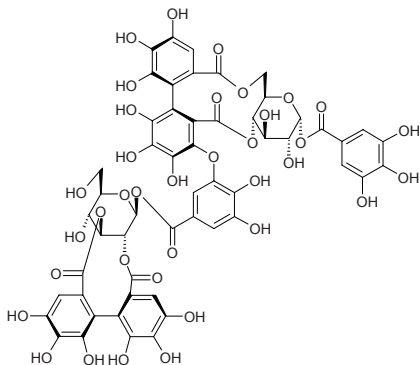
**19279 Sanguiin H<sub>7</sub>**

[[98917-86-3]]  $C_{34}H_{26}O_{23}$  (802.57). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

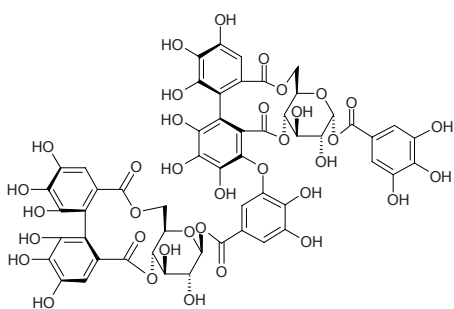


**19280 Sanguiin H<sub>8</sub>**

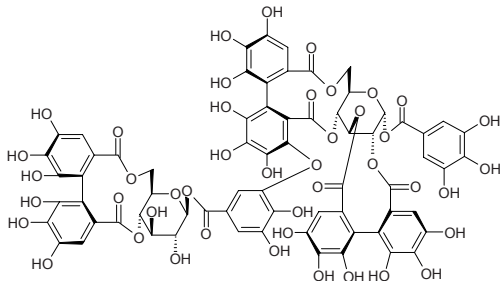
$C_{54}H_{42}O_{36}$  (1266.92). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

**19281 Sanguiin H<sub>9</sub>**

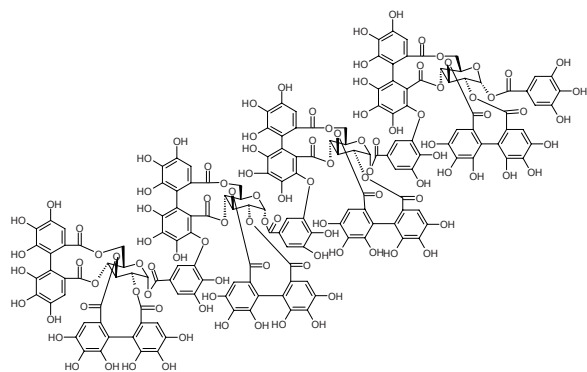
$C_{54}H_{42}O_{36}$  (1266.92). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

**19282 Sanguiin H<sub>10</sub>**

$C_{68}H_{48}O_{44}$  (1569.11). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

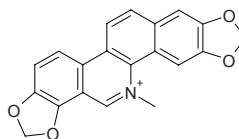
**19283 Sanguiin H<sub>11</sub>**

$C_{164}H_{106}O_{104}$  (3740.61). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

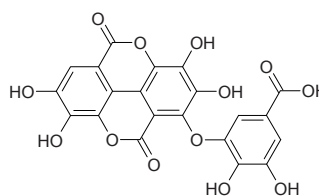
**19284 Sanguinarine**

$\psi$ -Cheierythrine [2447-54-3.]  $C_{20}H_{14}NO_4$  (332.34). mp 242–243°C (dec).

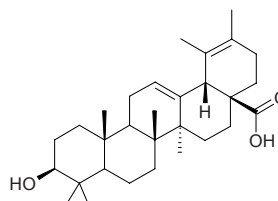
Pharm: PKA inhibitor (catalytic subunit of rat liver protein kinase A,  $IC_{50} = 6\mu\text{mol/L}$ )<sup>[5369]</sup>; PKC inhibitor ( $IC_{50} > 200\mu\text{mol/L}$ )<sup>[5369]</sup>; Cytotoxic (hmn keratinocytes, inhibits growth of cells,  $IC_{50} = 0.2\mu\text{mol/L}$ )<sup>[5369]</sup>; Cytotoxic (decreases concentration-dependently viability of hmn epidermoid carcinoma A431 cells at lower concentrations than of normal hmn epidermal keratinocytes, results in an induction of apoptosis but did not lead to formation of a DNA in normal keratinocytes)<sup>[5369]</sup>; Cytotoxic (interacts with calf thymus DNA and alters its secondary structure)<sup>[5369]</sup>; anti-HIV inactive (H9 lymphocytes, control AZT,  $IC_{50} = 500\mu\text{g/mL}$ ,  $EC_{50} = 0.0317\mu\text{g/mL}$ ,  $TI = 15800$ )<sup>[5364]</sup>. Source: BAI QU CAI *Chelidonium majus*, BO LUO HUI *Macleaya cordata* (whole herb: content = 5.69%<sup>[5508]</sup>), HE BAO MU DAN GEN *Dicentra spectabilis*, HE QING HUA *Hylomecon japonica*, JI YING SU *Argemone mexicana*, JU HUA HUANG LIAN *Corydalis pallida*, LI CHUN HUA *Papaver commutatum* [Syn. *Papaver rhoeas*], MEI ZHOU XUE GEN CAO *Sanguinaria canadensis*, XI GUO JIAO HUI XIANG *Hypecoum leptocarpum*, YA PIAN *Papaver somniferum*, YAO YONG QIU GUO ZI JIN *Fumaria officinalis*, YI YANG HE BAO MU DAN *Dicentra peregrina*, YING SU *Papaver somniferum*, YING SU KE *Papaver somniferum*, ZI HUA YU DENG CAO *Corydalis incisa*. Ref: 4, 6, 658, 5364, 5369, 5508.

**19285 Sanguisobiac acid dilactone**

$C_{21}H_{10}O_{13}$  (470.31). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

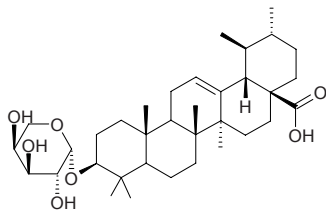
**19286 Sanguisorbigenin**

$C_{30}H_{46}O_3$  (454.70). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

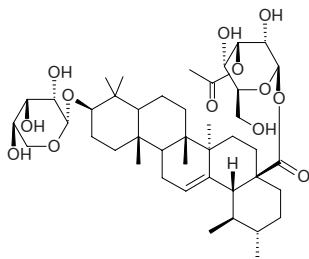


**19287 Sanguisorbin B**

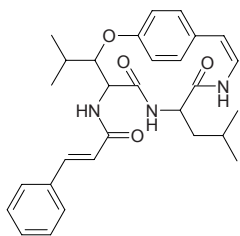
$C_{35}H_{56}O_7$  (588.83). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

**19288 Sanguisorbin E**

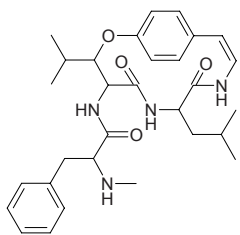
$C_{43}H_{68}O_{13}$  (793.01). Source: DI YU *Sanguisorba officinalis*. Ref: 660.

**19289 Sanjoinine**

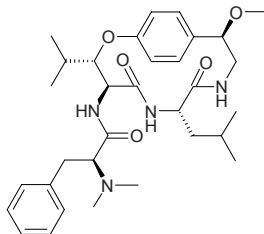
$C_{29}H_{35}N_3O_4$  (489.62). Source: SUAN ZAO REN *Ziziphus jujuba* var. *spinosa*. Ref: 660.

**19290 Sanjoinine B**

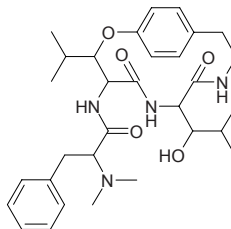
$C_{30}H_{40}N_4O_4$  (520.68). Source: SUAN ZAO REN *Ziziphus jujuba* var. *spinosa*. Ref: 660.

**19291 Sanjoinine D**

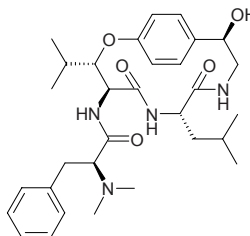
$C_{32}H_{46}N_4O_5$  (566.75). Source: SUAN ZAO REN *Ziziphus jujuba* var. *spinosa*. Ref: 660.

**19292 Sanjoinine F**

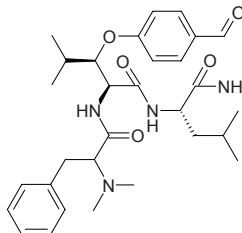
$C_{31}H_{44}N_4O_5$  (552.72). Source: SUAN ZAO REN *Ziziphus jujuba* var. *spinosa*. Ref: 660.

**19293 Sanjoinine G<sub>1</sub>**

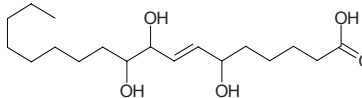
$C_{31}H_{44}N_4O_5$  (552.72). Source: SUAN ZAO REN *Ziziphus jujuba* var. *spinosa*. Ref: 660.

**19294 Sanjoinine G<sub>2</sub>**

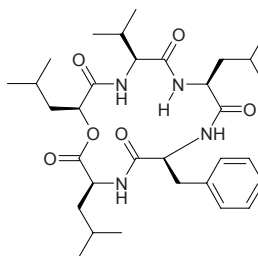
$C_{30}H_{42}N_4O_5$  (538.69). Source: SUAN ZAO REN *Ziziphus jujuba* var. *spinosa*. Ref: 660.

**19295 Sanleng acid**

$C_{18}H_{34}O_5$  (330.47). White amorphous powder, mp 116~118°C, soluble in ethanol, ethyl acetate. Source: SAN LENG *Sparganium stoloniferum*. Ref: 480.

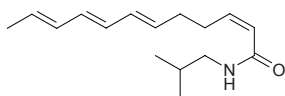
**19296 Sansalvamide**

$C_{32}H_{50}N_4O_6$  (586.78). Pharm: Cytotoxic (in vitro, NCI hm tumor cell line screen, mean  $GI_{50}$  = 3.6  $\mu$ mol/L). Source: *Fusarium* sp. Ref: 5087.

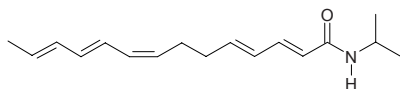


**19297 Sanshool**

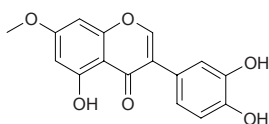
$C_{16}H_{25}NO$  (247.38). mp 69°C. Source: YE HUA JIAO YE *Zanthoxylum simulans*. Ref: 6.

**19298  $\gamma$ -Sanshool**

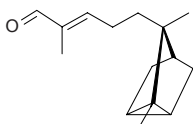
$C_{17}H_{25}NO$  (259.39). Pharm: Platelet aggregation inhibitor. Source: QUAN YUAN YE HUA JIAO *Zanthoxylum integrifolium*. Ref: 2176.

**19299 Santal**

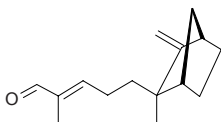
$C_{16}H_{12}O_6$  (300.27). Pharm: Antioxidant (DPPH scavenger, ScRt = 86.84%, control BHT, ScRt = 71.5%); antibacterial (*Staphylococcus aureus* ATCC 25923, MIC = 128 $\mu$ g/mL, Vancomycin, MIC = 0.5 $\mu$ g/mL; MRSA SK1, MIC = 2 $\mu$ g/mL, Vancomycin, MIC = 1.0 $\mu$ g/mL); increases blood pressure (anesthetized rats, increases in mean arterial blood pressure, 4.0mg/kg, 21.7mmHg). Source: PAN YUAN YU TENG *Derris scandens* (stem). Ref: 3810.

**19300  $\alpha$ -Santalal**

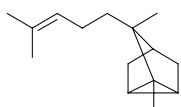
$C_{15}H_{22}O$  (218.34). Source: TAN XIANG *Santalum album*. Ref: 660.

**19301  $\beta$ -Santalal**

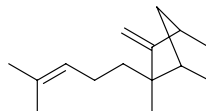
$C_{15}H_{22}O$  (218.34). Source: TAN XIANG *Santalum album*. Ref: 660.

**19302  $\alpha$ -Santalene**

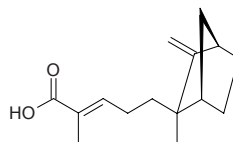
$C_{15}H_{24}$  (204.36). bp 252°C/753mmHg. Source: DONG FENG JU GEN *Atalantia buxifolia* [Syn. *Severinia buxifolia*] (root cortex)<sup>[3075]</sup>, FENG DOU CAI *Petasites japonicus*, HUA DONG LAN CI TOU *Echinops grysii*, TAN XIANG *Santalum album*, ZHANG MU *Cinnamomum camphora*. Ref: 6, 660, 3075.

**19303  $\beta$ -Santalene**

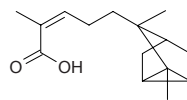
$\beta$ -Santalal(3,15),10-diene  $C_{15}H_{24}$  (204.36). bp 125~127°C/9mmHg, mp 263~264°C. Pharm: Smell of cedar. Source: HUA DONG LAN CI TOU *Echinops grysii*, WU WEI ZI *Schisandra chinensis*, TAN XIANG *Santalum album*, ZHANG MU *Cinnamomum camphora*. Ref: 2, 6, 658, 660.

**19304  $\beta$ -Santallic acid**

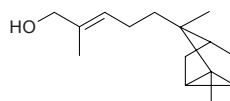
$C_{15}H_{22}O_2$  (234.34). Source: TAN XIANG *Santalum album*. Ref: 660.

**19305 Santallic acid**

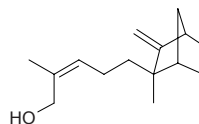
$C_{15}H_{22}O_2$  (234.34). mp ( $\beta$ ) 202°C, ( $\gamma$ ) 189°C, bp ( $\alpha$ ) 193°C/9mmHg. Source: TAN XIANG *Santalum album*. Ref: 6.

**19306  $\alpha$ -Santalol**

$C_{15}H_{24}O$  (220.36). bp 166~167°C/14mmHg. Pharm: Antibacterial. Source: HOU PO *Magnolia officinalis*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], WU WEI ZI *Schisandra chinensis*, TAN XIANG *Santalum album* (1.08%~2.37%). Ref: 6, 658, 5501.

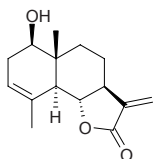
**19307  $\beta$ -Santalol**

$C_{15}H_{24}O$  (220.36). bp 177~178°C/17mmHg. Pharm: Antibacterial. Source: TAN XIANG *Santalum album* (heartwood: content scope = 0.75%~1.40%<sup>[5501]</sup>), SHENG JIANG *Zingiber officinale*. Ref: 6, 658, 5501.



**19308 Santamarin**

Santamarine C<sub>15</sub>H<sub>20</sub>O<sub>3</sub> (248.33). **Pharm:** Anti-inflammatory (modulator of cytokine network: inhibits TNF $\alpha$  production in LPS-activated RAW264.7 cells, IC<sub>50</sub> = 105  $\mu$ mol/L)<sup>[4416]</sup>; antineoplastic; cytotoxic (*in vitro*, HepG<sub>2</sub>, CD<sub>50</sub> = 7.5  $\mu$ g/mL; HeLa, CD<sub>50</sub> = 10  $\mu$ g/mL; OVCAR-3, CD<sub>50</sub> = 10  $\mu$ g/mL; control Cisplatin, HepG<sub>2</sub>, CD<sub>50</sub> = 2.8  $\mu$ g/mL; HeLa, CD<sub>50</sub> = 5.2  $\mu$ g/mL; OVCAR-3, CD<sub>50</sub> = 3  $\mu$ g/mL; without significant antibacterial effect)<sup>[4720]</sup>. **Source:** MI HUA TUN CAO *Ambrosia confertiflora*, MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*] (root: yield = 0.00056%dw)<sup>[4720]</sup>, WU XIN SHI *Michelia compressa* var. *formosana*, *Artemisia* sp., *Tanacetum* sp., *Chrysanthemum* sp. **Ref:** 658, 4416, 4720.

**19309 Santene**

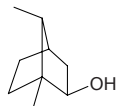
C<sub>9</sub>H<sub>14</sub> (122.21). bp 140–141°C. **Source:** TAN XIANG *Santalum album*, YU XIANG CAO *Mentha rotundifolia*. **Ref:** 6.

**19310 Santenone**

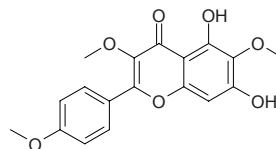
C<sub>9</sub>H<sub>14</sub>O (138.21). mp (–) 58–61°C, (±) 55–57°C, bp (–) 193–195°C, (±) 197°C. **Source:** TAN XIANG *Santalum album*. **Ref:** 6.

**19311 Santenone alcohol**

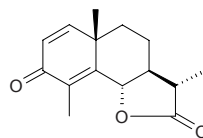
C<sub>9</sub>H<sub>16</sub>O (140.23). mp 86°C; 58–62°C. **Source:** TAN XIANG *Santalum album*. **Ref:** 6.

**19312 Santin**

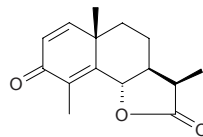
Betuletol 3-methyl ether; Centauridin; Tanetin; 6-Hydroxykaempferol 3,6,4'-trimethylether; 5,7-Dihydroxy-3,6,4'-trimethoxyflavone [27782-63-4] C<sub>18</sub>H<sub>16</sub>O<sub>7</sub> (344.32). mp 159–161°C. **Pharm:** Cyclo-oxygenase inhibitor (relative inhibition of thromboxane B<sub>2</sub>, IC<sub>50</sub> = 27  $\mu$ mol/L)<sup>[2292]</sup>; 5-lipoxygenase inhibitor (relative inhibition of leukotriene B<sub>4</sub>, IC<sub>50</sub> = 58  $\mu$ mol/L)<sup>[2292]</sup>; NO production inhibitor (LPS-induced, concentration-dependent manner, IC<sub>50</sub> = 7.8  $\mu$ mol/L or 6.2  $\mu$ mol/L)<sup>[4918]</sup>; PGE<sub>2</sub> production inhibitor (LPS-induced, concentration-dependent manner, IC<sub>50</sub> = 3.9  $\mu$ mol/L or 4.3  $\mu$ mol/L)<sup>[4918]</sup>; antitubercular (*Mycobacterium tuberculosis*, MIC = 46.2  $\mu$ g/mL, cytotoxic, Vero cells, IC<sub>50</sub> = 28.7  $\mu$ g/mL, SI (IC<sub>50</sub>/MIC) = 0.62, positive control Rifampin, MIC = 0.03  $\mu$ g/mL, IC<sub>50</sub> = 98.3  $\mu$ g/mL, SI = 3300)<sup>[4986]</sup>. **Source:** CHI YANG *Alnus japonica*, CHU AI JU *Tanacetum parthenium*<sup>[2292]</sup>, JU HAO *Tanacetum vulgare*<sup>[2292]</sup>, SHU HUA JIE CAO *Valeriana laxiflora* (aerial parts and root)<sup>[4986]</sup>, XIAO YE JU HAO *Tanacetum microphyllum* (aerial parts), *Alnus* spp., *Betula* spp., *Achillea* spp., *Dodonaea* spp. **Ref:** 660, 1512, 2292, 4918, 4986.

**19313  $\alpha$ -Santonin**

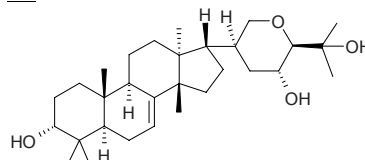
C<sub>15</sub>H<sub>18</sub>O<sub>3</sub> (246.31). mp (–) 174–176°C. **Pharm:** Anthelmintic; antineoplastic; cytotoxic; insect antifeedant; plant growth regulator. **Source:** HUI HAO *Seriphidium cinum* [Syn. *Artemisia cina*], BIN HAO *Artemisia maritima*, *Artemisia* sp. **Ref:** 6, 658.

**19314  $\beta$ -Santonin**

C<sub>15</sub>H<sub>18</sub>O<sub>3</sub> (246.31). mp (–) 216–218°C. **Pharm:** Anthelmintic but is highly toxic and is no longer used clinically. **Source:** DONG BEI HUI HAO *Seriphidium finitum* [Syn. *Artemisia finita*], HUANG HUA HAO *Artemisia annua*, MI HAO *Artemisia compacta*, XUE LING HAO *Artemisia schrenkiana*, YA LIE XING HAO *Artemisia sublessingiana*. **Ref:** 6, 658.

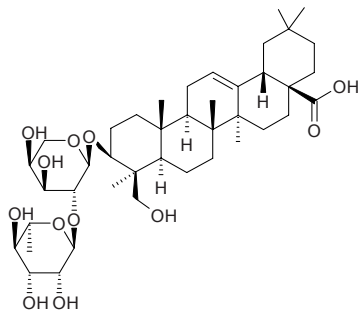
**19315 Sapelin A**

C<sub>30</sub>H<sub>50</sub>O<sub>4</sub> (474.73). **Pharm:** Cytotoxic. **Source:** *Entandrophragma cylindricum*. **Ref:** 658.

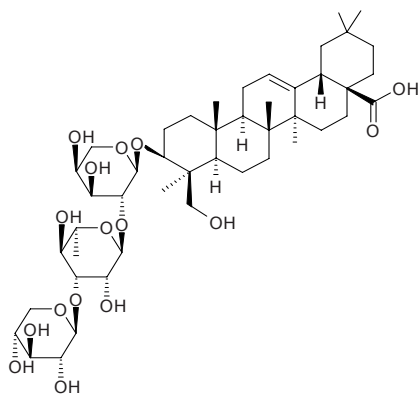


**19316 Sapindoside A**

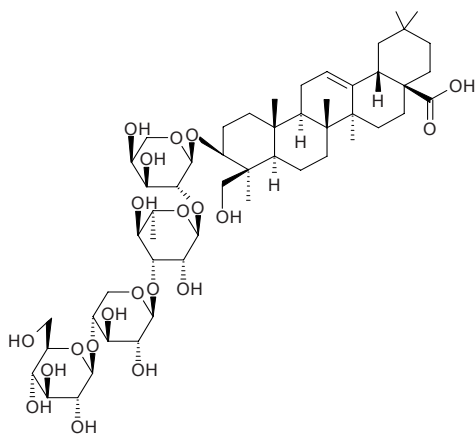
Akebiasaponin P<sub>D</sub> C<sub>41</sub>H<sub>66</sub>O<sub>12</sub> (750.98). mp 214~216°C. Pharm: Antineoplastic; antifungal; hemolytic; antihypercholesterolemic; antihypertensive (rbt, sc, 0.04mg/kg, blood pressure being reduced by 25%); molluscicide (*Biomphalaria glabrata*, EC = 8mg/L); LD<sub>50</sub> (mus, iv or ip) = 270mg/kg, (mus, sc) = 659mg/kg, (mus, orl) = 1625mg/kg. Source: CHAO XIAN BAI TOU WENG *Pulsatilla cernua*, LING XING CHANG CHUN TENG *Hedera rhombea*, MU TONG *Akebia quinata*, WU HUAN ZI PI *Sapindus mukorossi*, WU HUAN ZI YE *Sapindus mukorossi*, YANG CHANG CHUN TENG *Hedera helix*. Ref: 6, 658.

**19317 Sapindoside B**

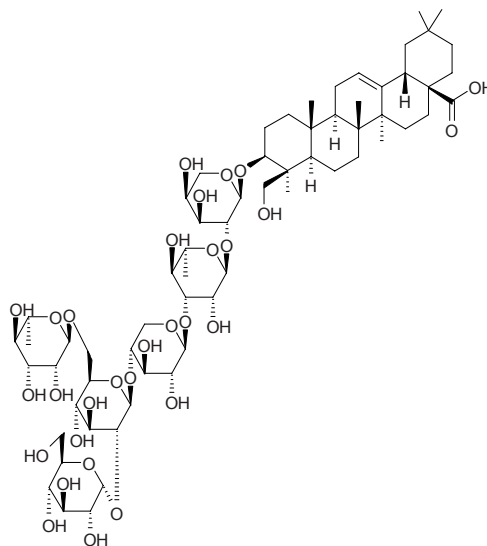
Akebiasaponin P<sub>G</sub> C<sub>46</sub>H<sub>74</sub>O<sub>16</sub> (883.09). mp 276~278°C. Source: HUANG HE MAO REN DONG *Lonicera fulvotomentosa*, WU HUAN ZI YE *Sapindus mukorossi*, WU HUAN ZI PI *Sapindus mukorossi*. Ref: 6, 660.

**19318 Sapindoside C**

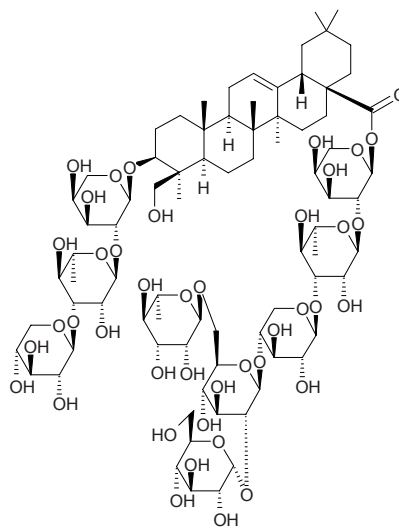
Prosapogenin CP<sub>8a</sub> C<sub>52</sub>H<sub>84</sub>O<sub>21</sub> (1045.24). mp 235°C. Source: WU HUAN ZI PI *Sapindus mukorossi*. Ref: 6.

**19319 Sapindoside D**

C<sub>64</sub>H<sub>104</sub>O<sub>30</sub> (1353.52). Source: WU HUAN ZI PI *Sapindus mukorossi*. Ref: 6.

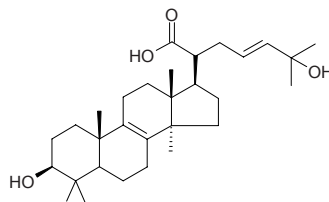
**19320 Sapindoside E**

C<sub>80</sub>H<sub>130</sub>O<sub>42</sub> (1763.90). Source: WU HUAN ZI PI *Sapindus mukorossi*. Ref: 6.

**19321 Saponaceic acid I**

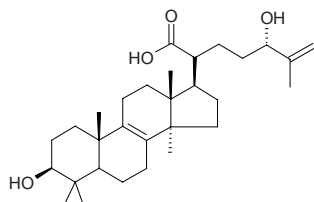
3β,25-Dihydroxylanosta-8,23E-dien-21-oic acid C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71).

Amorphous powder, [α]<sub>D</sub><sup>25</sup> = +10.0° (c = 0.2, MeOH). Source: ZAO WEI KOU MO *Tricholoma saponaceum*. Ref: 4252.

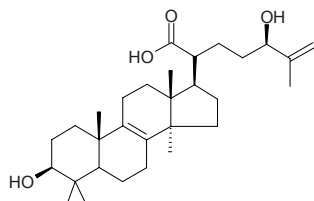


**19322 Saponaceoic acid II**

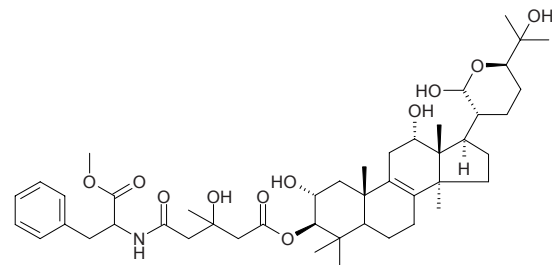
3,24-Dihydroxylanosta-8,25-dien-21-oic acid  $C_{30}H_{48}O_4$  (472.71). Amorphous powder,  $[\alpha]_D^{25} = +3.8^\circ$  ( $c = 0.2$ , MeOH). Source: ZAO WEI KOU MO *Tricholoma saponaceum*. Ref: 4252.

**19323 Saponaceoic acid III**

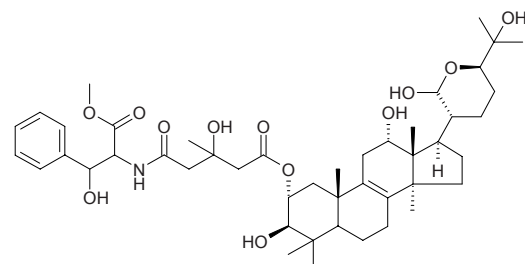
3 $\beta$ ,24R-Dihydroxylanosta-8,25-dien-21-oic acid  $C_{30}H_{48}O_4$  (472.71). Amorphous powder,  $[\alpha]_D^{25} = -5.0^\circ$  ( $c = 0.2$ , MeOH). Source: ZAO WEI KOU MO *Tricholoma saponaceum*. Ref: 4252.

**19324 Saponaceol A**

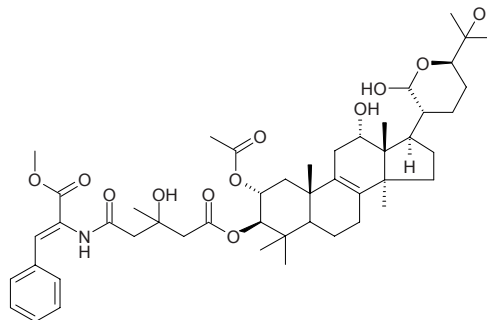
$C_{46}H_{69}NO_{11}$  (812.06). Amorphous powder,  $[\alpha]_D^{25} = -10.4^\circ$  ( $c = 0.6$ , MeOH). Pharm: Cytotoxic (HL-60 hmn leukemia cell,  $IC_{50} = 8.9\mu\text{mol/L}$ ). Source: ZAO WEI KOU MO *Tricholoma saponaceum*. Ref: 4059.

**19325 Saponaceol B**

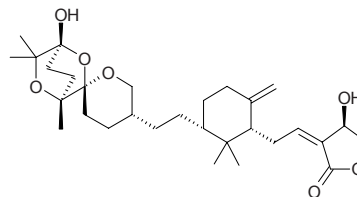
$C_{46}H_{69}NO_{12}$  (828.06). Amorphous powder,  $[\alpha]_D^{25} = -4.45^\circ$  ( $c = 0.4$ , MeOH). Source: ZAO WEI KOU MO *Tricholoma saponaceum*. Ref: 4059.

**19326 Saponaceol C**

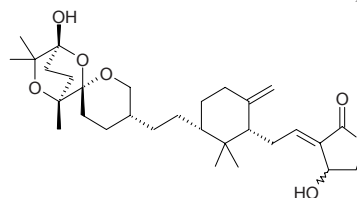
$C_{48}H_{69}NO_{12}$  (852.08). Amorphous powder,  $[\alpha]_D^{25} = -20.6^\circ$  ( $c = 0.5$ , MeOH). Source: ZAO WEI KOU MO *Tricholoma saponaceum*. Ref: 4059.

**19327 Saponaceolide A**

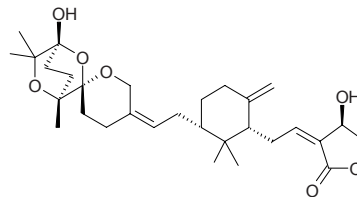
$C_{30}H_{46}O_7$  (518.70). Colorless needles, mp 147–150°C,  $[\alpha]_D^{25} = +73.4^\circ$  ( $c = 0.9$ ,  $CHCl_3$ ). Source: ZAO WEI KOU MO *Tricholoma saponaceum*. Ref: 4252.

**19328 Saponaceolide E**

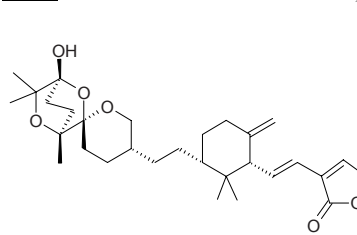
$C_{30}H_{46}O_7$  (518.70). Amorphous powder,  $[\alpha]_D^{25} = +15.4^\circ$  ( $c = 0.8$ , MeOH). Source: ZAO WEI KOU MO *Tricholoma saponaceum*. Ref: 4252.

**19329 Saponaceolide F**

$C_{30}H_{44}O_7$  (516.68). Amorphous powder,  $[\alpha]_D^{25} = +26.8^\circ$  ( $c = 0.3$ , MeOH). Source: ZAO WEI KOU MO *Tricholoma saponaceum*. Ref: 4252.

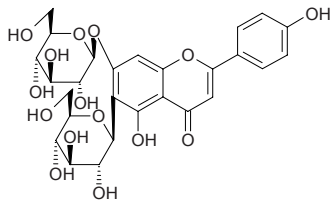
**19330 Saponaceolide G**

$C_{30}H_{44}O_6$  (500.68). Amorphous powder,  $[\alpha]_D^{25} = +27.7^\circ$  ( $c = 0.3$ , MeOH). Source: ZAO WEI KOU MO *Tricholoma saponaceum*. Ref: 4252.

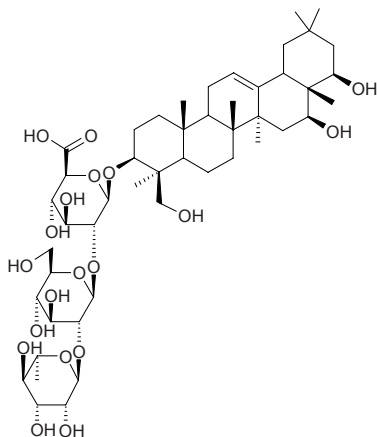


**19331 Saponarin**

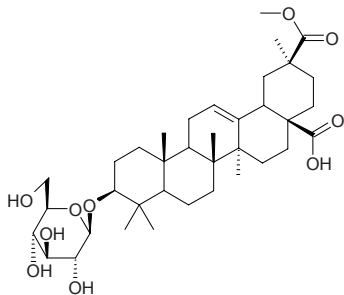
Isovitexin 7-*O*- $\beta$ -D-glucopyranoside [20310-89-8] C<sub>27</sub>H<sub>30</sub>O<sub>15</sub> (594.53). mp 231~232°C (dec). **Pharm:** Antihepatotoxin. **Source:** MU JIN HUA *Hibiscus syriacus*, SHUI MU CAO *Mnium cuspidatum*, FEI ZAO CAO *Saponaria officinalis* (in 1944, the compound was isolated from the plant)<sup>[5505]</sup>. **Ref:** 6, 1563, 5505.

**19332 Spartium junceum saponin**

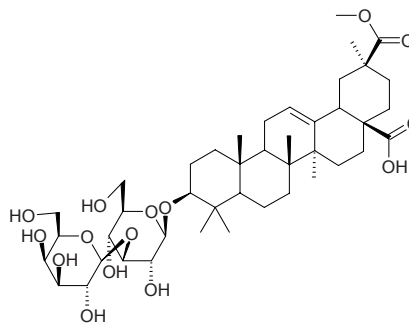
3-*O*-[ $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl]-3 $\beta$ ,16 $\beta$ ,22 $\beta$ ,24-tetrahydroxy-olean-12-ene C<sub>48</sub>H<sub>78</sub>O<sub>19</sub> (959.15). White powder. **Pharm:** Anti-ulcerogenic activity. **Source:** YING ZHAO DOU *Spartium junceum*. **Ref:** 2324.

**19333 Saponin 1**

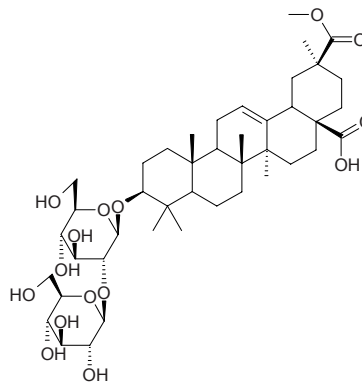
3-*O*- $\beta$ -D-Glucopyranosylserjanic acid C<sub>37</sub>H<sub>58</sub>O<sub>10</sub> (662.87). White amorphous powder,  $[\alpha]_D^{25} = +62^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Molluscicide (LC<sub>100</sub> = 3.1  $\mu$ g/mL, control 3-*O*-( $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) bayogenin, LC<sub>100</sub> = 12.5  $\mu$ g/mL); spermicidal (IC<sub>100</sub> = 700  $\mu$ g/mL, 3-*O*-( $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) bayogenin, IC<sub>100</sub> = 500  $\mu$ g/mL); haemolytic (MCTHBE = 1.9  $\mu$ g/mL, 3-*O*-( $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) bayogenin, MCTHBE = 7.5  $\mu$ g/mL). **Source:** ER SHI RUI SHANG LU *Phytolacca icosandra* (berry). **Ref:** 5101.

**19334 Saponin 2**

3-*O*-( $\beta$ -D-Galactopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -D-glucopyranosyl)serjanic acid C<sub>43</sub>H<sub>68</sub>O<sub>15</sub> (825.01). White amorphous powder,  $[\alpha]_D^{25} = +60^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Molluscicide (LC<sub>100</sub> = 3.1  $\mu$ g/mL, control 3-*O*-( $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) bayogenin, LC<sub>100</sub> = 12.5  $\mu$ g/mL); spermicidal (IC<sub>100</sub> = 500  $\mu$ g/mL, 3-*O*-( $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) bayogenin, IC<sub>100</sub> = 500  $\mu$ g/mL); haemolytic (MCTHBE = 3.8  $\mu$ g/mL, 3-*O*-( $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) bayogenin, MCTHBE = 7.5  $\mu$ g/mL). **Source:** ER SHI RUI SHANG LU *Phytolacca icosandra* (berry). **Ref:** 5101.

**19335 Saponin 3**

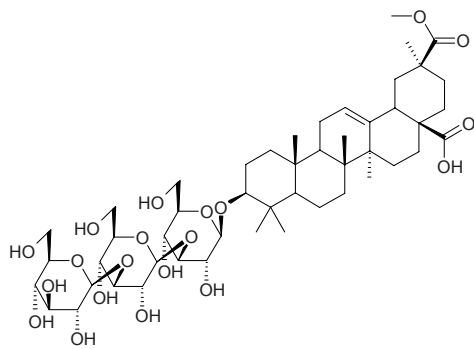
3-*O*-( $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl)serjanic acid C<sub>43</sub>H<sub>68</sub>O<sub>15</sub> (825.01). White amorphous powder,  $[\alpha]_D^{25} = +49^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Molluscicide (LC<sub>100</sub> = 10.0  $\mu$ g/mL, control 3-*O*-( $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) bayogenin, LC<sub>100</sub> = 12.5  $\mu$ g/mL); spermicidal (IC<sub>100</sub> = 250  $\mu$ g/mL, 3-*O*-( $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) bayogenin, IC<sub>100</sub> = 500  $\mu$ g/mL); haemolytic (MCTHBE = 7.5  $\mu$ g/mL, 3-*O*-( $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl) bayogenin, MCTHBE = 7.5  $\mu$ g/mL). **Source:** ER SHI RUI SHANG LU *Phytolacca icosandra* (berry). **Ref:** 5101.



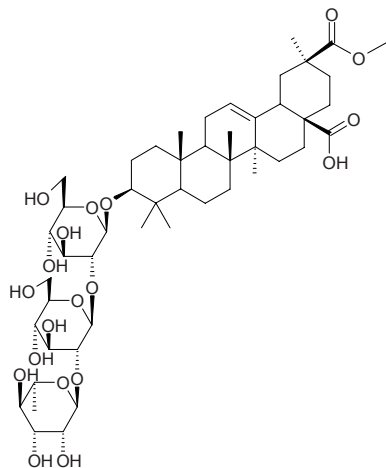


**19336 Saponin 4**

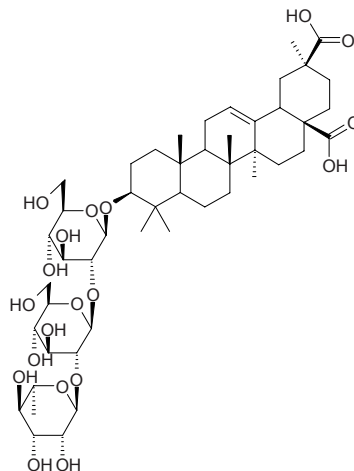
3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-glucopyranosyl)serjanic acid C<sub>49</sub>H<sub>78</sub>O<sub>20</sub> (987.16). White amorphous powder,  $[\alpha]_D^{23} = +47^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Molluscicide (LC<sub>100</sub> = 12.5 $\mu$ g/mL, control 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, LC<sub>100</sub> = 12.5 $\mu$ g/mL); spermicidal (IC<sub>100</sub> = 1333 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, IC<sub>100</sub> = 500 $\mu$ g/mL); haemolytic (MCTHBE = 7.5 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, MCTHBE = 7.5 $\mu$ g/mL). **Source:** ER SHI RUI SHANG LU *Phytolacca icosandra* (berry). **Ref:** 5101.

**19337 Saponin 5**

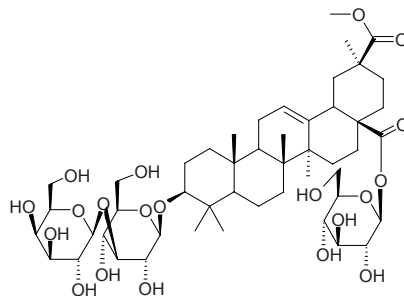
3-*O*-( $\alpha$ -*L*-Rhamnopyranosyl-( $\rightarrow$ )- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl)serjanic acid C<sub>49</sub>H<sub>78</sub>O<sub>19</sub> (971.16). White amorphous powder,  $[\alpha]_D^{23} = +21^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Molluscicide (LC<sub>100</sub> = 50.0 $\mu$ g/mL, control 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, LC<sub>100</sub> = 12.5 $\mu$ g/mL); spermicidal (IC<sub>100</sub> > 2000 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, IC<sub>100</sub> = 500 $\mu$ g/mL); haemolytic (MCTHBE > 60 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, MCTHBE = 7.5 $\mu$ g/mL). **Source:** ER SHI RUI SHANG LU *Phytolacca icosandra* (berry). **Ref:** 5101.

**19338 Saponin 6**

3-*O*-( $\alpha$ -*L*-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl)serjanic acid C<sub>48</sub>H<sub>76</sub>O<sub>19</sub> (957.13). White amorphous powder,  $[\alpha]_D^{23} = +22^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Molluscicide (LC<sub>100</sub> > 50.0 $\mu$ g/mL, control 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, LC<sub>100</sub> = 12.5 $\mu$ g/mL); spermicidal (IC<sub>100</sub> > 2000 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, IC<sub>100</sub> = 500 $\mu$ g/mL); haemolytic (MCTHBE > 60 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, MCTHBE = 7.5 $\mu$ g/mL). **Source:** ER SHI RUI SHANG LU *Phytolacca icosandra* (berry). **Ref:** 5101.

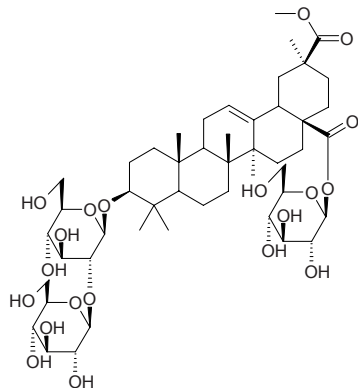
**19339 Saponin 7**

3-*O*-( $\beta$ -*D*-Galactopyranosyl-(1 $\rightarrow$ 3)- $\beta$ -*D*-glucopyranosyl)serjanic acid 28-*O*- $\beta$ -*D*-glucopyranoside C<sub>49</sub>H<sub>78</sub>O<sub>20</sub> (987.16). **Pharm:** Molluscicide (LC<sub>100</sub> > 50.0 $\mu$ g/mL, control 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, LC<sub>100</sub> = 12.5 $\mu$ g/mL); spermicidal (IC<sub>100</sub> > 2000 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, IC<sub>100</sub> = 500 $\mu$ g/mL); haemolytic (MCTHBE > 60 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, MCTHBE = 7.5 $\mu$ g/mL). **Source:** ER SHI RUI SHANG LU *Phytolacca icosandra* (berry). **Ref:** 5101.

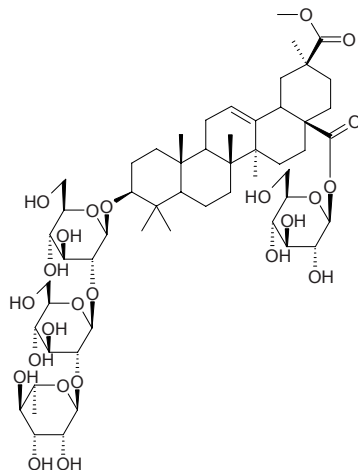


**19340 Saponin 8**

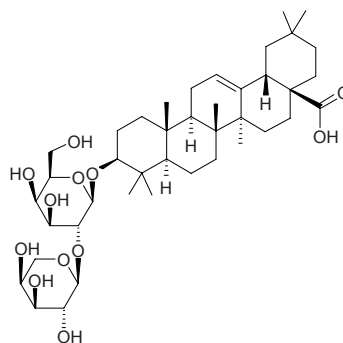
3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl)serjanic acid 28-*O*- $\beta$ -*D*-glucopyranoside C<sub>49</sub>H<sub>78</sub>O<sub>20</sub> (987.16). **Pharm:** Molluscicide (LC<sub>100</sub> > 50.0 $\mu$ g/mL, control 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, LC<sub>100</sub> = 12.5 $\mu$ g/mL); spermicidal (IC<sub>100</sub> > 2000 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, IC<sub>100</sub> = 500 $\mu$ g/mL); haemolytic (MCTHBE > 60 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, MCTHBE = 7.5 $\mu$ g/mL). **Source:** ER SHI RUI SHANG LU *Phytolacca icosandra* (berry). **Ref:** 5101.

**19341 Saponin 9**

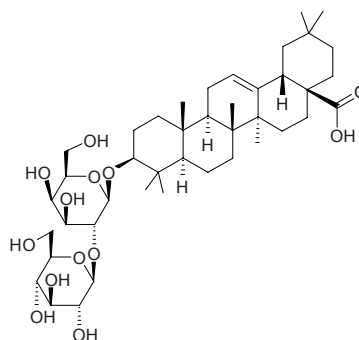
3-*O*-( $\alpha$ -*L*-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-glucopyranosyl)serjanic acid 28-*O*- $\beta$ -*D*-glucopyranoside C<sub>55</sub>H<sub>88</sub>O<sub>24</sub> (1133.30). **Pharm:** Molluscicide (LC<sub>100</sub> > 50.0 $\mu$ g/mL, control 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, LC<sub>100</sub> = 12.5 $\mu$ g/mL); spermicidal (IC<sub>100</sub> > 2000 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, IC<sub>100</sub> = 500 $\mu$ g/mL); haemolytic (MCTHBE > 60 $\mu$ g/mL, 3-*O*-( $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl)bayogenin, MCTHBE = 7.5 $\mu$ g/mL). **Source:** ER SHI RUI SHANG LU *Phytolacca icosandra* (berry). **Ref:** 5101.

**19342 Saponin E<sub>3</sub>**

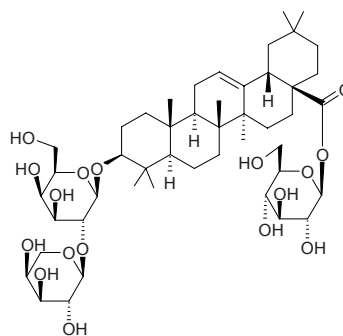
C<sub>41</sub>H<sub>66</sub>O<sub>12</sub> (750.98). **Source:** GUAN CONG DONG QING *Ilex dumosa*. **Ref:** 2160.

**19343 Saponin E<sub>6</sub>**

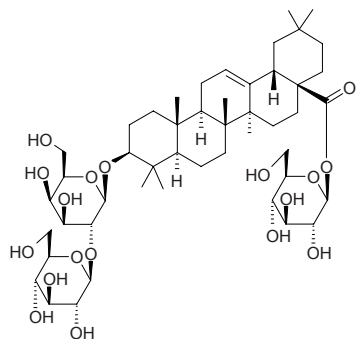
C<sub>42</sub>H<sub>68</sub>O<sub>13</sub> (781.00). **Source:** GUAN CONG DONG QING *Ilex dumosa*. **Ref:** 2160.

**19344 Saponin E<sub>7</sub>**

C<sub>47</sub>H<sub>76</sub>O<sub>17</sub> (913.12). **Source:** GUAN CONG DONG QING *Ilex dumosa*. **Ref:** 2160.

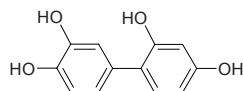
**19345 Saponin E<sub>8</sub>**

C<sub>48</sub>H<sub>78</sub>O<sub>18</sub> (943.15). **Source:** GUAN CONG DONG QING *Ilex dumosa*. **Ref:** 2160.

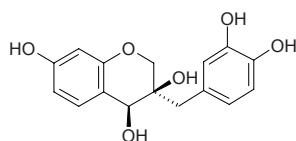


**19346 Sappanin**

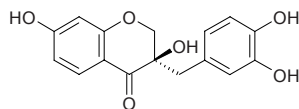
$C_{12}H_{10}O_4$  (218.21). mp 210–211°C. Source: SU MU *Caesalpinia sappan*. Ref: 6.

**19347 Sappanol**

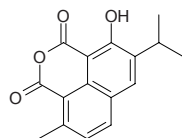
$C_{16}H_{16}O_6$  (304.30). Pharm: Xanthine oxidase inhibitor (competitive inhibitory activity in concentration-dependent manner,  $IC_{50} = 93.2 \mu\text{mol/L}$ ,  $K_i = 61.6 \mu\text{mol/L}$ , control Allopurinol,  $IC_{50} = 2.5 \mu\text{mol/L}$ ,  $K_i = 1.80 \mu\text{mol/L}$ )<sup>[4494]</sup>. Source: SU MU *Caesalpinia sappan*, SU MU *Caesalpinia sappan* (heartwood). Ref: 660, 4494.

**19348 Sappanone B**

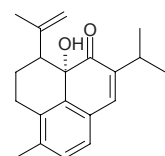
$C_{16}H_{14}O_6$  (302.29). Pharm: Xanthine oxidase inhibitor (competitive inhibitory activity in concentration-dependent manner,  $IC_{50} = 34.2 \mu\text{mol/L}$ ,  $K_i = 20.7 \mu\text{mol/L}$ , control Allopurinol,  $IC_{50} = 2.5 \mu\text{mol/L}$ ,  $K_i = 1.80 \mu\text{mol/L}$ )<sup>[4494]</sup>. Source: SU MU *Caesalpinia sappan*, SU MU *Caesalpinia sappan* (heartwood). Ref: 660, 4494.

**19349 Saprionide**

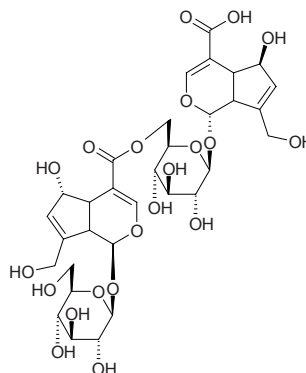
$C_{16}H_{14}O_4$  (270.29). Pale yellow powder. Pharm: Antibacterial inactive (*in vitro*, *Staphylococcus aureus*, *Micrococcus luteus*); topoisomerase I inhibitor inactive (*in vitro*); cytotoxic inactive (HL-60, SGC7901 and MKN-28). Source: HONG GEN CAO *Salvia prionitis* (root: yield = 0.00020%dw). Ref: 4635.

**19350 Sappirearine**

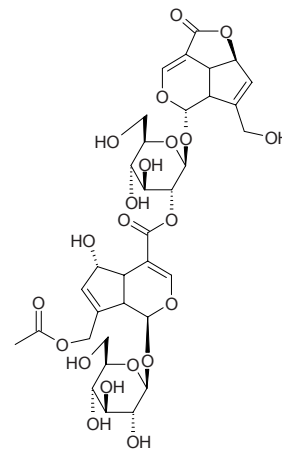
$C_{20}H_{24}O_2$  (296.41). Pale yellow prisms, mp 45°C. Pharm: Antibacterial inactive (*in vitro*, *Staphylococcus aureus*, *Micrococcus luteus*); topoisomerase I inhibitor inactive (*in vitro*); cytotoxic inactive (HL-60, SGC7901 and MKN-28). Source: HONG GEN CAO *Salvia prionitis* (root: yield = 0.0018%dw). Ref: 4635.

**19351 Saprosmoside G**

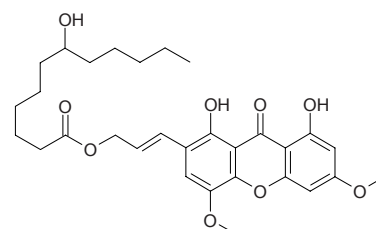
$C_{32}H_{42}O_{21}$  (762.68). White amorphous powder,  $[\alpha]_D^{19} = -1.2^\circ$  ( $c = 0.25$ , MeOH). Source: MA LAI BAN DAO RAN MU SHU *Saprosma scortechinii* (bustem and leaf). Ref: 4219.

**19352 Saprosmoside H**

$C_{34}H_{42}O_{21}$  (786.70). Yellow amorphous powder,  $[\alpha]_D^{19} = -46.4^\circ$  ( $c = 0.11$ , MeOH). Source: MA LAI BAN DAO RAN MU SHU *Saprosma scortechinii* (bustem and leaf). Ref: 4219.

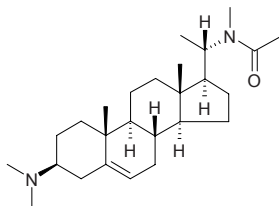
**19353 Sappxanthone**

$C_{30}H_{38}O_9$  (542.63). Source: WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. Ref: 660.

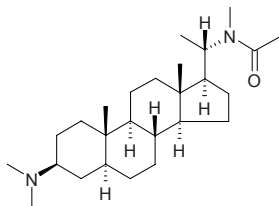


**19354 Saracocine**

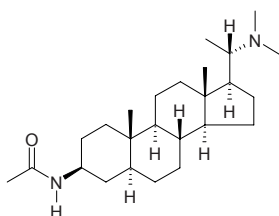
$C_{26}H_{44}N_2O$  (400.65). Yellowish gum, mp 226–228°C,  $[\alpha]_D^{20} = +56^\circ$  ( $c = 0.23$ , MeOH). **Pharm:** Antispasmodic (spontaneous contraction of rabbit jejunum,  $EC_{50} = 5.9\mu\text{g/mL}$ , control Verapamil,  $EC_{50} = 0.1\mu\text{g/mL}$ ;  $K^+$  80mmol/L contracted rabbit jejunum,  $EC_{50} = 24.5\mu\text{g/mL}$ , Verapamil,  $EC_{50} = 0.1\mu\text{g/mL}$ ); AChE inhibitor ( $EC_{50} = 8.0\mu\text{g/mL}$ , Verapamil,  $EC_{50} = 8.9\mu\text{g/mL}$ ). **Source:** YE SHAN HUA *Sarcococca saligna* (whole herb). **Ref:** 5054.

**19355 Saracodine**

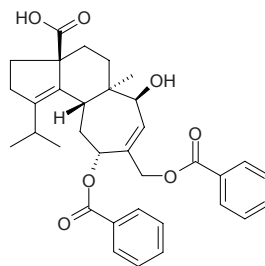
$C_{26}H_{46}N_2O$  (402.67). White amorphous material, mp 240–241°C,  $[\alpha]_D^{20} = -14.4^\circ$  ( $c = 0.02$ ,  $CDCl_3$ ). **Pharm:** Antispasmodic (spontaneous contraction of rabbit jejunum,  $EC_{50} = 7.0\mu\text{g/mL}$ , control Verapamil,  $EC_{50} = 0.1\mu\text{g/mL}$ ;  $K^+$  80mmol/L contracted rabbit jejunum,  $EC_{50} = 17.5\mu\text{g/mL}$ , Verapamil,  $EC_{50} = 0.1\mu\text{g/mL}$ ) AChE inhibitor ( $EC_{50} = 20.0\mu\text{g/mL}$ , Verapamil,  $EC_{50} = 8.9\mu\text{g/mL}$ ). **Source:** YE SHAN HUA *Sarcococca saligna* (whole herb). **Ref:** 5054.

**19356 Saracorine**

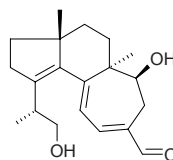
$C_{25}H_{44}N_2O$  (388.64). White amorphous material,  $[\alpha]_D^{20} = +49^\circ$  ( $c = 0.81$ ,  $CDCl_3$ ). **Pharm:** Antispasmodic (spontaneous contraction of rabbit jejunum,  $EC_{50} = 16.1\mu\text{g/mL}$ , control Verapamil,  $EC_{50} = 0.1\mu\text{g/mL}$ ;  $K^+$  80mmol/L contracted rabbit jejunum,  $EC_{50} = 62.3\mu\text{g/mL}$ , Verapamil,  $EC_{50} = 0.1\mu\text{g/mL}$ ); AChE inhibitor ( $EC_{50} = 27.2\mu\text{g/mL}$ , Verapamil,  $EC_{50} = 8.9\mu\text{g/mL}$ ). **Source:** YE SHAN HUA *Sarcococca saligna* (whole herb). **Ref:** 5054.

**19357 Sarbronine B**

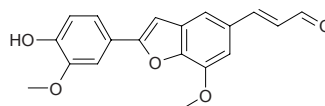
$C_{34}H_{38}O_7$  (558.68). Yellowish oil,  $[\alpha]_D^{25} = +10.3^\circ$  ( $c = 0.01$ , MeOH). **Source:** MEI WEI CHI JUN *Hydnum repandum*. **Ref:** 4804.

**19358 Sarcodonin A**

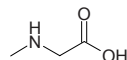
[125882-71-5]  $C_{20}H_{28}O_3$  (316.44). Yellow-green syrup,  $[\alpha]_D^{25} = +91.7^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ). **Source:** MEI WEI CHI JUN *Hydnum repandum*. **Ref:** 4804.

**19359 Sarcomeginal**

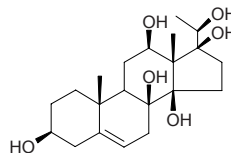
$C_{19}H_{16}O_5$  (324.34). Colorless amorphous solid. **Source:** *Sarcomelicope megistophylla*. **Ref:** 5408.

**19360 Sarcosine**

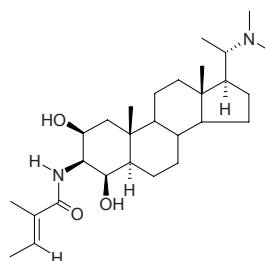
[107-97-1]  $C_3H_7NO_2$  (89.09). mp 212–213°C (dec). **Source:** LI YU *Cyprinus carpio*, MO GU *Agaricus campestris*. **Ref:** 6.

**19361 Sarcostin**

$C_{21}H_{34}O_6$  (382.50). **Source:** BAI SHOU WU *Cynanchum bungei*, LUO MO *Metaplexis japonica*, XU CHANG QING *Cynanchum paniculatum*. **Ref:** 6.

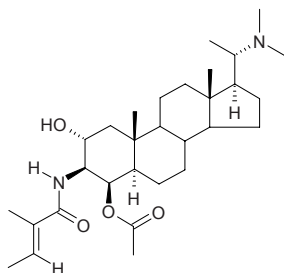
**19362 Sarcovagine A**

$C_{28}H_{48}N_2O_3$  (460.71). White acicular crystals, mp 277–278°C,  $[\alpha]_D^{25} = +21.2^\circ$  ( $c = 0.11$ , chloroform). **Source:** HAI NAN YE SHAN HUA *Sarcococca vagans*. **Ref:** 399.

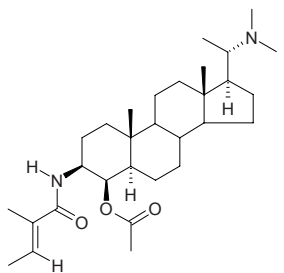


**19363 Sarcovagine B**

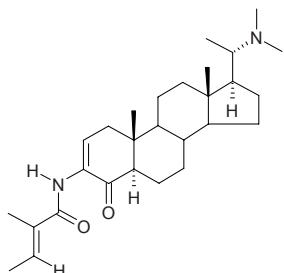
$C_{30}H_{50}N_2O_4$  (502.74). White crystals, mp 205~206°C,  $[\alpha]_D^{25} = +19.6^\circ$  ( $c = 0.06$ , chloroform). Source: HAI NAN YE SHAN HUA *Sarcococca vagans*. Ref: 399.

**19364 Sarcovagine C**

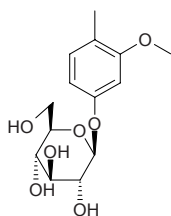
$C_{30}H_{50}N_2O_3$  (486.74). White acicular crystals, mp 192~194°C,  $[\alpha]_D^{13} = -9.01^\circ$  ( $c = 0.122$ , chloroform). Source: HAI NAN YE SHAN HUA *Sarcococca vagans*. Ref: 399.

**19365 Sarcovagine D**

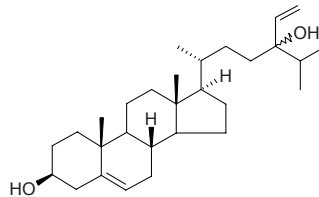
$C_{28}H_{44}N_2O_2$  (440.68). White crystals, mp 170~172°C,  $[\alpha]_D^{25} = +39.5^\circ$  ( $c = 0.07$ , chloroform). Source: HAI NAN YE SHAN HUA *Sarcococca vagans*. Ref: 399.

**19366 Sargencuneside**

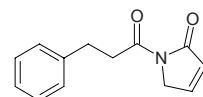
$C_{14}H_{20}O_7$  (300.31). Colorless acicular crystals (ethanol), mp 161~162°C. Source: DA XUE TENG *Sargentodoxa cuneata*. Ref: 481.

**19367 Saringosterol**

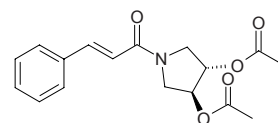
Stigmasta-5,28-diene-3,24-diol  $C_{29}H_{48}O_2$  (428.70). mp 160~161°C. Source: QUN DAI CAI *Undaria pinnatifida*. Ref: 6.

**19368 Sarmentamide A**

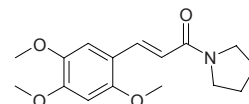
*N*-(Phenylpropanoyl)- $\Delta^3$ -2-pyrrolidone  $C_{13}H_{13}NO_2$  (215.25). Colorless oil. Source: JIA JU ZI *Piper sarmentosum* (fresh root: yield = 0.007%fw). Ref: 973.

**19369 Sarmentamide B**

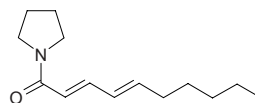
*N*-Cinnamoyl-*trans*-3,4-diacetoxypyrrolidine  $C_{17}H_{19}NO_5$  (317.34). Colorless wax,  $[\alpha]_D^{25} = 68.3^\circ$  ( $c = 0.12$ , MeOH). Source: JIA JU ZI *Piper sarmentosum* (fresh root: yield = 0.0016%fw). Ref: 973.

**19370 Sarmentamide C**

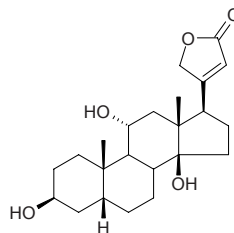
*N*-(2,4,5-Trimethoxycinnamoyl)pyrrolidine  $C_{16}H_{21}NO_4$  (291.35). Colorless solid, mp 159~162°C. Source: JIA JU ZI *Piper sarmentosum* (fresh root: yield = 0.0025%fw). Ref: 973.

**19371 Sarmentine**

1-(1-Oxo-2*E*,4*E*-decadienyl)pyrrolidine  $C_{14}H_{23}NO$  (221.35). Source: HU JIAO *Piper nigrum* (root: yield = 0.0034%dw), JIA JU ZI *Piper sarmentosum*. Ref: 660, 4753.

**19372 Sarmentogenin**

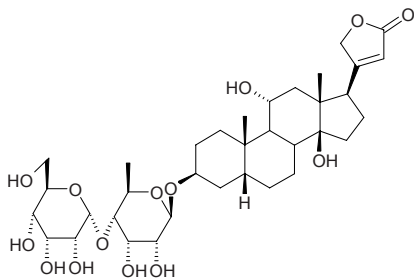
$C_{23}H_{34}O_5$  (390.52). Source: YANG JIAO AO ZI *Strophanthus divaricatus*. Ref: 660.



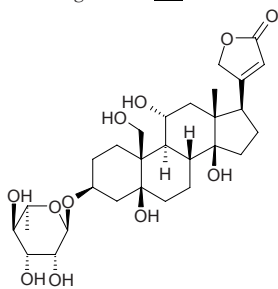
**19373 Sarmentogenin-3 $\beta$ -O-[ $\alpha$ -allosyl-(1 $\rightarrow$ 4)- $\beta$ -6-deoxyalloside]**

C<sub>35</sub>H<sub>54</sub>O<sub>14</sub> (698.81). White-brown powder,  $[\alpha]_D^{24} = -5.2^\circ$  ( $c = 2.3$ , MeOH).

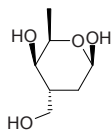
**Pharm:** Cytotoxic (KB, IC<sub>50</sub> = (0.075 $\pm$ 0.004) $\mu$ mol/L, control Podophyllotoxin, IC<sub>50</sub> = 0.014 $\mu$ mol/L). **Source:** GAO MEI YING BAN *Crossopetalum gaumeri* (root). **Ref:** 3969.

**19374 Sarmentoloside**

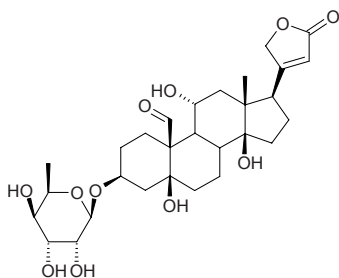
C<sub>29</sub>H<sub>44</sub>O<sub>11</sub> (568.67). **Pharm:** Toxin (vertebrate). **Source:** YANG JIAO AO ZI *Strophanthus divaricatus*, XI FEI YANG JIAO AO *Strophanthus sarmentosus* var. *senegambiae*. **Ref:** 658.

**19375 Sarmentose**

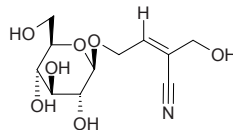
C<sub>7</sub>H<sub>14</sub>O<sub>4</sub> (162.19). mp 78~79°C. **Source:** FU SHOU CAO *Adonis amurensis*, LUO MO ZI *Metaplexis japonica*. **Ref:** 6.

**19376 Sarmentosigenin-3 $\beta$ -O- $\beta$ -6-deoxyguloside**

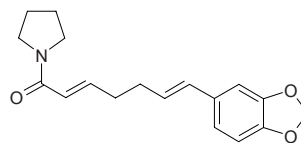
C<sub>29</sub>H<sub>42</sub>O<sub>11</sub> (566.65). White powder,  $[\alpha]_D^{24} = -26.0^\circ$  ( $c = 2.3$ , MeOH). **Pharm:** Cytotoxic (KB, IC<sub>50</sub> = (0.074 $\pm$ 0.009) $\mu$ mol/L, control Podophyllotoxin, IC<sub>50</sub> = 0.014 $\mu$ mol/L). **Source:** GAO MEI YING BAN *Crossopetalum gaumeri* (root). **Ref:** 3969.

**19377 Sarmentosin**

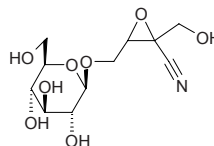
(E)-4-( $\beta$ -D-Glucopyranosyloxy)-2-(hydroxymethyl)-2-butenitrile [71933-54-5] C<sub>11</sub>H<sub>17</sub>NO<sub>7</sub> (275.26). White gum,  $[\alpha]_D^{22} = +39.99^\circ$  ( $c = 0.5$ , CHCl<sub>3</sub>). **Pharm:** Reduces level of SGPT; antihepatotoxin (mus orl, repairs acute hepatic injury induced by CCl<sub>4</sub>-liquid paraffin); inhibitory activity against NFAT transcription (IC<sub>50</sub> > 100 $\mu$ mol/L, positive control Cyclosporin A, IC<sub>50</sub> = (0.29 $\pm$ 0.01) $\mu$ mol/L)<sup>[2536]</sup>. **Source:** HUA CHA BIAO *Ribes fasciculatum* var. *chinense*, SHENG DI HONG JING TIAN *Rhodiola sacra*, SHI ZHI JIA *Sedum sarmentosum* (whole herb: mean content of 2 origins = 0.415%<sup>[5508]</sup>). **Ref:** 742, 2536, 5501, 5508.

**19378 Sarmentosine**

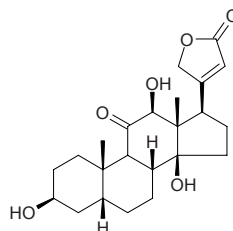
Piperamide C 7:2(2E,6E); 1-[1-Oxo-7(3,4-methylenedioxyphenyl)-2E,6E-heptadienyl]pyrrolidine [112448-68-7] C<sub>18</sub>H<sub>21</sub>NO<sub>3</sub> (299.37). mp 77.5~79.5°C. **Pharm:** Larvicidal. **Source:** HU JIAO *Piper nigrum* (root: yield = 0.000071%dw), JIA JU ZI *Piper sarmentosum*. **Ref:** 660, 1510, 3240, 4753.

**19379 Sarmentosin epoxide**

C<sub>11</sub>H<sub>17</sub>NO<sub>8</sub> (291.26). **Pharm:** Toxin. **Source:** XI PA JING TIAN *Sedum cepaea*. **Ref:** 658.

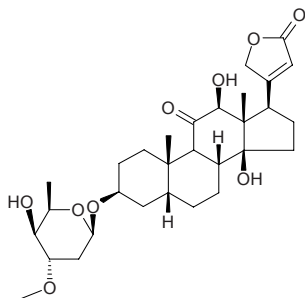
**19380 Sarmutogenin**

C<sub>23</sub>H<sub>32</sub>O<sub>6</sub> (404.51). **Source:** YANG JIAO AO ZI *Strophanthus divaricatus*. **Ref:** 660.

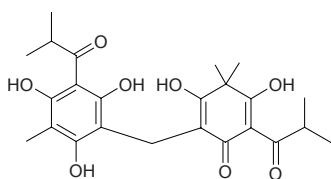


**19381 Sarmutoside**

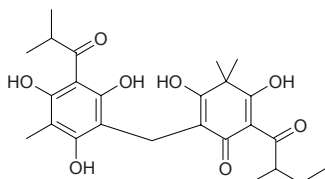
$C_{30}H_{44}O_9$  (548.68). mp 150~152°C, 233~245°C, 250~252°C. Source: YANG JIAO AO ZI *Strophanthus divaricatus*. Ref: 6.

**19382 Saroaspidin A**

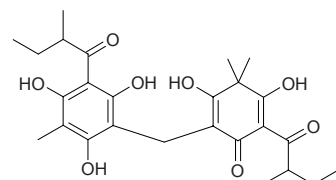
$C_{24}H_{30}O_8$  (446.50). Source: DI ER CAO *Hypericum japonicum*. Ref: 660.

**19383 Saroaspidin B**

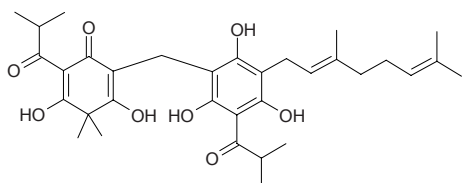
$C_{25}H_{32}O_8$  (460.53). Source: DI ER CAO *Hypericum japonicum*. Ref: 660.

**19384 Saroaspidin C**

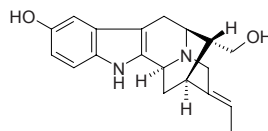
$C_{26}H_{34}O_8$  (474.56). Source: DI ER CAO *Hypericum japonicum*. Ref: 660.

**19385 Sarothralen A**

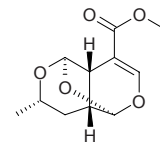
$C_{33}H_{44}O_8$  (568.71). Source: DI ER CAO *Hypericum japonicum*. Ref: 660.

**19386 Sarpagine**

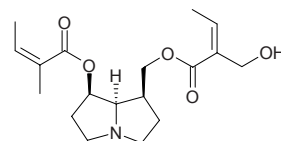
$C_{19}H_{22}N_2O_2$  (310.40). White prismatic crystals, mp 300~310°C,  $[\alpha]_D^{24.4} = +48.65^\circ$  ( $c = 1.483$ , pyridine). Pharm: Adrenergic receptor blocker; antihypertensive (hypertensive dog, iv, 1~2mg/kg); nicotine antagonist. Source: CUI TU LUO FU MU *Rauwolfia vomitoria*, KA FU LA LUO FU MU *Rauwolfia caffra*, KE MING XI LUO FU MU *Rauwolfia cumminsii*, PI LI LUO FU MU *Rauwolfia perakensis*, YANG JIAO MIAN *Alstonia mairei*, YIN DU LUO FU MU *Rauwolfia serpentina*. Ref: 633, 658, 660.

**19387 Sarracenin**

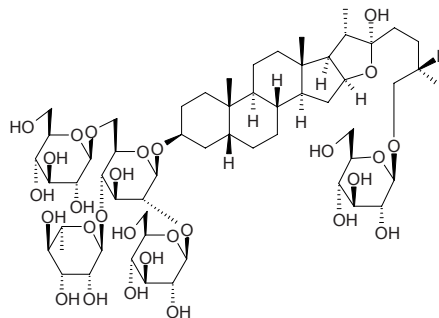
[59653-37-1]  $C_{11}H_{14}O_5$  (226.23). mp 127~128°C (dec). Pharm: Antineoplastic (mus, P<sub>388</sub>, 50mg/kg, *in vivo*, biotic prolonged rate = 50%). Source: HUANG PING ZI CAO *Sarracenia flava*. Ref: 5, 658.

**19388 Sarracine**

[2492-09-3]  $C_{18}H_{27}NO_5$  (337.42). mp 45~46°C, 51~52°C. Pharm: Anticholinergic (inhibits acetylcholine); antispasmodic (relieves spasm of intestinal canal in gpg and rat); antiulcerative, used in treatment of gastric ulcer (in former USSR); bidirectional action to CNS (first stimulates center and then inhibits it); antihypertensive. Source: DA BAI DING CAO *Senecio oryzetorum*, HUANG WAN *Senecio nemorensis*, PING QIAN LI GUANG *Senecio sarracenicus*, YE SHENG QIAN LI GUANG *Senecio sylvaticus*. Ref: 5, 6, 658.

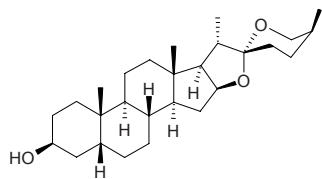
**19389 Sarsaparilloside**

$C_{57}H_{96}O_{28}$  (1229.38). Source: HUI BA QIA *Smilax aristolochiaefolia*. Ref: 658.

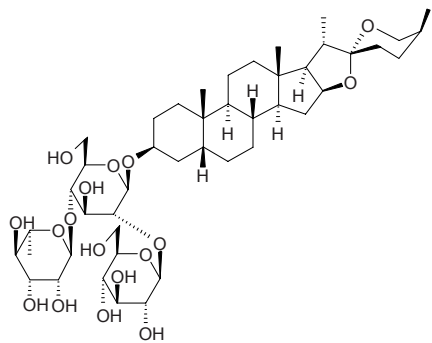


**19390 Sarsasapogenin**

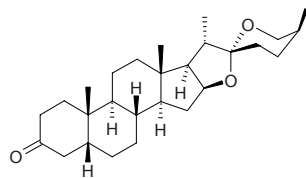
(25S)-5 $\beta$ -Spirostan-3 $\beta$ -ol [126-19-2] C<sub>27</sub>H<sub>44</sub>O<sub>3</sub> (416.65). **Pharm:** Raw material of synthesis of pregnane. **Source:** TIAN MEN DONG *Asparagus cochinchinensis* [Syn. *Asparagus lucidus*] (dried tuberoid: 3 mean content of 3 origins = 0.2879%)<sup>[5508]</sup>, ZHI MU *Anemarrhena asphodeloides* (dried rhizome: content scope of 5 origins = 0.844%~1.832%, mean content = 1.354%)<sup>[5508]</sup>. **Ref:** 2, 658, 5508.

**19391 Sarsasapogenin 3-O-4<sup>C</sup>-rhamnosyl-sophoroside**

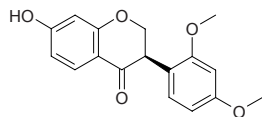
C<sub>45</sub>H<sub>74</sub>O<sub>17</sub> (887.09). **Pharm:** Molluscicide (*Biomphalaria glabrata*, LD<sub>100</sub> = 20mg/L). **Source:** WAN QU TIAN MEN DONG *Asparagus curillus*. **Ref:** 658.

**19392 Sarsasapogenone**

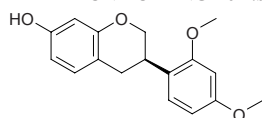
C<sub>27</sub>H<sub>42</sub>O<sub>3</sub> (414.63). mp 176~178°C, [ $\alpha$ ]<sub>D</sub><sup>29</sup> = -56.0° (c = 0.30, CHCl<sub>3</sub>), existing in moldy source plant only. **Source:** CHA RUI SHU YU *Dioscorea collettii*. **Ref:** 10, 24, 660.

**19393 Sativanone**

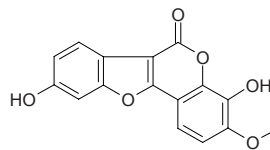
[70561-31-8] C<sub>17</sub>H<sub>16</sub>O<sub>5</sub> (300.31). **Source:** JIANG ZHEN XIANG *Dalbergia odorifera*. **Ref:** 716.

**19394 Sativin**

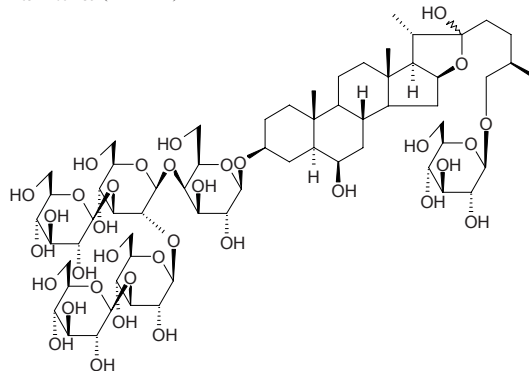
Sativan C<sub>17</sub>H<sub>18</sub>O<sub>4</sub> (286.33). **Pharm:** Antifungal. **Source:** HUA XU GENG BAI MAI GEN *Lotus pedunculatus*, MAO CI JIN JI ER *Caragana tibetica* (stem), YA MA XUN YU TENG *Derris amazonica*. **Ref:** 658, 4514.

**19395 Sativol**

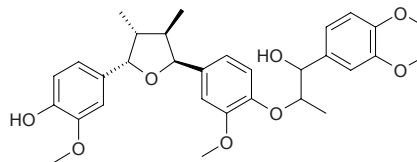
C<sub>16</sub>H<sub>10</sub>O<sub>6</sub> (298.25). mp 303°C. **Source:** MU XU *Medicago sativa*. **Ref:** 6.

**19396 Sativoside B<sub>1</sub>**

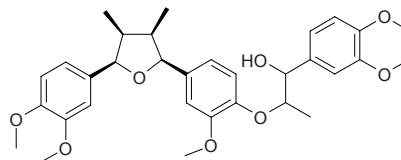
C<sub>63</sub>H<sub>106</sub>O<sub>35</sub> (1423.53). **Source:** DA SUAN *Allium sativum*. **Ref:** 660.

**19397 Saucerneol**

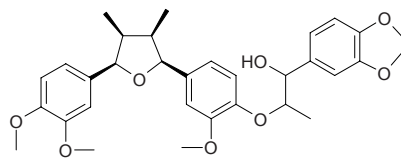
[88497-86-3] C<sub>31</sub>H<sub>38</sub>O<sub>8</sub> (538.64). **Source:** YU XING CAO *Houttuynia cordata*, *Saururus* sp. **Ref:** 2428.

**19398 Saucerneol A**

C<sub>32</sub>H<sub>40</sub>O<sub>8</sub> (552.67). Amorphous powder, [ $\alpha$ ]<sub>D</sub> = -83° (c = 0.7, CHCl<sub>3</sub>). **Source:** SAN BAI CAO *Saururus chinensis* (underground part). **Ref:** 4122.

**19399 Saucerneol B**

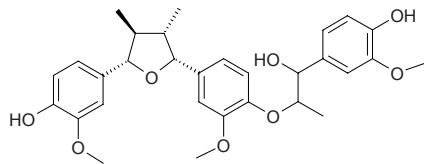
C<sub>31</sub>H<sub>36</sub>O<sub>8</sub> (536.63). Amorphous powder, [ $\alpha$ ]<sub>D</sub> = -58° (c = 0.6, CHCl<sub>3</sub>). **Source:** SAN BAI CAO *Saururus chinensis* (underground part). **Ref:** 4122.



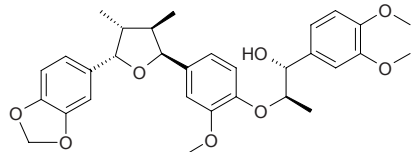


**19400 Saucerneol C**

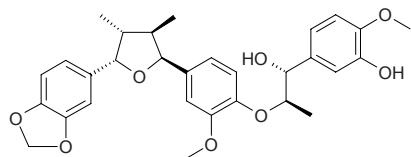
$C_{30}H_{36}O_8$  (524.62). Amorphous powder,  $[\alpha]_D^{25} = -66^\circ$  ( $c = 0.7$ ,  $CHCl_3$ ). Source: SAN BAI CAO *Saururus chinensis* (underground part). Ref: 4122.

**19401 Saucerneol D**

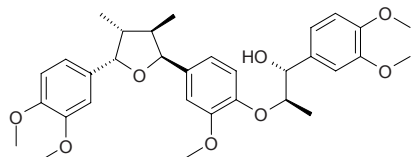
$C_{31}H_{36}O_8$  (536.63). Colorless powder, mp 75~76°C,  $[\alpha]_D^{25} = -88.1^\circ$  ( $c = 1.2$ ,  $CHCl_3$ ). Pharm: Anti-inflammatory (NF- $\kappa$ B inhibitor,  $IC_{50} = 6.1 \mu\text{mol/L}$ ). Source: SAN BAI CAO *Saururus chinensis* (root). Ref: 3453.

**19402 Saucerneol E**

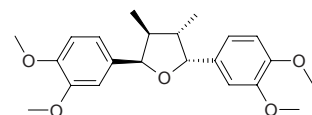
$C_{30}H_{34}O_8$  (522.60). Colorless powder, mp 76~78°C,  $[\alpha]_D^{25} = -83.0^\circ$  ( $c = 1.2$ ,  $CHCl_3$ ). Pharm: Anti-inflammatory (NF- $\kappa$ B inhibitor,  $IC_{50} = 12.7 \mu\text{mol/L}$ ). Source: SAN BAI CAO *Saururus chinensis* (root). Ref: 3453.

**19403 (-)-Saucerneol methyl ether**

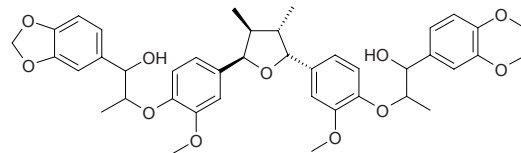
$C_{32}H_{40}O_8$  (552.67). Colorless powder, mp 72~74°C,  $[\alpha]_D^{25} = -63.0^\circ$  ( $c = 0.5$ ,  $CHCl_3$ ). Pharm: Anti-inflammatory (NF- $\kappa$ B inhibitor,  $IC_{50} = 16.9 \mu\text{mol/L}$ ). Source: SAN BAI CAO *Saururus chinensis* (root). Ref: 3453.

**19404 Saucernefin**

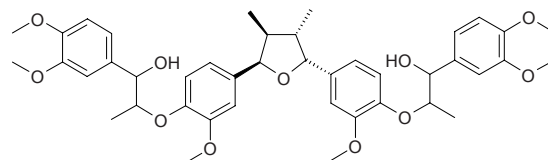
(+)-Saucernefin  $C_{22}H_{28}O_5$  (372.47). Colorless powder, mp 78~80°C,  $[\alpha]_D^{25} = +48.1^\circ$  ( $c = 0.5$ ,  $CHCl_3$ ). Pharm: PAF antagonist<sup>[658]</sup>, anti-inflammatory (NF- $\kappa$ B inhibitor,  $IC_{50} > 30 \mu\text{mol/L}$ )<sup>[3453]</sup>. Source: MEI ZHOU SAN BAI CAO *Saururus cernuus*, SAN BAI CAO *Saururus chinensis* (root). Ref: 658, 3453.

**19405 Saucernefin 7**

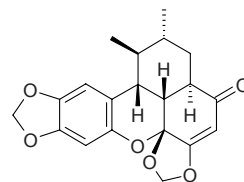
$C_{41}H_{48}O_{11}$  (716.83). Pale brown solid,  $[\alpha]_D^{25} = -13.4^\circ$  ( $c = 0.01$ , MeOH). Pharm: Anti-inflammatory (NO production inhibitor, LPS-induced Raw264.7 cells; PGE<sub>2</sub> production inhibitor, LPS-induced Raw264.7 cells; suppresses expression of iNOS and COX-2 protein in a dose-dependent manner)<sup>[5466]</sup>. Source: YU XING CAO *Houttuynia cordata*, SAN BAI CAO *Saururus chinensis*, *Saururus* sp. Ref: 2428, 5466.

**19406 Saucernefin 8**

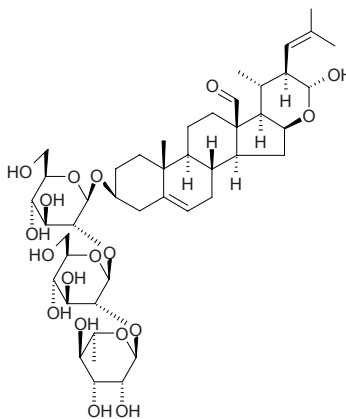
$C_{42}H_{52}O_{11}$  (732.88). Pale brown solid,  $[\alpha]_D^{25} = -15.1^\circ$  ( $c = 0.01$ , MeOH). Pharm: Anti-inflammatory (NO production inhibitor, LPS-induced Raw264.7 cells; PGE<sub>2</sub> production inhibitor, LPS-induced Raw264.7 cells; suppresses expression of iNOS and COX-2 protein in a dose-dependent manner)<sup>[5466]</sup>. Source: YU XING CAO *Houttuynia cordata*, SAN BAI CAO *Saururus chinensis*, *Saururus* sp. Ref: 2428, 5466.

**19407 Sauchinone**

$C_{20}H_{20}O_6$  (356.38). Colorless needles, mp 223~225°C,  $[\alpha]_D^{25} = -96.2^\circ$  ( $c = 1.7$ ,  $CHCl_3$ ). Pharm: Anti-inflammatory (LPS-stimulated RAW264.7 cells, NO production inhibitor through suppression of NF- $\kappa$ B by inhibiting transactivation activity of RelA subunit). Source: SAN BAI CAO *Saururus chinensis*. Ref: 5487.

**19408 Saundersioside C**

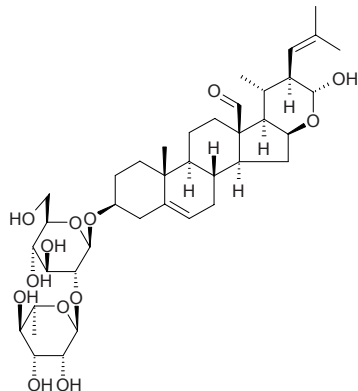
$C_{45}H_{70}O_{18}$  (899.05). Amorphous solid,  $[\alpha]_D^{30} = -49.6^\circ$  ( $c = 0.10$ , MeOH). Source: *Ornithogalum saundersiae*. Ref: 2363.



**19409 Saundersioside D**

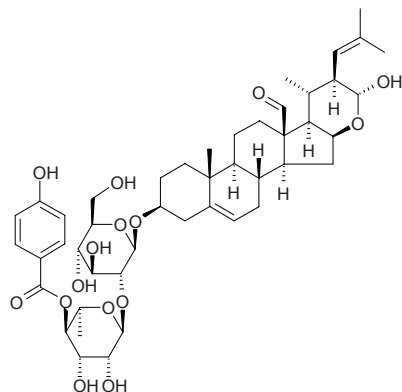
$C_{39}H_{60}O_{13}$  (736.91). Amorphous solid,  $[\alpha]_D^{28} = -60.0^\circ$  ( $c = 0.10$ , MeOH).

Source: *Ornithogalum saundersiae*. Ref: 2363.

**19410 Saundersioside E**

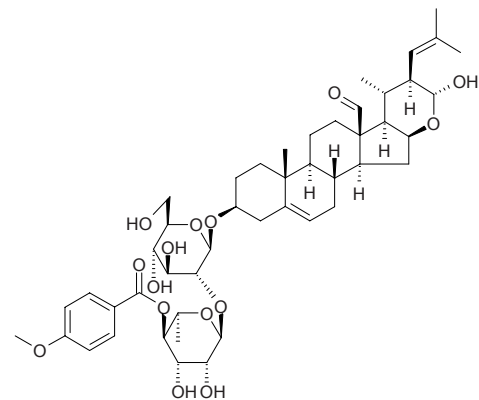
$C_{46}H_{64}O_{15}$  (857.01). Amorphous solid,  $[\alpha]_D^{27} = -32.8^\circ$  ( $c = 0.25$ , MeOH).

Pharm: Cytotoxic (cytostatic, HL-60 cells,  $IC_{50} = 0.021 \mu\text{mol/L}$ ). Source: *Ornithogalum saundersiae*. Ref: 2363.

**19411 Saundersioside F**

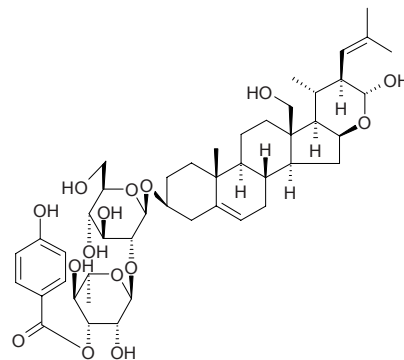
$C_{47}H_{66}O_{15}$  (871.04). Amorphous solid,  $[\alpha]_D^{26} = -4.0^\circ$  ( $c = 0.10$ , MeOH).

Pharm: Cytotoxic (cytostatic, HL-60 cells,  $IC_{50} = 0.019 \mu\text{mol/L}$ ). Source: *Ornithogalum saundersiae*. Ref: 2363.

**19412 Saundersioside G**

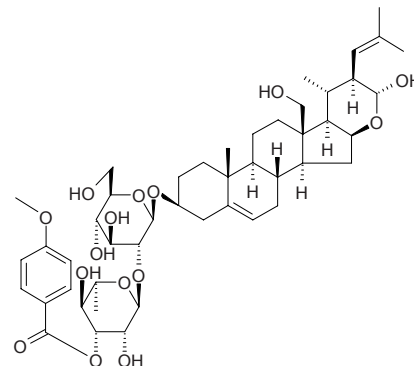
$C_{46}H_{66}O_{15}$  (859.03). Amorphous solid,  $[\alpha]_D^{26} = -20.0^\circ$  ( $c = 0.10$ , MeOH).

Pharm: Cytotoxic (cytostatic, HL-60 cells,  $IC_{50} = 0.063 \mu\text{mol/L}$ ). Source: *Ornithogalum saundersiae*. Ref: 2363.

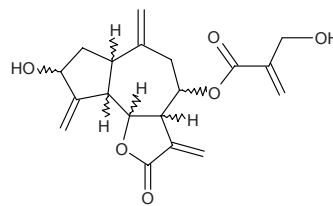
**19413 Saundersioside H**

$C_{47}H_{68}O_{15}$  (873.06). Amorphous solid,  $[\alpha]_D^{26} = -16.0^\circ$  ( $c = 0.10$ , MeOH).

Pharm: Cytotoxic (cytostatic, HL-60 cells,  $IC_{50} = 0.052 \mu\text{mol/L}$ ). Source: *Ornithogalum saundersiae*. Ref: 2363.

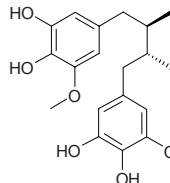
**19414 Saupirin**

$C_{19}H_{22}O_6$  (346.39). Pharm: Antiprotozoal (pathogenic amoeba and *Trichomonas vaginalis*). Source: MEI HUA FENG MAO JU *Saussurea pulchella*, XIN MEI FENG MAO JU *Saussurea neopulchella*. Ref: 658.

**19415 Sauriol A**

$C_{20}H_{26}O_6$  (362.43). White amorphous solid,  $[\alpha]_D = -240^\circ$  ( $c = 0.03$ ,  $\text{CHCl}_3$ ).

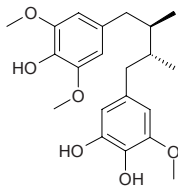
Source: MEI ZHOU SAN BAI CAO *Saururus cernuus*. Ref: 3959.



**19416 Sauriol B**

$C_{21}H_{28}O_6$  (376.45). White amorphous solid,  $[\alpha]_D = -92^\circ$  ( $c = 0.13$ ,  $CHCl_3$ ).

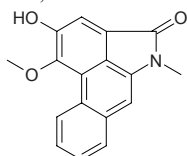
Source: MEI ZHOU SAN BAI CAO *Saururus cernuus*. Ref: 3959.

**19417 Sauristolactam**

Sauristolactam  $C_{17}H_{13}NO_3$  (279.30). Source: MEI ZHOU SAN BAI CAO

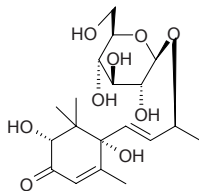
*Saururus cernuus*, SAN BAI CAO *Saururus chinensis* (aerial parts). Ref:

2428, 4968.

**19418 Sauroposide**

$C_{19}H_{30}O_9$  (402.45). Amorphous powder,  $[\alpha]_D^{31} = -37.9^\circ$  ( $c = 1.11$ , MeOH).

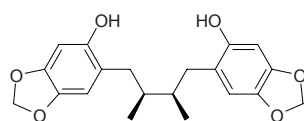
Source: TONG XU SHOU GONG MU *Sauropus androgynus*. Ref: 3432.

**19419 Saururin A**

$C_{20}H_{22}O_6$  (358.39). Pale brown solid,  $[\alpha]_D^{25} = 0^\circ$  ( $c = 0.45$ ,  $CHCl_3$ ). Pharm:

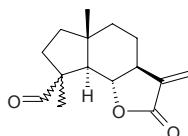
Antioxidant (*in vitro*, low-density lipoprotein peroxidation,  $IC_{50} = 8.5 \mu\text{mol/L}$ ; control Probulcol,  $IC_{50} = 1.3 \mu\text{mol/L}$ ). Source: SAN BAI CAO *Saururus*

*chinensis*. (underground part). Ref: 3096.

**19420 Saussureal**

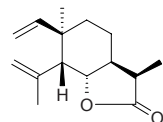
$C_{15}H_{20}O_3$  (248.32). Source: MU XIANG *Saussurea lappa* [Syn. *Aucklandia*

*lappa*]. Ref: 660.

**19421 Saussurea lactone**

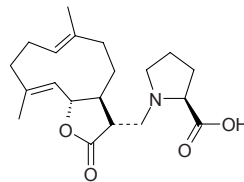
$C_{15}H_{22}O_2$  (234.34). mp 148–149°C. Source: MU XIANG *Saussurea lappa*

[Syn. *Aucklandia lappa*]. Ref: 2, 6.

**19422 Saussureamine A**

[148245-82-3]  $C_{20}H_{29}NO_4$  (347.46). Colorless prismatic crystals, mp

135–139°C,  $[\alpha]_D^{24} = +36.7^\circ$  (methanol). Pharm: Antiulcerative (stomach ulcer caused by HCl/ethanol, rat, 100mg/kg, InRt = 59.8%, mus, 200mg/kg, InRt = 57%). Source: MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*]. Ref: 986.

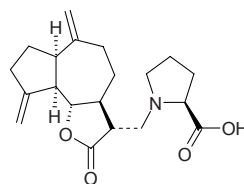
**19423 Saussureamine B**

[126209-82-3]  $C_{20}H_{27}NO_4$  (345.44). White powder,  $[\alpha]_D = -25.9^\circ$  (methanol).

Pharm: Antiulcerative (rat, stomach ulcer caused by HCl/ethanol, 50mg/kg,

InRt = 87.2%). Source: MU XIANG *Saussurea lappa* [Syn. *Aucklandia*

*lappa*]. Ref: 986.

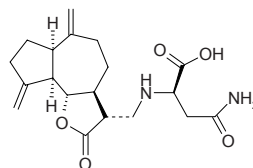
**19424 Saussureamine C**

[148245-83-4]  $C_{19}H_{26}N_2O_5$  (362.43). White powder,  $[\alpha]_D = -17.2^\circ$  (methanol).

Pharm: Antiulcerative (rat, stomach ulcer caused by HCl/ethanol, 100mg/kg,

InRt = 68.1%). Source: MU XIANG *Saussurea lappa* [Syn. *Aucklandia*

*lappa*]. Ref: 986.

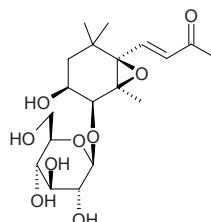
**19425 Saussureoside A**

$C_{19}H_{30}O_9$  (402.45). White powder,  $[\alpha]_D^{24} = -45.0^\circ$  ( $c = 0.80$ , MeOH). Pharm:

Aldose reductase inhibitor inactive ( $IC_{50} > 100 \mu\text{mol/L}$ , 100  $\mu\text{mol/L}$  InRt = 3%,

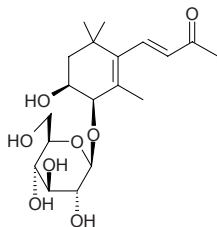
control Epalrestat,  $IC_{50} = 0.072 \mu\text{mol/L}$ ). Source: SHUI MU XUE LIAN HUA

*Saussurea medusa* (whole herb). Ref: 4530.

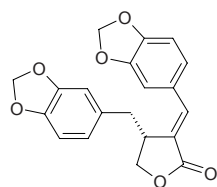


**19426 Saussureoside B**

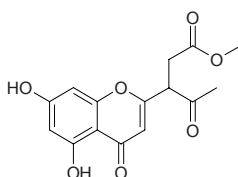
$C_{19}H_{30}O_8$  (386.45). White powder,  $[\alpha]_D^{26} = -39.5^\circ$  ( $c = 0.98$ , MeOH). **Pharm:** Aldose reductase inhibitor inactive ( $IC_{50} > 100\mu\text{mol/L}$ ,  $100\mu\text{mol/L}$  InRt = 13%, control Epalrestat,  $IC_{50} = 0.072\mu\text{mol/L}$ ). **Source:** SHUI MU XUE LIAN HUA *Saussurea medusa* (whole herb). **Ref:** 4530.

**19427 Savinin**

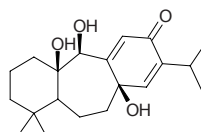
Saussurine  $C_{20}H_{16}O_6$  (352.35). mp 146.4~148.4°C. **Pharm:** Antirheumatic; regulates menstrual cycle; anti-inflammatory (modulator of cytokine network: inhibits LPS-activated production of TNF- $\alpha$  in RAW264.7 cells,  $IC_{50} = 31.9\mu\text{mol/L}$ )<sup>[4416]</sup>; cytotoxic (A549,  $ED_{50} = 6.7\mu\text{mol/L}$ ,  $ED_{50} = 19.1\mu\text{g/mL}$ , control Adriamycin,  $ED_{50} = 0.01\mu\text{mol/L}$ ,  $ED_{50} = 0.02\mu\text{g/mL}$ ; MCF7,  $ED_{50} = 0.5\mu\text{mol/L}$ ,  $ED_{50} = 1.5\mu\text{g/mL}$ , Adriamycin,  $ED_{50} = 0.1\mu\text{mol/L}$ ,  $ED_{50} = 0.1\mu\text{g/mL}$ ; HT29,  $ED_{50} = 1.5\mu\text{mol/L}$ ,  $ED_{50} = 4.3\mu\text{g/mL}$ , Adriamycin,  $ED_{50} = 0.1\mu\text{mol/L}$ ,  $ED_{50} = 0.1\mu\text{g/mL}$ )<sup>[5088]</sup>. **Source:** CHA ZI YUAN BAI *Juniperus sabina*, CHOU CAO *Ruta graveolens*, MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*], TAI WAN SHAN *Taiwania cryptomerioides* (heartwood), WU GENG WU JIA PI *Acanthopanax sessiliflorus*, XIAO GUO YUN XIANG *Ruta microcarpa*, SI ZI TAN *Pterocarpus santalinus* (heartwood), *Justicia hyssopifolia* (aerial parts). **Ref:** 2, 6, 658, 4259, 4416, 5088, 5501.

**19428 Sawarachromone**

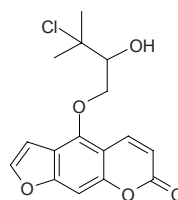
5,7-Dihydroxy-2-(1-acetyl-2-methoxycarbonylethyl)-chromone  $C_{15}H_{14}O_7$  (306.27). Fine crystals, mp 191~19°C (MeOH). **Pharm:** Antibacterial inactive (*Staphylococcus aureus*, MIC > 100 $\mu\text{g/mL}$ ; *Bacillus subtilis*, MIC > 100 $\mu\text{g/mL}$ ). **Source:** RI BEN HUA BAI *Chamaecyparis pisifera* (leaf). **Ref:** 4144.

**19429 Sawaradienone**

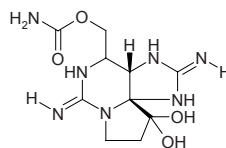
*rel*-(8*R*,10*R*,20*S*)-8,10,20-Trihydroxy-9(10 $\rightarrow$ 20)-abeo-abieta-9,13-dien-12-one  $C_{20}H_{30}O_4$  (334.46). Colorless viscous oil. **Pharm:** Antibacterial inactive (*Staphylococcus aureus*, MIC > 100 $\mu\text{g/mL}$ ; *Bacillus subtilis*, MIC > 100 $\mu\text{g/mL}$ ). **Source:** RI BEN HUA BAI *Chamaecyparis pisifera* (leaf). **Ref:** 4144.

**19430 Saxalin**

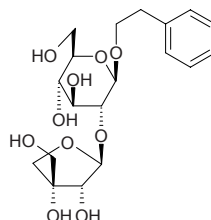
$C_{16}H_{15}ClO_5$  (322.75). **Source:** *Niphogeton ternata*. **Ref:** 4156.

**19431 Saxitoxin**

Mussel poison; Clam poison  $C_{10}H_{17}N_7O_4$  (299.29). Easily soluble in water, methanol, slightly soluble in ethanol, ice vinegar, insoluble in lipidic solvents. **Pharm:** Blocks nerve; LD (hmn, orl) = 0.10-0.12mg or 0.54-0.90mg. **Source:** BAI TA GE *Saxidomus giganteus*, *Platypodia granulosa*, *Emerita analoga*. **Ref:** 658, 5507.

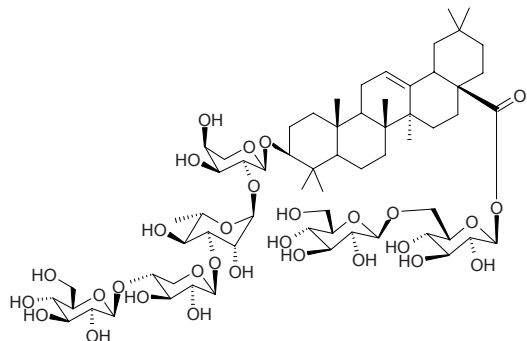
**19432 Sayaendoside**

Phenethyl 1-*O*- $\beta$ -D-apiofuranosyl (1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside  $C_{19}H_{28}O_{10}$  (416.43). Yellow powder,  $[\alpha]_D^{25} = -18.6^\circ$  ( $c = 0.05$ , MeOH). **Source:** WAN DOU *Pisum sativum* (young seedpot). **Ref:** 4110.

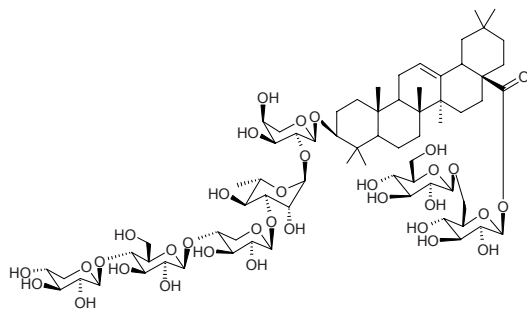


**19433 Scabiosaponin A**

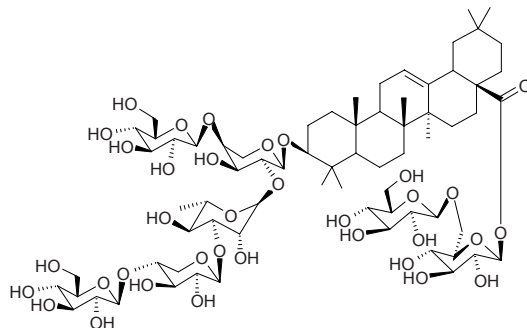
3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranosyloleanoic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>64</sub>H<sub>104</sub>O<sub>30</sub> (1353.52). Amorphous solid, mp 216–218°C,  $[\alpha]_D^{20} = -6.6^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, weak). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.0052%dw). **Ref:** 3021.

**19434 Scabiosaponin B**

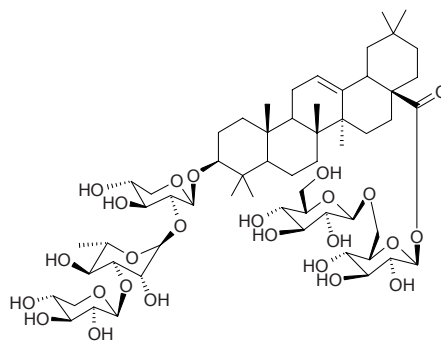
3-*O*- $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranosyloleanoic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>69</sub>H<sub>112</sub>O<sub>34</sub> (1485.64). Amorphous solid, mp 230–231°C,  $[\alpha]_D^{25} = -28.9^\circ$  ( $c = 0.30$ , MeOH). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, weak). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.0010%dw). **Ref:** 3021.

**19435 Scabiosaponin C**

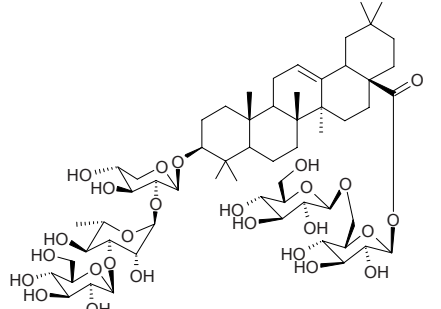
3-*O*-[ $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)] [ $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 4)]- $\alpha$ -*L*-arabinopyranosyloleanoic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>70</sub>H<sub>114</sub>O<sub>35</sub> (1515.67). Amorphous solid, mp<sup>21</sup>9–220°C,  $[\alpha]_D^{25} = -19.3^\circ$  ( $c = 0.20$ , MeOH). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, weak). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.00058%dw). **Ref:** 3021.

**19436 Scabiosaponin E**

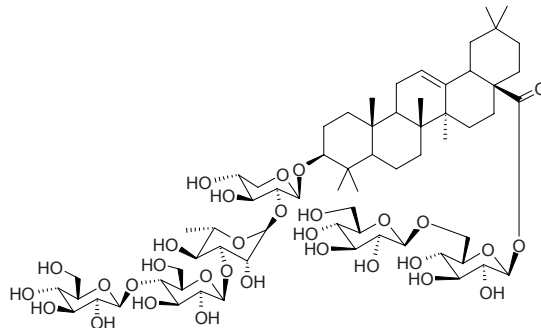
3-*O*- $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-xylopyranosyloleanoic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>58</sub>H<sub>94</sub>O<sub>25</sub> (1191.38). Amorphous solid, mp 208–210°C,  $[\alpha]_D^{20} = -22.9^\circ$  ( $c = 0.56$ , MeOH). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, 1mg/mL, InRt comparing the control = 80%). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.00052%dw). **Ref:** 3021.

**19437 Scabiosaponin F**

3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-xylopyranosyloleanoic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>59</sub>H<sub>96</sub>O<sub>26</sub> (1221.41). Amorphous solid, mp<sup>21</sup>8–219°C,  $[\alpha]_D^{25} = -11.1^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, 1mg/mL, InRt comparing the control = 73%). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.00033%dw). **Ref:** 3021.

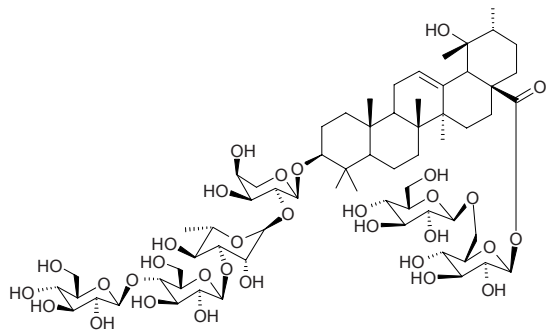
**19438 Scabiosaponin G**

3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-xylopyranosyloleanoic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>65</sub>H<sub>106</sub>O<sub>31</sub> (1383.55). Amorphous solid, mp 228–230°C,  $[\alpha]_D^{21} = -20.3^\circ$  ( $c = 1.28$ , MeOH). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, 1mg/mL, InRt comparing the control = 78%). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.00026%dw). **Ref:** 3021.

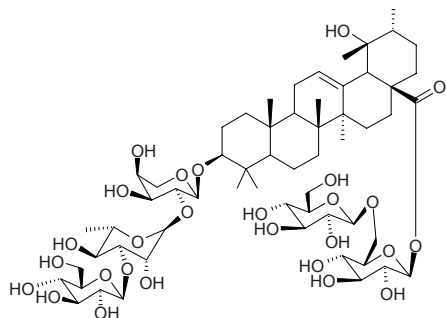


**19439 Scabiosaponin H**

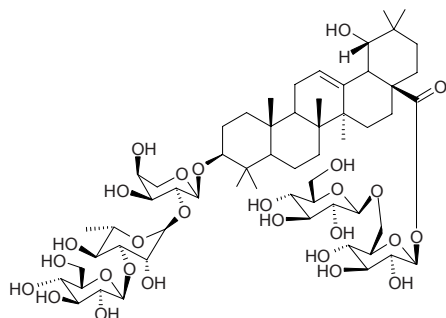
3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranosylpomolic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>65</sub>H<sub>106</sub>O<sub>32</sub> (1399.55). Amorphous solid, mp 230–232°C,  $[\alpha]_D^{20} = -11.3^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, 1mg/mL, InRt comparing the control = 57%). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.0023%dw). **Ref:** 3021.

**19440 Scabiosaponin I**

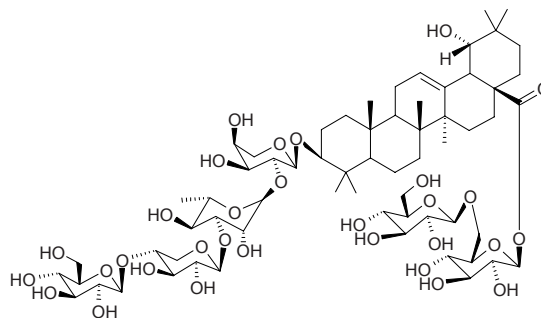
3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranosylpomolic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>59</sub>H<sub>96</sub>O<sub>27</sub> (1237.41). Amorphous solid, mp<sup>21</sup> 3–215°C,  $[\alpha]_D^{20} = -15.0^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, 1mg/mL, InRt comparing the control = 71%). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.0025%dw). **Ref:** 3021.

**19441 Scabiosaponin J**

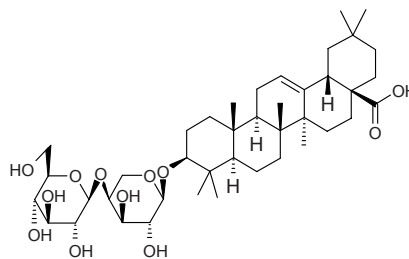
3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranosylsarsinolic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>59</sub>H<sub>96</sub>O<sub>27</sub> (1237.41). Amorphous solid, mp<sup>21</sup> 2–214°C,  $[\alpha]_D^{20} = -6.5^\circ$  ( $c = 0.10$ , MeOH). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, 1mg/mL, InRt comparing the control = 69%). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.00069%dw). **Ref:** 3021.

**19442 Scabiosaponin K**

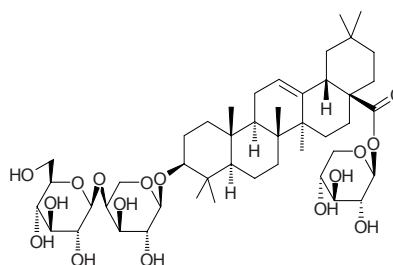
3-*O*- $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 3)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\alpha$ -*L*-arabinopyranosylsarsinolic acid 28-*O*- $\beta$ -*D*-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -*D*-glucopyranoside C<sub>64</sub>H<sub>104</sub>O<sub>31</sub> (1369.52). Amorphous solid, mp 220–222°C,  $[\alpha]_D^{20} = -36^\circ$  ( $c = 0.10$ , MeOH). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole herb: yield = 0.00014%dw). **Ref:** 3021.

**19443 Scabioside B**

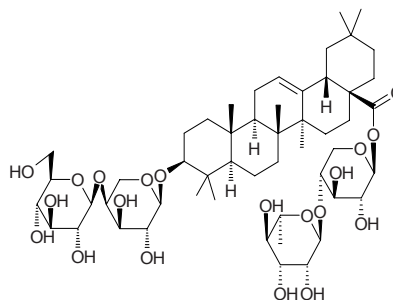
C<sub>41</sub>H<sub>66</sub>O<sub>12</sub> (750.98). mp 210–212°C. **Source:** HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. **Ref:** 2.

**19444 Scabioside D**

C<sub>46</sub>H<sub>74</sub>O<sub>16</sub> (883.09). mp 224–226°C. **Source:** HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. **Ref:** 2.

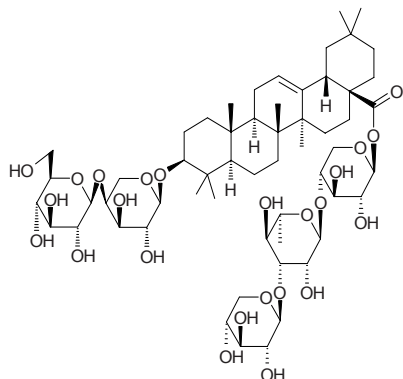
**19445 Scabioside E**

C<sub>52</sub>H<sub>84</sub>O<sub>20</sub> (1029.24). mp 224–227°C. **Source:** HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. **Ref:** 2.

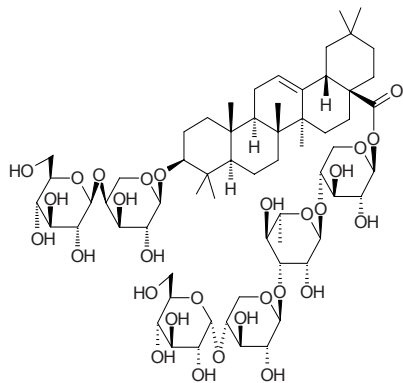


**19446 Scabioside F**

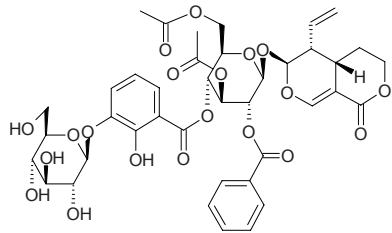
$C_{57}H_{92}O_{24}$  (1161.35). Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 2.

**19447 Scabioside G**

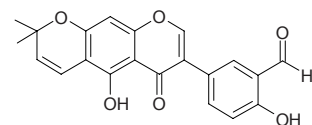
$C_{63}H_{102}O_{29}$  (1323.50). mp 235–236°C. Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 2.

**19448 Scaboside**

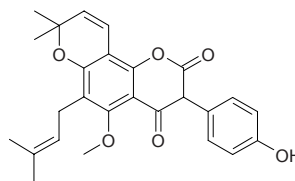
$C_{40}H_{44}O_{20}$  (844.78). Source: LONG DAN *Gentiana scabra*. Ref: 2.

**19449 Scandenal**

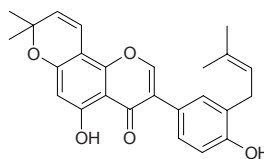
3'-Formyl-4',5-dihydroxy-2'',2''-dimethylchromeno-[6,7:5'',6'']isoflavone  $C_{21}H_{16}O_6$  (364.36). Yellow solid, mp 79–80°C. Pharm: Increases blood pressure (anesthetized rats, increases in mean arterial blood pressure, 0.4mg/kg, 11.67mmHg). Source: PAN YUAN YU TENG *Derris scandens* (stem). Ref: 3810.

**19450 Scandenin**

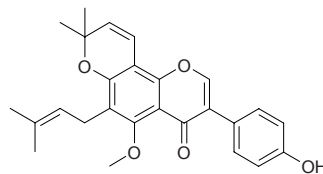
$C_{26}H_{26}O_6$  (434.49). Pharm: Anti-Inflammatory (inhibit brain liposomal peroxidation, 50µg/mL, optical density of DMSO control = (16.9±0.1)%,  $p < 0.001$ ; positive control Propyl gallate, 7.5µmol/mL, optical density of DMSO control = (20.6±0.2)%). Source: PAN YUAN YU TENG *Derris scandens* (stem). Ref: 4984.

**19451 Scanderone**

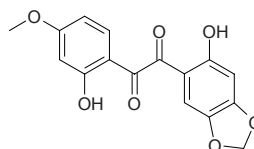
4',5-Dihydroxy-3'-prenyl-2'',2''-dimethylchromeno-[7,8:6'',5'']isoflavone  $C_{25}H_{24}O_5$  (404.47). Yellow solid, mp 115–116°C. Pharm: Increases blood pressure (anesthetized rats, increases in mean arterial blood pressure, 4.0mg/kg, 20mmHg). Source: PAN YUAN YU TENG *Derris scandens* (stem). Ref: 3810.

**19452 Scandinone**

$C_{26}H_{26}O_5$  (418.49). Yellow amorphous. Pharm: Antifungal (*Trichophyton mentagrophytes*, 500–1000µg/mL)<sup>[2347]</sup>; antioxidant (DPPH scavenger, ScRt = 63.16%, control BHT, ScRt = 71.5%)<sup>[3810]</sup>; antibacterial (*Staphylococcus aureus* ATCC 25923, MIC > 256µg/mL, control Vancomycin, MIC = 0.5µg/mL; MRSA SK1, MIC > 256µg/mL, Vancomycin, MIC = 1.0µg/mL)<sup>[3810]</sup>; increases blood pressure (anesthetized rats, increases in mean arterial blood pressure, 4.0mg/kg, 9.17mmHg)<sup>[3810]</sup>. Source: PAN YUAN YU TENG *Derris scandens*. Ref: 2347, 3810.

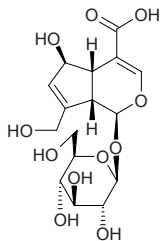
**19453 Scandione**

2',2''-Dihydroxy-4'-methoxy-4'',5''-methylenedioxybenzil  $C_{16}H_{12}O_7$  (316.27). Yellow solid, mp 132–133°C. Source: PAN YUAN YU TENG *Derris scandens* (stem). Ref: 3810.

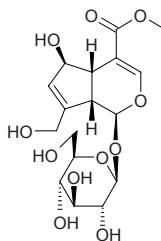


**19454 Scandoside**

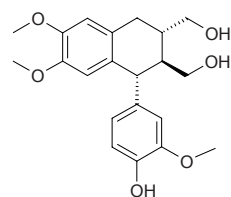
[18842-99-4] C<sub>16</sub>H<sub>22</sub>O<sub>11</sub> (390.35). mp 139~143°C. Source: JI SHI TENG *Paederia scandens*. Ref: 6.

**19455 Scandoside methyl ester**

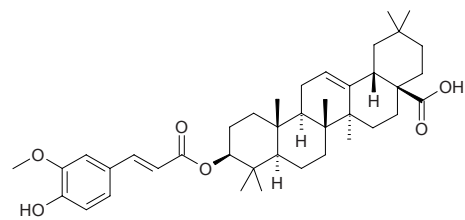
C<sub>17</sub>H<sub>24</sub>O<sub>11</sub> (404.37). Pharm: Antineoplastic (strong). Source: ZHI ZI *Gardenia jasminoides* [Syn. *Gardenia florida*]. Ref: 2, 626, 658.

**19456 Scaphopetalone**

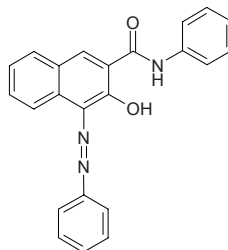
9,4,9'-Trihydroxy 4,5,3'-trimethoxy aryltetralin lignan C<sub>21</sub>H<sub>26</sub>O<sub>6</sub> (374.44). Brown sticky oil. Source: *Scaphopetalum thonneri* (stem cortex). Ref: 3363.

**19457 Scaphopetalumate**

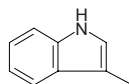
3β-O-E-Feruloyl oleanolic acid C<sub>40</sub>H<sub>56</sub>O<sub>6</sub> (632.89). Amorphous powder. Source: *Scaphopetalum thonneri* (stem cortex). Ref: 3363.

**19458 Scarlet808**

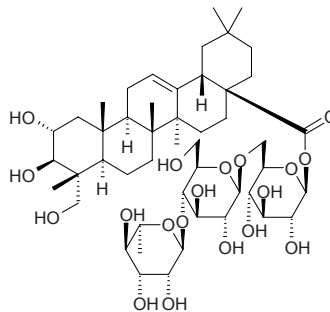
2-Hydroxy-3-(phenylaminocarbonyl)naphthalene-1-azobenzene C<sub>23</sub>H<sub>17</sub>N<sub>3</sub>O<sub>2</sub> (367.41). Red needles (CHCl<sub>3</sub>), mp 249~250°C. Pharm: Cytotoxic (K562, inhibits cell proliferation). Source: MI MAI E ZHANG CHAI *Schefflera venulosa* (stem cortex). Ref: 4600.

**19459 Scatole**

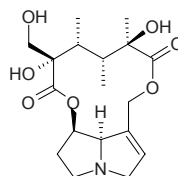
Skatole [83-34-1] C<sub>9</sub>H<sub>9</sub>N (131.18). mp 95°C, bp 265~266°C/755mmHg. Pharm: Funk. Source: LING MAO XIANG *Viverra zibetha*, TIAN CAI *Beta vulgaris*, *Arum* sp. Ref: 6, 658.

**19460 Scaffoleoside A**

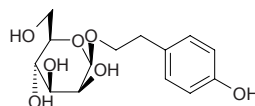
C<sub>48</sub>H<sub>78</sub>O<sub>19</sub> (959.15). Source: JI XUE CAO *Centella asiatica* (aerial parts). Ref: 4135.

**19461 Sceleratine**

[6190-25-6] C<sub>18</sub>H<sub>27</sub>NO<sub>7</sub> (369.42). mp 178°C, [α]<sub>D</sub><sup>21</sup> = +54° (ethanol). Pharm: Uterine stimulant (gpg, *in vitro*, EC = 1:20000); toxin (humans and livestock, liver). Source: LA QIAN LI GUANG *Senecio sceleratus*. Ref: 661.

**19462 Sceptroside**

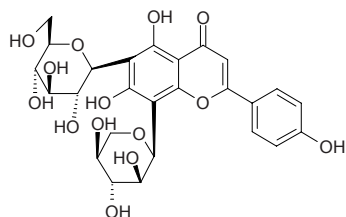
C<sub>14</sub>H<sub>20</sub>O<sub>7</sub> (300.31). Amorphous solid, [α]<sub>D</sub><sup>20</sup> = -51° (c = 0.5, MeOH). Source: *Isoplexis sceptrum* (fresh leaf). Ref: 5291.



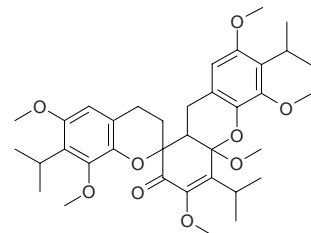


**19463 Schaftoside**

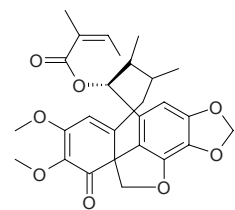
[51938-32-0]  $C_{26}H_{28}O_{14}$  (564.50). **Pharm:** Insect phagostimulant (*Plant hoppers*). **Source:** GAN CAO *Glycyrrhiza uralensis* (root and rhizome: content = 0.038%)<sup>[5508]</sup>, GUANG GUO GAN CAO *Glycyrrhiza glabra* (root and rhizome: content = 0.015%)<sup>[5508]</sup>, JING MI *Oryza sativa*<sup>[658]</sup>, TIAN NAN XING *Arisaema consanguineum* (dried tuber: content scope of 9 origins = 0.0102%–0.185%, mean content = 0.038%)<sup>[5508]</sup>, YI YE TIAN NAN XING *Arisaema heterophyllum* (dried tuber: content scope of 7 origins = 0.009%–0.0555%, mean content = 0.052%)<sup>[5508]</sup>, ZHANG GUO GAN CAO *Glycyrrhiza inflata* (root and rhizome: content = 0.038%)<sup>[5508]</sup>. **Ref:** 658, 5508.

**19464 (±)-Schefflone**

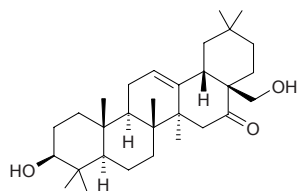
$C_{36}H_{48}O_9$  (624.78). Creamy crystals, mp 210°C,  $[\alpha]_D = 0.0^\circ$  ( $c = 0.16$ ,  $CHCl_3$ ). **Source:** XIE FEI ZI YU PAN *Uvaria scheffleri* (root cortex). **Ref:** 3763.

**19465 Schiarisanrin E**

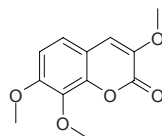
$C_{27}H_{30}O_8$  (482.54). Pale yellow solid. **Pharm:** Antihepatitis inactive (anti-HBsAg, 100µg/mL, InRt < 25%, inactive; anti-HBeAg, 100µg/mL, InRt < 25%, inactive). **Source:** A LI SHAN WU WEI ZI *Schisandra arisanensis* (stem). **Ref:** 4397.

**19466 Schimperinone**

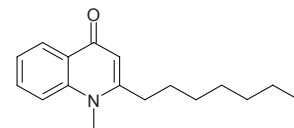
3β,28-dihydroxy-16-oxo-12-oleanene  $C_{30}H_{48}O_3$  (456.72). Colorless needles, mp 269–271°C,  $[\alpha]_D^{25} = -11^\circ$  ( $c = 0.6$ ,  $CHCl_3$ ). **Source:** KEN NI YA XIAN SUAN QIANG *Embelia schimperi*. **Ref:** 2058.

**19467 Schinicooumarin**

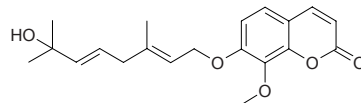
3,7,8-Trimethoxycoumarin [168074-91-7]  $C_{12}H_{12}O_5$  (236.22). Acicular crystals (Benzene–ethyl formate), mp 147–151°C. **Pharm:** Platelet aggregation inhibitor (caused by arachidonic acid, 100µg/mL InRt = 100%). **Source:** QING JIAO *Zanthoxylum schinifolium*. **Ref:** 1098.

**19468 Schinifoline**

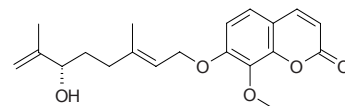
*N*-methyl-2-heptyl-4(1*H*)-quinolone [80554-58-1]  $C_{17}H_{23}NO$  (257.38). White acicular crystals (hexane:chloroform = 7:3), mp 81–82°C. **Pharm:** Antibacterial (gram-positive bacteria); platelet aggregation inhibitor; DNA isomerase inhibitor; cytotoxic. **Source:** HUA JIAO *Zanthoxylum bungeanum* (dried ripe pericarp: content = 0.007%)<sup>[5508]</sup>, QING JIAO *Zanthoxylum schinifolium* (dried ripe pericarp: content = 0.047%)<sup>[5508]</sup>. **Ref:** 207, 660, 2176, 5508.

**19469 Schinilenol**

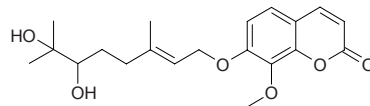
$C_{20}H_{24}O_5$  (344.41). **Pharm:** Antibacterial; smooth muscle relaxant; anticoagulant; photosensitive agent; ichthyotoxin; toxin. **Source:** *Zanthoxylum* sp. **Ref:** 2176.

**19470 Schininallyl**

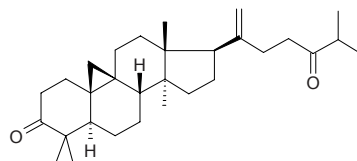
[168074-92-8]  $C_{20}H_{24}O_5$  (344.41). Prismatic crystals, mp 78–80°C,  $[\alpha]_D^{22} = -16.4^\circ$  ( $c = 0.07$ , chloroform). **Pharm:** Platelet aggregation inhibitor (*in vitro*, caused by arachidonic acid, collagen and PAF, 100µg/mL,  $P < 0.001$ ). **Source:** QING JIAO *Zanthoxylum schinifolium*. **Ref:** 1098.

**19471 Schinindiol**

$C_{20}H_{26}O_6$  (362.43). **Pharm:** Antibacterial; smooth muscle relaxant; anticoagulant; photosensitive agent; ichthyotoxin; toxin. **Source:** *Zanthoxylum* sp. **Ref:** 2176.

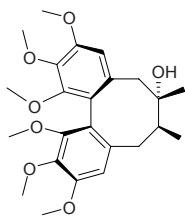
**19472 Schisandraflorin**

$C_{30}H_{46}O_2$  (438.70). **Pharm:** Antineoplastic; anti-HIV. **Source:** DA HUA WU WEI ZI *Schisandra grandiflora*. **Ref:** 2523.

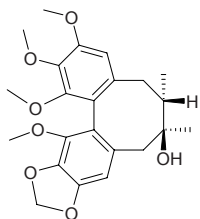


**19473 Schisandrol A**

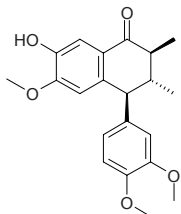
Wuweizichun A [7432-28-2]  $C_{24}H_{32}O_7$  (432.52). mp 118~119°C, 133°C,  $[\alpha]_D^{23} = +76.1^\circ$  ( $c = 0.71$ ,  $CHCl_3$ ). **Pharm:** Analgesic; antipyretic; antispasmodic; smooth muscle relaxant; choleric; antihepatotoxin (repairs hepatic injury induced by  $CCl_4$  and galactosamine, reduces SGPT and SGOT); CNS depressant; inhibits gastric secretion; slows heart rate; tonic (effective component in *Schisandra chinensis* WU WEI ZI); NFAT transcription inhibitor ( $IC_{50} = (1.34 \pm 0.05) \mu\text{mol/L}$ , control Cyclosporin A,  $IC_{50} = (1.20 \pm 0.29) \text{nmol/L}$ )<sup>[5343]</sup>. **Source:** HU LU BA *Trigonella foenum-graecum*, HUA ZHONG WU WEI ZI *Schisandra sphenanthera* (dried ripe fruit: content scope of 3 origins = 0.004%~0.079%, mean content = 0.04%)<sup>[5508]</sup>, WU WEI ZI *Schisandra chinensis* (dried ripe fruit: content scope of 6 origins = 2.24%~9.87%, mean content = 4.39%)<sup>[5508]</sup>. **Ref:** 2, 4, 6, 588, 5343, 5508.

**19474 Schisandrol B**

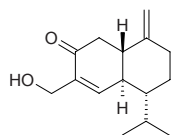
$C_{23}H_{28}O_7$  (416.48).  $[\alpha]_D^{23} = +72.2^\circ$  ( $c = 0.53$ ,  $CHCl_3$ ). **Pharm:** NFAT (nuclear factor of activated T cells) transcription inhibitor ( $IC_{50} = (16.37 \pm 1.00) \mu\text{mol/L}$ , control Cyclosporin A,  $IC_{50} = (1.20 \pm 0.29) \text{nmol/L}$ )<sup>[5343]</sup>. **Source:** HUA ZHONG WU WEI ZI *Schisandra sphenanthera* (dried ripe fruit: content scope of 3 origins = 0.027%~0.038%, mean content = 0.032%)<sup>[5508]</sup>, WU WEI ZI *Schisandra chinensis* (dried ripe fruit: content scope of 6 origins = 0.74%~3.75%, mean content = 1.40%)<sup>[5508]</sup>. **Ref:** 5343, 5508.

**19475 Schisandrone**

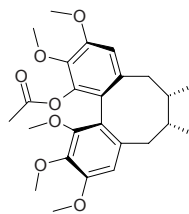
$C_{21}H_{24}O_5$  (356.42). **Source:** HUA ZHONG WU WEI ZI *Schisandra sphenanthera*, YI GENG WU WEI ZI *Schisandra henryi*. **Ref:** 660.

**19476 Schisandronol**

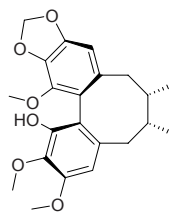
[61206-02-8]  $C_{15}H_{22}O_2$  (234.34). **Source:** NEI FENG XIAO WU WEI ZI *Schisandra nigra*. **Ref:** 1521.

**19477 Schisanhenol acetate**

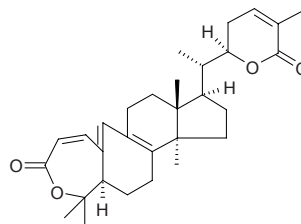
$C_{25}H_{32}O_7$  (444.53). Acicular crystals, mp 157~159°C,  $[\alpha]_D^{35} = +31.6^\circ$  (ethanol). **Source:** HONG HUA WU WEI ZI *Schisandra rubriflora*, WU WEI ZI *Schisandra chinensis*. **Ref:** 2, 39.

**19478 Schisanhenol B**

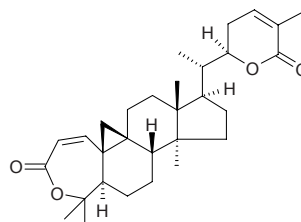
$C_{22}H_{26}O_6$  (386.45). Granular crystals (petroleum spirit-ether), mp 144~146°C. **Source:** HONG HUA WU WEI ZI *Schisandra rubriflora*, WU WEI ZI *Schisandra chinensis*. **Ref:** 2, 39.

**19479 Schisanlactone A**

[87164-31-6]  $C_{30}H_{40}O_4$  (464.65). Crystals, mp 227~229°C,  $[\alpha]_D^{23} = +365^\circ$  ( $c = 0.20$ ,  $CHCl_3$ ). **Pharm:** Antineoplastic<sup>[2523]</sup>; anti-HIV<sup>[2523]</sup>. **Source:** CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*], *Schisandra* sp. **Ref:** 2437, 2438, 2523.

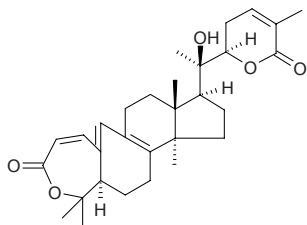
**19480 Schisanlactone B**

$C_{30}H_{42}O_4$  (466.67). Crystals, mp 205~207°C,  $[\alpha]_D^{20} = +80.2^\circ$  ( $c = 0.94$ ,  $CHCl_3$ ). **Pharm:** Antineoplastic<sup>[2523]</sup>; anti-HIV<sup>[2523]</sup>. **Source:** CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*], *Schisandra* sp. **Ref:** 1185, 2437, 2523.

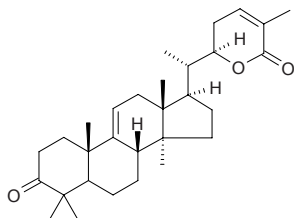


**19481 Schisanlactone C**

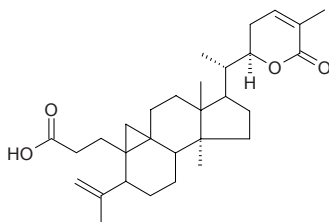
[92051-27-9] C<sub>30</sub>H<sub>40</sub>O<sub>5</sub> (480.65). Source: *Schisandra* sp. Ref: 2441.

**19482 Schisanlactone D**

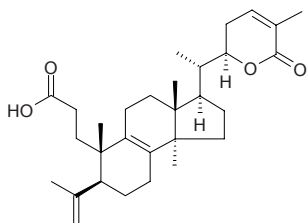
[92051-26-8] C<sub>30</sub>H<sub>44</sub>O<sub>3</sub> (452.68). Source: *Schisandra* sp. Ref: 2441.

**19483 Schisanlactone E**

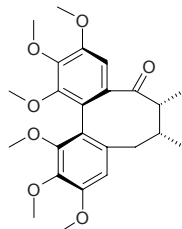
[136040-43-2] C<sub>30</sub>H<sub>44</sub>O<sub>4</sub> (468.68). mp 120~122°C, [α]<sub>D</sub><sup>15</sup> = -113.0° (c = 0.330, chloroform). Pharm: Cytotoxic (*in vitro*, P<sub>388</sub>, IC<sub>50</sub> = 10 μg/mL)<sup>[2523]</sup>. Source: CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*]. Ref: 1185, 2523.

**19484 Schisanlactone F**

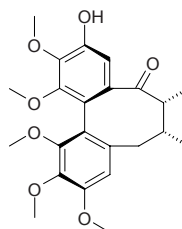
C<sub>30</sub>H<sub>44</sub>O<sub>4</sub> (468.68). Pharm: Antineoplastic<sup>[2523]</sup>; anti-HIV<sup>[2523]</sup>. Source: CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*]. Ref: 2438, 2440, 2523.

**19485 Schisanlignone A**

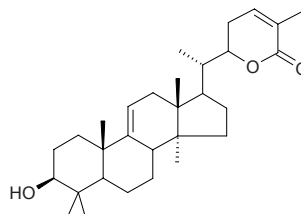
[13557-67-4] C<sub>24</sub>H<sub>30</sub>O<sub>7</sub> (430.50). Crystals (ethyl formate), mp 104~105°C, [α]<sub>D</sub><sup>24</sup> = -74.8° (c = 0.210, chloroform). Pharm: Cytotoxic (*in vitro*, P<sub>388</sub>, IC<sub>50</sub> = 10 μg/mL). Source: CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*]. Ref: 1184.

**19486 Schisanlignone B**

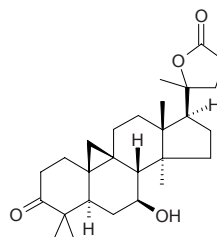
[135459-86-8] C<sub>23</sub>H<sub>28</sub>O<sub>7</sub> (416.47). mp 151~152°C, [α]<sub>D</sub><sup>24</sup> = -36.9° (c = 0.2355, chloroform). Pharm: Cytotoxic (*in vitro*, P<sub>388</sub>, IC<sub>50</sub> = 10 μg/mL). Source: CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*]. Ref: 1184.

**19487 Schisanol**

C<sub>30</sub>H<sub>46</sub>O<sub>3</sub> (454.70). Pharm: Antineoplastic; anti-HIV. Source: HUA ZHONG WU WEI ZI *Schisandra sphenanthera*. Ref: 2523.

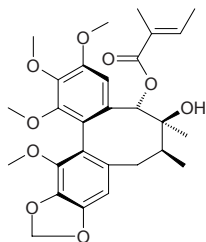
**19488 Schisanterpene B**

C<sub>27</sub>H<sub>40</sub>O<sub>4</sub> (428.62). Colorless needles, mp 193~194°C, [α]<sub>D</sub><sup>20</sup> = +20°C (c = 0.1, CHCl<sub>3</sub>). Pharm: Cytotoxic (hmn hepatocellular carcinoma HepG2, IC<sub>50</sub> = 61.32 μmol/L, control Camptothecin, IC<sub>50</sub> = 1.23 μmol/L; hmn acute promyelocytic leukemia HL-60, IC<sub>50</sub> = 58.07 μmol/L, Camptothecin, IC<sub>50</sub> = 1.35 μmol/L; hepatocellular carcinoma Bel7402, IC<sub>50</sub> = 72.93 μmol/L, Camptothecin, IC<sub>50</sub> = 1.02 μmol/L). Source: HAN RUI WU WEI ZI *Schisandra propinqua* (stem: yield = 0.0001% dw). Ref: 2097.

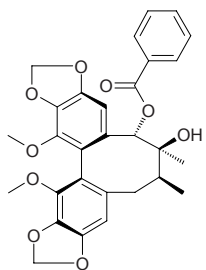


**19489 Schisantherin C**

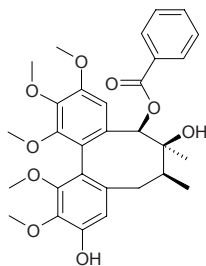
[58546-55-7]  $C_{28}H_{34}O_9$  (514.58). **Pharm:** Antihepatotoxin (mus, orl, 50mg/(kg·d), 15 days, reduces activity of SGPT). **Source:** HUA ZHONG WU WEI ZI *Schisandra sphenanthera*, WU WEI ZI *Schisandra chinensis*. **Ref:** 2, 658.

**19490 Schisantherin D**

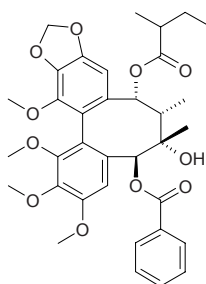
Schisantherin D [64917-82-4]  $C_{29}H_{28}O_9$  (520.54). **Pharm:** Antihepatotoxin (mus, orl, 50mg/(kg·d), 15 days, reduces activity of SGPT). **Source:** HUA ZHONG WU WEI ZI *Schisandra sphenanthera*, WU WEI ZI *Schisandra chinensis*. **Ref:** 2, 658.

**19491 Schisantherin E**

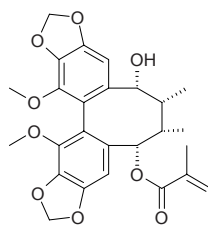
[64917-83-5]  $C_{30}H_{34}O_9$  (538.60). **Source:** WU WEI ZI *Schisandra chinensis*. **Ref:** 2.

**19492 Schisantherin J**

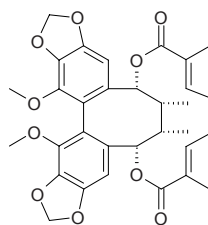
[135432-28-9]  $C_{35}H_{40}O_{11}$  (636.70). **Source:** CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*]. **Ref:** 2436.

**19493 Schisantherin L**

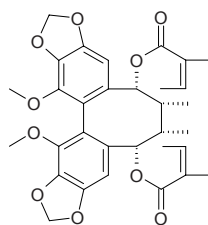
[149990-51-2]  $C_{27}H_{30}O_9$  (498.53). **Source:** LENG FAN TUAN *Kadsura coccinea* [syn. *Kadsura chenensis*; *Kadsura hainanensis*]. **Ref:** 2436.

**19494 Schisantherin M**

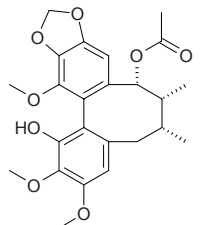
[149990-52-3]  $C_{32}H_{36}O_{10}$  (580.64). **Source:** LENG FAN TUAN *Kadsura coccinea* [syn. *Kadsura chenensis*; *Kadsura hainanensis*]. **Ref:** 2436.

**19495 Schisantherin N**

[150132-86-8]  $C_{32}H_{36}O_{10}$  (580.64). **Source:** LENG FAN TUAN *Kadsura coccinea* [syn. *Kadsura chenensis*; *Kadsura hainanensis*]. **Ref:** 2436.

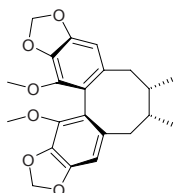
**19496 Schisantherin O**

[150132-87-9]  $C_{24}H_{28}O_8$  (444.49). **Source:** LENG FAN TUAN *Kadsura coccinea* [syn. *Kadsura chenensis*; *Kadsura hainanensis*]. **Ref:** 2436.

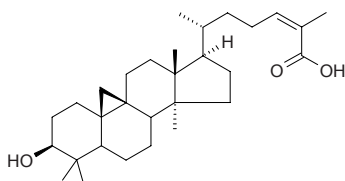


**19497 Schizandrin C**

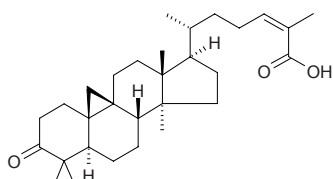
Schisandrin C; Wuweizisu C [61301-33-5]  $C_{22}H_{24}O_6$  (384.43).  $[\alpha]_D^{23} = -57.4^\circ$  ( $c = 0.85$ ,  $CHCl_3$ ). **Pharm:** Antineoplastic (screened as potential antitumor promoters, EBV-EA induced by TPA, mol ratio/TPA = 1000, relative percentage of EBV-EA =  $(2.6 \pm 0.2)\%$  (positive control value 32pmol, 20ng TPA = 100%), viability of Raji cells = 70%)<sup>[4644]</sup>; antihepatotoxin (mus, hepatotoxin induced by  $CCl_4$  or thioacetamide, 100mg/kg orl, lowers SGPT); NFAT transcription inhibitor ( $IC_{50} = (7.54 \pm 0.22)\mu\text{mol/L}$ , control Cyclosporin A,  $IC_{50} = (1.20 \pm 0.29)\text{nmol/L}$ )<sup>[5343]</sup>. **Source:** CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*], HONG HUA WU WEI ZI *Schisandra rubriflora*, HUA ZHONG WU WEI ZI *Schisandra sphenanthera* (dried ripe fruit: content scope of 2 origins = 0.08%~0.12%, mean content = 0.10%<sup>[5508]</sup>), NEI NAN WU WEI ZI *Kadsura interior* (stem)<sup>[4644]</sup>, WU WEI ZI *Schisandra chinensis* (dried ripe fruit: content scope of 6 origins = 0.20%~1.32%, mean content = 0.60%<sup>[5508]</sup>). **Ref:** 2, 39, 658, 4644, 5343, 5508.

**19498 Schizandrollic acid**

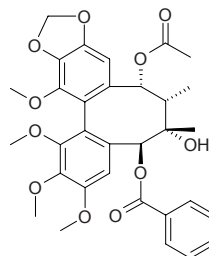
$C_{30}H_{48}O_3$  (456.72). **Pharm:** Antineoplastic; anti-HIV. **Source:** HUA ZHONG WU WEI ZI *Schisandra sphenanthera*, YI GENG WU WEI ZI *Schisandra henryi*. **Ref:** 2523.

**19499 Schizandronic acid**

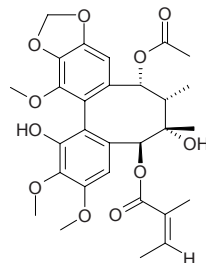
Schizandronic acid; Ganwuweizic acid [55511-14-3]  $C_{30}H_{46}O_3$  (454.70). **Pharm:** Antineoplastic<sup>[2523]</sup>; anti-HIV<sup>[2523]</sup>. **Source:** CHANG GENG NAN WU WEI ZI *Kadsura peltigera* [Syn. *Kadsura longipedunculata*], NEI FENG XIAO WU WEI ZI *Schisandra nigra*, XIAO HUA WU WEI ZI *Schisandra micrantha* (bustem and leaf). **Ref:** 2436, 2523, 4389.

**19500 Schizanrin F**

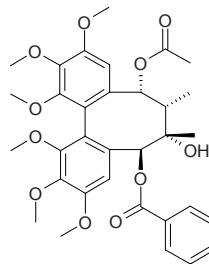
$C_{32}H_{34}O_{11}$  (594.62). White solid, mp 141~143°C. **Pharm:** Antihepatitis inactive (anti-HBsAg, 100μg/mL, InRt < 25%, inactive; anti-HBeAg, 100μg/mL, InRt < 25%, inactive). **Source:** *Kadsura matsudai* (stem). **Ref:** 4397.

**19501 Schizanrin G**

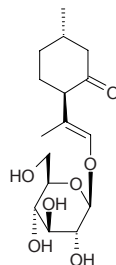
$C_{29}H_{34}O_{11}$  (558.58). White needles, mp 179~182°C. **Pharm:** Antihepatitis inactive (anti-HBsAg, 100μg/mL, InRt < 25%, inactive; anti-HBeAg, 100μg/mL, InRt < 25%, inactive). **Source:** *Kadsura matsudai* (stem). **Ref:** 4397.

**19502 Schizanrin H**

$C_{33}H_{38}O_{11}$  (610.66). White needles, mp 193~195°C. **Pharm:** Antihepatitis inactive (anti-HBsAg, 100μg/mL, InRt < 25%, inactive; anti-HBeAg, 100μg/mL, InRt < 25%, inactive). **Source:** *Kadsura matsudai* (stem). **Ref:** 4397.

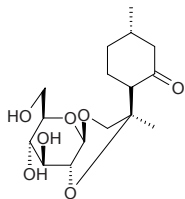
**19503 Schizonepetoside A**

[78887-75-9]  $C_{16}H_{26}O_7$  (330.38). **Source:** JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*]. **Ref:** 2.

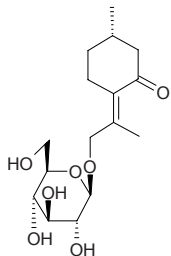


**19504 Schizonepetoside B**

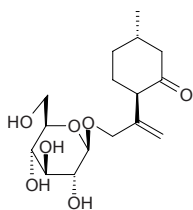
[78897-60-6]  $C_{16}H_{26}O_7$  (330.38). Source: JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*]. Ref: 2, 660.

**19505 Schizonepetoside C**

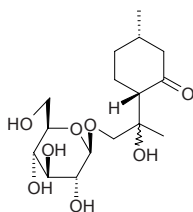
[105351-69-7]  $C_{16}H_{26}O_7$  (330.38). Source: JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*]. Ref: 2, 1521.

**19506 Schizonepetoside D**

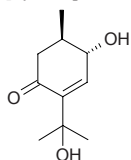
$C_{16}H_{26}O_7$  (330.38). Source: JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*]. Ref: 660.

**19507 Schizonepetoside E**

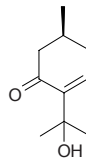
$C_{16}H_{28}O_8$  (348.40). Source: JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*]. Ref: 660.

**19508 Schizonodiol**

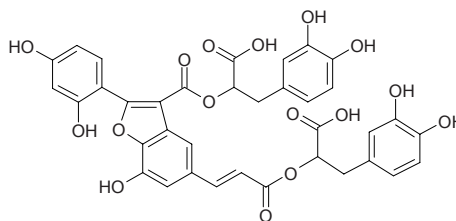
[121693-13-8]  $C_{10}H_{16}O_3$  (184.24). Source: JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*]. Ref: 2.

**19509 Schizonol**

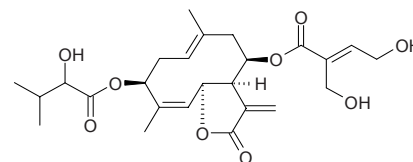
$C_{10}H_{16}O_2$  (168.24). Source: JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*]. Ref: 2.

**19510 Schizotenuin A**

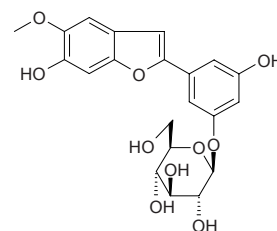
$C_{36}H_{28}O_{16}$  (716.61). Source: JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*]. Ref: 660.

**19511 Schkuhrin II**

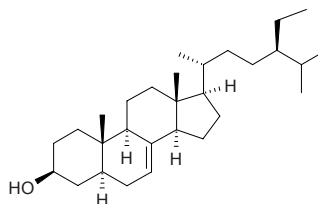
[70434-09-2]  $C_{25}H_{34}O_9$  (478.54). Pharm: Antibacterial; cytotoxic (KB, 5.5 μg/mL); insect antifeedant. Source: SHI KU JU *Schkuhria pinnata*. Ref: 5, 658.

**19512 Schoenoside**

$C_{21}H_{22}O_{10}$  (434.40). Amorphous powder.  $[\alpha]_D^{21} = -84.2^\circ$  ( $c = 0.48$ , MeOH). Source: WEI JING BAI HE *Schoenocaulon officinale* (rhizome). Ref: 4210.

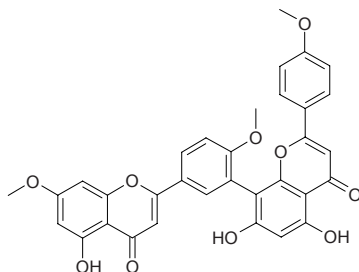
**19513 Schottenol**

[521-03-9]  $C_{29}H_{50}O$  (414.72). Pharm: Precursor to biosynthesis of ecdysone (*Drosophila pachea*). Source: family Cactaceae spp. Ref: 658.

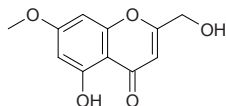


**19514 Sciadopitysin**

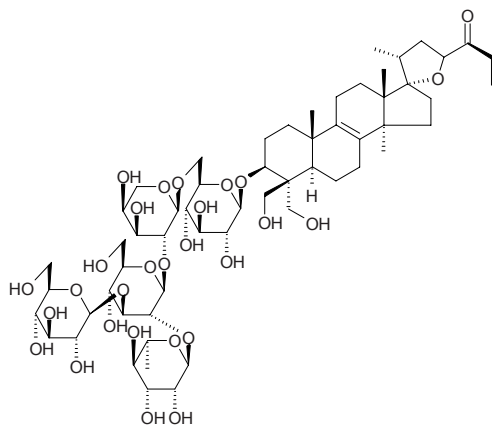
7,4',4'''-Tri-*O*-methyl amentoflavone [521-34-6] C<sub>33</sub>H<sub>24</sub>O<sub>10</sub> (580.55). mp 295–297°C. **Source:** BAI GUO YE *Ginkgo biloba* (in 1956 the compound was isolated from leaf of the plant)<sup>[5505]</sup>, SAN JIAN SHAN *Cephalotaxus fortunei*, YUN NAN FEI SHU *Torreya yunnanensis* (twig and leaf: yield = 0.00038%dw)<sup>[4707]</sup>, ZHAI YE NAN YANG SHAN *Araucaria angustifolia* (seeding root), ZI SHAN *Taxus cuspidata*. **Ref:** 660, 4707, 5098, 5505.

**19515 Scikochromone A**

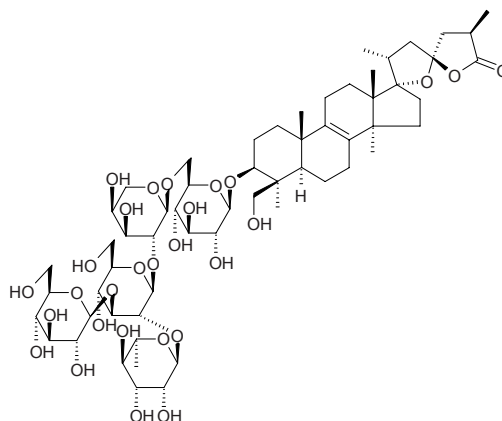
C<sub>11</sub>H<sub>10</sub>O<sub>5</sub> (222.20). **Pharm:** Cytotoxic (hmn peripheral blood T cells, dose = 5.0μg/mL, T cell survival rate = 90%); immunosuppressant (inhibits IL-2 secretion costimulated by CD28, dose = 5.0μg/mL, InRt = 63%). **Source:** HONG CHAI HU *Bupleurum scorzonerifolium* (root). **Ref:** 3498.

**19516 Scillanoside L<sub>1</sub>**

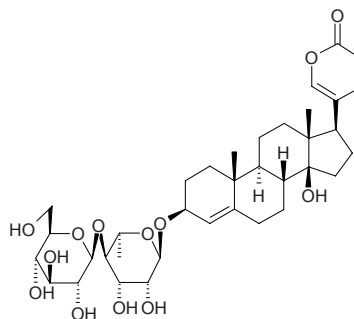
15-Deoxy-30-hydroxyeucosterol 3-*O*- $\alpha$ -L-rhamnopyranosyl-(1→2)-[( $\beta$ -D-glucopyranosyl-(1→3))- $\beta$ -D-glucopyranosyl-(1→2)- $\alpha$ -L-arabinopyranosyl-(1→6)- $\beta$ -D-glucopyranoside C<sub>58</sub>H<sub>94</sub>O<sub>28</sub> (1239.38). White amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -57.1° (c = 0.08, MeOH). **Pharm:** Cytotoxic (HT1080 ED<sub>50</sub> = (2.62±1.79)nmol/L; B16(F-10) ED<sub>50</sub> = (2.38±2.10)nmol/L; 3LL ED<sub>50</sub> = (4.07±1.05)nmol/L; MCF7 ED<sub>50</sub> = (7.96±4.83)nmol/L; PC3 ED<sub>50</sub> = (5.08±3.95)nmol/L; HT29 ED<sub>50</sub> = (6.56±5.21)nmol/L; LOX-IMVI ED<sub>50</sub> = (3.82±1.68)nmol/L; A549 ED<sub>50</sub> = (4.51±3.23)nmol/L; control adriamycin ED<sub>50</sub> = (0.09±0.03)nmol/L, (0.06±0.10)nmol/L, (0.09±0.03)nmol/L, (0.38±0.34)nmol/L, (0.83±0.18)nmol/L, (1.07±0.12)nmol/L, (0.38±0.33)nmol/L, (0.67±0.21)nmol/L, respectively). **Source:** MIAN ZAO ER *Scilla scilloides* (fresh bulb). **Ref:** 4225.

**19517 Scillanoside L<sub>2</sub>**

(23*S*,25*R*)-17 $\alpha$ ,23-Epoxy-29-hydroxy-3 $\beta$ -[(*O*- $\alpha$ -L-rhamnopyranosyl-(1→2)-*O*- $\beta$ -D-glucopyranosyl-(1→3))-*O*- $\beta$ -D-glucopyranosyl-(1→2)- $\alpha$ -L-arabinopyranosyl-(1→6)- $\beta$ -D-glucopyranosyl]oxy]lanost-8-en-23,26-olide C<sub>59</sub>H<sub>94</sub>O<sub>28</sub> (1251.39). Amorphous solid, [ $\alpha$ ]<sub>D</sub><sup>26</sup> = -102.0° (c = 0.1, MeOH); white amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -34.7° (c = 0.08, MeOH). **Pharm:** Cytotoxic (HT1080 ED<sub>50</sub> = (2.34±0.11)nmol/L; B16(F-10) ED<sub>50</sub> = (5.27±2.71)nmol/L; 3LL ED<sub>50</sub> = (3.53±3.53)nmol/L; MCF7 ED<sub>50</sub> > 10)nmol/L; PC3 ED<sub>50</sub> = (4.82±3.52)nmol/L; HT29 ED<sub>50</sub> > 10)nmol/L; LOX-IMVI ED<sub>50</sub> = (4.51±1.82)nmol/L; A549 ED<sub>50</sub> = (5.60±2.99)nmol/L; control Adriamycin ED<sub>50</sub> = (0.09±0.03)nmol/L, (0.06±0.10)nmol/L, (0.09±0.03)nmol/L, (0.38±0.34)nmol/L, (0.83±0.18)nmol/L, (1.07±0.12)nmol/L, (0.38±0.33)nmol/L, (0.67±0.21)nmol/L, respectively)<sup>[4225]</sup>; cytotoxic (Hmn oral squamous cell carcinoma cells HSC-2, IC<sub>50</sub> = 14μg/mL, control Etoposide, IC<sub>50</sub> = 24μg/mL)<sup>[4308]</sup>. **Source:** MIAN ZAO ER *Scilla scilloides* (fresh bulb), XUE GUANG HUA *Chionodoxa luciliae* (fresh bulb). **Ref:** 4225, 4308.

**19518 Scillaren A**

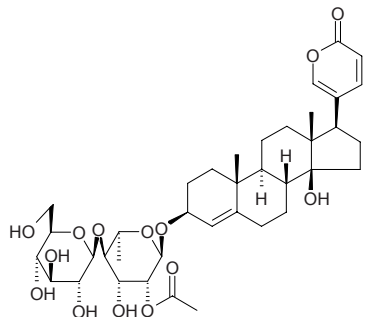
C<sub>36</sub>H<sub>52</sub>O<sub>13</sub> (692.81). Very bitter, two crystals type. acicular crystals(methanol), mp 184–186°C; tiny leaflike crystals (methanol), mp 208–211°C, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = -71.9° (c = 1.011, methanol). **Pharm:** LD<sub>50</sub> (cat, iv) = 0.143mg/kg. **Source:** HAI CONG *Urginea maritima*. **Ref:** 661.



**19519 Scillarenin 3-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-2'-O-acetyl- $\alpha$ -L-rhamnopyranoside**

$C_{38}H_{54}O_{14}$  (734.85). Amorphous powder,  $[\alpha]_D^{26} = -67.3^\circ$  ( $c = 0.50$ , MeOH).

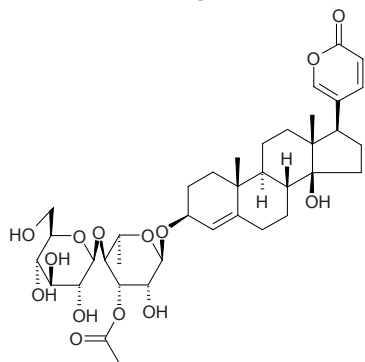
Source: HAI CONG *Urginea maritima* (bulb). Ref: 3513.



**19520 Scillarenin 3-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)-3'-O-acetyl- $\alpha$ -L-rhamnopyranoside**

$C_{38}H_{54}O_{14}$  (734.85). Amorphous powder,  $[\alpha]_D^{26} = -60.6^\circ$  ( $c = 0.57$ , MeOH).

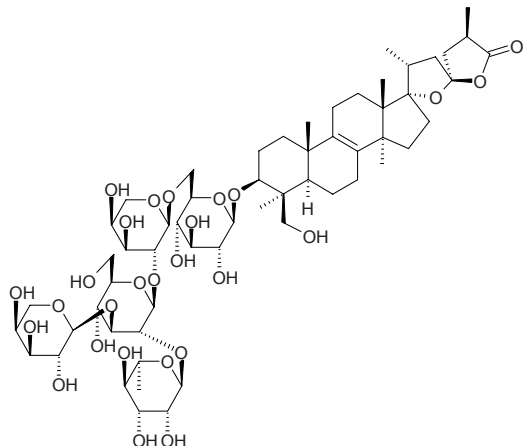
Source: HAI CONG *Urginea maritima* (bulb). Ref: 3513.



**19521 Scillasaponin E**

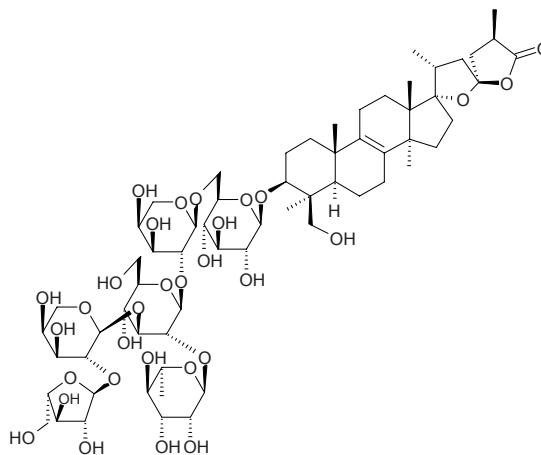
(23*S*,25*R*)-3 $\beta$ -[(*O*- $\alpha$ -L-Arabinopyranosyl-(1 $\rightarrow$ 3)-*O*-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)]-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-*O*- $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl)oxy]-17 $\alpha$ ,23-epoxy-29-hydroxylanost-8-en-23,26-olide  $C_{58}H_{92}O_{27}$  (1221.36). Amorphous solid,  $[\alpha]_D^{27} = 22.0^\circ$  ( $c = 0.10$ , MeOH). Pharm:

Cytotoxic (HSC-2 hmn oral squamous cell carcinoma cells,  $IC_{50} = 6.3\mu\text{g/mL}$ , control Etoposide,  $IC_{50} = 24\mu\text{g/mL}$ ). Source: QI YI PU TAO FENG XIN ZI *Muscari paradoxum* (bulb). Ref: 3495.



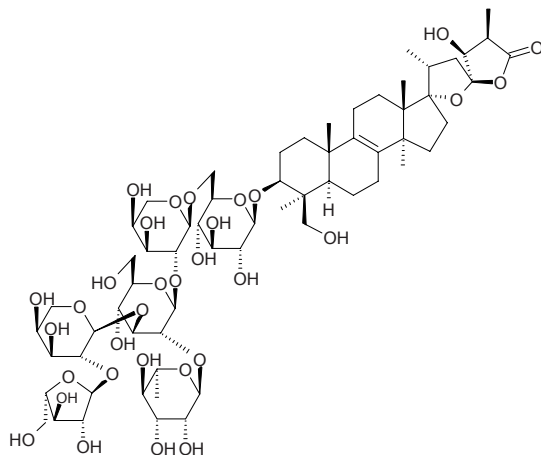
**19522 Scillasaponin F**

(23*S*,25*R*)-3 $\beta$ -[(*O*- $\alpha$ -L-Arabinofuranosyl-(1 $\rightarrow$ 2)-*O*- $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 3)-*O*-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)]-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-*O*- $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl)oxy]-17 $\alpha$ ,23-epoxy-29-hydroxylanost-8-en-23,26-olide  $C_{63}H_{100}O_{31}$  (1353.48). Amorphous solid,  $[\alpha]_D^{28} = 40.0^\circ$  ( $c = 0.10$ , MeOH). Pharm: Cytotoxic (HSC-2 hmn oral squamous cell carcinoma cells,  $IC_{50} = 23\mu\text{g/mL}$ , control Etoposide,  $IC_{50} = 24\mu\text{g/mL}$ ). Source: QI YI PU TAO FENG XIN ZI *Muscari paradoxum* (bulb). Ref: 3495.



**19523 Scillasaponin G**

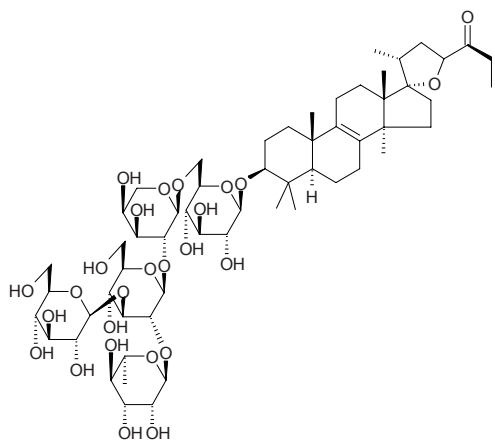
(23*S*,24*S*,25*R*)-3 $\beta$ -[(*O*- $\alpha$ -L-Arabinofuranosyl-(1 $\rightarrow$ 2)-*O*- $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 3)-*O*-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)]-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-*O*- $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl)oxy]-17 $\alpha$ ,23-epoxy-24,29-dihydroxylanost-8-en-23,26-olide  $C_{63}H_{100}O_{32}$  (1369.48). Amorphous solid,  $[\alpha]_D^{28} = 36.0^\circ$  ( $c = 0.10$ , MeOH). Pharm: Cytotoxic (HSC-2 hmn oral squamous cell carcinoma cells,  $IC_{50} = 59\mu\text{g/mL}$ , control Etoposide,  $IC_{50} = 24\mu\text{g/mL}$ ). Source: QI YI PU TAO FENG XIN ZI *Muscari paradoxum* (bulb). Ref: 3495.



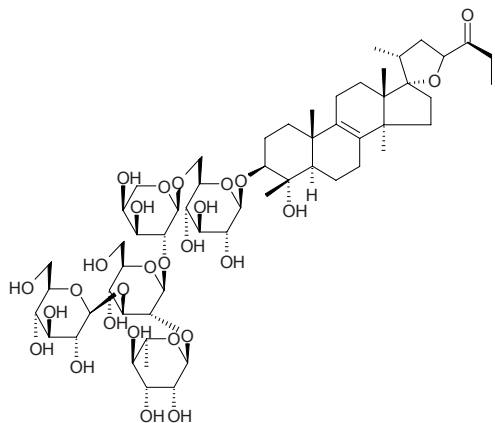


**19524 Scillascolloside E<sub>1</sub>**

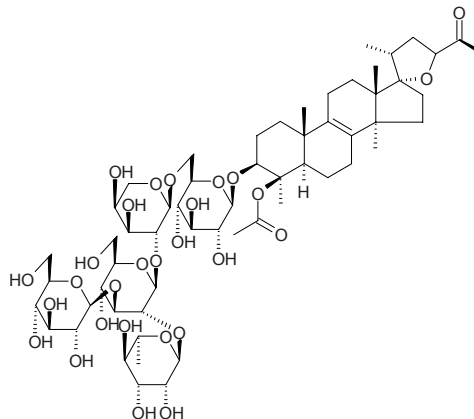
C<sub>58</sub>H<sub>94</sub>O<sub>26</sub> (1207.38). White amorphous powder (aq. MeOH), mp 221~223°C,  $[\alpha]_D^{25} = -57.1^\circ$  ( $c = 0.08$ , MeOH). **Pharm:** Cytotoxic (HT1080 ED<sub>50</sub> = (1.66±0.04)nmol/L; B16(F-10) ED<sub>50</sub> = (2.66±0.21)nmol/L; 3LL ED<sub>50</sub> = (2.59±0.49)nmol/L; MCF7 ED<sub>50</sub> = (3.06±2.35)nmol/L; PC3 ED<sub>50</sub> = (1.53±0.28)nmol/L; HT29 ED<sub>50</sub> = (3.00±2.76)nmol/L; LOX-IMVI ED<sub>50</sub> = (2.44±0.43)nmol/L; A549 ED<sub>50</sub> = (1.98±1.80)nmol/L; control Adriamycin ED<sub>50</sub> = (0.09±0.03)nmol/L, (0.06±0.10)nmol/L, (0.09±0.03)nmol/L, (0.38±0.34)nmol/L, (0.83±0.18)nmol/L, (1.07±0.12)nmol/L, (0.38±0.33)nmol/L, (0.67±0.21)nmol/L, respectively); antineoplastic (*in vivo*, apparently increased the life span of mouse bearing Sarcoma 180 tumor cell, 3mg/kg, T/C = 239%). **Source:** MIAN ZAO ER *Scilla scilloides* (fresh bulb). **Ref:** 4225.

**19525 Scillascolloside E<sub>2</sub>**

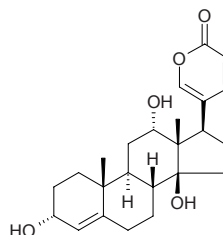
C<sub>57</sub>H<sub>92</sub>O<sub>27</sub> (1209.35). **Pharm:** Cytotoxic (HT1080 ED<sub>50</sub> = (2.30±0.04)nmol/L; B16(F-10) ED<sub>50</sub> = (7.06±4.07)nmol/L; 3LL ED<sub>50</sub> = (3.83±3.98)nmol/L; MCF7 ED<sub>50</sub> = (4.80±1.72)nmol/L; PC3 ED<sub>50</sub> = (3.95±0.43)nmol/L; HT29 ED<sub>50</sub> = (3.23±3.09)nmol/L; LOX-IMVI ED<sub>50</sub> = (3.70±4.32)nmol/L; A549 ED<sub>50</sub> = (3.54±0.74)nmol/L; control Adriamycin ED<sub>50</sub> = (0.09±0.03)nmol/L, (0.06±0.10)nmol/L, (0.09±0.03)nmol/L, (0.38±0.34)nmol/L, (0.83±0.18)nmol/L, (1.07±0.12)nmol/L, (0.38±0.33)nmol/L, (0.67±0.21)nmol/L, respectively). **Source:** MIAN ZAO ER *Scilla scilloides* (fresh bulb). **Ref:** 4225.

**19526 Scillascolloside E<sub>3</sub>**

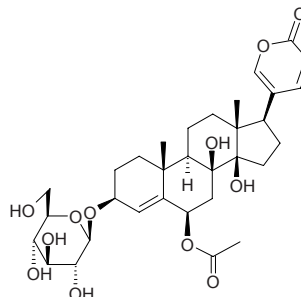
C<sub>59</sub>H<sub>94</sub>O<sub>28</sub> (1251.39). **Pharm:** Cytotoxic (HT1080 ED<sub>50</sub> = (1.69±1.65)nmol/L; B16(F-10) ED<sub>50</sub> = (3.82±1.79)nmol/L; 3LL ED<sub>50</sub> = (2.61±0.26)nmol/L; MCF7 ED<sub>50</sub> = (4.34±2.46)nmol/L; PC3 ED<sub>50</sub> = (2.33±0.95)nmol/L; HT29 ED<sub>50</sub> = (5.96±2.73)nmol/L; LOX-IMVI ED<sub>50</sub> = (4.89±0.12)nmol/L; A549 ED<sub>50</sub> = (3.09±1.98)nmol/L; control Adriamycin ED<sub>50</sub> = (0.09±0.03)nmol/L, (0.06±0.10)nmol/L, (0.09±0.03)nmol/L, (0.38±0.34)nmol/L, (0.83±0.18)nmol/L, (1.07±0.12)nmol/L, (0.38±0.33)nmol/L, (0.67±0.21)nmol/L, respectively). **Source:** MIAN ZAO ER *Scilla scilloides* (fresh bulb). **Ref:** 4225.

**19527 3- $\alpha$ ,12 $\alpha$ -Scilliphaeosidin**

C<sub>24</sub>H<sub>32</sub>O<sub>5</sub> (400.52). Amorphous powder,  $[\alpha]_D^{26} = +110.3^\circ$  ( $c = 1.07$ , MeOH). **Source:** HAI CONG *Urginea maritima* (bulb). **Ref:** 3513.

**19528 Scilliroside**

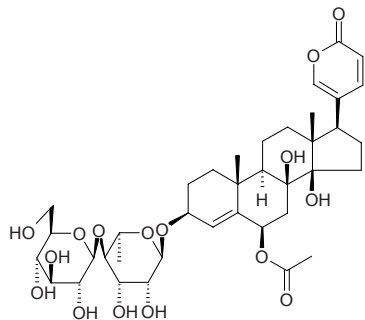
C<sub>32</sub>H<sub>44</sub>O<sub>12</sub> (620.76). **Pharm:** Rodenticide; LD<sub>50</sub> (male rat, orl) = 0.7mg/kg. **Source:** HAI CONG *Urginea maritima*. **Ref:** 658.



**19529 Scillirosidin 3-O-β-D-glucopyranosyl-(1→4)-α-L-rhamnopyranoside**

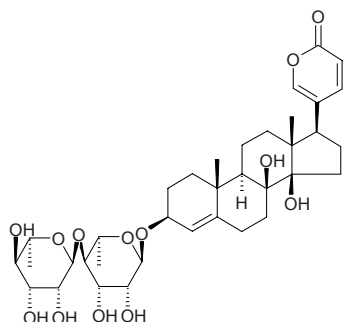
$C_{38}H_{54}O_{16}$  (766.84). Amorphous powder,  $[\alpha]_D^{26} = -71.1^\circ$  ( $c = 1.0$ , MeOH).

Source: HAI CONG *Urginea maritima* (bulb). Ref: 3513.

**19530 Scillirubrosidin 3-O-α-L-rhamnopyranosyl-(1→4)-α-L-rhamnopyranoside**

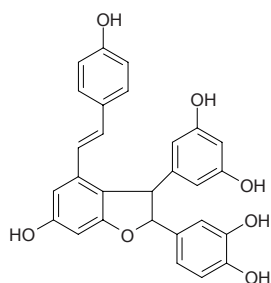
$C_{36}H_{52}O_{13}$  (692.81). Amorphous powder,  $[\alpha]_D^{26} = -94.5^\circ$  ( $c = 2.5$ , MeOH).

Source: HAI CONG *Urginea maritima* (bulb). Ref: 3513.

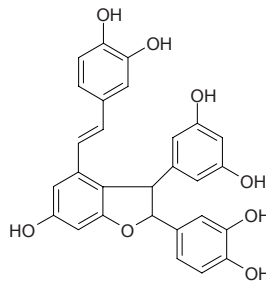
**19531 Scirpusin A**

[69297-51-4]  $C_{28}H_{22}O_7$  (470.48). Pharm: Antioxidant (superoxide anion scavenger,  $IC_{50} = (4.68 \pm 0.14) \mu\text{mol/L}$ , control (+)-Catechin,  $IC_{50} = (3.67 \pm 0.14) \mu\text{mol/L}$ ). Source: MAO CI JIN JI ER *Caragana tibetica* (stem).

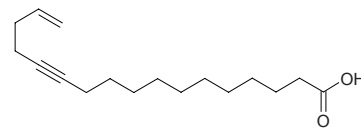
Ref: 4514.

**19532 Scirpusin B**

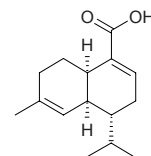
[69297-49-0]  $C_{28}H_{22}O_8$  (486.48). Pharm: Antioxidant (superoxide anion scavenger,  $IC_{50} = (2.83 \pm 0.03) \mu\text{mol/L}$ , control (+)-Catechin,  $IC_{50} = (3.67 \pm 0.14) \mu\text{mol/L}$ ). Source: MAO CI JIN JI ER *Caragana tibetica* (stem). Ref: 4514.

**19533 Scleropyric acid**

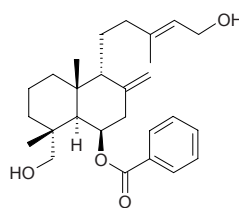
$C_{17}H_{28}O_2$  (264.41). Colorless sticky solid. Pharm: Antitubercular (*Mycobacterium tuberculosis* H<sub>37</sub>Ra, MIC = 25 μg/mL, control Rifampicin, MIC = 0.004 μg/mL, Isoniazid, MIC = 0.06 μg/mL, Kanamycin sulfate, MIC = 2.5 μg/mL); anti-plasmodial (parasite *Plasmodium falciparum* K1 multidrug-resistant strain,  $IC_{50} = 7.2 \mu\text{g/mL}$ ). Source: YING HE *Scleropyrum wallichianum* (twig). Ref: 4520.

**19534 Sclerosporin**

[66419-03-2]  $C_{15}H_{22}O_2$  (234.34). Pharm: Induces formation of spore (mycelium in fungi, under illumination, 0.001 μg/mL). Source: *Sclerotinia fruticola*. Ref: 658.

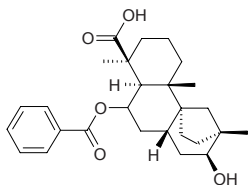
**19535 Scopadiol**

$C_{27}H_{38}O_4$  (426.6). Pharm: Cytotoxic (*in vitro*, SCL,  $ED_{50} = 22.8 \mu\text{mol/L}$ ; SCL-6,  $ED_{50} = 12.2 \mu\text{mol/L}$ ; SCL-376,  $ED_{50} = 8.9 \mu\text{mol/L}$ ; SCL-9,  $ED_{50} = 12.2 \mu\text{mol/L}$ ; Kato3,  $ED_{50} = 9.7 \mu\text{mol/L}$ ; NuGc-4,  $ED_{50} = 16.6 \mu\text{mol/L}$ ; control Vinblastine Sulfate: SCL,  $ED_{50} = 5.9 \mu\text{mol/L}$ ; SCL-6,  $ED_{50} = 6.1 \mu\text{mol/L}$ ; SCL-376,  $ED_{50} = 5.3 \mu\text{mol/L}$ ; SCL-9,  $ED_{50} = 5.3 \mu\text{mol/L}$ ; Kato3,  $ED_{50} = 6.1 \mu\text{mol/L}$ ; NUGC-4,  $ED_{50} = 5.3 \mu\text{mol/L}$ ). Source: YE GAN CAO *Scoparia dulcis* (aerial parts: yield = 0.0185% dw). Ref: 4703.

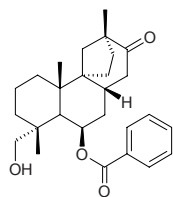


**19536 Scopadulcic acid C**

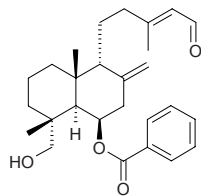
$C_{27}H_{36}O_5$  (440.58). Amorphous powder,  $[\alpha]_D^{25} = -21.7^\circ$  ( $c = 0.23$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic (MTT assay, KB cells,  $IC_{50} = 50\mu g/mL$ ); NO production inhibitor (murine macrophages LPS/IFN $\gamma$ -induced,  $IC_{50} = 900\mu g/mL$ , Note: inorganic free radical NO is produced by the oxidation of L-arginine by NO synthase and its overproduction can stimulate tumor growth and metastasis by promoting the migratory, invasive, and angiogenic potentials of tumor cells); multidrug resistance protein (MRP) inhibitor ( $IC_{50} = 20\mu g/mL$ ). **Source:** YE GAN CAO *Scoparia dulcis* (aerial parts: yield = 0.00023%dw). **Ref:** 2098.

**19537 Scopadulciol**

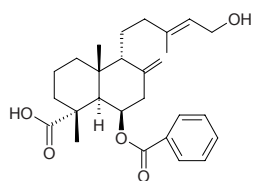
Dulcinol [136565-26-9]  $C_{27}H_{36}O_4$  (424.58). Colorless amorphous powder,  $[\alpha]_D^{25} = -2.3^\circ$  ( $c = 0.5$ , chloroform). **Pharm:** Cytotoxic (*in vitro*, SCL,  $ED_{50} = 22\mu mol/L$ ; SCL-6,  $ED_{50} = 32.8\mu mol/L$ ; SCL-37'6,  $ED_{50} = 24.4\mu mol/L$ ; SCL-9,  $ED_{50} = 37.7\mu mol/L$ ; Kato3,  $ED_{50} = 35.5\mu mol/L$ ; NuGc-4,  $ED_{50} = 33.3\mu mol/L$ ; control Vinblastine Sulfate: SCL,  $ED_{50} = 5.9\mu mol/L$ ; SCL-6,  $ED_{50} = 6.1\mu mol/L$ ; SCL-37'6,  $ED_{50} = 5.3\mu mol/L$ ; SCL-9,  $ED_{50} = 5.3\mu mol/L$ ; Kato3,  $ED_{50} = 6.1\mu mol/L$ ; NUGC-4,  $ED_{50} = 5.3\mu mol/L$ )<sup>[4703]</sup>; inhibits replication of HSV-1;  $H^+$ ,  $K^+$ -ATPase inhibitor (pig,  $10\mu mol/L$ , InRt = 21%,  $100\mu mol/L$ , InRt = 45%, inhibits secretion and ulcer). **Source:** YE GAN CAO *Scoparia dulcis* (aerial parts: yield = 0.0154%dw)<sup>[4703]</sup>. **Ref:** 950, 1068, 1125, 4703.

**19538 Scopanolal**

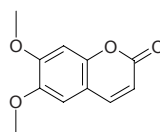
$C_{27}H_{36}O_4$  (424.59). Gum,  $[\alpha]_D^{25} = -7.1^\circ$  ( $c = 0.48$ ,  $CHCl_3$ ). **Source:** YE GAN CAO *Scoparia dulcis* (aerial parts: yield = 0.00077%dw). **Ref:** 4703.

**19539 Scoparic acid A**

[116425-30-0]  $C_{27}H_{36}O_5$  (440.58). Colorless amorphous powder,  $[\alpha]_D = -38.3^\circ$  (chloroform). **Pharm:** Ileal smooth muscle relaxant (gpg, *in vitro*,  $IC_{50} = 32\mu mol/L$ );  $\beta$ -glucuronidase inhibitor (ox liver,  $IC_{50} = 6.8\mu mol/L$ ). **Source:** YE GAN CAO *Scoparia dulcis*. **Ref:** 975.

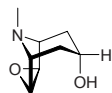
**19540 Scoparone**

6,7-Dimethoxycoumarin; Aesculetin dimethylether [120-08-1]  $C_{11}H_{10}O_4$  (206.20). Needles ( $H_2O$ ), mp  $114^\circ C$ , mp  $144-145^\circ C$ . **Pharm:** Analgesic (hot plate model and acetic acid-induced writhing model); antiasthmatic (for asthmatic bronchitis, effective rate = 83%); anti-inflammatory (swollen foot model caused by carrageenan); choleric (anesthetic rat and dog, effective component in Virgate Wormwood, *Artemisia scoparia* HUANG HAO); coronary vasodilator; vasodilator ( $1-100\mu mol/L$ , relaxation of rat aortic rings arterenol precontracted with in a concentration-dependent manner, in presence of endothelium  $EC_{50} = (2.49 \pm 0.13)\mu mol/L$ , in absence of endothelium  $EC_{50} = (52 \pm 4)\mu mol/L$ )<sup>[5368]</sup>; diuretic (dog); estrogenic activity (rat); antihypertensive (dog, iv, 10mg/kg, blood pressure reduces by 56%, action maintains 160min); increases cerebral blood flow; inhibits calcium activation and release (blood vessel smooth muscle); antineoplastic (Raji cells, antitumor promotor, *in vivo*, inhibits TPA-induced EBV-EA activation, compound concentration = 500mol ratio/32 pmol TPA, EBV-EA-positive cells =  $(45.3 \pm 1.5)\%$  (viability >80%),  $\beta$ -Carotene, EBV-EA-positive cells =  $(34.3 \pm 1.1)\%$  (viability >80), Curcumin, EBV-EA-positive cells =  $(22.8 \pm 1.8)\%$  (viability >80%);  $IC_{50} = 457$ mol ratio/32 pmol TPA,  $\beta$ -Carotene,  $IC_{50} = 400$ mol ratio/32 pmol TPA, Curcumin  $IC_{50} = 341$ mol ratio/32 pmol TPA)<sup>[5048]</sup>; platelet aggregation inhibitor ( $50\mu mol/L$ , InRt = 31%;  $100\mu mol/L$ , InRt = 64%)<sup>[5171]</sup>; cytotoxic (KB,  $ED_{50} > 25\mu g/mL$ , control Doxorubicin,  $ED_{50} = 0.12\mu g/mL$ ; Hep3B,  $ED_{50} = 7.5\mu g/mL$ , Doxorubicin,  $ED_{50} = 0.14\mu g/mL$ ; Colon205,  $ED_{50} > 25\mu g/mL$ , Doxorubicin,  $ED_{50} = 0.10\mu g/mL$ ; HeLa,  $ED_{50} > 25\mu g/mL$ , Doxorubicin,  $ED_{50} = 0.11\mu g/mL$ )<sup>[4369]</sup>;  $LD_{50}$  (mus, orl) = 940mg/kg; **Source:** BEI MEI E ZHANG QIU *Liriodendron tulipifera*, CI HUA JIAO *Zanthoxylum acanthopodium*, CONG MU *Aralia chinensis*, DIE QIAO SHI HU *Dendrobium aurantiacum* var. *denneanum* (stem: content = 0.0032%)<sup>[5508]</sup>, DUAN BANG SHI HU *Dendrobium capillipes* (stem: content = 0.0085%)<sup>[5508]</sup>, GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*], GUANG JING QIAN CAO *Rubia wallichiana* (stem), HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*] (aerial parts: content = 0.46%)<sup>[5501]</sup>, HUANG HUA HAO *Artemisia annua*, JIA LIAN QIAO *Duranta repens* (whole herb), JU HUA SHI HU *Dendrobium thyrsiflorum*, KU RUO LONG DAN *Gentiana kuroo*, LIAN QIAO *Forsythia suspensa*, LONG YAN DU HUO *Aralia fargesii*, MI HUA SHI HU *Dendrobium densiflorum* (stem: content = 0.068%)<sup>[5508]</sup>, MU CHAI HU *Bupleurum frutescens*, MU<sup>(4)</sup> JU *Aegle marmelos*, QING JIAO *Zanthoxylum schinifolium*, RI BEN HUANG BAI *Phellodendron japonicum* (leaf), RU DI JIN NIU *Zanthoxylum nitidum*, TAI WAN FU RONG *Hibiscus taiwanensis*, YE HUA JIAO YE *Zanthoxylum simulans*, YIN CHEN HAO *Artemisia capillaris* (aerial parts: content scope = 2.0%~2.6%)<sup>[5501]</sup>, *Cedrelopsis grevei* (trunk bark), *Citrus medica* var. *etrog*, *Citrus sulcata*, *Citrus tamurana*, occurs in many plants. **Ref:** 2, 4, 6, 571, 642, 658, 660, 1521, 2529, 4179, 4369, 4502, 5171, 5048, 5368, 5501, 5508.



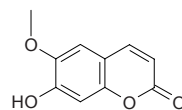
**19541 Scopine**

[498-45-3] C<sub>8</sub>H<sub>13</sub>NO<sub>2</sub> (155.20). mp 76°C. Source: SAI LANG DANG *Anisodius luridus*. Ref: 6.

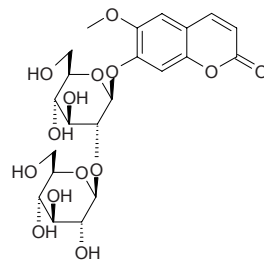
**19542 Scopoletin**

6-Methoxy-7-hydroxycoumarin; Chrysatroic acid; Baogongteng B [92-61-5] C<sub>10</sub>H<sub>8</sub>O<sub>4</sub> (192.17). Needles or prisms (EtOH), mp 204°C; 207~208°C. Pharm: Cytotoxic (KB, ED<sub>50</sub> > 25µg/mL, control Doxorubicin, ED<sub>50</sub> = 0.12µg/mL; Hep3B, ED<sub>50</sub> > 25µg/mL, control Doxorubicin, ED<sub>50</sub> = 0.14µg/mL; Colon205, ED<sub>50</sub> > 25µg/mL, control Doxorubicin, ED<sub>50</sub> = 0.10µg/mL; HeLa, ED<sub>50</sub> > 25µg/mL, control Doxorubicin, ED<sub>50</sub> = 0.11µg/mL)<sup>[4369]</sup>; antineoplastic (KB *in vitro*, ED<sub>50</sub> = 100µg/mL, mus lymphocyte leukemia *in vivo*); antibacterial; antifungal; anti-inflammatory; antispasmodic (gpg ileum and trachea); antitussive (dispels phlegm, reduces viscosity of phlegm and neutrophil in phlegm); germination inhibitor (shoot of pea); stimulates germination (*Striga asiatica*); used in treatment of rheumatism and neuralgia (one of effective components in *Erycibe obtusifolia* DING GONG TENG); antioxidant (DPPH scavenger, EC<sub>50</sub> > 33µg/mL, 33µg/mL InRt = 34%, control Ascorbic acid, EC<sub>50</sub> = 1.6µg/mL = 9.1µmol/L)<sup>[4154]</sup>; β-hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of β-hexosaminidase, 100µmol/L, InRt = (1.9±3.4%)<sup>[4304]</sup>); antileishmanial (*Leishmania donovani* promastigotes, IC<sub>50</sub> = 374µmol/L, SI = 0.35; control Pentamidine, IC<sub>50</sub> = 0.40µmol/L, SI = 0.42; amastigotes, IC<sub>50</sub> > 90µmol/L, control Pentostam, IC<sub>50</sub> = 9.75µg/mL)<sup>[5127]</sup>; antitrypanosomal (*Trypanosoma brucei brucei* blood stream trypomastigotes, IC<sub>50</sub> > 30µmol/L, control Pentamidine, IC<sub>50</sub> = 0.00034µmol/L)<sup>[5127]</sup>; cytotoxic (KB cells, IC<sub>50</sub> = 130.2µmol/L, control Pentamidine, IC<sub>50</sub> = 0.17µmol/L)<sup>[5127]</sup>; cytotoxic (quinone reductase induction assay in cultured Hepa1c1c7 mouse hepatoma cells)<sup>[5038]</sup>; antineoplastic (Raji cells, antitumor promotor, *in vivo*, inhibits TPA-induced EBV-EA activation, compound concentration = 500mol ratio/32 pmol TPA, EBV-EA-positive cells = (53.3±2.0)% (viability > 80%), β-Carotene, EBV-EA-positive cells = (34.3±1.1)% (viability > 80%), Curcumin, EBV-EA-positive cells = (22.8±1.8)% (viability > 80%); IC<sub>50</sub> = 510mol ratio/32 pmol TPA, β-Carotene, IC<sub>50</sub> = 400mol ratio/32 pmol TPA, Curcumin IC<sub>50</sub> = 341mol ratio/32 pmol TPA)<sup>[5048]</sup>; platelet aggregation inhibitor (50µmol/L, InRt = 5%; 100µmol/L, InRt = 21%)<sup>[5171]</sup>; antioxidant inactive (*in vitro*, rat liver microsomes lipid peroxidation)<sup>[3088]</sup>; MAO inhibitor (IC<sub>50</sub> = 19.4µg/mL)<sup>[3088]</sup>; LD<sub>50</sub> (mus, ip) = 0.85g/kg, (mus, orl) = 1.39g/kg. Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], BEI FANG GOU QI GEN PI *Lycium chinense* var. *potaninii* (root cortex: content = 0.00076%)<sup>[5508]</sup>, BEI SHA SHEN *Glehnia littoralis* (underground part), BIAN XU *Polygonum aviculare*, DANG GUI *Angelica sinensis*, DI JIN CAO *Euphorbia humifusa*, DIAN QIE *Atropa belladonna*, DIAN QIN *Sinodielsia yunnanensis* (root), DING GONG TENG *Erycibe obtusifolia*, DONG LANG DANG *Scopolia japonica*, DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*], DUAN ROU MAO DA JI *Euphorbia pubescens*, DUO BIAN XIAO GUAN HUA *Coronilla varia*, FU SHOU CAO *Adonis amurensis*, GOU QI GEN PI *Lycium chinense* (root cortex: content = 0.0019%)<sup>[5508]</sup>, GOU QI ZI *Lycium chinense*, GUANG JING QIAN CAO *Rubia wallichiana* (stem), GUANG YE DING GONG TENG *Erycibe schmidtii*, HAI SHI *Diospyros maritima*, HONG NAN

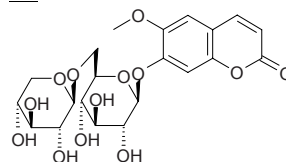
PI *Machilus thunbergii*, HU LU BA *Trigonella foenum-graecum*, HUA GOU TENG *Uncaria sinensis*, HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*], HUANG HUA BAI JIANG *Patrinia scabiosaeifolia*, HUANG HUA HAO *Artemisia annua*, HUANG HUA REN *Sida acuta*, JIAN YE CEN *Fraxinus szaboana* [Syn. *Fraxinus chinensis* var. *acuminata*], JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], LIU QIU SHE GEN CAO *Ophiorrhiza liukiensis* (whole herb), LONG YAN DU HUO *Aralia fargesii*, MA TI YE *Caltha palustris*, MAN SHAN HONG *Rhododendron dauricum*, MAO GUO QI *Acer nikoense* (stem cortex), MI HUA SHI HU *Dendrobium densiflorum* (stem), MU JIN HUA *Hibiscus syriacus*<sup>[3088]</sup>, NAN CHUAN GUAN CHUN HUA *Microtoena prainiana* (stem: yield = 0.00007%dw)<sup>[4752]</sup>, NING XIA GOU QI GEN PI *Lycium barbarum* (root cortex: content = 0.00095%)<sup>[5508]</sup>, NING XIA GOU QI ZI *Lycium barbarum*, RI BEN HUANG BAI *Phellodendron japonicum* (leaf), SANG BAI PI *Morus alba* (root cortex: content scope of 10 origins = 0.0020%~0.0173%, mean content = 0.0100%)<sup>[5508]</sup>, SANG YE *Morus alba*, SI GE MENG XUAN HAU *Convolvulus scammonia*, TAI WAN FU RONG *Hibiscus taiwanensis*, TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.00016%dw)<sup>[4722]</sup>, TIAN QIE ZI *Solanum indicum* (root)<sup>[3087]</sup>, TU MAO DONG QING *Ilex pubescens* var. *glaber*, XIAO YUN MU *Micromelum integerrimum*, XUAN FU HUA *Inula britannica*, YE HEI YING *Prunus serotina*, YI ZHU QIAN MA *Urtica dioica*, YIN CHEN HAO *Artemisia capillaris*, ZHAI YE BAN FENG HE *Pterospermum lanceaeifolium*, ZHAO SHAN BAI *Rhododendron micranthum*, *Citrus medica* var. *etrog*, *Guarea rholocarpa* (leaf), occurs in many plants. Ref: 2, 4, 11, 415, 571, 585, 588, 658, 660, 1424, 1493, 1494, 1495, 2529, 3087, 3088, 4154, 4304, 4305, 4369, 4502, 4527, 4722, 4752, 5038, 5048, 5127, 5171, 5384, 5501, 5508.

**19543 Scopoletin 7-O-β-D-sophoroside**

C<sub>22</sub>H<sub>28</sub>O<sub>14</sub> (516.46). Off-white amorphous powder. Source: *Viburnum tinus* (leaf). Ref: 5339.

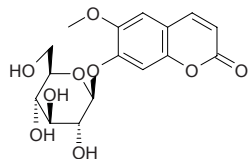
**19544 Scopoletin β-D-xylopyranosyl-(1→6)-β-D-glucopyranoside**

C<sub>21</sub>H<sub>26</sub>O<sub>13</sub> (486.43). Colorless needles (MeOH), mp 243~245°C, [α]<sub>D</sub><sup>23</sup> = -148° (c = 0.5, H<sub>2</sub>O). Source: CANG ZHU *Atractylodes lancea* (rhizome). Ref: 4384.

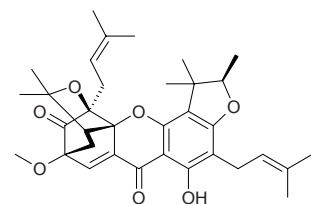


**19545 Scopolin**

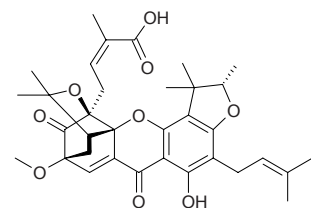
[531-44-2]  $C_{16}H_{18}O_9$  (354.32). mp 219°C. **Pharm:** Anti-inflammatory; used in treatment of rheumatism and neuralgia (one of the effective components in DING GONG TENG). **Source:** DING GONG TENG *Erycibe obtusifolia*, DONG LANG DANG *Scopolia japonica*, GUANG YE DING GONG TENG *Erycibe schmidtii*, HUANG HUA HAO *Artemisia annua*, JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], PI ZHEN QI SHU *Rhus lanceolata*, SANG YE *Morus alba* (leaf: yield = 0.0003%), XIANG RI KUI JING SUI *Helianthus annuus*, XIANG RI KUI YE *Helianthus annuus*, XIANG RI KUI ZI *Helianthus annuus*, YAN CAO *Nicotiana tabacum*, *Hedera* sp., *Swertia* sp., *Anthemis* sp., *Artemisia* sp., *Celtis* sp. **Ref:** 6, 11, 658, 3507, 5501.

**19546 Scortechinone A**

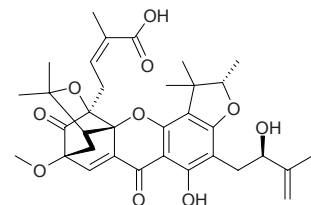
$C_{34}H_{42}O_7$  (652.71). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC = 128 µg/mL, control Vancomycin, MIC = 1 µg/mL; *Staphylococcus aureus* SK1, MIC = 128 µg/mL, Vancomycin, MIC = 1 µg/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19547 Scortechinone B**

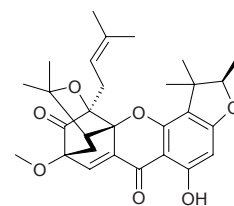
$C_{34}H_{40}O_9$  (592.69). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC = 8 µg/mL, control Vancomycin, MIC = 1 µg/mL; *Staphylococcus aureus* SK1, MIC = 2 µg/mL, Vancomycin, MIC = 1 µg/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19548 Scortechinone C**

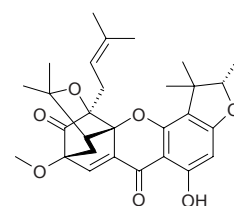
$C_{34}H_{40}O_{10}$  (608.69). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC = 32 µg/mL, control Vancomycin, MIC = 1 µg/mL; *Staphylococcus aureus* SK1, MIC = 32 µg/mL, Vancomycin, MIC = 1 µg/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19549 Scortechinone D**

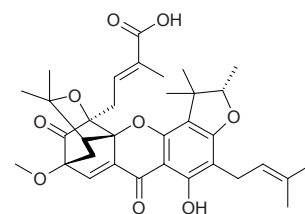
$C_{29}H_{34}O_7$  (494.59). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC > 256 µg/mL, control Vancomycin, MIC = 1 µg/mL; *Staphylococcus aureus* SK1, MIC > 256 µg/mL, Vancomycin, MIC = 1 µg/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19550 Scortechinone E**

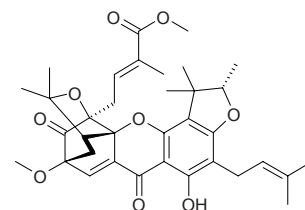
$C_{29}H_{34}O_7$  (494.59). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC > 256 µg/mL, control Vancomycin, MIC = 1 µg/mL; *Staphylococcus aureus* SK1, MIC > 256 µg/mL, Vancomycin, MIC = 1 µg/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19551 Scortechinone F**

$C_{34}H_{40}O_9$  (592.69). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC = 16 µg/mL, control Vancomycin, MIC = 1 µg/mL; *Staphylococcus aureus* SK1, MIC = 4 µg/mL, Vancomycin, MIC = 1 µg/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

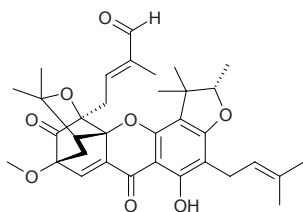
**19552 Scortechinone G**

$C_{35}H_{42}O_9$  (606.72). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC > 64 µg/mL, control Vancomycin, MIC = 1 µg/mL; *Staphylococcus aureus* SK1, MIC > 64 µg/mL, Vancomycin, MIC = 1 µg/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

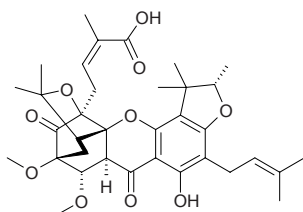


**19553 Scortechinone H**

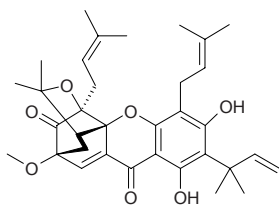
$C_{34}H_{40}O_8$  (576.69). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC > 64 $\mu$ g/mL, control Vancomycin, MIC = 1 $\mu$ g/mL; *Staphylococcus aureus* SK1, MIC = 4 $\mu$ g/mL, Vancomycin, MIC = 1 $\mu$ g/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19554 Scortechinone I**

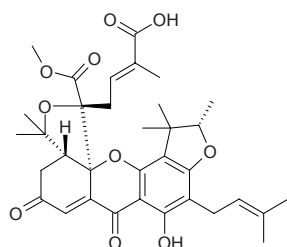
$C_{35}H_{44}O_{10}$  (624.73). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC = 8 $\mu$ g/mL, control Vancomycin, MIC = 1 $\mu$ g/mL; *Staphylococcus aureus* SK1, MIC = 8 $\mu$ g/mL, Vancomycin, MIC = 1 $\mu$ g/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19555 Scortechinone J**

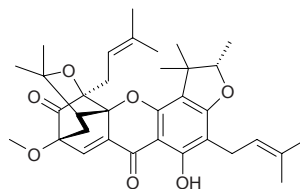
$C_{34}H_{42}O_7$  (562.71). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC = 32 $\mu$ g/mL, control Vancomycin, MIC = 1 $\mu$ g/mL; *Staphylococcus aureus* SK1, MIC = 8 $\mu$ g/mL, Vancomycin, MIC = 1 $\mu$ g/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19556 Scortechinone K**

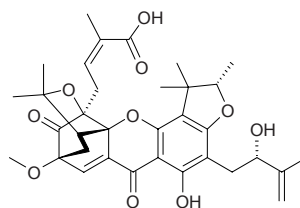
$C_{34}H_{40}O_{10}$  (608.59). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC = 128 $\mu$ g/mL, control Vancomycin, MIC = 1 $\mu$ g/mL; *Staphylococcus aureus* SK1, MIC = 128 $\mu$ g/mL, Vancomycin, MIC = 1 $\mu$ g/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19557 Scortechinone L**

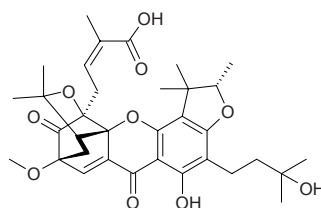
$C_{34}H_{42}O_7$  (562.71). Yellow gum,  $[\alpha]_D^{29} = -176^\circ$  ( $c = 0.017$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC > 64 $\mu$ g/mL, control Vancomycin, MIC = 1 $\mu$ g/mL; *Staphylococcus aureus* SK1, MIC > 64 $\mu$ g/mL, Vancomycin, MIC = 1 $\mu$ g/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19558 Scortechinone M**

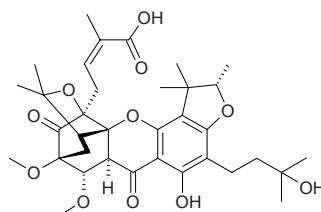
$C_{34}H_{40}O_{10}$  (608.69). Yellow gum,  $[\alpha]_D^{29} = -353^\circ$  ( $c = 0.017$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC = 32 $\mu$ g/mL, control Vancomycin, MIC = 1 $\mu$ g/mL; *Staphylococcus aureus* SK1, MIC = 32 $\mu$ g/mL, Vancomycin, MIC = 1 $\mu$ g/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19559 Scortechinone N**

$C_{34}H_{42}O_{10}$  (610.71). Yellow gum,  $[\alpha]_D^{29} = -263^\circ$  ( $c = 0.019$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC = 32 $\mu$ g/mL, control Vancomycin, MIC = 1 $\mu$ g/mL; *Staphylococcus aureus* SK1, MIC = 32 $\mu$ g/mL, Vancomycin, MIC = 1 $\mu$ g/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19560 Scortechinone O**

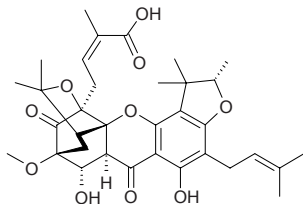
$C_{35}H_{46}O_{11}$  (642.75). Pale yellow gum,  $[\alpha]_D^{29} = +77^\circ$  ( $c = 0.013$ , MeOH). **Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC > 128 $\mu$ g/mL, control Vancomycin, MIC = 1 $\mu$ g/mL; *Staphylococcus aureus* SK1, MIC > 128 $\mu$ g/mL, Vancomycin, MIC = 1 $\mu$ g/mL). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.



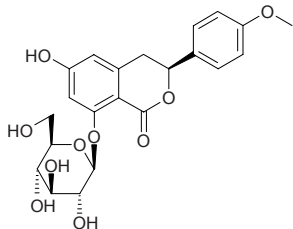


**19561 Scortechinone P**

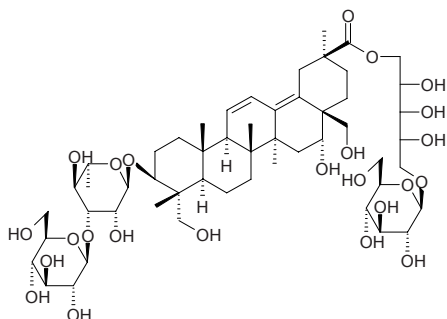
$C_{34}H_{42}O_{10}$  (610.71). Pale yellow gum,  $[\alpha]_D^{29} = +83^\circ$  ( $c = 0.012$ , MeOH).  
**Pharm:** Antibacterial (*Staphylococcus aureus* ATCC25923, MIC = 32  $\mu\text{g/mL}$ , control Vancomycin, MIC = 1  $\mu\text{g/mL}$ ; *Staphylococcus aureus* SK1, MIC = 16  $\mu\text{g/mL}$ , Vancomycin, MIC = 1  $\mu\text{g/mL}$ ). **Source:** *Garcinia scortechinii* (stem cortex). **Ref:** 5058.

**19562 Scorzocreticoside I**

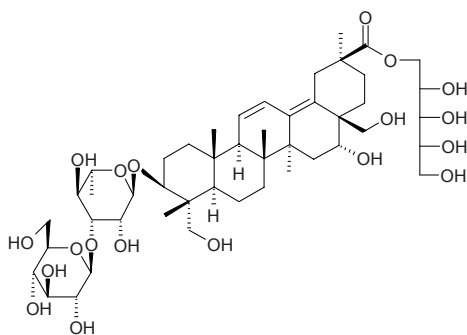
$C_{22}H_{24}O_{10}$  (448.43). **Pharm:** Antioxidant (DPPH scavenger,  $IC_{50} = (59.15 \pm 7.38)$   $\mu\text{g/mL}$ ; control Ascorbic acid,  $IC_{50} = (2.49 \pm 0.32)$   $\mu\text{g/mL}$ , Caffeic acid,  $IC_{50} = (1.78 \pm 0.03)$   $\mu\text{g/mL}$ , Chlorogenic acid,  $IC_{50} = (1.28 \pm 0.38)$   $\mu\text{g/mL}$ ). **Source:** SUAN YE PO LUO MEN SHEN *Tragopogon porrifolius* (subaerial parts). **Ref:** 5307.

**19563 Scorzoneroside A**

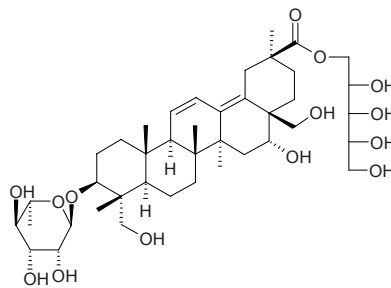
$C_{53}H_{86}O_{24}$  (1107.26). **Source:** HONG CHAI HU *Bupleurum scorzoniferolium*. **Ref:** 2247.

**19564 Scorzoneroside B**

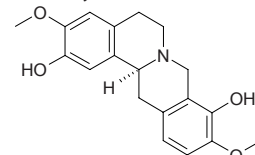
$C_{47}H_{76}O_{19}$  (945.12). **Source:** HONG CHAI HU *Bupleurum scorzoniferolium*. **Ref:** 2247.

**19565 Scorzoneroside C**

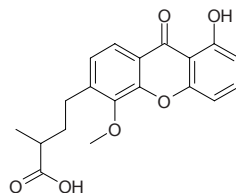
$C_{41}H_{66}O_{14}$  (782.97). **Source:** HONG CHAI HU *Bupleurum scorzoniferolium*. **Ref:** 2247.

**19566 Scoulerine**

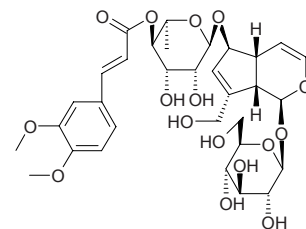
(*S*)-5,8,13,13a-Tetrahydro-3,10-dimethoxy-6*H*-dibenzo[*a,g*]quinolizine-2,9-diol [6451-73-6]  $C_{19}H_{21}NO_4$  (327.38). mp (+) 197°C, (−) 204°C. **Source:** HE BAO MU DAN GEN *Dicentra spectabilis*, JU HUA HUANG LIAN *Corydalis pallida*, YA PIAN *Papaver somniferum*, YAN HU SUO *Corydalis yanhusuo* [Syn. *Corydalis turtschaninovii* f. *Yanhusuo*], ZI HUA YU DENG CAO *Corydalis incisa*. **Ref:** 6.

**19567 Scriblitifolic acid**

$C_{19}H_{18}O_6$  (342.35). mp 163–164°C, mp 164–167°C (petrol- $CHCl_3$ ). **Source:** TE SI MAN NI HU TONG BIAN ZHONG *Calophyllum teysmannii* var. *inophylloide* (wood). **Ref:** 3937.

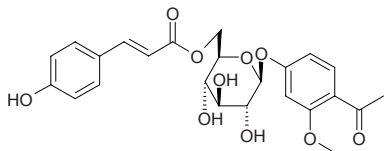
**19568 Scrolepidoside**

6-*O*-[4'-*O*-*trans*-(3,4-Dimethoxycinnamoyl)- $\alpha$ -*L*-rhamnopyranosyl]aucubin  $C_{32}H_{42}O_{16}$  (682.68). Amorphous powder,  $[\alpha]_D^{22} = -140^\circ$  ( $c = 0.23$ , MeOH). **Pharm:** Antitrypanosomal (*Trypanosoma brucei rhodesiense*,  $IC_{50} = 33.3$   $\mu\text{g/mL}$ , control Melarsoprol,  $IC_{50} = 0.0033$   $\mu\text{g/mL}$ ; *Trypanosoma cruzi*,  $IC_{50} > 90$   $\mu\text{g/mL}$ , control Benznidazole,  $IC_{50} = 0.70$   $\mu\text{g/mL}$ ); antileishmanial (*Leishmania donovani*,  $IC_{50} = 6.1$   $\mu\text{g/mL}$ , control Miltefosine,  $IC_{50} = 0.32$   $\mu\text{g/mL}$ ); antimalarial (*Plasmodium falciparum*,  $IC_{50} > 50$   $\mu\text{g/mL}$ , control Artemisinin,  $IC_{50} = 0.002$   $\mu\text{g/mL}$ ); cytotoxic (L6 cells,  $IC_{50} > 90$   $\mu\text{g/mL}$ , control Podophyllotoxin,  $IC_{50} = 0.0075$   $\mu\text{g/mL}$ ). **Source:** LIN PIAN XUAN SHEN *Scrophularia lepidota* (root). **Ref:** 5251.

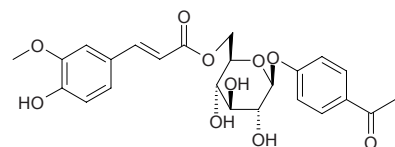


**19569 Scrophuloside A**

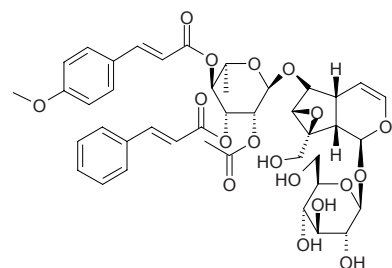
$C_{24}H_{26}O_{10}$  (474.47). Colorless amorphous powder,  $[\alpha]_D^{24} = -29.5^\circ$  ( $c = 0.88$ , MeOH). **Source:** *Neopicrorhiza scrophulariiflora* (rhizome: yield = 0.0059%dw). **Ref:** 1584.

**19570 Scrophuloside B**

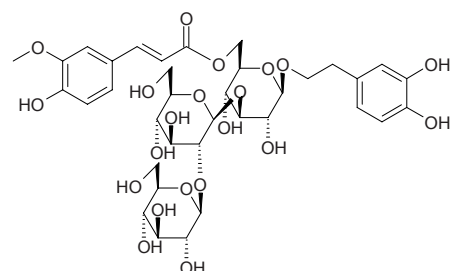
$C_{24}H_{26}O_{10}$  (474.47). Colorless amorphous powder,  $[\alpha]_D^{24} = -36.0^\circ$  ( $c = 0.50$ , MeOH). **Source:** *Neopicrorhiza scrophulariiflora* (rhizome: yield = 0.0022%dw). **Ref:** 1584.

**19571 Scrophuloside B<sub>a</sub>**

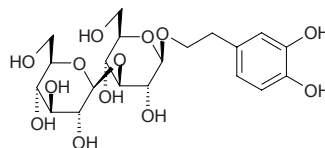
6-*O*-(2''-*O*-Acetyl-3''-*O*-cinnamoyl-4''-*O*-*p*-methoxycinnamoyl- $\alpha$ -*L*-rhamnopyranosyl)catalpol  $C_{42}H_{48}O_{18}$  (840.84). Yellowish powder,  $[\alpha]_D^{25} = -31.8^\circ$  ( $c = 0.29$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic (MCF7,  $IC_{50} > 100\mu\text{mol/L}$ , control Adriamycin,  $IC_{50} = (1.5 \pm 0.2)\mu\text{mol/L}$ ; K562,  $IC_{50} = (44.6 \pm 6.4)\mu\text{mol/L}$ , Adriamycin,  $IC_{50} = (0.07 \pm 0.01)\mu\text{mol/L}$ ; Bowes,  $IC_{50} = (90.2 \pm 7.7)\mu\text{mol/L}$ , Adriamycin,  $IC_{50} = (0.45 \pm 0.01)\mu\text{mol/L}$ ; T24S,  $IC_{50} > 100\mu\text{mol/L}$ , Adriamycin,  $IC_{50} = (5.8 \pm 0.6)\mu\text{mol/L}$ ; A549,  $IC_{50} > 100\mu\text{mol/L}$ , Adriamycin,  $IC_{50} = (15.8 \pm 6.7)\mu\text{mol/L}$ ). **Source:** XUAN SHEN *Scrophularia ningpoensis*. **Ref:** 5288.

**19572 Scroside A**

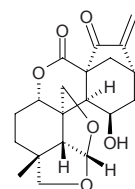
$C_{36}H_{48}O_{21}$  (816.77). **Pharm:** Antioxidant (hydroxyl radical scavenger,  $IC_{50} = 98.0\mu\text{mol/L}$ , control Ascorbic acid,  $IC_{50} = 51.8\mu\text{mol/L}$ , superoxide anion radical scavenger,  $IC_{50} = 167.7\mu\text{mol/L}$ , control Ascorbic acid,  $IC_{50} = 86.2\mu\text{mol/L}$ ). **Source:** XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora* (root). **Ref:** 4289.

**19573 Scroside D**

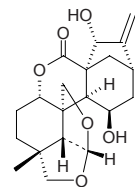
$C_{20}H_{30}O_{13}$  (478.45). White amorphous powder, mp 240–242°C (MeOH),  $[\alpha]_D^{20} = -42.6^\circ$  ( $c = 0.8$ , MeOH). **Pharm:** Antioxidant (hydroxyl radical scavenger,  $IC_{50} = 48.7\mu\text{mol/L}$ , control Ascorbic acid,  $IC_{50} = 51.8\mu\text{mol/L}$ , superoxide anion radical scavenger,  $IC_{50} = 84.5\mu\text{mol/L}$ , control Ascorbic acid,  $IC_{50} = 86.2\mu\text{mol/L}$ ). **Source:** XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora* (root). **Ref:** 4289.

**19574 Sculponeatin A**

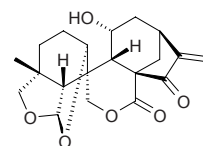
$C_{20}H_{24}O_6$  (360.41). Crystals, mp  $> 300^\circ\text{C}$ ,  $[\alpha]_D^{25} = -139^\circ$  ( $c = 0.21$ , pyridine). **Pharm:** Antibacterial (*Staphylococcus aureus*, *Bacillus dysenteriae* and *Bacillus subtilis*, MIC = 62.5 $\mu\text{g/mL}$ ). **Source:** CAO SU *Phlomis umbrosa*, HUANG HUA XIANG CHA CAI *Isodon sculponeata* [Syn. *Rabdosia sculponeata*]. **Ref:** 4067.

**19575 Sculponeatin B**

[85287-60-1]  $C_{20}H_{26}O_6$  (362.43). White crystals, mp 316–318°C,  $[\alpha]_D^{27} = -161.4^\circ$  ( $c = 0.5$ , pyridine); mp 244–246°C,  $[\alpha]_D^{25} = -109^\circ$  ( $c = 0.14$ ,  $C_5H_5N$ ). **Pharm:** Antibacterial (*Staphylococcus aureus*, *Bacillus dysenteriae* and *Bacillus subtilis*, MIC = 62.5 $\mu\text{g/mL}$ ). **Source:** HUANG HUA XIANG CHA CAI *Isodon sculponeata* [Syn. *Rabdosia sculponeata*]. **Ref:** 661, 4067.

**19576 Sculponeatin C**

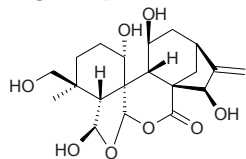
$C_{20}H_{24}O_6$  (360.41). mp 292–294°C,  $[\alpha]_D^{24} = -163^\circ$  ( $c = 0.21$ ,  $C_5H_5N$ ). **Source:** HUANG HUA XIANG CHA CAI *Isodon sculponeata* [Syn. *Rabdosia sculponeata*]. **Ref:** 4067.



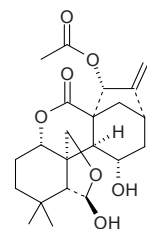


**19577 Sculponeatin D**

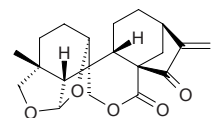
$C_{20}H_{28}O_8$  (396.44). mp 288~290.5°C,  $[\alpha]_D^{19} = -100.0^\circ$  (MeOH). Source: HUANG HUA XIANG CHA CAI *Isodon sculponeata* [Syn. *Rabdosia sculponeata*]. Ref: 4067.

**19578 Sculponeatin E**

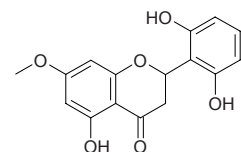
$C_{22}H_{30}O_7$  (406.48). White crystals mp 136~137°C,  $[\alpha]_D^{14.5} = -145.56^\circ$  ( $c = 0.564$ ). Source: HUANG HUA XIANG CHA CAI *Isodon sculponeata* [Syn. *Rabdosia sculponeata*]. Ref: 2113.

**19579 Sculponeatin J**

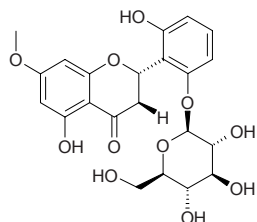
$C_{20}H_{24}O_5$  (344.41). Pharm: Cytotoxic (*in vitro*, K562,  $IC_{50} = 0.83\mu\text{g/mL}$ ; control *cis*-Platin,  $IC_{50} = 0.52\mu\text{g/mL}$ ). Source: LU SHI DONG LING CAO *Isodon rubescens* var. *lushiensis* (leaf: yield = 0.00022%dw). Ref: 4732.

**19580 Scuteamoenin**

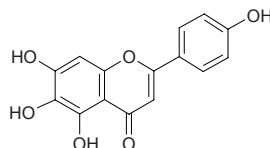
(2*S*)-2',5,6'-Trihydroxy-7-methoxyflavanone  $C_{16}H_{14}O_6$  (302.29). Colorless acicular crystals, mp 250°C. Source: DIAN HUANG QIN *Scutellaria amoena*. Ref: 153.

**19581 Scuteamoenoside**

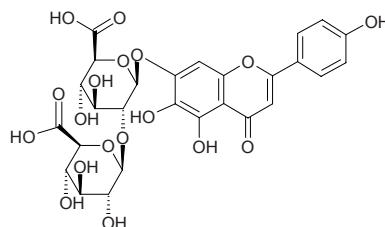
(2*S*)-2',5,6'-trihydroxy-7-methoxyflavanone-2'-*O*- $\beta$ -*D*-glucopyranoside  $C_{22}H_{24}O_{11}$  (464.43). Colorless crystalline powder, mp 236~239°C. Source: DIAN HUANG QIN *Scutellaria amoena*. Ref: 124.

**19582 Scutellarein**

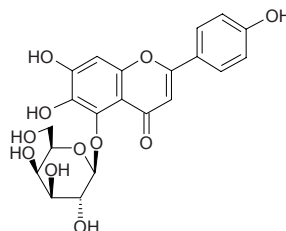
[529-53-3]  $C_{15}H_{10}O_6$  (286.24). mp 350°C. Pharm: Inhibits formation of indole-3-acetic acid oxidase and ATP; larvacide (inhibits larva of *Heliothis zea* growth). Source: BAN ZHI LIAN *Scutellaria barbata* [Syn. *Scutellaria rivularis*], CHOU MO LI *Clerodendron fragrans*, HAN XIN CAO *Scutellaria indica*, JIA LIAN QIAO YE *Duranta repens*, MU HU DIE *Oroxylum indicum*, MU HU DIE SHU PI *Oroxylum indicum*, ZI MEI SHU *Millingtonia hortensis*. Ref: 6, 658.

**19583 Scutellarein-7-*O*-diglucuronide**

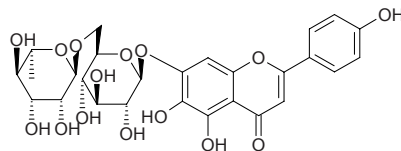
$C_{27}H_{26}O_{18}$  (638.50). Source: HUI HUI SU GENG *Perilla frutescens* var. *crispa*. Ref: 660.

**19584 Scutellarein-5-galactoside**

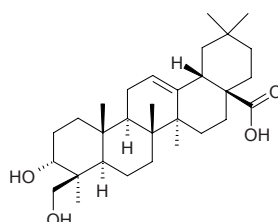
$C_{21}H_{20}O_{11}$  (448.39). Source: ZI MEI SHU *Millingtonia hortensis*. Ref: 6.

**19585 Scutellarein-7-rutinoside**

$C_{27}H_{30}O_{15}$  (488.71). Source: MU HU DIE SHU PI *Oroxylum indicum*. Ref: 6.

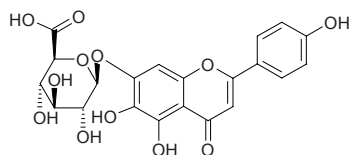
**19586 Scutellaric acid**

$C_{30}H_{48}O_4$  (472.71). White amorphous powder, mp 273~276°C,  $[\alpha]_D^{23} = +34.6^\circ$  ( $c = 0.85$ , pyridine). Pharm: Quinone reductase inducer inactive (mouse Hepalc7 hepatoma cells,  $CD > 10\mu\text{g/mL}$ ). Source: *Coussarea brevicaulis*. Ref: 3434.

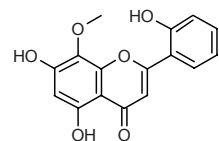


**19587 Scutellarin**

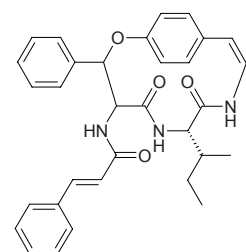
[27740-01-8]  $C_{21}H_{18}O_{12}$  (462.37). mp > 300°C. **Pharm:** Improves permeability of BBB; increases cerebral blood flow; platelet aggregation inhibitor (induced by ADP); main component of breviscapin in *Erigeron breviscapus* DENG ZHAN XI XIN to cure post-palsy paralysis; reduces resistance of cerebral blood vessels; used in treatment of post-palsy paralysis (for 469 cases in clinic, effective rate = 89.3%); antioxidant (PC12 cells, against oxidative toxicity induced by glutamate: control, LDH released = (25.94±5.92)%; glutamate, LDH released = (76.26±7.01)%; 0.1μmol/L+Glu, LDH released = (58.98±9.20)%; 1.0μmol/L+Glu, LDH released = (52.23±7.74)%; 10μmol/L+Glu, LDH released = (42.27±3.84)%; Vitamin E 10μmol/L+Glu, LDH released = (55.70±8.84)%<sup>[4972]</sup>; LD<sub>50</sub> (mus, iv) = 1314mg/kg. **Source:** BAN ZHI LIAN *Scutellaria barbata* [Syn. *Scutellaria rivularis*], CHOU MO LI *Clerodendron fragrans*, DA CHE QIAN *Plantago major*, DENG ZHAN XI XIN *Erigeron breviscapus*, GAO CONG ZHEN ZHU MEI *Sorbaria arborea*, GAO HUANG QIN *Scutellaria altissima*, HUANG QIN *Scutellaria baicalensis*, HUANG QIN *Scutellaria baicalensis*, JIAN ZI SU YE *Perilla frutescens* var. *acuta* [Syn. *Perilla frutescens* var. *purpurascens*], MU HU DIE *Oroxylum indicum*, ZHEN ZHU MEI *Sorbaria sorbifolia*. **Ref:** 6, 658, 660, 4972, 5501.

**19588 Scutevulin**

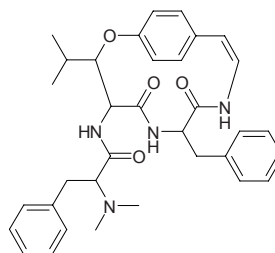
5,7,2'-Trihydroxy-8-methoxyflavone [80713-32-2]  $C_{16}H_{12}O_6$  (300.27). **Pharm:** cAMP phosphodiesterase inhibitor (ox heart, IC<sub>50</sub> = 6μmol/L). **Source:** HUANG QIN *Scutellaria baicalensis*. **Ref:** 2, 1652.

**19589 Scutianene D**

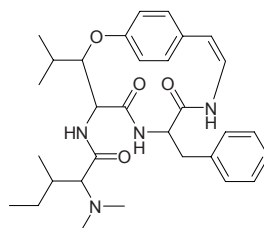
$C_{32}H_{33}N_3O_4$  (523.64). **Pharm:** Antibacterial inactive (gram-positive: *Staphylococcus aureus*, control Chloramphenicol, MIA = 0.7μg; *Staphylococcus epidermidis*, Chloramphenicol, MIA = 0.7μg; *Micrococcus luteus*, Chloramphenicol, MIA = 0.7μg; gram-negative: *Salmonella setubal*, Chloramphenicol, MIA = 0.7μg; *Escherichia coli*, Chloramphenicol, MIA = 0.5μg; *Klebsiella pneumoniae*, Chloramphenicol, MIA = 0.5μg); antifungal inactive (*Candida albicans* and *Saccharomyces cerevisiae*, 100μg). **Source:** HUANG YANG YE DUI CI TENG *Scutia buxifolia* (root cortex). **Ref:** 5323.

**19590 Scutianine B**

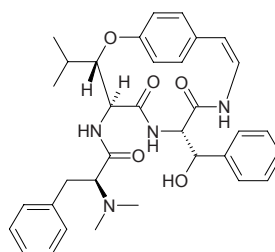
$C_{34}H_{40}N_4O_4$  (568.72). **Pharm:** Antibacterial (gram-negative: *Escherichia coli*, MIA = 6.25μg or 12.5μg, control Chloramphenicol, MIA = 0.5μg); antifungal inactive (*Candida albicans* and *Saccharomyces cerevisiae*, 100μg). **Source:** HUANG YANG YE DUI CI TENG *Scutia buxifolia* (root cortex). **Ref:** 5323.

**19591 Scutianine C**

$C_{31}H_{42}N_4O_4$  (534.70). **Pharm:** Antibacterial inactive (gram-positive: *Staphylococcus aureus*, control Chloramphenicol, MIA = 0.7μg; *Staphylococcus epidermidis*, Chloramphenicol, MIA = 0.7μg; *Micrococcus luteus*, Chloramphenicol, MIA = 0.7μg; gram-negative: *Salmonella setubal*, Chloramphenicol, MIA = 0.7μg; *Escherichia coli*, Chloramphenicol, MIA = 0.5μg; *Klebsiella pneumoniae*, Chloramphenicol, MIA = 0.5μg); antifungal inactive (*Candida albicans* and *Saccharomyces cerevisiae*, 100μg). **Source:** HUANG YANG YE DUI CI TENG *Scutia buxifolia* (root cortex). **Ref:** 5323.

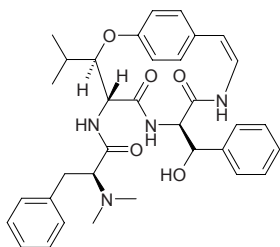
**19592 Scutianine D**

$C_{34}H_{40}N_4O_5$  (584.72). **Pharm:** Antibacterial (gram-positive: *Staphylococcus epidermidis*, MIA = 50.0μg, control Chloramphenicol, MIA = 0.7μg; *Micrococcus luteus*, MIA = 25.0μg, Chloramphenicol, MIA = 0.7μg; gram-negative: *Escherichia coli*, MIA = 50.0μg, Chloramphenicol, MIA = 0.5μg); antifungal inactive (*Candida albicans* and *Saccharomyces cerevisiae*, 100μg). **Source:** HUANG YANG YE DUI CI TENG *Scutia buxifolia* (root cortex). **Ref:** 5323.

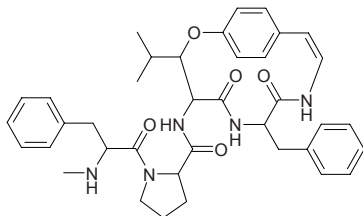


**19593 Scutianine E**

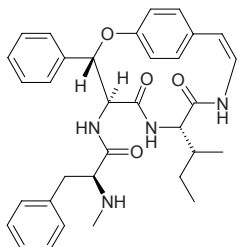
$C_{34}H_{40}N_4O_5$  (584.72). **Pharm:** Antibacterial (gram-positive: *Staphylococcus aureus*, MIA = 25.0 $\mu$ g, control Chloramphenicol, MIA = 0.7 $\mu$ g; *Staphylococcus epidermidis*, MIA = 6.25 $\mu$ g, Chloramphenicol, MIA = 0.7 $\mu$ g; *Micrococcus luteus*, MIA = 6.25 $\mu$ g, Chloramphenicol, MIA = 0.7 $\mu$ g; gram-negative: *Escherichia coli*, MIA = 6.25 $\mu$ g, Chloramphenicol, MIA = 0.5 $\mu$ g; *Klebsiella pneumoniae*, MIA = 12.5 $\mu$ g, Chloramphenicol, MIA = 0.5 $\mu$ g); antifungal inactive (*Candida albicans* and *Saccharomyces cerevisiae*, 100 $\mu$ g). **Source:** HUANG YANG YE DUI CI TENG *Scutia buxifolia* (root cortex). **Ref:** 5323.

**19594 Scutianine F**

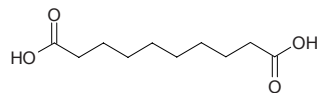
$C_{38}H_{45}N_5O_5$  (651.81). **Pharm:** Antibacterial inactive (gram-positive: *Staphylococcus aureus*, control Chloramphenicol, MIA = 0.7 $\mu$ g; *Staphylococcus epidermidis*, Chloramphenicol, MIA = 0.7 $\mu$ g; *Micrococcus luteus*, Chloramphenicol, MIA = 0.7 $\mu$ g; gram-negative: *Salmonella setubal*, Chloramphenicol, MIA = 0.7 $\mu$ g; *Escherichia coli*, Chloramphenicol, MIA = 0.5 $\mu$ g; *Klebsiella pneumoniae*, Chloramphenicol, MIA = 0.5 $\mu$ g); antifungal inactive (*Candida albicans* and *Saccharomyces cerevisiae*, 100 $\mu$ g). **Source:** HUANG YANG YE DUI CI TENG *Scutia buxifolia* (root cortex). **Ref:** 5323.

**19595 Scutianine M**

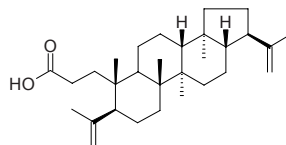
$C_{33}H_{38}N_4O_4$  (554.70). White powder, mp 257~259°C,  $[\alpha]_D^{25} = +120^\circ$  ( $c = 0.018$ ,  $CHCl_3$ ). **Pharm:** Antibacterial inactive (gram-positive: *Staphylococcus aureus*, control Chloramphenicol, MIA = 0.7 $\mu$ g; *Staphylococcus epidermidis*, Chloramphenicol, MIA = 0.7 $\mu$ g; *Micrococcus luteus*, Chloramphenicol, MIA = 0.7 $\mu$ g; gram-negative: *Salmonella setubal*, Chloramphenicol, MIA = 0.7 $\mu$ g; *Escherichia coli*, Chloramphenicol, MIA = 0.5 $\mu$ g; *Klebsiella pneumoniae*, Chloramphenicol, MIA = 0.5 $\mu$ g); antifungal inactive (*Candida albicans* and *Saccharomyces cerevisiae*, 100 $\mu$ g). **Source:** HUANG YANG YE DUI CI TENG *Scutia buxifolia* (root cortex). **Ref:** 5323.

**19596 Sebacic acid**

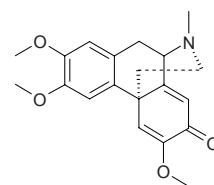
Decanedioic acid [111-20-6]  $C_{10}H_{18}O_4$  (202.25). **Source:** BI MA ZI *Ricinus communis*, DANG GUI *Angelica sinensis*. **Ref:** 2.

**19597 Sebiferic acid**

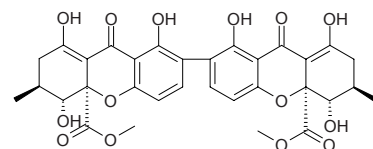
[52809-09-3]  $C_{30}H_{48}O_2$  (440.72). mp 178~180°C. **Source:** WU JIU MU GEN PI *Sapium sebiferum*. **Ref:** 6.

**19598 (+)-Sebiferine**

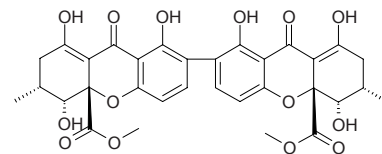
$C_{20}H_{23}NO_4$  (341.41). **Source:** *Stephania* sp. **Ref:** 3404.

**19599 Secalonic acid A**

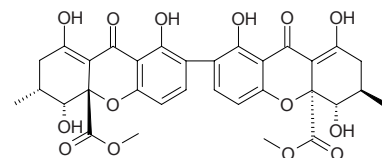
$C_{32}H_{30}O_{14}$  (638.59). mp 246~247°C (dec). **Source:** MAI JIAO *Claviceps purpurea*. **Ref:** 6.

**19600 Secalonic acid B**

$C_{32}H_{30}O_{14}$  (638.59). mp 254~256°C (dec). **Source:** MAI JIAO *Claviceps purpurea*. **Ref:** 6.

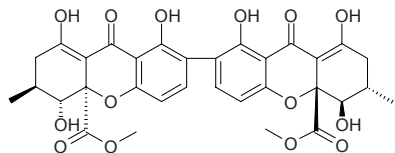
**19601 Secalonic acid C**

$C_{32}H_{30}O_{14}$  (638.59). mp 159~161°C. **Source:** MAI JIAO *Claviceps purpurea*. **Ref:** 6.

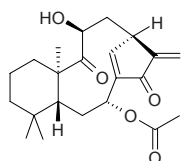


**19602 Secalonic acid D**

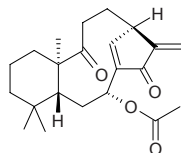
$C_{32}H_{30}O_{14}$  (638.59). mp 253–255°C. Source: MAI JIAO *Claviceps purpurea*.  
Ref: 6.

**19603 ent-8,9-Seco-7 $\alpha$ -acetoxy-11 $\beta$ -hydroxykaura-(14),16-dien-9,15-dione**

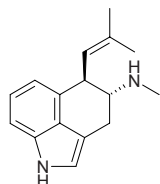
$C_{22}H_{30}O_5$  (374.48). Colorless oil,  $[\alpha]_{589nm}^{20} = 2^\circ$ ,  $[\alpha]_{578nm}^{24} = +3^\circ$ ,  $[\alpha]_{546nm} = +6^\circ$ ,  
 $[\alpha]_{435nm} = +50^\circ$ , ( $c = 0.2$ , MeOH). Source: *Lepidolaena taylorii*. Ref: 1901.

**19604 ent-8,9-Seco-7 $\alpha$ -acetoxykaura-8(14),16-dien-9,15-dione**

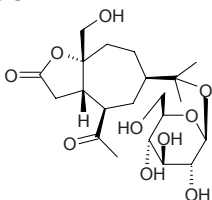
$C_{22}H_{30}O_4$  (358.48). Colorless oil,  $[\alpha]_{589nm}^{20} = -72^\circ$ ,  $[\alpha]_{577nm} = -82^\circ$ ,  
 $[\alpha]_{546nm} = -98^\circ$ ,  $[\alpha]_{435nm} = -173^\circ$ ,  $[\alpha]_{405nm} = -111^\circ$  ( $c = 0.2$ ,  $CHCl_3$ ).  
Source: *Lepidolaena taylorii*. Ref: 1901.

**19605 6,7-Seco-agroclavine**

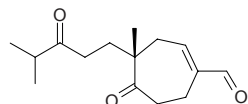
$C_{16}H_{22}N_2$  (240.35). Source: MAI JIAO *Claviceps purpurea*. Ref: 660.

**19606 (1S,5R,7R,10R)-Secoatractylolactone 11-O- $\beta$ -D-glucopyranoside**

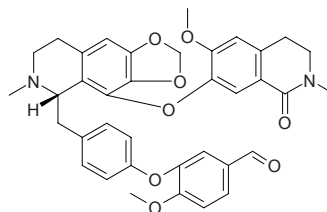
$C_{21}H_{34}O_{10}$  (446.50). Amorphous powder,  $[\alpha]_D^{22} = +36^\circ$  ( $c = 1.3$ , MeOH).  
Source: CANG ZHU *Atractylodes lancea*, GUAN CANG ZHU *Atractylodes japonica* (fresh rhizome). Ref: 4310, 4348.

**19607 Secocarotanal**

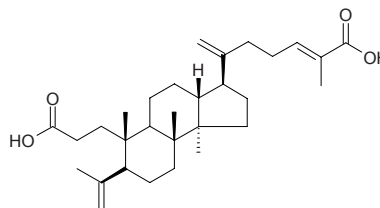
$C_{15}H_{22}O_3$  (250.34). Source: MEI GUI HUA *Rosa rugosa*. Ref: 660.

**19608 Secocepharantine**

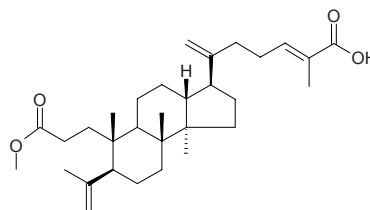
$C_{37}H_{36}N_2O_8$  (636.71). Source: TAI WAN QIAN JIN TENG *Stephania sasakii*.  
Ref: 660.

**19609 (24E)-3,4-Secodammara-4(28),20,24-trien-3,26-dioic acid**

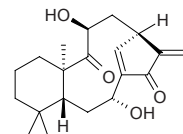
$C_{30}H_{46}O_4$  (470.70). Source: CHI YANG *Alnus japonica*. Ref: 660.

**19610 24(E)-3,4-Secodammara-4(28),20,24-trien-3,26-dioic acid-3-methylester**

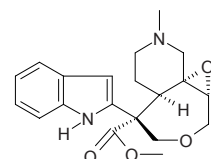
$C_{31}H_{48}O_4$  (484.73). Source: CHI YANG *Alnus japonica*. Ref: 660.

**19611 ent-8,9-Seco-7 $\alpha$ ,11 $\beta$ -dihydroxykaura-14(14),16-dien-9,15-dione**

$C_{20}H_{28}O_4$  (332.44). Colorless oil,  $[\alpha]_{589nm}^{19} = -3^\circ$ ,  $[\alpha]_{577nm} = -2^\circ$ ,  $[\alpha]_{546nm} = +1^\circ$ ,  
 $[\alpha]_{435nm} = +53^\circ$ ,  $[\alpha]_{405nm} = +165^\circ$  ( $c = 0.2$ ,  $CHCl_3$ ). Source: *Lepidolaena taylorii*. Ref: 1901.

**19612 6,7-Seco-19,20-epoxyangustilobine B**

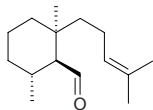
$C_{20}H_{24}N_2O_4$  (356.43). Amorphous solid,  $[\alpha]_D^{29} = +73.6^\circ$  ( $c = 1.25$ , MeOH).  
Source: XIANG PI MU *Alstonia scholaris* (leaf). Ref: 2806.



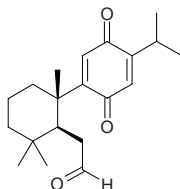
**19613 (-)-6,7-Seco-eudesm-7(11)-en-6-ol**

$C_{15}H_{26}O$  (222.36). Colorless oil. Source: *Tritomaria polita* (essential oil).

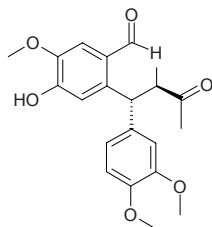
Ref: 3446.

**19614 7,8-Seco-para-ferruginone**

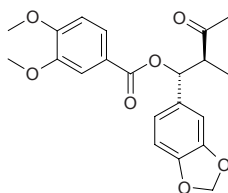
$C_{20}H_{28}O_3$  (316.44). Yellow needles, mp 151~152°C. Pharm: Antibacterial (*in vitro*, *Staphylococcus aureus*, MIC = 20 $\mu$ mol/L; *Micrococcus luteus*, MIC = 15 $\mu$ mol/L). Source: HONG GEN CAO *Salvia prionitis* (root: yield = 0.00030%dw). Ref: 4635.

**19615 7,8-Seco-holostylone A**

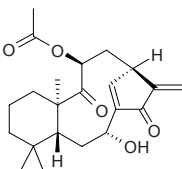
(7*S*,8*R*)-4-Hydroxy-3',4',5-trimethoxy-7,8-seco-2,7'-cycloignan-7,8-dione  $C_{21}H_{24}O_6$  (372.42). Amorphous yellow solid,  $[\alpha]_D^{25} = -181.8^\circ$  ( $c = 0.44$ ,  $CHCl_3$ ). Source: *Holostylis reniformis* (root). Ref: 3784.

**19616 7,8-Seco-holostylone B**

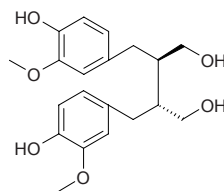
(7*R*,8*S*)-3,4-Dimethoxy-3',4'-methylenedioxy-7,8-seco-7,7'-epoxyignan-7,8-dione  $C_{21}H_{22}O_7$  (386.41). Amorphous yellow solid,  $[\alpha]_D^{25} = +37.0^\circ$  ( $c = 0.13$ ,  $CHCl_3$ ). Source: *Holostylis reniformis* (root). Ref: 3784.

**19617 ent-8,9-Seco-7a-hydroxy-11-acetoxykaura-8(14),16-dien-9,15-dione**

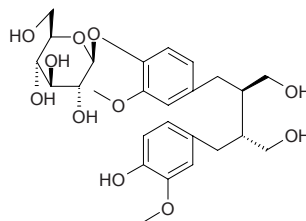
$C_{22}H_{30}O_5$  (374.48). Colorless oil,  $[\alpha]_{589nm}^{20} = -31^\circ$ ,  $[\alpha]_{577nm} = -42^\circ$ ,  $[\alpha]_{546nm} = -54^\circ$ ,  $[\alpha]_{435nm} = -131^\circ$ ,  $[\alpha]_{405nm} = -126^\circ$  ( $c = 0.2$ ,  $CHCl_3$ ) Source: *Lepidolaena taylorii*. Ref: 1901.

**19618 (-)-Secoisolariciresinol**

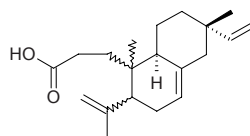
(8*R*,8'*R*)-(-)-Secoisolariciresinol  $C_{20}H_{26}O_6$  (362.43). Pale yellow amorphous powder. Pharm: Antioxidant (DPPH scavenger,  $EC_{50} = 7.7\mu$ g/mL = 21.3 $\mu$ mol/L, control Ascorbic acid,  $EC_{50} = 1.6\mu$ g/mL = 9.1 $\mu$ mol/L)<sup>[4154]</sup>; antioxidant (DPPH scavenger,  $IC_{50} = 28.9\mu$ mol/L, control Caffeic acid,  $IC_{50} = 25.5\mu$ mol/L)<sup>[5407]</sup>; NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3 $\mu$ mol/L, 10 $\mu$ mol/L, 30 $\mu$ mol/L, 100 $\mu$ mol/L, InRt = -7.3%, 6.5%, 0.9%, -12.5%, respectively; control *L*-NMMA, 3 $\mu$ mol/L, 10 $\mu$ mol/L, 30 $\mu$ mol/L, 100 $\mu$ mol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively)<sup>[4691]</sup>; NO production inhibitor ( $IC_{50} = 148\mu$ mol/L, control *L*-NMMA,  $IC_{50} = 28.5\mu$ mol/L)<sup>[5407]</sup>;  $\beta$ -hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of  $\beta$ -hexosaminidase, 100 $\mu$ mol/L, InRt = (-2.8 $\pm$ 5.3%)<sup>[4347]</sup>; aldose reductase inhibitor ( $IC_{50} > 100\mu$ mol/L, 100 $\mu$ mol/L InRt = 26%, control Epalrestat,  $IC_{50} = 0.072\mu$ mol/L)<sup>[4530]</sup>; cytotoxic (*in vitro*, 26-L5,  $EC_{50} = 5.9\mu$ g/mL; HT1080,  $EC_{50} = 60.2\mu$ g/mL; control 5-Fluorouracil, Colon26-L5,  $EC_{50} = 0.29\mu$ g/mL; HT1080,  $EC_{50} = 0.07\mu$ g/mL)<sup>[4661]</sup>; estrogenic<sup>[5408]</sup>. Source: BEI SHA SHEN *Glehnia littoralis* (underground part), CHU YE HUA JIAO *Zanthoxylum ailanthoides*, SHUI GUI JIAO YE *Hymenocallis littoralis* [Syn. *Hymenocallis americana*; *Pancretium littoralis*], SHUI MU XUE LIAN HUA *Saussurea medusa* (whole herb), XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.0054%dw)<sup>[4691]</sup>, YI YE TIE SHAN *Tsuga heterophylla* (sapwood), YUN NAN HONG DOU SHAN *Taxus yunnanensis* (wood: yield = 0.607%dw), *Sarcomelicope megistophylla*. Ref: 660, 3965, 4154, 4347, 4530, 4661, 4691, 5407, 5408.

**19619 (-)-Secoisolariciresinol 4-O- $\beta$ -D-glucopyranoside**

$C_{26}H_{36}O_{11}$  (524.57). Colorless amorphous solid,  $[\alpha]_D = -182.1^\circ$  ( $c = 0.05$ , MeOH). Pharm: Antioxidant (DPPH scavenger,  $EC_{50} = 21.0\mu$ g/mL = 40.0 $\mu$ mol/L, control Ascorbic acid,  $EC_{50} = 1.6\mu$ g/mL = 9.1 $\mu$ mol/L). Source: BEI SHA SHEN *Glehnia littoralis* (underground part). Ref: 4154.

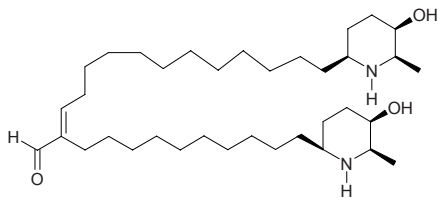
**19620 3,4-Secoisopi-mara-4(18),7,15-trien-3-oic acid**

$C_{20}H_{30}O_2$  (302.46). Pharm: Inhibits intestinal motility (mouse, *in vivo*)<sup>[4964]</sup>. Source: ZHU HONG SHU WEI CAO *Salvia cinnabarina* (aerial parts). Ref: 4942, 4964.

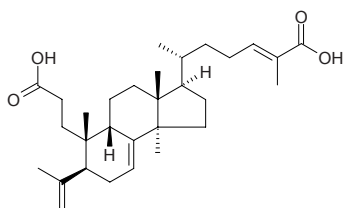


**19621 Secojuliprosopinal**

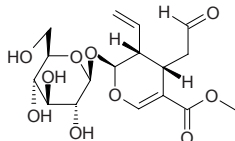
$C_{36}H_{68}N_2O_3$  (576.95). Colorless gum,  $[\alpha]_D^{28} = +5.0^\circ$  ( $c = 1.0$ , MeOH). Source: MU DOU SHU *Prosopis juliflora* (leaf). Ref: 3778.

**19622 24(E)-3,4-Seco-9βH-lanosta-4(28),7,24-triene-3,26-dioic acid**

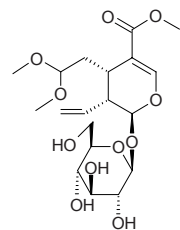
$C_{30}H_{46}O_4$  (470.70). White amorphous powder, mp 232~236 °C,  $[\alpha]_D^{20} = -13.4^\circ$  ( $c = 0.2$ , EtOH). Pharm: Cytotoxic (weak activity: A549,  $ED_{50} = 28.3\mu\text{g/mL}$ ; SK-OV-3,  $ED_{50} = 20.9\mu\text{g/mL}$ ; SK-MEL-2,  $ED_{50} = 29.9\mu\text{g/mL}$ ; HCT15,  $ED_{50} = 30.4\mu\text{g/mL}$ ). Source: CHAO XIAN LENG SHAN *Abies koreana* (root cortex). Ref: 3854.

**19623 Secologanin**

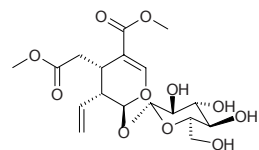
Loniceroside  $C_{17}H_{24}O_{10}$  (388.37). Source: JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig: yield = 0.0013%dw)<sup>[4723]</sup>, SHUI CAI *Menyanthes trifoliata* (in 1968, the compound was isolated from the plant by Battersby et al.)<sup>[5505]</sup>. Ref: 6, 4723, 5505.

**19624 Secologanin dimethyl acetal**

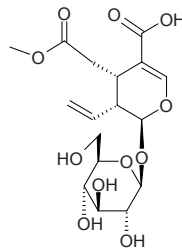
$C_{19}H_{30}O_{11}$  (434.44). Source: REN DONG TENG *Lonicera japonica*, JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig: yield = 0.00057%dw). Ref: 660, 4723.

**19625 Secologanoside dimethyl ester**

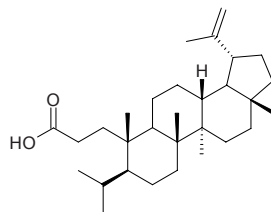
$C_{18}H_{26}O_{11}$  (418.4). Source: JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig: yield = 0.0078%dw). Ref: 4723.

**19626 Secologanoside 7-methyl ester**

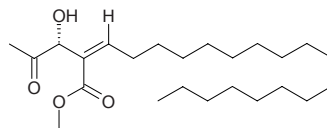
$C_{17}H_{24}O_{11}$  (404.37). Amorphous powder,  $[\alpha]_D^{25} = -106.1^\circ$  ( $c = 0.337$ , MeOH). Source: BAO MA ZI *Syringa amurensis* [Syn. *Syringa reticulata* var. *amurensis*] (leaf), JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig: yield = 0.0059%dw). Ref: 4363.

**19627 3,4-Seco-20(29)-lupen-3-oic acid**

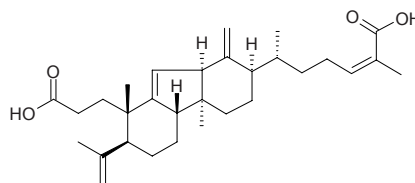
$C_{30}H_{50}O_2$  (442.73). Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.00094%dw). Ref: 4722.

**19628 Secomahubanolid**

(2Z)-2-[(1R)-1-Hydroxy-2-oxo-propyl]-icos-2-enoic acid methyl ester  $C_{24}H_{44}O_4$  (396.62). Colorless oil,  $[\alpha]_D^{25} = -11.16^\circ$  ( $c = 0.029$ ,  $CHCl_3$ ). Source: TAI WAN RUI FANG RUN NAN *Machilus zuihoensis* (stem wood). Ref: 5287.

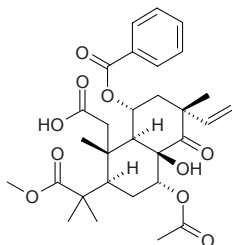
**19629 Seco-neokadsuranic acid A**

$C_{30}H_{44}O_4$  (468.68). Pharm: Antineoplastic<sup>[2523]</sup>; anti-HIV<sup>[2523]</sup>. Source: YI XING NAN WU WEI ZI *Kadsura heteroclita* [Syn. *Uvaria heteroclita*]. Ref: 660, 2436, 2523.

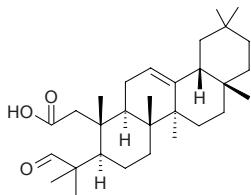


**19630 Secoorthosiphol B**

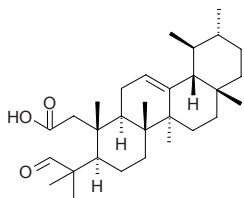
$C_{30}H_{38}O_{10}$  (558.63). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 Cells,  $IC_{50} = 127 \mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0 \mu\text{mol/L}$ ; Polymixin B,  $IC_{50} = 27.8 \mu\text{g/mL}$ )<sup>[4677]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00018%dw<sup>[4677]</sup>; yield = 0.00094%dw<sup>[4741]</sup>). **Ref:** 4677, 4741.

**19631 2,3-seco-3-Oxoolean-12-en-2-oic acid**

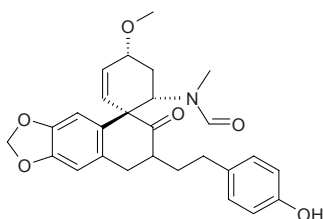
$C_{30}H_{48}O_3$  (456.72). Amorphous powder,  $[\alpha]_D^{23} = +52.7^\circ$  ( $c = 0.4$ ,  $\text{CHCl}_3$ ). **Source:** HUANG LONG DAN *Gentiana lutea* (rhizome and root). **Ref:** 4307.

**19632 2,3-Seco-3-oxours-12-en-2-oic acid**

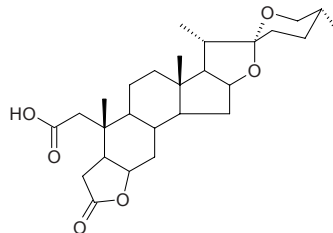
$C_{30}H_{48}O_3$  (456.72). Amorphous powder,  $[\alpha]_D^{23} = +68.1^\circ$  ( $c = 0.8$ ,  $\text{CHCl}_3$ ). **Source:** HUANG LONG DAN *Gentiana lutea* (rhizome and root). **Ref:** 4307.

**19633 (-)-Secoplicamine**

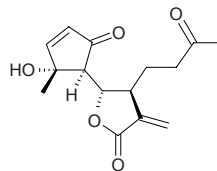
$C_{27}H_{29}NO_6$  (463.54). Amorphous solid,  $[\alpha]_D = -16.9^\circ$  ( $c = 0.142$ , MeOH). **Source:** TU ER QI XUE HUA LIAN *Galanthus plicatus* ssp. *byzantinus*. **Ref:** 1872.

**19634 2,3-Seco-porrigenin**

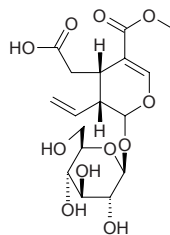
$C_{27}H_{40}O_6$  (460.62). **Pharm:** Cytotoxic (inhibits cancer cell proliferation *in vitro*). **Source:** JIU CONG *Allium porrum*. **Ref:** 2165.

**19635 Secotanapartholide A**

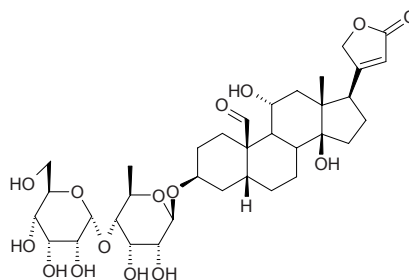
$C_{15}H_{18}O_5$  (278.31). **Source:** LIU JI NU *Artemisia anomala* (whole herb with flowers). **Ref:** 660.

**19636 Secoxyloganin**

[58822-47-2]  $C_{17}H_{24}O_{11}$  (404.37). **Pharm:** Antitrypanosomal (trypomastigotes of *Trypanosoma cruzi*, *in vitro*,  $IC_{50} = 74.2 \mu\text{g/mL}$ , control Gentian violet,  $IC_{50} = 7.5 \mu\text{g/mL}$ )<sup>[3439]</sup>. **Source:** JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig: yield = 0.338%dw)<sup>[4723]</sup>, REN DONG TENG *Lonicera japonica*, *Calycophyllum spruceanum*. **Ref:** 660, 3439, 4723.

**19637 Securigenin-3β-O-[α-allosyl-(1→4)-β-6-deoxyalloside]**

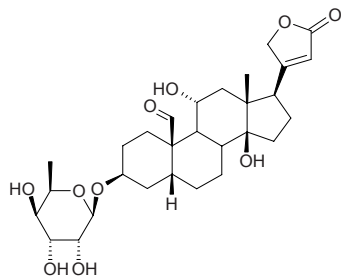
$C_{35}H_{52}O_{15}$  (712.80). White-yellow powder,  $[\alpha]_D^{24} = -28.7^\circ$  ( $c = 2.2$ , MeOH). **Pharm:** Cytotoxic (KB,  $IC_{50} = (0.104 \pm 0.005) \mu\text{mol/L}$ , control Podophyllotoxin,  $IC_{50} = 0.014 \mu\text{mol/L}$ ). **Source:** GAO MEI YING BAN *Crossopetalum gaumeri* (root). **Ref:** 3969.



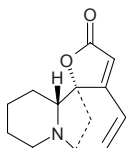


**19638 Securigenin-3 $\beta$ -O- $\beta$ -6-deoxyguloside**

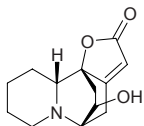
C<sub>29</sub>H<sub>42</sub>O<sub>10</sub> (550.65). White powder,  $[\alpha]_D^{24} = -61.0^\circ$  ( $c = 1.0$ , MeOH). **Pharm:** Cytotoxic (KB, IC<sub>50</sub> = (0.164±0.015)μmol/L, control Podophyllotoxin, IC<sub>50</sub> = 0.014μmol/L). **Source:** GAO MEI YING BAN *Crossopetalum gaumeri* (root). **Ref:** 3969.

**19639 Securinine**

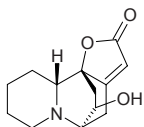
Securinan-11-one [5610-40-2] C<sub>13</sub>H<sub>15</sub>NO<sub>2</sub> (217.27). Light yellow crystals, mp 142~143°C,  $[\alpha]_D^{20} = 1042.3^\circ$  (ethanol), easily soluble in chloroform, ethanol, slightly soluble in ether, acetone, water.<sup>[5507]</sup> **Pharm:** Enhances myocardial contractility (anesthetic animal iv); increases blood pressure (anesthetic animal, iv); cholinesterase inhibitor; CNS stimulant; respiratory stimulant (anesthetic animal, iv); LD<sub>50</sub> (mus, iv) = 3.5mg/kg or 6.3mg/kg, (mus, ip) = 25mg/kg, (rat, ip) = 41mg/kg. **Source:** YI YE QIU *Securinega suffruticosa* (in 1956, isolated from the plant for the first time<sup>[5507]</sup>), PAN ZHUANG YE XIA ZHU *Phyllanthus discoides*. **Ref:** 6, 658, 5507.

**19640 Securinol A**

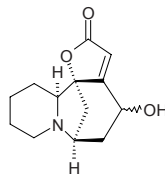
[5008-48-0] C<sub>13</sub>H<sub>17</sub>NO<sub>3</sub> (235.29). mp (+) 135~136°C. **Source:** YI YE QIU *Securinega suffruticosa*. **Ref:** 6, 1521.

**19641 Securinol B**

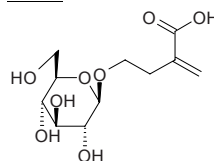
[30155-10-3] C<sub>13</sub>H<sub>17</sub>NO<sub>3</sub> (235.29). mp (+) 158~160°C. **Source:** YI YE QIU *Securinega suffruticosa*. **Ref:** 6, 1521.

**19642 Securinol C**

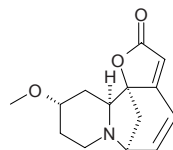
C<sub>13</sub>H<sub>17</sub>NO<sub>3</sub> (235.29). mp (-) 114~115°C. **Source:** YI YE QIU *Securinega suffruticosa*. **Ref:** 6.

**19643 Securiterpenoside**

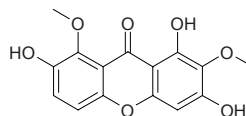
C<sub>11</sub>H<sub>18</sub>O<sub>8</sub> (278.26). White crystals, easily solving in methanol, mp 80~83°C. **Source:** CHAN YI TENG *Securidaca inappendiculata*. **Ref:** 2228.

**19644 Securitinine**

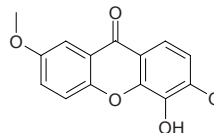
C<sub>14</sub>H<sub>17</sub>NO<sub>3</sub> (247.30). mp 129~130°C. **Source:** YI YE QIU *Securinega suffruticosa*. **Ref:** 6.

**19645 Securixanthone A**

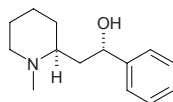
1,3,7-Trihydroxy-2,8-dimethoxyxanthone C<sub>15</sub>H<sub>12</sub>O<sub>7</sub> (304.26). Fine yellow needles (MeOH), mp 218°C. **Source:** CHAN YI TENG *Securidaca inappendiculata* (stem). **Ref:** 5238.

**19646 Securixanthone B**

3,7-Dimethoxy-4-hydroxyxanthone C<sub>15</sub>H<sub>12</sub>O<sub>5</sub> (272.26). Fine yellow needles (MeOH), mp 178°C. **Source:** CHAN YI TENG *Securidaca inappendiculata* (stem). **Ref:** 5238.

**19647 (2S,2'S)-Sedamine**

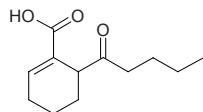
C<sub>14</sub>H<sub>21</sub>NO (219.33). **Source:** TAI JING TIAN *Sedum acre*, *Sedum* spp. **Ref:** 1521.



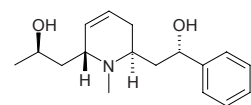


**19648 Sedanonic acid**

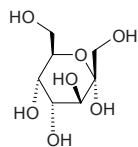
$C_{12}H_{18}O_3$  (210.38). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 660.

**19649 (-)-Sedinine**

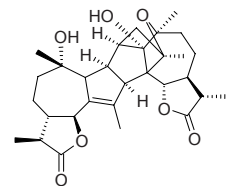
$C_{17}H_{25}NO_2$  (275.39). Source: FEI CAI *Sedum aizoon*, TAI JING TIAN *Sedum acre*. Ref: 660, 1521.

**19650 Sedoheptulose**

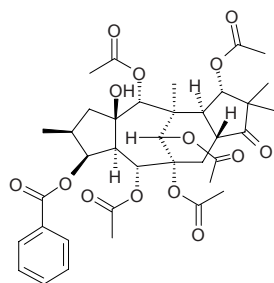
$C_7H_{14}O_7$  (210.19). Source: FAN MU GUA *Carica papaya*, FEI CAI *Sedum aizoon*, SHI ZHI JIA *Sedum sarmentosum*, YING SU KE *Papaver somniferum*. Ref: 660.

**19651 Seemarin**

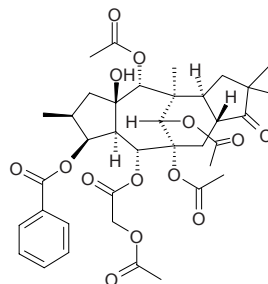
$C_{30}H_{40}O_7$  (512.65). mp 256–257°C,  $[\alpha]_D = +114.5^\circ$  ( $c = 0.10$ , MeOH/CHCl<sub>3</sub>). Source: YOU RUI XIANG *Daphne oleoides*. Ref: 2302.

**19652 Segetene 3**

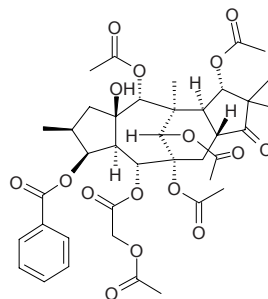
$C_{37}H_{46}O_{14}$  (714.77). Pharm: Antifeedant (*Spodopetra littoralis*, 1000mg/L); anti-HIV-1 (inhibition of virus-induced cytopathicity in MT-4 cells,  $EC_{50} > 100\mu\text{g/mL}$ ); cytotoxic (MT-4,  $CC_{50} > 100\mu\text{g/mL}$ ). Source: HAI YANG DA JI *Euphorbia paralias* (aerial parts). Ref: 5221.

**19653 Segetene 4**

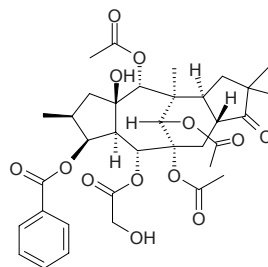
$C_{37}H_{46}O_{14}$  (714.77). Pharm: Antifeedant (*Spodopetra littoralis*, 1000mg/L); anti-HIV-1 (inhibition of virus-induced cytopathicity in MT-4 cells,  $EC_{50} > 100\mu\text{g/mL}$ ); cytotoxic (MT-4,  $CC_{50} > 100\mu\text{g/mL}$ ). Source: HAI YANG DA JI *Euphorbia paralias* (aerial parts). Ref: 5221.

**19654 Segetene 5**

$C_{39}H_{48}O_{16}$  (772.81). Pharm: Antifeedant (*Spodopetra littoralis*, 500mg/L); anti-HIV-1 (inhibition of virus-induced cytopathicity in MT-4 cells,  $EC_{50} = 51\mu\text{g/mL}$ ); cytotoxic (MT-4,  $CC_{50} = 51\mu\text{g/mL}$ ). Source: HAI YANG DA JI *Euphorbia paralias* (aerial parts). Ref: 5221.

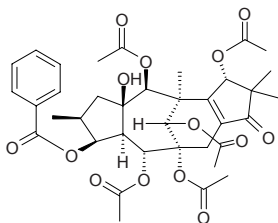
**19655 Segetene 6**

$C_{35}H_{44}O_{13}$  (672.73). Pharm: Anti-HIV-1 (inhibition of virus-induced cytopathicity in MT-4 cells,  $EC_{50} > 100\mu\text{g/mL}$ ); cytotoxic (MT-4,  $CC_{50} > 100\mu\text{g/mL}$ ). Source: HAI YANG DA JI *Euphorbia paralias* (aerial parts). Ref: 5221.

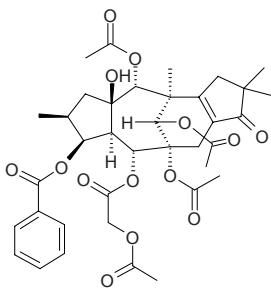


**19656 Segetene A**

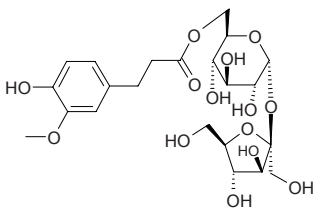
5 $\alpha$ ,6,11 $\alpha$ ,14 $\beta$ ,17(*R*)-Pentaacetoxy-3 $\beta$ -benzoyloxy-15 $\beta$ -hydroxyseget-8(12)-en-9-one C<sub>37</sub>H<sub>44</sub>O<sub>14</sub> (712.75). White amorphous powder,  $[\alpha]_D = -4^\circ$  ( $c = 0.17$ , MeOH). **Pharm:** Antifeedant (*Spodopetra littoralis*, > 1000mg/L); anti-HIV-1 (inhibition of virus-induced cytopathicity in MT-4 cells, EC<sub>50</sub> > 100 $\mu$ g/mL); cytotoxic (MT-4, CC<sub>50</sub> > 100 $\mu$ g/mL). **Source:** HAI YANG DA JI *Euphorbia paralias* (aerial parts). **Ref:** 5221.

**19657 Segetene B**

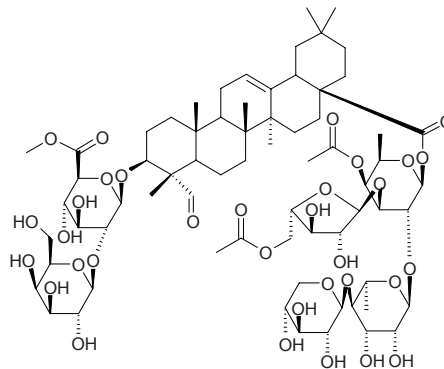
6,14 $\alpha$ ,17(*R*)-Triacetoxy-5 $\alpha$ -(2-acetoxyacetoxy)-3 $\beta$ -benzoyloxy-15 $\beta$ -hydroxyseget-8(12)-en-9-one C<sub>37</sub>H<sub>44</sub>O<sub>14</sub> (712.75). White amorphous powder,  $[\alpha]_D = -51^\circ$  ( $c = 0.13$ ). **Pharm:** Antifeedant (*Spodopetra littoralis*, > 1000mg/L). **Source:** HAI YANG DA JI *Euphorbia paralias* (aerial parts). **Ref:** 5221.

**19658 Segetoside A**

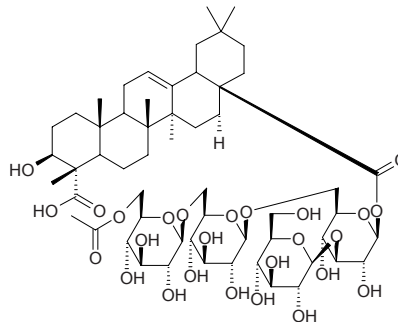
$\alpha$ -D-(6-*O*-Dihydroferuloyl)-glucuronosyl(1 $\rightarrow$ 2)- $\beta$ -D-fructofuranoside C<sub>22</sub>H<sub>32</sub>O<sub>15</sub> (536.49). Colorless oil,  $[\alpha]_D^{24} = +38.21^\circ$  ( $c = 0.56$ , MeOH). **Source:** WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. **Ref:** 8.

**19659 Segetoside B**

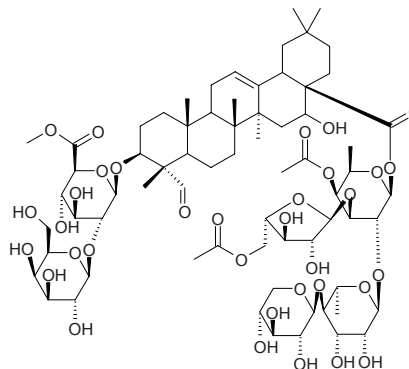
28-*O*- $\beta$ -D-Xylopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-[ $\alpha$ -L-(5-*O*-acetyl)-arabinofuranosyl(1 $\rightarrow$ 3)]- $\beta$ -D-(4-*O*-acetyl)-fucopyranosyl-gypsogenin-3-*O*- $\beta$ -D-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-(6-*O*-methyl ester)-glucuronopyranoside C<sub>69</sub>H<sub>106</sub>O<sub>33</sub> (1463.59). White powder,  $[\alpha]_D^{24} = -8.70^\circ$  ( $c = 0.52$ , MeOH). **Source:** WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. **Ref:** 8.

**19660 Segetoside C**

Gypsogenic acid-28-*O*- $\beta$ -D-(6-*O*-acetyl)-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)-[ $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 3)]- $\beta$ -D-glucopyranoside C<sub>56</sub>H<sub>88</sub>O<sub>26</sub> (1177.31). White powder,  $[\alpha]_D^{22} = +8.86^\circ$  ( $c = 0.43$ , MeOH). **Source:** WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. **Ref:** 8.

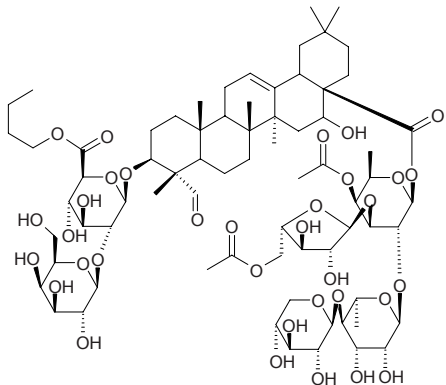
**19661 Segetoside D**

28-*O*- $\beta$ -D-Xylopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-[ $\alpha$ -L-(5-*O*-acetyl)-arabinofuranosyl(1 $\rightarrow$ 3)]- $\beta$ -D-(4-*O*-acetyl)-fucopyranosyl-quillaic acid-3-*O*- $\beta$ -D-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-(6-*O*-methyl ester)-glucuronopyranoside C<sub>69</sub>H<sub>106</sub>O<sub>34</sub> (1479.59). White powder,  $[\alpha]_D^{24} = -13.97^\circ$  ( $c = 1.40$ , MeOH). **Source:** WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. **Ref:** 8.

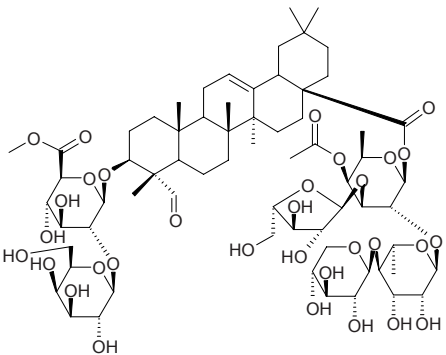


**19662 Segetoside E**

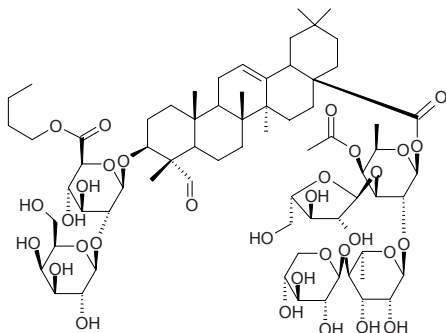
28-*O*- $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)-[ $\alpha$ -*L*-(5-*O*-acetyl)-arabinofuranosyl(1 $\rightarrow$ 3)]- $\beta$ -*D*-(4-*O*-acetyl)-fucopyranosyl-quillaic acid-3-*O*- $\beta$ -*D*-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-(6-*O*-*n*-butyl ester)-glucuronopyranoside C<sub>72</sub>H<sub>112</sub>O<sub>34</sub> (1521.68). White powder,  $[\alpha]_D^{24} = -17.93^\circ$  (c = 0.50, MeOH). Source: WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. Ref: 8.

**19663 Segetoside F**

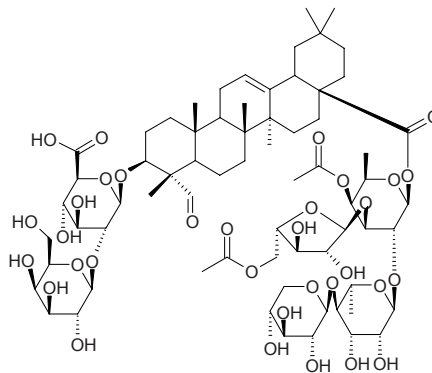
28-*O*-[ $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)]- $\alpha$ -*L*-arabinofuranosyl(1 $\rightarrow$ 3)- $\beta$ -*D*-(4-*O*-acetyl)-fucopyranosyl-gypsogenin-3-*O*- $\beta$ -*D*-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-(6-*O*-methyl ester)-glucuronopyranoside C<sub>67</sub>H<sub>104</sub>O<sub>32</sub> (1461.56). White powder,  $[\alpha]_D^{24} = -5.03^\circ$  (c = 0.52, MeOH). Source: WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. Ref: 8.

**19664 Segetoside G**

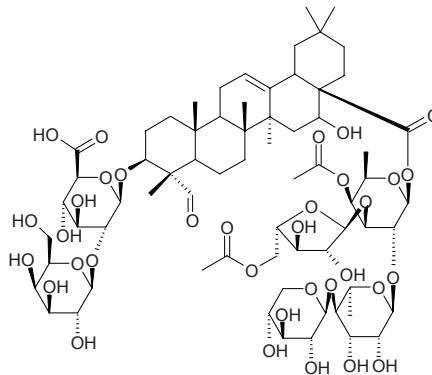
28-*O*- $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)-[ $\alpha$ -*L*-arabinofuranosyl(1 $\rightarrow$ 3)]- $\beta$ -*D*-(4-*O*-acetyl)-fucopyranosyl-gypsogenin-3-*O*- $\beta$ -*D*-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-(6-*O*-*n*-butyl ester)-glucuronopyranoside C<sub>70</sub>H<sub>110</sub>O<sub>32</sub> (1463.64). White powder,  $[\alpha]_D^{24} = -6.39^\circ$  (c = 0.36, MeOH). Source: WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. Ref: 8.

**19665 Segetoside H**

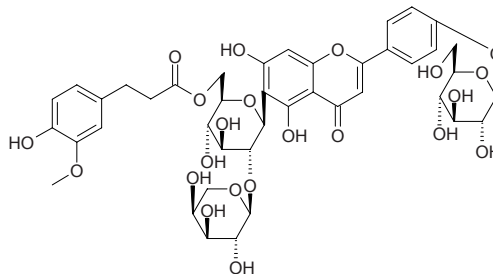
28-*O*- $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)-[ $\alpha$ -*L*-(5-*O*-acetyl)-arabinofuranosyl(1 $\rightarrow$ 3)]- $\beta$ -*D*-(4-*O*-acetyl)-fucopyranosyl-gypsogenin-3-*O*- $\beta$ -*D*-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-glucuronopyranoside C<sub>68</sub>H<sub>104</sub>O<sub>33</sub> (1449.57). White powder,  $[\alpha]_D^{24} = -36.71^\circ$  (c = 0.14, MeOH). Source: WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. Ref: 8.

**19666 Segetoside I**

28-*O*- $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -*L*-rhamnopyranosyl-(1 $\rightarrow$ 2)-[ $\alpha$ -*L*-(5-*O*-acetyl)-arabinofuranosyl(1 $\rightarrow$ 3)]- $\beta$ -*D*-(4-*O*-acetyl)-fucopyranosyl-quillaic acid-3-*O*- $\beta$ -*D*-galactopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-glucuronopyranoside C<sub>68</sub>H<sub>104</sub>O<sub>34</sub> (1465.57). White powder,  $[\alpha]_D^{24} = -13.94^\circ$  (c = 1.27, MeOH). Source: WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. Ref: 8.

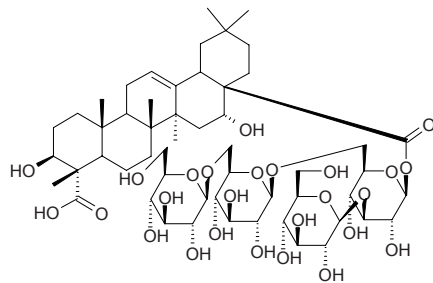
**19667 Segetoside J**

4'-*O*-Glucopyranosyl apigenin-6-*C*- $\alpha$ -*L*-arabinopyranosyl(1 $\rightarrow$ 2)- $\beta$ -*D*-(6-*O*-dihydroferuloyl)-glucopyranoside C<sub>42</sub>H<sub>48</sub>O<sub>22</sub> (904.84). Source: WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. Ref: 8.

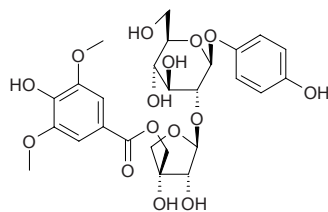


**19668 Segetoside K**

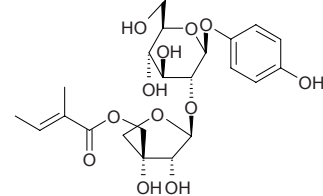
Olean-12-ene-23 $\alpha$ ,28 $\beta$ -dioic acid-3 $\beta$ -,16 $\alpha$ -dihydroxy-28-*O*- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)-[ $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 3)]- $\beta$ -D-glucopyranoside C<sub>54</sub>H<sub>86</sub>O<sub>26</sub> (1151.27). White powder,  $[\alpha]_D^{24} = -20.53^\circ$  ( $c = 0.28$ , MeOH). Source: WANG BU LIU XING *Vaccaria segetalis* [Syn. *Vaccaria pyramidata*]. Ref: 8.

**19669 Seguinose F**

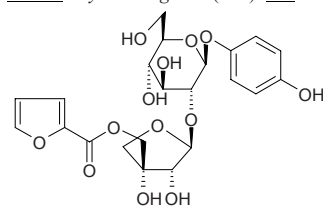
C<sub>26</sub>H<sub>32</sub>O<sub>15</sub> (584.54). Source: JIU BING YE *Glycosmis pentaphylla* (stem). Ref: 4424.

**19670 Seguinose G**

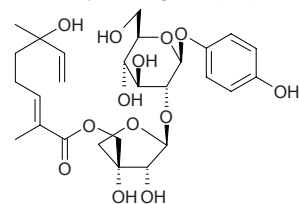
C<sub>22</sub>H<sub>30</sub>O<sub>12</sub> (486.48). Amorphous powder,  $[\alpha]_D^{22} = -85.1^\circ$  ( $c = 0.48$ , MeOH). Source: *Myrsine seguinii* (leaf). Ref: 2378.

**19671 Seguinose H**

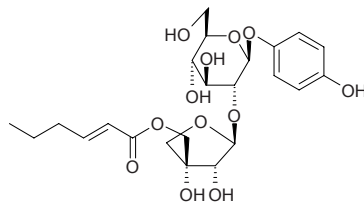
C<sub>22</sub>H<sub>26</sub>O<sub>13</sub> (498.44). Amorphous powder,  $[\alpha]_D^{22} = -72.1^\circ$  ( $c = 0.89$ , MeOH). Source: *Myrsine seguinii* (leaf). Ref: 2378.

**19672 Seguinose I**

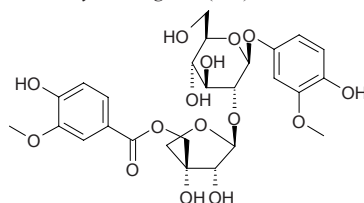
C<sub>27</sub>H<sub>38</sub>O<sub>13</sub> (570.60). Amorphous powder,  $[\alpha]_D^{22} = -53.7^\circ$  ( $c = 0.99$ , MeOH). Source: *Myrsine seguinii* (leaf). Ref: 2378.

**19673 Seguinose J**

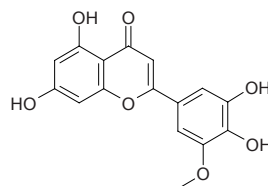
C<sub>23</sub>H<sub>32</sub>O<sub>12</sub> (500.50). Amorphous powder,  $[\alpha]_D^{23} = -70.2^\circ$  ( $c = 0.41$ , MeOH). Source: *Myrsine seguinii* (leaf). Ref: 2378.

**19674 Seguinose K**

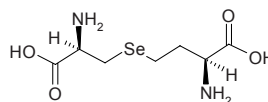
C<sub>26</sub>H<sub>30</sub>O<sub>15</sub> (584.54). Amorphous powder,  $[\alpha]_D^{22} = -52.4^\circ$  ( $c = 0.21$ , MeOH). Source: *Myrsine seguinii* (leaf). Ref: 2378.

**19675 Selagin**

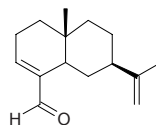
C<sub>16</sub>H<sub>12</sub>O<sub>7</sub> (316.27). Source: XIAO JIE JIN CAO *Huperzia selago* [Syn. *Lycopodium selago*]. Ref: 660.

**19676 L-Selenocystathionine**

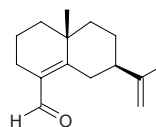
C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>4</sub>Se (269.16). Pharm: Toxin. Source: *Astragalus* sp. Ref: 658.

**19677 (-)-Selina-3,11-dien-14-al**

C<sub>15</sub>H<sub>22</sub>O (218.34). Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13.

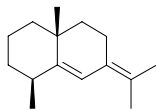
**19678 (+)-Selina-4,11-dien-14-al**

C<sub>15</sub>H<sub>22</sub>O (218.34). Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13.

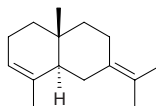


**19679 (-)-Selina-5,7(11)-diene**

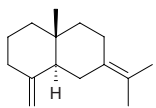
$C_{15}H_{24}$  (204.36). Colorless oil. Source: TIE JIAO JUE YU TAI *Plagiochila asplenioides* (essential oil). Ref: 5257.

**19680 3,7(11)-Selinadiene**

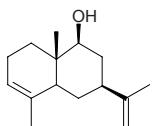
$C_{15}H_{24}$  (204.36). Source: MA HUA *Cannabis sativa*. Ref: 660.

**19681 Selina-4(15),7(11)-diene**

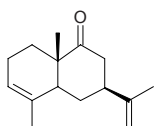
Selina-4(15),7(11)-diene  $C_{15}H_{24}$  (204.36). Source: MA HUA *Cannabis sativa*, PI JIU HUA *Humulus lupulus*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 660.

**19682 (+)-Selina-3,11-dien-9-ol**

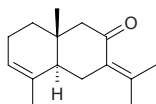
$C_{15}H_{24}O$  (220.36). Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13.

**19683 (-)-Selina-3,11-dien-9-one**

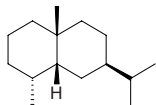
$C_{15}H_{22}O$  (218.34). Source: CHEN XIANG *Aquilaria agallocha*. Ref: 13.

**19684 Selina-3,7(11)-dien-8-one**

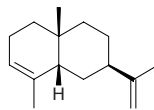
$C_{15}H_{22}O$  (218.34). Source: SHUANG YE XI XIN *Asarum caulescens*. Ref: 660.

**19685 Selinane**

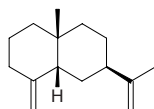
Selinane  $C_{15}H_{28}$  (208.39). Source: CHEN XIANG *Aquilaria agallocha*, MAN SHAN HONG *Rhododendron dauricum*. Ref: 6.

**19686 α-Selinene**

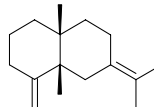
$C_{15}H_{24}$  (204.36). bp 268~272°C. Source: REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 2.

**19687 β-Selinene**

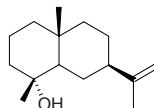
$C_{15}H_{24}$  (204.36). Source: BEI CANG ZHU *Atractylodes chinensis*, CANG ZHU *Atractylodes lancea*, KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*], MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*], NAN HE SHI *Daucus carota*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], WU WEI ZI *Schisandra chinensis*. Ref: 2, 660.

**19688 γ-Selinene**

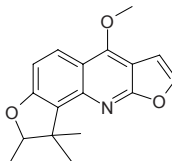
$C_{15}H_{24}$  (204.36). Source: REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 2.

**19689 Selin-11-en-4α-ol**

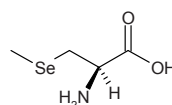
$C_{15}H_{26}O$  (222.37). Pharm: NO production Inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages,  $IC_{50} = 39\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 28\mu\text{mol/L}$ )<sup>[4655]</sup>; β-hexosaminidase release inhibitor (RBL-2H3 Cells,  $100\mu\text{mol/L}$ , InRt = 11.9%; control Curcumin, InRt = 62.6%)<sup>[4655]</sup>. Source: YI ZHI REN *Alpinia oxyphylla* (fruit: yield = 0.0009%dw). Ref: 4655.

**19690 Semecarpine**

$C_{17}H_{17}NO_3$  (283.33). Pale yellow needles ( $\text{CHCl}_3\text{-Me}_2\text{CO}$ ), mp 145~147°C,  $[\alpha]_D^{24} = +2.6$  ( $c = 0.14$ , MeOH). Pharm: Cytotoxic ( $P_{388}$  cell line,  $ED_{50} = 28.1\mu\text{g/mL}$ , control Mithramycin,  $ED_{50} = 0.06\mu\text{g/mL}$ ; HT29,  $ED_{50} > 50\mu\text{g/mL}$ , Mithramycin,  $ED_{50} = 0.07\mu\text{g/mL}$ ; A549,  $ED_{50} = 29.3\mu\text{g/mL}$ , Mithramycin,  $ED_{50} = 0.08\mu\text{g/mL}$ ). Source: SI ROU TUO GUO YE MI ZHU YU *Melicope semecarpifolia*. Ref: 5405.

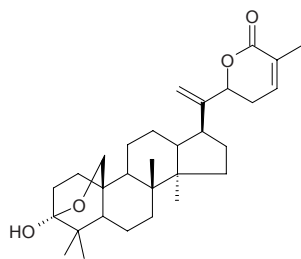
**19691 Se-Methyl-L-selenocysteine**

$C_4H_9NO_2Se$  (182.08). Pharm: Causes selenium poisoning. Source: ER GOU HUANG QI *Astragalus bisulcatus*. Ref: 658.

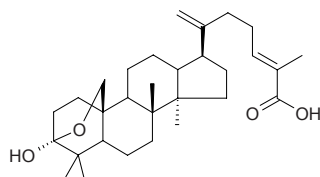


**19692 Semialactone**

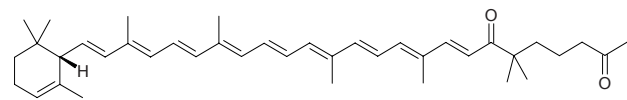
$C_{30}H_{44}O_4$  (468.68). White powder,  $[\alpha]_D^{25} = +73^\circ$  ( $c = 0.15$ ,  $CHCl_3$ ). Source: YA DAN ZI *Brucea javanica* [Syn. *Brucea sumatrana*; *Rhus javanica*] (stem cortex). Ref: 4111.

**19693 Semialatic acid**

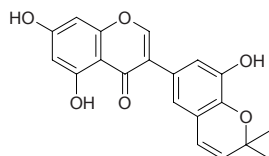
$C_{30}H_{46}O_4$  (470.70). White powder,  $[\alpha]_D^{25} = +71^\circ$  ( $c = 0.40$ ,  $CHCl_3$ ). Source: YA DAN ZI *Brucea javanica* [Syn. *Brucea sumatrana*; *Rhus javanica*] (stem cortex). Ref: 4111.

**19694 Semi- $\alpha$ -carotenone**

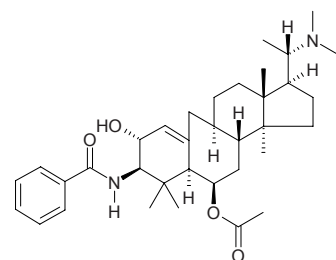
$C_{40}H_{56}O_2$  (568.89). mp  $135^\circ C$ . Source: JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. Ref: 6.

**19695 Semilicoisoflavone B**

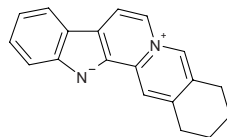
[129280-33-7]  $C_{20}H_{16}O_6$  (352.35). Source: CU MAO GAN CAO *Glycyrrhiza aspera*, *Glycyrrhiza* sp. Ref: 660, 2431.

**19696 Semperviraminol**

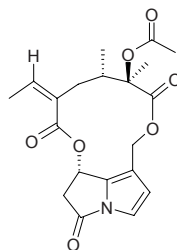
$C_{35}H_{52}N_2O_4$  (564.82). Pharm: AChE inhibitor inactive (control Physostigmine),  $IC_{50} = (0.041 \pm 0.001) \mu mol/L$ . Source: DUO RU TOU HUANG YANG *Buxus papillosa* (leaf). Ref: 5216.

**19697 Sempervirine II**

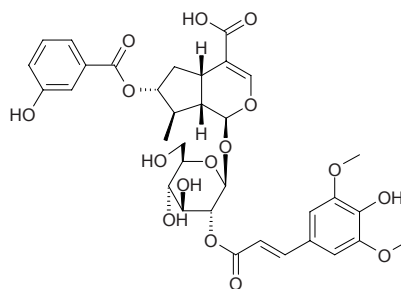
Sempervirine; Sempervine  $C_{19}H_{16}N_2$  (272.35). Pharm: Antineoplastic. Source: CHANG LV GOU WEN *Gelsemium sempervirens*. Ref: 658.

**19698 Senaetnine**

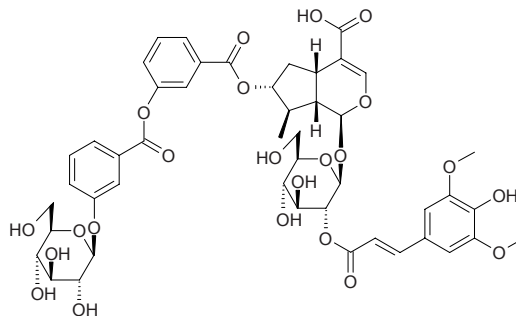
[64191-69-1]  $C_{20}H_{23}NO_7$  (389.41). Crystals, mp  $183.5^\circ C$ ,  $[\alpha]_D^{24} = 10.6^\circ$  ( $c = 2.5$ ,  $CHCl_3$ ). Pharm: Toxin (rat, harmful to lung not liver). Source: *Senecio aetnensis*. Ref: 658, 1521.

**19699 Senburiside I**

$C_{34}H_{38}O_{16}$  (702.67). Source: BAO JING ZHANG YA CAI *Swertia franchetiana* (whole herb). Ref: 4469.

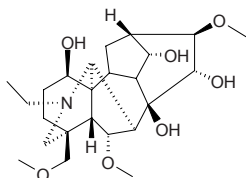
**19700 Senburiside III**

$C_{47}H_{52}O_{23}$  (984.92). White amorphous powder (MeOH-H<sub>2</sub>O),  $[\alpha]_D^{25} = -60.0^\circ$  ( $c = 1.03$ , MeOH). Source: BAO JING ZHANG YA CAI *Swertia franchetiana* (whole herb). Ref: 4469.

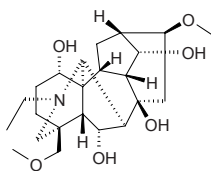


**19701 Senbusine C**

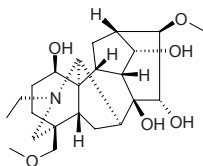
Fuziline [80665-72-1]  $C_{24}H_{39}NO_7$  (453.58). White mass crystals, mp 202.5~206.0°C; colorless powder,  $[\alpha]_D^{26} = +10.8^\circ$  ( $c = 1.564$ ,  $CHCl_3$ ). Source: WU TOU *Aconitum carmichaeli*, ZHONG BA E ZHANG YE FU ZI *Aconitum carmichaeli* cv. Ref: 461, 2502.

**19702 Senbusine A**

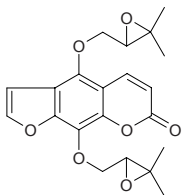
[82202-95-7]  $C_{23}H_{37}NO_6$  (423.55). White amorphous powder. Source: GUA YE WU TOU *Aconitum hemsleyanum*, WU TOU *Aconitum carmichaeli*. Ref: 2208.

**19703 Senbusine B**

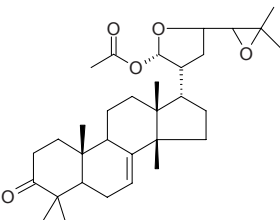
$C_{23}H_{37}NO_6$  (423.55). Source: WU TOU *Aconitum carmichaeli*. Ref: 660.

**19704 Sen-byakangelicol**

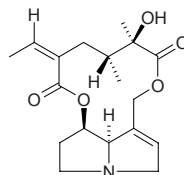
$C_{21}H_{22}O_7$  (386.41). Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*]. Ref: 2.

**19705 Sendanone acetate**

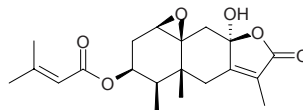
$C_{32}H_{48}O_5$  (512.74). mp 184~186°C. Source: RI BEN KU LIAN *Melia azedarach* var. *japonica*. Ref: 6, 660.

**19706 Senecionine**

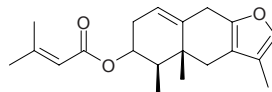
12-Hydroxysenecionan-11,16-dione [130-01-8]  $C_{18}H_{25}NO_5$  (335.40). mp 232~233°C. Pharm: Antispasmodic (intestinal smooth muscle relaxant); mutagen; reduces arteriotony; toxin (poison for liver, lung and reproductive system);  $LD_{50}$  (mus, ip) = 64.9mg/kg. Source: CAO DIAN QIAN LI GUANG *Senecio jacobaea*, DA BAI DING CAO *Senecio oryzetorum*, DA TOU TUO WU *Ligularia japonica* [Syn. *Arnica japonica*; *Senecio japonica*], OU ZHOU QIAN LI GUANG *Senecio vulgaris*. Ref: 6, 658.

**19707 3β-Seneciyoxy-1β,10β-epoxy-8α-hydroxyeremophil-7(11)-en-8β(12)-olide**

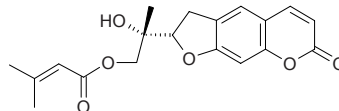
$C_{20}H_{26}O_6$  (362.43). White needles (MeOH), mp 182~184°C,  $[\alpha]_D^{25} = -123^\circ$  ( $c = 0.75$ , acetone). Pharm: Antibacterial (*Bacillus subtilis*, 100μg/mL, IZD = 13~15mm, moderate, control Chloromycetin, IZD = 16~20mm; *Escherichia coli*, 100μg/mL, IZD = 13~15mm, Chloromycetin, IZD = 16~20mm)<sup>[4627]</sup>. Source: JIA TUO WU *Ligulariopsis shichuana* (whole herb: yield = 0.0012%dw). Ref: 4627.

**19708 Seneciyoxyeuryopsin**

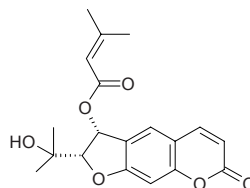
$C_{20}H_{26}O_3$  (314.43). Source: HUANG SE QIAN LI GUANG *Senecio flavus*. Ref: 2409.

**19709 (+)-2''-Seneciyoxyarmesin**

$C_{19}H_{20}O_6$  (344.37). mp 100~102°C (hexane- $CH_2Cl_2$ ),  $[\alpha]_D^{20} = +28^\circ$  ( $c = 0.7$ ,  $CHCl_3$ ). Source: JU MAO LEI A WEI *Ferulago capillaries* (root). Ref: 3938.

**19710 (-)-(2''S,3'R)-3'-Seneciyoxyarmesin**

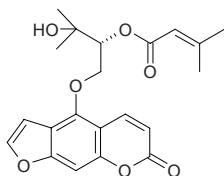
$C_{19}H_{20}O_6$  (344.37). mp 148~149°C (*n*-hexane- $CH_2Cl_2$ ),  $[\alpha]_D^{20} = -236^\circ$  ( $c = 1.3$ ,  $CHCl_3$ ). Source: JU MAO LEI A WEI *Ferulago capillaries* (root). Ref: 3938.



**19711 (+)-Senecioplpranol**

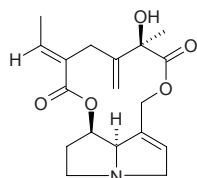
$C_{21}H_{22}O_7$  (386.41). mp 164~165°C (MeOH),  $[\alpha]_D^{20} = +9.0^\circ$  ( $c = 1.0$ ,  $Me_2CO_3$ ).

Source: JU MAO LEI A WEI *Ferulago capillaries* (root). Ref: 3938.

**19712 (E)-Seneciophylline**

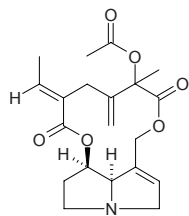
[480-81-9]  $C_{18}H_{23}NO_5$  (333.39). White acicular crystals, mp 217~218°C.

Pharm: Antispasmodic (rat and rbt, isolated intestinal tube, spasm induced by carbachol); toxin (poison for heart, liver and lung). Source: CAO DIAN QIAN LI GUANG *Senecio jacobaea*, DA BAI DING CAO *Senecio oryzetorum*, FEI LV BIN QIAN LI GUANG *Senecio phillicus*, KUAN YE QIAN LI GUANG *Senecio platyphyllus*, OU ZHOU QIAN LI GUANG *Senecio vulgaris*, SHU MA *Crotalaria juncea*, TU SAN QI *Senecio chrysanthemoides*. Ref: 6, 151, 658.

**19713 Seneciophyllinine**

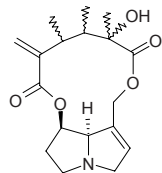
$C_{20}H_{25}NO_6$  (375.43). White acicular crystals, mp 82.0~82.5°C. Source: SAN

QI CAO *Gynura segetum* [Syn. *Gynura japonica*]. Ref: 151.

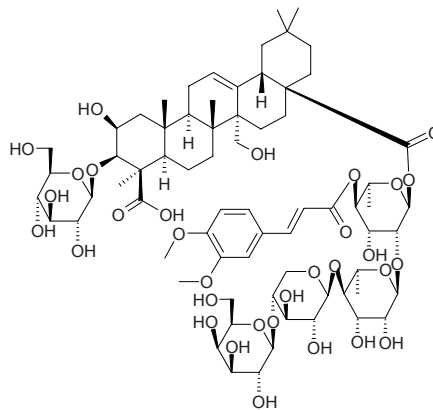
**19714 Senecivernine**

[72755-25-0]  $C_{18}H_{25}NO_5$  (335.41). Pharm: Hepatotoxin. Source: CHUN

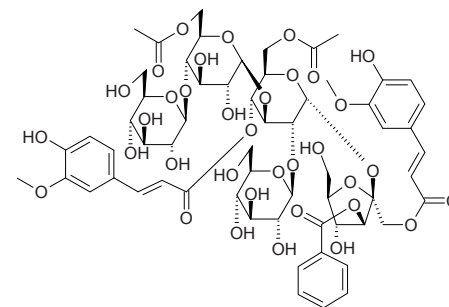
QIAN LI GUANG *Senecio vernalis*. Ref: 658.

**19715 Senegin II**

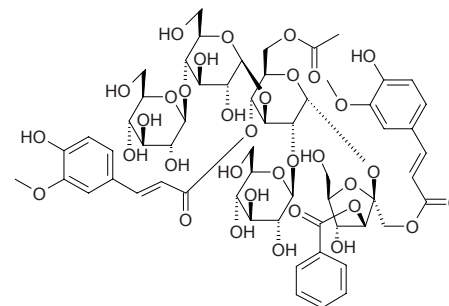
2,3,27-Trihydroxy-12-oleanene-23,28-dioic acid 3-O- $\beta$ -D-glucopyranoside, 28-O-[ $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-[3,4-dimethoxycinnamoyl-(1 $\rightarrow$ 4)]- $\alpha$ -L-fucopyranosyl] ester [34366-31-9]  $C_{70}H_{104}O_{32}$  (1457.60). Pharm: Antineoplastic; antitussive (dispels phlegm). Source: MEI YUAN ZHI *Polygala senega*. Ref: 658, 1521.

**19716 Senegose A**

[151466-60-3]  $C_{61}H_{76}O_{35}$  (1369.26).  $[\alpha]_D = -9.9^\circ$ . Source: KUAN YE MEI YUAN ZHI *Polygala senega* var. *latifolia*. Ref: 2184.

**19717 Senegose B**

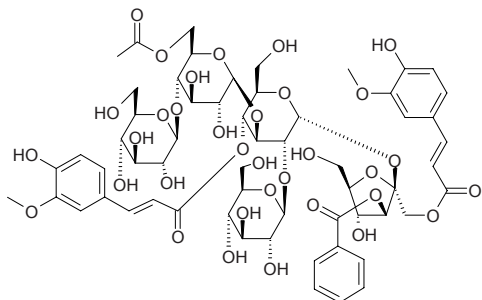
$C_{59}H_{74}O_{34}$  (1327.23).  $[\alpha]_D = -10.2^\circ$ . Source: KUAN YE MEI YUAN ZHI *Polygala senega* var. *latifolia*. Ref: 2184.



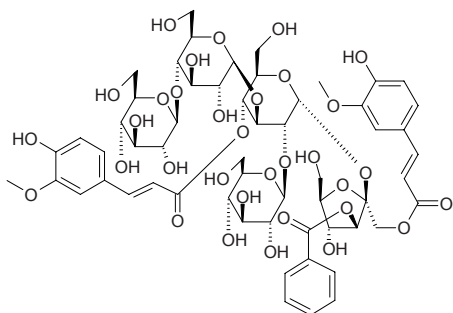


**19718 Senegose C**

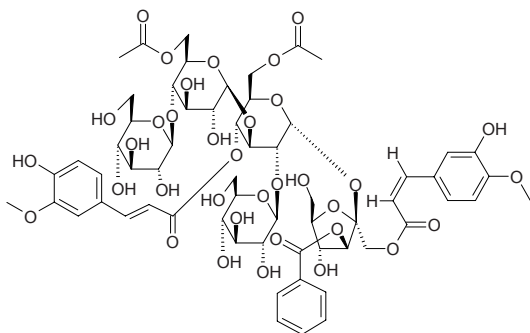
$C_{59}H_{74}O_{34}$  (1327.23).  $[\alpha]_D = -16.0^\circ$ . Source: KUAN YE MEI YUAN ZHI  
*Polygala senega* var. *latifolia*. Ref: 2184.

**19719 Senegose D**

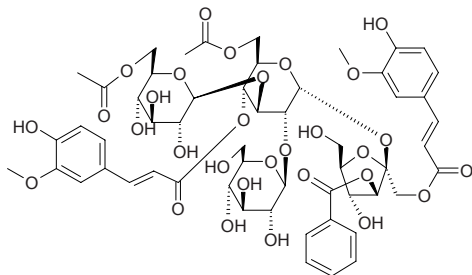
$C_{57}H_{72}O_{33}$  (1285.19).  $[\alpha]_D = -6.9^\circ$ . Source: KUAN YE MEI YUAN ZHI  
*Polygala senega* var. *latifolia*. Ref: 2184.

**19720 Senegose E**

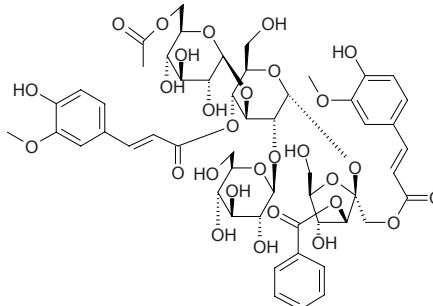
$C_{61}H_{76}O_{35}$  (1329.26).  $[\alpha]_D = +64.5^\circ$ . Source: KUAN YE MEI YUAN ZHI  
*Polygala senega* var. *latifolia*. Ref: 2184.

**19721 Senegose F**

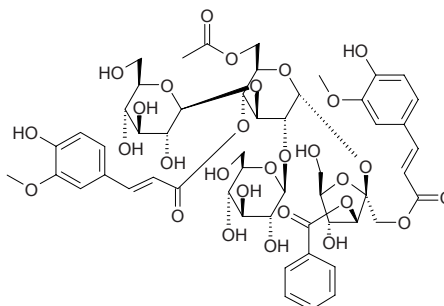
$C_{55}H_{66}O_{30}$  (1207.12).  $[\alpha]_D = -11.5^\circ$ . Source: KUAN YE MEI YUAN ZHI  
*Polygala senega* var. *latifolia*. Ref: 2184.

**19722 Senegose G**

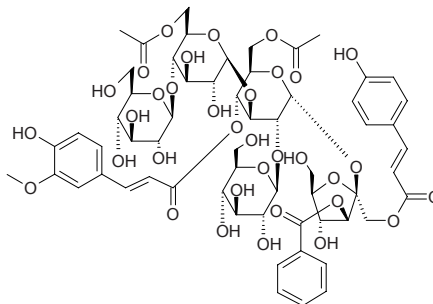
$C_{53}H_{64}O_{29}$  (1165.08).  $[\alpha]_D = +1.2^\circ$ . Source: KUAN YE MEI YUAN ZHI  
*Polygala senega* var. *latifolia*. Ref: 2184.

**19723 Senegose H**

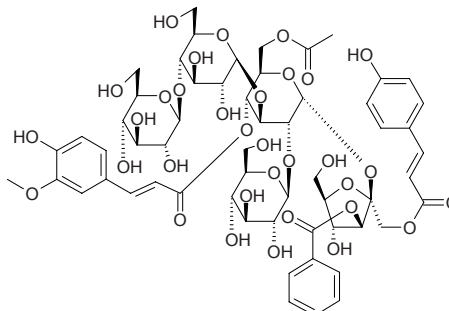
$C_{53}H_{64}O_{29}$  (1165.08).  $[\alpha]_D = -3.0^\circ$ . Source: KUAN YE MEI YUAN ZHI  
*Polygala senega* var. *latifolia*. Ref: 2184.

**19724 Senegose J**

$C_{60}H_{74}O_{34}$  (1339.24).  $[\alpha]_D = -6.6^\circ$ . Source: MEI YUAN ZHI *Polygala senega*.  
Ref: 2184.

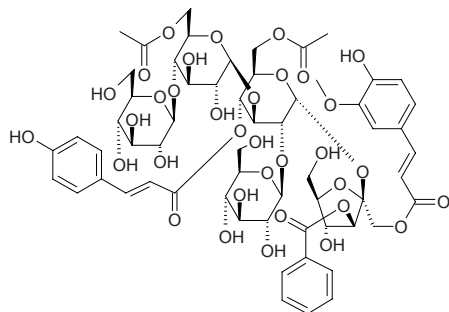
**19725 Senegose K**

$C_{58}H_{72}O_{33}$  (1297.20).  $[\alpha]_D = -2.6^\circ$ . Source: MEI YUAN ZHI *Polygala senega*.  
Ref: 2184.

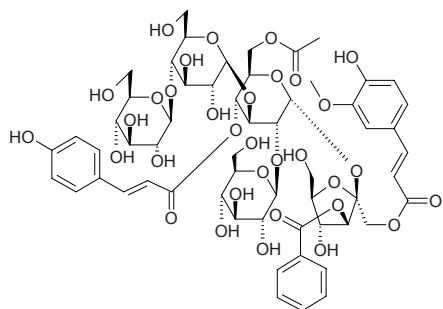


**19726 Senegose L**

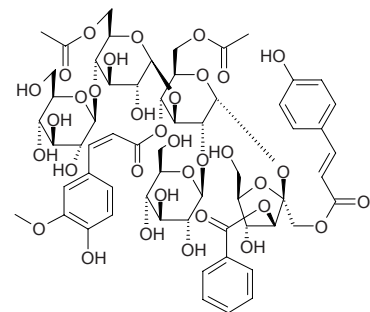
$C_{60}H_{74}O_{34}$  (1339.24).  $[\alpha]_D = -6.3^\circ$ . Source: MEI YUAN ZHI *Polygala senega*.  
Ref: 2184.

**19727 Senegose M**

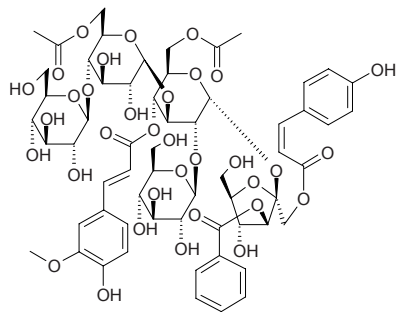
$C_{58}H_{72}O_{33}$  (1297.20).  $[\alpha]_D = -4.4^\circ$ . Source: MEI YUAN ZHI *Polygala senega*.  
Ref: 2184.

**19728 Senegose N**

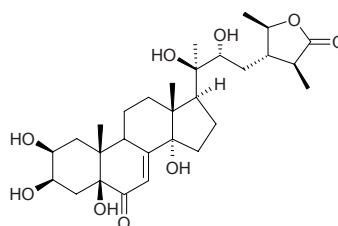
$C_{60}H_{74}O_{34}$  (1339.24).  $[\alpha]_D = +39.6^\circ$ . Source: MEI YUAN ZHI *Polygala senega*. Ref: 2184.

**19729 Senegose O**

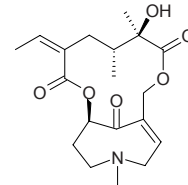
$C_{60}H_{74}O_{34}$  (1339.24).  $[\alpha]_D = -13.1^\circ$ . Source: MEI YUAN ZHI *Polygala senega*. Ref: 2184.

**19730 Sengosterone**

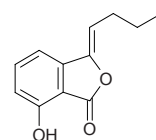
[22799-11-7]  $C_{29}H_{44}O_9$  (536.67). mp 159~161°C. Source: MA NIU XI  
*Cyathula capitata*. Ref: 6.

**19731 Senkirkine**

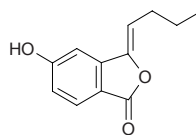
[2318-18-5]  $C_{19}H_{27}NO_6$  (365.43). Pharm: Carcinogen (liver); mutagen (Ames experiment, cell culture, and fruit fly experiment). Source: CAO DIAN QIAN LI GUANG *Senecio jacobaea*, CHUN QIAN LI GUANG *Senecio vernalis*, FENG DOU CAI *Petasites japonicus*, JIN LIAN HUA ZHU SHI DOU *Crotalaria laburnifolia*, KUAN DONG HUA *Tussilago farfara*, LEI SHI QIAN LI GUANG *Senecio renardii*, LIAN PENG CAO *Farfugium japonicum*, YI DIAN HONG *Emilia sonchifolia*. Ref: 658, 660.

**19732 Senkyunolide B**

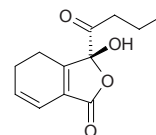
$C_{12}H_{12}O_3$  (204.23). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 660.

**19733 Senkyunolide C**

(Z)-5-Hydroxy-3-butylidene-phthalide  $C_{12}H_{12}O_3$  (204.23). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 2, 660.

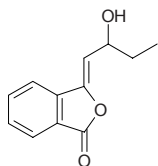
**19734 Senkyunolide D**

$C_{12}H_{14}O_4$  (222.24). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 660.

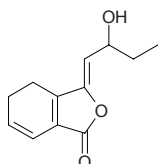


**19735 Senkyunolide E**

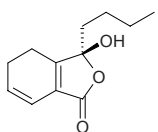
$C_{12}H_{12}O_3$  (204.23). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 660.

**19736 Senkyunolide F**

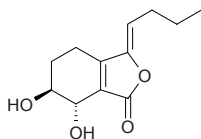
$C_{12}H_{14}O_3$  (206.24). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 660.

**19737 Senkyunolide G**

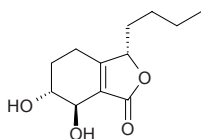
[94530-85-5]  $C_{12}H_{16}O_3$  (208.26). Pharm: Anticonvulsant (rat, cerebral section, inhibits release of Glu-transmitter). Source: CHA XIONG *Ligusticum sinense* cv. *chaxiong*, CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*], GAO BEN *Ligusticum sinense*. Ref: 531, 660, 1596.

**19738 Senkyunolide H**

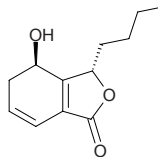
[94596-27-7]  $C_{12}H_{16}O_4$  (224.26). Pharm: Anticonvulsant (rat, cerebral section, inhibits release of Glu-transmitter); anti-arteriosclerosis (mus, inhibits proliferation of cultured cell in aortal smooth muscle  $IC_{50} < 0.1 \mu\text{g/mL}$ ). Source: CHA XIONG *Ligusticum sinense* cv. *chaxiong*, CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*], GAO BEN *Ligusticum sinense*. Ref: 531, 660, 1596, 1600.

**19739 Senkyunolide J**

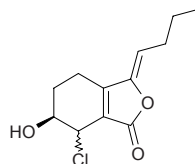
$C_{12}H_{18}O_4$  (226.27). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 660.

**19740 Senkyunolide K**

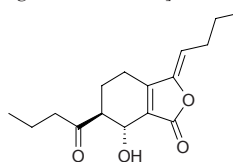
$C_{12}H_{16}O_3$  (208.26). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 2.

**19741 Senkyunolide L**

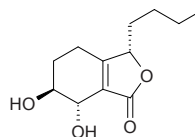
$C_{12}H_{15}ClO_3$  (242.70). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 2.

**19742 Senkyunolide M**

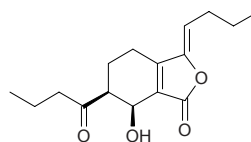
$C_{16}H_{22}O_4$  (278.35). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 2.

**19743 Senkyunolide N**

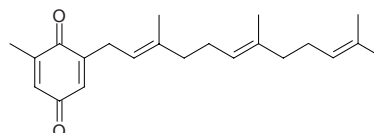
3*S*,6*S*,7*S*-3-Butyl-4,5-dihydro-6,7-dihydroxy phthalide  $C_{12}H_{18}O_4$  (226.27). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 660.

**19744 Senkyunolide Q**

$C_{16}H_{22}O_4$  (278.35). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 660.

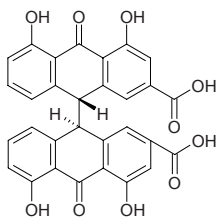
**19745 Senkyunone**

$C_{22}H_{30}O_2$  (326.48). Source: CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*]. Ref: 660.

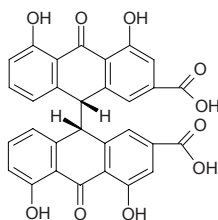


**19746 Sennidin A**

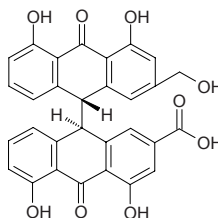
$C_{30}H_{18}O_{10}$  (538.47). **Source:** DA HUANG *Rheum officinale*, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. **Ref:** 2, 660.

**19747 Sennidin B**

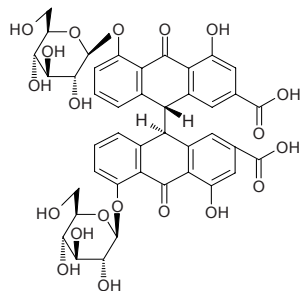
$C_{30}H_{18}O_{10}$  (538.47). **Source:** ZHANG YE DA HUANG *Rheum palmatum*. **Ref:** 660.

**19748 Sennidin C**

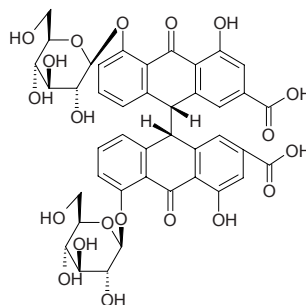
$C_{30}H_{20}O_9$  (524.49). **Source:** DA HUANG *Rheum officinale*, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. **Ref:** 2, 660.

**19749 Sennoside A**

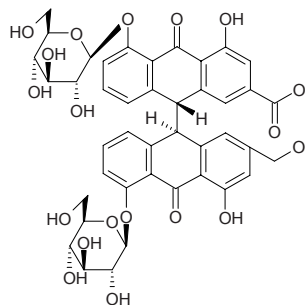
$C_{42}H_{38}O_{20}$  (862.76). **Pharm:** Laxative; hemostatic;  $LD_{50}$  (mus) = 1.414g/kg. **Source:** DA HUANG *Rheum officinale*, FAN XIE YE *Cassia angustifolia*, HE ZI *Terminalia chebula*, JIAN YE FAN XIE YE *Cassia acutifolia* (in 1950, the compound was isolated from the plant by A. Stoll et al.)<sup>[5505]</sup>, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. **Ref:** 2, 658, 660, 5501, 5505.

**19750 Sennoside B**

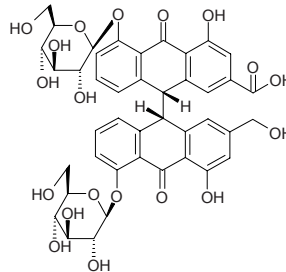
$C_{42}H_{38}O_{20}$  (862.76). **Pharm:** Laxative; hemostatic. **Source:** DA HUANG *Rheum officinale*, FAN XIE YE *Cassia angustifolia*, JIAN YE FAN XIE YE *Cassia acutifolia*, ZHANG YE DA HUANG *Rheum palmatum*. **Ref:** 660, 5501.

**19751 Sennoside C**

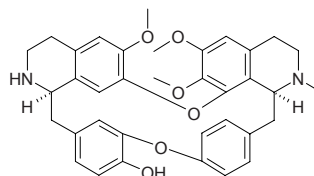
$C_{42}H_{40}O_{19}$  (848.78). **Source:** DA HUANG *Rheum officinale*, FAN XIE YE *Cassia angustifolia*, JIAN YE FAN XIE YE *Cassia acutifolia*, TANG GU TE DA HUANG *Rheum tanguticum*, ZHANG YE DA HUANG *Rheum palmatum*. **Ref:** 2, 660.

**19752 Sennoside D**

$C_{42}H_{40}O_{19}$  (848.78). **Source:** FAN XIE YE *Cassia angustifolia*, JIAN YE FAN XIE YE *Cassia acutifolia*, ZHANG YE DA HUANG *Rheum palmatum*. **Ref:** 660.

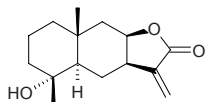
**19753 Sepeperine**

$C_{36}H_{38}N_2O_6$  (594.71). **Pharm:** Antitrypanosomal (inhibits trypomastigote form of *Trypanosoma cruzi*, strain Y,  $IC_{50}$  = 78.1  $\mu$ g/mL,  $IC_{90}$  = 285.3  $\mu$ g/mL); antimalarial (*Plasmodium falciparum* D6,  $LC_{50}$  = 73.6 ng/mL, SI = 92; *Plasmodium falciparum* W2,  $LC_{50}$  = 100.1 ng/mL, SI = 68); cytotoxic (KB,  $LC_{50}$  = 6800 ng/mL). **Source:** *Guatteria boliviana* (stem cortex). **Ref:** 3976.

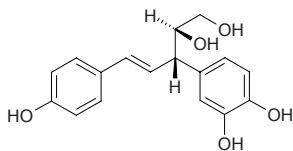


**19754 Septuplinolide**

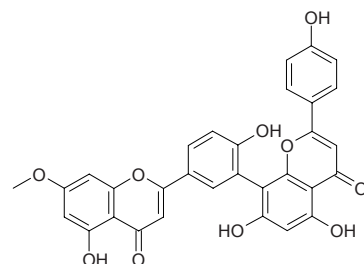
$C_{15}H_{22}O_3$  (250.34). Source: HE AN FU LAO JU *Flourensia riparia* (aerial parts). Ref: 3820.

**19755 Sequirin C**

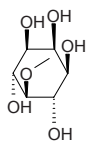
$C_{17}H_{18}O_5$  (302.33).  $[\alpha]_D^{21} = +38.1^\circ$  ( $c = 1.00$ ,  $Me_2CO$ ). Source: GE BI TIAN MEN *Asparagus gobicus* (root). Ref: 4975.

**19756 Sequoiaflavone**

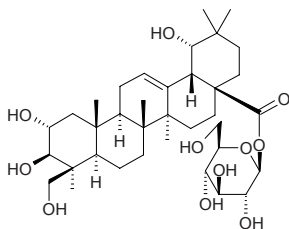
$C_{31}H_{20}O_{10}$  (552.5). Source: YUN NAN SUI HUA SHAN *Amentotaxus yunnanensis* (leaf and twig; yield = 0.00025%dw). Ref: 4707.

**19757 Sequoyitol**

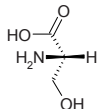
$C_7H_{14}O_6$  (194.19). Source: BAI GUO YE *Ginkgo biloba*., SAN JIAN SHAN *Cephalotaxus fortunei*, YUN NAN SUI HUA SHAN *Amentotaxus yunnanensis* (leaf and twig; yield = 0.00017%dw). Ref: 660, 4707.

**19758 Sericoside**

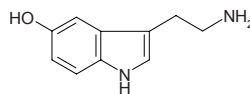
[55306-04-2]  $C_{36}H_{58}O_{11}$  (666.86). Source: XIA KU CAO *Prunella vulgaris*. Ref: 2508.

**19759 (S)-Serine**

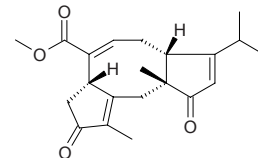
(L)-Serine  $C_3H_7NO_3$  (105.09). Source: BAN XIA *Pinellia ternata* (dried tuber: content scope of 4 origins = 0.66%~1.02%, mean content = 0.80%)<sup>[5521]</sup>, widely distributed in nature (from wide variety of protein hydrolysates). Ref: 660, 5521.

**19760 Serotonin**

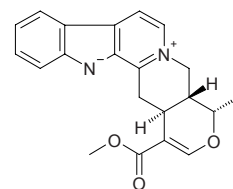
[65099-56-1]  $C_{10}H_{12}N_2O$  (176.22). Pharm: Neurotransmitter. Source: CHAN SU *Bufo bufo gargarizans*; *Bufo melanostictus*, CI YANG LI DOU *Mucuna pruriens*, FAN QIE *Lycopersicon esculentum*, XIANG JIAO *Musa paradisiaca* var. *sapientum* [Syn. *Musa sapientum*], YI ZHU QIAN MA *Urtica dioica*. Ref: 2, 658.

**19761 Serpendione**

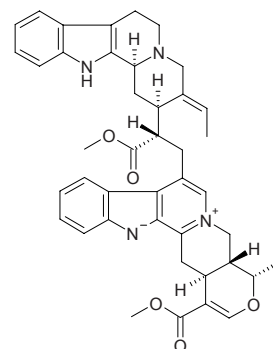
$C_{21}H_{26}O_4$  (342.44).  $[\alpha]_D = +109.7^\circ$  ( $c = 0.58$ ,  $CHCl_3$ ). Pharm: Vasodilator (isolated rat aorta, 0.05mg/mL, strongly depressed the maximal responses to the contractile agent, InRt = 92.2%). Source: PU FU QIANG DAO YAO *Hypoestes serpens* (dried and powdered aerial parts). Ref: 3036.

**19762 Serpentine**

$C_{21}H_{20}N_2O_3$  (348.41). Pharm: Antineoplastic (mus, mammary cancer MS310); antihypertensive; CNS activity (increases atrial and ventricular thresholds, also reduces atrial conduction, dog heart iv, 0.5~2.0mg/kg). Source: BI SHI LUO FU MU *Rauwolfia beddomei*, CHANG CHUN HUA *Catharanthus roseus* [Syn. *Vinca rosea*; *Lochera rosea*], DA CHANG CHUN HUA *Vinca herbacea* [Syn. *Vinca major*], GUAN MU LUO FU MU *Rauwolfia fruticosa*, YIN DU LUO FU MU *Rauwolfia serpentina*. Ref: 2, 658.

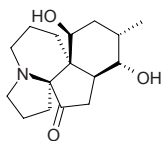
**19763 Serpentinine**

[36519-42-3]  $C_{42}H_{44}N_4O_5$  (684.84). mp 265~270°C. Source: CUI TU LUO FU MU *Rauwolfia vomitoria*, YUN NAN LUO FU MU *Rauwolfia yunnanensis*. Ref: 6, 660.

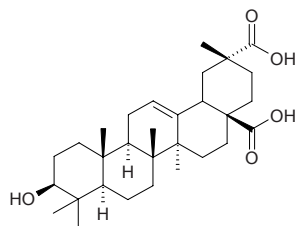


**19764 Serrantinine**

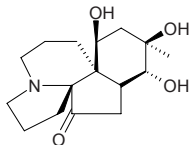
$C_{16}H_{25}NO_3$  (279.38). mp 244~245°C. Source: JU CHI SHI SONG *Lycopodium serratum* var. *thunbergii* (in 1966, the compound was isolated from the plant by K.Nishikawa et al.). Ref: 5505.

**19765 Serratagenic acid**

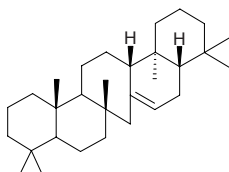
$C_{30}H_{46}O_5$  (486.70). mp > 310°C. Source: SAN TAI HONG HUA *Clerodendron serratum*. Ref: 6.

**19766 Serratanidine**

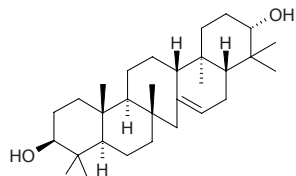
$C_{16}H_{25}NO_4$  (295.38). mp 210~211°C. Source: QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*]. Ref: 6.

**19767 Serratene**

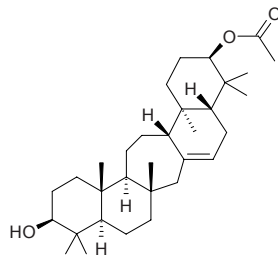
Serrat-14-ene  $C_{30}H_{50}$  (410.73). mp 239.5~240.0°C. Source: DONG BEI DUO ZU JUE *Polypodium virginianum*, SHUI LONG GU *Polypodium niponicum*. Ref: 6, 660.

**19768 Serratenediol**

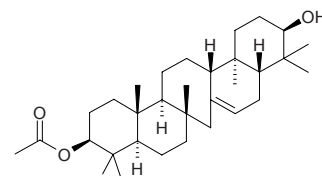
Serrat-14-en-3 $\beta$ ,21 $\alpha$ -diol [2239-24-9]  $C_{30}H_{50}O_2$  (442.73). Colorless powder, mp 302.5~304.5°C, mp 298~299°C (MeOH),  $[\alpha]_D^{26} = +21.5^\circ$  ( $c = 0.30$ ,  $CHCl_3$ ). Source: GUO JIANG LONG *Lycopodium complanatum*, PU DI WU GONG *Lycopodium cernuum* (root, stem and leaf: yield = 0.0025%dw)<sup>[4633]</sup>, QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*] (2%; in 1964, the compound was isolated from the plant)<sup>[5505]</sup>. Ref: 6, 4633, 5505.

**19769 Serratenediol-21-acetate**

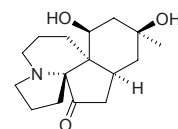
$C_{32}H_{52}O_3$  (484.77). White lamellar crystals, mp > 300°C. Source: QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*]. Ref: 109.

**19770 Serratenediol-3-acetate**

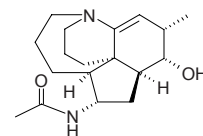
Phlegmanol C [1260-05-5]  $C_{32}H_{52}O_3$  (484.77). Crystals ( $C_6H_6$ ), mp 336~338°C,  $[\alpha]_D^{15} = -20^\circ$  ( $c = 0.5$ ,  $CHCl_3$ ), mp 317~319°C. Source: MA WEI SHAN *Phlegmariurus phlegmaria* [Syn. *Lycopodium phlegmaria*], QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*], *Lycopodium megastachyum*. Ref: 6, 2987.

**19771 Serratine**

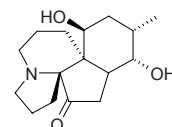
[15252-93-4]  $C_{16}H_{25}NO_3$  (279.38). mp 253°C. Source: QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*]. Ref: 6.

**19772 Serratinidine**

[7689-04-5]  $C_{18}H_{28}N_2O_2$  (304.44). mp 232~234°C. Source: QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*]. Ref: 6.

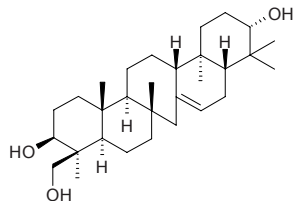
**19773 Serratinine**

[5545-99-3]  $C_{16}H_{25}NO_3$  (279.38). mp 244~245°C. Source: QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*]. Ref: 6.

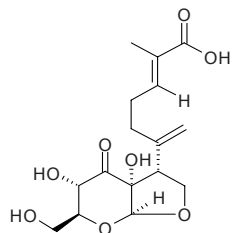


**19774 Serratriol**

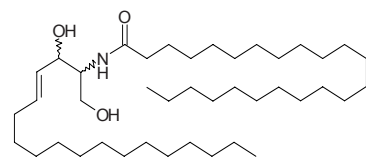
$C_{30}H_{50}O_3$  (458.73). mp 335~336°C. Source: PU DI WU GONG *Lycopodium cornu*, QIAN CENG TA *Huperzia serrata* [Syn. *Lycopodium serratum*]. Ref: 6.

**19775 Serratumin A**

$C_{16}H_{22}O_8$  (342.35). Brown gum,  $[\alpha]_D^{16.7} = +11.53^\circ$  ( $c = 0.009$ , pyridine). Source: SAN TAI HUA *Clerodendrum serratum* var. *amplexifolium*. Ref: 887.

**19776 Sertularamide**

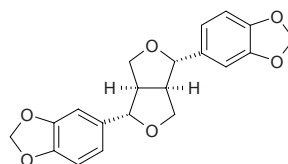
$C_{41}H_{81}NO_3$  (636.11). White amorphous powder. Source: BANG YE JUE ZAO *Caulerpa sertularioides*. Ref: 808.

**19777 Sesamin**

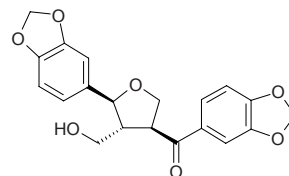
$C_{20}H_{18}O_6$  (354.36). Yellow needles, mp 122~124°C, mp 123~124°C,  $[\alpha]_D^{23} = +42^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ); (-) 122~124°C, ( $\pm$ ) 129~130°C; mp 124°C,  $[\alpha]_D^{25} = +63.2^\circ$  ( $c = 0.34$ ,  $CHCl_3$ ). Pharm: Antibacterial (*Mycobacterium tuberculosis*); antiviral (influenza virus, Sendai virus); antifungal (TLC bioautography method at very low concentration); antifungal (TLC-based assay, *Cladosporium cucumerinum*, MIQ = 0.1  $\mu$ g, control Moiconazole, MIQ = 1  $\mu$ g)<sup>[5385]</sup>; cytotoxic (Meth-A sarcoma cell line,  $ED_{50} = 6.0 \mu$ g/mL, LLC cell line,  $ED_{50} > 10 \mu$ g/mL)<sup>[3510]</sup>; antioxidant (TLC-based assay, DPPH scavenger, MIQ = 10  $\mu$ g; control Quercetin, MIQ = 1  $\mu$ g)<sup>[5385]</sup>; neuroprotective (glutamate-induced neurotoxicity in primary cultures of cortical cells, 0.1  $\mu$ mol/L, protection rate = (16.6 $\pm$ 1.3)%; MK-801, 1.0  $\mu$ mol/L, protection rate = (83.6 $\pm$ 2.0)%,  $p < 0.001$ , CNQX, 1.0  $\mu$ mol/L, protection rate = (70.5 $\pm$ 1.5)%,  $p < 0.001$ )<sup>[4927]</sup>.

Source: BI BA *Piper longum*, BIAN XING MU LAN *Magnolia mutabilis*, CI HUA JIAO *Zanthoxylum acanthopodium*, CI WU JIA *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*], HAN CHENG XI XIN *Asarum sieboldii* var. *seoulensis* (the compound was isolated from the plant by T. Kaku et al. in 1931)<sup>[5505]</sup>, HEI ZHI MA *Sesamum indicum* (black seed) [Syn. *Sesamum orientale* (black seed)] (seed: content scope = 0.18%~0.21%)<sup>[5501]</sup>, HONG NAN PI *Machilus thunbergii*, HU JIAO HUA JIAO *Zanthoxylum piperitum*, LIAO XI XIN *Asarum heterotropoides* var. *mandshuricum* (dried whole herb: mean content = 0.0375%)<sup>[5508]</sup>, MAO PAO TONG *Paulownia*

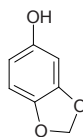
*tomentosa*, MENG DA NA YUN XIANG *Ruta montana*, QIANG DAO YAO *Hypoestes purpurea* [Syn. *Justicia purpurea*; *Hypoestes sinica*] (whole herb: yield = 0.0036%dw)<sup>[4712]</sup>, QING HAO *Artemisia apiacea* [Syn. *Artemisia carvifolia*; *Artemisia caruifolia*] (aerial parts), RONG MAO SHAN XIANG *Hyptis tomentosa*, RU DI JIN NIU *Zanthoxylum nitidum* (dried root: mean content = 0.115%)<sup>[5508]</sup>, SI LI LAN KA TU MI SHU *Bridelia retusa*, WU GENG WU JIA PI *Acanthopanax sessiliflorus*, WU JIA PI *Acanthopanax gracilistylus*, XI XIN *Asarum sieboldii* (dried whole herb: mean content = 0.0292%)<sup>[5508]</sup>, ZHONG YA KU HAO *Artemisia absinthium*, ZHOU YE MU LAN *Magnolia praecocissima* (seed), *Fagara xanthoxyloides*, *Fagara* sp., occurs in many plants. Ref: 2, 658, 660, 2021, 3510, 4181, 4712, 4927, 5385, 5501, 5505, 5508.

**19778 Sesaminone**

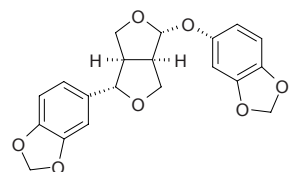
$C_{20}H_{18}O_7$  (370.36).  $[\alpha]_D^{25} = -30.6^\circ$  ( $c = 0.1$ ,  $CHCl_3$ ). Pharm: Bone resorption inhibitor (bones were cultured with PTH 200  $\mu$ mol/L,  $^{45}Ca$  release = (13.6 $\pm$ 1.0)%,  $p < 0.001$ , control  $^{45}Ca$  release = (15.4 $\pm$ 1.3)%). Source: HAI JIN BI XIE *Dioscorea spongiosa* (rhizome). Ref: 4921.

**19779 Sesamol**

1,3-Benzodioxol-5-ol [533-31-3]  $C_7H_6O_3$  (138.12). mp 65.8°C. Pharm: Causes allergic reaction (hmn skin). Source: BAI ZHI MA *Sesamum indicum* (white seed) [Syn. *Sesamum orientale* (white seed)], HEI ZHI MA *Sesamum indicum* (black seed) [Syn. *Sesamum orientale* (black seed)]. Ref: 6, 658.

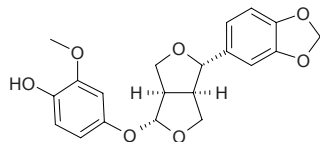
**19780 Sesamolol**

$C_{20}H_{18}O_7$  (370.36). mp 94°C. Source: HEI ZHI MA *Sesamum indicum* (black seed) [Syn. *Sesamum orientale* (black seed)]. Ref: 6.

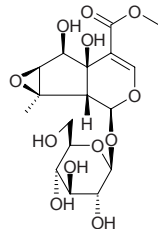


**19781 Sesamolol**

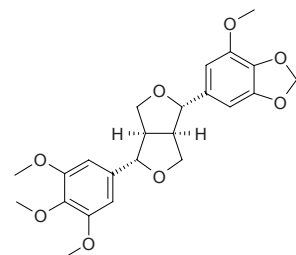
$C_{20}H_{20}O_7$  (372.38). **Pharm:** Antioxidant. **Source:** HEI ZHI MA *Sesamum indicum* (black seed) [Syn. *Sesamum orientale* (black seed)]. **Ref:** 658.

**19782 Sesamoside**

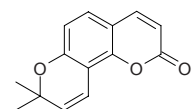
$C_{17}H_{24}O_{12}$  (420.37). **Source:** MENG GU CAO SU *Phlomis mongolica*, XIAN SHENG MA XIAN HAO *Pedicularis muscicola*. **Ref:** 560, 579.

**19783 Sesartemin**

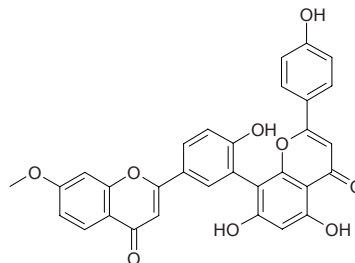
$C_{23}H_{26}O_8$  (430.46). **Pharm:** Monoamine oxidase inhibitor (microsome in digestive tract of *Ostrinia nubilalis*); lowers isolation-induced aggression (mouse); cytotoxic (Meth-A sarcoma cell line,  $ED_{50} = 9.7\mu\text{g/mL}$ , LLC cell line,  $ED_{50} > 10\mu\text{g/mL}$ )<sup>[3510]</sup>. **Source:** QING HAO *Artemisia apiacea* [Syn. *Artemisia carvifolia*; *Artemisia caruifolia*] (aerial parts), ZHONG YA KU HAO *Artemisia absinthium*. **Ref:** 658, 3510.

**19784 Seselin**

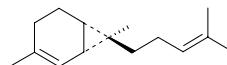
$C_{14}H_{12}O_3$  (228.25). mp 119~120°C. **Pharm:** Antifungal (*Curvularia lunata*, *Aspergillus niger*); antineoplastic (Raji cells, antitumor promotor, *in vivo*, inhibits TPA-induced EBV-EA activation, compound concentration = 500(mol ratio/32pmol TPA), EBV-EA-positive cells = (46.5±1.9)% (viability > 80%),  $\beta$ -Carotene, EBV-EA-positive cells = (34.3±1.1)% (viability > 80%), Curcumin, EBV-EA-positive cells = (22.8±1.8)% (viability > 80%);  $IC_{50} = 461$ (mol ratio/32pmol TPA),  $\beta$ -Carotene,  $IC_{50} = 400$ (mol ratio/32pmol TPA), Curcumin  $IC_{50} = 341$ (mol ratio/32pmol TPA))<sup>[5048]</sup>. **Source:** CHENG ZI *Citrus junos*, GOU JU *Poncirus trifoliata*, HAN QIN *Apium graveolens*, HUI XIANG *Foeniculum vulgare*, LI HUA JU *Citrus tachibana*, TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.00012%dw)<sup>[4722]</sup>, XIAN YE QIN *Apium leptophyllum*, YIN DU XIE HAO *Seseli indicum*, ZHI GEN PI *Poncirus trifoliata*, ZHI KE *Citrus aurantium*, *Citrus rugulosa*, *Citrus hassaku*. **Ref:** 6, 658, 4722, 5048.

**19785 Sesguoiaflavone**

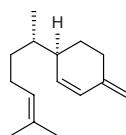
$C_{31}H_{20}O_9$  (536.50). **Source:** SAN JIAN SHAN *Cephalotaxus fortunei*. **Ref:** 2.

**19786 Sesquicarene**

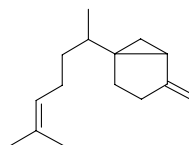
[20479-23-6]  $C_{15}H_{24}$  (204.36). **Source:** WU WEI ZI *Schisandra chinensis*. **Ref:** 2.

**19787  $\beta$ -Sesquiphellandrene**

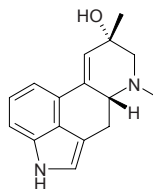
[20307-83-9]  $C_{15}H_{24}$  (204.36). **Source:** GAN JIANG *Zingiber officinale*. **Ref:** 2.

**19788 Sesquisabinene**

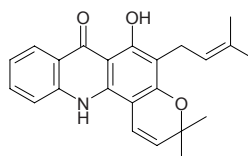
$C_{15}H_{24}$  (204.36). **Source:** HU JIAO *Piper nigrum*. **Ref:** 660.

**19789 Setoclavine**

$C_{16}H_{18}N_2O$  (254.33). **Source:** MAI JIAO *Claviceps purpurea*. **Ref:** 660.

**19790 Severifoline**

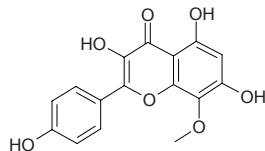
$C_{23}H_{23}NO_3$  (361.44). **Pharm:** Cytotoxic (*in vitro*, Colon205,  $ED_{50} > 25\mu\text{g/mL}$ , inactive; Hep3B,  $ED_{50} > 25\mu\text{g/mL}$ , inactive; KB,  $ED_{50} = 0.09\mu\text{g/mL}$ ). **Source:** DONG FENG JU GEN *Atalantia buxifolia* [Syn. *Severinia buxifolia*] (root cortex). **Ref:** 3075.



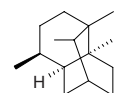


**19791 Sexangularetin**

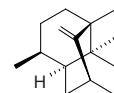
[571-74-4] C<sub>16</sub>H<sub>12</sub>O<sub>7</sub> (316.27). **Pharm:** Mutagen (*Salmonella typhimurium* TA100). **Source:** XI ZE LAN *Eupatorium gracile*. **Ref:** 658.

**19792 Seychellane**

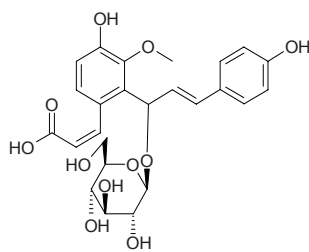
C<sub>15</sub>H<sub>26</sub> (202.37). **Source:** SHI YE GAN SONG *Nardostachys jatamansi*. **Ref:** 660.

**19793 Seychellene**

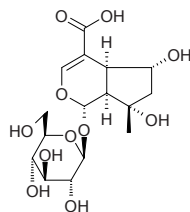
C<sub>15</sub>H<sub>24</sub> (204.36). **Source:** GUANG HUO XIANG *Pogostemon cablin* [Syn. *Mentha cablin*], SHI YE GAN SONG *Nardostachys jatamansi*. **Ref:** 660.

**19794 Shakuchirin**

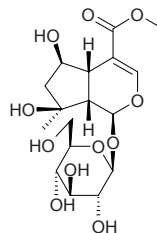
C<sub>25</sub>H<sub>28</sub>O<sub>11</sub> (504.50). mp 100~110°C. **Source:** HUO TAN MU CAO *Polygonum chinense*, TIAN QIAO MAI GEN *Fagopyrum cymosum* [Syn. *Polygonum cymosum*]. **Ref:** 6.

**19795 Shanzhiside**

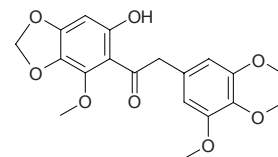
[29836-27-9] C<sub>16</sub>H<sub>24</sub>O<sub>11</sub> (392.36). mp 82~90°C; [α]<sub>D</sub><sup>29</sup> = -125.4° (c = 0.102, MeOH). **Pharm:** Cytotoxic inactive (Vero cells)<sup>[5456]</sup>; COX-2 inhibitor inactive<sup>[5456]</sup>. **Source:** HUA YE JIA DU JUAN *Barleria lupulina* (flower), ZHI ZI *Gardenia jasminoides* [Syn. *Gardenia florida*]. **Ref:** 2, 5456.

**19796 Shanzhiside methyl ester**

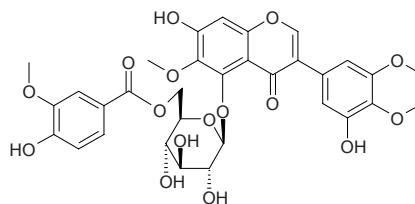
C<sub>17</sub>H<sub>26</sub>O<sub>11</sub> (406.39). [α]<sub>D</sub><sup>27</sup> = -105.2° (c = 0.104, MeOH). **Pharm:** Cytotoxic inactive (Vero cells); COX-2 inhibitor inactive. **Source:** HUA YE JIA DU JUAN *Barleria lupulina* (flower). **Ref:** 5456.

**19797 Sheganone**

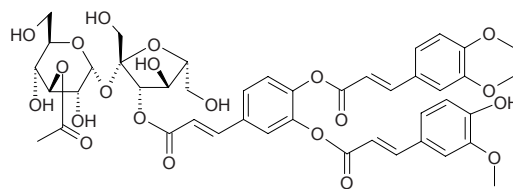
C<sub>19</sub>H<sub>20</sub>O<sub>8</sub> (376.37). **Source:** SHE GAN *Belamcanda chinensis*. **Ref:** 660.

**19798 Shegansu A**

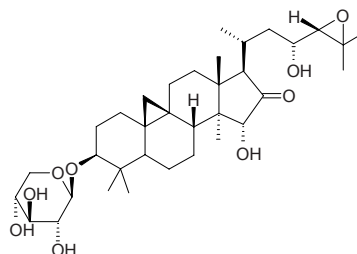
Irigenin-5-*O*-(6''-*O*-vanillin acid)-β-*D*-glucoside C<sub>32</sub>H<sub>32</sub>O<sub>16</sub> (672.60). Yellow crystals, mp 140~143°C, [α]<sub>D</sub><sup>14</sup> = -17.3° (c = 0.22, EtOH). **Source:** SHE GAN *Belamcanda chinensis*. **Ref:** 9.

**19799 Shegansu C**

C<sub>44</sub>H<sub>48</sub>O<sub>21</sub> (912.86). Yellowish amorphous, [α]<sub>D</sub><sup>31</sup> = +51.3° (c = 0.075, EtOH). **Source:** SHE GAN *Belamcanda chinensis*. **Ref:** 9.

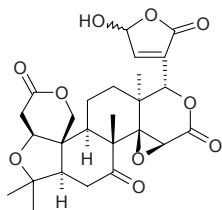
**19800 Shengmanol xyloside**

C<sub>35</sub>H<sub>56</sub>O<sub>9</sub> (620.83). **Source:** SAN MIAN DAO *Cimicifuga acerina*, XING AN SHENG MA *Cimicifuga dahurica*. **Ref:** 660.

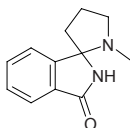


**19801 Shihulimonin A**

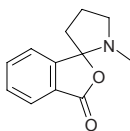
21-Hydroxy-23-oxo-20-en-limonin  $C_{26}H_{30}O_{10}$  (502.525). Colorless acicular crystals, mp 284–288°C,  $[\alpha]_D = -70^\circ$  ( $c = 0.16$ , MeOH). Source: SHI HU<sup>(3)</sup> *Evodia rutaecarpa* var. *officinalis*. Ref: 2126.

**19802 Shihunidine**

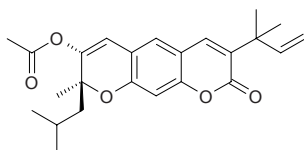
[135626-84-5]  $C_{12}H_{14}N_2O$  (202.26). Colorless columnar crystals ( $C_6H_6$ ), mp 173–174°C,  $[\alpha]_D^{22} = 0^\circ$ . Pharm:  $Na^+$ ,  $K^+$ -ATP inhibitor (rat, microsome in kidney, strong action). Source: MEI HUA SHI HU *Dendrobium loddigesii*. Ref: 189.

**19803 Shihunine**

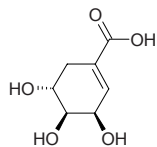
[4031-12-3]  $C_{12}H_{13}NO_2$  (203.24). mp 79°C. Pharm:  $Na^+$ ,  $K^+$ -ATP inhibitor (rat, microsome in kidney, strong action). Source: MEI HUA SHI HU *Dendrobium loddigesii*. Ref: 6, 189.

**19804 Shijiaocao lactone**

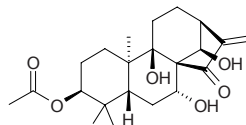
$C_{24}H_{28}O_5$  (396.49). mp 95–97°C. Source: SHI JIAO CAO *Boenninghausenia sessilicarpa*. Ref: 2495.

**19805 Shikimic acid**

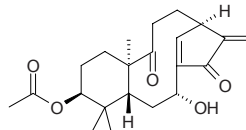
3,4,5-Trihydroxy-1-cyclohexene-1-carboxylic acid [138-59-0]  $C_7H_{10}O_5$  (174.15). Pharm: Mutagen (strong). Source: DONG DU HUI *Illicium religiosum*, BAI GUO *Ginkgo biloba*, LV BEI GUI HUA *Excoecaria cochinchinensis* var. *viridis*, MANG QI GU *Dicranopteris pedata* [Syn. *Polypodium pedatum*; *Dicranopteris dichotoma*], MIN WAN BA JIAO *Illicium minwanense*. Ref: 2, 315, 658, 660, 4544.

**19806 Shikoccidin**

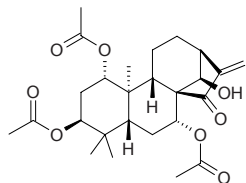
$C_{22}H_{32}O_6$  (392.50). mp 178–179°C,  $[\alpha]_D^{27} = -3.2^\circ$  ( $c = 0.20$ , MeOH). Source: XI SI GUO XIANG CHA CAI *Isodon shikokiana* var. *occidentalis*. Ref: 4067.

**19807 Shikoccin**

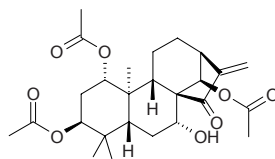
$C_{22}H_{30}O_5$  (374.48). mp 150–152°C,  $[\alpha]_D^{25} = -37^\circ$  ( $c = 0.24$ ,  $CHCl_3$ ). Source: XI SI GUO XIANG CHA CAI *Isodon shikokiana* var. *occidentalis*. Ref: 4067.

**19808 Shikodokaurin A**

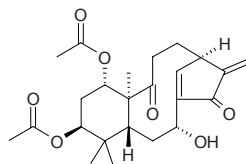
$C_{26}H_{36}O_8$  (476.57). mp 232–234°C. Source: JIAN XING SI GUO XIANG CHA CAI *Isodon shikokiana* var. *intermedius*. Ref: 4067.

**19809 Shikodokaurin B**

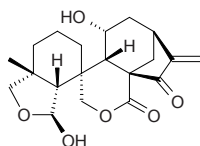
$C_{26}H_{36}O_8$  (476.57). Amorphous powder. Source: JIAN XING SI GUO XIANG CHA CAI *Isodon shikokiana* var. *intermedius*. Ref: 4067.

**19810 Shikodomedin**

$C_{24}H_{32}O_7$  (432.52). mp 193–194°C,  $[\alpha]_D^{22} = -67.0^\circ$  ( $c = 0.46$ ,  $CHCl_3$ ). Source: JIAN XING SI GUO XIANG CHA CAI *Isodon shikokiana* var. *intermedius*. Ref: 4067.

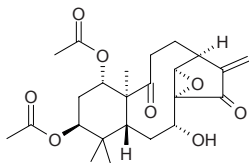
**19811 Shikodonin**

[66548-00-3]  $C_{20}H_{26}O_6$  (362.43). mp 206–209°C. Pharm: Antineoplastic; pesticide (insects). Source: SI GUO XIANG CHA CAI *Rabdosia shikokiana*, ZHONG JIAN XIANG CHA CAI *Isodon shikokianus* var. *intermedius*. Ref: 658, 4067.

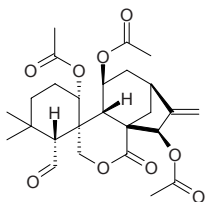


**19812 Shikokiamedin**

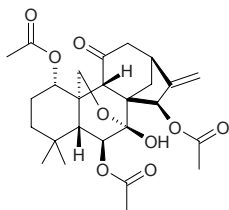
$C_{24}H_{32}O_8$  (448.52). Amorphous powder,  $[\alpha]_D^{22} = -42.5^\circ$  ( $c = 0.26$ ,  $CHCl_3$ ). Source: JIAN XING SI GUO XIANG CHA CAI *Isodon shikokiana* var. *intermedius*. Ref: 4067.

**19813 Shikokianal acetate**

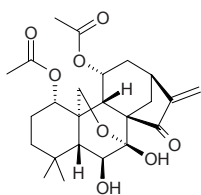
$C_{26}H_{34}O_9$  (490.56). mp 192~194°C,  $[\alpha]_D^{22} = +89^\circ$  ( $c = 0.26$ ,  $CHCl_3$ ). Source: SI GUO XIANG CHA CAI *Rabdosia shikokiana*. Ref: 4067.

**19814 Shikokianidin**

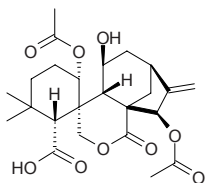
$C_{26}H_{34}O_9$  (490.56). mp 218~219°C,  $[\alpha]_D = -109^\circ$  ( $C_5H_5N$ ). Source: SI GUO XIANG CHA CAI *Rabdosia shikokiana*. Ref: 4067.

**19815 Shikokianin**

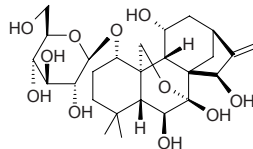
[24267-69-4]  $C_{24}H_{32}O_8$  (448.52). mp 284~287°C,  $[\alpha]_D^{25} = -38.7^\circ$  ( $c = 0.2$ ,  $C_5H_5N$ ). Source: MAO YE XIANG CHA CAI *Isodon japonica* [*Syn. Rabdosia japonica*], SI GUO XIANG CHA CAI *Rabdosia shikokiana*. Ref: 575, 4067.

**19816 Shikokianoic acid**

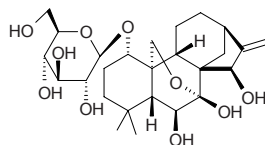
$C_{24}H_{32}O_9$  (464.52). mp 134~135°C,  $[\alpha]_D^{22} = +3^\circ$  ( $c = 0.35$ ,  $CHCl_3$ ). Source: SI GUO XIANG CHA CAI *Rabdosia shikokiana*. Ref: 4067.

**19817 Shikokiaside A**

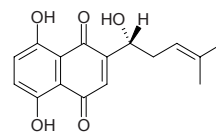
$C_{26}H_{40}O_{11}$  (528.60). mp 235~240°C,  $[\alpha]_D^{25} = +0.5^\circ$  ( $c = 0.8$ ,  $C_5H_5N$ ). Source: SI GUO XIANG CHA CAI *Rabdosia shikokiana*. Ref: 4067.

**19818 Shikokiaside B**

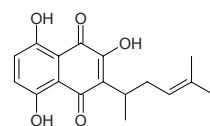
$C_{26}H_{40}O_{10}$  (512.60). mp 265~268°C,  $[\alpha]_D^{25} = -15.3^\circ$  ( $c = 1.2$ ,  $C_5H_5N$ ). Source: SI GUO XIANG CHA CAI *Rabdosia shikokiana*. Ref: 4067.

**19819 Shikonin**

[517-89-5]  $C_{16}H_{16}O_5$  (288.30). Pharm: Antibacterial (lactic acid bacteria and vinegar organism, EC = 20~30 µg/mL; *Bacillus coli*, *B. typhosus*, *Bacillus dysenteriae*, *Bacillus pyocyaneus* and *Staphylococcus aureus*); antineoplastic (mus,  $S_{180}$ , 10mg/(kg·d) ip, complete inhibition); antiprotozoal; platelet aggregation inhibitor; antiviral; used in treatment of amoebic dysentery (0.5~10 µg/mL); used in treatment of cirrhosis with ascites (animals, biotic prolonged rate = 92.5%); used in treatment of hepatitis (acute icteric, acute non-icteric, chronic); contracts blood vessels (inhibits ACh-induced relaxation on intact thoracic aorta,  $IC_{50} = (0.244 \pm 0.039) \mu\text{mol/L}$ , control 1,4-Naphthoquinone  $IC_{50} = (1.50 \pm 0.17) \mu\text{mol/L}$ )<sup>[4916]</sup>; antioxidant; anti-inflammatory (modulator of cytokine network: blocks RANTES (regulated upon activation on normal T-cell expressed and secreted) and macrophage inflammatory protein (MIP-1a) binding to hmn monocytes,  $IC_{50} = 3.6 \mu\text{mol/L}$  and  $2.6 \mu\text{mol/L}$ , respectively; blocks RANTES and MIP-1a binding to hmn embryonic kidney (HEK)/293 cells transfected with stable CC chemokine receptor-1 (CCR1) ( $IC_{50} = 2.63 \mu\text{mol/L}$  and  $2.57 \mu\text{mol/L}$ , respectively); inhibits RANTES-induced CCR1 cell migration, without interfering with CCR1 cell migration induced by epidermal growth factor (EGF); appears to be a highly specific antagonist for the CCR1 receptor)<sup>[4416]</sup>. Source: BAI GUO ZI CAO *Lithospermum officinale*, DIAN ZI CAO *Onosma paniculatum* (root: content = 0.02%<sup>[5508]</sup>), JIA ZI CAO *Arnebia guttata* (root: mean content of 2 origins = 0.02%<sup>[5508]</sup>), XIN ZANG JIA ZI CAO *Arnebia euchroma* (root: mean content of 3 origins = 0.14%<sup>[5508]</sup>), ZI CAO *Lithospermum erythrorhizon* (root: mean content of 7 origins = 0.07%<sup>[5508]</sup>). Ref: 2, 658, 660, 2193, 4416, 4916, 5501, 5508.

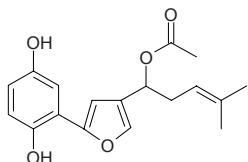
**19820 Shikonine**

$C_{17}H_{18}O_5$  (302.33). Source: ZI CAO *Lithospermum erythrorhizon*. Ref: 2193.

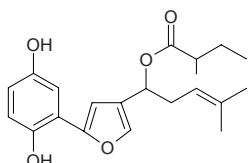


**19821 Shikonofuran A**

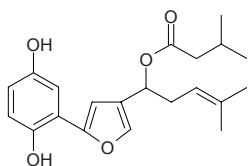
$C_{18}H_{20}O_5$  (316.36). Source: ZI CAO *Lithospermum erythrorhizon*. Ref: 2193.

**19822 Shikonofuran B**

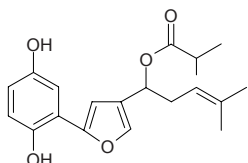
$C_{21}H_{26}O_5$  (358.44). Pharm: Prostaglandin biosynthesis inhibitor (20 $\mu$ g/mL, InRt = 72.5%). Source: ZI CAO *Lithospermum erythrorhizon*, XIN ZANG JIA ZI CAO *Arnebia euchroma*. Ref: 660, 2193.

**19823 Shikonofuran C**

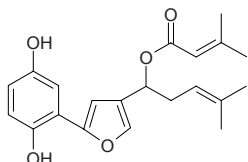
$C_{21}H_{26}O_5$  (358.44). Pharm: Prostaglandin biosynthesis inhibitor (20 $\mu$ g/mL, InRt = 72.5%). Source: ZI CAO *Lithospermum erythrorhizon*, XIN ZANG JIA ZI CAO *Arnebia euchroma*. Ref: 660, 2193.

**19824 Shikonofuran D**

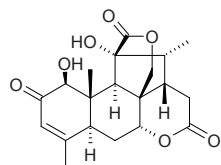
$C_{20}H_{24}O_5$  (344.41). Source: ZI CAO *Lithospermum erythrorhizon*. Ref: 2193.

**19825 Shikonofuran E**

$C_{21}H_{24}O_5$  (356.42). Source: ZI CAO *Lithospermum erythrorhizon*. Ref: 2193.

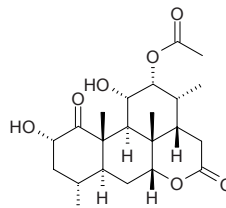
**19826 Shinjudilactone**

$C_{20}H_{24}O_7$  (376.41). Source: CHU BAI PI *Ailanthus altissima*. Ref: 660.

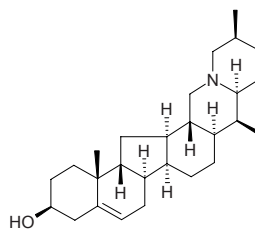
**19827 Shinjulactone K**

[94451-22-6]  $C_{22}H_{32}O_7$  (408.49). Colorless prismatic crystals (chloroform-hexane), mp 135~139°C,  $[\alpha]_D^{24} = +33^\circ$  ( $c = 1.0$ , chloroform).

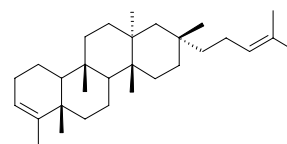
Pharm: Tuberculostatic (*in vivo*, *Mycobacterium tuberculosis* H37Rv, 12.5 $\mu$ g/mL, InRt = 19%). Source: CHU BAI PI *Ailanthus altissima*. Ref: 934, 996.

**19828 Shinonomenine**

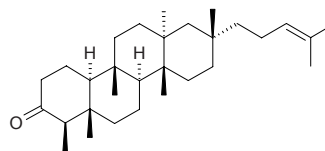
$C_{27}H_{43}NO$  (397.65). Source: XI BEI MU *Fritillaria imperialis* (bulb). Ref: 4217.

**19829 Shiona-3,21-diene**

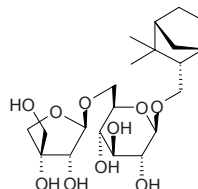
$C_{30}H_{50}$  (410.73). Source: DAO LUAN YE FU SHI JUE *Lemnaphyllum microphyllum* var. *obovatum*. Ref: 660.

**19830 Shionone**

[10376-48-4]  $C_{30}H_{50}O$  (426.73). mp 161~162°C. Source: ZI WAN *Aster tataricus* (root and rhizome: mean content of 25 origins = 0.131%). Ref: 6, 5508.

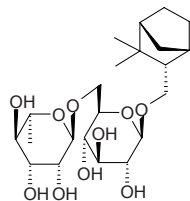
**19831 Shionoside A**

$C_{21}H_{36}O_{10}$  (448.52). Source: ZI WAN *Aster tataricus*. Ref: 660.

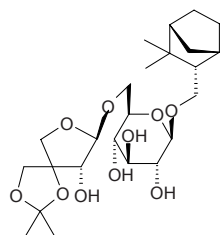


**19832 Shionoside B**

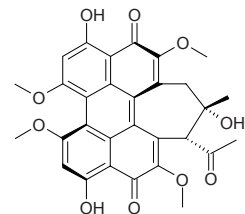
$C_{22}H_{38}O_{10}$  (462.54). Source: ZI WAN *Aster tataricus*. Ref: 660.

**19833 Shionoside C**

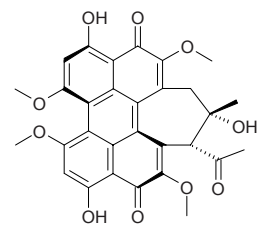
$C_{24}H_{40}O_{10}$  (488.58). Source: ZI WAN *Aster tataricus*. Ref: 660.

**19834 Shiraiachrome A**

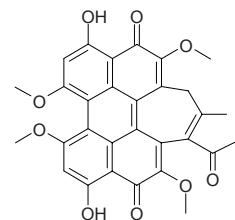
$C_{30}H_{26}O_{10}$  (546.54). Source: ZHU XUANG *Shiraiia bambusicola*. Ref: 660.

**19835 Shiraiachrome B**

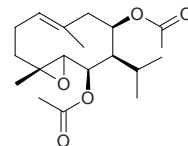
$C_{30}H_{26}O_{10}$  (546.54). Source: ZHU XUANG *Shiraiia bambusicola*. Ref: 660.

**19836 Shiraiachrome C**

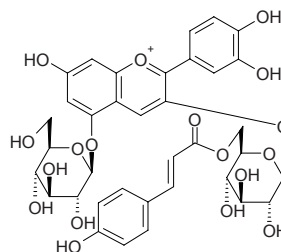
$C_{30}H_{24}O_9$  (528.52). Source: ZHU XUANG *Shiraiia bambusicola*. Ref: 660.

**19837 Shiromodiol diacetate**

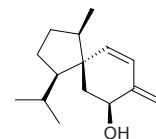
$C_{19}H_{30}O_5$  (338.45). Pharm: Insect antifeedant. Source: SAN YE DIAO ZHANG *Lindera triloba*. Ref: 658.

**19838 Shisonin**

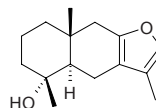
$C_{36}H_{37}O_{18}^+$  (757.69). Source: QIE ZI *Solanum melongena*, *Perilla* spp. Ref: 660.

**19839 Shizuka-acoradienol**

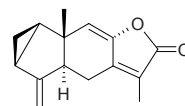
$C_{15}H_{24}O$  (220.36). Source: YIN XIAN CAO *Chloranthus japonicus*. Ref: 660.

**19840 Shizukafuranol**

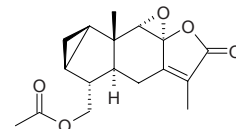
$C_{15}H_{22}O_2$  (234.34). Source: JIN SU LAN *Chloranthus spicatus*, YIN XIAN CAO *Chloranthus japonicus*. Ref: 660.

**19841 Shizukanolide B**

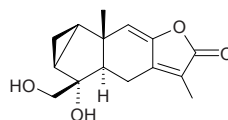
$C_{15}H_{16}O_2$  (228.29). Source: YIN XIAN CAO *Chloranthus japonicus*. Ref: 660.

**19842 Shizukanolide D**

$C_{17}H_{20}O_5$  (304.35). Source: YIN XIAN CAO *Chloranthus japonicus*. Ref: 660.

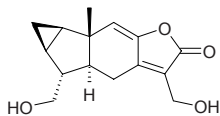
**19843 Shizukanolide E**

$C_{15}H_{18}O_4$  (262.31). Source: JI JI *Chloranthus serratus*, YIN XIAN CAO *Chloranthus japonicus*. Ref: 660, 1521.

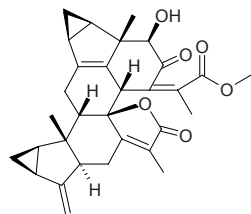


**19844 Shizukanolide F**

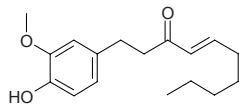
$C_{15}H_{18}O_4$  (262.31). **Source:** JI JI *Chloranthus serratus*, YIN XIAN CAO *Chloranthus japonicus*. **Ref:** 660, 1521.

**19845 Shizukaol A**

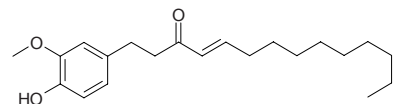
$C_{31}H_{34}O_6$  (5002.61). **Source:** YIN XIAN CAO *Chloranthus japonicus*. **Ref:** 660.

**19846 6-Shogaol**

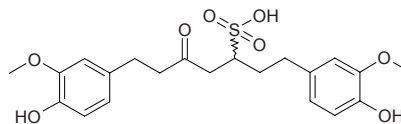
Shogaol; *trans*-6-Shogaol [555-66-8]  $C_{17}H_{24}O_3$  (276.38). Grey-yellow oil. **Pharm:** Antemetic (frog, 100mg/kg); antihypertensive (rat, 0.5mg/mL iv); free radical scavenger; enhances myocardial contractility and raises heart rate (*in vitro* rat heart, 3.6 $\mu$ mol/L); antihistamine (inhibits histamine release, rat peritoneal giant cells, caused by calcium); inhibits mesenteric venous contraction (mus, caused by arterenol and PGF<sub>2</sub>); platelet aggregation inhibitor (due to arachidonic acid, *in vitro*, IC<sub>50</sub> = 2.23 $\mu$ mol/L); inhibits rat skin passive allergy; 5-lipoxygenase inhibitor; cyclo-oxygenase inhibitor; prostaglandin biosynthesis inhibitor (IC<sub>50</sub> = 1.6 $\mu$ mol/L); insect antifeedant (termites, 1000mg/L); irritant; mutagen (TA100, TA535); nematocide; antagonist to body temperature reduction caused by 5-HT (mus, orl, 10mg/kg); molluscicide (toxic to shellfish); CYP3A4 inhibitor (IC<sub>50</sub> = 77.7 $\mu$ mol/L, control Ketoconazole, IC<sub>50</sub> = 0.245 $\mu$ mol/L)<sup>[4669]</sup>; CYP2D6 inhibitor inactive (IC<sub>50</sub> > 100 $\mu$ mol/L, control Quinidine, IC<sub>50</sub> = 0.078 $\mu$ mol/L)<sup>[4669]</sup>. **Source:** FANG XIANG JIANG *Zingiber aromaticum* (rhizome: yield = 0.000047%dw)<sup>[4669]</sup>, GAN JIANG *Zingiber officinale*, SHENG JIANG *Zingiber officinale*. **Ref:** 2, 900, 4669.

**19847 trans-10-Shogaol**

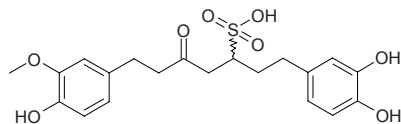
$C_{21}H_{32}O_3$  (332.49). **Pharm:** CYP3A4 inhibitor (IC<sub>50</sub> = 90.2 $\mu$ mol/L, control Ketoconazole IC<sub>50</sub> = 0.24 $\mu$ mol/L); CYP2D6 inhibitor (IC<sub>50</sub> = 45.7 $\mu$ mol/L, control Quinidine IC<sub>50</sub> = 0.068 $\mu$ mol/L). **Source:** FANG XIANG JIANG *Zingiber aromaticum* (rhizome). **Ref:** 4449.

**19848 Shogasulfonic acid A**

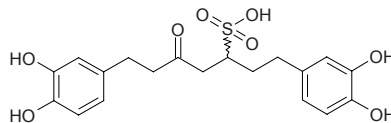
5-Sulfonyl-1,7-bis(4-hydroxy-3-methoxyphenyl)-heptan-3-one  $C_{21}H_{26}O_8S$  (438.50). Pale yellowish amorphous powder, mp 205°C (dec),  $[\alpha]_D^{21} = -0.5^\circ$  ( $c = 2.00$ , MeOH). **Source:** SHENG JIANG *Zingiber officinale*. **Ref:** 3361.

**19849 Shogasulfonic acid B**

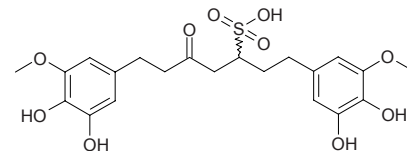
5-Sulfonyl-1-(4-hydroxy-3-methoxyphenyl)-7-(3,4-dihydroxyphenyl)-heptan-3-one  $C_{20}H_{24}O_8S$  (424.47). Pale green oil,  $[\alpha]_D^{21} = -1.0^\circ$  ( $c = 1.60$ , MeOH). **Source:** SHENG JIANG *Zingiber officinale*. **Ref:** 3361.

**19850 Shogasulfonic acid C**

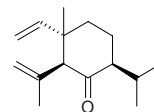
5-Sulfonyl-1,7-bis(3,4-dihydroxyphenyl)-heptan-3-one  $C_{19}H_{22}O_8S$  (410.45). Pale yellowish oily substance,  $[\alpha]_D^{21} = -5.6^\circ$  ( $c = 0.25$ , MeOH). **Source:** SHENG JIANG *Zingiber officinale*. **Ref:** 3361.

**19851 Shogasulfonic acid D**

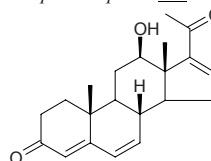
5-Sulfonyl-1,7-bis(4,5-dihydroxy-3-methoxyphenyl)-heptan-3-one  $C_{21}H_{26}O_{10}S$  (470.50). Pale yellowish crystalline powder, mp 154~158°C (dec),  $[\alpha]_D^{21} = -0.3^\circ$  ( $c = 1.00$ , MeOH). **Source:** SHENG JIANG *Zingiber officinale*. **Ref:** 3361.

**19852 Shyobunone**

$C_{13}H_{24}O$  (220.36). **Source:** BAI CHANG *Acorus calamus*. **Ref:** 6.

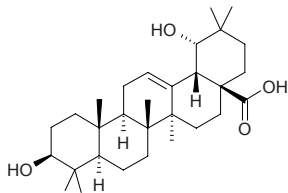
**19853 S-I**

$C_{21}H_{26}O_3$  (326.44). mp 210~212°C,  $[\alpha]_D = +69.5^\circ$ . **Source:** XIANG JIA PI *Periploca septium*. **Ref:** 2498.

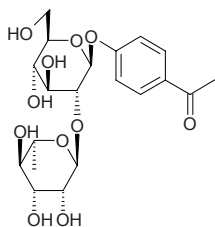


**19854 Siaresinolic acid**

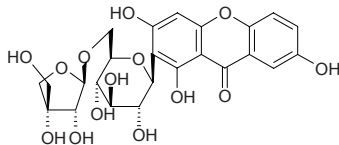
$C_{30}H_{48}O_4$  (472.71). mp 274~275°C. Source: YUE NAN AN XI XIANG *Styrax tonkinensis*. Ref: 6, 660.

**19855 Sibiricaphenone**

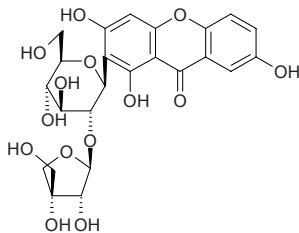
$C_{20}H_{28}O_{11}$  (444.44). Amorphous powder,  $[\alpha]_D^{23} = -62^\circ$  ( $c = 0.97$ , MeOH). Source: XI BO LI YA YUAN ZHI *Polygala sibirica*. Ref: 691.

**19856 Sibiricaxanthone A**

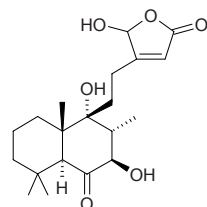
$C_{24}H_{26}O_{14}$  (538.47). Yellow amorphous powder;  $[\alpha]_D^{23} = +312^\circ$  ( $c = 0.85$ , MeOH). Source: XI BO LI YA YUAN ZHI *Polygala sibirica*. Ref: 691.

**19857 Sibiricaxanthone B**

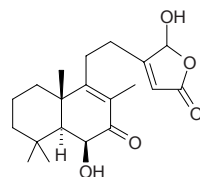
$C_{24}H_{26}O_{14}$  (538.47). Yellow amorphous powder;  $[\alpha]_D^{23} = -11^\circ$  ( $c = 1.44$ , MeOH). Source: XI BO LI YA YUAN ZHI *Polygala sibirica*. Ref: 691.

**19858 Sibiricinone A**

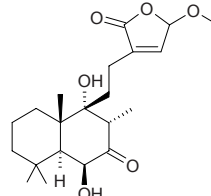
$C_{20}H_{30}O_6$  (366.46). Colorless oil,  $[\alpha]_D^{20} = +18.4^\circ$  ( $c = 0.64$ ,  $CHCl_3$ ). Source: XI YE YI MU CAO *Leonurus sibiricus* (aerial parts: yield = 0.00022%). Ref: 4744.

**19859 Sibiricinone B**

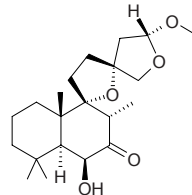
$C_{20}H_{28}O_5$  (348.44). Colorless oil,  $[\alpha]_D^{20} = +4.4^\circ$  ( $c = 0.18$ ,  $CHCl_3$ ). Source: XI YE YI MU CAO *Leonurus sibiricus* (aerial parts: yield = 0.00026%). Ref: 4744.

**19860 Sibiricinone C**

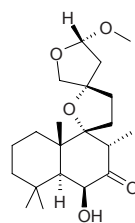
$C_{21}H_{32}O_6$  (380.49). Colorless oil,  $[\alpha]_D^{20} = +4.7^\circ$  ( $c = 1.58$ ,  $CHCl_3$ ). Source: XI YE YI MU CAO *Leonurus sibiricus* (aerial parts: yield = 0.00056%). Ref: 4744.

**19861 Sibiricinone D**

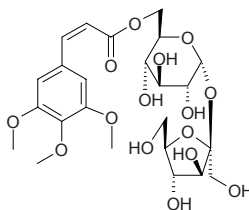
$C_{21}H_{34}O_5$  (366.5). Colorless oil. Source: XI YE YI MU CAO *Leonurus sibiricus* (aerial parts). Ref: 4744.

**19862 Sibiricinone E**

$C_{21}H_{34}O_5$  (366.5). Colorless oil. Source: XI YE YI MU CAO *Leonurus sibiricus* (aerial parts). Ref: 4744.

**19863 Sibiricose A<sub>2</sub>**

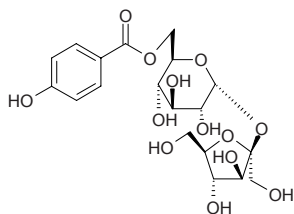
$C_{24}H_{34}O_{15}$  (562.53). Amorphous powder;  $[\alpha]_D^{23} = +19^\circ$  ( $c = 0.56$ , MeOH). Source: XI BO LI YA YUAN ZHI *Polygala sibirica*. Ref: 691.



**19864 Sibiricose A<sub>3</sub>**

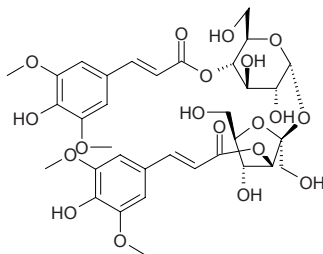
C<sub>19</sub>H<sub>26</sub>O<sub>13</sub> (462.41). Amorphous powder;  $[\alpha]_D^{23} = +29^\circ$  ( $c = 1.30$ , MeOH).

Source: XI BO LI YA YUAN ZHI *Polygala sibirica*. Ref: 691.

**19865 Sibiricose A<sub>4</sub>**

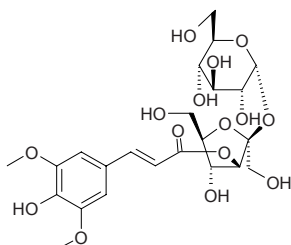
C<sub>34</sub>H<sub>42</sub>O<sub>19</sub> (754.70). Amorphous powder;  $[\alpha]_D^{23} = -23^\circ$  ( $c = 1.13$ , MeOH).

Source: XI BO LI YA YUAN ZHI *Polygala sibirica*. Ref: 691.

**19866 Sibiricose A<sub>6</sub>**

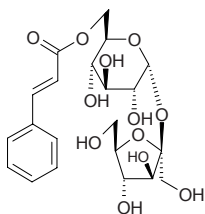
C<sub>23</sub>H<sub>32</sub>O<sub>15</sub> (548.50). Amorphous powder;  $[\alpha]_D^{23} = -2^\circ$  ( $c = 0.72$ , MeOH).

Source: XI BO LI YA YUAN ZHI *Polygala sibirica*. Ref: 691.

**19867 Sibirioside A**

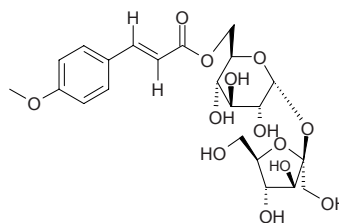
C<sub>21</sub>H<sub>28</sub>O<sub>12</sub> (472.45). Colorless prismatic crystals, mp 110–112°C,  $[\alpha]_D =$

$-29.6^\circ$  ( $c = 0.20$ , methanol). Source: ZHAN LONG JIAN *Veronicastrum sibiricum*. Ref: 337.

**19868 Sibirioside B**

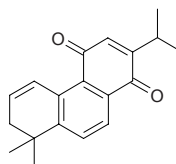
C<sub>22</sub>H<sub>30</sub>O<sub>13</sub> (502.48). Colorless prismatic crystals, mp 108–110°C,  $[\alpha]_D =$

$-20.18^\circ$  ( $c = 0.34$ , methanol). Source: ZHAN LONG JIAN *Veronicastrum sibiricum*. Ref: 337.

**19869 Sibiriquinone A**

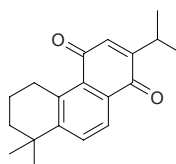
C<sub>19</sub>H<sub>20</sub>O<sub>2</sub> (280.37). Red solid,  $[\alpha]_D^{25} = +16.6^\circ$  ( $c = 0.2$ , MeOH). Pharm:

Immunosuppressant (lymphocyte transformation assay, control Concanavalin A, 5μg/mL, InRt = -12%, 20μg/mL, InRt = 32%, 80μg/mL, InRt = 41%; control Dexamethasone, 50μg/mL, InRt = 63%). Source: ZHAN LONG JIAN *Veronicastrum sibiricum* (aerial parts). Ref: 4260.

**19870 Sibiriquinone B**

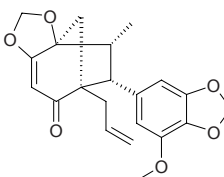
C<sub>19</sub>H<sub>22</sub>O<sub>2</sub> (282.39). Red solid,  $[\alpha]_D^{25} = +7.8^\circ$  ( $c = 0.2$ , MeOH). Pharm:

Immunosuppressant (lymphocyte transformation assay, control Concanavalin A, 5μg/mL, InRt = 12%, 20μg/mL, InRt = 35%, 80μg/mL, InRt = 52%; control Dexamethasone, 50μg/mL, InRt = 63%). Source: ZHAN LONG JIAN *Veronicastrum sibiricum* (aerial parts). Ref: 4260.

**19871 Sibyllenone**

C<sub>21</sub>H<sub>22</sub>O<sub>6</sub> (370.41). Colorless crystals, mp 160°C,  $[\alpha]_D^{23} = 0^\circ$  ( $c = 0.0021$ ,

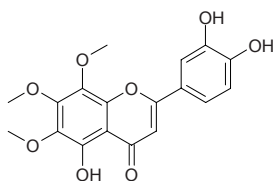
CHCl<sub>3</sub>). Pharm: Anti-inflammatory (5-LOX inhibitor, IC<sub>50</sub> = 18.6μmol/L; COX-1 inhibitor, > 500μmol/L, inactive, control Indomethacin, IC<sub>50</sub> = 3.1μmol/L, COX-2 inhibitor, > 500μmol/L, inactive, Indomethacin, IC<sub>50</sub> = 188μmol/L). Source: NAN FEI ZHANG GUI *Ocotea bullata* (stem cortex). Ref: 3971.



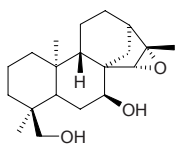


**19872 Sideritiflavone**

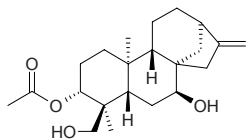
[70360-12-2] C<sub>18</sub>H<sub>16</sub>O<sub>8</sub> (360.32). Yellow columnar crystals, mp 223~226°C (MeOH). Source: DONG LING CAO *Rabdosia rubescens* (stem and leaf). Ref: 1521, 4906.

**19873 Sideroxol**

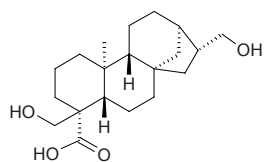
C<sub>20</sub>H<sub>32</sub>O<sub>3</sub> (320.48). Colorless needles (CHCl<sub>3</sub>). Source: *Sideritis ozturkii* (aerial parts). Ref: 3827.

**19874 Sidol**

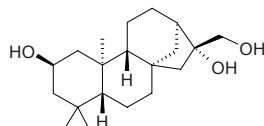
C<sub>22</sub>H<sub>34</sub>O<sub>4</sub> (362.51). White resin (CHCl<sub>3</sub>). Source: *Sideritis ozturkii* (aerial parts). Ref: 3827.

**19875 Siegesbeckic acid**

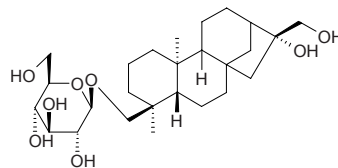
C<sub>20</sub>H<sub>32</sub>O<sub>4</sub> (336.48). mp 251~251.5°C, [α]<sub>D</sub><sup>26</sup> = -108° (c = 0.277, C<sub>5</sub>H<sub>5</sub>N). Source: XIAN GENG XI XIAN *Siegesbeckia orientalis* var. *pubescens* [Syn. *Siegesbeckia pubescens*], XI XIAN *Siegesbeckia orientalis*. Ref: 9, 660.

**19876 Siegesbeckiol**

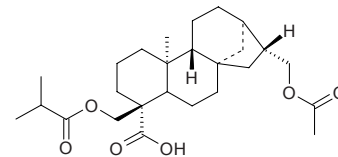
C<sub>20</sub>H<sub>34</sub>O<sub>3</sub> (322.49). mp 271~273°C, [α]<sub>D</sub><sup>28</sup> = -27.6° (c = 0.290, C<sub>5</sub>H<sub>5</sub>N), mp 268~269°C, [α]<sub>D</sub><sup>22</sup> = -26.7° (c = 0.74, CHCl<sub>3</sub>). Source: XIAN GENG XI XIAN *Siegesbeckia orientalis* var. *pubescens* [Syn. *Siegesbeckia pubescens*], XI XIAN *Siegesbeckia orientalis*, DAN HUANG XIANG CHA CAI *Isodon flavidus*. Ref: 9, 660, 4067.

**19877 Siegesbeckioside**

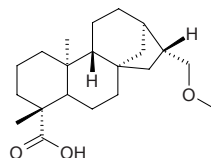
C<sub>26</sub>H<sub>44</sub>O<sub>8</sub> (484.64). mp 276.5~277.5°C, [α]<sub>D</sub><sup>25</sup> = -29.2° (c = 0.290, C<sub>5</sub>H<sub>5</sub>N). Source: XIAN GENG XI XIAN *Siegesbeckia orientalis* var. *pubescens* [Syn. *Siegesbeckia pubescens*]. Ref: 9.

**19878 Siegesetheric acid I**

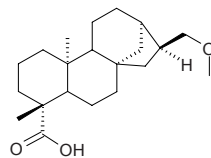
*ent*-17-Acetoxy-18-isobutyryloxy-16(α)-kauran-19-oic acid C<sub>26</sub>H<sub>40</sub>O<sub>6</sub> (448.61). White acicular crystals (acetic ester), mp 152~153°C. Source: XI XIAN *Siegesbeckia orientalis*. Ref: 377.

**19879 Siegesetheric acid II**

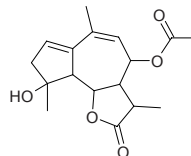
*ent*-17-Ethoxy-16(α)-kauran-19-oic acid C<sub>22</sub>H<sub>36</sub>O<sub>3</sub> (348.53). White lamellar crystals (acetic ester), mp 202~204°C. Source: XI XIAN *Siegesbeckia orientalis*. Ref: 377.

**19880 Siegesmethyletheric acid**

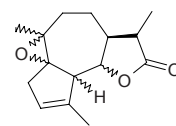
C<sub>21</sub>H<sub>34</sub>O<sub>3</sub> (334.5). Colorless acicular crystals (acetone) mp 231~232°C. Source: XIAN GENG XI XIAN *Siegesbeckia orientalis* var. *pubescens* [Syn. *Siegesbeckia pubescens*]. Ref: 798.

**19881 Sieversin**

C<sub>17</sub>H<sub>22</sub>O<sub>5</sub> (306.36). mp 128~131°C. Source: BAI HAO *Artemisia sieversiana*. Ref: 6.

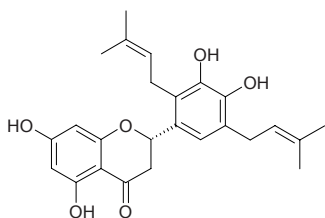
**19882 Sieversinin**

C<sub>15</sub>H<sub>20</sub>O<sub>3</sub> (248.32). mp 141~142°C. Source: BAI HAO *Artemisia sieversiana*. Ref: 6.

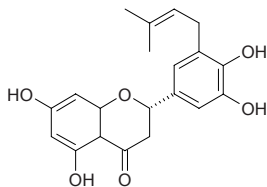


**19883 Sigmoidin A**

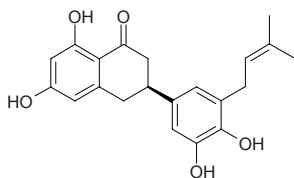
$C_{26}H_{30}O_5$  (422.53). **Pharm:** Antimalarial (*Plasmodium falciparum* D6,  $IC_{50} = (5.8 \pm 0.6) \mu\text{g/mL}$ , control Chloroquine,  $IC_{50} = (0.009 \pm 0.002) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.04 \pm 0.01) \mu\text{g/mL}$ ; *Plasmodium falciparum* W2,  $IC_{50} = (5.9 \pm 1.1) \mu\text{g/mL}$ , Chloroquine,  $IC_{50} = (0.08 \pm 0.01) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.21 \pm 0.01) \mu\text{g/mL}$ )<sup>[3879]</sup>; antioxidant (DPPH scavenger,  $100 \mu\text{mol/L}$ , InRt = 93%, control Quercetin 3-*O*-glucoside, InRt = 92%)<sup>[4932]</sup>; LTB<sub>4</sub> production inhibitor (rat peritoneal leukocytes,  $100 \mu\text{mol/L}$ , InRt = 95%,  $IC_{50} = 31 \mu\text{mol/L}$ , control Apigenin  $IC_{50} = 14 \mu\text{mol/L}$ )<sup>[4932]</sup>; anti-inflammatory (*in vivo*, mouse ear edema induced by phospholipase A2, 5mg/kg, orl, InRt = 20%, Cyproheptadine, InRt = 74%)<sup>[4932]</sup>. **Source:** A BI XI NI YA CI TONG *Erythrina abyssinica* (stem cortex), AI SI XING CI TONG *Erythrina sigmoidea*. **Ref:** 1521, 3879, 4932.

**19884 Sigmoidin B**

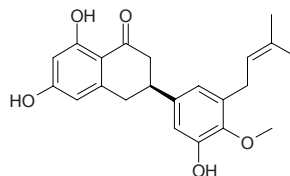
$C_{20}H_{22}O_6$  (358.39). **Source:** GAN CAO *Glycyrrhiza uralensis*. **Ref:** 660.

**19885 Sigmoidin B**

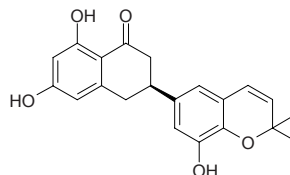
$C_{21}H_{22}O_5$  (354.41). **Pharm:** Antimalarial (*Plasmodium falciparum* D6,  $IC_{50} = (8.1 \pm 2.2) \mu\text{g/mL}$ , control Chloroquine,  $IC_{50} = (0.009 \pm 0.002) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.04 \pm 0.01) \mu\text{g/mL}$ ; *Plasmodium falciparum* W2,  $IC_{50} = (9.3 \pm 2.7) \mu\text{g/mL}$ , Chloroquine,  $IC_{50} = (0.08 \pm 0.01) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.21 \pm 0.01) \mu\text{g/mL}$ )<sup>[3879]</sup>; antioxidant (DPPH scavenger,  $100 \mu\text{mol/L}$ , InRt = 86%, control Quercetin 3-*O*-glucoside, InRt = 92%)<sup>[4932]</sup>; LTB<sub>4</sub> production inhibitor (rat peritoneal leukocytes,  $100 \mu\text{mol/L}$ , InRt = 44%, control Apigenin  $IC_{50} = 14 \mu\text{mol/L}$ )<sup>[4932]</sup>; anti-inflammatory (*in vivo*, mouse ear edema induced by phospholipase A2, 5mg/kg, orl, InRt = 59%, cyproheptadine, InRt = 74%)<sup>[4932]</sup>. **Source:** A BI XI NI YA CI TONG *Erythrina abyssinica* (stem cortex), AI SI XING CI TONG *Erythrina sigmoidea*. **Ref:** 1521, 3879, 4932.

**19886 Sigmoidin B-4'-methyl ether**

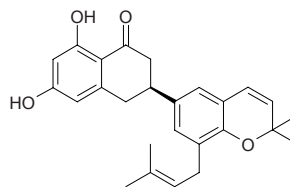
$C_{22}H_{24}O_5$  (368.43). **Pharm:** Antimalarial (*Plasmodium falciparum* D6,  $IC_{50} = (13.0 \pm 2.0) \mu\text{g/mL}$ , control Chloroquine,  $IC_{50} = (0.009 \pm 0.002) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.04 \pm 0.01) \mu\text{g/mL}$ ; *Plasmodium falciparum* W2,  $IC_{50} = (12.7 \pm 2.9) \mu\text{g/mL}$ , Chloroquine,  $IC_{50} = (0.08 \pm 0.01) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.21 \pm 0.01) \mu\text{g/mL}$ )<sup>[3879]</sup>. **Source:** A BI XI NI YA CI TONG *Erythrina abyssinica* (stem cortex), BO SHI CI TONG *Erythrina berteroaana*. **Ref:** 1521, 3879.

**19887 Sigmoidin C**

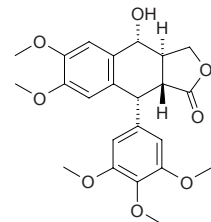
$C_{21}H_{20}O_5$  (352.39). **Pharm:** Antimalarial (*Plasmodium falciparum* D6,  $IC_{50} = (17.8 \pm 3.6) \mu\text{g/mL}$ , control Chloroquine,  $IC_{50} = (0.009 \pm 0.002) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.04 \pm 0.01) \mu\text{g/mL}$ ; *Plasmodium falciparum* W2,  $IC_{50} = (15.8 \pm 3.9) \mu\text{g/mL}$ , Chloroquine,  $IC_{50} = (0.08 \pm 0.01) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.21 \pm 0.01) \mu\text{g/mL}$ )<sup>[3879]</sup>. **Source:** A BI XI NI YA CI TONG *Erythrina abyssinica* (stem cortex), AI SI XING CI TONG *Erythrina sigmoidea*. **Ref:** 1521, 3879.

**19888 Sigmoidin E**

$C_{26}H_{28}O_4$  (404.51). **Pharm:** Antimalarial (*Plasmodium falciparum* D6,  $IC_{50} = (9.1 \pm 2.3) \mu\text{g/mL}$ , control Chloroquine,  $IC_{50} = (0.009 \pm 0.002) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.04 \pm 0.01) \mu\text{g/mL}$ ; *Plasmodium falciparum* W2,  $IC_{50} = (11.8 \pm 2.5) \mu\text{g/mL}$ , Chloroquine,  $IC_{50} = (0.08 \pm 0.01) \mu\text{g/mL}$ , Quinine,  $IC_{50} = (0.21 \pm 0.01) \mu\text{g/mL}$ )<sup>[3879]</sup>. **Source:** A BI XI NI YA CI TONG *Erythrina abyssinica* (stem cortex), AI SI XING CI TONG *Erythrina sigmoidea*. **Ref:** 1521, 3879.

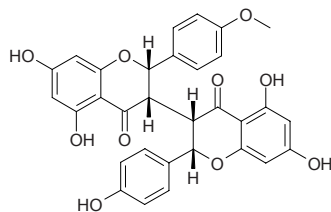
**19889 Sikkimotoxin**

[18651-67-7]  $C_{23}H_{26}O_8$  (430.46). mp 120°C. **Pharm:** Antineoplastic (cutaneous carcinoma); toxin (used only externally in clinic). **Source:** TAO ER QI *Podophyllum emodii* [Syn. *Podophyllum emodii* var. *chinense*; *Podophyllum sikkimense*; *Sinopodophyllum emodii*]. **Ref:** 5.

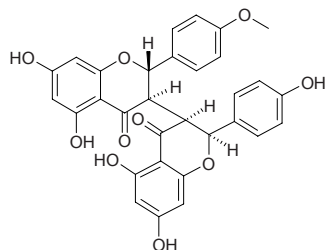


**19890 Sikokianin A**

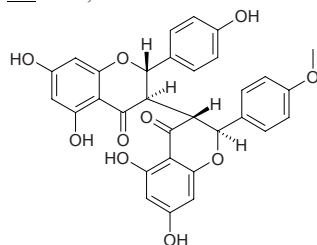
[106293-99-6] C<sub>31</sub>H<sub>24</sub>O<sub>10</sub> (556.53). Needles (MeOH aq.), mp 230–232°C, [ $\alpha$ ]<sub>D</sub> = +150° (c = 0.74, MeOH). **Pharm:** Antimitotic and antifungal (*Pyricularia oryzae*, 400µg/mL, middle inhibition)<sup>[4476]</sup>. **Source:** LANG DU *Stellera chamaejasme*, SI GUO YAO HUA *Wikstroemia sikokiana*. **Ref:** 2542, 4476.

**19891 Sikokianin B**

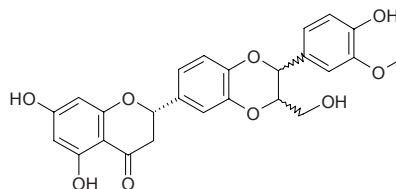
[106235-33-0] C<sub>31</sub>H<sub>24</sub>O<sub>10</sub> (556.53). Amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>30</sup> = +199.7° (c = 1.0, MeOH). **Pharm:** Antimalarial (chloroquine-resistant K1 strain of *Plasmodium falciparum*, IC<sub>50</sub> = 0.54µg/mL, control Chloroquine, IC<sub>50</sub> = 0.56µg/mL, Artemisinin, IC<sub>50</sub> = 0.0097µg/mL; drug-sensitive FCR3 strain, IC<sub>50</sub> = 0.54µg/mL, control Chloroquine, IC<sub>50</sub> = 0.014µg/mL, Artemisinin, IC<sub>50</sub> = 0.0068µg/mL)<sup>[4926]</sup>; cytotoxic (MRC-5 cells, IC<sub>50</sub> = 22.54µg/mL, control Chloroquine, IC<sub>50</sub> = 18.54µg/mL, Artemisinin, IC<sub>50</sub> = 45.12µg/mL)<sup>[4926]</sup>; NO production inhibitor (mus, macrophage-like cell line, RAW264.7, activated by LPS and recombinant mouse IFN- $\gamma$ , IC<sub>50</sub> = 50–60µmol/L, control Quercetin, IC<sub>50</sub> = 24.8µmol/L)<sup>[2541]</sup>. **Source:** LIAO GE WANG GEN *Wikstroemia indica*. **Ref:** 2541, 4926.

**19892 Sikokianin C**

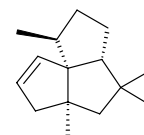
[159813-69-1] C<sub>31</sub>H<sub>24</sub>O<sub>10</sub> (556.53). Amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>30</sup> = +3.1° (c = 1.0, MeOH). **Pharm:** Antimalarial (chloroquine-resistant K1 strain of *Plasmodium falciparum*, IC<sub>50</sub> = 0.56µg/mL, control Chloroquine, IC<sub>50</sub> = 0.56µg/mL, Artemisinin, IC<sub>50</sub> = 0.0097µg/mL; drug-sensitive FCR3 strain, IC<sub>50</sub> = 0.34µg/mL, control Chloroquine, IC<sub>50</sub> = 0.014µg/mL, Artemisinin, IC<sub>50</sub> = 0.0068µg/mL)<sup>[4926]</sup>; cytotoxic (MRC-5 cells, IC<sub>50</sub> = 11.21µg/mL, control Chloroquine, IC<sub>50</sub> = 18.54µg/mL, Artemisinin, IC<sub>50</sub> = 45.12µg/mL)<sup>[4926]</sup>; NO production inhibitor (mus, macrophage-like cell line, RAW264.7, activated by LPS and recombinant mouse IFN- $\gamma$ , IC<sub>50</sub> = 50–60µmol/L, control Quercetin, IC<sub>50</sub> = 24.8µmol/L)<sup>[2541]</sup>. **Source:** LIAO GE WANG GEN *Wikstroemia indica*. **Ref:** 2541, 4926.

**19893 Silandrin**

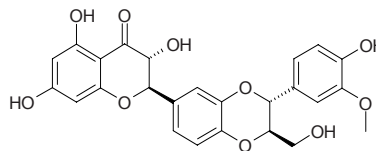
[70815-32-6] C<sub>25</sub>H<sub>22</sub>O<sub>9</sub> (466.45). **Pharm:** Antihepatotoxin. **Source:** SHUI FEI JI *Silybum marianum*. **Ref:** 658.

**19894 Silphinene**

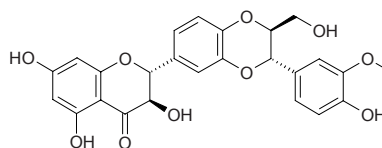
C<sub>15</sub>H<sub>24</sub> (204.36). **Pharm:** Anti-Inflammatory (anti-oedema, control oedema = (7.8±0.3)mg, 100µg/cm<sup>2</sup> mixture with modhephene and isocomene, oedema = (4.9±0.4)mg, p<0.05, reduction = 37%, Indomethacin oedema = (3.4±0.3)mg, p<0.05, reduction = 56%). **Source:** GAO SHAN HUO RONG CAO *Leontopodium alpinum* (root). **Ref:** 4985.

**19895 Silybin**

Silybin A; Silibinin [22888-70-6] C<sub>25</sub>H<sub>22</sub>O<sub>10</sub> (482.45). Yellowish flat crystals (MeOH–H<sub>2</sub>O), mp 162–163°C, [ $\alpha$ ]<sub>D</sub> = +20° (c = 0.21, acetone); soluble in acetone, methanol, acetic ester, ethanol, slightly soluble in chloroform, insoluble in water.<sup>[5507]</sup> **Pharm:** Antihepatotoxin; used in treatment of hepatitis; LOX inhibitor<sup>[4415]</sup>; COX inhibitor<sup>[4415]</sup>; anti-inflammatory (NO production inhibitor, peritoneal macrophages in LPS-treated mouse, reduces NO production and iNOS gene expression, by inhibiting NF- $\kappa$ B)<sup>[4415]</sup>; LD<sub>50</sub> (mus, iv) = (1056±35)mg/kg. **Source:** SHUI FEI JI *Silybum marianum* (dried ripe fruit: content = 1.31%<sup>[5508]</sup>). **Ref:** 658, 4415, 4719, 5507, 5508.

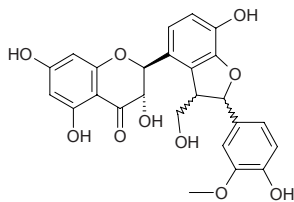
**19896 Silybin B**

C<sub>25</sub>H<sub>22</sub>O<sub>10</sub> (482.45). Yellow grain crystals (MeOH–H<sub>2</sub>O), mp 158–160°C, [ $\alpha$ ]<sub>D</sub> = –1.07° (c = 0.28, acetone). **Source:** SHUI FEI JI *Silybum marianum* (seed). **Ref:** 4719.

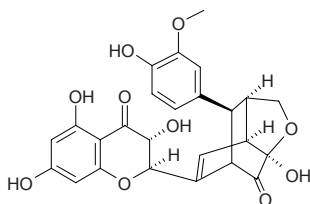


**19897 Silychristin**

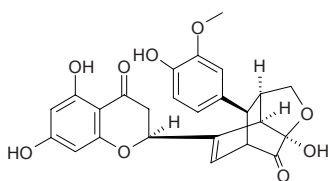
[33889-69-9]  $C_{25}H_{22}O_{10}$  (482.45). mp 174~176°C (water),  $[\alpha]_D^{23} = +81.4^\circ$  (pyridine). **Pharm:** Plant growth inhibitor; used in treatment of hepatitis; LOX inhibitor<sup>[4415]</sup>; COX inhibitor<sup>[4415]</sup>. **Source:** SHUI FEI JI *Silybum marianum*. **Ref:** 661, 658, 4415.

**19898 Silydianin**

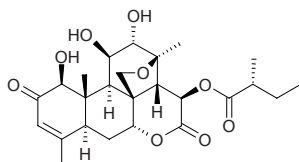
[29782-68-1]  $C_{25}H_{22}O_{10}$  (482.45). mp 191°C,  $[\alpha]_D^{24} = +175^\circ$  (acetone). **Pharm:** Antihepatotoxin; peroxidase inhibitor; plant growth inhibitor; LOX inhibitor<sup>[4415]</sup>; COX inhibitor<sup>[4415]</sup>. **Source:** SHUI FEI JI *Silybum marianum*. **Ref:** 661, 4415.

**19899 Silymonin**

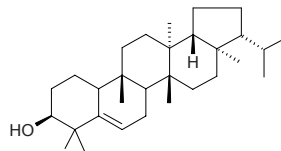
$C_{25}H_{22}O_9$  (466.45). **Source:** SHUI FEI JI *Silybum marianum*. **Ref:** 660.

**19900 Simalikalactone D**

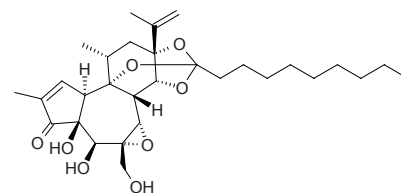
[35321-80-3]  $C_{25}H_{34}O_9$  (478.54). mp 228~230°C. **Pharm:** Antiamebic; anti-neoplastic (mus  $P_{388}$ , 1mg/kg, biotic prolonged rate = (65~75)%, KB *in vitro*,  $ED_{50} = 0.01\text{--}0.001\mu\text{g/mL}$ ); antimalarial (*Plasmodium falciparum*,  $CIC = 0.002\mu\text{g/mL}$ ); antiviral. **Source:** FEI ZHOU KU MU *Quassia africana*, KU SHU PI *Picrasma quassioides* [Syn. *Picrasma ailanthoides*], MEI ZHOU KU MU *Quassia amara*. **Ref:** 5, 658.

**19901 Simiarenol**

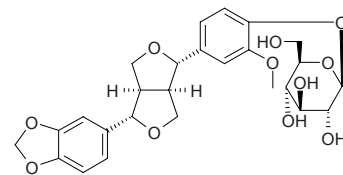
$C_{30}H_{50}O$  (426.73). **Source:** BAI MAO GEN<sup>(1)</sup> *Imperata cylindrica* var. *major*, DONG GUA PI *Benincasa hispida*, DONG GUA ZI *Benincasa hispida*, LIU JI NU *Artemisia anomala* (whole herb with flowers), YI DIAN HONG *Emilia sonchifolia*. **Ref:** 660.

**19902 Simplexin**

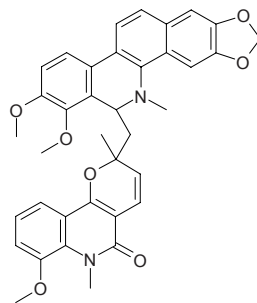
Wikstrotoxin [1404-62-2]  $C_{30}H_{44}O_8$  (532.68). **Pharm:** Causes pulmonary heart disease (taken long-term); causes St. George disease (ox). **Source:** LANG DU *Stellera chamaejasme*, SHAN DI YAO HUA *Wikstroemia monticola*, DAN ZHI DAO HUA *Pimelea simplex*. **Ref:** 658, 660, 1521.

**19903 Simplexoside**

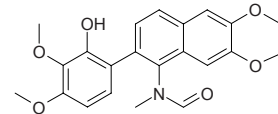
$C_{26}H_{30}O_{11}$  (518.53). **Pharm:** Antioxidant; CNS depressant. **Source:** DAN JUE CHUANG *Justicia simplex*. **Ref:** 658.

**19904 Simulanoquinoline**

[155416-22-1]  $C_{37}H_{34}N_2O_7$  (618.69). **Pharm:** Platelet aggregation inhibitor; DNA isomerase inhibitor; antibacterial; cytotoxic. **Source:** YE HUA JIAO GEN *Zanthoxylum simulans*. **Ref:** 2176.

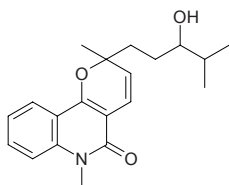
**19905 Simulansamide**

[176713-29-4]  $C_{22}H_{23}NO_6$  (397.43). **Pharm:** Platelet aggregation inhibitor; DNA isomerase inhibitor; antibacterial; cytotoxic. **Source:** YE HUA JIAO GEN *Zanthoxylum simulans*. **Ref:** 1521, 2176.

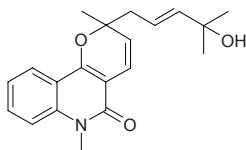


**19906 Simulansine**

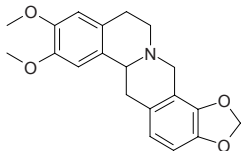
[176520-66-4] C<sub>20</sub>H<sub>25</sub>NO<sub>3</sub> (327.43). **Pharm:** Platelet aggregation inhibitor; DNA isomerase inhibitor; antibacterial; cytotoxic. **Source:** YE HUA JIAO GEN *Zanthoxylum simulans*. **Ref:** 2176.

**19907 Simulenoline**

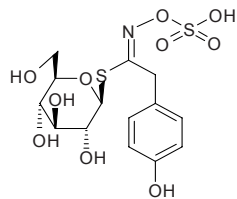
C<sub>20</sub>H<sub>23</sub>NO<sub>3</sub> (325.41). **Pharm:** Platelet aggregation inhibitor; DNA isomerase inhibitor; antibacterial; cytotoxic. **Source:** YE HUA JIAO GEN *Zanthoxylum simulans*. **Ref:** 2176.

**19908 Sinactine**

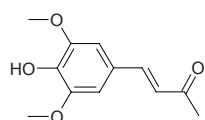
C<sub>20</sub>H<sub>21</sub>NO<sub>4</sub> (339.39). mp (-) 175°C, (±) 168°C. **Source:** LI CHUN HUA *Papaver commutatum* [Syn. *Papaver rhoeas*], QING FENG TENG *Sinomenium acutum*. **Ref:** 6.

**19909 Sinalbine**

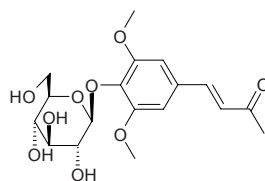
Inapine glucosinolate C<sub>14</sub>H<sub>19</sub>NO<sub>10</sub>S<sub>2</sub> (425.44). mp 139°C (anhydrate). **Pharm:** Antifungal (*Trichophyton* sp., *Oidium porriginis*); irritant. **Source:** BAI JIE ZI *Sinapis alba* [Syn. *Brassica alba*; *Brassica hirta*], BAN LAN GEN *Isatis indigoica*, BO NIANG HAO *Descurainia sophia*, LAI FU ZI *Raphanus sativus*, TING LI ZI *Lepidium apetalum* [Syn. *Lepidium micranthum*], YE OU BAI JIE *Sinapis arvensis*. **Ref:** 6, 658, 660.

**19910 Sinapaldehyde**

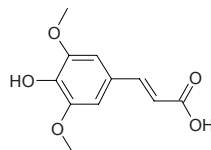
[4206-58-0] C<sub>11</sub>H<sub>12</sub>O<sub>4</sub> (208.22). **Pharm:** Cytotoxic (quinone reductase induction assay in cultured Hepa1c1c7 mouse hepatoma cells)<sup>[5038]</sup>; detumescent (rat ears); prostaglandin biosynthetase inhibitor. **Source:** HEI HU TAO *Juglans nigra*, HOU PO *Magnolia officinalis*, TAI WAN FU RONG *Hibiscus taiwanensis*, YIN BAI QI *Acer saccharinum*, *Quercus* sp., *Aglaia ponapensis*. **Ref:** 2, 658, 2529, 5038.

**19911 Sinapaldehyde glucoside**

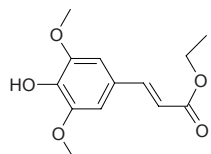
C<sub>17</sub>H<sub>22</sub>O<sub>9</sub> (370.36). **Source:** JIU BI YING *Ilex rotunda*. **Ref:** 660.

**19912 Sinapic acid**

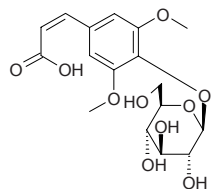
C<sub>11</sub>H<sub>12</sub>O<sub>5</sub> (224.22). mp 192°C. **Pharm:** Antibacterial; antifungal; antihepatotoxin. **Source:** DI SHAO GUA *Cynanchum thesioides*, HUI XIANG JING YE *Foeniculum vulgare*, JIA DU XING CAI *Lepidium sativum*, JIE ZI *Brassica juncea*, LAO SHU GUA *Capparis spinosa*, LI MENG GEN *Citrus limonia*, LI MENG YE *Citrus limonia*, NAN FANG OU SHI NAN *Erica australis*, NING MENG *Citrus limon*, NING MENG PI *Citrus limon*, OU XI XIN *Asarum europaeum*, PU<sup>(2)</sup> TAO *Vitis vinifera*, SI ZI TAN *Pterocarpus santalinus*, YANG CONG *Allium cepa*, YE JIE *Brassica oleracea*, YI ZHU QIAN MA *Urtica dioica*, occurs in many plants (a common const. of plants and fruits. Found by Bate-Smith in 26% of investigated dicotyledonous and 57% of monocotyledonous spp.). **Ref:** 6, 658, 660, 1521.

**19913 Sinapic acid ethyl ester**

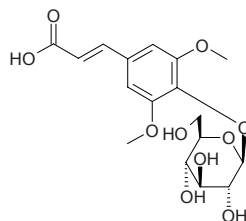
C<sub>13</sub>H<sub>16</sub>O<sub>5</sub> (252.27). **Source:** BO NIANG HAO *Descurainia Sophia* (seeds). **Ref:** 2548.

**19914 cis-Sinapic acid glucoside**

C<sub>17</sub>H<sub>22</sub>O<sub>10</sub> (386.36). **Source:** BO NIANG HAO *Descurainia sophia* **Ref:** 660.

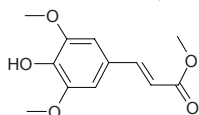
**19915 trans-Sinapic acid glucoside**

C<sub>17</sub>H<sub>22</sub>O<sub>10</sub> (386.36). **Source:** BO NIANG HAO *Descurainia sophia* **Ref:** 660.

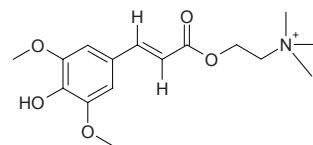


**19916 trans-Sinapic acid methylester**

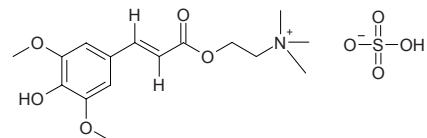
3-(4-Hydroxy-3,5-dimethoxy-phenyl)-acrylic acid methyl ester  $C_{12}H_{14}O_5$  (238.24). Slightly yellow powder; colorless crystals, mp 83~85°C,  $[\alpha]_D^{22} = -8.1^\circ$  ( $CHCl_3$ ). **Pharm:** Cytotoxic (*in vitro* antiproliferative activity, LoVo,  $IC_{50} > 40 \mu\text{mol/L}$ , control Doxorubicin,  $IC_{50} = (0.04 \pm 0.01) \mu\text{mol/L}$ ). **Source:** PU TONG YUAN ZHI *Polygala vulgaris*, SHUI GAN CAO *Amsonia sinensis*. **Ref:** 2092, 4246.

**19917 Sinapine**

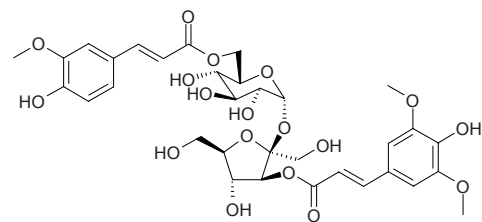
$C_{16}H_{24}NO_5$  (310.37). mp 179°C. **Source:** BAI JIE ZI *Sinapis alba* [Syn. *Brassica alba*; *Brassica hirta*] (dried ripe seed: content (sulfofuranate) = 0.45%<sup>[5508]</sup>), JIE ZI *Brassica juncea*, LAI FU ZI *Raphanus sativus* (ripe seed: content scope of 5 origins = 0.17%~0.36%, mean content = 0.25%<sup>[5508]</sup>). **Ref:** 6, 5508.

**19918 Sinapine bisulfate**

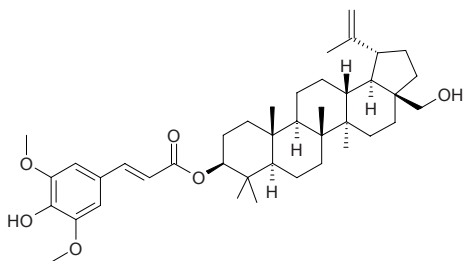
$C_{16}H_{25}NO_9S$  (414.44). **Pharm:** Antihypertensive. **Source:** LAI FU ZI *Raphanus sativus* (seed: content = 0.21%). **Ref:** 5501.

**19919 3'-Sinapoyl-6-feruloylsucrose**

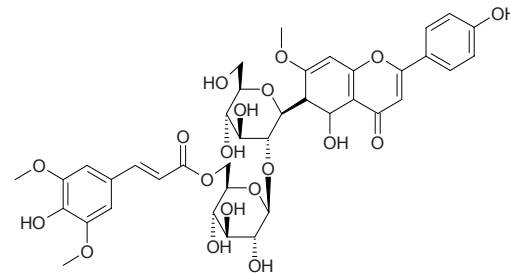
$C_{33}H_{40}O_{18}$  (724.68). Amorphous powder,  $[\alpha]_D^{25} = -69.11^\circ$  ( $c = 0.34$ , MeOH). **Source:** CHOU CAO *Ruta graveolens* (dried aerial parts). **Ref:** 3073.

**19920 3β-trans-Sinapoyloxy-20(29)-en-28-ol**

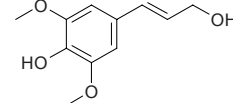
$C_{41}H_{60}O_6$  (648.93). Pale yellow amorphous powder ( $CHCl_3$ -MeOH), mp 200°C (dec),  $[\alpha]_D^{22} = +22.5^\circ$  ( $c = 0.16$ , MeOH). **Source:** FEI LV BIN PIAO SHU *Celtis philippinensis*. **Ref:** 2060.

**19921 6'''-Sinapoylspinosin**

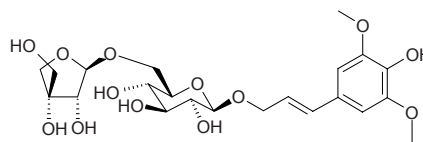
$C_{39}H_{44}O_{19}$  (816.77). **Source:** DA ZAO *Ziziphus jujuba*, SUAN ZAO REN *Ziziphus jujuba* var. *spinosa*. **Ref:** 2.

**19922 Sinapyl alcohol**

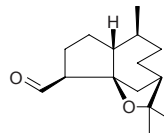
3-(4-Hydroxy-3,5-dimethoxyphenyl)-prop-2-enol [537-33-7]  $C_{11}H_{14}O_4$  (210.23). **Pharm:** Precursor to biosynthesis of lignin (in angiosperms); anti-inflammatory (mouse, inhibits increased vascular permeability by acetic acid, 30mg/(kg-d), orl, InRt = 38%, control Indomethacin, 100mg/(kg-d), orl, InRt = 45%<sup>[4073]</sup>); anti-inflammatory (rat, acute paw edema by carrageen, 30mg/(kg-d), orl, 1h, 3h, 5h, InRt = 17%, 41%, 21%, control ibuprofen, 100mg/(kg-d), orl, 1h, 3h, 5h, InRt = 42%, 55%, 47%<sup>[4073]</sup>); analgesic (mouse: acetic acid induced writhing, 30mg/(kg-d), orl, InRt = 55%, control Aspirin, 100mg/(kg-d), orl, InRt = 68%; hot plate test, 30mg/(kg-d), orl, increased action time = 83%; control Morphine, increased action time = 138%<sup>[4073]</sup>). **Source:** MAO PAO TONG *Paulownia tomentosa*, QIAN MA *Urtica cannabina*, TIAN NV MU LAN *Magnolia sieboldii* (stem cortex), *Viscum* sp. **Ref:** 658, 660, 4073.

**19923 Sinapyl 9-O-[β-D-apiofuranosyl(1→6)]-O-β-D-glucopyranoside**

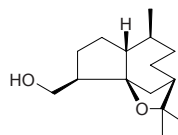
$C_{22}H_{32}O_{13}$  (504.49). White powder, mp 284~286°C,  $[\alpha]_D^{20} = +13.2^\circ$  ( $c = 0.50$ ,  $H_2O$ ). **Pharm:** Antioxidant (*in vitro*, effect on conjugated diene formation of LDL or MDA level in rat brain). **Source:** SHI LIU ZHONG ZI *Punica granatum* (seed: yield = 0.0003%). **Ref:** 4792.

**19924 Sinenofuranal**

$C_{15}H_{24}O_2$  (236.36). **Source:** BAI MU XIANG *Aquilaria sinensis*. **Ref:** 13.

**19925 Sinenofuranol**

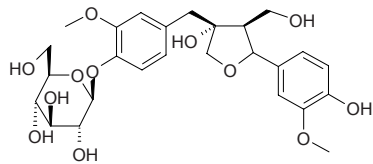
$C_{15}H_{26}O_2$  (238.37). **Source:** BAI MU XIANG *Aquilaria sinensis*. **Ref:** 13.



**19926 Sinenoside**

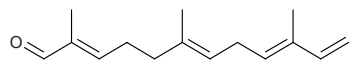
$C_{26}H_{34}O_{12}$  (538.55). White crystals,  $[\alpha]_D^{19} = -46.67^\circ$  ( $c = 0.015$ ,  $C_5H_5N$ ).

Source: NV ZHEN XIAO LA SHU *Ligustrum sinense*. Ref: 2444.

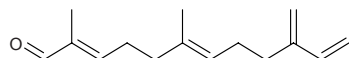
**19927  $\alpha$ -Sinensal**

2,6,10-Trimethyl-2,6,9,11-dodecatetraenal  $C_{15}H_{22}O$  (218.34). Pharm: Flavorant.

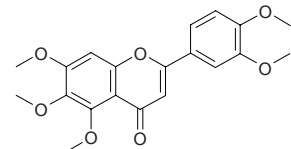
Source: JU PI *Citrus reticulata*, TIAN CHENG *Citrus sinensis*. Ref: 658, 660.

**19928  $\beta$ -Sinensal**

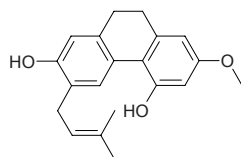
$C_{15}H_{22}O$  (218.34). Pharm: Flavorant. Source: TIAN CHENG *Citrus sinensis*. Ref: 658.

**19929 Sinensetin**

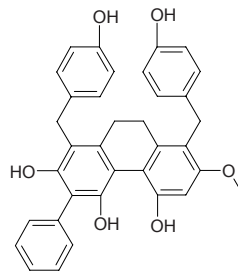
5,6,7,3',4'-Pentamethoxyflavone [2306-27-6]  $C_{20}H_{20}O_7$  (372.38). Colorless prismatic crystals, mp 169–171°C (methanol); pale-yellow prisms, mp 179°C, 172–173°C. Pharm: Antifungal; cytotoxic (EAC *in vitro*, 30  $\mu\text{mol/L}$ , InRt = 50%); induces cell differentiation (mus myelocytic leukemia cells, 50  $\mu\text{mol/L}$ , growing rate = 62%, 5  $\mu\text{mol/L}$ , growing rate = 81%, 50  $\mu\text{mol/L}$  and 5  $\mu\text{mol/L}$ , activity of macrophages >10%, HL-60 cells, 100  $\mu\text{mol/L}$ , growing rate = 50%, 50  $\mu\text{mol/L}$ , growing rate = 73%, 50  $\mu\text{mol/L}$ , activity of macrophages >25%, 5  $\mu\text{mol/L}$ , activity of macrophages = 10%); antihistamine (inhibits histamine release, basophiles, due to antigen and TPA,  $IC_{50} = 44$  and 26  $\mu\text{mol/L}$  respectively); inhibits oxidation of linoleic acid ( $IC_{50} = 114 \mu\text{mol/L}$ ); inhibits tissue factor express (induced by hmn interleukin-1 in hyalin leukocyte,  $IC_{50} = 10 \mu\text{mol/L}$ ); 15-lipoxygenase inhibitor. Source: HUA ZHOU YOU *Citrus grandis* var. *tomentosa*, JIAO GAN *Citrus tankan*, JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], JU PI *Citrus reticulata*, LONG XU TENG *Bauhinia championii*, MAO XU CAO *Clerodendranthus spicatus*, SHENG HONG JI *Ageratum conyzoides*, TIAN CHENG *Citrus sinensis*, ZHI KE *Citrus aurantium*, ZHI SHI *Citrus aurantium*, ZONG ZHUANG HUA LI *Chenopodium championii*. Ref: 658, 900, 979, 2648, 2867, 2910, 2974, 2998.

**19930 Sinensol G**

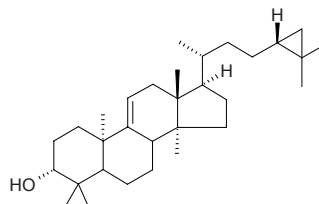
2-Methoxy-4,7-dihydroxy-6-isopentenyl-9,10-dihydrophenanthrene  $C_{20}H_{22}O_3$  (310.40). Colorless amorphous powder. Source: ZHONG GUO SHOU CAO *Spiranthes sinensis* (aerial parts). Ref: 4120.

**19931 Sinensol H**

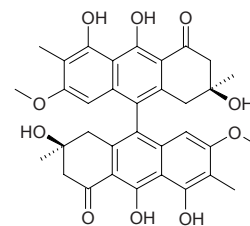
4,5,7-Trihydroxy-1,8-bis(4-hydroxybenzyl)-3-methoxy-6-phenyl-9,10-dihydrophenanthrene  $C_{35}H_{30}O_6$  (546.63). Pale yellow amorphous powder,  $[\alpha]_D^{25} = 0^\circ$  ( $c = 0.5$ , MeOH). Source: ZHONG GUO SHOU CAO *Spiranthes sinensis* (aerial parts). Ref: 4120.

**19932 Sinetirucallol**

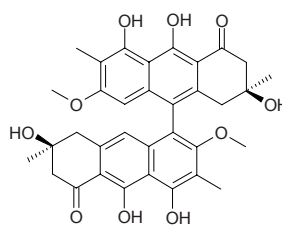
24,31-Homocyclotirucall-9(11)-ene-3 $\beta$ -ol  $C_{31}H_{52}O$  (440.76). Colorless needles, mp 96–97°C,  $[\alpha]_D^{25} = -66^\circ$  ( $c = 0.5$ ,  $\text{CHCl}_3$ ). Source: ZHONG GUO SHOU CAO *Spiranthes sinensis* (aerial parts). Ref: 4120.

**19933 Singueanol I**

$C_{34}H_{34}O_{10}$  (602.64). Pharm: Antibacterial<sup>[4418]</sup>; antispasmodic<sup>[4418]</sup>. Source: WANG JIANG NAN *Cassia occidentalis*, DONG FEI JUE MING *Cassia singueana*. Ref: 660, 4418.

**19934 Singueanol II**

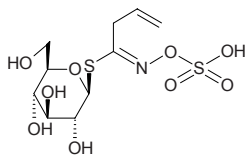
$C_{34}H_{34}O_{10}$  (602.64). Pharm: Antibacterial; antispasmodic. Source: DONG FEI JUE MING *Cassia singueana*. Ref: 4418.



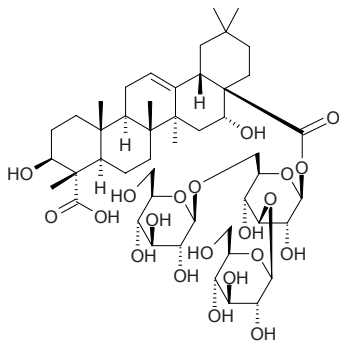


**19935 Sinigrin**

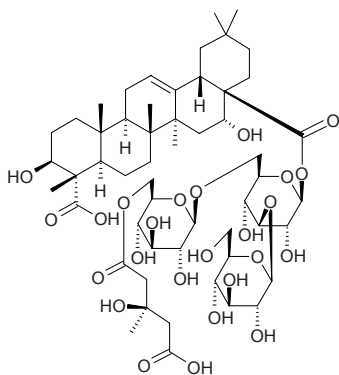
[3952-98-5] C<sub>10</sub>H<sub>17</sub>NO<sub>9</sub>S<sub>2</sub> (359.38). mp 127~129°C. **Pharm:** Antibacterial; irritant; promotes secretion of digestive juice. **Source:** BAI JIANG *Patrinia villosa*, BAN LAN GEN *Isatis indigotica*, JI CAI *Capsella bursa-pastoris*, JIE ZI *Brassica juncea*, LA GEN *Armoracia lapathifolia*, XI MING *Thlaspi arvense*, XI MING ZI *Thlaspi arvense*. **Ref:** 4, 6, 658, 660.

**19936 Sinocrassulose I**

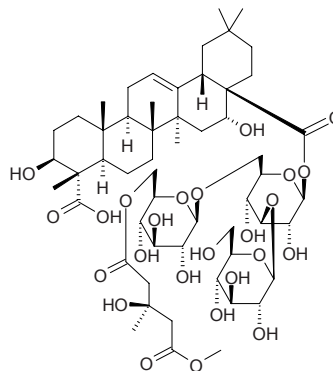
3 $\beta$ ,16 $\alpha$ -Dihydroxyolean-12-en-23,28-dioic acid 28-O-[ $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 3)][ $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 6)]- $\beta$ -D-glucopyranosyl ester C<sub>48</sub>H<sub>76</sub>O<sub>21</sub> (989.13). White amorphous powder,  $[\alpha]_D^{26} = +17.6^\circ$  ( $c = 0.051$ , MeOH). **Source:** SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). **Ref:** 4264.

**19937 Sinocrassulose II**

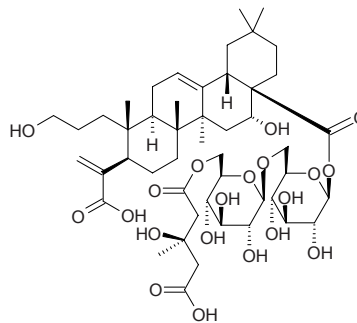
3 $\beta$ ,16 $\alpha$ -Dihydroxyolean-12-en-23,28-dioic acid 28-O-[ $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 3)][ $\beta$ -D-6-O-((3R)-3-hydroxy-3-methylglutaryl)glucopyranosyl(1 $\rightarrow$ 6)]- $\beta$ -D-glucopyranosyl ester C<sub>54</sub>H<sub>84</sub>O<sub>25</sub> (1133.26). White amorphous powder,  $[\alpha]_D^{26} = +13.9^\circ$  ( $c = 0.074$ , MeOH). **Source:** SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). **Ref:** 4264.

**19938 Sinocrassulose III**

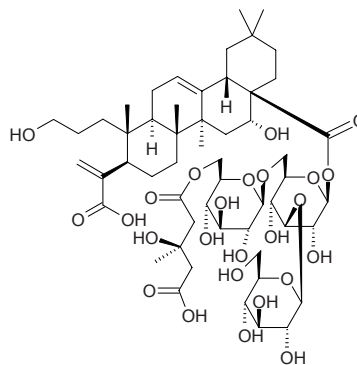
3 $\beta$ ,16 $\alpha$ -Dihydroxyolean-12-en-23,28-dioic acid 28-O-[ $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 3)][ $\beta$ -D-6-O-(3-hydroxy-5-methoxy-3-methyl-5-oxopentanyloxy)glucopyranosyl(1 $\rightarrow$ 6)]- $\beta$ -D-glucopyranosyl ester C<sub>55</sub>H<sub>86</sub>O<sub>25</sub> (1147.28). White amorphous powder,  $[\alpha]_D^{26} = +30.4^\circ$  ( $c = 0.023$ , MeOH). **Source:** SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). **Ref:** 4264.

**19939 Sinocrassulose IV**

3,16 $\alpha$ -Dihydroxy-3,4-seco-olean-4(24),12-dien-23,28-dioic acid 28-O-[ $\beta$ -D-6-O-(3-hydroxy-3-methylglutaryl)-glucopyranosyl(1 $\rightarrow$ 6)]- $\beta$ -D-glucopyranosyl ester C<sub>48</sub>H<sub>74</sub>O<sub>20</sub> (971.11). White amorphous powder,  $[\alpha]_D^{26} = +22.6^\circ$  ( $c = 0.031$ , MeOH). **Source:** SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). **Ref:** 4264.

**19940 Sinocrassulose V**

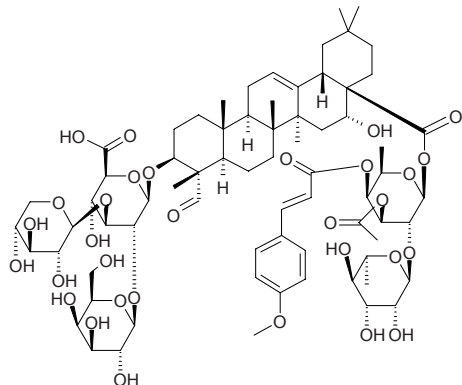
3,16 $\alpha$ -Dihydroxy-3,4-seco-olean-4(24),12-dien-23,28-dioic acid 28-O-[ $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 3)]{ $\beta$ -D-6-O-[(3R)-3-hydroxy-3-methylglutaryl]-glucopyranosyl(1 $\rightarrow$ 6)}- $\beta$ -D-glucopyranosyl ester C<sub>54</sub>H<sub>84</sub>O<sub>25</sub> (1133.26). White amorphous powder,  $[\alpha]_D^{26} = +39.7^\circ$  ( $c = 0.026$ , MeOH). **Source:** SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). **Ref:** 4264.



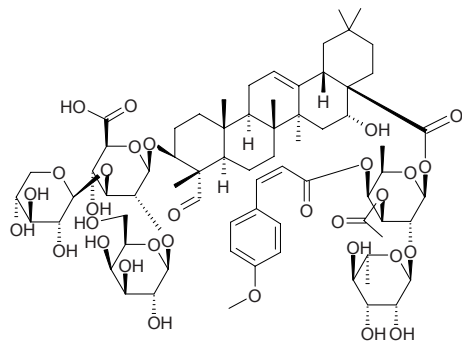


**19941 Sinocrassuloside VI**

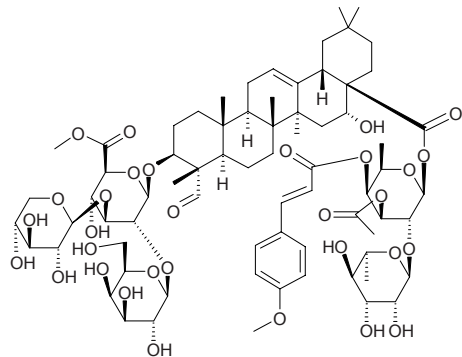
3-*O*-[ $\beta$ -*D*-Galactopyranosyl(1 $\rightarrow$ 2)][ $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 3)]- $\beta$ -*D*-glucuronopyranosyl quillaic acid 28-*O*-[ $\alpha$ -*L*-rhamnopyranosyl(1 $\rightarrow$ 2)]-3-*O*-acetyl-4-*O*-(*E*)-*para*-methoxycinnamoyl- $\beta$ -*D*-fucopyranosyl ester C<sub>71</sub>H<sub>102</sub>O<sub>31</sub> (1451.59). White amorphous powder,  $[\alpha]_D^{26} = +18.4^\circ$  ( $c = 0.076$ , MeOH). Source: SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). Ref: 4264.

**19942 Sinocrassuloside VII**

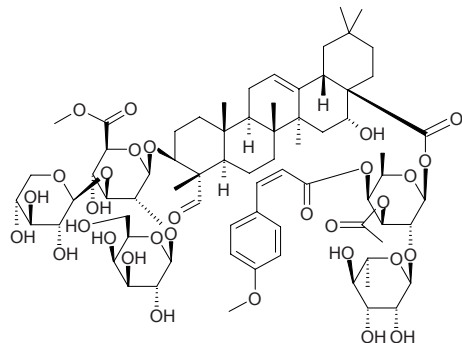
3-*O*-[ $\beta$ -*D*-Galactopyranosyl(1 $\rightarrow$ 2)][ $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 3)]- $\beta$ -*D*-glucuronopyranosyl quillaic acid 28-*O*-[ $\alpha$ -*L*-rhamnopyranosyl(1 $\rightarrow$ 2)]-3-*O*-acetyl-4-*O*-(*Z*)-*para*-methoxycinnamoyl- $\beta$ -*D*-fucopyranosyl ester C<sub>71</sub>H<sub>102</sub>O<sub>31</sub> (1451.59). White amorphous powder,  $[\alpha]_D^{26} = +8.3^\circ$  ( $c = 0.004$ , MeOH). Source: SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). Ref: 4264.

**19943 Sinocrassuloside VIII**

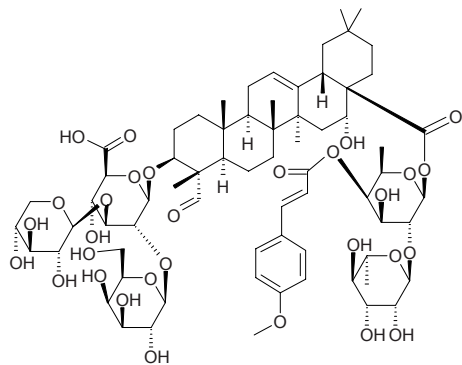
3-*O*-[ $\beta$ -*D*-Galactopyranosyl(1 $\rightarrow$ 2)][ $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 3)]-[6-*O*-methyl- $\beta$ -*D*-glucuronopyranosyl] quillaic acid 28-*O*-[ $\alpha$ -*L*-rhamnopyranosyl(1 $\rightarrow$ 2)]-[3-*O*-acetyl-4-*O*-(*E*)-*para*-methoxycinnamoyl- $\beta$ -*D*-fucopyranosyl] ester C<sub>72</sub>H<sub>104</sub>O<sub>31</sub> (1465.61). White amorphous powder,  $[\alpha]_D^{26} = +12.1^\circ$  ( $c = 0.022$ , MeOH). Source: SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). Ref: 4264.

**19944 Sinocrassuloside IX**

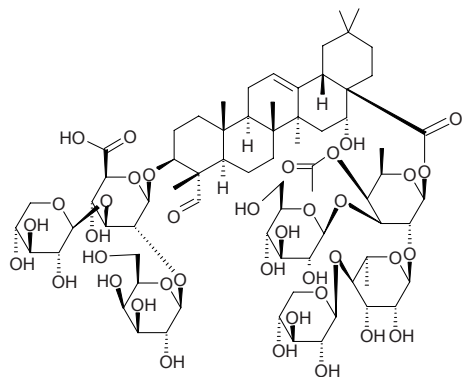
3-*O*-[ $\beta$ -*D*-Galactopyranosyl(1 $\rightarrow$ 2)][ $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 3)]-[6-*O*-methyl- $\beta$ -*D*-glucuronopyranosyl] quillaic acid 28-*O*-[ $\alpha$ -*L*-rhamnopyranosyl(1 $\rightarrow$ 2)]-3-*O*-acetyl-4-*O*-(*Z*)-*para*-methoxycinnamoyl- $\beta$ -*D*-fucopyranosyl ester C<sub>72</sub>H<sub>104</sub>O<sub>31</sub> (1465.61). White amorphous powder,  $[\alpha]_D^{26} = +37.5^\circ$  ( $c = 0.016$ , MeOH). Source: SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). Ref: 4264.

**19945 Sinocrassuloside X**

3-*O*-[ $\beta$ -*D*-Galactopyranosyl(1 $\rightarrow$ 2)][ $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 3)]- $\beta$ -*D*-glucuronopyranosyl quillaic acid 28-*O*-[ $\alpha$ -*L*-rhamnopyranosyl(1 $\rightarrow$ 2)]-4-*O*-(*E*)-*para*-methoxycinnamoyl- $\beta$ -*D*-fucopyranosyl ester C<sub>69</sub>H<sub>100</sub>O<sub>30</sub> (1409.55). White amorphous powder,  $[\alpha]_D^{26} = +38.5^\circ$  ( $c = 0.026$ , MeOH). Source: SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). Ref: 4264.

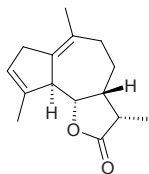
**19946 Sinocrassuloside XI**

3-*O*-[ $\beta$ -*D*-Galactopyranosyl(1 $\rightarrow$ 2)][ $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 3)]- $\beta$ -*D*-glucuronopyranosyl quillaic acid 28-*O*-{[ $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 4)]- $\alpha$ -*L*-rhamnopyranosyl(1 $\rightarrow$ 2)}-[ $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 3)]-4-*O*-acetyl- $\beta$ -*D*-fucopyranosyl ester C<sub>72</sub>H<sub>112</sub>O<sub>38</sub> (1585.67). White amorphous powder,  $[\alpha]_D^{26} = +3.5^\circ$  ( $c = 0.019$ , MeOH). Source: SI MA LI JIN SHI LIAN *Sinocrassula asclepiadea* (root). Ref: 4264.

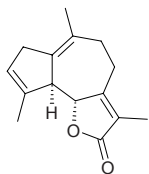


**19947 Sinodiellide A**

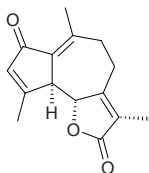
5 $\alpha$ ,6 $\beta$ ,7 $\beta$ -H-1(10),3-Guaiadien-12,6 $\alpha$ -olide C<sub>15</sub>H<sub>20</sub>O<sub>2</sub> (232.33). Colorless needles, mp 145.5~146.5°C; white powder (EtOAc), mp 127~128°C, [ $\alpha$ ]<sub>D</sub><sup>21</sup> = -59.82° (*c* = 0.56, CHCl<sub>3</sub>). Source: DIAN QIN *Sinodielsia yunnanensis* (root: yield = 0.062%). Ref: 4305, 5470.

**19948 Sinodiellide B**

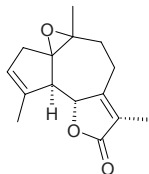
5 $\alpha$ ,6 $\beta$ -H-1(10),3,7(11)-Guaiatrien-12,6 $\alpha$ -olide C<sub>15</sub>H<sub>18</sub>O<sub>2</sub> (230.31). Colorless needles (EtOAc), mp 91~92°C, [ $\alpha$ ]<sub>D</sub><sup>21</sup> = -30.09° (*c* = 0.62, CHCl<sub>3</sub>); mp 104.3~105.0°C. Source: DIAN QIN *Sinodielsia yunnanensis* (root: yield = 0.024%). Ref: 4305, 5470.

**19949 Sinodiellide C**

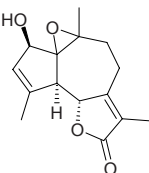
C<sub>15</sub>H<sub>16</sub>O<sub>3</sub> (244.29). Colorless crystalline powder, mp 140.5~141.0°C. Source: DIAN QIN *Sinodielsia yunnanensis* (root: yield = 0.0015%). Ref: 4305.

**19950 Sinodiellide D**

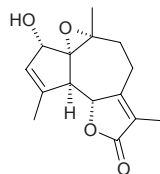
C<sub>15</sub>H<sub>18</sub>O<sub>3</sub> (246.31). Colorless amorphous powder. Source: DIAN QIN *Sinodielsia yunnanensis* (root: yield = 0.0010%). Ref: 4305.

**19951 Sinodiellide E**

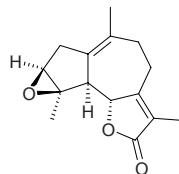
C<sub>15</sub>H<sub>18</sub>O<sub>4</sub> (262.31). Colorless needles, mp 163.6~164.0°C, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = +46.3° (*c* = 0.549, CHCl<sub>3</sub>). Source: DIAN QIN *Sinodielsia yunnanensis* (root). Ref: 4336.

**19952 Sinodiellide F**

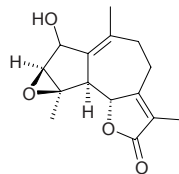
C<sub>15</sub>H<sub>18</sub>O<sub>4</sub> (262.31). Colorless needles, mp 102.8~103.0°C, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -168.7° (*c* = 0.435, CHCl<sub>3</sub>). Source: DIAN QIN *Sinodielsia yunnanensis* (root). Ref: 4336.

**19953 Sinodiellide G**

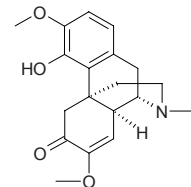
C<sub>15</sub>H<sub>18</sub>O<sub>3</sub> (246.31). Colorless amorphous powder, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = +6.1° (*c* = 0.405, CHCl<sub>3</sub>). Source: DIAN QIN *Sinodielsia yunnanensis* (root). Ref: 4336.

**19954 Sinodiellide H**

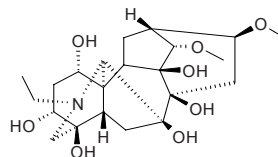
C<sub>15</sub>H<sub>18</sub>O<sub>4</sub> (262.31). Pale yellow viscous oil, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -7.3° (*c* = 0.379, CHCl<sub>3</sub>). Source: DIAN QIN *Sinodielsia yunnanensis* (root). Ref: 4336.

**19955 Sinomenine**

Coculine [115-53-7] C<sub>19</sub>H<sub>23</sub>NO<sub>4</sub> (329.40). mp 162°C. Pharm: Analgesic (mus, rbt); antiarrhythmic (*in vitro* atrium of gpg); anti-inflammatory (rat, arthritis model due to methanol or egg white); antitussive (mus, cat); inhibits intestinal smooth muscle (*in vitro*); antihypertensive (dog, cat and rat, iv and orl); negative chronotropic action; releases histamine; LD<sub>50</sub> (mus, orl) = 580mg/kg, (mus, sc) = 535mg/kg, (mus, ip) = 285mg/kg, (dog, orl) = 45mg/kg, (monkey, orl) = 95mg/kg. Source: BIAN FU GE *Menispermum dauricum*, BIAN FU GE GEN *Menispermum dauricum* (rhizome: mean content = 0.107%<sup>[5508]</sup>), QING FENG TENG *Sinomenium acutum* (stem: content = 0.81%<sup>[5501]</sup>). Ref: 4, 6, 658, 5501, 5508.

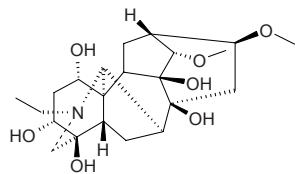
**19956 Sinomontanine D**

C<sub>22</sub>H<sub>35</sub>O<sub>8</sub>N (441.53). White amorphous powder. Source: GAO WU TOU *Aconitum sinomontanum*. Ref: 844.

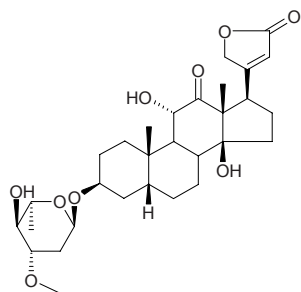


**19957 Sinomontanine E**

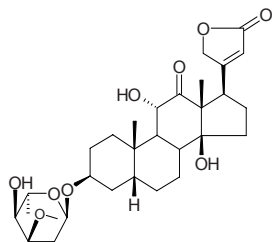
$C_{22}H_{35}O_7N$  (425.53). White amorphous powder. Source: GAO WU TOU *Aconitum sinomontanum*. Ref: 844.

**19958 Sinoside**

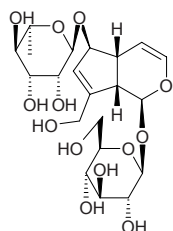
$C_{30}H_{44}O_9$  (548.68). mp 197~202°C, 233~244°C. Pharm: Cardiotonic. Source: YANG JIAO AO ZI *Strophanthus divaricatus*. Ref: 6, 658.

**19959 Sinostroside**

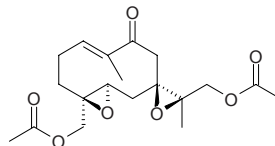
$C_{30}H_{44}O_9$  (548.68). mp 183~193°C. Source: YANG JIAO AO ZI *Strophanthus divaricatus*. Ref: 6.

**19960 Sinuatol**

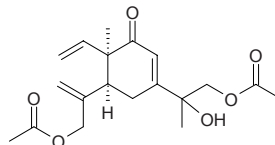
6-*O*- $\alpha$ -*L*-Rhamnopyranosyl-aucubin  $C_{21}H_{32}O_{13}$  (492.48). Pharm: Antitrypanosomal (*Trypanosoma brucei rhodesiense*,  $IC_{50} > 100\mu g/mL$ , control Melarsoprol,  $IC_{50} = 0.0033\mu g/mL$ ; *Trypanosoma cruzi*,  $IC_{50} > 90\mu g/mL$ , control Benznidazole,  $IC_{50} = 0.70\mu g/mL$ ); antileishmanial (*Leishmania donovani*,  $IC_{50} > 100\mu g/mL$ , control Miltefosine,  $IC_{50} = 0.32\mu g/mL$ ); antimalarial (*Plasmodium falciparum*,  $IC_{50} > 50\mu g/mL$ , control Artemisinin,  $IC_{50} = 0.002\mu g/mL$ ); cytotoxic (L6 cells,  $IC_{50} > 90\mu g/mL$ , control Podophyllotoxin,  $IC_{50} = 0.0075\mu g/mL$ ). Source: LIN PIAN XUAN SHEN *Scrophularia lepidota* (root). Ref: 5251.

**19961 Sipaucin A**

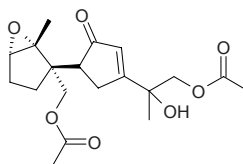
$C_{19}H_{26}O_7$  (366.41). Yellow oil,  $[\alpha]_D^{20} = -4^\circ$  ( $c = 0.10$ ,  $CHCl_3$ ). Source: SHAO HUA XI PA MU *Siparuna pauciflora*. Ref: 3376.

**19962 Sipaucin B**

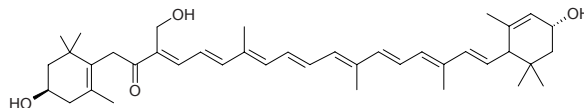
$C_{19}H_{26}O_6$  (350.42). Yellow oil,  $[\alpha]_D^{20} = +8^\circ$  ( $c = 0.25$ ,  $CHCl_3$ ). Source: SHAO HUA XI PA MU *Siparuna pauciflora*. Ref: 3376.

**19963 Sipaucin C**

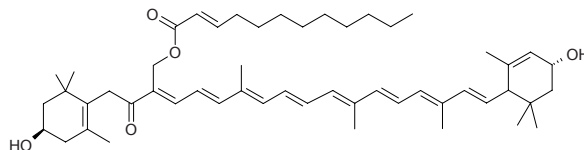
$C_{19}H_{26}O_7$  (366.41). Yellow oil,  $[\alpha]_D^{20} = +3^\circ$  ( $c = 0.30$ ,  $CHCl_3$ ). Source: SHAO HUA XI PA MU *Siparuna pauciflora*. Ref: 3376.

**19964 Siphonaxanthin**

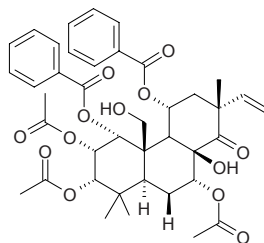
$C_{40}H_{56}O_4$  (600.89). Source: SHUI SONG *Codium fragile*. Ref: 660.

**19965 Siphonein**

$C_{52}H_{76}O_5$  (781.18). Source: SHUI SONG *Codium fragile*. Ref: 660.

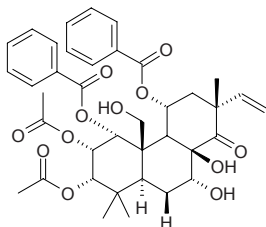
**19966 Siphonol A**

$C_{40}H_{46}O_{13}$  (734.80). Colorless amorphous solid,  $[\alpha]_D^{25} = -146.5^\circ$  ( $c = 0.07$ ,  $CHCl_3$ ). Pharm: NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 10.8\mu mol/L$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu mol/L$ ; Polymixin B,  $IC_{50} = 27.8\mu g/mL$ ; Dexamethasone  $IC_{50} = 170\mu mol/L$ ). Source: XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts). Ref: 4322.

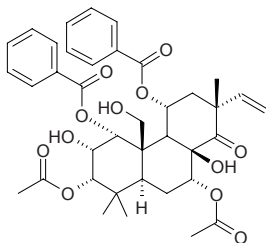


**19967 Siphonol B**

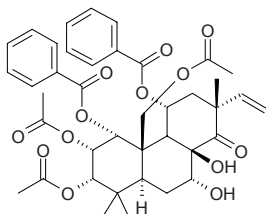
$C_{38}H_{44}O_{12}$  (692.77). Colorless amorphous solid,  $[\alpha]_D^{25} = -103.4^\circ$  ( $c = 0.08$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 17.3\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ , Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ , Dexamethasone,  $IC_{50} = 170\mu\text{mol/L}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts). **Ref:** 4322.

**19968 Siphonol C**

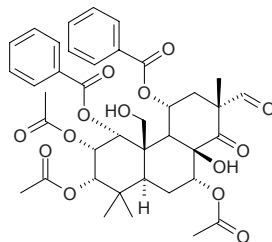
$C_{38}H_{44}O_{12}$  (692.77). Colorless amorphous solid,  $[\alpha]_D^{25} = -49.9^\circ$  ( $c = 0.06$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 22.9\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ , Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ , Dexamethasone  $IC_{50} = 170\mu\text{mol/L}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts). **Ref:** 4322.

**19969 Siphonol D**

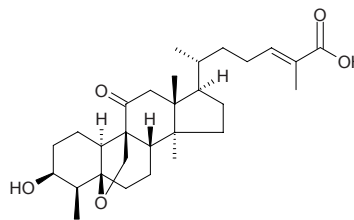
$C_{40}H_{46}O_{13}$  (734.80). Colorless amorphous solid,  $[\alpha]_D^{25} = -92.8^\circ$  ( $c = 0.09$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 46.5\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ , Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ , Dexamethasone  $IC_{50} = 170\mu\text{mol/L}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts). **Ref:** 4322.

**19970 Siphonol E**

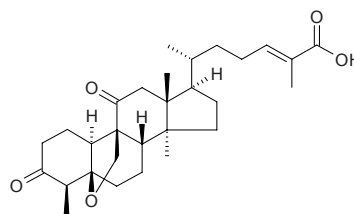
$C_{39}H_{44}O_{14}$  (736.78). Colorless amorphous solid,  $[\alpha]_D^{25} = -135.7^\circ$  ( $c = 0.06$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 23.0\mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 26.0\mu\text{mol/L}$ , Polymixin B,  $IC_{50} = 27.8\mu\text{g/mL}$ , Dexamethasone  $IC_{50} = 170\mu\text{mol/L}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts). **Ref:** 4322.

**19971 Siraitic acid A**

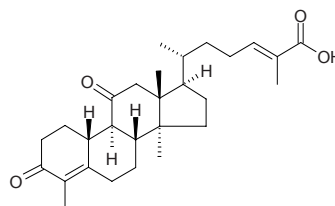
$C_{29}H_{44}O_5$  (472.67). White columnar crystals, mp 210–211°C,  $[\alpha]_D^{22} = +58.6^\circ$  ( $c = 0.50$ , EtOH). **Source:** LUO HAN GUO *Siraitia grosvenorii* [Syn: *Momordica grosvenorii*]. **Ref:** 495.

**19972 Siraitic acid B**

$C_{29}H_{42}O_5$  (470.66). White columnar crystals, mp 171–172°C,  $[\alpha]_D^{22} = +41.4^\circ$  ( $c = 0.50$ , EtOH). **Source:** LUO HAN GUO *Siraitia grosvenorii* [Syn: *Momordica grosvenorii*]. **Ref:** 495.

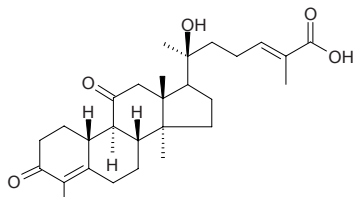
**19973 Siraitic acid C**

$C_{28}H_{40}O_4$  (440.63). White columnar crystals mp 217–218°C. **Source:** LUO HAN GUO *Siraitia grosvenorii* [Syn: *Momordica grosvenorii*]. **Ref:** 812.

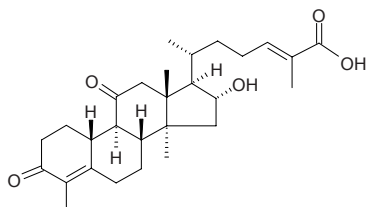


**19974 Siraitic acid D**

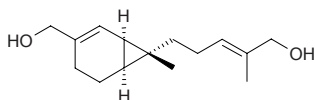
$C_{28}H_{40}O_5$  (456.63). White columnar crystals mp 194–195°C. Source: LUO HAN GUO *Siraitia grosvenorii* [Syn. *Momordica grosvenorii*]. Ref: 812.

**19975 Siraitic acid E**

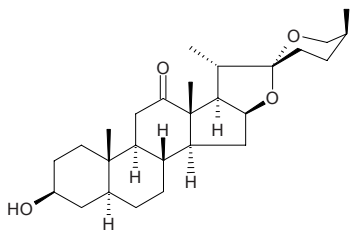
$C_{28}H_{40}O_5$  (456.63). White acicular crystals mp 246–248°C. Source: LUO HAN GUO *Siraitia grosvenorii* [Syn. *Momordica grosvenorii*]. Ref: 836.

**19976 Sirenin**

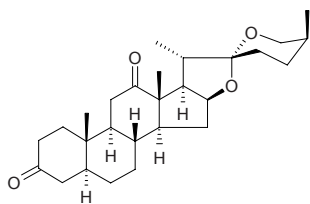
$C_{15}H_{24}O_2$  (236.36). Pharm: Alluring action (male gamete of Allomyces,  $1 \times 10^{-10}$  mol/L). Source: *Saprolegnia ferax*. Ref: 658.

**19977 Sisalagenin**

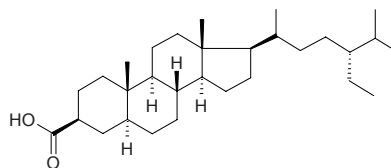
$C_{27}H_{42}O_4$  (430.63). Source: JIAN MA *Agave sisalana*. Ref: 10.

**19978 Sisalagenone**

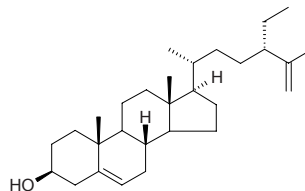
$C_{27}H_{40}O_4$  (428.62). Source: SHUI QIE *Solanum torvum*. Ref: 6.

**19979 Sitostanyl formate**

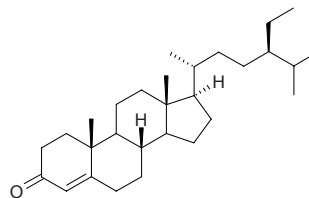
$C_{30}H_{52}O_2$  (444.75). mp 107°C,  $[\alpha]_D = +9.9^\circ$  ( $c = 0.3$ ,  $CHCl_3$ ). Source: BING YE SUO LUO *Yathea podophylla* (fresh frond). Ref: 4401.

**19980 5,25-Sitost-dienol**

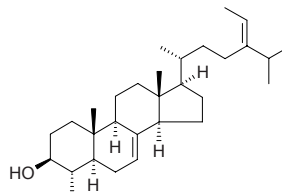
$C_{29}H_{48}O$  (412.71). Source: GUA LOU *Trichosanthes kirilowii*. Ref: 2.

**19981  $\beta$ -Sitostenone**

Stigmast-4-en-3-one  $C_{29}H_{48}O$  (412.71).  $[\alpha]_D^{25} = +83^\circ$  ( $c = 0.5$ ,  $CHCl_3$ ). Pharm: Cytotoxic ( $P_{388}$ ,  $ED_{50} = 20.14 \mu\text{g/mL}$ , control Mithramycin,  $ED_{50} = 0.58 \mu\text{g/mL}$ ; A549,  $ED_{50} > 50 \mu\text{g/mL}$ , Mithramycin,  $ED_{50} = 0.073 \mu\text{g/mL}$ ; HT29,  $ED_{50} > 50 \mu\text{g/mL}$ , Mithramycin,  $ED_{50} = 0.076 \mu\text{g/mL}$ )<sup>[5421]</sup>. Source: MIAN MAO MA DOU LING *Aristolochia mollissima* (dried root and stem: yield = 0.0019% dw), XIONG RUI ZHUANG SHU WEI CAO *Salvia staminea*, MO ZHI JIAO GU CUI *Casearia membranacea* (stem). Ref: 1521, 3026, 5400, 5421.

**19982  $\alpha_1$ -Sitosterol**

[474-40-8]  $C_{30}H_{50}O$  (426.73). mp 162–164°C. Source: AI QIE *Solanum demissum*, MA LING SHU *Solanum tuberosum*, WAN DOU *Pisum sativum*. Ref: 1521.



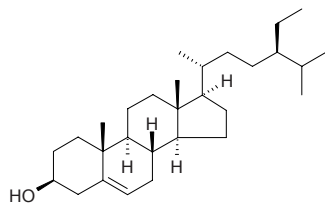
**19983  $\beta$ -Sitosterol**

(3 $\beta$ ,24R)Stigmast-5-en-3-ol [83-46-5] C<sub>29</sub>H<sub>50</sub>O (414.72). mp 136~137°C, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -35° (CHCl<sub>3</sub>), [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -36° (c = 1.0, C HCl<sub>3</sub>); [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -36.0° (c = 0.2, CHCl<sub>3</sub>). **Pharm:** Antineoplastic (mus Lewis lung cancer and adenocarcinoma 715, rat W<sub>256</sub>); antimutagenic (*E. coli* PQ37, antigenotoxicity test, for mutagen MNNG shows 45% reduction of induction factor, for mutagen NQO, shows 55% reduction of induction factor)<sup>[4459]</sup>; anti-inflammatory; antitussive (mus, cough induced by ammonia, orl, ED = 250mg/kg); antihypercholesterolemic (mus and jockos, reduces cholesterol); antifungal inactive (hmn pathogenic yeasts *Candida albicans*, *Candida glabrata* and *Candida tropicalis*); 12(S)-LOX inhibitor (hmn Platelets, 12(S)-HETE Production inhibitor, 100 $\mu$ g/mL, inhibitive rate = (25.0 $\pm$ 2.2)%, control Baicalein, IC<sub>50</sub> = 24.6 $\mu$ mol/L)<sup>[4980]</sup>; gastroprotective (30 mg/kg, Gp = (42.5 $\pm$ 7.5)%, control Carbenoxolone, Gp = (88.4 $\pm$ 5.4)%, *p*<0.05)<sup>[5461]</sup>; platelet aggregation inhibitor (washed rabbit platelets, 100 $\mu$ g/mL, 100 $\mu$ mol/L AA-induced, InRt = 18.6%, control 50 $\mu$ mol/L Aspirin, InRt = 100%; 10 $\mu$ g/mL collagen-induced, InRt = 8.4%, 100 $\mu$ mol/L Aspirin, InRt = 4.9%; 0.1U/mL Thrombin-induced, InRt = 16.3%, 100 $\mu$ mol/L Aspirin, InRt = 1.7%; 2ng/mL PAF-induced, InRt = 1.3%, 100 $\mu$ mol/L Aspirin, InRt = 2.1%)<sup>[5427]</sup>; platelet aggregation inhibitor (2~5mg/mL collagen-induced, IC<sub>50</sub> = (195 $\pm$ 8) $\mu$ mol/L, control ASA, IC<sub>50</sub> = (420 $\pm$ 3) $\mu$ mol/L; 1~4 $\mu$ mol/L epinephrine-induced with 0.8~1.0mg/mL collagen, IC<sub>50</sub> = (174 $\pm$ 8) $\mu$ mol/L, ASA, IC<sub>50</sub> = (53 $\pm$ 5) $\mu$ mol/L; 10~40 $\mu$ mol/L Sodium arachidonate-induced with 0.8~1.0mg/mL collagen, IC<sub>50</sub> = (145 $\pm$ 5) $\mu$ mol/L, ASA, IC<sub>50</sub> = (66.0 $\pm$ 2.1) $\mu$ mol/L; 1~5 $\mu$ mol/L PGH<sub>2</sub>/TXA<sub>2</sub> receptor agonist U46619-induced with 0.8~1.0mg/mL collagen, IC<sub>50</sub> = (170 $\pm$ 9) $\mu$ mol/L, ASA, IC<sub>50</sub> = (340 $\pm$ 12) $\mu$ mol/L)<sup>[4994]</sup>; cytotoxic (P<sub>388</sub>, ED<sub>50</sub> = 15.87 $\mu$ g/mL, control Mithramycin, ED<sub>50</sub> = 0.58 $\mu$ g/mL; A549, ED<sub>50</sub> > 50 $\mu$ g/mL, Mithramycin, ED<sub>50</sub> = 0.073 $\mu$ g/mL; HT29, ED<sub>50</sub> > 50 $\mu$ g/mL, Mithramycin, ED<sub>50</sub> = 0.076 $\mu$ g/mL)<sup>[5421]</sup>; cytotoxic (MCF7, IC<sub>50</sub> > 100 $\mu$ mol/L, control Adriamycin, IC<sub>50</sub> = (1.5 $\pm$ 0.2) $\mu$ mol/L; K562, IC<sub>50</sub> > 100 $\mu$ mol/L, Adriamycin, IC<sub>50</sub> = (0.07 $\pm$ 0.01) $\mu$ mol/L; Bowes, IC<sub>50</sub> = (36.5 $\pm$ 3.8) $\mu$ mol/L, Adriamycin, IC<sub>50</sub> = (0.45 $\pm$ 0.01) $\mu$ mol/L; T24S, IC<sub>50</sub> > 100 $\mu$ mol/L, Adriamycin, IC<sub>50</sub> = (5.8 $\pm$ 0.6) $\mu$ mol/L; A549, IC<sub>50</sub> > 100 $\mu$ mol/L, Adriamycin, IC<sub>50</sub> = (15.8 $\pm$ 6.7) $\mu$ mol/L)<sup>[5288]</sup>; cytotoxic inactive (*in vitro*, HONE-1 and NUGC cancer cell lines, no significant activity)<sup>[3069]</sup>; cytotoxic inactive (*in vitro*, LNCaP, IC<sub>50</sub> > 100 $\mu$ mol/L)<sup>[4607]</sup>; antitrypanosomal inactive (epimastigotes of *Trypanosoma cruzi*, 400 $\mu$ mol/L)<sup>[2579]</sup>; tyrosinase inhibitor (333 $\mu$ mol/L, InRt = 14.3%, control Kojic acid, IC<sub>50</sub> = 125 $\mu$ mol/L)<sup>[4722]</sup>; CYP3A4 inhibitor inactive (IC<sub>50</sub> > 100 $\mu$ mol/L, control Ketoconazole, IC<sub>50</sub> = 0.245 $\mu$ mol/L)<sup>[4669]</sup>; CYP2D6 inhibitor inactive (IC<sub>50</sub> > 100 $\mu$ mol/L, control Quinidine, IC<sub>50</sub> = 0.078 $\mu$ mol/L)<sup>[4669]</sup>. **Source:** AN ZI BEI MU *Fritillaria unibracteata*, BA DOU *Croton tiglium*, BA JI TIAN *Morinda officinalis* (root: content scope = 0.059%~0.062%)<sup>[5501]</sup>, BA QIA *Smilax china* [Syn. *Smilax japonica*] (tuberoid: mean content = 0.0050%)<sup>[5508]</sup>, BAI GUO *Ginkgo biloba*, BAI JIE ZI *Sinapis alba* [Syn. *Brassica alba*; *Brassica hirta*] (dried ripe seed: content = 0.03%)<sup>[5508]</sup>, BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*], BAN LAN GEN *Isatis indigotica*, BAN XIA *Pinellia ternata*, BEI JIA ER TANG SONG CAO *Thalictrum baicalense*, BEI MA DOU LING *Aristolochia contorta*, BEI MA DOU LING GEN *Aristolochia contorta*, CHAN SU *Bufo bufo gargarizans*; *Bufo melanostictus*, CHANG YE TIAN MING JING *Carpesium longifolium* (aerial parts: yield = 0.0036%dw)<sup>[4736]</sup>, CHAO XIAN LENG SHAN *Abies koreana* (root cortex), CHE QIAN *Plantago asiatica*, CHI SHAO *Paeonia lactiflora* wild, CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*], CHUAN XU DUAN

*Dipsacus asperoides*, CI WU JIA *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*], CI WU JIA YE *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*], CU LIU GUO *Hippophae rhamnoides*, DA CHE QIAN *Plantago major*, DA QING YE *Isatis indigotica*, DAN SHEN *Salvia miltiorrhiza*, DIAN HUANG QIN *Scutellaria amoena*, DIAN LONG DAN *Gentiana rigescens*, DIAN NAN HONG HOU KE *Calophyllum polyanthum* (seed: yield = 0.020%dw)<sup>[4767]</sup>, DONG BEI TIAN NAN XING *Arisaema amurense* (dried tuber: content = 0.25%)<sup>[5508]</sup>, DONG CHONG XIA CAO *Cordyceps sinensis*, DONG FANG WU TAN *Nauclea orientalis* (bark)<sup>[3074]</sup>, DONG FENG JU GEN *Atalantia buxifolia* [Syn. *Severinia buxifolia*] (root cortex)<sup>[3075]</sup>, DU ZHONG *Eucommia ulmoides*, FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*], FANG XIANG JIANG *Zingiber aromaticum* (rhizome: yield = 0.00025%dw)<sup>[4669]</sup>, GAN CAO *Glycyrrhiza uralensis*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*], GOU QI GEN PI *Lycium chinense*, GOU QI ZI *Lycium chinense*, GU SUI BU *Drynaria fortunei*, GUAN MU TONG *Aristolochia manshuriensis* (stem)<sup>[4706]</sup>, GUANG FANG JI *Aristolochia fangchi*, GUANG JING QIAN CAO *Rubia wallichiana* (stem), GUI ZHI *Cinnamomum cassia* [Syn. *Cinnamomum aromaticum*], HAI FENG TENG *Piper kadsura* [Syn. *Piper futokadsura*], HE SHOU WU *Polygonum multiflorum*, HEI DA DOU *Glycine max*, HONG HUA *Carthamus tinctorius*, HUA DONG LAN CI TOU *Echinops grijisii*, HUAI TONG *Aristolochia moupinensis*, HUANG BAI *Phellodendron amurense*, HUANG GAN CAO *Glycyrrhiza kansuensis*, HUANG HUA HAO *Artemisia annua*, HUANG QI *Astragalus membranaceus*, HUANG QI II *Engelhardia roxburghiana* (root), HUANG QIN *Scutellaria baicalensis*, HUI HUI SU *Perilla frutescens* var. *crispa*, HUO XIANG *Agastache rugosus*, HUO YAN HUA *Phlogacanthus curviflorus* (root: yield = 0.0062%dw)<sup>[4799]</sup>, JIAN YE TOU WU GEN *Ligularia sagitta*, JIAN ZI SU YE *Perilla frutescens* var. *acuta* [Syn. *Perilla frutescens* var. *purpurascens*], JIN YIN HUA *Lonicera japonica*, JU PI *Citrus reticulata*, KAI KOU JIAN *Tupistra chinensis* (underground part)<sup>[4676]</sup>, LANG DANG ZI *Hyoscyamus niger* (seed: yield = 0.00024%dw)<sup>[4607]</sup>, LI MENG PI *Citrus limonia*, LIU QIU SHE GEN CAO *Ophiorrhiza liukuensis* (whole herb), LIU SU SHI HU *Dendrobium fimbriatum* var. *oculatum*, LONG XUE SHU *Dracaena draco* (stem cortex)<sup>[4696]</sup>, LU SHAN SHI WEI *Pyrrhosia sheareri*, MA TI YE *Caltha palustris*, MAN JING ZI *Vitex trifolia*, MANG QI GU *Dicranopteris pedata* [Syn. *Polypodium pedatum*; *Dicranopteris dichotoma*], MENG GU HUANG QI *Astragalus mongholicus*, MIAN MAO MA DOU LING *Aristolochia mollissima* (dried root and stem: yield = 0.012%dw)<sup>[3026]</sup>, MO ZHI JIAO GU CUI *Casearia membranacea* (stem), MU JIN PI *Hibiscus syriacus*, MU TONG *Akebia quinata*, MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*], OU ZHOU CI BAI *Juniperus communis* (wood), PI PA YE *Eriobotrya japonica* (stem and leaf)<sup>[3061]</sup>, PU HUANG *Typha angustata*, QIANG HUO *Notopterygium incisum*, QIANG XIANG *Celosia argentea* (seed), QING FENG TENG *Sinomenium acutum*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], RI BEN HUANG BAI *Phellodendron japonicum* (leaf), RI BEN LU TI CAO *Pyrola japonica*, ROU CONG RONG *Cistanche deserticola*, SAI ER WEI YA SHI CAO *Achillea alexandri-regis*, SAN LENG *Sparganium stoloniferum* (tuber: content = 0.0353%)<sup>[5508]</sup>, SAN QI CAO *Gynura segetum* [Syn. *Gynura japonica*] (rhizome), SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], SHAN YAO *Dioscorea batatas* [Syn. *Dioscorea opposita*],

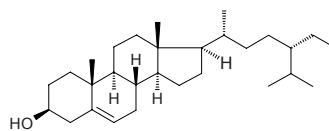


SHENG DI HONG JING TIAN *Rhodiola sacra*, SHI WEI *Pyrrosia lingua*, SHOU LIAN LIANG YI MU *Amphipterygium adstringens* (stem cortex), SI CHI SI LENG CAO *Schnabelia tetradonta* (aerial parts: yield = 0.0012%dw)<sup>[4665]</sup>, TAI WAN FU RONG *Hibiscus taiwanensis*, TAI WAN GE NA XIANG *Goniothalamus amuyon* (fresh bustem and leaf)<sup>[4686]</sup>, TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = 0.0016%dw)<sup>[4722]</sup>, TAI WAN JIN GU CAO *Ajuga taiwanensis* (whole herb), TAI WAN PU GONG YING *Taraxacum formosanum* (fresh root), TAI WAN XIU XIAN JU *Spiraea formosana*, TIAN MA *Gastrodia elata*, TIAN NAN XING *Arisaema consanguineum* (dried tuber: content scope of 3 origins = 0.11%–0.13%, mean content = 0.12%<sup>[5508]</sup>), TU YE HUANG PI SHU *Phellodendron chinense* var. *glabriusculum*, WU GENG WU JIA PI *Acanthopanax sessiliflorus*, WU GENG WU JIA PI *Acanthopanax sessiliflorus* (fruit), WU JIA PI *Acanthopanax gracilistylus*, XIA YE XIANG PU *Typha angustifolia*, XIAN GENG XI XIAN *Siegesbeckia orientalis* var. *pubescens* [Syn. *Siegesbeckia pubescens*], XIAN HE CAO *Agrimonia pilosa* var. *japonica*, XIAO HONG SHEN *Rubia yunnanensis* (root)<sup>[4646]</sup>, XIAO MAI *Triticum aestivum* [Syn. *Triticum vulgare*], XIAO QIAO MU ZI JIN NIU *Ardisia arborescens* (whole herb)<sup>[4769]</sup>, XIAO YE GUAN ZHONG *Matteuccia struthiopteris*, XIN JIANG LAN CI TOU *Echinops ritro*, XING AN SHENG MA *Cimicifuga dahurica*, XIONG RUI ZHUANG SHU WEI CAO *Salvia staminea*, XUAN SHEN *Scrophularia ningpoensis*, YANG MEI SHU PI *Myrica rubra* (bark: yield = 0.0036%), YAO YONG PU GONG YING *Taraxacum officinale*, YE ZI RANG *Cocos nucifera*, YI LANG QING LAN *Dracocephalum kotschyi*, YI YE TIAN NAN XING *Arisaema heterophyllum*, YI ZHU QIAN MA *Urtica dioica*, YIN CHEN HAO *Artemisia capillaris*, YING HE *Scleropyrum wallichianum* (twig), YU SHU SHU *Zea mays*, YU XING CAO *Houttuynia cordata*, YUN NAN GAN CAO *Glycyrrhiza yunnanensis*, YUN NAN SUI HUA SHAN *Amentotaxus yunnanensis* (twig and leaf: yield = 0.0005%dw)<sup>[4707]</sup>, ZAN BI XI BA DOU *Croton zambesicus* (leaf), ZAO JIA CI *Gleditsia sinensis* [Syn. *Gleditsia horrida*] (thorn), ZHAI YE BAN FENG HE *Pterospermum lanceaefolium*, ZHANG GUO GAN CAO *Glycyrrhiza inflata*, ZHANG YE BAN XIA *Pinellia pedatisecta* (dried tuber: content = 0.15%<sup>[5508]</sup>), ZHI ZI *Gardenia jasminoides* [Syn. *Gardenia florida*], ZHONG GUO XIU QIU *Hydrangea chinensis* (root)<sup>[3069]</sup>, ZI SU YE *Perilla frutescens* var. *arguta*, *Juliania adstringens* (bark), occurs in many plants (the commonest sterol of higher plants). Ref: 2, 4, 377, 519, 658, 660, 1521, 2529, 2545, 2575, 2576, 2579, 3026, 3061, 3069, 3074, 3075, 3786, 3807, 3854, 4163, 4369, 4459, 4483, 4488, 4502, 4520, 4527, 4607, 4646, 4665, 4669, 4676, 4686, 4696, 4706, 4707, 4722, 4736, 4767, 4769, 4799, 4980, 4994, 5059, 5288, 5382, 5400, 5421, 5427, 5461, 5501, 5508.



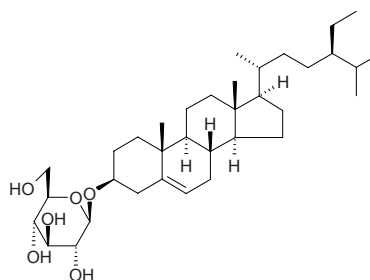
#### 19984 $\gamma$ -Sitosterol

(3 $\beta$ ,24S)Stigmast-5-en-3-ol C<sub>29</sub>H<sub>50</sub>O (414.72). mp 147~148°C, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = -47.7° (CHCl<sub>3</sub>). Source: BAN LAN GEN *Isatis indigotica*, DA QING YE *Isatis indigotica*, LI MENG PI *Citrus limonia*, LU BIAN QING *Clerodendron cyrtophyllum*, YUN QIAN HU *Peucedanum rubricaulae*. Ref: 2, 177, 660, 1521.



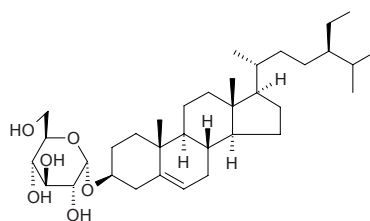
#### 19985 $\beta$ -Sitosterol-3-O- $\beta$ -D-glucoside

$\beta$ -Sitosteryl 3-O- $\beta$ -D-glucoside C<sub>35</sub>H<sub>60</sub>O<sub>6</sub> (576.86). mp 135~136°C, [ $\alpha$ ]<sub>D</sub><sup>23</sup> = +40.2° (c = 0.85, pyridine). Pharm: Antibacterial (oral pathogens: *Streptococcus mutans*, MIC > 500  $\mu$ g/mL, control Chlorhexidine gluconate, MIC = 1.25  $\mu$ g/mL; *Fusobacterium nucleatum*, MIC > 500  $\mu$ g/mL, Chlorhexidine gluconate, MIC = 2.5  $\mu$ g/mL)<sup>[5418]</sup>; cytotoxic (P<sub>388</sub>, ED<sub>50</sub> = 6.12  $\mu$ g/mL, control Mithramycin, ED<sub>50</sub> = 0.58  $\mu$ g/mL; A549, ED<sub>50</sub> > 50  $\mu$ g/mL, Mithramycin, ED<sub>50</sub> = 0.073  $\mu$ g/mL; HT29, ED<sub>50</sub> = 26.55  $\mu$ g/mL, Mithramycin, ED<sub>50</sub> = 0.076  $\mu$ g/mL)<sup>[5421]</sup>. Source: BAI MAO GEN<sup>(4)</sup> *Hydrastis canadensis* (root), MO ZHI JIAO GU CUI *Casearia membranacea* (stem). Ref: 5418, 5421.



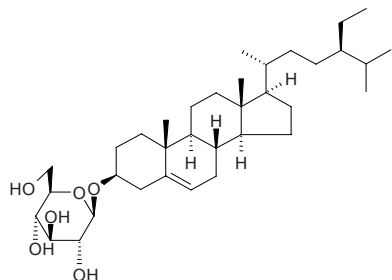
#### 19986 $\beta$ -Sitosterol- $\alpha$ -D-glucoside

C<sub>35</sub>H<sub>60</sub>O<sub>6</sub> (576.86). mp 300~302°C. Source: CHUAN CHI SHAO *Paeonia veitchii*. Ref: 448.

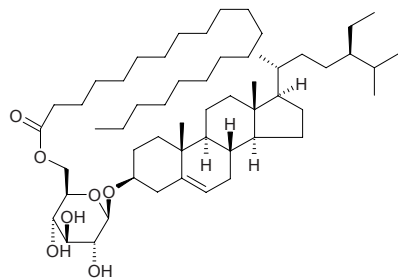


**19987  $\beta$ -Sitosterol- $\beta$ -D-glucoside**

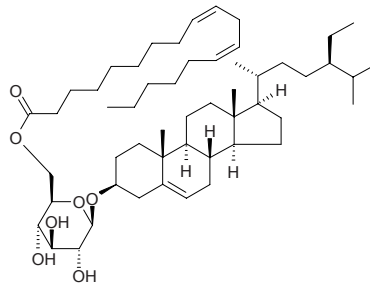
3-O- $\beta$ -D-Glycopyranosylsitosterol C<sub>55</sub>H<sub>102</sub>O<sub>6</sub> (576.86). White powder; mp 283~286°C (dec),  $[\alpha]_D^{25} = -51^\circ$  ( $c = 1.0$ , MeOH). **Pharm:** Cytotoxic inactive (*in vitro*, HONE-1 and NUGC cancer cell lines, no significant activity)<sup>[3069]</sup>; CYP3A4 inhibitor inactive (IC<sub>50</sub> > 100 $\mu$ mol/L, control Ketoconazole IC<sub>50</sub> = 0.24 $\mu$ mol/L)<sup>[4449]</sup>; CYP2D6 inhibitor inactive (IC<sub>50</sub> > 100 $\mu$ mol/L, control Quinidine IC<sub>50</sub> = 0.068 $\mu$ mol/L)<sup>[4449]</sup>. **Source:** DUN XING BAI YE TENG *Cryptolepis obtusa* (root), BAN XIA *Pinellia ternata*, CHAO XIAN LENG SHAN *Abies koreana* (root cortex), CHUAN XIN LIAN *Andrographis paniculata* [Syn. *Justicia paniculata*], DONG FANG GOU JI *Woodwardia orientalis*, DONG FANG WU TAN *Nauclera orientalis* (bark)<sup>[3074]</sup>, FANG XIANG JIANG *Zingiber aromaticum* (rhizome), GOU QI YE *Lycium chinense*, GUAN MU TONG *Aristolochia manshuriensis* (stem: yield = 0.0027%)<sup>[4706]</sup>, HONG SAN QI *Polygonum suffutum*, HUANG HUA BAI JIANG *Patrinia scabiosaefolia*, HUANG KUI *Abelmoschus moschatus* [Syn. *Hibiscus abelmoschus*], JIN YIN HUA *Lonicera japonica*, KAI KOU JIAN *Tupistra chinensis* (underground part)<sup>[4676]</sup>, KU GUA *Momordica charantia*, LI MU *Lyonia ovalifolia*, MAN JING ZI *Vitex trifolia*, MANG QI GU *Dicranopteris pedata* [Syn. *Polypodium pedatum*; *Dicranopteris dichotoma*], MU TONG *Akebia quinata*, MU TONG GEN *Akebia quinata*, PI JIU HUA *Humulus lupulus* (strobile)<sup>[4789]</sup>, SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.0035%dw)<sup>[4702]</sup>, SANG YE *Morus alba*, SHUI QIE *Solanum torvum*, TAI WAN FU RONG *Hibiscus taiwanensis*, TAI WAN JIN GU CAO *Ajuga taiwanensis* (whole herb), WU SE MEI *Lantana camara* (aerial parts), XIANG JIA PI *Periploca sepium*, XIONG RUI ZHUANG SHU WEI CAO *Salvia staminea*, YA PIAN *Papaver somniferum*, YU BAI FU *Typhonium giganteum*, YUAN CAN SHA *Bombyx mori*, YUN NAN CAO KOU *Alpinia blepharocalyx* (seed: yield = 0.00023%<sup>[3042]</sup>; yield = 0.000050%dw<sup>[3048]</sup>), ZHANG LIU TOU *Costus speciosus*, ZHONG GUO XIU QIU *Hydrangea chinensis* (root)<sup>[3069]</sup>, *Nuxia sphaerocephala* (leaf). **Ref:** 6, 377, 535, 562, 660, 2529, 3042, 3048, 3069, 3074, 3854, 3920, 4309, 4419, 4449, 4483, 4676, 4702, 4706, 4789, 5400.

**19988  $\beta$ -Sitosterol-3-O- $\beta$ -D-glucoside-6'-O-eicosanate**

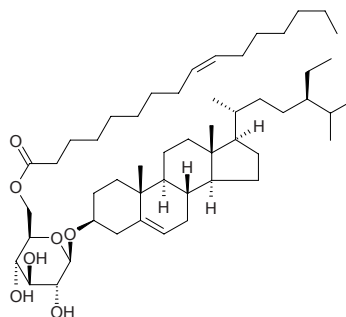
C<sub>55</sub>H<sub>98</sub>O<sub>7</sub> (871.39). White crystals, mp 121~123°C. **Source:** SHENG TENG *Stelmatocrypton khasianum*. **Ref:** 2157.

**19989  $\beta$ -Sitosterol-3-(6-linoleoyl)glucopyranoside**

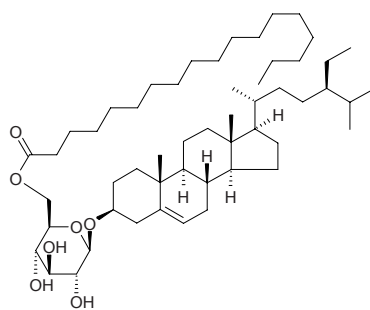
C<sub>53</sub>H<sub>90</sub>O<sub>7</sub> (839.30). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 660.

**19990  $\beta$ -Sitosterol-3-(6-palmitoleoyl)glucopyranoside**

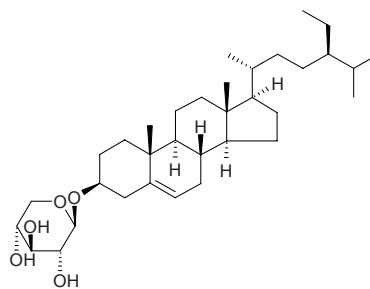
C<sub>51</sub>H<sub>88</sub>O<sub>7</sub> (813.27). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 660.

**19991  $\beta$ -Sitosterol-3-(6-stearoyl)glucopyranoside**

C<sub>53</sub>H<sub>94</sub>O<sub>7</sub> (843.34). **Source:** REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. **Ref:** 660.

**19992  $\beta$ -Sitosterol-3-O- $\beta$ -D-xylopyranoside**

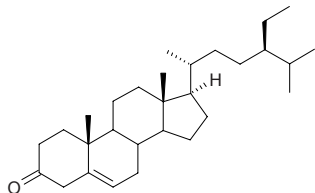
C<sub>34</sub>H<sub>58</sub>O<sub>5</sub> (546.84). Colorless acicular crystals (methanol), mp 285~287°C,  $[\alpha]_D = -55.2^\circ$  ( $c = 0.39$ , pyridine). **Source:** NAN FANG TU SI ZI *Cuscuta australis*. **Ref:** 468.



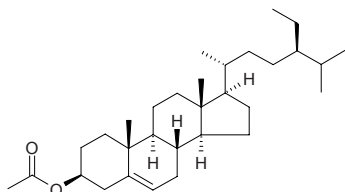


**19993  $\beta$ -Sitosterone**

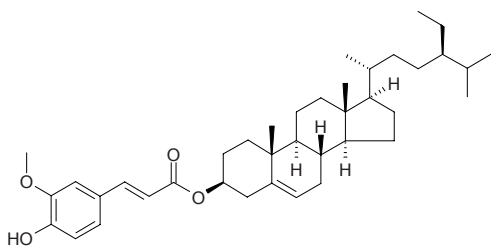
Stigmast-5-en-3-one;  $\Delta^5$ -Sitosterol-3-one C<sub>29</sub>H<sub>48</sub>O (412.71). Needles (MeOH-Et<sub>2</sub>O), mp 94°C, [ $\alpha$ ]<sub>D</sub><sup>27</sup> = +80.3° (*c* = 0.4, CHCl<sub>3</sub>). **Pharm:** Platelet aggregation inhibitor (washed rabbit platelets, 100 $\mu$ g/mL, 100 $\mu$ mol/L AA-induced, AggRt = 2.4%, control 50 $\mu$ mol/L Aspirin, AggRt = 100%; 10 $\mu$ g/mL collagen-induced, AggRt = 4.6%, 100 $\mu$ mol/L Aspirin, AggRt = 4.9%; 0.1U/mL thrombin-induced, AggRt = 4.9%, 100 $\mu$ mol/L Aspirin, AggRt = 1.7%; 2ng/mL PAF-induced, AggRt = 2.4%, 100 $\mu$ mol/L Aspirin, AggRt = 2.1%)<sup>[5427]</sup>. **Source:** SAN QI CAO *Gynura segetum* [Syn. *Gynura japonica*] (rhizome), occurs in many plants. **Ref:** 1521, 5427.

**19994  $\beta$ -Sitoseryl acetate**

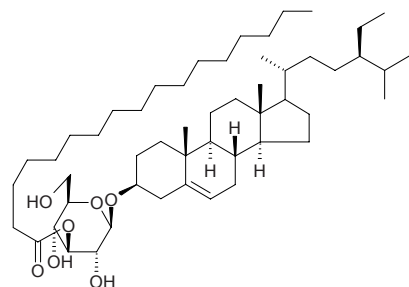
C<sub>31</sub>H<sub>52</sub>O<sub>2</sub> (456.76). mp 134°C. **Source:** QIAO MU ZI ZHU *Callicarpa arborea*. **Ref:** 6.

**19995  $\beta$ -Sitoseryl ferulate**

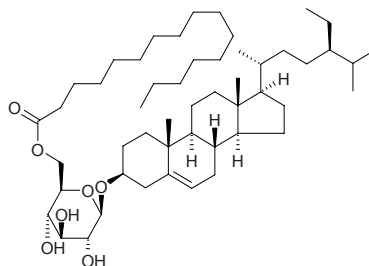
C<sub>39</sub>H<sub>58</sub>O<sub>4</sub> (590.89). mp 131.0~131.5°C. **Source:** MI PI KANG *Oryza sativa*. **Ref:** 6.

**19996  $\beta$ -Sitoseryl glucoside 3'-O-heptadecoate**

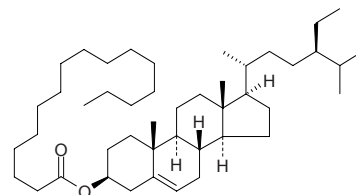
C<sub>52</sub>H<sub>92</sub>O<sub>7</sub> (829.31). **Source:** ROU CONG RONG *Cistanche deserticola*. **Ref:** 2448.

**19997  $\beta$ -Sitoseryl-D-glucoside-6'-palmitate**

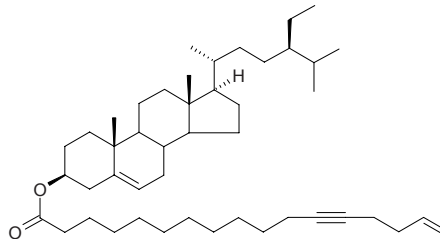
6'-O-Palmityl-sitoseryl-3-O- $\beta$ -D-glucoside, Stoindoside I C<sub>51</sub>H<sub>90</sub>O<sub>7</sub> (815.28). [ $\alpha$ ]<sub>D</sub><sup>21</sup> = -43° (*c* = 1.70, CHCl<sub>3</sub>). **Pharm:** Antiemetic (young male chicks, copper sulfate induced emesis assay, 50mg/kg, InRt = 50.9%, *p* < 0.001)<sup>[4649]</sup>. **Source:** GAO LIANG JIANG *Alpinia officinarum* (rhizome: yield = 0.00087%dw), LONG XUE SHU *Dracaena draco* (stem cortex), DONG FANG GOU JI *Woodwardia orientalis*, YA PIAN *Papaver somniferum*, YI ZHU QIAN MA *Urtica dioica*, GE BI TIAN MEN *Asparagus gobicus* (root). **Ref:** 6, 2989, 4649, 4696, 4975.

**19998  $\beta$ -Sitoseryl palmitate**

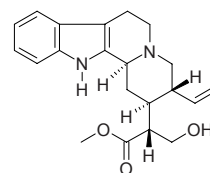
C<sub>45</sub>H<sub>80</sub>O<sub>2</sub> (653.14). mp 89°C. **Source:** PU HUANG *Typha angustata*, XIA YE XIANG PU *Typha angustifolia*. **Ref:** 2, 660.

**19999  $\beta$ -Sitoseryl-3-O-scleropyrate**

C<sub>46</sub>H<sub>76</sub>O<sub>2</sub> (661.12). Amorphous. **Pharm:** Antitubercular inactive (*Mycobacterium tuberculosis* H<sub>37</sub>Ra); antiplasmodial inactive (parasite *Plasmodium falciparum* K1 multidrug-resistant strain). **Source:** YING HE *Scleropyrum wallichianum* (twig). **Ref:** 4520.

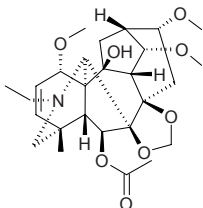
**20000 Sitsirikine**

[1245-00-7] C<sub>21</sub>H<sub>26</sub>N<sub>2</sub>O<sub>3</sub> (354.45). mp 206~208°C. **Source:** CHANG CHUN HUA *Catharanthus roseus* [Syn. *Vinca rosea*; *Lochera rosea*]. **Ref:** 2.

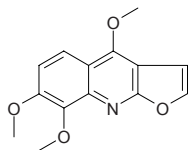


**20001 Siwanine A**

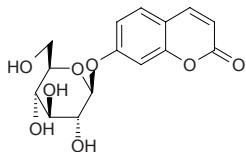
$C_{27}H_{39}NO_8$  (505.61). White amorphous powder. Source: QIN LING CUI QUE HUA *Delphinium giraldii*. Ref: 2506.

**20002 Skimmianine**

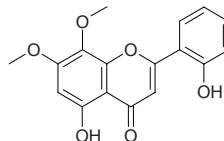
$C_{14}H_{13}NO_4$  (259.26). mp 176°C, Note: commonly in family *Rutaceae*. Pharm: Analgesic; anticonvulsant; antipyretic; CNS depressant; phototoxic (*Saccharomyces cerevisiae*, *Candida albicans*); photo-activated antibacterial (*Staphylococcus aureus*)<sup>[4989]</sup>; photo-activated antifungal (*Candida albicans* weak)<sup>[4989]</sup>; photo-activated DNA binding (restriction enzymes Xba I, Bci V I, Sal I, Pst I, Sph I and Hind III)<sup>[4989]</sup>; cytotoxic (P<sub>388</sub> cell line, ED<sub>50</sub> = 2.5 μg/mL, control Mithramycin, ED<sub>50</sub> = 0.06 μg/mL; HT29, ED<sub>50</sub> = 7.2 μg/mL, Mithramycin, ED<sub>50</sub> = 0.07 μg/mL; A549, ED<sub>50</sub> = 0.12 μg/mL, Mithramycin, ED<sub>50</sub> = 0.08 μg/mL)<sup>[5405]</sup>; LD<sub>50</sub> (mus, ip) = 150–250 mg/kg. Source: BAI SE BAI XIAN *Dictamnus albus*, BAI XIAN PI *Dictamnus dasycarpus*, CHOU CAO *Ruta graveolens*, CHOU SHAN YANG *Orixa japonica* (stem: yield = 0.00061% dw)<sup>[4774]</sup>, CHU YE HUA JIAO PI *Zanthoxylum ailanthoides*, FEI LONG ZHANG XUE *Toddalia asiatica* [Syn. *Toddalia aculeata*; *Paullinia asiatica*], GOU JU *Poncirus trifoliata*, HUA JIAO GEN *Zanthoxylum bungeanum*, HUA JIAO *Zanthoxylum bungeanum* (dried ripe pericarp: content scope = 0.0025%–0.0071%<sup>[5501]</sup>, content = 0.005%<sup>[5508]</sup>), JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], QING JIAO *Zanthoxylum schinifolium* (dried ripe pericarp: content scope = 0.0251%–0.0471%<sup>[5501]</sup>, content = 0.045%<sup>[5508]</sup>), SI ROU TUO GUO YE MI ZHU YU *Melicope semecarpifolia*, XIANG YIN YU *Skimmia japonica*, YIN YU *Skimmia reevesiana*, ZHU YE JIAO GEN *Zanthoxylum planispinum*, *Sarcomelicope glauca*. Ref: 6, 11, 658, 4774, 4989, 5405, 5501, 5508.

**20003 Skimmin**

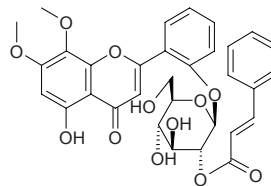
Umbelliferone 7-*O*-β-*D*-glucopyranoside  $C_{15}H_{16}O_8$  (324.29). Amorphous powder,  $[\alpha]_D^{24} = -48^\circ$ , mp 219–221°C; mp 219–221°C. Source: BEI SHA SHEN *Glehnia littoralis* (fruit), CONG ZHU XUE LIAN *Saussurea tridactyla* var. *maidugonla*, GUANG RONG YIN YU *Skimmia laureola*, SANG YE *Morus alba* (leaf: yield = 0.0013%<sup>[3507]</sup>), YIN YU *Skimmia reevesiana*, XIANG YIN YU *Skimmia japonica* (the compound was isolated from the plant by J.F.Eykman in 1844)<sup>[5505]</sup>, XIANG YIN YU *Skimmia japonica* (leaf), *Morus* sp. Ref: 6, 660, 1521, 2513, 3507, 3525, 5055.

**20004 Skullcapflavone I**

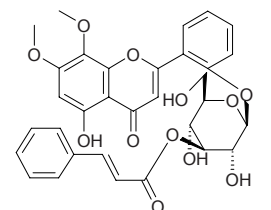
Panicolin [41060-16-6]  $C_{17}H_{14}O_6$  (314.30). Source: CHUAN XIN LIAN *Andrographis paniculata* [Syn. *Justicia paniculata*], HUANG QIN *Scutellaria baicalensis*, SHEN CHANG CHUAN XIN LIAN *Andrographis elongata* (whole herb). Ref: 2, 4149.

**20005 Skullcapflavone I 2'-*O*-β-*D*-(2''-*E*-cinnamoyl)glucopyranoside**

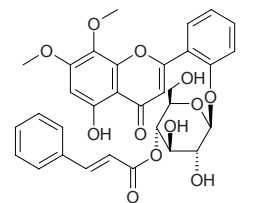
$C_{32}H_{30}O_{12}$  (606.59). Yellow amorphous powder (MeOH), mp 196–197°C,  $[\alpha]_D^{25} = -0.15^\circ$  ( $c = 4.0$ , MeOH). Source: BAI LI XIANG YE CHUN XIN LIAN *Andrographis serpyllifolia*. Ref: 2354.

**20006 Skullcapflavone I 2'-*O*-β-*D*-(3''-*E*-cinnamoyl)glucopyranoside**

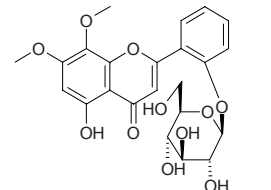
$C_{32}H_{30}O_{12}$  (606.59). Yellow amorphous powder (MeOH), mp 236–237°C,  $[\alpha]_D^{25} = -0.09^\circ$  ( $c = 5.0$ , MeOH). Source: BAI LI XIANG YE CHUN XIN LIAN *Andrographis serpyllifolia*. Ref: 2354.

**20007 Skullcapflavone I 2'-*O*-β-*D*-(4''-*E*-cinnamyl)glucopyranoside**

$C_{32}H_{30}O_{12}$  (606.59). Yellow amorphous powder, mp 247–249°C (MeOH),  $[\alpha]_D^{25} = -12.0^\circ$  ( $c = 4.0$ , MeOH). Source: SHEN CHANG CHUAN XIN LIAN *Andrographis elongata* (whole herb). Ref: 4149.

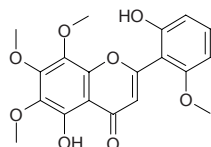
**20008 Skullcapflavone I 2'-*O*-β-*D*-glucopyranoside**

$C_{23}H_{24}O_{11}$  (476.44). Source: SHEN CHANG CHUAN XIN LIAN *Andrographis elongata* (whole herb). Ref: 4149.

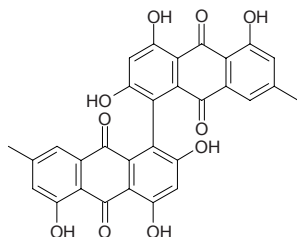


**20009 Skullcapflavone II**

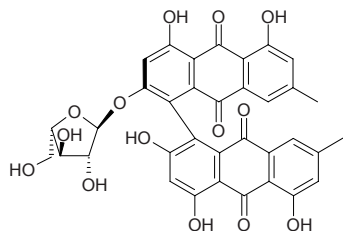
5,2'-Dihydroxy-6,7,8,6'-tetamethoxyflavone [55084-08-7]  $C_{19}H_{18}O_8$  (374.35). Yellow pillar crystals, mp 180–181°C; yellow lamellar crystals (methanol), mp 194–196°C. **Pharm:** Antineoplastic (ICR mus S<sub>180</sub>, biotic prolonged rate = 172%); antithrombotic (1.0mmol/L, inhibits platelet aggregation due to collagen, InRt = 32.5%); bradykinin antagonist; cytotoxic (*in vitro*, L<sub>1210</sub> ED<sub>50</sub> = 1.5µg/mL); antihistamine (inhibits histamine release, *in vitro*, rat peritoneal giant cells, IC<sub>50</sub> = 15.0µmol/L); trypsin inhibitor (IC<sub>50</sub> = 18µmol/L); cytotoxic (LXFL529L hmn large cell lung carcinoma cell line and HL-60, inhibits cell growth at a micromolar range)<sup>[5369]</sup>; tyrosine kinase inhibitor (tyrosine kinase of EGFR, IC<sub>50</sub> > 60µmol/L)<sup>[5369]</sup>. **Source:** DIAN HUANG QIN *Scutellaria amoena*, HUANG QIN *Scutellaria baicalensis* (dried root: mean content = 0.055%<sup>[5508]</sup>), NIAN MAO HUANG QIN *Scutellaria viscidula*. **Ref:** 2, 658, 660, 900, 5369, 5508.

**20010 Skyrin**

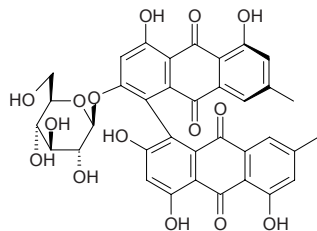
$C_{30}H_{18}O_{10}$  (538.47). **Pharm:** Cytotoxic (*in vitro*, Calu1, IC<sub>50</sub> = (14.3±2.5)µmol/L; HeLa, IC<sub>50</sub> = (11.3±3.5)µmol/L; K562, IC<sub>50</sub> = (27.3±5.0)µmol/L; Raji, IC<sub>50</sub> = (12.3±4.1)µmol/L; Vero, IC<sub>50</sub> = (18.3±2.6)µmol/L; Wish, IC<sub>50</sub> = (21.3±3.2)µmol/L, 1,3,8-trihydroxy for anthraquinone plays a significant role in the cytotoxic activity). **Source:** YI HE GUO *Ventilago leiocarpa* (stem). **Ref:** 3057.

**20011 S-(+)-Skyrin-6-O-α-arabinofuranoside**

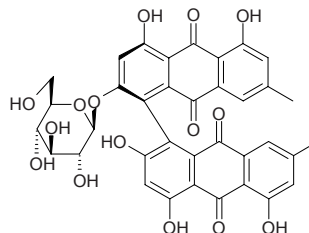
$C_{35}H_{26}O_{14}$  (670.59). Red-orange amorphous powder. **Source:** GUAN YE LIAN QIAO *Hypericum perforatum* (aerial parts). **Ref:** 5119.

**20012 R(-)-Skyrin-6-O-β-glucopyranoside**

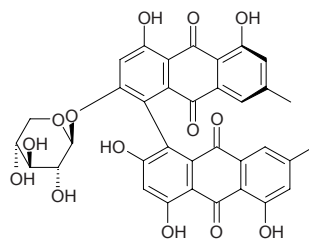
$C_{36}H_{28}O_{15}$  (700.62). Red-orange amorphous powder, mp > 300°C. **Pharm:** Inhibits [<sup>125</sup>I]sauvagine binding to CRH-1 receptor (IC<sub>50</sub> = 4µmol/L). **Source:** GUAN YE LIAN QIAO *Hypericum perforatum* (aerial parts). **Ref:** 5119.

**20013 S-(+)-Skyrin-6-O-β-glucopyranoside**

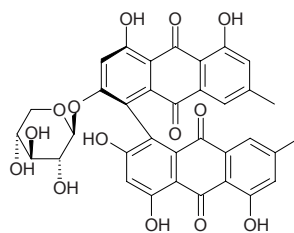
$C_{36}H_{28}O_{15}$  (700.62). Red-orange amorphous powder, mp > 300°C. **Pharm:** Inhibits [<sup>125</sup>I]sauvagine binding to CRH-1 receptor (IC<sub>50</sub> = 1µmol/L). **Source:** GUAN YE LIAN QIAO *Hypericum perforatum* (aerial parts). **Ref:** 5119.

**20014 R(-)-Skyrin-6-O-β-D-xylopyranoside**

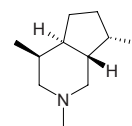
$C_{35}H_{26}O_{14}$  (670.59). Orange-red amorphous powder. **Source:** YUAN BAO CAO *Hypericum sampsonii* (whole herb). **Ref:** 4055.

**20015 S-(+)-Skyrin-6-O-β-D-xylopyranoside**

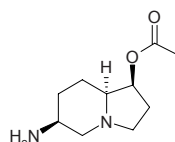
$C_{35}H_{26}O_{14}$  (670.59). Red-orange amorphous powder. **Source:** GUAN YE LIAN QIAO *Hypericum perforatum* (aerial parts). **Ref:** 5119.

**20016 β-Skytanthine**

$C_{11}H_{21}N$  (167.30). **Pharm:** Low toxin; tremorigenic agent. **Source:** family Asteraceae spp. **Ref:** 658.

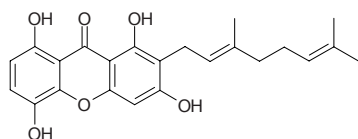
**20017 Slaframine**

$C_{10}H_{18}N_2O_2$  (198.27). **Pharm:** Parasympathomimetic. **Source:** SAN XIAO CAO *Trifolium repens*. **Ref:** 658

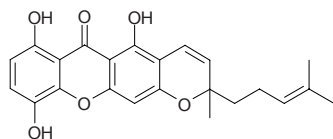


**20018 Smeathxanthone A**

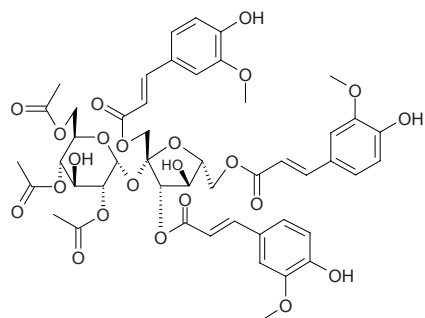
2-(3,7-Dimethyl-2,6-octadienyl)-1,3,5,8-tetrahydroxyxanthone C<sub>23</sub>H<sub>24</sub>O<sub>6</sub> (396.44). Yellow crystals, mp 216~218°C. **Pharm:** Antibacterial (*In vitro*, *Escherichia coli*, MIC = 156.25µg/mL, Gentamicin/Nystatin, MIC = 10µg/mL; *Klebsiella pneumoniae*, MIC = 312.5µg/mL, Gentamicin/Nystatin, MIC = 10µg/mL; *Proteus vulgaris*, MIC = 312.5µg/mL, Gentamicin/Nystatin, MIC = 5µg/mL; *Salmonella typhimurium*, MIC = 156.25µg/mL, Gentamicin/Nystatin, MIC = 5µg/mL; *Staphylococcus aureus*, MIC = 312.5µg/mL, Gentamicin/Nystatin, MIC = 10µg/mL; *Streptococcus faecalis*, MIC = 156.25µg/mL, Gentamicin/Nystatin, MIC = 10µg/mL); antifungal (*Candida albicans*, MIC = 312.5µg/mL, Gentamicin/Nystatin, MIC = 30µg/mL; *Candida krusei*, MIC = 312.5µg/mL, Gentamicin/Nystatin, MIC = 30µg/mL). **Source:** *Garcinia smeathmannii* (stem cortex). **Ref:** 5310.

**20019 Smeathxanthone B**

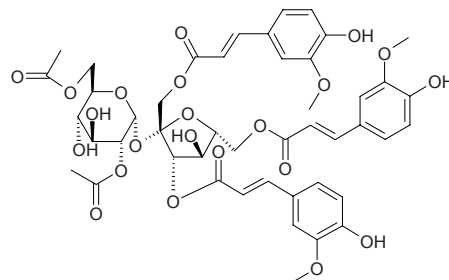
5,7,10-Trihydroxy-2-methyl-2-(4-methylpent-3-enyl)[2*H*,6*H*]pyran[3,2-*b*]xanthen-6-one C<sub>23</sub>H<sub>22</sub>O<sub>6</sub> (394.43). Yellow crystals, mp 187~189°C, [α]<sub>D</sub><sup>22</sup> = +30.3° (*c* = 0.02, MeOH). **Pharm:** Antibacterial (*In vitro*, *Escherichia coli*, MIC = 625µg/mL, Gentamicin/Nystatin, MIC = 10µg/mL; *Klebsiella pneumoniae*, MIC = 625µg/mL, Gentamicin/Nystatin, MIC = 10µg/mL; *Proteus vulgaris*, MIC = 312.5µg/mL, Gentamicin/Nystatin, MIC = 5µg/mL; *Salmonella typhimurium*, MIC = 625µg/mL, Gentamicin/Nystatin, MIC = 5µg/mL; *Staphylococcus aureus*, MIC = 312.5µg/mL, Gentamicin/Nystatin, MIC = 10µg/mL; *Streptococcus faecalis*, MIC = 625µg/mL, Gentamicin/Nystatin, MIC = 10µg/mL); antifungal (*Candida albicans*, MIC = 312.5µg/mL, Gentamicin/Nystatin, MIC = 30µg/mL; *Candida krusei*, MIC = 312.5µg/mL, Gentamicin/Nystatin, MIC = 30µg/mL). **Source:** *Garcinia smeathmannii* (stem cortex). **Ref:** 5310.

**20020 Smiglaside A**

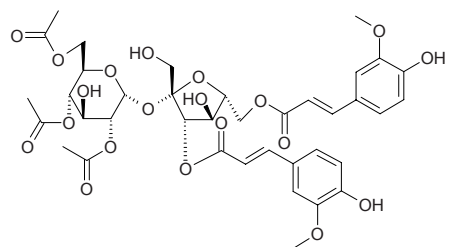
C<sub>48</sub>H<sub>52</sub>O<sub>23</sub> (996.94). Amorphous powder, [α]<sub>D</sub> = 79.53° (*c* = 0.4, MeOH). **Source:** TU FU LING *Smilax glabra*. **Ref:** 771.

**20021 Smiglaside B**

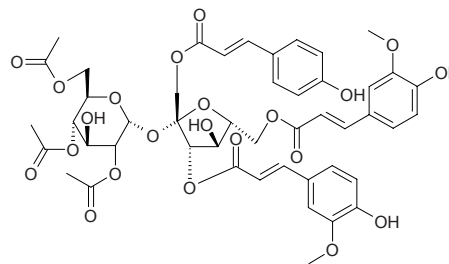
C<sub>46</sub>H<sub>50</sub>O<sub>22</sub> (954.9). Yellowish amorphous powder, [α]<sub>D</sub> = 36.65° (*c* = 0.7, MeOH). **Source:** TU FU LING *Smilax glabra*. **Ref:** 771.

**20022 Smiglaside C**

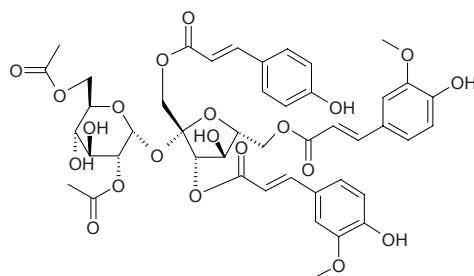
C<sub>38</sub>H<sub>44</sub>O<sub>20</sub> (820.76). Amorphous powder, [α]<sub>D</sub> = 32.86° (*c* = 0.6, MeOH). **Source:** TU FU LING *Smilax glabra*. **Ref:** 771.

**20023 Smiglaside D**

C<sub>47</sub>H<sub>50</sub>O<sub>22</sub> (966.91). Amorphous powder, [α]<sub>D</sub> = 67.14° (*c* = 0.5, MeOH). **Source:** TU FU LING *Smilax glabra*. **Ref:** 771.

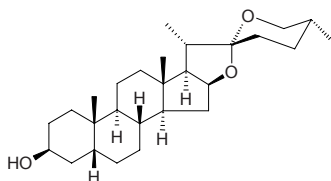
**20024 Smiglaside E**

C<sub>45</sub>H<sub>48</sub>O<sub>21</sub> (924.87). Amorphous powder, [α]<sub>D</sub> = 123.84° (*c* = 0.4, MeOH). **Source:** TU FU LING *Smilax glabra*. **Ref:** 771.

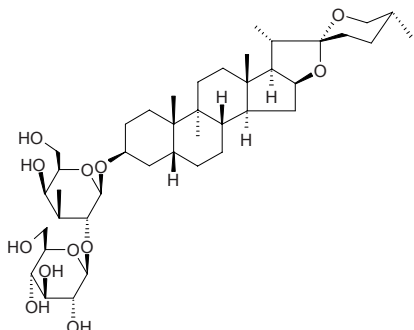


**20025 Smilagenin**

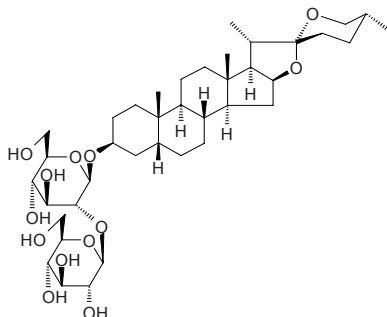
Isosarsapogenin  $C_{27}H_{44}O_3$  (416.65). mp 183~184°C. Source: ZHI MU *Anemarrhena asphodeloides*. Ref: 2.

**20026 Smilagenin-3-O-β-D-glucopyranosyl (1→2)-β-D-galactopyranoside**

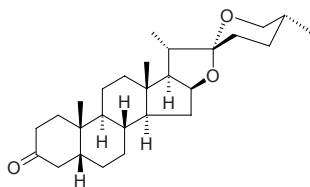
$C_{40}H_{66}O_{12}$  (738.96). Source: XIE BAI *Allium macrostemon*. Ref: 660.

**20027 Smilagenin-3-O-β-D-glucopyranosyl(1→2)-β-D-mannopyranoside**

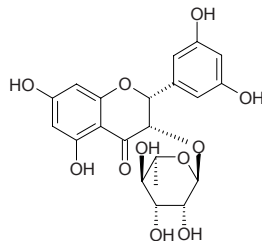
Isosarsapogenin-3-O-β-D-glucopyranosyl(1→2)-β-D-mannopyranoside  $C_{39}H_{64}O_{13}$  (740.94). White granular crystals, mp 265~267°C,  $[\alpha]_D^{12} = -189.3^\circ$ . Source: ZHI MU *Anemarrhena asphodeloides*. Ref: 199.

**20028 Smilagenone**

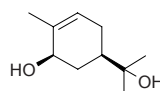
$C_{27}H_{42}O_3$  (414.63). It only exists in moldy source plants and causes the quality of the diosgenin products to decrease. Source: CHA RUI SHU YU *Dioscorea collettii*, CHUAN LONG SHU YU *Dioscorea nipponica*, DUN YE SHU YU *Dioscorea zingiberensis*, FU ZHOU SHU YU *Dioscorea futschauensis*, SHU KUI YE SHU YU *Dioscorea althaeoides*. Ref: 10.

**20029 Smitilbin**

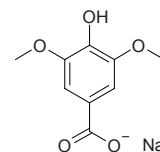
$C_{21}H_{22}O_{11}$  (450.40). Source: TU FU LING *Smilax glabra*. Ref: 714.

**20030 Sobrerol**

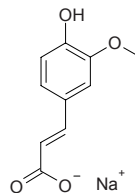
Sobrepin [498-71-5]  $C_{10}H_{18}O_2$  (170.25). Pharm: Antineoplastic (reduces markedly morbidity of mammary cancer). Source: occurs in many plants (vegetables and fruits). Ref: 1521, 1582.

**20031 Sodium syringate**

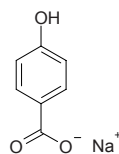
$C_9H_9NaO_5$  (220.16). Source: *Eurycoma* sp. Ref: 4556.

**20032 Sodium ferulate**

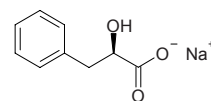
$C_{10}H_9NaO_4$  (216.17). White amorphous powder. Source: XIN ZANG JIA ZI CAO *Arnebia euchroma*. Ref: 2187.

**20033 Sodium p-hydroxybenzoate**

$C_7H_5NaO_3$  (160.11). Source: *Eurycoma* sp. Ref: 4556.

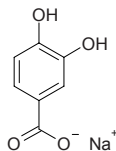
**20034 (2R)-Sodium 3-phenyllactate**

$C_9H_9NaO_3$  (188.16). Colorless needles, mp > 280°C, (MeOH),  $[\alpha]_D^{25} = -26.8^\circ$  ( $c = 0.0025$ , MeOH). Source: TAI WAN HUANG BO *Phellodendron amurense* var. *wilsonii* (leaf: yield = yield = 0.00051%dw). Ref: 4722.

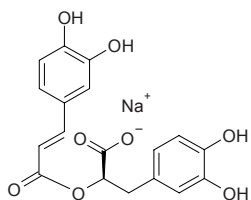


**20035 Sodium protocatechuate**

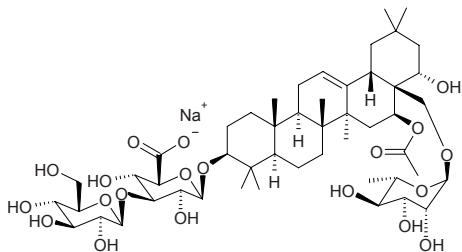
$C_7H_5NaO_4$  (176.11). Source: *Eurycoma* sp. Ref: 4556.

**20036 Sodium rosmarinate**

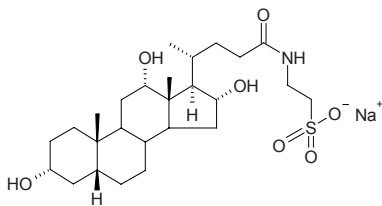
$C_{18}H_{15}NaO_8$  (382.31). White amorphous powder. Source: XIN ZANG JIA ZI CAO *Arnebia euchroma*. Ref: 2187.

**20037 Sodium salt of alternoside II**

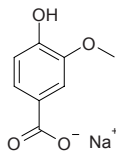
$C_{50}H_{79}NaO_{20}$  (1023.16). Amorphous powder, mp 294–296°C,  $[\alpha]_D^{20} = +1.5^\circ$  ( $c = 0.19$ , MeOH). Pharm: Anti-sweetener. Source: CHI GENG TENG *Gymnema sylvestre* (leaf: yield = yield = 0.0040%dw). Ref: 3037.

**20038 Sodium taurophythocholate**

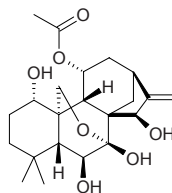
$C_{26}H_{44}NNaO_7S$  (537.70). White powder, mp 192–194°C. Source: MANG SHE *Python molurus bivittatus*. Ref: 240.

**20039 Sodium vanillate**

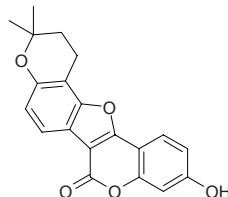
$C_8H_7NaO_4$  (190.13). Source: *Eurycoma* sp. Ref: 4556.

**20040 Sodoponin**

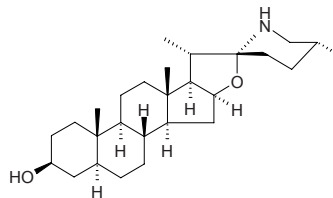
$C_{22}H_{32}O_7$  (408.50). mp 229–231.5°C,  $[\alpha]_D^{28} = +45.7^\circ$  ( $c = 1.0$ ,  $CHCl_3$ ). Source: MAO YE XIANG CHA CAI *Isodon japonica* [Syn. *Rabdosia japonica*], SHAN DI XIANG CHA CAI *Isodon oresbia* (aerial parts). Ref: 3808, 4067.

**20041 Sojagol**

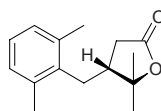
$C_{20}H_{16}O_5$  (336.35). Pharm: Antifungal; estrogenic activity. Source: HEI DA DOU *Glycine max*. Ref: 658.

**20042 Soladulcidine**

Soladulcidine  $C_{27}H_{45}NO_2$  (415.67). mp 209–211°C,  $[\alpha]_D = -50^\circ$  ( $c = 0.4$ , chloroform). Pharm: Antifungal (*Claviceps purpurea*, *Sclerotinia*, *Trichothecium roseum*). Source: QIAN NIAN BU LAN XIN *Solanum dulcamara*, BAI MAO TENG *Solanum lyratum*. Ref: 6, 658, 660.

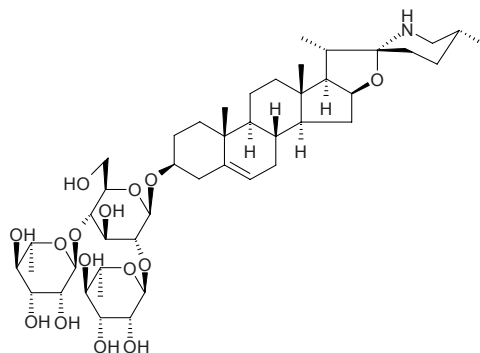
**20043 Solafuranone**

$C_{15}H_{20}O_2$  (232.33). White solid (EtOAc/hexane), mp 132–133°C,  $[\alpha]_D^{25} = +14.0^\circ$  ( $c = 1.0$ ,  $CH_3CN$ ). Source: TIAN QIE ZI *Solanum indicum* (root). Ref: 3087.

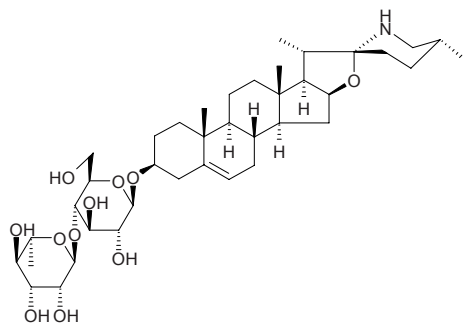


**20044 Solamargine**

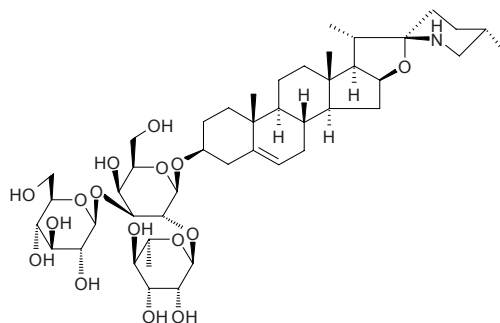
$C_{45}H_{73}NO_{15}$  (868.08). mp 293–295°C. Pharm: Antibacterial; antineoplastic (mus,  $S_{180}$ , ED = 30mg/kg). Source: BAI MAO TENG *Solanum lyratum*, CI TIAN QIE *Solanum khasianum*, LA JIAO *Capsicum frutescens*, LONG KUI *Solanum nigrum* (whole herb: content = 0.20%<sup>[5508]</sup>), QIAN NIAN BU LAN XIN *Solanum dulcamara*. Ref: 6, 658, 660, 5508.

**20045  $\beta$ -Solamargine**

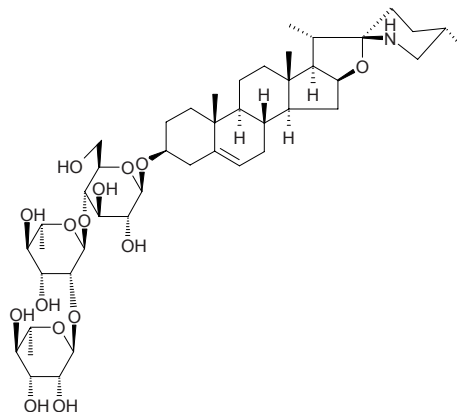
$C_{39}H_{63}NO_{11}$  (721.94). Source: YE DIAN QIE *Solanum surattense*. Ref: 6.

**20046  $\alpha$ -Solamargine**

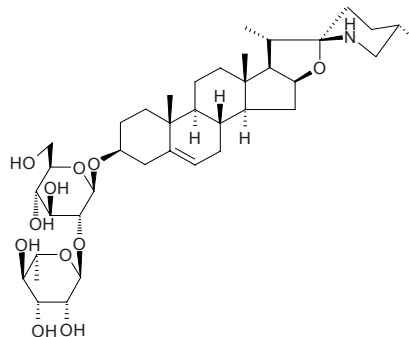
$C_{45}H_{73}NO_{16}$  (884.08). mp 278–281°C (dec). Source: QIAN NIAN BU LAN XIN *Solanum dulcamara*. Ref: 6, 660.

**20047  $\beta$ -Solamarine**

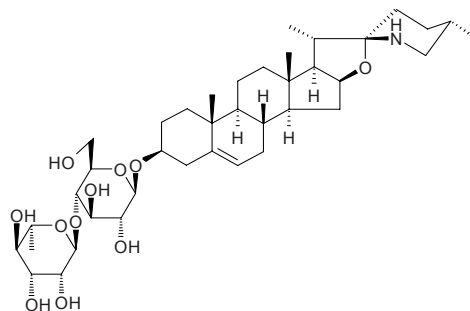
[3671-38-3]  $C_{45}H_{73}NO_{15}$  (868.08). mp 275–277°C (dec). Source: QIAN NIAN BU LAN XIN *Solanum dulcamara*. Ref: 5, 6, 660.

**20048  $\gamma_1$ -Solamarine**

$C_{39}H_{63}NO_{11}$  (721.94). mp 268–271°C (dec). Source: QIAN NIAN BU LAN XIN *Solanum dulcamara*. Ref: 6.

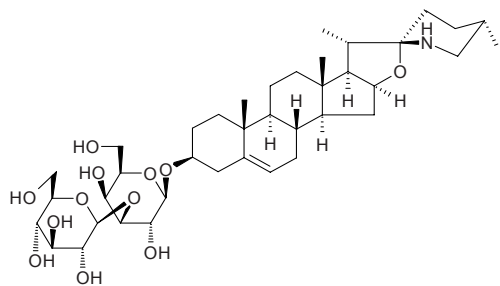
**20049  $\gamma_2$ -Solamarine**

$C_{39}H_{63}NO_{11}$  (721.94). mp 243–248°C (dec). Source: QIAN NIAN BU LAN XIN *Solanum dulcamara*. Ref: 6.

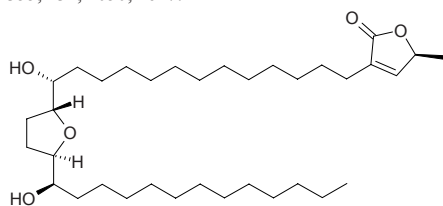


**20050  $\delta$ -Solamarine**

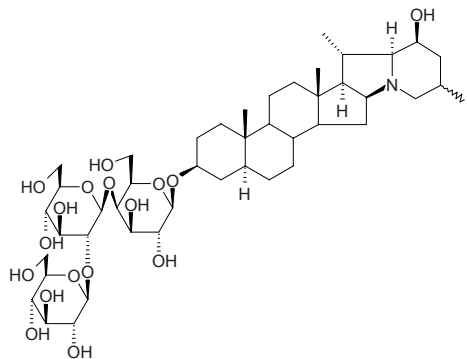
$C_{39}H_{63}NO_{12}$  (737.94). mp 265–269°C (dec). Source: QIAN NIAN BU LAN XIN *Solanum dulcamara*. Ref: 6.

**20051 Solamin**

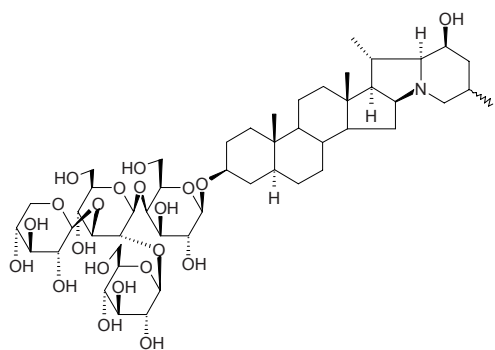
[138682-32-3]  $C_{35}H_{64}O_5$  (564.90). White crystals, mp 74–75°C. Pharm: Cytotoxic ( $P_{388}$ ,  $ED_{50} = 0.04\mu\text{g/mL}$ ; KB,  $ED_{50} = 0.3\mu\text{g/mL}$ ). Source: CI GUO FAN LI ZHI *Annona muricata* (leaf: yield = 0.00025%dw)<sup>[4617]</sup>, GUANG YE ZI YU PAN *Uvaria boniana*, NIU XIN FAN LI ZHI *Annona reticulata*. Ref: 355, 432, 1050, 4617.

**20052 (25 $\zeta$ )-Solanidan-3 $\beta$ ,23 $\beta$ -dihydroxy 3-O- $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 4)- $\beta$ -D-galactopyranoside**

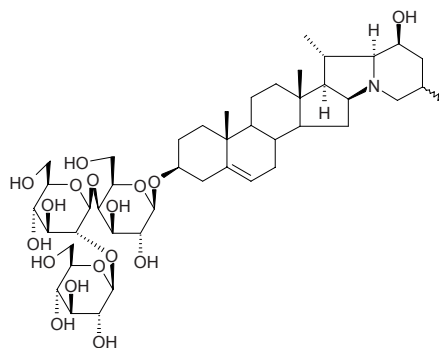
$C_{45}H_{75}NO_{17}$  (902.10). Source: BAI MAO TENG *Solanum lyratum*. Ref: 660.

**20053 (25 $\zeta$ )-Solanidan-3 $\beta$ ,23 $\beta$ -dihydroxy 3-O- $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 2)- $\beta$ -D-xylopyranosyl (1 $\rightarrow$ 3)- $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 4)- $\beta$ -D-galactopyranoside**

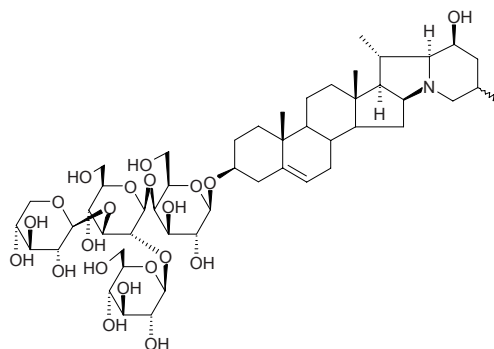
$C_{50}H_{83}NO_{21}$  (1034.21). Source: BAI MAO TENG *Solanum lyratum*. Ref: 660.

**20054 (25 $\zeta$ )-Solanid-5-en-3 $\beta$ ,23 $\beta$ -dihydroxy 3-O- $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 4)- $\beta$ -D-galactopyranoside**

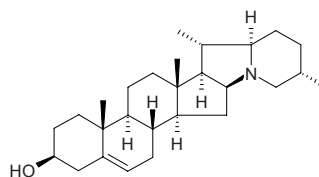
$C_{45}H_{73}NO_{17}$  (900.08). Source: BAI MAO TENG *Solanum lyratum*. Ref: 660.

**20055 (25 $\zeta$ )-Solanid-5-en-3 $\beta$ ,22 $\beta$ -dihydroxy 3-O- $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 2)- $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 3)- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 4)- $\beta$ -D-galactopyranoside**

$C_{50}H_{81}NO_{21}$  (1032.20). Source: BAI MAO TENG *Solanum lyratum*. Ref: 660.

**20056 Solanidine**

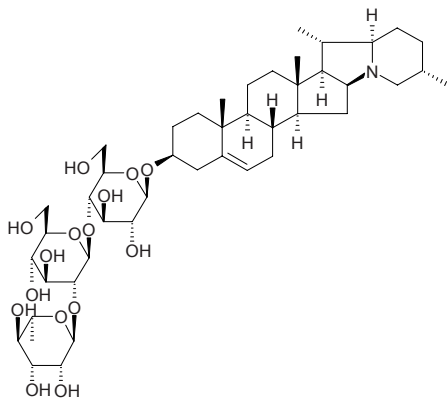
[80-78-4]  $C_{27}H_{43}NO$  (397.65). mp 218–219°C. Pharm: Cardiotonic (frog heart, *in vitro*); toxin. Source: CHUAN BEI MU *Fritillaria cirrhosa*, HEI BAI HE *Fritillaria camtschatscensis*, LA JIAO *Capsicum frutescens*, LI LU *Veratrum nigrum*, LONG KUI *Solanum nigrum*, MA LING SHU *Solanum tuberosum*, MAO YE LI LU *Veratrum grandiflorum*, ZHE BEI MU *Fritillaria verticillata* var. *thunbergii* [Syn. *Fritillaria thunbergii*]. Ref: 6, 658, 2201.





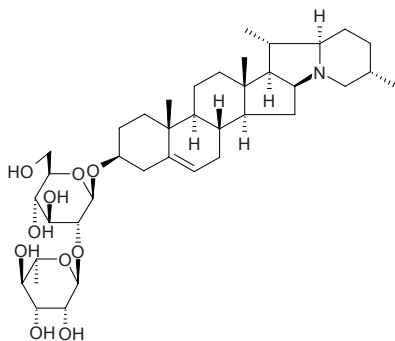
**20057 Solanidine-3-O- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranoside**

[81942-09-8] C<sub>45</sub>H<sub>73</sub>NO<sub>15</sub> (868.08). mp 278~283°C, [ $\alpha$ ]<sub>D</sub> = -58.4° (c = 0.9, pyridine). Source: ZHE BEI MU *Fritillaria verticillata* var. *thunbergii* [Syn. *Fritillaria thunbergii*]. Ref: 2201.



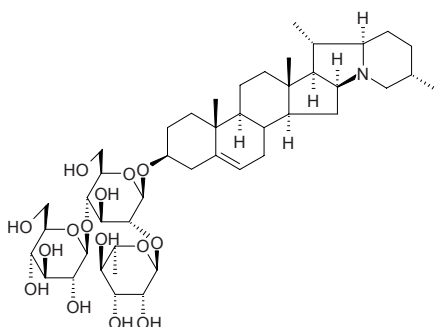
**20058 Solanidine-3-O- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside**

C<sub>39</sub>H<sub>63</sub>NO<sub>10</sub> (705.94). mp 287~292°C, [ $\alpha$ ]<sub>D</sub> = -52.5° (c = 0.9, pyridine). Source: ZHE BEI MU *Fritillaria verticillata* var. *thunbergii* [Syn. *Fritillaria thunbergii*]. Ref: 2201.



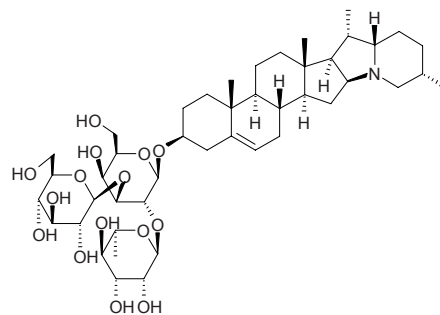
**20059 Solanidine 3-O- $\alpha$ -L-rhamnopyranosyl (1 $\rightarrow$ 2)-[ $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranoside**

C<sub>45</sub>H<sub>73</sub>NO<sub>15</sub> (868.08). Source: JIA BAI HE *Notholirion hyacinthinum* [Syn. *Notholirion bulbuliferum*]. Ref: 660.



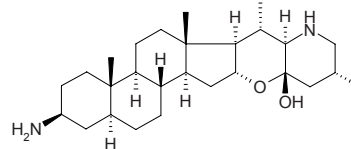
**20060 Solanine**

$\alpha$ -Solanine [20562-02-1] C<sub>45</sub>H<sub>73</sub>NO<sub>15</sub> (868.08). Tiny acicular crystals(85% ethanol), mp 190°C turn brown lump, 285 (dec), [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -60° (pyridine). Pharm: Antineoplastic (S<sub>180</sub> and ascites carcinoma); antifungal (*Aspergillus niger* and *Candida albicans*); hemolytic; increases level of blood sugar (rat, ip, 5~30mg/kg, inhibits use of glucose); smooth muscle stimulant; teratogen (pregnant mus); toxin (hmn, orl, 2.8mg/kg poisoning); LD<sub>50</sub> (mus, ip, chloride) = 42mg/kg, (rat, ip, chloride) = 67mg/kg. Source: MA LING SHU *Solanum tuberosum*, LONG KUI *Solanum nigrum*, FAN QIE *Lycopersicon esculentum*. Ref: 658, 6, 1371.



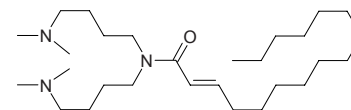
**20061 Solanocapsine**

[639-86-1] C<sub>27</sub>H<sub>46</sub>N<sub>2</sub>O<sub>2</sub> (430.68). mp 222°C. Pharm: Antibacterial (in serum, *Mycobacterium tuberculosis*, *Diplococcus pneumoniae*); slows heart rate; toxin (hmn, tolerance dose = 60~84mg). Source: YE HAI JIAO *Solanum capsicastrum*, YU SHAN HU GEN *Solanum pseudo-capsicum*. Ref: 6, 658.



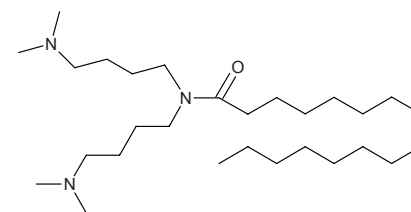
**20062 Solapalmitine**

[17232-86-9] C<sub>28</sub>H<sub>57</sub>N<sub>3</sub>O (451.79). Oil, bp 153°C/0.08mmHg (bath). Pharm: Antineoplastic (rat, W<sub>256</sub>, ED<sub>50</sub> = 0.36mg/kg); cytotoxic (KB, *in vitro*). Source: SAN LIE QIE *Solanum tripartitum*. Ref: 661.



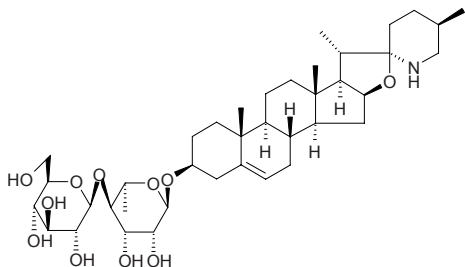
**20063 Solapalmitine**

[17232-85-8] C<sub>28</sub>H<sub>59</sub>N<sub>3</sub>O (453.80). Oil, bp 150°C/0.05mmHg (bath). Pharm: Antineoplastic (rat, W<sub>256</sub>, ED<sub>50</sub> = 0.36mg/kg); cytotoxic (KB, *in vitro*). Source: SAN LIE QIE *Solanum tripartitum*. Ref: 661.

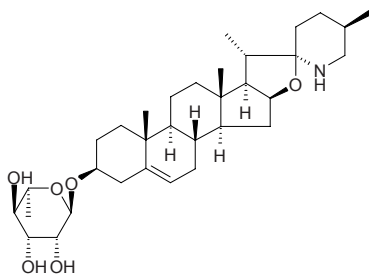


**20064 Solaplumbine**

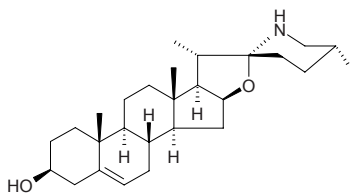
[54302-48-6] C<sub>39</sub>H<sub>63</sub>NO<sub>11</sub> (721.94). Yellowish acicular crystals(ethanol-benzene), mp 180°C, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -90° (c = 1, methanol). **Pharm:** Antineoplastic (mus, W<sub>256</sub>, 15mg/kg, InRt = 87%). **Source:** HUI YE YAN CAO *Nicotiana plumbaginifolia*. **Ref:** 661.

**20065 Solaplumbinine**

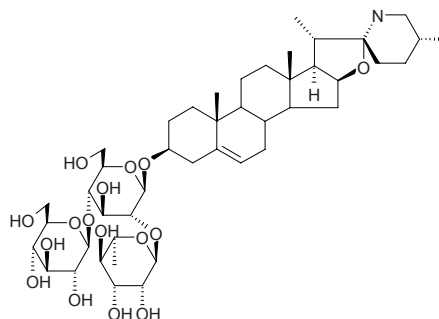
C<sub>33</sub>H<sub>53</sub>NO<sub>6</sub> (559.79). White amorphous powder, mp 184-185°C, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -39.5° (c = 1, methanol). **Pharm:** Antineoplastic (mus W<sub>256</sub>, 10mg/kg, InRt = 83%, 20mg/kg, InRt = 89%). **Source:** HUI YE YAN CAO *Nicotiana plumbaginifolia*. **Ref:** 661.

**20066 Solasodine**

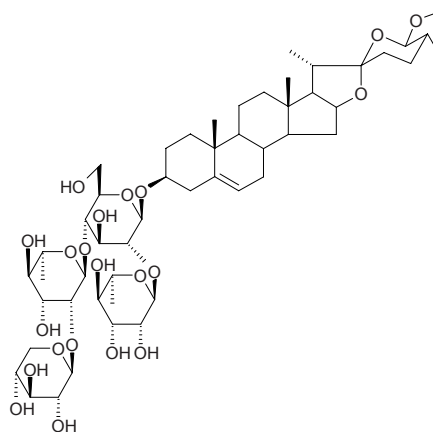
[126-17-0] C<sub>27</sub>H<sub>43</sub>NO<sub>2</sub> (413.65). mp 202°C. **Pharm:** Anti-inflammatory (reduces permeability of blood capillary and activity of hyaluronidase); antipyretic (rat, 3mg/kg sc, body temperature goes down 1.5°C and maintains 24h, mus, body temperature goes down 2.0°C and maintains 48h); increases level of blood sugar (glucocorticoid); teratogen (pregnant rat, 180mg orl, defect rate = 25.8%); LD<sub>50</sub> (mus, ip) = 898mg/kg, (rat, ip) = 395mg/kg, (gpg, ip) = 103mg/kg. **Source:** AO ZHOU QIE *Solanum aviculare* [Syn. *Solanum laciniatum*], CI TIAN QIE *Solanum khasianum*, HEI BAI HE *Fritillaria camtschaticensis*, LA JIAO *Capsicum frutescens*, LONG KUI *Solanum nigrum* (whole herb: content = 0.25%<sup>[5508]</sup>), QIAN NIAN BU LAN XIN *Solanum dulcamara*, QIE YE *Solanum melongena*, SU XIN YE BAI YING *Solanum jasminoides*, TIAN QIE ZI *Solanum indicum*. **Ref:** 6, 658, 660, 5508.

**20067 Solasodine 3-O- $\alpha$ -L-rhamnopyranosyl (1→2)-O-[ $\beta$ -D-glucopyranosyl (1→4)]- $\beta$ -D-glucopyranoside**

C<sub>45</sub>H<sub>73</sub>NO<sub>16</sub> (884.08). **Source:** BAI HE *Lilium brownii* var. *viridulum* [Syn. *Lilium brownii* var. *colchesteri*]. **Ref:** 660.

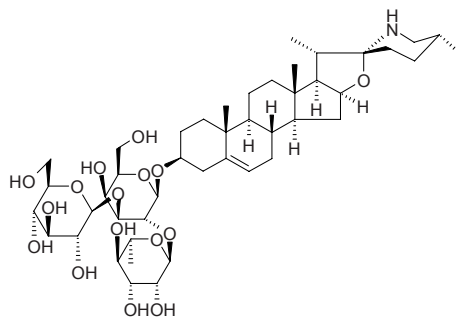
**20068 Solasodoside A**

(2*R*,26*R*)-26-Methoxyspirost-5-en-3 $\beta$ -ol 3-O-{O- $\alpha$ -L-rhamnopyranosyl-(1→2)-O-[ $\beta$ -D-xylopyranosyl-(1→2)-O- $\alpha$ -L-rhamnopyranosyl-(1→4)]- $\beta$ -D-glucopyranoside} C<sub>51</sub>H<sub>82</sub>O<sub>21</sub> (1031.21). Amorphous powder. **Pharm:** Cytotoxic (antiproliferative, HL-60 cells *in vitro*, GI<sub>50</sub> > 80.0 $\mu$ mol/L, control Cisplatin, GI<sub>50</sub> = 8.5 $\mu$ mol/L). **Source:** SUO DUO MI QIE *Solanum sodomeum* [Syn. *Solanum sodomaemum*] (underground parts: yield = 0.0036%fw). **Ref:** 1158.

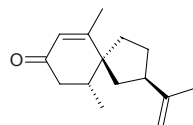


**20069 Solasonine**

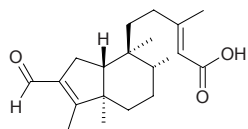
[19121-58-5]  $C_{45}H_{73}NO_{16}$  (884.08). mp 301~303°C. **Pharm:** Antineoplastic (S<sub>180</sub>); bidirectional action to CNS system (rat and rbt, stimulates in low dose, inhibits in high dose); hemolytic; platelet aggregation inhibitor; increases level of blood sugar (rat, ip, 50~100mg/kg); stimulates heart; toxin. **Source:** AO ZHOU QIE *Solanum aviculare* [Syn. *Solanum laciniatum*], BAI MAO TENG *Solanum lyratum*, CI TIAN QIE *Solanum khasianum*, HUANG GUO QIE *Solanum xanthocarpum*, HUI BAI QIE *Solanum incanum*, LA JIAO *Capsicum frutescens*, LONG KUI *Solanum nigrum*, QIAN NIAN BU LAN XIN *Solanum dulcamara*, QIE ZI *Solanum melongena*, SHUI QIE *Solanum torvum*, SU XIN YE BAI YING *Solanum jasminoides*, SUO DUO MI QIE *Solanum sodomeum* [Syn. *Solanum sodomaemum*], XIAO LU QIE *Solanum viarum*, YE DIAN QIE *Solanum surattense*, YE YAN YE *Solanum verbascifolium*, *Solanum* sp. **Ref:** 6, 658, 660.

**20070 Solavetivone**

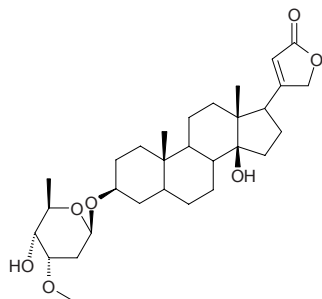
[54878-25-0]  $C_{15}H_{22}O$  (218.34). **Pharm:** Cytotoxic (*in vitro*, OVCAR-3, IC<sub>50</sub> = 0.1mmol/L)<sup>[3087]</sup>; antifungal. **Source:** MA LING SHU *Solanum tuberosum*, TIAN QIE ZI *Solanum indicum* (root)<sup>[3087]</sup>, YAN CAO *Nicotiana tabacum*. **Ref:** 658, 3087.

**20071 Solidagonal acid**

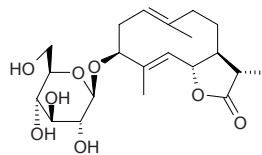
[97868-05-8]  $C_{20}H_{30}O_3$  (318.46). **Source:** GAO YI ZHI HUANG HUA *Solidago altissima*. **Ref:** 4049.

**20072 Somalin**

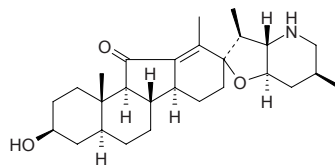
$C_{30}H_{46}O_7$  (518.70). mp 240~246°C. **Source:** FU SHOU CAO *Adonis amurensis* (root: content = 0.056%<sup>[5508]</sup>) **Ref:** 6, 1521, 5508.

**20073 Sonchuside A**

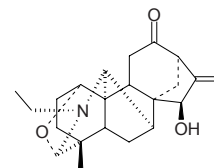
$C_{21}H_{32}O_8$  (412.48). **Source:** DAO LUAN YE PU GONG YING GEN *Taraxacum obovatum*. **Ref:** 5357.

**20074 Songbeisine**

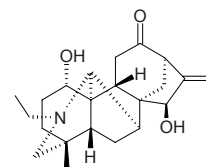
$C_{27}H_{41}NO_3$  (427.63). **Source:** AN ZI BEI MU *Fritillaria unibracteata*. **Ref:** 2.

**20075 Songoramine**

[23179-78-4]  $C_{22}H_{29}NO_3$  (355.48). Colorless oil, mp 211~212°C,  $[\alpha]_D^{26} = -44.2^\circ$  ( $c = 0.266$ ,  $CHCl_3$ ). **Source:** XUAN WEI WU TOU *Aconitum nagarum* var. *lasiandrum*, WU TOU *Aconitum carmichaeli*. **Ref:** 660, 461.

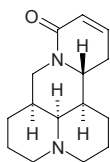
**20076 Songorine**

[509-24-0]  $C_{22}H_{31}NO_3$  (350.51). Crystals (acetone-ether), mp 201~203°C,  $[\alpha]_D^{25} = 136^\circ$  ( $c = 2.5$ , methanol). hydrochloride crystals, mp 257~258,  $[\alpha]_D^{22} = -114^\circ$  ( $c = 2$ , water). **Pharm:** CNS depressant (high dose); CNS stimulant (low dose); antihypertensive (high dose); inhibits spontaneous movement (mus, 400mg/kg, sc); sedative; antipyretic (rbi); LD<sub>50</sub> (mus, orl) = 1575mg/kg, (mus, sc) = 630mg/kg, (mus, ip) = 485mg/kg, (mus, iv) = 142.5mg/kg. **Source:** DUO GEN WU TOU *Aconitum karakolicum*, SHAN DI WU TOU *Aconitum monticola*, WU TOU *Aconitum carmichaeli*, XUAN WEI WU TOU *Aconitum nagarum* var. *lasiandrum*, ZHUN GE ER WU TOU *Aconitum soongaricum*. **Ref:** 6, 658.

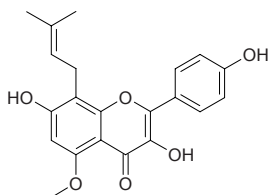


**20077 Sophocarpine**

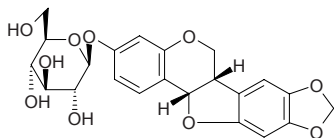
[6483-15-4]  $C_{15}H_{22}N_2O$  (246.36). mp 52~53°C, 57~58°C. **Pharm:** Antiasthmatic (gpg, asthma induced by acetylcholine chloride and histamine, mus, 12.8mg/kg orl, InRt = 88%,  $p < 0.01$ ); antineoplastic (animals, transplant tumor, InRt = (31~56)%); increases blood pressure (rbt, iv, bromide 20mg/kg, 2.23kPa); inhibits spontaneous movement (mus); stimulates heart (homother- mal animals, poikilotherms, *in vitro*); LD<sub>50</sub> (mus, orl) = 241.5mg/kg, (mus, im) = 92.41mg/kg, (rat, ip) = 120mg/kg, (rat, im) = 130mg/kg, (rat, sc) = 185mg/kg, (rat, orl) = 198mg/kg, (mus, orl, bromide) = 297.5mg/kg, (mus, im, bromide) = 101.4mg/kg, (mus, iv, bromide) = 73.64mg/kg. **Source:** BAI CI HUA *Sophora vicifolia*, GAN SU HUAI SHU *Sophora pachycarpa*, KU DOU ZI *Sophora alopecuroides* (seed: content = 0.058%<sup>[5508]</sup>), KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*] (dried root: content scope of 7 origins = 0.08%~0.73%, mean content = 0.34%<sup>[5508]</sup>), SHAN DOU GEN *Sophora subprostrata* [Syn. *Sophora tonkinensis*]. **Ref:** 4, 546, 564, 593, 658, 5501, 5508.

**20078 Sophoflavescenol**

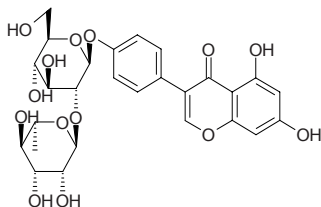
$C_{21}H_{20}O_6$  (368.39). **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 4430.

**20079 Sophojaponicin**

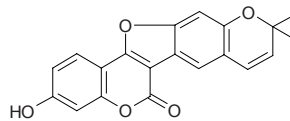
$C_{22}H_{22}O_{10}$  (446.40). Colorless prismatic or acicular crystals (methanol), mp 202~204 (dec),  $[\alpha]_D^{17} = -104^\circ$  ( $c = 0.70$ , acetic acid). **Pharm:** Antineoplastic (mus S<sub>180</sub> entity tumor); LD<sub>50</sub> (mus, ip) = 200~250mg/kg, (rat, ip) = 300mg/kg. **Source:** HUAI *Sophora japonica*. **Ref:** 661.

**20080 Sophorabioside**

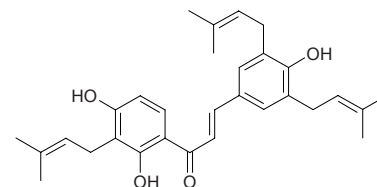
$C_{27}H_{30}O_{14}$  (578.53). mp 247°C. **Source:** HUAI *Sophora japonica* (pericarp)<sup>[3080]</sup>, HUAI JIAO *Sophora japonica*. **Ref:** 6, 3080.

**20081 Sophoracoumestan A**

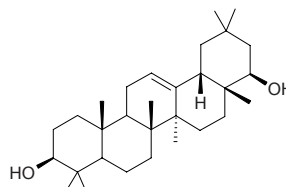
$C_{20}H_{14}O_5$  (334.33). **Source:** BU GU ZHI *Psoralea corylifolia*. **Ref:** 660.

**20082 Sophoradin**

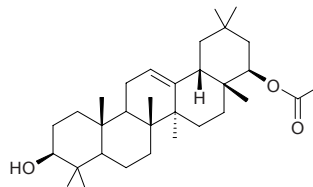
[23057-54-7]  $C_{30}H_{36}O_4$  (460.62). Yellow acicular crystals (diethyl ether-hexane), mp 161°C. **Pharm:** Antiulcerative; gastric secretion inhibitor (rat); H<sup>+</sup>, K<sup>+</sup>-ATPase inhibitor (gpg stomach *in vitro*). **Source:** SHAN DOU GEN *Sophora subprostrata* [Syn. *Sophora tonkinensis*]. **Ref:** 6, 900.

**20083 Sophoradiol**

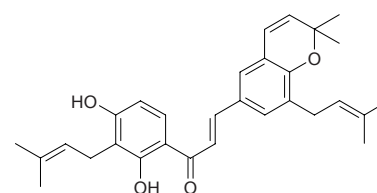
$C_{30}H_{50}O_2$  (442.73). **Source:** GE GEN *Pueraria lobata* [Syn. *Pueraria thunbergiana*; *Pueraria pseudohirsuta*], HUAI *Sophora japonica*, JI GU CAO *Abrus fruticosus* [Syn. *Abrus cantoniensis*], SHAN DOU GEN *Sophora subprostrata* [Syn. *Sophora tonkinensis*], XIANG SI ZI *Abrus precatorius*. **Ref:** 660.

**20084 Sophoradiol-22-O-acetate**

$C_{32}H_{52}O_3$  (484.77). **Source:** XIANG SI ZI *Abrus precatorius*. **Ref:** 660.

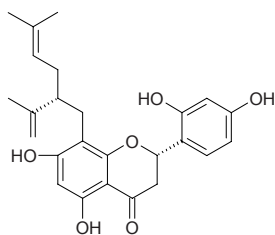
**20085 Sophoradachromene**

$C_{30}H_{34}O_4$  (458.60). mp 154°C. **Source:** SHAN DOU GEN *Sophora subprostrata* [Syn. *Sophora tonkinensis*]. **Ref:** 6.

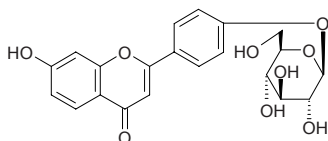


**20086 Sophoraflavanone G**

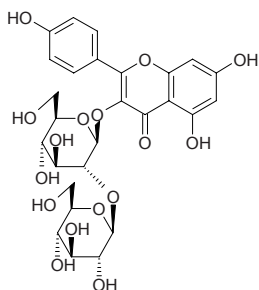
$C_{25}H_{28}O_6$  (424.50). **Pharm:** Tyrosinase inhibitor ( $IC_{50} = 44.7\mu\text{mol/L}$ , control Kojic acid,  $IC_{50} = 11.3\mu\text{mol/L}$ )<sup>[5409]</sup>. **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 4430, 5409.

**20087 Sophoraflavone B**

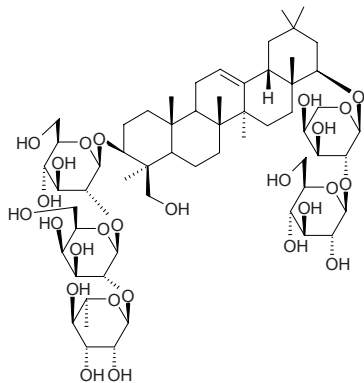
$C_{21}H_{20}O_9$  (416.39). **Source:** HUANG GAN CAO *Glycyrrhiza kansuensis*. **Ref:** 660.

**20088 Sophoraflavonolide**

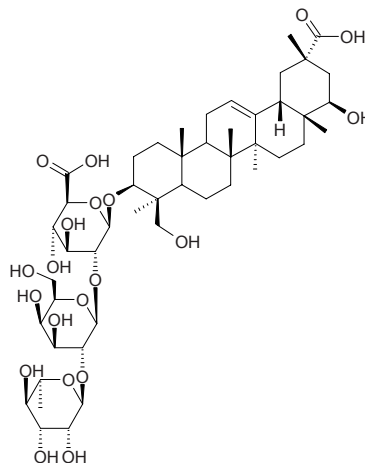
Kaempferol-3-O- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside  $C_{27}H_{30}O_{16}$  (610.53). mp 207~208°C. **Pharm:** Anti-HIV-1 (RT (RDDP) inhibitor,  $IC_{50} = 75\mu\text{mol/L}$ , positive control Adriamycin,  $IC_{50} = 27\mu\text{mol/L}$ ; DDDP inhibitor,  $IC_{50} > 100\mu\text{mol/L}$ , positive control Adriamycin,  $IC_{50} = 6\mu\text{mol/L}$ ; HIV-1 IN inhibitor,  $IC_{50} > 100\mu\text{mol/L}$ , positive control Suramin,  $IC_{50} = 2.4\mu\text{mol/L}$ )<sup>[4187]</sup>. **Source:** HUAI JIAO *Sophora japonica*, HUANG HUA JIA ZHU TAO *Thevetia nerifolia* [Syn. *Thevetia peruviana*] (leaf), ZANG HONG HUA *Crocus sativus*. **Ref:** 6, 660, 4187.

**20089 Sophoraflavoside I**

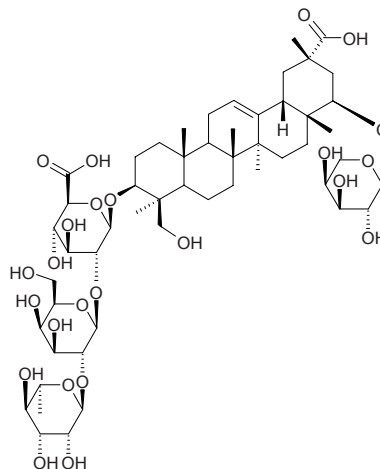
$C_{59}H_{98}O_{26}$  (1223.42). **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 2, 660, 1521.

**20090 Sophoraflavoside II**

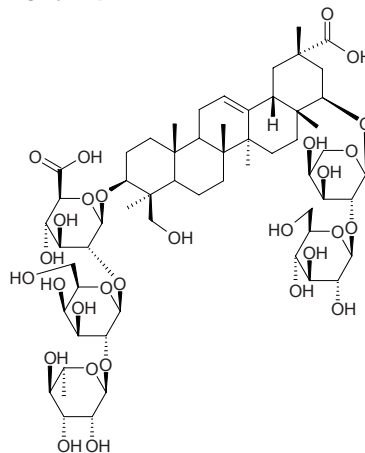
$C_{48}H_{76}O_{20}$  (973.13). **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 660.

**20091 Sophoraflavoside III**

$C_{53}H_{84}O_{24}$  (1105.25). **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 660.

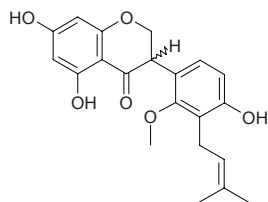
**20092 Sophoraflavoside IV**

$C_{59}H_{94}O_{29}$  (1267.39). **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 660.

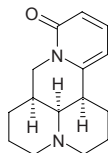


**20093 Sophoraisoflavanone A**

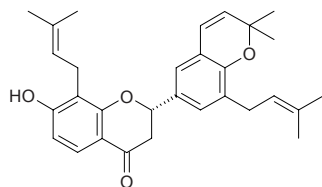
$C_{21}H_{22}O_6$  (370.41). **Pharm:** Antimicrobial (*in vitro*, *Staphylococcus aureus*, *Escherichia coli*, *Bacillus subtilis*, *Penicillium citrinum* and *Candida albicans*). **Source:** LING NAN HUAI SHU *Sophora tomentosa*. **Ref:** 658.

**20094 Sophoramine**

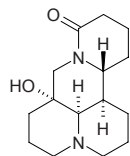
(-)-Sophoramide [6882-66-2]  $C_{15}H_{20}N_2O$  (244.34). White acicular crystals (hexane), mp 164~165°C,  $[\alpha]_D = -98^\circ$  (ethanol). **Pharm:** Antiarrhythmic (caused by aconitine, BaCl<sub>2</sub>, CHCl<sub>3</sub>, adrenalin, CaCl<sub>2</sub>); enhances myocardial contractility; immunosuppressant; reduces activity of LDH; reduces area of myocardial infarction; raises dopamine metabolite HVA (in rat striatum and marginal zone of forebrain). **Source:** BAI CI HUA *Sophora viciifolia*, KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*], KU DOU ZI *Sophora alopecuroides*. **Ref:** 2, 6, 546, 564, 900.

**20095 Sophoranochromene**

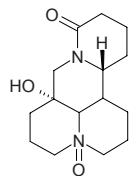
$C_{30}H_{34}O_4$  (458.60). mp 152°C. **Source:** SHAN DOU GEN *Sophora subprostrata* [Syn. *Sophora tonkinensis*]. **Ref:** 6.

**20096 Sophoranol**

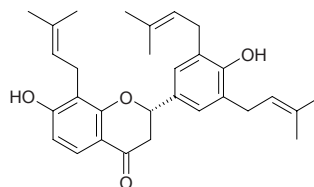
5-Hydroxymatine [3411-37-8]  $C_{15}H_{24}N_2O_2$  (264.37). mp 171°C,  $[\alpha]_D^{20} = +66^\circ$  (H<sub>2</sub>O). **Source:** FU MAO SHAN DOU GEN *Euchresta strigillosa*, KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*] (dried root: content scope of 5 origins = 0.050%~0.074%, mean content = 0.060%<sup>[5508]</sup>), SAN XIAU YE SHAN DOU GEN *Euchresta japonica*, SHAN DOU GEN *Sophora subprostrata* [Syn. *Sophora tonkinensis*]. **Ref:** 6, 660, 1521, 5508.

**20097 Sophoranol N-oxide**

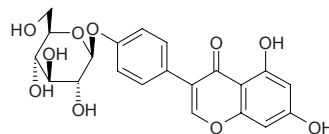
$C_{15}H_{24}N_2O_3$  (280.37). **Source:** KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 2.

**20098 Sophoranone**

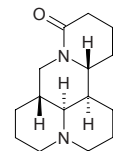
$C_{30}H_{36}O_4$  (460.62). mp 108°C. **Pharm:** Antineoplastic (gastric cancer). **Source:** SHAN DOU GEN *Sophora subprostrata* [Syn. *Sophora tonkinensis*]. **Ref:** 6, 658.

**20099 Sophoricoside**

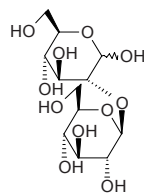
[152-95-4]  $C_{21}H_{20}O_{10}$  (432.39). mp 297°C. **Pharm:** Anti-inflammatory (rat, inflammation model induced by embedding woolball, 20mg/(kg·d) ip, 7 days, obvious effect); reduces GPT (glutamine-pyruvic transaminase). **Source:** HUAI *Sophora japonica*, HUANG HUA MU *Piptanthus nepalensis*, HUAI JIAO *Sophora japonica*. **Ref:** 6, 658.

**20100 Sophoridine**

$C_{15}H_{24}N_2O$  (248.37). **Pharm:** bidirectional action to blood pressure (iv, first increases then decreases); contracts blood vessels (peripheral and visceral); positive inotropic effect; antiarrhythmic (animal model); stimulates heart (homothermal animal, poikilotherm, *in vitro*); immunoenhancer (mus, red blood cells). **Source:** KU DOU GEN *Sophora alopecuroides*, KU DOU ZI *Sophora alopecuroides* (seed: content = 0.116%<sup>[5508]</sup>), KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*] (dried root: content scope of 7 origins = trace~0.66%, mean content = 0.29%<sup>[5508]</sup>). **Ref:** 1521, 5501, 5508.

**20101 Sophorose**

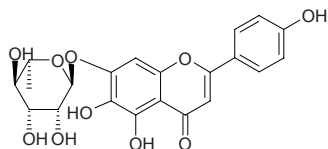
[534-46-3]  $C_{12}H_{22}O_{11}$  (342.30). mp (α) 196~198°C. **Source:** HUAI JIAO *Sophora japonica*. **Ref:** 6.



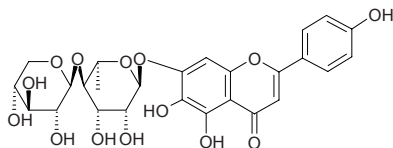
**20102 Sorbarin**

[24512-68-3]  $C_{21}H_{20}O_{10}$  (432.39). mp > 300°C. **Pharm:** Aldose reductase inhibitor (rat, eye lens, 10  $\mu$ mol/L InRt = 70.3%, 1  $\mu$ mol/L InRt = 13.9%).

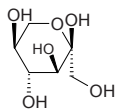
**Source:** ZHEN ZHU MEI *Sorbaria sorbifolia*. **Ref:** 6, 1631.

**20103 Sorbifolin**

$C_{26}H_{28}O_{14}$  (564.50). **Source:** ZHEN ZHU MEI *Sorbaria sorbifolia*. **Ref:** 660.

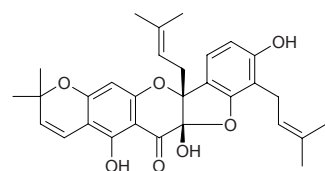
**20104 Sorbose**

$C_6H_{12}O_6$  (180.16). **Source:** OU ZHOU HUA QIU *Sorbus aucuparia*. **Ref:** 658.

**20105 Sorocein D**

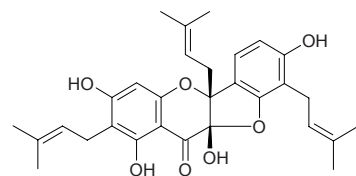
$C_{30}H_{32}O_7$  (504.59). **Pharm:** Cytotoxic (HSC-2,  $CC_{50}$  = 190  $\mu$ mol/L, 97  $\mu$ g/mL; HSG,  $CC_{50}$  = 120  $\mu$ mol/L, 61  $\mu$ g/mL; HGF,  $CC_{50}$  = 270  $\mu$ mol/L, 135  $\mu$ g/mL)<sup>[3034]</sup>.

**Source:** *Sorocea bonplandii* (root cortex). **Ref:** 1521, 3034.

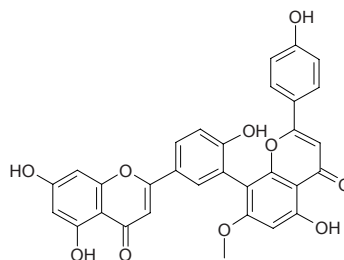
**20106 Sorocein F**

$C_{30}H_{34}O_7$  (506.6). **Pharm:** Cytotoxic (HSC-2,  $CC_{50}$  = 47  $\mu$ mol/L, 24  $\mu$ g/mL; HSG,  $CC_{50}$  = 49  $\mu$ mol/L, 25  $\mu$ g/mL; HGF,  $CC_{50}$  = 110  $\mu$ mol/L, 57  $\mu$ g/mL)<sup>[3034]</sup>.

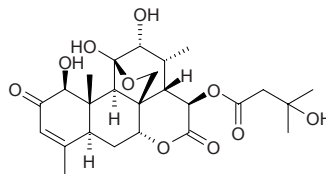
**Source:** *Sorocea ilicifolia* (root). **Ref:** 1521, 3034.

**20107 Sotetsuflavone**

$C_{31}H_{20}O_{10}$  (552.50). **Source:** YUN NAN SUI HUA SHAN *Amentotaxus yunnanensis* (leaf and twig: yield = 0.00033%dw), YUN NAN FEI SHU *Torreya yunnanensis* (leaf and twig: yield = 0.00008%dw), JUAN BAI *Selaginella tamariscina*, SU TIE YE *Cycas revoluta*. **Ref:** 660, 4707.

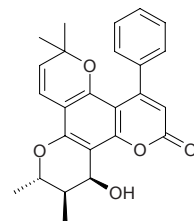
**20108 Soularbinone**

$C_{25}H_{34}O_{10}$  (494.55). **Pharm:** Antineoplastic (leukemia); antimalarial (ED = 0.006  $\mu$ g/mL). **Source:** family Simarubaceae spp. **Ref:** 658.

**20109 Soulattrolide**

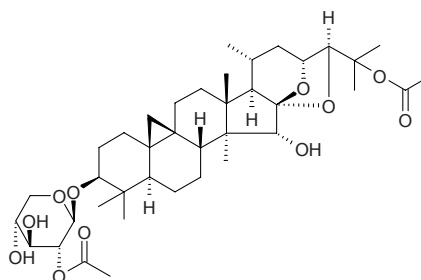
[65025-62-9]  $C_{25}H_{24}O_5$  (404.47). **Pharm:** Anti-HIV (strong HIV-RT inhibitor).

**Source:** TE SI MAN NI HU TONG *Calophyllum teysmannii*. **Ref:** 2268.

**20110 Soulieoside A**

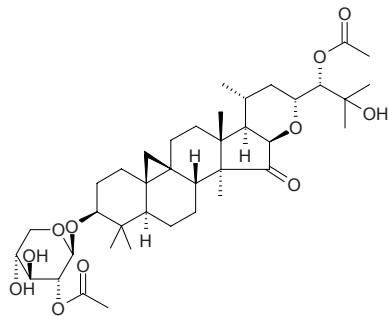
25-O-Acetylcimigenol-3-O- $\beta$ -D-(2-acetyl)xylopyranoside  $C_{39}H_{60}O_{11}$  (704.91).

White amorphous powder, mp 150~152°C (MeOH),  $[\alpha]_D^{20}$  = +22.0° (c = 0.05, CHCl<sub>3</sub>:CH<sub>3</sub>OH = 1:1). **Source:** HUANG SAN QI *Souliea vaginata* (Rhizome). **Ref:** 4291.

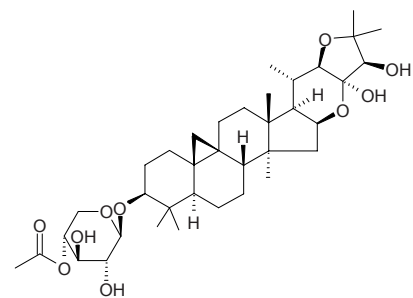


**20111 Soulieoside B**

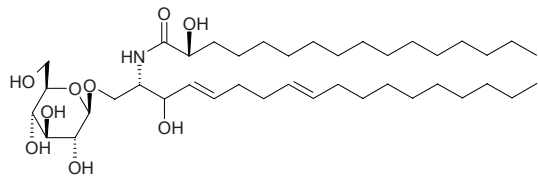
24-*O*-Acetyl-isodahurinol-3-*O*- $\beta$ -*D*-(2-acetyl)xylopyranoside C<sub>39</sub>H<sub>60</sub>O<sub>11</sub> (704.91). White amorphous powder, mp 157~160°C (MeOH),  $[\alpha]_D^{20} = +14.0^\circ$  ( $c = 0.05$ , CHCl<sub>3</sub>:CH<sub>3</sub>OH = 1:1). Source: HUANG SAN QI *Souliea vaginata* (Rhizome). Ref: 4291.

**20112 Soulieoside C**

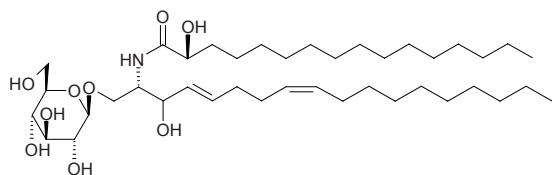
20(*S*),22(*R*),23(*S*),24(*R*)-16 $\beta$ :23,22:25-Diepoxy-3 $\beta$ ,23,24-trihydroxy-9,19-cyclolanostane-3-*O*- $\beta$ -*D*-(4-acetyl)xylopyranoside C<sub>37</sub>H<sub>58</sub>O<sub>10</sub> (662.87). White amorphous powder, mp 237~239°C (MeOH),  $[\alpha]_D^{20} = -8.6^\circ$  ( $c = 0.07$ , CHCl<sub>3</sub>:CH<sub>3</sub>OH = 1:1). Source: HUANG SAN QI *Souliea vaginata* (Rhizome). Ref: 4291.

**20113 Soyacerebroside I**

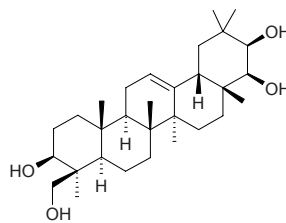
C<sub>40</sub>H<sub>75</sub>NO<sub>9</sub> (714.05). White rounded grain crystals, mp 192~197°C,  $[\alpha]_D = +9.2^\circ$  ( $c = 0.60$ , *i*-PrOH). Pharm: PAF antagonist. Source: XI LAN ROU GUI *Cinnamomum zeylanicum*. Ref: 2199.

**20114 Soyacerebroside II**

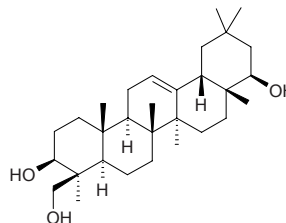
C<sub>40</sub>H<sub>75</sub>NO<sub>9</sub> (714.05). White amorphous powder, mp 262~264°C,  $[\alpha]_D = +7.9^\circ$  ( $c = 0.64$ , *i*-PrOH). Pharm: PAF antagonist. Source: XI LAN ROU GUI *Cinnamomum zeylanicum*. Ref: 2199.

**20115 Soyasapogenol A**

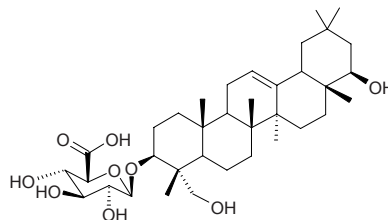
C<sub>30</sub>H<sub>50</sub>O<sub>4</sub> (474.73). mp 308~312°C. Source: HEI DA DOU *Glycine max*. Ref: 6.

**20116 Soyasapogenol B**

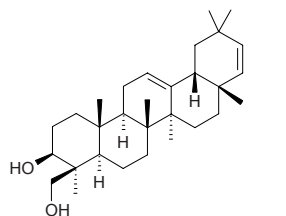
C<sub>30</sub>H<sub>50</sub>O<sub>3</sub> (458.73). mp 258~259°C. Source: HEI DA DOU *Glycine max*. Ref: 6.

**20117 Soyasapogenol B monoglucuronide**

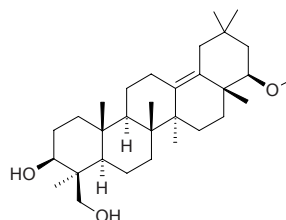
3-*O*-[ $\beta$ -*D*-Glucuronopyranosyl]soyasapogenol B C<sub>36</sub>H<sub>58</sub>O<sub>9</sub> (634.86). Pharm: Cytotoxic (*in vitro*, Hs740.T, ED<sub>50</sub> = 9.61 $\mu$ g/mL; Hs756T, ED<sub>50</sub> = 9.59 $\mu$ g/mL; Hs578T, ED<sub>50</sub> = 8.77 $\mu$ g/mL; HS742.T, ED<sub>50</sub> = 28.68 $\mu$ g/mL; DU145, ED<sub>50</sub> = 9.13 $\mu$ g/mL; LNCaP-FGC, ED<sub>50</sub> = 37.29 $\mu$ g/mL). Source: DA DOU *Glycine max* (Soybean phytochemical concentrate: yield = 0.0022%dw). Ref: 4630.

**20118 Soyasapogenol C**

C<sub>30</sub>H<sub>48</sub>O<sub>2</sub> (440.72). mp 238~239°C. Source: HEI DA DOU *Glycine max*. Ref: 6.

**20119 Soyasapogenol D**

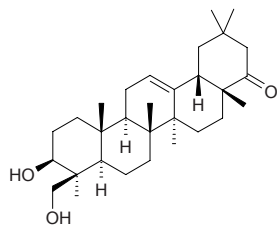
[65892-76-4] C<sub>31</sub>H<sub>52</sub>O<sub>3</sub> (472.76). mp 298~299°C. Source: HEI DA DOU *Glycine max*. Ref: 6.



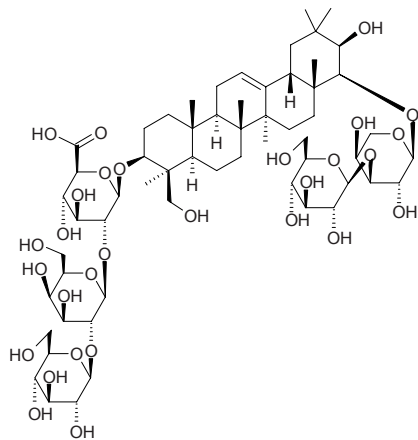


**20120 Soyasapogenol E**

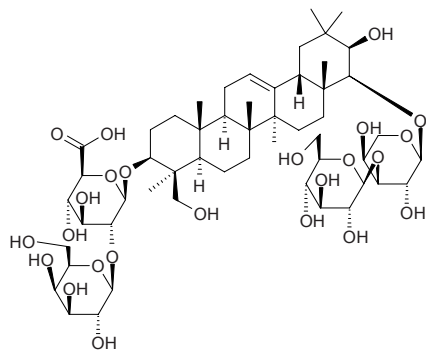
$C_{30}H_{48}O_3$  (456.72). Source: HEI DA DOU *Glycine max*. Ref: 6, 1521.

**20121 Soyasaponin A<sub>1</sub>**

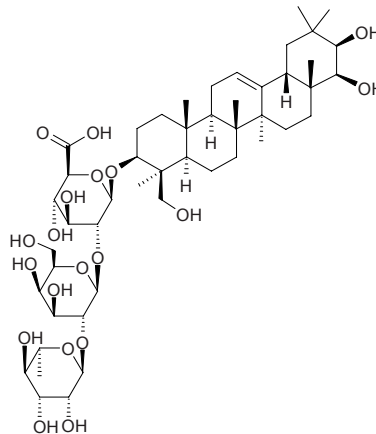
[78693-94-4]  $C_{59}H_{96}O_{29}$  (1269.41). Colorless acicular crystals (water–methanol), mp 240~242°C,  $[\alpha]_D^{26} = +23.2^\circ$  ( $c = 0.91$ , methanol). Pharm: Antithrombotic; calcium antagonist; antihypercholesterolemic; cytotoxic; antioxidant (mus heart, inhibits lipid peroxidization due to adriamycin); inhibits liver damage. Source: HEI DA DOU *Glycine max*. Ref: 658, 900.

**20122 Soyasaponin A<sub>2</sub>**

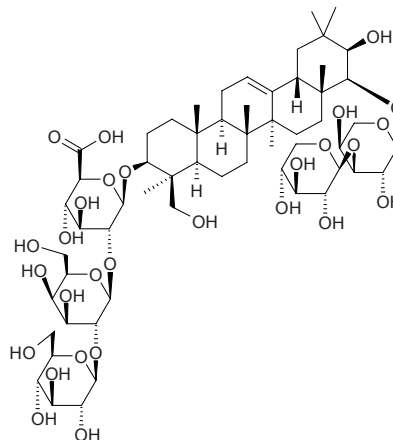
3-*O*-[ $\beta$ -*D*-Galactopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -*D*-glucuronopyranosyl]-22-*O*-[ $\beta$ -*D*-glucopyranosyl(1 $\rightarrow$ 3)- $\alpha$ -*L*-arabinopyranosyl] soyasapogenol A [78693-93-3]  $C_{53}H_{86}O_{24}$  (1107.26). Colorless thin acicular crystals (water–methanol), mp 231~232°C,  $[\alpha]_D^{26} = +25.3^\circ$  ( $c = 1.0$ , methanol). Pharm: Calcium antagonist; antihypercholesterolemic; antioxidant (mus heart, inhibits lipid peroxidization due to adriamycin,  $ED_{50} = 17.8\text{mg/kg}$ ); inhibits liver damage; cytotoxic (*in vitro*, Hs740T,  $ED_{50} = 3.15\mu\text{g/mL}$ ; Hs756T,  $ED_{50} = 3.22\mu\text{g/mL}$ ; Hs578T,  $ED_{50} = 4.84\mu\text{g/mL}$ ; Hs742T,  $ED_{50} = 30.1\mu\text{g/mL}$ ; DU145,  $ED_{50} = 2.11\mu\text{g/mL}$ ; LNCaP-FGC,  $ED_{50} = 30.7\mu\text{g/mL}$ )<sup>[4630]</sup>. Source: DA DOU *Glycine max* (Soybean phytochemical concentrate: yield = 0.0048%dw), HEI DA DOU *Glycine max*. Ref: 900, 1521, 4630.

**20123 Soyasaponin A<sub>3</sub>**

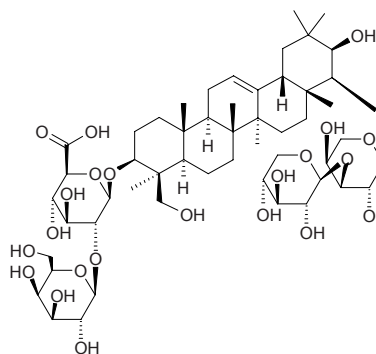
[114077-04-2]  $C_{48}H_{78}O_{19}$  (959.15). White amorphous powder,  $[\alpha]_D^{27} = -14.2^\circ$  ( $c = 0.55$ , pyridine). Pharm: Lipoxygenase inhibitor. Source: HEI DA DOU *Glycine max*, SHAN DOU GEN *Sophora subprostrata* [Syn. *Sophora tonkinensis*]. Ref: 962, 1044, 1123.

**20124 Soyasaponin A<sub>4</sub>**

[117210-06-7]  $C_{58}H_{94}O_{28}$  (1239.38). Colorless thin crystals, mp 281~285°C,  $[\alpha]_D^{16} = +21.3^\circ$  ( $c = 0.3$ , methanol). Pharm: Lipoxygenase inhibitor; prevents AIDS. Source: HEI DA DOU *Glycine max*. Ref: 900.

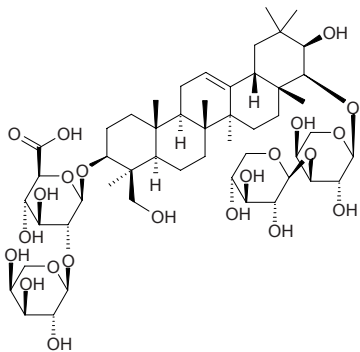
**20125 Soyasaponin A<sub>5</sub>**

[117226-04-7]  $C_{52}H_{84}O_{23}$  (1077.24). Colorless thin crystals, mp 276~279°C,  $[\alpha]_D^{16} = +19.6^\circ$  ( $c = 0.4$ , methanol). Pharm: Lipoxygenase inhibitor; prevents AIDS. Source: HEI DA DOU *Glycine max*. Ref: 900.

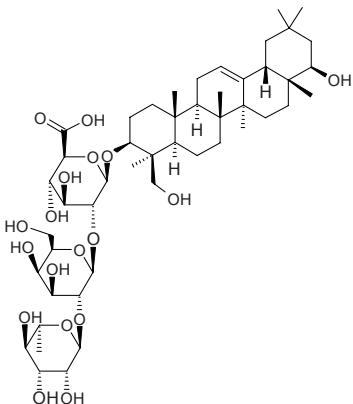


**20126 Soyasaponin A<sub>6</sub>**

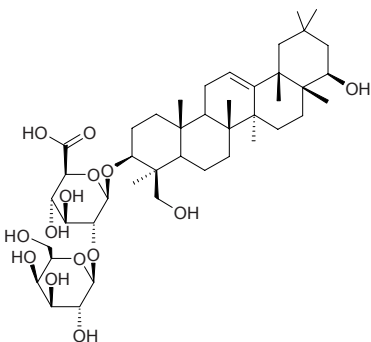
[117210-07-8] C<sub>51</sub>H<sub>82</sub>O<sub>22</sub> (1047.21). Colorless thin crystals, mp 282–285°C, [ $\alpha$ ]<sub>D</sub><sup>16</sup> = +20.2° (c = 0.3, methanol). **Pharm:** Lipoxygenase inhibitor; prevents AIDS. **Source:** HEI DA DOU *Glycine max*. **Ref:** 1015.

**20127 Soyasaponin I**

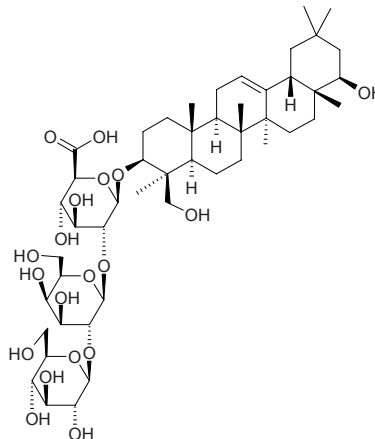
Soyasaponin Bb C<sub>48</sub>H<sub>78</sub>O<sub>18</sub> (943.15). **Pharm:** Inhibits formation of peroxidase. **Source:** BING DOU *Lens culinaris*, HEI DA DOU *Glycine max*, HUI HUI DOU *Cicer arietinum*, JI GU CAO *Abrus fruticulosus* [Syn. *Abrus cantoniensis*], KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. **Ref:** 2, 658, 718.

**20128 Soyasaponin III**

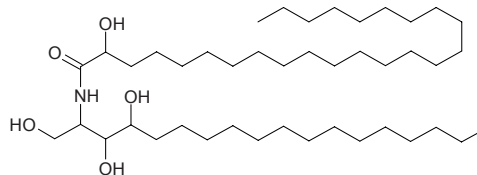
C<sub>42</sub>H<sub>68</sub>O<sub>14</sub> (797.00). **Source:** HUA I *Sophora japonica*. **Ref:** 660.

**20129 Soyasaponin V**

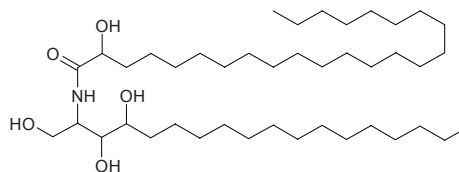
3-O-[ $\beta$ -D-Glucopyranosyl-(1→2)- $\beta$ -D-galactopyranosyl(1→2)- $\beta$ -D-glucuronopyranosyl]soyasapogenol B [114590-20-4] C<sub>48</sub>H<sub>78</sub>O<sub>19</sub> (959.15). Colorless acicular crystals, mp 217–219°C (ethanol–water), [ $\alpha$ ]<sub>D</sub><sup>22</sup> = +17.8° (c = 0.5, methanol). **Pharm:** Lipoxygenase inhibitor; cytotoxic (*in vitro*, Hs740.T, ED<sub>50</sub> = 8.97 $\mu$ g/mL; Hs756T, ED<sub>50</sub> = 7.36 $\mu$ g/mL; Hs578T, ED<sub>50</sub> = 9.87 $\mu$ g/mL; Hs742.T, ED<sub>50</sub> = 31.55 $\mu$ g/mL; DU145, ED<sub>50</sub> = 5.75 $\mu$ g/mL; LNCaP-FGC, ED<sub>50</sub> = 40.68 $\mu$ g/mL)<sup>[4630]</sup>. **Source:** BAI FAN DOU *Phaseolus vulgaris*, DA DOU *Glycine max* (Soybean phytochemical concentrate: yield = 0.0036%<sup>[4630]</sup>), HEI DA DOU *Glycine max*. **Ref:** 900, 4630.

**20130 Soyasphingosine A**

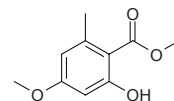
C<sub>43</sub>H<sub>87</sub>NO<sub>5</sub> (698.18). White powder (CHCl<sub>3</sub>), mp 150–151°C. **Source:** HEI DA DOU *Glycine max*. **Ref:** 2519.

**20131 Soyasphingosine B**

C<sub>42</sub>H<sub>85</sub>NO<sub>5</sub> (684.15). White powder (CHCl<sub>3</sub>), mp 150–151°C. **Source:** HEI DA DOU *Glycine max*. **Ref:** 2519.

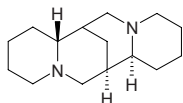
**20132 Sparassol**

C<sub>10</sub>H<sub>12</sub>O<sub>4</sub> (196.20). mp 67–68°C. **Source:** NAO YANG HUA *Rhododendron molle*. **Ref:** 6.

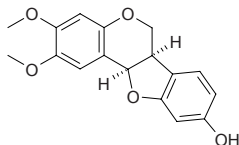


**20133 Sparteine**

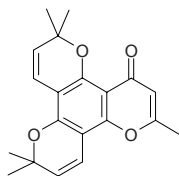
6 $\beta$ ,7 $\alpha$ ,9 $\alpha$ ,11 $\alpha$ -Pachycarpine; Lupinidine [90-39-1] C<sub>15</sub>H<sub>26</sub>N<sub>2</sub> (234.39). bp (-) 188°C/18mmHg; [ $\alpha$ ]<sub>D</sub><sup>21</sup> = -16.4° (c = 10, absolute ethanol), easily soluble in ethanol, chloroform, ether, slightly soluble in water<sup>[5507]</sup>. **Pharm:** Diuretic; oxytocic; uterine stimulant (*in vitro* and *in vivo*); toxin (insects); used in treatment of ventricular tachycardia, reduces myocardial excitability and conductivity, slows heart rate and inhibits myocardial contractility. **Source:** BAI QU CAI *Chelidonium majus*, HUANG YU SHAN DOU *Lupinus luteus*, JIN QUE ER *Cytisus scoparius* [Syn. *Spartium scoparium*], MU MA DOU *Thermopsis lanceolata*. **Ref:** 6, 658, 5507.

**20134 (-)-Sparticarpin**

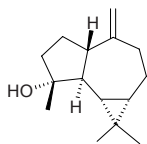
C<sub>17</sub>H<sub>16</sub>O<sub>5</sub> (300.32). **Pharm:** Antifungal. **Source:** YING ZHAO DOU *Spartium junceum*. **Ref:** 658.

**20135 Spathelia bischromene**

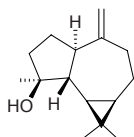
C<sub>20</sub>H<sub>20</sub>O<sub>4</sub> (324.38). **Pharm:** Antibacterial; cytotoxic (HeLa). **Source:** family Rutaceae spp. **Ref:** 658.

**20136 (-)-ent-Spathulenol**

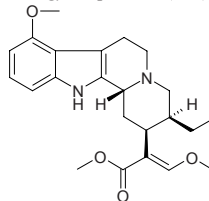
C<sub>15</sub>H<sub>24</sub>O (220.36). Colorless oil, [ $\alpha$ ]<sub>D</sub><sup>26</sup> = -2.9° (c = 1.3, CHCl<sub>3</sub>). **Source:** KUAN DONG HUA *Tussilago farfara* (flower bud). **Ref:** 3531.

**20137 Spathulenol**

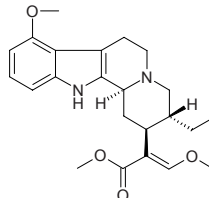
Caryolane-5 $\beta$ ,9 $\beta$ -diol [6750-60-3] C<sub>15</sub>H<sub>24</sub>O (220.36). [ $\alpha$ ]<sub>D</sub><sup>26</sup> = +60° (c = 0.1, CHCl<sub>3</sub>). **Pharm:** Cytotoxic (Mel-2, ED<sub>50</sub> = 6.3  $\mu$ g/mL); antibacterial (*Staphylococcus aureus*, moderate)<sup>[4929]</sup>; antiasthmatic; dispels phlegm; LD<sub>50</sub> (mus) = 1.726g/kg. **Source:** CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*], HUANG HAO *Artemisia scoparia* [Syn. *Artemisia capillaris* var. *scoparia*], XIONG RUI ZHUANG SHU WEI CAO *Salvia staminea*, YUN SHI *Caesalpinia decapetala* (leaf), *Esenbeckia yaaxhokob* (leaf). **Ref:** 2, 660, 1821, 1822, 4456, 4929, 5400.

**20138 Speciociliatine**

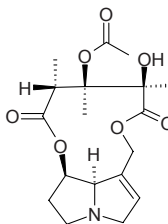
C<sub>23</sub>H<sub>30</sub>N<sub>2</sub>O<sub>4</sub> (398.51). **Pharm:** Opioid agonist (gpg ileum, pEC<sub>50</sub> = 5.55±0.15, control Morphine, pEC<sub>50</sub> = 7.15±0.05). **Source:** MEI LI MAO ZHU MU *Mitragyna speciosa* (leaf). **Ref:** 5069.

**20139 Speciogynine**

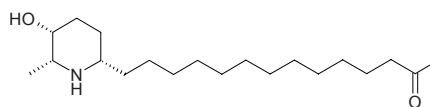
C<sub>23</sub>H<sub>30</sub>N<sub>2</sub>O<sub>4</sub> (398.51). **Pharm:** Opioid agonist (gpg ileum, pEC<sub>50</sub> = 5.61±0.06, control Morphine, pEC<sub>50</sub> = 7.15±0.05). **Source:** MEI LI MAO ZHU MU *Mitragyna speciosa* (leaf). **Ref:** 5069.

**20140 Spectabiline**

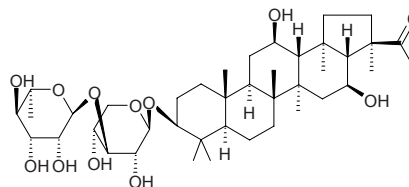
C<sub>18</sub>H<sub>25</sub>NO<sub>7</sub> (367.39). mp 185.5~186.0°C (ethanol), [ $\alpha$ ]<sub>D</sub><sup>22</sup> = +121° (c = 1.7, chloroform), +143° (c = 1.38, ethanol). **Pharm:** Antineoplastic (rat Walker carcinoma, 50mg/kg, InRt = 95%, mus glandular carcinoma 755, 60mg/kg, InRt = 82%); antispasmodic (gpg, ileum); cardiotoxic. **Source:** MEI LI ZHU SHI DOU *Crotalaria spectabilis*, AO ZHU SHI DOU *Crotalaria retusa*. **Ref:** 661.

**20141 (-)-Spectaline**

C<sub>20</sub>H<sub>39</sub>NO<sub>2</sub> (325.54). **Pharm:** Analgesic (male Swiss mouse, capsaicin- induced neurogenic pain model, ID<sub>50</sub> = 20.81  $\mu$ g/paw, control Dipyron ID<sub>50</sub> = 19.89  $\mu$ g/paw). **Source:** XIA YE JUE MING *Cassia leptophylla*. **Ref:** 5440.

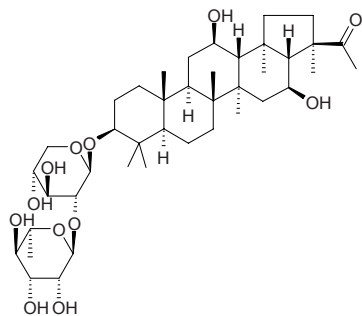
**20142 Spergulacin**

C<sub>41</sub>H<sub>68</sub>O<sub>12</sub> (752.99). Microneedles (MeOH), mp 280~282°C (dec), [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -13.7° (c = 0.76, pyridine). **Source:** *Mollugo spergula* (aerial parts). **Ref:** 5227.

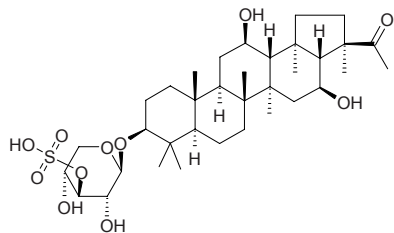


**20143 Spergulacin A**

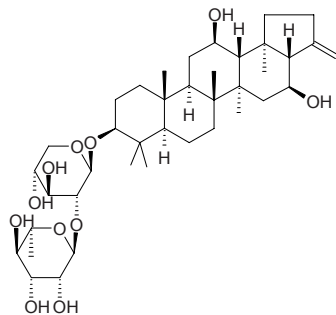
$C_{41}H_{68}O_{12}$  (752.99). Colorless needles (methanol), mp 260–262°C (dec),  $[\alpha]_D^{20} = -16.1^\circ$  ( $c = 0.77$ , pyridine). Source: *Mollugo spergula* (aerial parts). Ref: 5227.

**20144 Spergulin A**

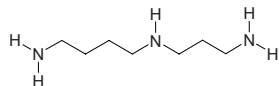
3-*O*-( $\beta$ -*D*-Xylopyranosyl 4-sulphate)-spergulagenin A  $C_{35}H_{58}O_{11}S$  (686.91). Colorless needles, mp 220–221°C (dec),  $[\alpha]_D^{25} = +19.1^\circ$  ( $c = 0.66$ , DMSO). Source: *Mollugo spergula* (aerial parts). Ref: 5227.

**20145 Spergulin B**

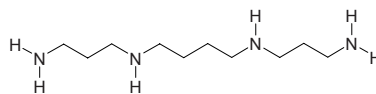
3-*O*-[ $\alpha$ -Rhamnopyranosyl (1→2)- $\beta$ -*D*-xylopyranosyl]-spergulatriol  $C_{39}H_{64}O_{11}$  (708.94). Colorless powder, mp 271–273°C (dec),  $[\alpha]_D^{20} = -20.0^\circ$  ( $c = 0.85$ , pyridine). Source: *Mollugo spergula* (aerial parts). Ref: 5227.

**20146 Spermidine**

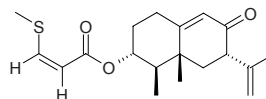
[124-20-9]  $C_7H_{19}N_3$  (145.25). Pharm: Germination inhibitor (spores of *Penicillium notatum*) Source: FAN QIE *Lycopersicon esculentum*, HEI DA DOU *Glycine max*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]<sup>[5508]</sup>, YAN CAO *Nicotiana tabacum*, YAN MAI *Avena sativa*. Ref: 658, 5508.

**20147 Spermine**

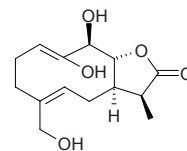
[71-44-3]  $C_{10}H_{26}N_4$  (202.35). Pharm: Germination inhibitor (spores of *Penicillium notatum*). Source: JU YU *Helianthus tuberosus*, MAI YA *Hordeum vulgare*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]<sup>[5508]</sup>, YAN MAI *Avena sativa*. Ref: 658, 5508.

**20148 Spetasin**

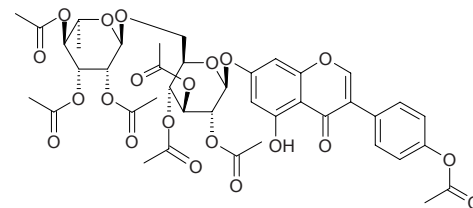
[70238-61-6]  $C_{19}H_{26}O_3S$  (334.48). mp 134–136°C,  $[\alpha]_D^{18} = +78.8^\circ$  (chloroform). Pharm: Antispasmodic; inhibits L-type Calcium current (NG108-15 neuronal cells)<sup>[5365]</sup>. Source: HUANG HUA JIA ZHU TAO *Thevetia neriifolia* [Syn. *Thevetia peruviana*], TAI WAN FENG DOU CAI *Petasites formosanus*. Ref: 661, 5365.

**20149 Sphaelactone A**

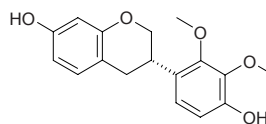
9,14-dihydroxy-1(10),4-germacatrien-12,8-olide[1(10)*E,4E,8a,9β*]  $C_{14}H_{20}O_5$  (268.31). Yellow oleaginous substance. Source: MAO GUO HAN XIAO *Michelia spaerantha*. Ref: 668.

**20150 Sphaerobioside acetate**

$C_{41}H_{44}O_{21}$  (872.80). Pharm: Antioxidant (DPPH scavenger, 10  $\mu$ mol/L, ScRt = 18%, control BHT, 10  $\mu$ mol/L, ScRt = 43%); antibacterial (*Staphylococcus aureus* ATCC 25923, MIC > 128  $\mu$ g/mL, control Vancomycin, MIC = 2  $\mu$ g/mL; *Staphylococcus aureus* MRSA SK1, MIC > 128  $\mu$ g/mL, Vancomycin, MIC = 2  $\mu$ g/mL). Source: TIAN SHAN ZHU ZI *Garcinia dulcis* (fruit). Ref: 5319.

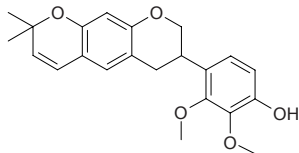
**20151 Spherosin**

$C_{17}H_{18}O_5$  (302.33). mp 151°C. Source: KU MA DOU *Swainsonia salsula* [Syn. *Sphaerophysa salsula*]. Ref: 6, 660.

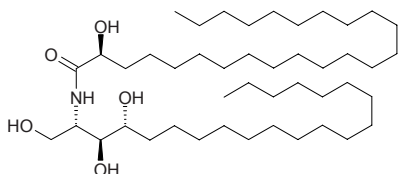


**20152 Spherosinin**

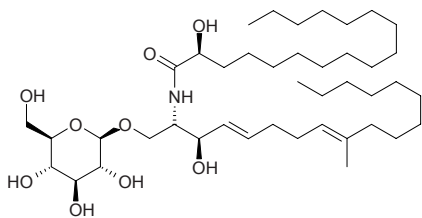
C<sub>22</sub>H<sub>24</sub>O<sub>5</sub> (368.43). mp 97~98°C. Source: KU MA DOU *Swainsonia salsula* [Syn. *Sphaerophysa salsula*]. Ref: 6.

**20153 Sphingolipid Lipids01-175**

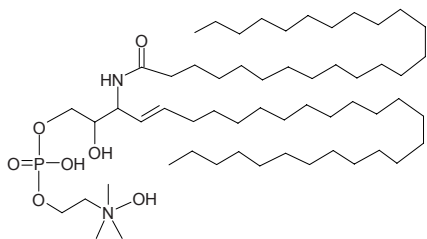
C<sub>45</sub>H<sub>91</sub>NO<sub>5</sub> (726.23). Source: LAN HUANG HONG GU *Russula cyanoxantha*. Ref: 2077.

**20154 Sphingolipid Lipids01-521**

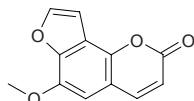
C<sub>42</sub>H<sub>79</sub>NO<sub>9</sub> (742.10). Source: AI LI SI DUO KONG JUN *Polyporus ellisii*. Ref: 2079.

**20155 Sphingomyelin**

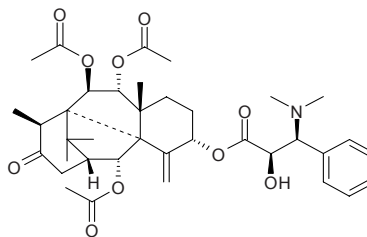
C<sub>57</sub>H<sub>117</sub>N<sub>2</sub>O<sub>7</sub>P (973.55). mp 196~198°C. Source: MU ER *Auricularia auricula*, ZHANG YU *Octopus vulgaris*. Ref: 6.

**20156 Sphondin**

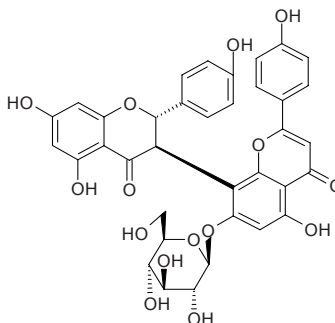
C<sub>12</sub>H<sub>8</sub>O<sub>4</sub> (216.20). mp 183~186°C, 189~191°C. Source: DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*], LANG DU *Stellera chamaejasme*, LI JIANG QIAN HU *Peucedanum govianum* var. *bicolor*, YONG NING DU HUO *Heracleum yungningense*. Ref: 6.

**20157 Spicaledonine**

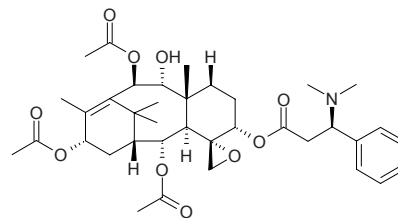
C<sub>37</sub>H<sub>49</sub>NO<sub>10</sub> (667.80). [α]<sub>D</sub> = +29° (CHCl<sub>3</sub>). Source: AO DA LI YA HONG DOU SHAN *Austrotaxus spicata*. Ref: 662.

**20158 Spicataside**

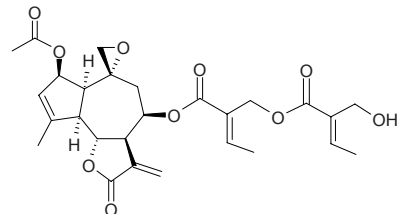
C<sub>36</sub>H<sub>30</sub>O<sub>15</sub> (702.63). mp 232~233°C (dec). Source: SHAN ZHU ZI *Garcinia multiflora*. Ref: 6.

**20159 Spicataxine**

C<sub>37</sub>H<sub>51</sub>NO<sub>10</sub> (669.82). Source: AO DA LI YA HONG DOU SHAN *Austrotaxus spicata*. Ref: 662.

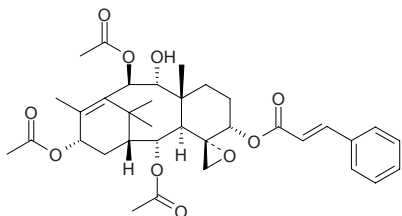
**20160 Spicatin**

C<sub>27</sub>H<sub>32</sub>O<sub>10</sub> (516.55). Resinoid, difficult to crystallize, [α]<sub>D</sub><sup>22</sup> = -146° (c = 0.20, chloroform). Pharm: Antineoplastic; cytotoxic (KB). Source: CU SHE BIAN JU *Liatris squarrosa*, MI SUI HUA SHE BIAN JU *Liatris pycnostachya*, SHE BIAN JU *Liatris spicata*, XI YE SHE BIAN JU *Liatris tenuifolia*. Ref: 661.

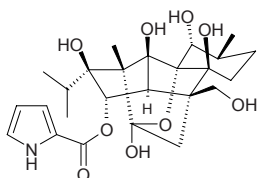


**20161 Spicatine**

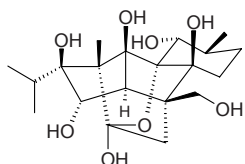
C<sub>35</sub>H<sub>44</sub>O<sub>10</sub> (624.73). Source: AO DA LI YA HONG DOU SHAN *Austrotaxus spicata*. Ref: 662.

**20162 Spiganthine**

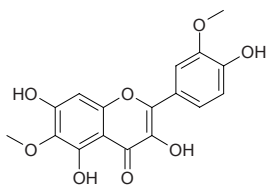
C<sub>25</sub>H<sub>35</sub>NO<sub>9</sub> (493.56). Crystals (CHCl<sub>3</sub>:Me<sub>2</sub>CO = 3:1), mp 159°C, [α]<sub>D</sub> = +35° (c = 0.5). Pharm: Cardiac contraction inhibitor (guinea-pig papillary muscle, causes a prolongation of the latency time and decrease of contraction force, EC<sub>50</sub> = 25nmol/L). Source: QU CHONG CAO *Spigelia anthelmia* (aerial parts). Ref: 5139.

**20163 Spiganthol**

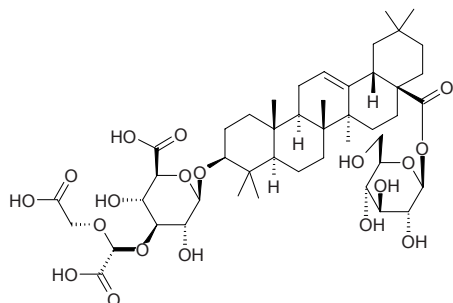
C<sub>20</sub>H<sub>32</sub>O<sub>8</sub> (400.47). Amorphous. Source: QU CHONG CAO *Spigelia anthelmia* (aerial parts). Ref: 5139.

**20164 Spinacetin**

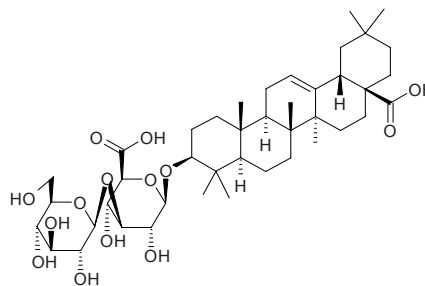
C<sub>17</sub>H<sub>14</sub>O<sub>8</sub> (346.30). mp 235–236°C. Source: BO CAI *Spinacia oleracea*. Ref: 6.

**20165 Spinacoside C**

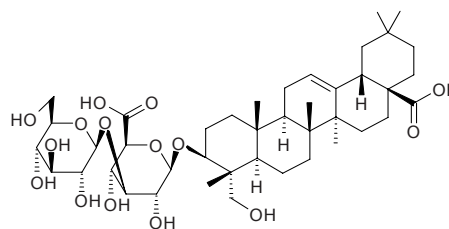
C<sub>46</sub>H<sub>70</sub>O<sub>19</sub> (927.06). Source: LUO KUI HUA *Basella rubra* (aerial parts). Ref: 3544.

**20166 Spinasaponin A**

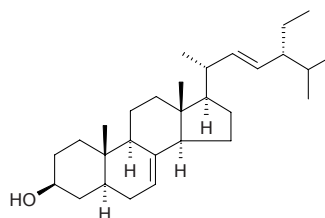
C<sub>42</sub>H<sub>66</sub>O<sub>14</sub> (794.99). Pharm: Antibacterial. Source: BO CAI *Spinacia oleracea*. Ref: 6, 658.

**20167 Spinasaponin B**

C<sub>42</sub>H<sub>66</sub>O<sub>15</sub> (810.99). Pure substance, separated by layer chromatography, sugarlike, difficult to crystallize, softening point, 195–198°C, [α]<sub>D</sub><sup>22</sup> = +100° (c = 0.42, methanol). Pharm: Antibacterial. Source: BO CAI *Spinacia oleracea*. Ref: 6, 658.

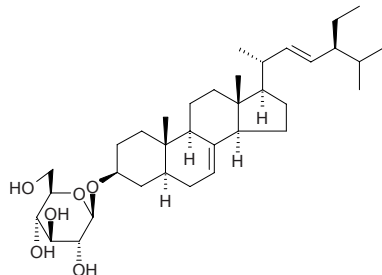
**20168 α-Spinasterol**

24α-ethyl-5α-cholesta-7-*trans*,22-dien-3β-ol [481-17-4] C<sub>29</sub>H<sub>48</sub>O (412.71). Colorless acicular crystals (ethanol), mp 159–160°C; mp 157–159°C, [α]<sub>D</sub><sup>22</sup> = –0.05° (c = 0.055, CHCl<sub>3</sub>). Pharm: Anti-inflammatory; diuretic; cell proliferation inhibitor (glomerular mesangial caused by high-ambient glucose, IC<sub>50</sub> = 3.9ng/mL, 9.5pmol/L, inhibitory potency is about 1,000 times higher than that of positive control Simvastatin, a HMG-CoA reductase inhibitor; significantly reduces increases of serum triglycerides, renal weight and urinary protein excretion in streptozotocin-induced diabetic mouse, action can be comparable with insulin)<sup>[5012]</sup>. Source: BAI QU CAI *Chelidonium majus*, BO CAI *Spinacia oleracea*, CHAI HU *Bupleurum chinense*, DA YE CHAI HU *Bupleurum longiradiatum*, DANG SHEN *Codonopsis pilosula*, GUA LOU *Trichosanthes kirilowii* (fruit: mean content = 0.0171%<sup>[5508]</sup>), HUANG JIN FENG *Impatiens sicutifer*, JIE GENG *Platycodon grandiflorum*, JIN HUANG CHAI HU *Bupleurum aureum*, KU CAO *Vallisneria spiralis*, KU HAO *Conyza blinii*, MEI SHANG LU *Phytolacca americana* [Syn. *Phytolacca decandra*], MEI YUAN ZHI *Polygala senega*, MU XU *Medicago sativa*, NIU XI *Achyranthes bidentata*, SHUI CAI *Menyanthes trifoliata*, SI GUA *Luffa cylindrica*, TU JING JIE *Chenopodium ambrosioides*, WANG GUA *Trichosanthes cucumeroides*, XIAO HUA SUAN TENG ZI *Embelia parviflora*, YAO XI GUA *Citrullus colocynthis*, YE ZI RANG *Cocos nucifera*, occurs in many plants. Ref: 2, 6, 437, 548, 582, 604, 5012, 5508.

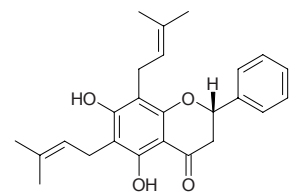


**20169  $\alpha$ -Spinasterol- $\beta$ -D-glucoside**

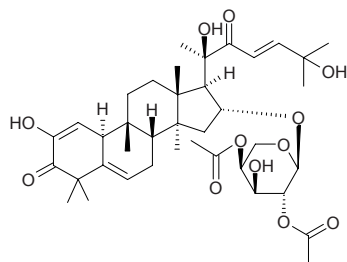
$\alpha$ -Spinasterol glucoside C<sub>35</sub>H<sub>58</sub>O<sub>6</sub> (574.85). mp 291~292°C (gasoline), [ $\alpha$ ]<sub>D</sub><sup>27</sup> = -35.0°, acicular crystals (benzene-ethanol), mp 282~283°C, [ $\alpha$ ]<sub>D</sub> = -35° (*c* = 0.4, pyridine). **Pharm:** Diuretic. **Source:** DANG SHEN *Codonopsis pilosula*, GAO YI ZHI HUANG HUA *Solidago altissima*, HUI YE DU JING SHAN *Maesa chisia*, JIE GENG *Platycodon grandiflorum*, NIU TI DOU *Pithecolobium dulce*, NIU XI *Achyranthes bidentata*, TIAN HUA FEN *Trichosanthes kirilowii*, YIN CHAI HU *Stellaria dichotoma* var. *lanceolata*, ZI HU *Bupleurum falcatum*. **Ref:** 2, 582, 661, 5501.

**20170 Spiniavanone-B**

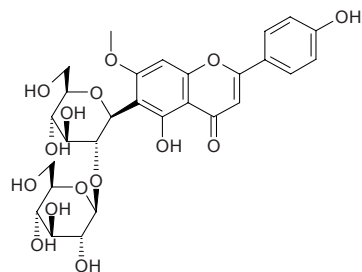
5,7-Dihydroxy-6,8-di(3-methylbut-2-enyl)flavanone C<sub>25</sub>H<sub>28</sub>O<sub>4</sub> (392.50). Oil. **Source:** *Lonchocarpus xuui* (stem cortex). **Ref:** 3973.

**20171 Spinoid A**

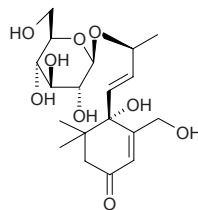
C<sub>39</sub>H<sub>56</sub>O<sub>12</sub> (716.87). **Pharm:** Cytotoxic. **Source:** DUO CI DI SHI MU *Desfontainia spinosa*. **Ref:** 658.

**20172 Spinisin**

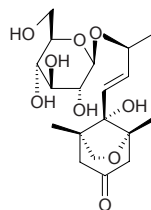
2''-O- $\beta$ -D-Glucopyranosylswertisin C<sub>28</sub>H<sub>32</sub>O<sub>15</sub> (608.56). **Source:** DA ZAO *Ziziphujuba*, SUAN ZAO REN *Ziziphujuba* var. *spinosa*. **Ref:** 2.

**20173 Spionoside A**

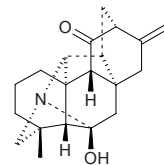
(6*S*,9*S*)-6-Hydroxyinamoside; (-)-(6*S*,9*S*)-9-O- $\beta$ -D-Glucopyranosyloxy-6,13-dihydroxy-3-oxo- $\alpha$ -ionol C<sub>19</sub>H<sub>30</sub>O<sub>9</sub> (402.45). Amorphous, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -43.0° (*c* = 0.3, MeOH). **Source:** LAO SHU GUA *Capparis spinosa*. **Ref:** 1998.

**20174 Spionoside B**

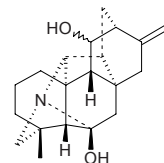
(9*S*)-Drummondol-9-O- $\beta$ -D-glucoopyranoside C<sub>19</sub>H<sub>30</sub>O<sub>9</sub> (402.45). Amorphous, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -51.2° (*c* = 2.0, MeOH). **Source:** LAO SHU GUA *Capparis spinosa*. **Ref:** 1998.

**20175 Spiradine A**

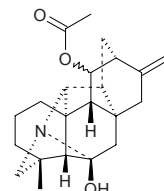
C<sub>20</sub>H<sub>25</sub>NO<sub>2</sub> (311.43). mp 281~282°C. **Source:** XIU XIAN JU YE *Spiraea japonica*. **Ref:** 6.

**20176 Spiradine B**

[19741-51-6] C<sub>20</sub>H<sub>27</sub>NO<sub>2</sub> (313.44). mp 259~260°C. **Source:** XIU XIAN JU YE *Spiraea japonica*. **Ref:** 6.

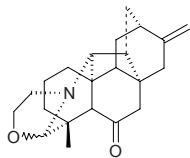
**20177 Spiradine C**

C<sub>22</sub>H<sub>29</sub>NO<sub>3</sub> (355.48). mp 248~249°C. **Source:** XIU XIAN JU YE *Spiraea japonica*. **Ref:** 6.

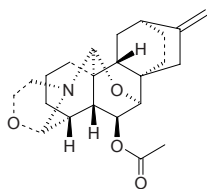


**20178 Spiradine D**

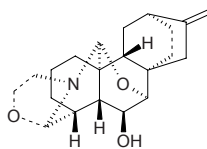
$C_{22}H_{29}NO_2$  (339.48). **Pharm:** Platelet aggregation inhibitor (*in vitro*, induced by PAF, distinct effect). **Source:** XIAO YE HUA BEI XIU XIAN JU *Spiraea fritschiana* var. *parvifolia*. **Ref:** 2198.

**20179 Spiradine F**

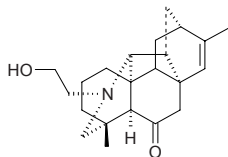
[21040-64-2]  $C_{23}H_{31}NO_4$  (385.51). **Source:** XIU XIAN JU YE *Spiraea japonica*. **Ref:** 6.

**20180 Spiradine G**

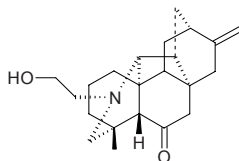
[21040-66-4]  $C_{21}H_{29}NO_3$  (343.47). mp 168~170°C. **Source:** XIU XIAN JU YE *Spiraea japonica*. **Ref:** 6.

**20181 Spirafine II**

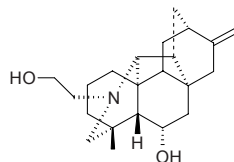
$C_{22}H_{31}NO_2$  (341.50). **Pharm:** Platelet aggregation inhibitor (*in vitro*, induced by PAF,  $IC_{50} = (40.8 \pm 11.7) \text{mg/L}$  or  $(119.6 \pm 34.3) \mu\text{mol/L}$ ). **Source:** XIAO YE HUA BEI XIU XIAN JU *Spiraea fritschiana* var. *parvifolia*. **Ref:** 2198.

**20182 Spirafine III**

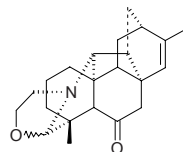
$C_{22}H_{31}NO_2$  (341.50). **Pharm:** Platelet aggregation inhibitor (*in vitro*, induced by PAF,  $IC_{50} = (43.5 \pm 17.1) \text{mg/L}$  or  $(127.5 \pm 50.1) \mu\text{mol/L}$ ). **Source:** XIAO YE HUA BEI XIU XIAN JU *Spiraea fritschiana* var. *parvifolia*. **Ref:** 2198.

**20183 Spirafine III A**

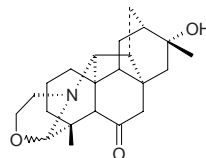
$C_{22}H_{33}NO_2$  (343.51). **Pharm:** Platelet aggregation inhibitor (*in vitro*, induced by PAF, distinct effect). **Source:** XIAO YE HUA BEI XIU XIAN JU *Spiraea fritschiana* var. *parvifolia*. **Ref:** 2198.

**20184 Spirafine IV**

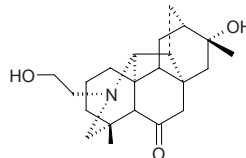
$C_{22}H_{29}NO_2$  (339.48). **Pharm:** Platelet aggregation inhibitor (*in vitro*). **Source:** XIAO YE HUA BEI XIU XIAN JU *Spiraea fritschiana* var. *parvifolia*. **Ref:** 2198.

**20185 Spirafine V**

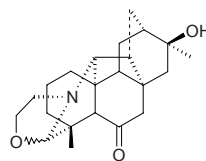
$C_{22}H_{31}NO_3$  (357.50). **Pharm:** Platelet aggregation inhibitor (*in vitro*, induced by PAF, distinct effect). **Source:** XIAO YE HUA BEI XIU XIAN JU *Spiraea fritschiana* var. *parvifolia*. **Ref:** 2198.

**20186 Spirafine VA**

$C_{22}H_{33}NO_3$  (359.51). **Pharm:** Platelet aggregation inhibitor (*in vitro*, induced by PAF, distinct effect). **Source:** XIAO YE HUA BEI XIU XIAN JU *Spiraea fritschiana* var. *parvifolia*. **Ref:** 2198.

**20187 Spirafine VI**

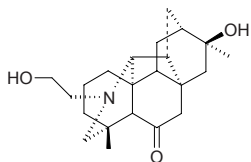
$C_{22}H_{31}NO_3$  (357.50). **Pharm:** Platelet aggregation inhibitor (*in vitro*, induced by PAF, distinct effect). **Source:** XIAO YE HUA BEI XIU XIAN JU *Spiraea fritschiana* var. *parvifolia*. **Ref:** 2198.



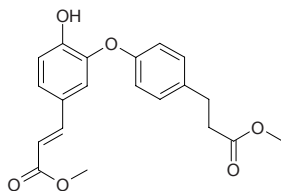


**20188 Spirafine VIA**

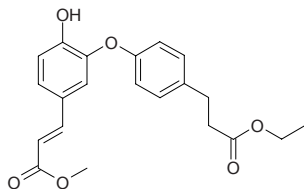
$C_{22}H_{33}NO_3$  (359.51). **Pharm:** Platelet aggregation inhibitor (*in vitro*, induced by PAF, distinct effect). **Source:** XIAO YE HUA BEI XIU XIAN JU *Spiraea fritschiana* var. *parvifolia*. **Ref:** 2198.

**20189 Spiraformin A**

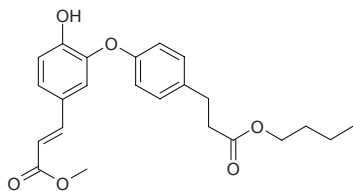
$C_{20}H_{22}O_6$  (356.38). Colorless syrup. **Source:** TAI WAN XIU XIAN JU *Spiraea formosana*. **Ref:** 2575.

**20190 Spiraformin B**

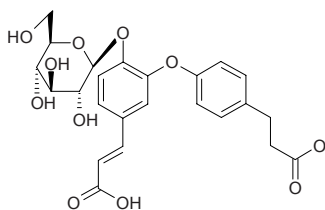
$C_{21}H_{22}O_6$  (370.41). Colorless syrup. **Source:** TAI WAN XIU XIAN JU *Spiraea formosana*. **Ref:** 2575.

**20191 Spiraformin C**

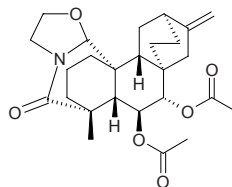
$C_{23}H_{26}O_6$  (398.46). Colorless syrup. **Source:** TAI WAN XIU XIAN JU *Spiraea formosana*. **Ref:** 2575.

**20192 Spiraformin D**

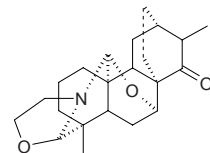
$C_{24}H_{26}O_{11}$  (490.47). Colorless syrup,  $[\alpha]_D^{25} = -2.1^\circ$  ( $c = 0.9$ , MeOH). **Source:** TAI WAN XIU XIAN JU *Spiraea formosana*. **Ref:** 2575.

**20193 Spiramide**

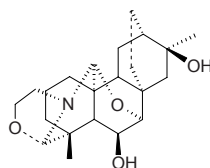
$C_{26}H_{35}NO_6$  (457.57). Amorphous powder,  $[\alpha]_D^{26} = -63.40^\circ$  ( $c = 4.2$ ,  $CHCl_3$ ). **Source:** JI JIAN XIU XIAN JU *Spiraea japonica* var. *acuta* (root: yield = 0.000011%). **Ref:** 3045.

**20194 Spiramine N<sub>6</sub>**

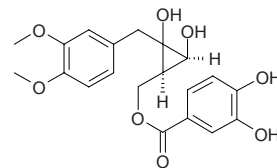
$C_{22}H_{31}NO_3$  (357.50). **Pharm:** Platelet aggregation inhibitor (*in vitro*, selectively inhibits aggregation induced by PAF with dose-response relationship,  $IC_{50} = 26\mu\text{mol/L}$ ; reduces 5-HT release induced by AA or PAF in a concentration-dependent manner,  $IC_{50} = 4.7\mu\text{mol/L}$  or  $3.5\mu\text{mol/L}$ ; obviously reduces conglutination between activated platelet and neutrophile granulocytes,  $IC_{50} = 78.6\mu\text{mol/L}$ ). **Source:** XIU XIAN JU *Spiraea japonica*. **Ref:** 4429.

**20195 Spiramine W**

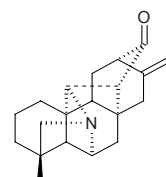
$C_{22}H_{33}NO_4$  (375.51). Acicular crystals. **Source:** JI JIAN XIU XIAN JU *Spiraea japonica* var. *acuta*. **Ref:** 896.

**20196 Spiramogolin**

$C_{20}H_{22}O_8$  (390.39). Colorless rhomboid crystals (EtOH), mp 194–196°C,  $[\alpha]_D^{22} = +70.7^\circ$  ( $c = 0.3$ , MeOH). **Source:** MENG GU XIU XIAN JU *Spiraea mongolica*. **Ref:** 421.

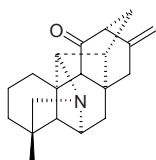
**20197 Spirasine IV**

$C_{20}H_{25}NO$  (295.43). Amorphous white powder,  $[\alpha]_D^{17} = -95.7^\circ$  ( $c = 1.1$ , chloroform). **Source:** GUANG YE FEN HUA XIU XIAN JU *Spiraea japonica* var. *fortunei*. **Ref:** 43.

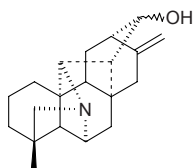


**20198 Spirasine IX**

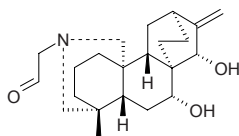
$C_{20}H_{25}NO$  (295.43). Colorless columnar crystals, mp 157–158°C,  $[\alpha]_D^{21} = +135.5^\circ$  ( $c = 1.0$ , chloroform). Source: GUANG YE FEN HUA XIU XIAN JU *Spiraea japonica* var. *fortunei*. Ref: 43.

**20199 Spirasine XI**

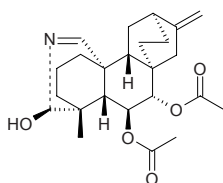
$C_{20}H_{27}NO$  (297.44). White acicular crystals, mp 286–288°C,  $[\alpha]_D^{11} = -23.8^\circ$  ( $c = 0.84$ , chloroform). Source: GUANG YE FEN HUA XIU XIAN JU *Spiraea japonica* var. *fortunei*. Ref: 43.

**20200 Spiratine A**

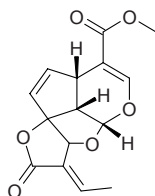
$C_{22}H_{33}NO_3$  (359.51). Amorphous powder,  $[\alpha]_D^{24} = -6.25^\circ$  ( $c = 1.0$ ,  $CH_3OH$ ). Source: JI JIAN XIU XIAN JU *Spiraea japonica* var. *acuta* (root: yield = 0.00022%). Ref: 3045.

**20201 Spiratine B**

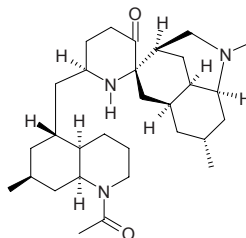
$C_{24}H_{33}NO_5$  (415.53). Amorphous powder,  $[\alpha]_D^{25} = +129.48^\circ$  ( $c = 5.0$ ,  $CHCl_3$ ). Source: JI JIAN XIU XIAN JU *Spiraea japonica* var. *acuta* (root: yield = 0.00018%). Ref: 3045.

**20202 Spirolactone iridoid**

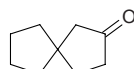
$C_{15}H_{14}O_6$  (290.28). Source: SU KU BA DOU HUA *Himatanthus sucubua*. Ref: 4143.

**20203 Spirolucidine**

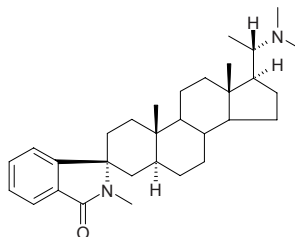
$C_{30}H_{49}N_3O_2$  (483.74). Source: GUANG LIANG SHI SONG *Lycopodium lucidulum*. Ref: 3927.

**20204 Spiro[4,4]nonane-2-one**

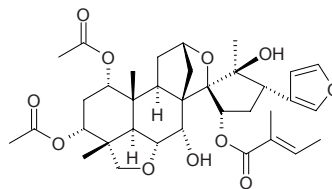
$C_9H_{14}O$  (138.21). Source: YI ZHI REN *Alpinia oxyphylla*. Ref: 660.

**20205 Spiropachysine**

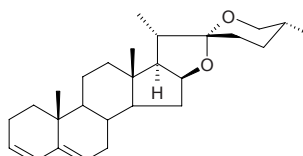
(+)-Spiropachysine [19587-41-8]  $C_{31}H_{46}N_2O$  (462.72). Acicular crystals, mp 278–280°C, mp 290–292°C,  $[\alpha]_D^{22} = +31.9^\circ$  (chloroform). Pharm: Antiulcerative (mus, sc, 50mg/kg); sedative (mus, ip, 50–200mg/mL). Source: XUE SHAN LIN *Pachysandra terminalis*. Ref: 6, 1111, 1141.

**20206 Spirosendan**

$C_{35}H_{46}O_{11}$  (642.75). Amorphous powder,  $[\alpha]_D = -2^\circ$  ( $c = 0.07$ ). Source: CHUAN LIAN PI *Melia toosendan*. Ref: 2374.

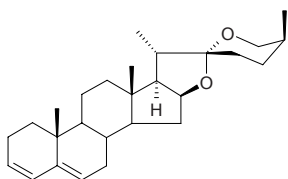
**20207 25α-Spirosta-3,5-diene**

25R-Spirosta-3,5-diene [1672-65-7]  $C_{27}H_{40}O_2$  (396.62). mp 164–165°C. Source: SHAN BI XIE *Dioscorea tokoro*, CHUAN LONG SHU YU *Dioscorea nipponica*, HU LU BA *Trigonella foenum-graecum*. Ref: 6, 660, 2458.

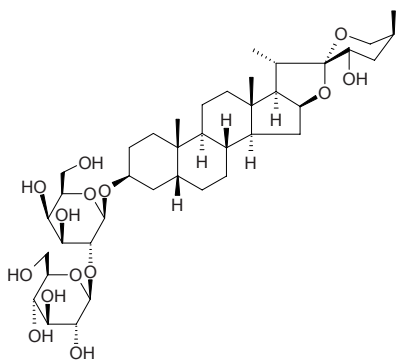


**20208 25 $\beta$ -Spirosta-3,5-diene**

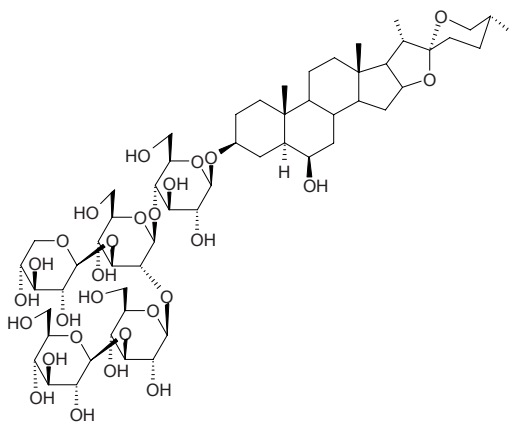
25S-Spirosta-3,5-diene [37064-21-4] C<sub>27</sub>H<sub>40</sub>O<sub>2</sub> (396.62). Source: HU LU BA *Trigonella foenum-graecum*. Ref: 2458.

**20209 (5 $\beta$ ,25S)-Spirostan-3 $\beta$ ,15 $\alpha$ ,23 $\alpha$ -diol-3-O-D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranoside**

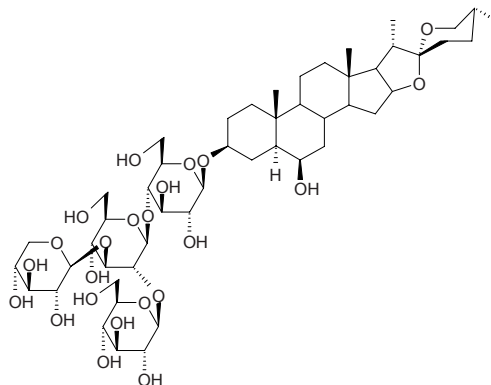
Timosaponin G C<sub>39</sub>H<sub>64</sub>O<sub>14</sub> (756.96). White powder, mp > 210°C (dec), [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -42.2° (MeOH). Source: ZHI MU *Anemarrhena asphodeloides*. Ref: 675.

**20210 (25R)-5 $\alpha$ -Spirostan-3 $\beta$ ,6 $\beta$ -diol 3-O-{O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-O- $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 3)-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-galactopyranoside}**

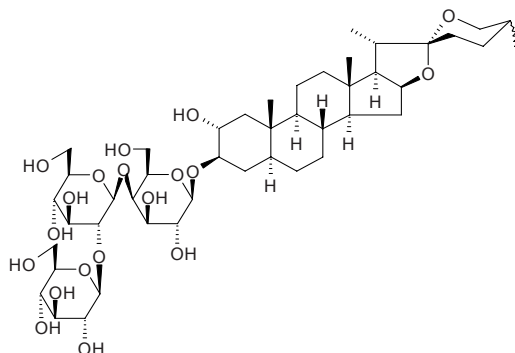
[244764-96-3] C<sub>56</sub>H<sub>92</sub>O<sub>28</sub> (1213.34). [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -56° (MeOH). Pharm: Antifungal (*Fusarium culmorum*, ED<sub>50</sub> = 30~35 $\mu$ g/mL). Source: JIU CONG *Allium porrum*. Ref: 2340.

**20211 (25R)-5 $\alpha$ -Spirostan-3 $\beta$ ,6 $\beta$ -diol 3-O-{O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-O- $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 3)}-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-galactopyranoside}**

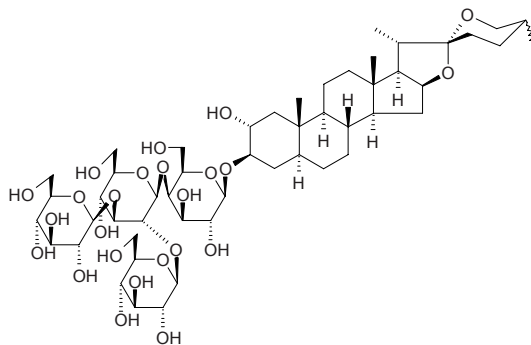
C<sub>50</sub>H<sub>82</sub>O<sub>23</sub> (1051.20). [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -57° (MeOH). Pharm: Antifungal (*Fusarium culmorum*, ED<sub>50</sub> = 30~35 $\mu$ g/mL). Source: JIU CONG *Allium porrum*. Ref: 2340.

**20212 (25R,S)-5 $\alpha$ -Spirostan-2 $\alpha$ ,3 $\beta$ -diol 3-O-[O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-galactopyranoside]**

C<sub>45</sub>H<sub>74</sub>O<sub>19</sub> (919.08). Amorphous solid, [ $\alpha$ ]<sub>D</sub><sup>28</sup> = -52° (c = 0.1, pyridine). Source: QIAO TOU *Allium chinense*. Ref: 710.

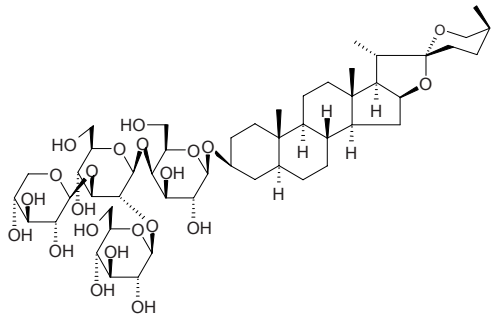
**20213 (25R,S)-5 $\alpha$ -Spirostan-2 $\alpha$ ,3 $\beta$ -diol 3-O-[O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)]-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)-O- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-galactopyranoside]**

C<sub>51</sub>H<sub>84</sub>O<sub>24</sub> (1081.22). Amorphous solid, [ $\alpha$ ]<sub>D</sub><sup>26</sup> = -42° (c = 0.1, pyridine). Source: QIAO TOU *Allium chinense*. Ref: 710.



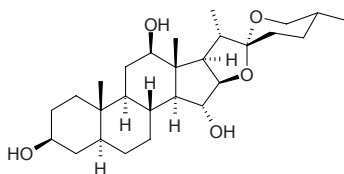
**20214 (2*S*,25*S*)-5*α*-Spirostan-3*β*-ol 3-*O*-[*O*-*β*-*D*-galactopyranosyl-(1→2)-*O*-*β*-*D*-xylopyranosyl-(1→3)]-*O*-*β*-*D*-glucopyranosyl-(1→4)-*β*-*D*-galactopyranoside]**

C<sub>50</sub>H<sub>82</sub>O<sub>22</sub> (1035.20). Amorphous powder,  $[\alpha]_D^{28} = -7.3^\circ$  ( $c = 0.1$ , CHCl<sub>3</sub>:MeOH = 1:1). Source: *Dichelostemma multiflorum*. Ref: 738.



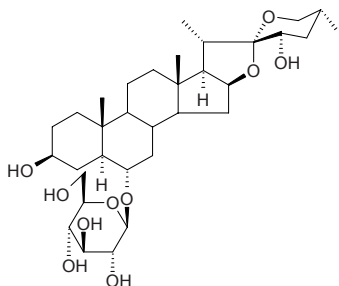
**20215 5*α*-Spirostan-3*β*,12*β*,15*α*-triol**

C<sub>27</sub>H<sub>44</sub>O<sub>5</sub> (448.65). White powder,  $[\alpha]_D^{25} = -19.3^\circ$  ( $c = 0.07$ , CH<sub>2</sub>Cl<sub>2</sub>). Source: PA KE YE XIANG SHU *Cestrum parqui* (fresh leaf). Ref: 5327.



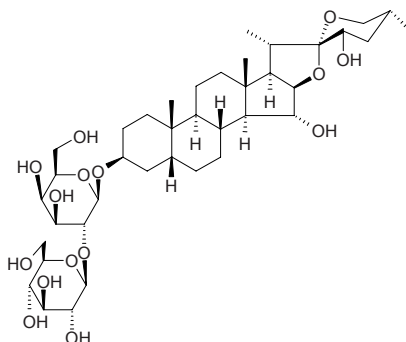
**20216 (2*R*)-5*α*-Spirostan-3*β*,6*α*,23*α*-triol-6-*O*-*β*-*D*-glucopyranoside**

C<sub>33</sub>H<sub>54</sub>O<sub>10</sub> (610.79). White amorphous powder. Source: FAN MA *Agave americana*. Ref: 2250.



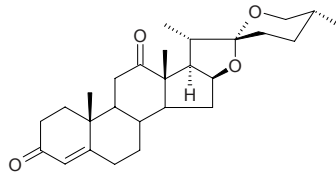
**20217 (5*β*,25*S*)-Spirostan-3*β*,15*α*,23*α*-triol-3-*O*-*D*-glucopyranosyl-(1→2)-*β*-*D*-galactopyranoside**

Timosaponin F C<sub>39</sub>H<sub>64</sub>O<sub>15</sub> (772.94). White powder, mp > 200°C (dec),  $[\alpha]_D^{25} = -47.8^\circ$  (MeOH). Source: ZHI MU *Anemarrhena asphodeloides*. Ref: 675.



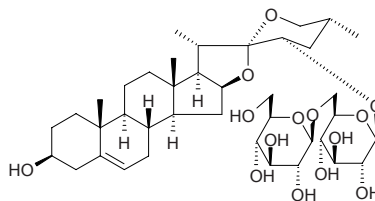
**20218 25*R*-Spirost-4-en-3,12-dione**

C<sub>27</sub>H<sub>38</sub>O<sub>4</sub> (426.60). Colorless powder (CHCl<sub>2</sub>), mp 240–241°C. Source: CI JI LI *Tribulus terrestris*. Ref: 1881.



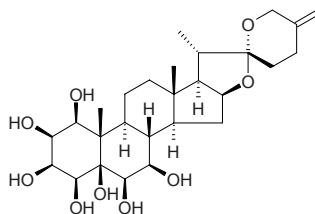
**20219 (23*S*,25*R*)-Spirost-5-ene-3*β*,23-diol 23-*O*-[*O*-*β*-*D*-glucopyranosyl-(1→6)-*β*-*D*-glucopyranoside]**

[239105-68-1] C<sub>39</sub>H<sub>62</sub>O<sub>14</sub> (754.92). Amorphous solid,  $[\alpha]_D^{25} = -44.0^\circ$  ( $c = 0.10$ , MeOH). Source: JIA YE SHU *Ruscus aculeatus*. Ref: 2311.



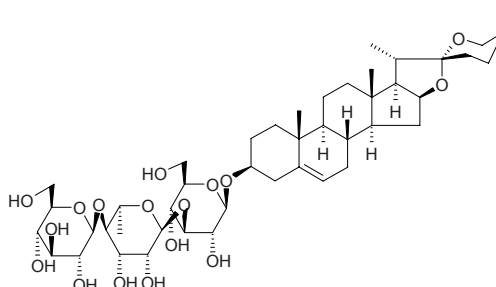
**20220 Spirost-25(27)-ene-1,2,3,4,5,6,7-heptol**

C<sub>27</sub>H<sub>42</sub>O<sub>9</sub> (510.63). Source: WAN NIAN QING GEN *Rohdea japonica* [Syn. *Orontium japonicum*]. Ref: 660.



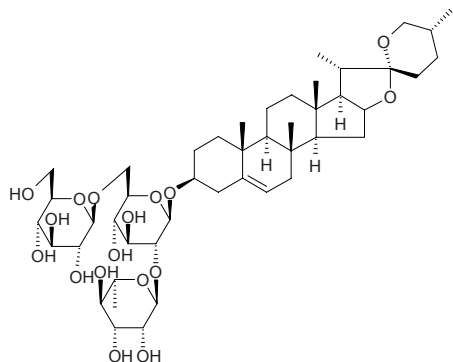
**20221 (25*S*)-Spirost-5-en-3*β*-yl *O*-*β*-*D*-glucopyranosyl-(1→4)-*O*-*α*-*L*-rhamnopyranosyl-(1→3)-*β*-*D*-glucopyranoside**

C<sub>45</sub>H<sub>72</sub>O<sub>17</sub> (885.07). Amorphous solid,  $[\alpha]_D^{25} = -86.0^\circ$  ( $c = 0.10$ , CHCl<sub>3</sub>:MeOH = 1:1). Pharm: Cytotoxic (hmn, HL-60 promyelocytic leukemia cells, 10 μg/mL, InRt > 50%). Source: JIAN GEN SHU *Tacca chantrieri* [Syn. *Tacca minor*; *Tacca esquirolii*]. Ref: 2026.



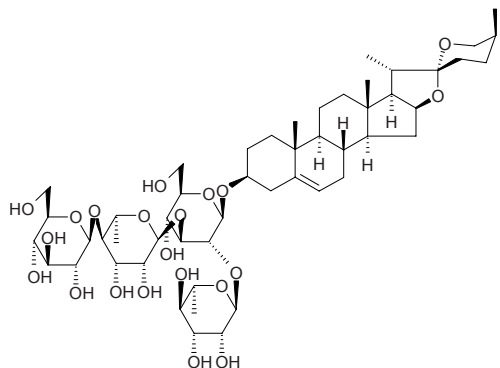
**20222 (25R)-Spirost-5-en-3 $\beta$ -yl-*O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-*O*-[ $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)]- $\beta$ -D-glucopyranoside**

[244160-59-6] C<sub>45</sub>H<sub>72</sub>O<sub>17</sub> (885.07). Amorphous solid,  $[\alpha]_D^{29} = -89.6^\circ$  ( $c = 0.27$ , MeOH) **Pharm**: Na<sup>+</sup>, K<sup>+</sup>-ATPase inhibitor (IC<sub>50</sub> = 22  $\mu$ mol/L, control Ouabain, IC<sub>50</sub> = 1.0  $\mu$ mol/L). **Source**: QING LIANG BAI HE *Lilium candidum*. **Ref**: 2303.



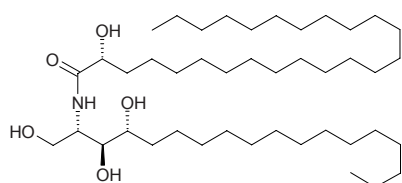
**20223 (25S)-Spirost-5-en-3 $\beta$ -yl *O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-*O*-[*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 3)]- $\beta$ -D-glucopyranoside**

C<sub>51</sub>H<sub>82</sub>O<sub>21</sub> (1031.21). Amorphous solid,  $[\alpha]_D^{25} = -86.0^\circ$  ( $c = 0.10$ , CHCl<sub>3</sub>:MeOH = 1:1). **Pharm**: Cytotoxic (hmn, HL-60 promyelocytic leukemia cells, 10  $\mu$ g/mL, InRt > 50%). **Source**: JIAN GEN SHU *Tacca chantrieri* [Syn. *Tacca minor*; *Tacca esquirolii*]. **Ref**: 2026.



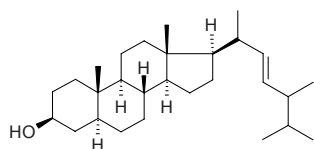
**20224 Sponge sphingolipid**

C<sub>43</sub>H<sub>87</sub>NO<sub>5</sub> (698.18).  $[\alpha]_D^{28} = +10.2^\circ$  ( $c = 0.45$ , pyridine). **Source**: XIAO BANG XIU QIU HAI MIAN *Iotrochota baculifera*. **Ref**: 4391.



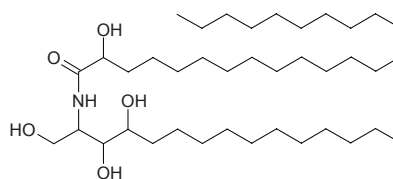
**20225 Spongesterol**

C<sub>28</sub>H<sub>48</sub>O (400.69). **Source**: QIAN HU *Angelica decursiva* [Syn. *Peucedanum decursivum*]. **Ref**: 6.



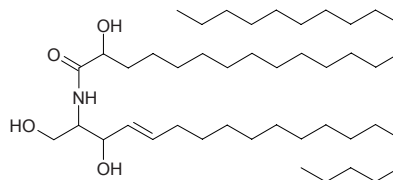
**20226 Spongiamine A**

*N*-(2'-Hydroxy-*n*-tetracosanoyl)-1,3,4-trihydroxy-*n*-pentadeca-sphingosine C<sub>39</sub>H<sub>79</sub>NO<sub>5</sub> (642.07). White powder, mp 138~139°C. **Source**: *Spongia* sp. **Ref**: 4884.



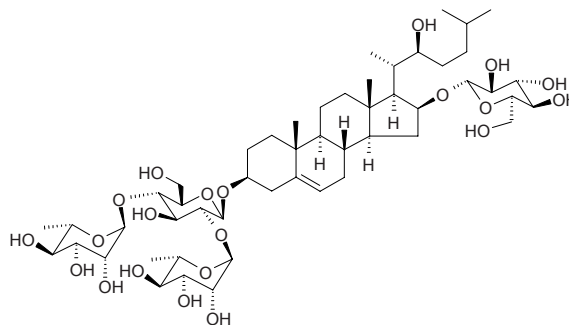
**20227 Spongiamine B**

*N*-(2'-Hydroxy-*n*-tetracosanoyl)-*n*-eicosasphinga-(4*E*)-ene C<sub>44</sub>H<sub>87</sub>NO<sub>4</sub> (694.19). White solid. **Source**: *Spongia* sp. **Ref**: 4884.



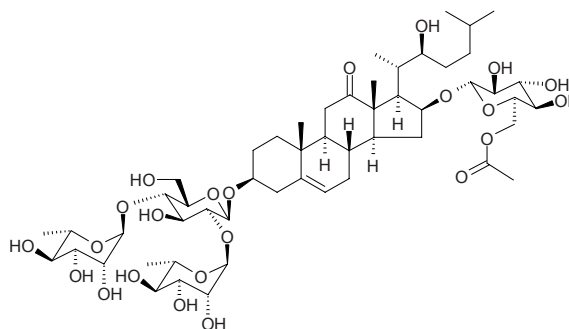
**20228 Spongioside A**

(22*S*)-16 $\beta$ -[( $\beta$ -D-Glucopyranosyl)oxy]-22-hydroxycholest-5-en-3 $\beta$ -yl *O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-*O*-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranoside C<sub>51</sub>H<sub>86</sub>O<sub>21</sub> (1035.24). Colorless amorphous solid,  $[\alpha]_D = -67.8^\circ$  ( $c = 0.10$ , CH<sub>3</sub>OH). **Pharm**: Bone resorption inhibitor (PTH-induced in a bone organ culture system). **Source**: HAI JIN BI XIE *Dioscorea spongiosa* (Rhizome: yield = 0.000048%). **Ref**: 4692.



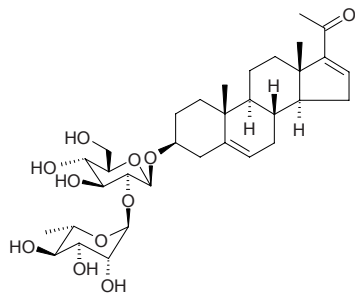
**20229 Spongioside B**

(22*S*)-16 $\beta$ -[(6-*O*-Acetyl- $\beta$ -D-glucopyranosyl)oxy]-22-hydroxy-3 $\beta$ -[(*O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-*O*-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranosyl)oxy]cholest-5-en-12-one C<sub>53</sub>H<sub>86</sub>O<sub>23</sub> (1091.26). Colorless amorphous solid,  $[\alpha]_D = -46.3^\circ$  ( $c = 0.25$ , CH<sub>3</sub>OH). **Source**: HAI JIN BI XIE *Dioscorea spongiosa* (Rhizome: yield = 0.000084%). **Ref**: 4692.

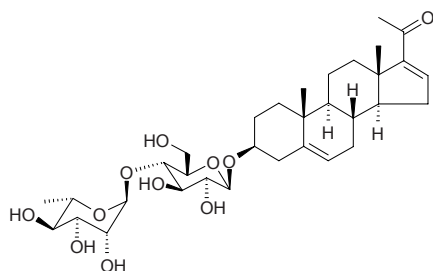


**20230 Spongipregnoside A**

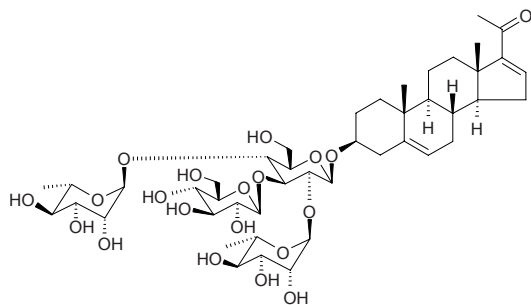
3 $\beta$ -[(*O*- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl)oxy]-pregna-5,16-dien-20-one C<sub>33</sub>H<sub>50</sub>O<sub>11</sub> (622.76). Colorless amorphous solid, [ $\alpha$ ]<sub>D</sub> = -18.2° (*c* = 0.15, CH<sub>3</sub>OH). Source: HAI JIN BI XIE *Dioscorea spongiosa* (Rhizome: yield = 0.000096%). Ref: 4692.

**20231 Spongipregnoside B**

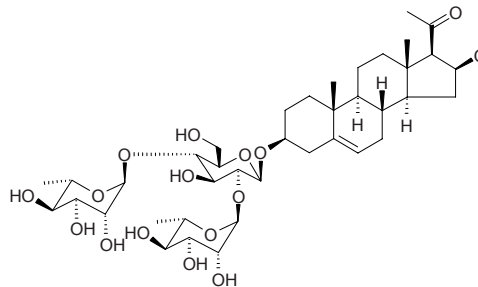
3 $\beta$ -[(*O*- $\alpha$ -L-Rhamnopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranosyl)oxy]pregna-5,16-dien-20-one C<sub>33</sub>H<sub>50</sub>O<sub>11</sub> (622.76). Colorless amorphous solid, [ $\alpha$ ]<sub>D</sub> = -64.6° (*c* = 0.05, CH<sub>3</sub>OH). Source: HAI JIN BI XIE *Dioscorea spongiosa* (Rhizome: yield = 0.000060%). Ref: 4692.

**20232 Spongipregnoside C**

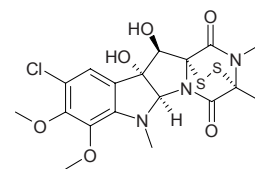
3 $\beta$ -[(*O*- $\beta$ -D-Glucopyranosyl-(1 $\rightarrow$ 3)-*O*-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)]-*O*-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranosyl)oxy]pregna-5,16-dien-20-one C<sub>45</sub>H<sub>70</sub>O<sub>20</sub> (931.05). Colorless amorphous solid, [ $\alpha$ ]<sub>D</sub> = -68.7° (*c* = 0.10, CH<sub>3</sub>OH). Source: HAI JIN BI XIE *Dioscorea spongiosa* (Rhizome: yield = 0.000048%). Ref: 4692.

**20233 Spongipregnoside D**

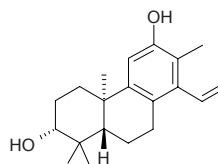
16 $\beta$ -Methoxy-3 $\beta$ -[(*O*- $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 2)-*O*-[ $\alpha$ -L-rhamnopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranosyl)oxy]pregna-5,16-dien-20-one C<sub>40</sub>H<sub>64</sub>O<sub>16</sub> (800.95). Colorless amorphous solid, [ $\alpha$ ]<sub>D</sub> = -54.2° (*c* = 0.20, CH<sub>3</sub>OH). Source: HAI JIN BI XIE *Dioscorea spongiosa* (Rhizome: yield = 0.000048%). Ref: 4692.

**20234 Sporidesmin**

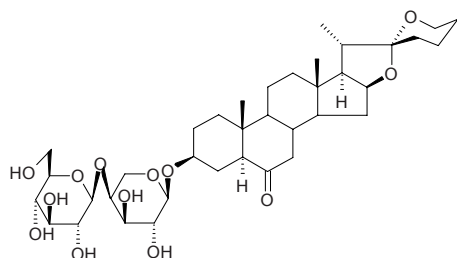
C<sub>18</sub>H<sub>20</sub>CIN<sub>3</sub>O<sub>6</sub>S<sub>2</sub> (473.96). Pharm: Antineoplastic. Source: *Pithomyces chartarum*. Ref: 658.

**20235 Spruceanol**

C<sub>20</sub>H<sub>28</sub>O<sub>2</sub> (300.44). Pharm: Cytotoxic. Source: family Euphorbiaceae spp. Ref: 658.

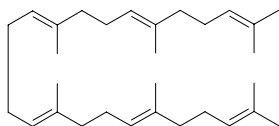
**20236 SQD<sub>4</sub>**

C<sub>38</sub>H<sub>60</sub>O<sub>13</sub> (724.89). Pharm: Antineoplastic (inhibits growth of HeLa cells, SMMC-7721 liver cancer cells, MQc80-3 gastric adenocarcinoma cells). Source: CU CAO BA QIA *Smilax lebrunii*. Ref: 2165.

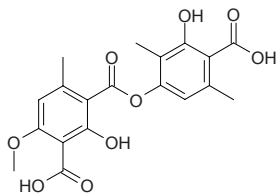


**20237 Squalene**

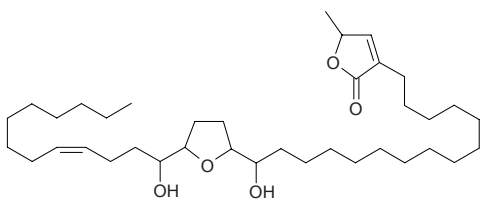
2,6,10,15,19,23-Hexamethyl-2,6,10,14,18,22-tetracosahexaene [7683-64-9]  $C_{30}H_{50}$  (410.73). bp 284–285°C/25mmHg. **Pharm:** NFAT transcription factor inhibitor inactive ( $IC_{50} > 50\mu\text{mol/L}$ , positive control Cyclosporin A,  $IC_{50} = (0.31 \pm 0.01)\mu\text{mol/L}$ )<sup>[4511]</sup>; cytotoxic ( $P_{388}$ ,  $ED_{50} > 50\mu\text{g/mL}$ , control Mithramycin,  $ED_{50} = 0.58\mu\text{g/mL}$ ; A549,  $ED_{50} > 50\mu\text{g/mL}$ , Mithramycin,  $ED_{50} = 0.073\mu\text{g/mL}$ ; HT29,  $ED_{50} > 50\mu\text{g/mL}$ , Mithramycin,  $ED_{50} = 0.076\mu\text{g/mL}$ )<sup>[5421]</sup>. **Source:** A LI HONG *Fomes officinalis*, CHAO XIAN LUO WAN *Gymnaster koraiensis* (leaf), DONG FENG CAI *Doellingeria scaber* [Syn. *Aster scaber*], DOU YOU *Glycine max*, DUAN SHU *Tilia vulgaris*, HEI DA DOU *Glycine max*, JING MI *Oryza sativa*, MI PI KANG *Oryza sativa*, SI GUA *Luffa cylindrica*, SI GUA ZI *Luffa cylindrica*, TONG YOU *Aleurites cordata* [Syn. *Aleurites fordii*], XIANG SI ZI *Abrus precatorius*, YUN SHI *Caesalpinia decapetala* (leaf), MO ZHI JIAO GU CUI *Casearia membranacea* (stem). **Ref:** 6, 4456, 4511, 5421.

**20238 Squamatic acid**

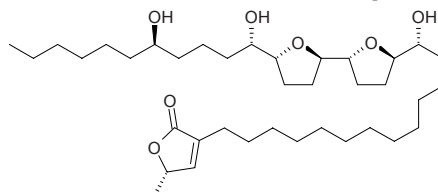
$C_{19}H_{18}O_9$  (390.35). mp 219°C. **Source:** XUE CHA *Thamnia vermicularis*. **Ref:** 6.

**20239 Squamocenin**

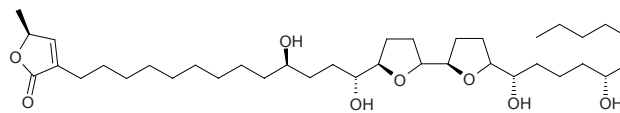
$C_{37}H_{66}O_5$  (590.94). White waxy substance. **Source:** FAN LI ZHI *Annona squamosa* (seed). **Ref:** 4860.

**20240 Squamocin**

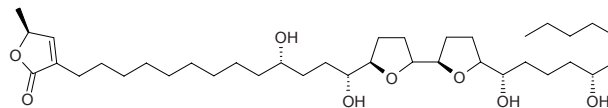
Annonin I [120298-30-8]  $C_{37}H_{66}O_7$  (622.93). Ceraceous solid, mp < 30°C,  $[\alpha]_D^{22} = +0.15^\circ$  ( $c = 1.7$ , methanol); colorless oil,  $[\alpha]_D^{24} = +20.0^\circ$  ( $c = 0.05$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic ( $L_{1210}$  *in vitro*,  $ID_{50} = 0.58\mu\text{g/mL}$ ;  $P_{388}$ ,  $ED_{50} = 10^{-8}\mu\text{g/mL}$ ); cytotoxic (hmn hepatoma cell lines HepG2,  $IC_{50} = 0.547\text{ng/mL}$ , control Adriamycin,  $IC_{50} = 0.241\mu\text{g/mL}$ ; hmn hepatoma cells transfected with hepatitis B virus Hep2,2,15,  $IC_{50} = 0.923\text{ng/mL}$ , Adriamycin,  $IC_{50} = 0.450\mu\text{g/mL}$ )<sup>[5377]</sup>; NADH ubiquinone reductase inhibitor ( $IC_{50} = 2.5\text{nmol/L}$ ); anthelmintic (*Caenorhabditis elegans*); insecticidal. **Source:** CI GUO FAN LI ZHI *Annona muricata*, FAN LI ZHI *Annona squamosa*. **Ref:** 900, 5377.

**20241 Squamocin O<sub>1</sub>**

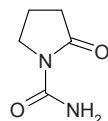
$C_{37}H_{66}O_8$  (638.93). White wax,  $[\alpha]_D^{25} = +17.7^\circ$  ( $c = 0.6$ , MeOH). **Source:** FAN LI ZHI *Annona squamosa*. **Ref:** 1944.

**20242 Squamocin O<sub>2</sub>**

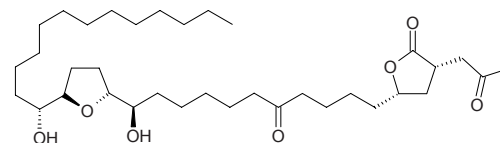
$C_{37}H_{66}O_8$  (638.93). White wax,  $[\alpha]_D^{25} = +17.4^\circ$  ( $c = 1.0$ , MeOH). **Source:** FAN LI ZHI *Annona squamosa*. **Ref:** 1944.

**20243 Squamolone**

$C_5H_8N_2O_2$  (128.13). **Pharm:** Cytotoxic (*in vitro*, HepG2,  $IC_{50} = 2.8\mu\text{g/mL}$ ; Hep2,2,15,  $IC_{50} = 1.6\mu\text{g/mL}$ ). **Source:** YOU GOU YING ZHAO *Artabotrys uncinatus* (stem). **Ref:** 3083.

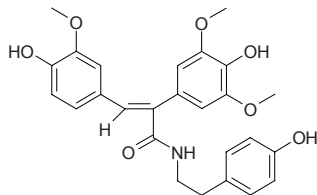
**20244 Squamone**

[126655-24-1]  $C_{35}H_{62}O_7$  (594.88). Yellowish amorphous powder, mp 87–89°C,  $[\alpha]_D^{25} = +7.0^\circ$  ( $c = 0.12$ , chloroform); white crystals, mp 95–97°C,  $[\alpha]_D^{25} = +29^\circ$  ( $c = 0.1$ , methanol). **Pharm:** Cytotoxic ( $P_{388}$ ,  $ED_{50} = 5.6\mu\text{g/mL}$ ; A549,  $ED_{50} = 1.34\mu\text{g/mL}$ ; HT29,  $ED_{50} = 1.5\mu\text{g/mL}$ ; MCF7,  $ED_{50} = 2.14\mu\text{g/mL}$ ). **Source:** NIU XIN FAN LI ZHI *Annona reticulata*, FAN LI ZHI *Annona squamosa*. **Ref:** 401, 1050, 1070.

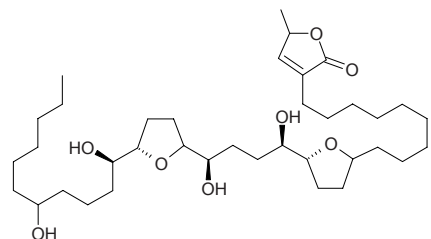


**20245 Squamosamide**

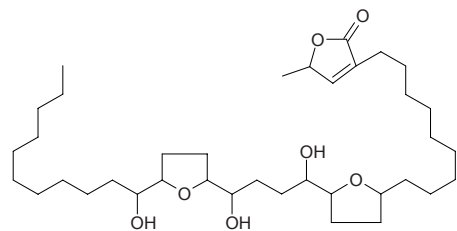
$C_{26}H_{27}NO_7$  (465.51). Yellowish crystals, mp 200~202°C. Source: FAN LI ZHI *Annona squamosa*. Ref: 221.

**20246 Squamostatin B**

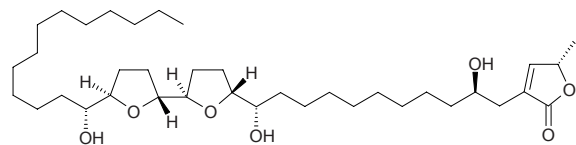
$C_{37}H_{66}O_8$  (638.93). White crystals, mp 105~106°C,  $[\alpha]_D^{22} = +13.5^\circ$  ( $c = 0.14$ , chloroform). Source: FAN LI ZHI *Annona squamosa*. Ref: 303.

**20247 Squamostatin D**

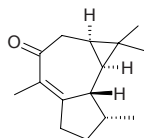
$C_{37}H_{66}O_7$  (622.93). White crystals, mp 51~53°C,  $[\alpha]_D = 8.6^\circ$  ( $c = 0.088$ , MeOH), mp 51~55°C. Source: FAN LI ZHI *Annona squamosa*. Ref: 883.

**20248 Squamotacin**

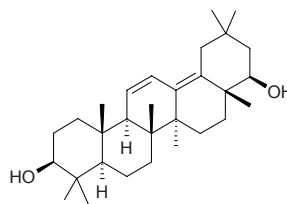
[174158-66-8]  $C_{37}H_{66}O_7$  (622.93). White powder,  $[\alpha]_D = 2.59^\circ$  ( $c = 0.0027$ ). Pharm: Cytotoxic (BST,  $LC_{50} = 0.0068\mu\text{g/mL}$ ; PC3,  $ED_{50} = 0.00000172\text{ng/mL}$ ). Source: FAN LI ZHI *Annona squamosa*. Ref: 1045.

**20249 Squamulone**

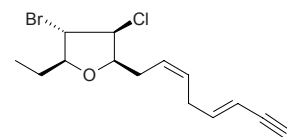
Aromadendr-1(10)-en-9-one  $C_{15}H_{22}O$  (218.34). Needles (acetone), mp 50~51°C,  $[\alpha]_D^{25} = -202^\circ$  ( $c = 1.43$ ,  $\text{CHCl}_3$ ) (lit. mp 45~46°C,  $[\alpha]_D = -234^\circ$  ( $c = 1.2$ ,  $\text{CHCl}_3$ )). Pharm: Insecticidal (adult *Cylas formicarius elegantulus*, 0.04mg/insect, 24h mortality = 10%, 48h mortality = 60%, 72h mortality = 100%). Source: LUN SHENG SHAN XIANG *Hyptis verticillata* (green stem and leaf), *Curvularia lunata*. Ref: 5140.

**20250 Squasapogenol**

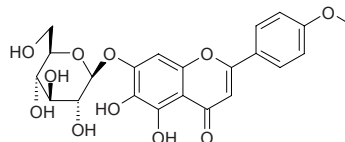
Olean-11,13(18)-diene-3 $\beta$ ,22 $\beta$ -diol  $C_{30}H_{48}O_2$  (440.72). Colorless acicular crystals (di-Ac), mp > 300°C (di-Ac). Source: YUAN GUO GAN CAO *Glycyrrhiza squamulosa*. Ref: 257.

**20251 Srilankenyne**

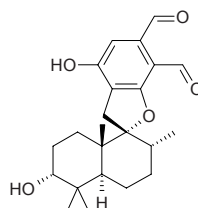
$C_{14}H_{18}BrClO$  (317.66). Source: *Aplysia oculifera*. Ref: 2306.

**20252 Stachannin A**

Scutellarein 4'-O-methylether 7-O- $\beta$ -glucopyranoside  $C_{22}H_{22}O_{11}$  (462.41). Source: *Paederota lutea*. Ref: 3832.

**20253 Stachybotrystrydial (Mer-NF5003F)**

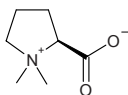
$C_{23}H_{30}O_5$  (386.49). Yellow solid,  $[\alpha]_D^{28} = -20.8^\circ$  ( $c = 0.25$ ,  $\text{CHCl}_3$ ). Pharm: Antiviral (HSV-1,  $IC_{50} = (4.32 \pm 0.57)\mu\text{g/mL}$ , control Acyclovir  $IC_{50} = (1.5 \pm 0.5)\mu\text{g/mL}$ , colorimetric method (P. Skehan, et al., J Natl Cancer Inst 1990, 82, 1107-1112)); antimalarial (*Plasmodium falciparum*, K1 multi-drug-resistant strain, cultivated *in vitro* by Trager and Jensen method (Science, 1976, 193, 673),  $IC_{50} = (0.85 \pm 0.20)\mu\text{g/mL}$  ( $n = 3$ ), control Dihydroartemisinin  $IC_{50} = (1.2 \pm 0.02)\text{ng/mL}$ ); cytotoxic (Vero cells,  $IC_{50} = (24.3 \pm 0.2)\mu\text{g/mL}$  ( $n = 3$ ), control Ellipticine  $IC_{50} = (0.4 \pm 0.1)\mu\text{g/mL}$ , colorimetric method (P. Skehan, et al., J Natl Cancer Inst 1990, 82, 1107~1112)). Source: Fungus *Stachybotrys nephrospora*. Ref: 4078.



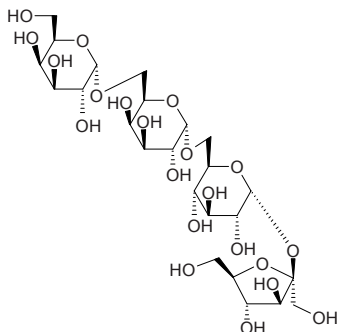


**20254 Stachydrine**

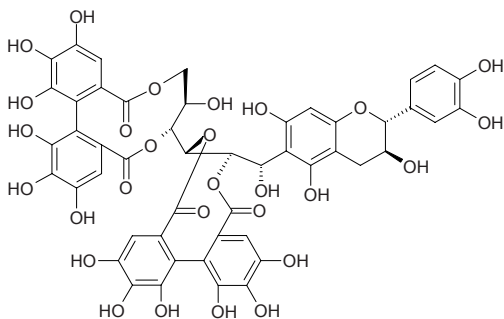
Cadabine [471-87-4]  $C_7H_{13}NO_2$  (143.19). mp 235–240°C (dec). **Pharm:** Antitussive (dispels phlegm); hemostatic (dog, rbt, rat); antiasthmatic (bronchial smooth muscle relaxant); slows heart rate (frog heart); uterine stimulant; low toxin. **Source:** KUAI JING SHUI SU *Stachys tubrifera*, LAO SHU GUA *Capparis spinosa*, MU XU *Medicago sativa*, QIAN MA *Urtica cannabina*, SI CHUAN QING FENG TENG *Sabia schumanniana*, XI YE YI MU CAO *Leonurus sibiricus*, YI MU CAO *Leonurus heterophyllus* [Syn. *Leonurus artemisia*] (dried aerial parts: mean content = 0.48%<sup>[5508]</sup>), ZHE SHU *Cudrania tricuspidata*. **Ref:** 4, 658, 660, 5508.

**20255 Stachyose**

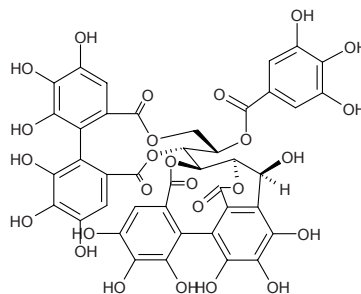
$\alpha$ -D-Galactosyl- $\alpha$ -D-galactosyl- $\alpha$ -D-glucosyl- $\beta$ -D-fructose [10094-58-3]  $C_{24}H_{42}O_{21}$  (666.59). **Source:** CHE QIAN *Plantago asiatica*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], WU SE MEI *Lantana camara*. **Ref:** 2, 234, 660.

**20256 Stachyuranin B**

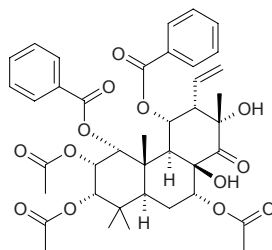
$C_{49}H_{38}O_{28}$  (1074.83). **Source:** HU TAO REN *Juglans regia*. **Ref:** 3408.

**20257 Stachyurin**

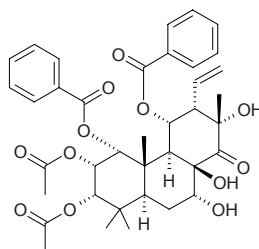
$C_{41}H_{28}O_{26}$  (936.66). **Source:** BAN LI *Castanea mollissima* (leaf), CI LI *Rosa roxburghii*. **Ref:** 660.

**20258 Staminol A**

$C_{40}H_{46}O_{13}$  (734.80). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50}$  = 25.5  $\mu$ mol/L; control *L*-NMMA,  $IC_{50}$  = 26.0  $\mu$ mol/L, Polymixin B,  $IC_{50}$  = 27.8  $\mu$ g/mL, Dexamethasone  $IC_{50}$  = 170  $\mu$ mol/L). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts). **Ref:** 4322.

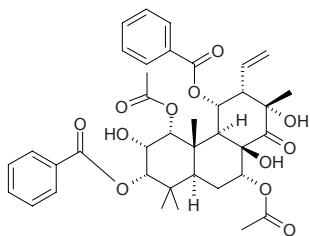
**20259 Staminol B**

$C_{38}H_{44}O_{12}$  (692.77). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50}$  = 67.9  $\mu$ mol/L; control *L*-NMMA,  $IC_{50}$  = 26.0  $\mu$ mol/L, Polymixin B,  $IC_{50}$  = 27.8  $\mu$ g/mL, Dexamethasone  $IC_{50}$  = 170  $\mu$ mol/L)<sup>[4322]</sup>. **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts). **Ref:** 4322.

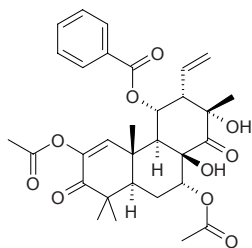


**20260 Staminol C**

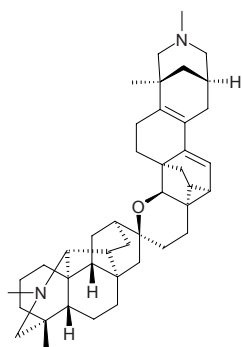
$C_{38}H_{44}O_{12}$  (692.77). Colorless amorphous solid,  $[\alpha]_D^{25} = -81.7^\circ$  ( $c = 0.067$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 61.1 \mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 35.7 \mu\text{mol/L}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00005%dw). **Ref:** 4741.

**20261 Staminol D**

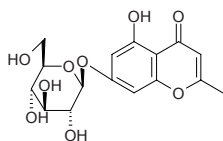
$C_{31}H_{36}O_{10}$  (568.63). Colorless amorphous solid,  $[\alpha]_D^{25} = -18.8^\circ$  ( $c = 0.293$ ,  $CHCl_3$ ). **Pharm:** NO production inhibitor (LPS-activated macrophage-like J774.1 cells,  $IC_{50} = 92 \mu\text{mol/L}$ ; control *L*-NMMA,  $IC_{50} = 35.7 \mu\text{mol/L}$ ). **Source:** XIONG RUI ZHUANG ZHI GUAN CAO *Orthosiphon stamineus* [Syn: *Orthosiphon aristatus*; *Orthosiphon grandiflorus*; *Orthosiphon spicatus*] (aerial parts: yield = 0.00018%dw). **Ref:** 4741.

**20262 Staphidine**

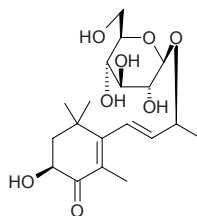
$C_{42}H_{58}N_2O$  (606.93). **Pharm:** Ectoparasiticide (floral seeds). **Source:** SI TA WEI CUI QUE HUA *Delphinium staphisagria*. **Ref:** 658.

**20263 Staphylin**

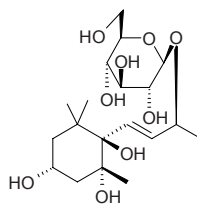
Noreugenin-7-*O*- $\beta$ -*D*-glucoside  $C_{16}H_{18}O_9$  (354.32). mp 248–251°C. **Source:** JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig: yield = 0.0012%dw), SHENG GU YOU *Staphylea bumalda*. **Ref:** 6, 4723.

**20264 Staphylioside A**

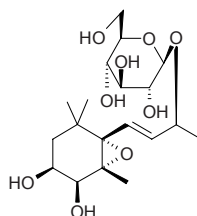
(3*S*,9*S*,5*Z*,7*E*)-Megastigma-5,7-diene-3,9-dihydroxy-4-one 9-*O*- $\beta$ -*D*-glucopyranoside  $C_{19}H_{30}O_8$  (386.45). Amorphous powder,  $[\alpha]_D^{26} = -110.7^\circ$  ( $c = 0.41$ , MeOH). **Source:** SHENG GU YOU *Staphylea bumalda* (leaf). **Ref:** 4478.

**20265 Staphylioside B**

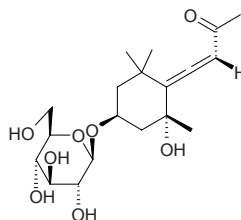
(3*R*,5*R*,6*R*,9*S*,7*E*)-Megastigman-7-ene-3,5,6,9-tetrol 9-*O*- $\beta$ -*D*-glucopyranoside  $C_{19}H_{34}O_9$  (406.48). Amorphous powder,  $[\alpha]_D^{26} = -30.0^\circ$  ( $c = 0.80$ , MeOH). **Source:** SHENG GU YOU *Staphylea bumalda* (leaf). **Ref:** 4478.

**20266 Staphylioside C**

(3*S*,4*S*,5*R*,6*S*,9*S*,7*E*)-Megastigman-7-ene-5,6-epoxy-3,4,9-triol 9-*O*- $\beta$ -*D*-glucopyranoside  $C_{19}H_{32}O_9$  (404.46). Amorphous powder,  $[\alpha]_D^{26} = -90.0^\circ$  ( $c = 0.47$ , MeOH). **Source:** SHENG GU YOU *Staphylea bumalda* (leaf). **Ref:** 4478.

**20267 Staphylioside D**

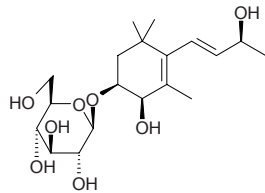
$C_{19}H_{30}O_8$  (386.45). Amorphous powder,  $[\alpha]_D^{26} = -60.8^\circ$  ( $c = 0.21$ , MeOH). **Source:** SHENG GU YOU *Staphylea bumalda* (leaf). **Ref:** 4478.



**20268 Staphylioside E**

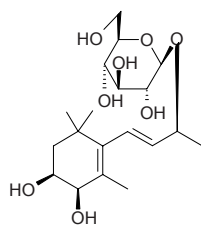
$C_{19}H_{32}O_8$  (388.46). Amorphous powder,  $[\alpha]_D^{23} = -99.0^\circ$  ( $c = 0.67$ , MeOH).

Source: SHENG GU YOU *Staphylea bumalda* (leaf). Ref: 4478.

**20269 Staphylioside F**

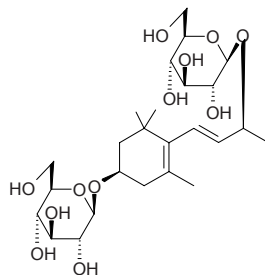
$C_{19}H_{32}O_8$  (388.46). Amorphous powder,  $[\alpha]_D^{26} = -118.1^\circ$  ( $c = 0.53$ , MeOH).

Source: SHENG GU YOU *Staphylea bumalda* (leaf). Ref: 4478.

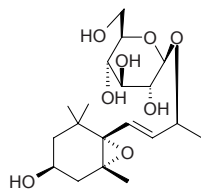
**20270 Staphylioside G**

$C_{25}H_{42}O_{12}$  (534.61). Amorphous powder,  $[\alpha]_D^{26} = -99.4^\circ$  ( $c = 1.21$ , MeOH).

Source: SHENG GU YOU *Staphylea bumalda* (leaf). Ref: 4478.

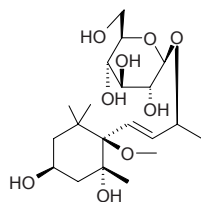
**20271 Staphylioside H**

Epoxyactinidionoside; (3*S*,5*R*,6*R*,9*S*,7*E*)-Megastigman-5-ene-3,9-diol 9-*O*- $\beta$ -*D*-glucopyranoside  $C_{19}H_{32}O_8$  (388.46). Amorphous powder,  $[\alpha]_D^{26} = -78.8^\circ$  ( $c = 3.40$ , MeOH). Source: MAO JIAN QIU LUO *Lychnis coranaria*, SHENG GU YOU *Staphylea bumalda* (leaf). Ref: 2189, 4478.

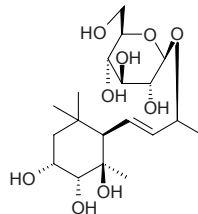
**20272 Staphylioside I**

$C_{20}H_{36}O_9$  (420.50). Amorphous powder,  $[\alpha]_D^{28} = -34.4^\circ$  ( $c = 0.41$ , MeOH).

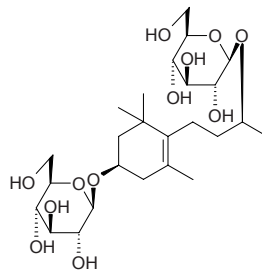
Source: SHENG GU YOU *Staphylea bumalda* (leaf). Ref: 4478.

**20273 Staphylioside J**

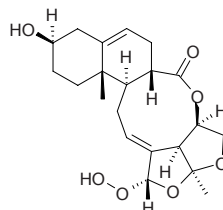
(3*R*,4*R*,5*R*,6*R*,9*S*,7*E*)-Megastigman-7-ene-3,4,5,9-tetra 9-*O*- $\beta$ -*D*-glucopyranoside  $C_{19}H_{34}O_9$  (406.48). Amorphous powder,  $[\alpha]_D^{28} = -37.6^\circ$  ( $c = 1.46$ , MeOH). Source: SHENG GU YOU *Staphylea bumalda* (leaf). Ref: 4478.

**20274 Staphylioside K**

(3*S*,9*S*)-Megastigman-5-ene-3,9-diol 3,9-di-*O*- $\beta$ -*D*-glucopyranoside  $C_{25}H_{44}O_{12}$  (536.62). Amorphous powder,  $[\alpha]_D^{28} = -67.5^\circ$  ( $c = 0.53$ , MeOH). Source: SHENG GU YOU *Staphylea bumalda* (leaf). Ref: 4478.

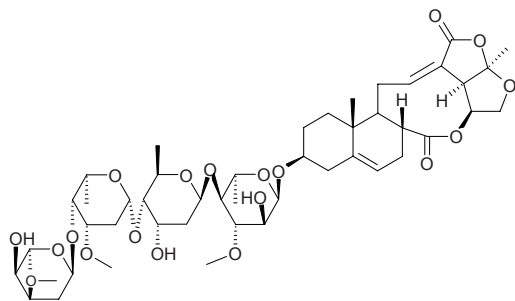
**20275 Stauntonine**

3 $\beta$ -Hydroxy-18-hydroperoxy-15,20 $\alpha$ :18,20 $\beta$ -diepoxy-13,14:14,15-disecopregna-5,12-dien-14-oic acid 16-oxy-lactone  $C_{21}H_{28}O_7$  (392.45). Colorless prisms, mp 173–175°C (EtOAc),  $[\alpha]_D^{25} = -46.97^\circ$  ( $c = 0.132$ , MeOH). Pharm: Vasodilator (*in vitro*, rat isolated aortic rings with endothelium, pre-contracted by 0.1  $\mu$ mol/L Phenylephrine,  $IC_{50} = 5.37 \mu$ mol/L,  $pIC_{50} = 5.24 \pm 0.87$ , control Nitroglycerine  $pIC_{50} = 8.28 \pm 0.63$ ; with endothelium pre-contracted by 100mmol/L KCl, 10mmol/L, relaxation percentage = (53.4 $\pm$ 7.3)%, control 1.0  $\mu$ mol/L Verapamil, relaxation percentage = (97.36 $\pm$ 8.51)%). Source: LIU YE BAI QIAN *Cynanchum stauntonii*. Ref: 4077.

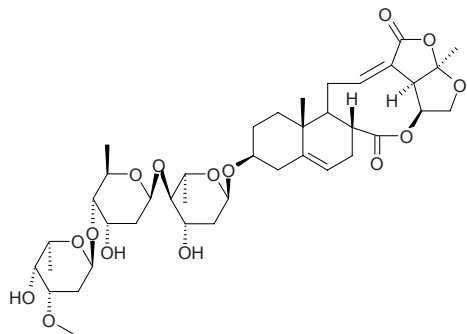


**20276 Stauntoside A**

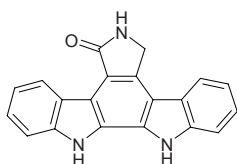
Stauntogenin 3-*O*-[ $\alpha$ -*L*-diginopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*L*-cymaropyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-thevetopyranoside] [261636-64-0] C<sub>48</sub>H<sub>72</sub>O<sub>19</sub> (953.10). Amorphous powder, [ $\alpha$ ]<sub>D</sub> = -63.4° (c = 0.88, MeOH). Source: LIU YE BAI QIAN *Cynanchum stauntonii*. Ref: 2395.

**20277 Stauntoside B**

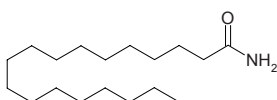
Stauntogenin 3-*O*-[ $\alpha$ -*L*-Cymaropyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-digitoxopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-3-demethyl-2-deoxy-thevetopyranoside]; Stauntogenin 3-*O*-[ $\alpha$ -*L*-Cymaropyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-digitoxopyranosyl-(1 $\rightarrow$ 4)-2,6-dideoxy- $\beta$ -*D*-ribo-hexopyranoside] [261636-66-2] C<sub>40</sub>H<sub>58</sub>O<sub>15</sub> (778.90). Amorphous powder, [ $\alpha$ ]<sub>D</sub> = -39.10° (c = 0.585, MeOH). Source: LIU YE BAI QIAN *Cynanchum stauntonii*. Ref: 2395.

**20278 Staurosporinone**

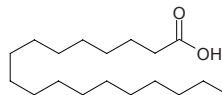
[85753-43-1] C<sub>20</sub>H<sub>13</sub>N<sub>3</sub>O (311.35). Pharm: Cytotoxic (HeLa cells, IC<sub>50</sub> = 8.9 μg/mL). Source: FEN LIU JUN *Lycogala epidendrum* (wild sporocarp). Ref: 4465.

**20279 Stearamide**

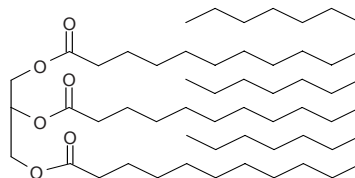
C<sub>18</sub>H<sub>37</sub>NO (283.50). Source: BAI JIANG CAN *Bombyx mori*. Ref: 660.

**20280 Stearic acid**

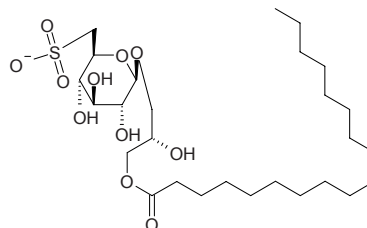
Octadecanoic acid [57-11-4] C<sub>18</sub>H<sub>36</sub>O<sub>2</sub> (284.49). mp 71.5~72.0°C. Source: AN ZI BEI MU *Fritillaria unibracteata*, BA DOU *Croton tiglium*, BAN WEN LU HUI *Aloe vera* var. *chinensis*, BING LANG *Areca catechu*, BU GU ZHI *Psoralea corylifolia*, CHAI HU *Bupleurum chinense*, CI WU JIA *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*], CU LIU GUO *Hippophae rhamnoides*, DA ZAO *Ziziphus jujuba*, DONG CHONG XIA CAO *Cordyceps sinensis*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], GUA LOU *Trichosanthes kirilowii*, GUANG JIN QIAN CAO *Desmodium styracifolium*, HONG HUA *Carthamus tinctorius*, JI GUAN ZI *Celosia cristata* (seed), LANG DANG ZI *Hyoscyamus niger* (dried ripe seed: content = 1.6%)<sup>[5508]</sup>, LI JIANG QIAN HU *Peucedanum govianum* var. *bicolor*, MAN JING ZI *Vitex trifolia*, PU HUANG *Typha angustata*, QIANG HUO *Notopterygium incisum*, QUAN XIE *Buthus martensi*, ROU CONG RONG *Cistanche deserticola*, SHAN ZHA *Crataegus pinnatifida*, SHUANG BIAN GUA LOU *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*], SHUI LIU DOU *Pongamia pinnata* (stem cortex: yield = 0.0015%)<sup>[4721]</sup>, WU JIA PI *Acanthopanax gracilistylus*, WU SE MEI *Lantana camara* (aerial parts), XI YANG SHEN *Panax quinquefolium*, XING REN *Prunus armeniaca*, YA DAN ZI *Brucea javanica* [Syn. *Brucea sumatrana*; *Rhus javanica*], YIN CHEN HAO *Artemisia capillaris*, YIN YANG HUO *Epimedium brevicornum*, YONG NING DU HUO *Heracleum yungningense*, YU XING CAO *Houttuynia cordata*, YUN QIAN HU *Peucedanum rubricaulis*, occurs in many plants. Ref: 2, 177, 260, 530, 541, 557, 660, 4307, 4721, 5508.

**20281 Stearin**

[555-43-1] C<sub>57</sub>H<sub>110</sub>O<sub>6</sub> (891.51). mp ( $\alpha$ -) 55°C, ( $\beta$ -) 73°C, ( $\beta'$ -) 64°C. Source: BAI E GAO *Anser cygnoides domestica*, ZHONG GUO XUAN FU HUA *Inula britannica* var. *chinensis*. Ref: 6, 660.

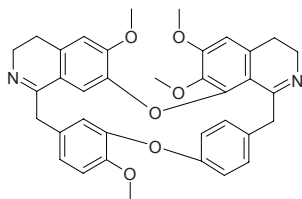
**20282 (2S)-1-Stearoyl-3-O-(6-sulpho- $\alpha$ -D-quinovopyranosyl)-glycerol**

C<sub>27</sub>H<sub>51</sub>O<sub>11</sub>S<sup>-</sup> (583.76). Source: KA SHI QIAN GOU ZAO *Amphidinium carterae*. Ref: 4448.

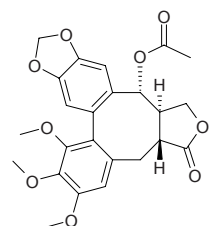


**20283 Stebisimine**

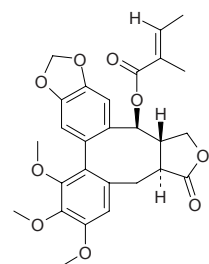
[5692-04-6]  $C_{36}H_{34}N_2O_6$  (590.68). mp 233~235°C. **Pharm:** Cytotoxic (HeLa,  $ED_{50} = 16\mu\text{g/mL}$ ). **Source:** QIAN JIN TENG *Stephania japonica*. **Ref:** 6, 1791.

**20284 Steganacin**

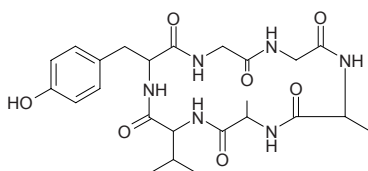
$C_{24}H_{24}O_9$  (456.46).  $[\alpha]_D^{23} = -114^\circ$  ( $c = 0.74$ , chloroform). **Pharm:** Antimitotic; cytotoxic (mus P<sub>388</sub> and hmn KB, 0.001~0.1 $\mu\text{g/mL}$ ; HeLa). **Source:** WU JIA QIAN HU *Steganotaenia araliacea*. **Ref:** 661.

**20285 Steganagin**

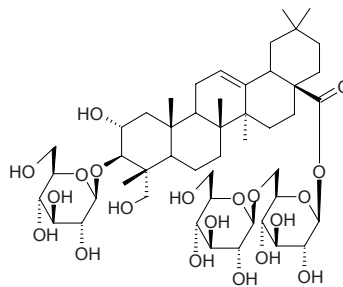
$C_{27}H_{28}O_9$  (496.52). mp 142.5~143°C,  $[\alpha]_D^{23} = -113^\circ$  ( $c = 0.72$ , chloroform). **Pharm:** Cytotoxic (mus P<sub>388</sub> and hmn KB, 0.001~0.1 $\mu\text{g/mL}$ ). **Source:** WU JIA QIAN HU *Steganotaenia araliacea*. **Ref:** 661.

**20286 Stellarria cyclopeptide**

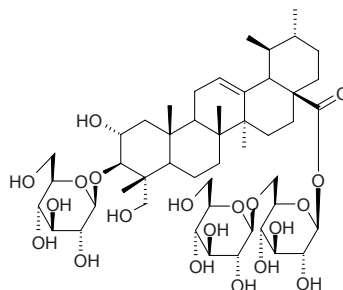
$C_{24}H_{34}N_6O_7$  (518.57). White lamellar crystals, mp > 300°C,  $[\alpha]_D^{22} = +0.151^\circ$  ( $c = 1.0$ ,  $C_5H_5N$ ). **Source:** YIN CHAI HU *Stellaria dichotoma* var. *lanceolata*. **Ref:** 238.

**20287 Stelmatotriterpenoside E**

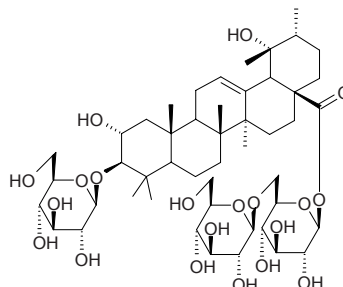
2 $\alpha$ ,3 $\beta$ ,23-Trihydroxyolean-12-en-28-oic acid-3-*O*- $\beta$ -D-glucopyranosyl-28-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl ester  $C_{48}H_{78}O_{20}$  (975.14). White powder, mp 226~229°C (dec),  $[\alpha]_D^{25} = -43.5^\circ$  ( $c = 0.18$ , MeOH). **Source:** SHENG TENG *Stelmatocrypton khasianum* (stem). **Ref:** 4340.

**20288 Stelmatotriterpenoside F**

2 $\alpha$ ,3 $\beta$ ,23-Trihydroxy-urs-12-en-28-oic acid-3-*O*- $\beta$ -D-glucopyranosyl-28-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranosylester  $C_{48}H_{78}O_{20}$  (975.14). White powder, mp 217~220°C (dec),  $[\alpha]_D^{25} = -14.9^\circ$  ( $c = 0.27$ , MeOH). **Source:** SHENG TENG *Stelmatocrypton khasianum* (stem). **Ref:** 4340.

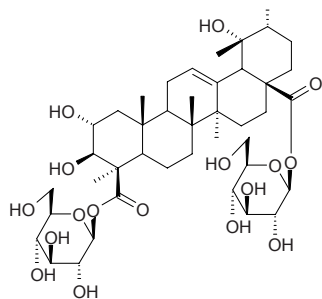
**20289 Stelmatotriterpenoside G**

2 $\alpha$ ,3 $\beta$ ,19 $\alpha$ -Trihydroxy-urs-12-en-28-oic acid-3-*O*- $\beta$ -D-glucopyranosyl-28-*O*- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranosyl ester  $C_{48}H_{78}O_{20}$  (975.14). White powder, mp 185~187°C,  $[\alpha]_D^{25} = -138.0^\circ$  ( $c = 0.06$ , MeOH). **Source:** SHENG TENG *Stelmatocrypton khasianum* (stem). **Ref:** 4340.

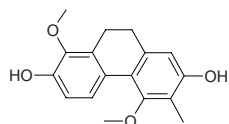


**20290 Stelmatotriterpenoside H**

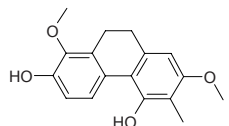
2 $\beta$ ,3 $\beta$ ,19 $\alpha$ -Trihydroxy-urs-12-en-24,28-dioic acid-24-*O*- $\beta$ -D-glucopyranosyl-28-*O*- $\beta$ -D-glucopyranosyl diester C<sub>42</sub>H<sub>66</sub>O<sub>17</sub> (842.98). White powder, mp 219~221°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +200° (*c* = 0.02, MeOH). Source: SHENG TENG *Stelmatocrypton khasianum* (stem). Ref: 4340.

**20291 Stemanthrene A**

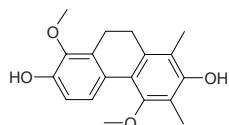
2,7-Dihydroxy-1,5-dimethoxy-6-methyl-9,10-dihydrophenanthrene C<sub>17</sub>H<sub>18</sub>O<sub>4</sub> (286.33). Colorless crystals, mp 130~132°C. Source: *Stemona* cf. *pierrei* (underground parts). Ref: 3751.

**20292 Stemanthrene B**

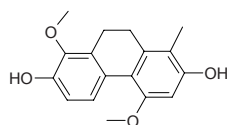
2,5-Dihydroxy-1,7-dimethoxy-6-methyl-9,10-dihydrophenanthrene C<sub>17</sub>H<sub>18</sub>O<sub>4</sub> (286.33). Colorless crystals, mp 198~200°C. Source: *Stemona* cf. *pierrei* (underground parts). Ref: 3751.

**20293 Stemanthrene C**

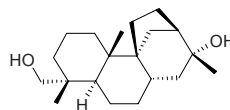
2,7-Dihydroxy-4,8-dimethoxy-1,3-dimethyl-9,10-dihydrophenanthrene C<sub>18</sub>H<sub>20</sub>O<sub>4</sub> (300.36). Colorless crystals, mp 169~171°C. Source: *Stemona* cf. *pierrei* (underground parts). Ref: 3751.

**20294 Stemanthrene D**

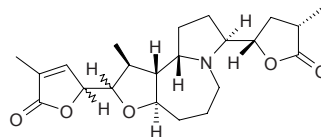
C<sub>17</sub>H<sub>18</sub>O<sub>4</sub> (286.33). Source: *Stemona* cf. *pierrei* (underground parts). Ref: 3751.

**20295 Stemarin**

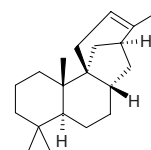
Stemodinol C<sub>20</sub>H<sub>34</sub>O<sub>2</sub> (306.49). Source: DAO GEN MEI *Rhizopus oryzae*. Ref: 3781.

**20296 Stemocochinin**

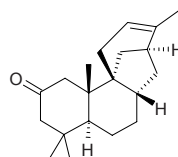
3-Methyl-5-[(2*Z*,3*aR*)-1*t*-methyl-8*t*-((2*S*)-4*c*-methyl-5-oxo-tetrahydrofuran-2*r*-yl)-(3*ar*,10*at*,10*bt*)-decahydro-2*H*-furo[3,2-*c*]pyrrolo[1,2-*a*]azepin-2-yl]-5*H*-furan-2-one C<sub>22</sub>H<sub>31</sub>NO<sub>5</sub> (389.50). Amorphous, [ $\alpha$ ]<sub>D</sub><sup>20</sup> = -52° (*c* = 0.2, MeOH). Pharm: Insecticidal (neonate larvae of *Spodoptera littoralis*, LC<sub>50</sub> = 170mg/L, EC<sub>50</sub> = 61mg/L). Source: DI TANG BAI BU *Stemona kerrii*, YIN DU ZHI NA BAI BU *Stemona cochinchinensis*, *Stemona curtisii*. Ref: 3409.

**20297 Stemod-12-ene**

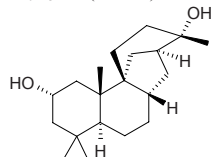
C<sub>20</sub>H<sub>32</sub> (272.48). Amorphous solid, mp 43~45°C, [ $\alpha$ ]<sub>D</sub><sup>27</sup> = +33.6° (*c* = 5.77, CHCl<sub>3</sub>). Source: DAO GEN MEI *Rhizopus oryzae*. Ref: 3781.

**20298 Stemod-12-en-2-one**

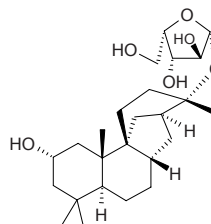
C<sub>20</sub>H<sub>30</sub>O (286.46). Amorphous crystals, mp 73~75°C, [ $\alpha$ ]<sub>D</sub><sup>27</sup> = +34.2° (*c* = 1.90, Me<sub>2</sub>CO). Source: DAO GEN MEI *Rhizopus oryzae*. Ref: 3781.

**20299 Stemodin**

C<sub>20</sub>H<sub>34</sub>O<sub>2</sub> (306.49). Source: DAO GEN MEI *Rhizopus oryzae*. Ref: 3781.

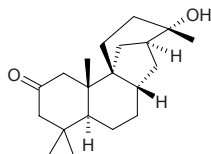
**20300 Stemodin- $\alpha$ -L-arabinofuranoside**

C<sub>25</sub>H<sub>42</sub>O<sub>6</sub> (438.61). Needles, mp 215~217°C, [ $\alpha$ ]<sub>D</sub><sup>27</sup> = -40.8° (*c* = 0.91, MeOH). Source: DAO GEN MEI *Rhizopus oryzae*. Ref: 3781.

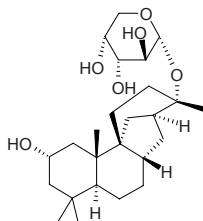


**20301 Steminone**

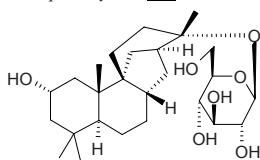
$C_{20}H_{32}O_2$  (304.48). Needles, mp 209–210°C,  $[\alpha]_D^{27} = +10.2^\circ$  ( $c = 1.25$ , Me<sub>2</sub>CO). Source: DAO GEN MEI *Rhizopus oryzae*. Ref: 3781.

**20302 Steminoside A**

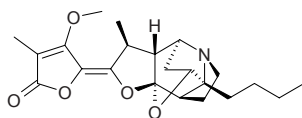
Stemin- $\alpha$ -L-arabinopyranoside  $C_{25}H_{42}O_6$  (438.61). Source: DAO GEN MEI *Rhizopus oryzae*. Ref: 3781.

**20303 Steminoside B**

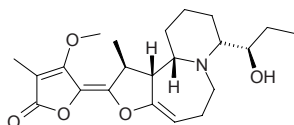
Stemin- $\beta$ -D-glucopyranoside  $C_{26}H_{44}O_7$  (468.64). Source: DAO GEN MEI *Rhizopus oryzae*. Ref: 3781.

**20304 Stemofoline**

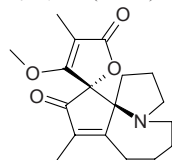
[29881-57-0]  $C_{22}H_{29}NO_5$  (387.48). Pharm: Insecticidal (neonate larvae of *Spodoptera littoralis*, LC<sub>50</sub> = 2.0mg/L, EC<sub>50</sub> = 1.5mg/L)<sup>[3409]</sup>. Source: WAN SHENG BAI BU *Stemona japonica* (in 1970, the compound was isolated from the plant by H.Irie et al.)<sup>[5505]</sup>, YIN DU ZHI NA BAI BU *Stemona cochinchinensis*, *Stemona curtisii*. Ref: 660, 3409, 5505.

**20305 Stemokerrin**

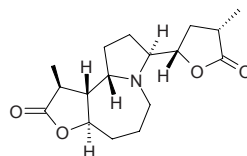
4-Methoxy-3-methyl-5-[(2Z,11aS)-8t-((1R)-1-hydroxypropyl)-1c-methyl-(11a r,11bc)-1,2,5,6,8,9,10,11,11a,11b-decahydro-furo[3,2-c]pyrido[1,2-a]zazepin-2-ylidene]-5H-furan-2-one  $C_{22}H_{31}NO_5$  (389.50). Colorless plates, mp 138–141°C,  $[\alpha]_D^{20} = +136^\circ$  ( $c = 0.3$ , MeOH). Pharm: Insecticidal (neonate larvae of *Spodoptera littoralis*, LC<sub>50</sub> = 58mg/L, EC<sub>50</sub> = 14.1mg/L). Source: DI TANG BAI BU *Stemona kerrii*. Ref: 3409.

**20306 Stemonamine**

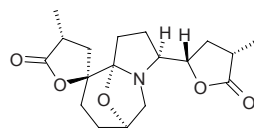
$C_{19}H_{27}NO_4$  (333.43). Source: WAN SHENG BAI BU *Stemona japonica*. Ref: 660.

**20307 Stemonine**

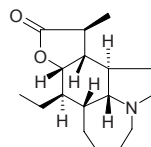
[27498-90-1]  $C_{17}H_{25}NO_4$  (307.39). mp 169°C. Pharm: Antibacterial; antiviral; antitussive; CNS depressant; analgesic. Source: BAI BU *Stemona tuberosa*, WAN SHENG BAI BU *Stemona japonica* (in 1970, the compound was isolated from the plant by H.Irie et al.)<sup>[5505]</sup>, ZHI LI BAI BU *Stemona sessilifolia*, *Stemona cf. pierrei* (underground parts). Ref: 6, 660, 3751, 5501, 5505.

**20308 Stemotinine**

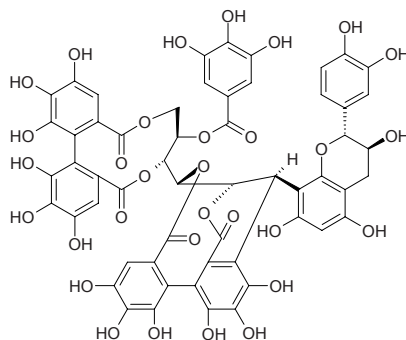
[85644-15-1]  $C_{18}H_{25}NO_5$  (335.40). Source: BAI BU *Stemona tuberosa*. Ref: 660.

**20309 Stenine**

$C_{17}H_{27}NO_2$  (277.41). mp 65–67°C. Source: BAI BU *Stemona tuberosa*. Ref: 6.

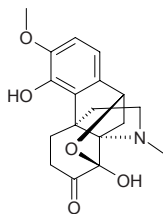
**20310 Stenophyllanin A**

[97775-88-7]  $C_{56}H_{40}O_{31}$  (1208.92). Pharm: Antioxidant (SOD-like activity, EC<sub>50</sub> = 35.6μmol/L, control Gallic acid, EC<sub>50</sub> = 31.7μmol/L, L-Ascorbic acid, EC<sub>50</sub> = 34.6μmol/L); antioxidant (DPPH free radical scavenger, EC<sub>50</sub> = 0.41μmol/L, control Gallic acid, EC<sub>50</sub> = 5.88μmol/L, L-Ascorbic acid, EC<sub>50</sub> = 6.25μmol/L). Source: HU TAO REN *Juglans regia*. Ref: 3408.

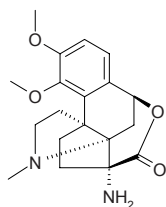


**20311 Stephabyssine**

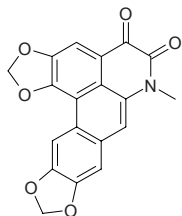
$C_{18}H_{21}NO_5$  (331.37). Source: FEN JI DU *Stephania longa*. Ref: 660.

**20312 Stephdiamine**

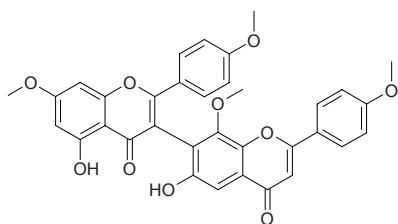
$C_{19}H_{24}N_2O_4$  (344.41). Source: QIAN JIN TENG *Stephania japonica*. Ref: 660.

**20313 Stephadione**

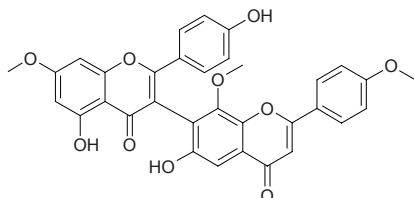
$C_{19}H_{11}NO_6$  (349.30). Red powder, mp > 300°C. Source: FANG JI *Stephania tetrandra*. Ref: 9.

**20314 Stephaflavone A**

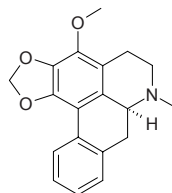
Stephaniaflavone A; 5,5''-Dihydroxy-7,4',7'',4'''-tetramethoxy-[3→6'']-biflavone  $C_{34}H_{26}O_{10}$  (594.58). Yellow cubic crystals ( $C_6H_6$ ), mp 237~239°C. Source: FANG JI *Stephania tetrandra* (aerial parts). Ref: 9, 5194.

**20315 Stephaflavone B**

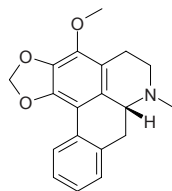
Stephaniaflavone B; 5,4',5''-Trihydroxy-7,7'',4'''-trimethoxy-[3→6'']-biflavone  $C_{33}H_{24}O_{10}$  (580.55). Yellow cubic crystals ( $CHCl_3$ ), mp 192~194°C. Source: FANG JI *Stephania tetrandra* (aerial parts). Ref: 9, 5194.

**20316 Stephalagine**

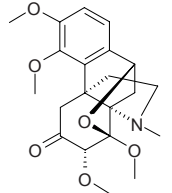
$C_{19}H_{19}NO_3$  (309.37). Pharm: Cytotoxic inactive (yeast assay: RS321NYCp50(gal), RS321NpRAD52(gal), RS321NpRAD52(glu)). Source: DING KE LA QIAN JIN TENG *Stephania dinklagei* (stem). Ref: 5457.

**20317 (-)-Stephalagine**

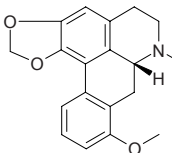
$C_{19}H_{19}NO_3$  (309.37). Source: YOU GOU YING ZHAO *Artabotrys uncinatus* (stem). Ref: 3083.

**20318 Stephamiersine**

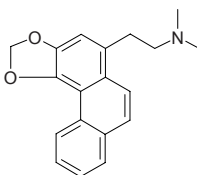
$C_{21}H_{27}NO_6$  (389.45). Source: QIAN JIN TENG *Stephania japonica*. Ref: 660.

**20319 Stephanine**

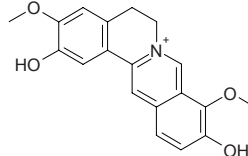
[517-63-5]  $C_{19}H_{19}NO_3$  (309.37). mp (-) 160~161°C, (±) 131~133°C. Source: DI BU RONG *Stephania delavayi* [Syn. *Stephania epigaea*], QIAN JIN TENG *Stephania japonica*, YE HE HUA *Magnolia coco*. Ref: 4.

**20320 Stephanthrine**

Stephanthrine  $C_{19}H_{19}NO_2$  (293.37). White acicular crystals (methanol), mp 234~236°C (HBr). Source: FANG JI *Stephania tetrandra*. Ref: 2, 44, 660.

**20321 Stepharanine**

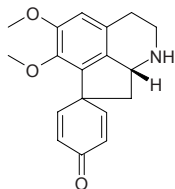
$C_{19}H_{18}NO_4^+$  (324.36). Source: QING NIU DAN *Tinospora sagittata*. Ref: 660.



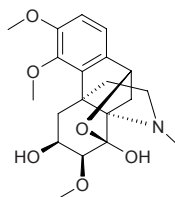


**20322 Stepharine**

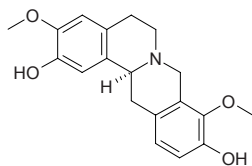
$C_{18}H_{19}NO_3$  (297.36). mp 179~181°C. Source: DA ZAO *Ziziphus jujuba*, QING FENG TENG *Sinomenium acutum*, YOU GOU YING ZHAO *Artabotrys uncinatus* (root, stem and leaf)<sup>[3083]</sup>. Ref: 2, 660, 3083.

**20323 Stephasunoline**

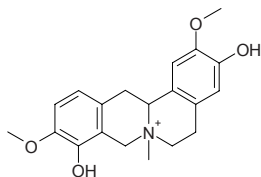
$C_{20}H_{27}NO_6$  (377.44). Source: QIAN JIN TENG *Stephania japonica*. Ref: 660.

**20324 Stepholidine**

[16562-13-3]  $C_{19}H_{21}NO_4$  (327.38). mp 126~128°C, 161~163°C. Pharm: Dopamine receptor antagonist (stronger than levo-tetrahydropalmatine and tetrahydroberberine); dopamine  $D_2$  receptor antagonist (rat, anterior pituitary); used in treatment of restless extrapyramidal dyskinesia); antispasmodic (mus, inhibits spontaneous motion,  $ED_{50}$  = 258mg/kg); analgesic (mus, acetic acid-induced writhing model  $ED_{50}$  = 223mg/kg, electrostimulation model, hot plate model); used in treatment of vascular headache and bilious headache; antihypertensive (dog and rat; treatment of primary hypertension, slow action with enduring curative effects); antioxidant (microsome, lipid peroxidation induced by  $Fe^{2+}/VC$ ,  $CCl_4/NADPH$ , or  $Fe^{3+}/NADPH$ , presents dose-response relationship). Source: BIAN FU GE GEN *Menispermum dauricum*. Ref: 6, 627, 630, 647, 695, 919, 922.

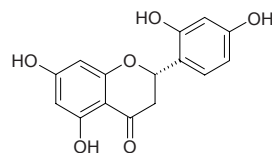
**20325 Steponine**

$C_{20}H_{24}NO_4$  (342.42). Source: QIAN JIN TENG *Stephania japonica*. Ref: 6.

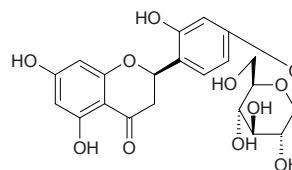
**20326 Steppogenin**

(2*S*)-5,7,2',4'-Tetrahydroxyflavanone  $C_{15}H_{12}O_6$  (288.26). Pharm: Cytotoxic (cyclooxygenase-1 inhibitor,  $IC_{50}$  = 1.7 $\mu$ g/mL)<sup>[5038]</sup>; cytotoxic (mouse mammary organ culture assay, 67% at 10 $\mu$ g/mL)<sup>[5038]</sup>; aromatase inhibitor (*in vitro*,  $IC_{50}$  = 2.2 $\mu$ mol/L; control Aminoglutethimide,  $IC_{50}$  = 6.4 $\mu$ mol/L)<sup>[3090]</sup>.

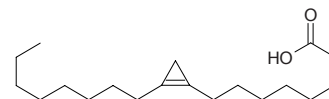
Source: DA DA HE MIAN BAO GUO *Artocarpus dadah*, GOU SHU *Broussonetia papyrifera*. Ref: 3090, 5038.

**20327 Steppogenin 4'-O- $\beta$ -D-glucoside**

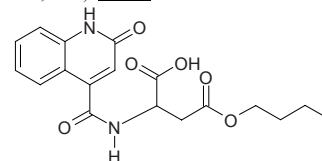
$C_{21}H_{22}O_{11}$  (450.40). Colorless amorphous solid, mp 259~263°C (MeOH/H<sub>2</sub>O). Source: ZHUO SE SANG CHENG *Maclura tinctoria*. Ref: 2353.

**20328 Sterculic acid**

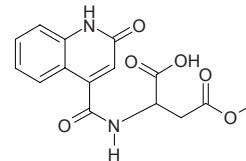
$C_{19}H_{34}O_2$  (294.48). mp 18.2~18.3°C. Source: JIA MA SHU *Sterculia foetida*, MU JIN ZI *Hibiscus syriacus*, WU TONG ZI *Firmiana simplex*. Ref: 6.

**20329 Sterculinine I**

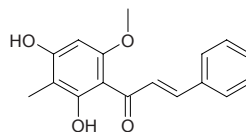
2-[(2-Oxo-1,2-dihydro-quinoline-4-carbonyl)-amino]-succinic acid 4-*n*-butyl ester  $C_{18}H_{20}N_2O_6$  (360.37). White powder, mp 184~186°C,  $[\alpha]_D^{20}$  = +24.2° ( $c$  = 0.50, H<sub>2</sub>O). Source: PANG DA HAI *Sterculia lychnophora* (seed). Ref: 3394.

**20330 Sterculinine II**

2-[(2-Oxo-1,2-dihydro-quinoline-4-carbonyl)-amino]-succinic acid 4-methyl ester  $C_{15}H_{14}N_2O_6$  (318.29). White powder, mp 176~178°C,  $[\alpha]_D^{20}$  = +25° ( $c$  = 0.50, H<sub>2</sub>O). Source: PANG DA HAI *Sterculia lychnophora* (seed). Ref: 3394.

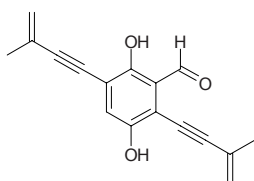
**20331 Stercurensin**

$C_{17}H_{16}O_4$  (284.31). Source: YANG PU TAO YE *Syzygium samarangense*. Ref: 4100.

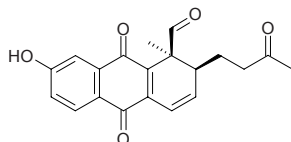


**20332 Sterehirsutinal**

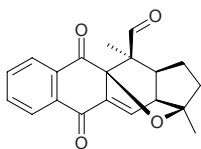
$C_{17}H_{14}O_3$  (266.30). Yellow solid. Pharm: Phytotoxin (callus of *Vitis vinifera*, GI<sub>50</sub> = 100 $\mu$ mol/L). Source: MAO REN GE JUN *Stereum hirsutum*. Ref: 3930.

**20333 Sterekunthal A**

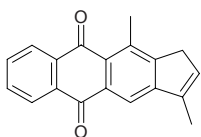
$C_{20}H_{18}O_5$  (338.36). Yellow oil,  $[\alpha]_D^{22} = -10^\circ$  ( $c = 0.44$ ,  $CHCl_3$ ). Pharm: Antimalarial (antiplasmodial); toxic (endothelial cell line ECV-304). Source: WU GAN DA YU YE QIU *Stereospermum kunthianum*. Ref: 2019.

**20334 Sterekunthal B**

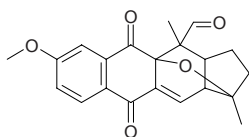
$C_{20}H_{18}O_4$  (322.36). Colorless oil. Pharm: Antimalarial (antiplasmodial); toxic (endothelial cell line ECV-304). Source: WU GAN DA YU YE QIU *Stereospermum kunthianum*. Ref: 2019.

**20335 Sterequinone A**

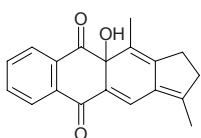
$C_{19}H_{14}O_2$  (274.32). Pale yellow semi solid. Source: JIA MIAN YU YE QIU *Stereospermum personatum*. Ref: 3424.

**20336 Sterequinone B**

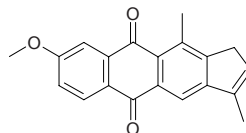
$C_{21}H_{20}O_5$  (352.39). Yellow solid, mp 138°C. Source: JIA MIAN YU YE QIU *Stereospermum personatum*. Ref: 3424.

**20337 Sterequinone C**

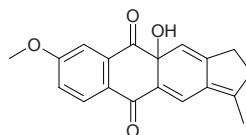
$C_{19}H_{16}O_3$  (292.34). Pale yellow solid, mp 199°C. Source: JIA MIAN YU YE QIU *Stereospermum personatum*. Ref: 3424.

**20338 Sterequinone D**

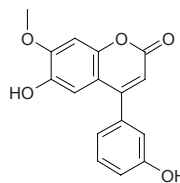
$C_{20}H_{16}O_3$  (304.35). Yellow syrup. Source: JIA MIAN YU YE QIU *Stereospermum personatum*. Ref: 3424.

**20339 Sterequinone E**

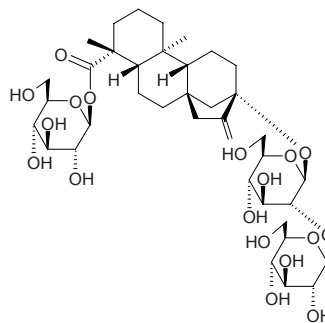
$C_{19}H_{16}O_4$  (308.34). Semi solid. Source: JIA MIAN YU YE QIU *Stereospermum personatum*. Ref: 3424.

**20340 Stevenin**

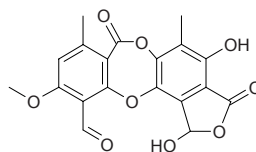
Stevein; Stevenine [36286-69-8]  $C_{16}H_{12}O_5$  (284.27). Source: JIANG ZHEN XIANG *Dalbergia odorifera*. Ref: 716.

**20341 Stevioside**

$C_{38}H_{60}O_{18}$  (804.89). Hygroscopic crystals, mp 198°C,  $[\alpha]_D^{25} = -39.3^\circ$  ( $c = 5.7$ , water). Pharm: Hypoglycemic; antihypertensive; promotes metabolism; used in treatment of gastric hyperacidity; toxin (rat, orl, 5g/(kg-d) for 90 days, no pathological change observed); LD<sub>50</sub> (rat, ip)  $\geq 3400$ mg/kg. Source: TIAN CHA *Rubus suavissimus*, TIAN YE JU *Eupatorium rebaudianum* (dried leaf: content scope = 3.47%~16.00%, mean content = 9.66%<sup>[5508]</sup>). Ref: 661, 5508.

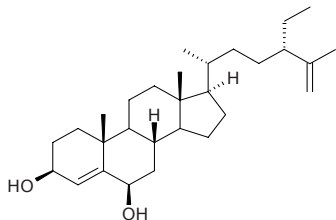
**20342 Stictic acid**

$C_{19}H_{14}O_9$  (386.32). Source: XIAO LA BA *Cladonia verticillata*. Ref: 660.

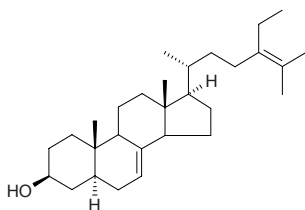


**20343 Stigmasta-4,25-dien-3 $\beta$ ,6 $\beta$ -diol**

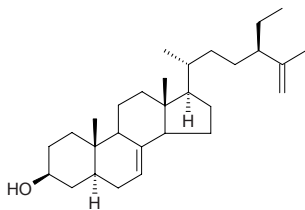
$C_{29}H_{48}O_2$  (428.70). Colorless acicular crystals, mp 242~243°C. Source: LUE DA AO DING ZAO *Laurencia majuscula*. Ref: 2152.

**20344 7,24-Stigmastadienol**

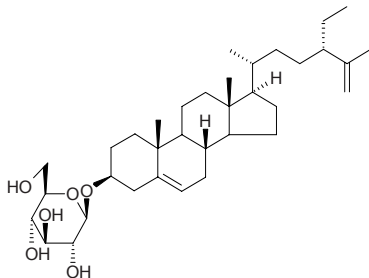
$C_{29}H_{48}O$  (412.71). Source: GUA LOU *Trichosanthes kirilowii*. Ref: 2.

**20345 7,25-Stigmastadienol**

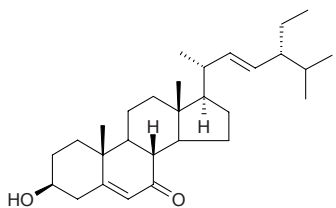
$C_{29}H_{48}O$  (412.71). Source: GUA LOU *Trichosanthes kirilowii*. Ref: 2.

**20346 5,25-Stigmastadien-3 $\beta$ -ol- $\beta$ -D-glucoside**

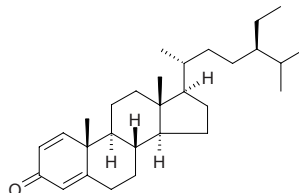
$C_{35}H_{58}O_6$  (574.85). Source: KU GUA *Momordica charantia*. Ref: 6.

**20347 Stigmasta-5,22-dien-3 $\beta$ -ol-7-one**

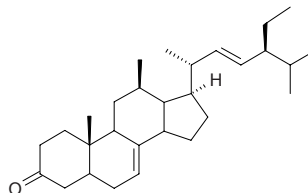
$C_{29}H_{46}O_2$  (426.69). Source: MA GEN *Cannabis sativa*. Ref: 660.

**20348 (22E,24R)-Stigmasta-1,4-dien-3-one**

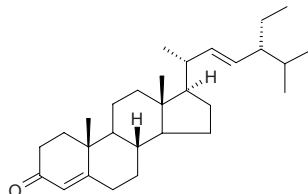
$C_{29}H_{46}O$  (410.69). Colorless needles (MeOH), mp 89~91°C,  $[\alpha]_D^{24} = +22.8^\circ$  ( $c = 0.33$ ,  $CHCl_3$ ). Pharm: Platelet aggregation inhibitor (washed rabbit platelets, 100 $\mu$ g/mL, 100 $\mu$ mol/L AA-induced, AggRt = 2.4%, control 50 $\mu$ mol/L Aspirin, AggRt = 100%; 10 $\mu$ g/mL collagen-induced, AggRt = 1.8%, 100 $\mu$ mol/L Aspirin, AggRt = 4.9%; 0.1U/mL thrombin-induced, AggRt = 5.2%, 100 $\mu$ mol/L Aspirin, AggRt = 1.7%; 2ng/mL PAF-induced, AggRt = 4.2%, 100 $\mu$ mol/L Aspirin, AggRt = 2.1%). Source: SAN QI CAO *Gynura segetum* [Syn. *Gynura japonica*] (rhizome). Ref: 5427.

**20349 (22E,20S,24S)-Stigmasta-7,22-dien-3-one**

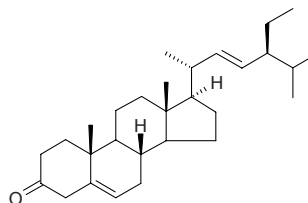
$C_{29}H_{46}O$  (410.69). Source: XIA KU CAO *Prunella vulgaris*. Ref: 2508.

**20350 Stigmasta-4,22-dien-3-one**

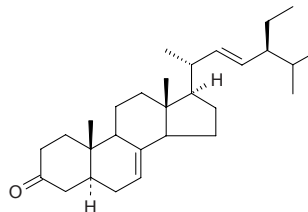
$C_{29}H_{46}O$  (410.69). Source: MA GEN *Cannabis sativa*. Ref: 660.

**20351 Stigmasta-5,22-dien-3-one**

$C_{29}H_{46}O$  (410.69). Source: DANG SHEN *Codonopsis pilosula*. Ref: 2.

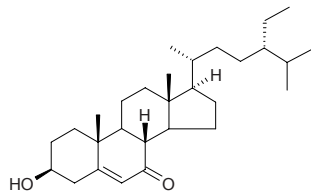
**20352 5 $\alpha$ -Stigmasta-7,22-dien-3-one**

$C_{29}H_{46}O$  (410.69). Source: DANG SHEN *Codonopsis pilosula*. Ref: 2.

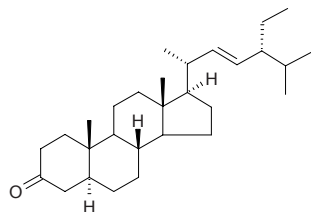


**20353 Stigmasta-5-en-3 $\beta$ -ol-7-one**

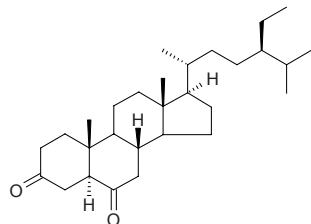
$C_{29}H_{48}O_2$  (428.70). Source: MA GEN *Cannabis sativa*. Ref: 660.

**20354 5 $\alpha$ -Stigmasta-22-en-3-one**

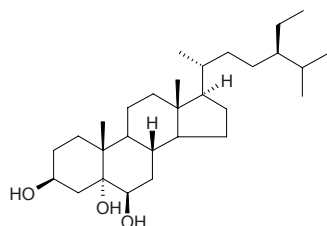
$C_{29}H_{48}O$  (412.71). Source: MA GEN *Cannabis sativa*. Ref: 660.

**20355 5 $\alpha$ -Stigmastan-3,6-dione**

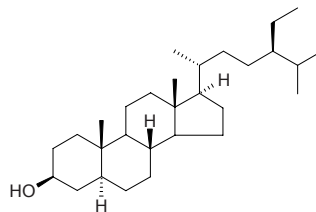
$C_{29}H_{48}O_2$  (428.70). Colorless amorphous crystals, mp 192–194°C,  $[\alpha]_D^{25} = +26.7^\circ$  ( $c = 0.19$ ,  $CHCl_3$ ). Pharm: Antimutagenic (*E. coli* PQ37, antigenotoxicity test, for mutagen MNNG shows 30% reduction of induction factor, for mutagen NQO, shows 40% reduction of induction factor)<sup>[4459]</sup>. Source: BAO XING WEI MAO *Euonymus mupinensis*, PU HUANG *Typha angustata*, ZAO JIA CI *Gleditsia sinensis* [Syn. *Gleditsia horrida*] (thorn). Ref: 2, 278, 4459.

**20356 Stigmastane-3 $\beta$ ,5 $\alpha$ ,6 $\beta$ -triol**

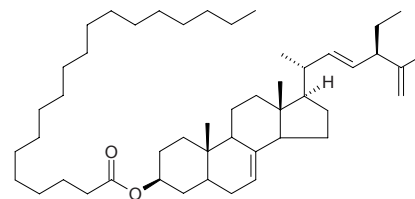
$C_{29}H_{52}O_3$  (448.74). Pharm: Cytotoxic ( $P_{388}$ ,  $ED_{50} > 50\mu g/mL$ , control Mithramycin,  $ED_{50} = 0.58\mu g/mL$ ; A549,  $ED_{50} > 50\mu g/mL$ , Mithramycin,  $ED_{50} = 0.073\mu g/mL$ ; HT29,  $ED_{50} > 50\mu g/mL$ , Mithramycin,  $ED_{50} = 0.076\mu g/mL$ ). Source: MO ZHI JIAO GU CUI *Casearia membranacea* (stem). Ref: 5421.

**20357 Stigmastanol**

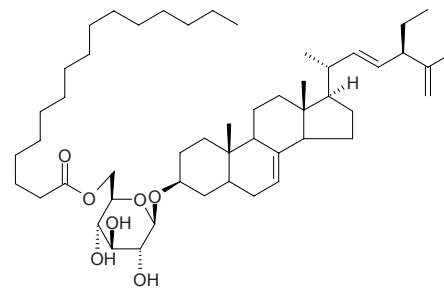
[19466-47-8]  $C_{29}H_{52}O$  (416.74). White lamellar crystals, mp 110–112°C. Source: GUA LOU *Trichosanthes kirilowii*, LU CAO *Rhaponticum carthamoides*. Ref: 2, 698.

**20358 Stigmasta-7,22,25-triene-3-nonadecanoic acid ester**

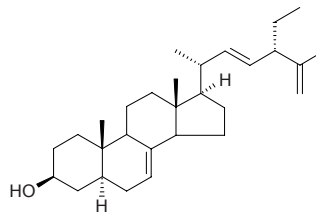
$C_{48}H_{82}O_2$  (691.19). Colorless lamellar crystals (acetone), mp 100–101°C. Source: JIA BEI MU *Bolbostemma paniculatum* (bulb). Ref: 4819.

**20359 Stigmasta-7,22,25-triene-3-O- $\beta$ -D-(6'-palmitoyl)glucopyranoside**

$C_{51}H_{86}O_7$  (811.25). White waxy solid, mp 84–86°C. Source: JIA BEI MU *Bolbostemma paniculatum* (bulb). Ref: 4819.

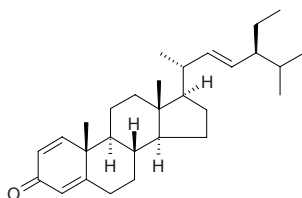
**20360 7,22,25-Stigmastatrienol**

$C_{29}H_{46}O$  (410.69). Source: GUA LOU *Trichosanthes kirilowii*. Ref: 2.

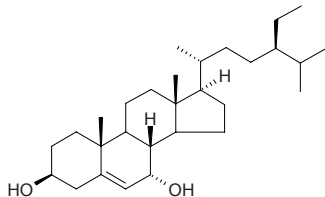


**20361 (22E,24S)-Stigmasta-1,4,22-trien-3-one**

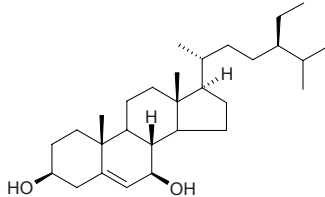
$C_{29}H_{44}O$  (408.67). Colorless needles (MeOH), mp 100~101°C,  $[\alpha]_D^{27} = +25.5^\circ$  ( $c = 0.03$ ,  $CHCl_3$ ). **Pharm:** Platelet aggregation inhibitor (washed rabbit platelets, 100 $\mu$ g/mL, 100 $\mu$ mol/L AA-induced, AggRt = 1.5%, control 50 $\mu$ mol/L Aspirin, AggRt = 100%; 10 $\mu$ g/mL collagen-induced, AggRt = 0.4%, 100 $\mu$ mol/L Aspirin, AggRt = 4.9%; 0.1U/mL thrombin-induced, AggRt = 4.2%, 100 $\mu$ mol/L Aspirin, AggRt = 1.7%; 2ng/mL PAF-induced, AggRt = 3.4%, 100 $\mu$ mol/L Aspirin, AggRt = 2.1%). **Source:** SAN QI CAO *Gynura segetum* [Syn. *Gynura japonica*] (rhizome). **Ref:** 5427.

**20362 Stigmast-5-ene-3 $\beta$ ,7 $\alpha$ -diol**

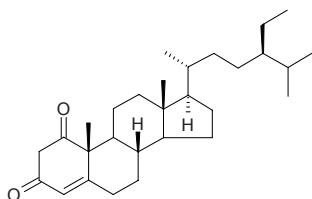
$C_{29}H_{50}O_2$  (430.72). **Pharm:** Cytotoxic ( $P_{388}$ ,  $ED_{50} = 31.31\mu$ g/mL, control Mithramycin,  $ED_{50} = 0.58\mu$ g/mL; A549,  $ED_{50} > 50\mu$ g/mL, Mithramycin,  $ED_{50} = 0.073\mu$ g/mL; HT29,  $ED_{50} = 28.87\mu$ g/mL, Mithramycin,  $ED_{50} = 0.076\mu$ g/mL). **Source:** MO ZHI JIAO GU CUI *Casearia membranacea* (stem). **Ref:** 5421.

**20363 Stigmast-5-ene-3 $\beta$ ,7 $\beta$ -diol**

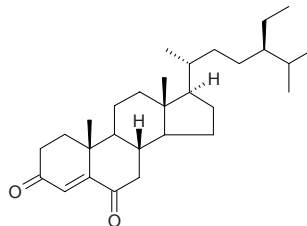
$C_{29}H_{50}O_2$  (430.72). **Pharm:** Cytotoxic ( $P_{388}$ ,  $ED_{50} = 6.39\mu$ g/mL, control Mithramycin,  $ED_{50} = 0.58\mu$ g/mL; A549,  $ED_{50} = 10.95\mu$ g/mL, Mithramycin,  $ED_{50} = 0.073\mu$ g/mL; HT29,  $ED_{50} = 8.09\mu$ g/mL, Mithramycin,  $ED_{50} = 0.076\mu$ g/mL). **Source:** MO ZHI JIAO GU CUI *Casearia membranacea* (stem). **Ref:** 5421.

**20364 Stigmast-4-ene-1,3-dione**

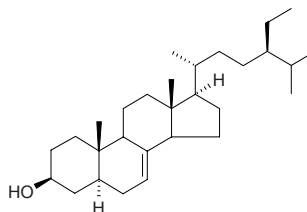
$C_{29}H_{46}O_2$  (426.69). White plate crystals, mp 144~146°C. **Source:** SHA REN *Amomum villosum*. **Ref:** 518.

**20365 Stigmast-4-ene-3,6-dione**

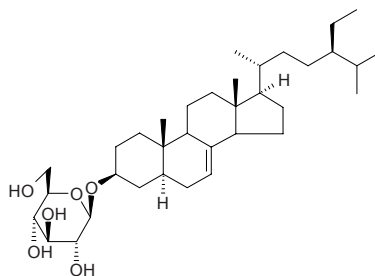
$C_{29}H_{46}O_2$  (426.69). Colorless amorphous crystals, mp 168~169°C,  $[\alpha]_D^{25} = -21.4^\circ$  ( $c = 0.15$ ,  $CHCl_3$ ). **Pharm:** Antimutagenic (*E. coli* PQ37, antigenotoxicity test, for mutagen MNNG shows 30% reduction of induction factor, for mutagen NQO, shows 25% reduction of induction factor). **Source:** ZAO JIA CI *Gleditsia sinensis* [Syn. *Gleditsia horrida*] (thorn). **Ref:** 4459.

**20366 5 $\alpha$ -Stigmast-7-en-3 $\beta$ -ol**

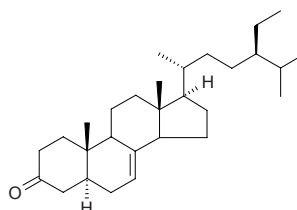
$C_{29}H_{50}O$  (414.72). mp 137~140°C. **Source:** XIA KU CAO *Prunella vulgaris*, YAO YONG PU GONG YING *Taraxacum officinale*. **Ref:** 6, 660, 2508.

**20367 7-Stigmastenol-3-O- $\beta$ -D-glucoside**

$C_{35}H_{60}O_6$  (576.86). **Source:** DANG SHEN *Codonopsis pilosula*, SHUANG BIAN GUA LOU *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*], TIAN HUA FEN *Trichosanthes kirilowii*, SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.0006%dw). **Ref:** 2, 660, 4702.

**20368 7-Stigmastenone-3**

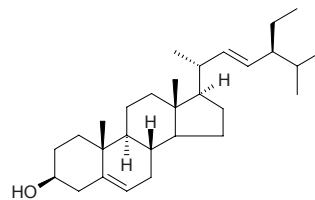
$C_{29}H_{48}O$  (412.71). **Source:** DANG SHEN *Codonopsis pilosula*, SHUANG BIAN GUA LOU *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*]. **Ref:** 2, 660.



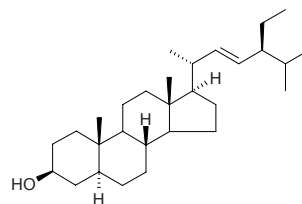
**20369 Stigmasterol**

(22E)-Stigmasta-5,22-dien-3 $\beta$ -ol [83-48-7] C<sub>29</sub>H<sub>48</sub>O (412.71). mp 170°C, [ $\alpha$ ]<sub>D</sub><sup>27</sup> = -42.9° (c = 1.2, CHCl<sub>3</sub>). **Pharm:** Antihypercholesterolemic (chick, reduces the level of cholesterol in serum); antimutagenic (*E. coli* PQ37, antigenotoxicity test, for mutagen MNNG shows 51.2% reduction of induction factor, for mutagen NQO, shows 64.2% reduction of induction factor)<sup>[4459]</sup>; cytotoxic inactive (A2780 ovarian cancer cell line, IC<sub>50</sub> = 26.3mg/mL)<sup>[5379]</sup>; cytotoxic inactive (*in vitro*, HeLa, Vero, K562, Raji, Wish, and Calu1 tumor cell lines, IC<sub>50</sub> > 100 $\mu$ mol/L)<sup>[3057]</sup>; antileishmanial (*Leishmania donovani* promastigotes, IC<sub>50</sub> > 1209 $\mu$ mol/L, control Pentamidine, IC<sub>50</sub> = 0.40 $\mu$ mol/L, amastigotes, IC<sub>50</sub> > 90 $\mu$ mol/L, control Pentostam, IC<sub>50</sub> = 9.75 $\mu$ g/mL)<sup>[5127]</sup>; antimalarial (*Plasmodium falciparum* K1, IC<sub>50</sub> > 1209 $\mu$ mol/L, control Chloroquine, IC<sub>50</sub> = 0.59 $\mu$ mol/L)<sup>[5127]</sup>; antitrypanosomal (*Trypanosoma brucei brucei* blood stream trypomastigotes, IC<sub>50</sub> > 30 $\mu$ mol/L, control Pentamidine, IC<sub>50</sub> = 0.00034 $\mu$ mol/L)<sup>[5127]</sup>; cytotoxic (KB cells, IC<sub>50</sub> > 1272 $\mu$ mol/L, control Pentamidine, IC<sub>50</sub> = 0.17 $\mu$ mol/L)<sup>[5127]</sup>; platelet aggregation inhibitor (washed rabbit platelets, 100 $\mu$ g/mL, 100 $\mu$ mol/L AA-induced, InRt = 0.5%, control 50 $\mu$ mol/L Aspirin, InRt = 100%; 10 $\mu$ g/mL collagen-induced, InRt = 1.7%, 100 $\mu$ mol/L Aspirin, InRt = 4.9%; 0.1U/mL Thrombin-induced, InRt = 4.6%, 100 $\mu$ mol/L Aspirin, InRt = 1.7%; 2ng/mL PAF-induced, InRt = 2.8%, 100 $\mu$ mol/L Aspirin, InRt = 2.1%)<sup>[5427]</sup>; antiviral (*in vitro*, Para3 Virus, IC<sub>50</sub> = 10.3 $\mu$ g/mL, TC<sub>50</sub> = 165 $\mu$ g/mL, TI = 3.6; control Ribavirin, IC<sub>50</sub> = 2.6 $\mu$ g/mL, TC<sub>50</sub> = 62.5 $\mu$ g/mL, TI = 24.0)<sup>[3089]</sup>. **Source:** AI YE *Artemisia argyi*, BAI FAN DOU *Phaseolus vulgaris*, BAI GUO *Ginkgo biloba*, BAI HE *Lilium brownii* var. *viridulum* [Syn. *Lilium brownii* var. *colchesteri*], BAI HUA SHE SHE CAO *Oldenlandia diffusa* [Syn. *Hedyotis diffusa*], BEI SHA SHEN *Glehnia littoralis* (root: mean content = 0.0178%)<sup>[5508]</sup>, BIAN DOU *Dolichos lablab*, BU GU ZHI *Psoralea corylifolia*, CANG ER *Xanthium sibiricum* [Syn. *Xanthium strumarium*], CHAI HU *Bupleurum chinense*, CHAO XIAN BAI TOU WENG *Pulsatilla cernua*, CHE QIAN *Plantago asiatica*, CHE SANG ZI YE *Dodonaea viscosa*, CHI BAN YAN HU SUO *Corydalis remota* [Syn. *Corydalis bulbosa* var. *typica*], CHUAN DANG SHEN *Codonopsis tangshen* (dried root: content = 0.0227%)<sup>[5508]</sup>, CU LIU GUO *Hippophae rhamnoides*, DA CHE QIAN *Plantago major*, DA JI<sup>(4)</sup> *Cirsium japonicum*, DA ZAO *Ziziphus jujuba*, DANG GUI *Angelica sinensis*, DANG SHEN *Codonopsis pilosula* (dried root: mean content = 0.0125%)<sup>[5508]</sup>, DONG FENG JU GEN *Atalantia buxifolia* [Syn. *Severinia buxifolia*] (root cortex), DU BIAN DOU *Physostigma venenosum*, E BU SHI CAO *Centipeda minima*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], GAN ZHE *Saccharum sinensis*, GOU QI ZI *Lycium chinense*, GU SUI BU *Drynaria fortunei*, GUA LOU *Trichosanthes kirilowii*, GUAN MU TONG *Aristolochia manshuriensis* (stem)<sup>[4706]</sup>, GUANG JING QIAN CAO *Rubia wallichiana* (stem), *Guarea rhopalocarpa* (leaf), HAI FENG TENG *Piper kadsura* [Syn. *Piper futokadsura*], HEI DA DOU *Glycine max*, HUANG HUA HAO *Artemisia annua*, HUANG HUA YUAN ZHI *Polygala arillata*, HUANG QIN *Scutellaria baicalensis*, HUI HUI SU *Perilla frutescens* var. *crispa*, HUI XIANG *Foeniculum vulgare*, JIA SUAN JIANG *Nicandra physaloides*, JIAN ZI SU YE *Perilla frutescens* var. *acuta* [Syn. *Perilla frutescens* var. *purpurascens*], JIAO GAN *Citrus tankan*, JIN YIN HUA *Lonicera japonica*, JING MI *Oryza sativa*, KAI KOU JIAN *Tupistra chinensis* (underground part)<sup>[4676]</sup>, KU DI DAN *Elephantopus scaber*, KU SHI LIAN *Caesalpinia minax* (seed)<sup>[3089]</sup>, KUAI JING GE

*Pueraria tuberosa*, LANG YU PI *Ulmus parvifolia*, LONG YAN YE *Euphoria longan* [Syn. *Dimocarpus longan*], LU BIAN QING *Clerodendron cyrtophyllum*, LU ZHU GEN *Arundo donax*, LUO HUA SHENG *Arachis hypogaea*, MAI DONG *Ophiopogon japonicus*, MAN JIU JIE *Psychotria serpens*, MANG QI GU *Dicranopteris pedata* [Syn. *Polypodium pedatum*; *Dicranopteris dichotoma*], MIAN MAO MA DOU LING *Aristolochia mollissima* (dried root and stem: yield = 0.0031%<sup>[3026]</sup>), MING DANG SHEN *Changium smyrnioides*, MU SHU DI SHANG BU FEN *Manihot esculenta*, MU TONG *Akebia quinata*, MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*], PU DI WU GONG *Lycopodium cernuum*, QING FENG TENG *Sinomenium acutum*, QIU HUA DANG SHEN *Codonopsis subglobosa* (dried root: content = 0.0283%<sup>[5508]</sup>), REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SAN QI CAO *Gynura segetum* [Syn. *Gynura japonica*] (rhizome), SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], SAN ZUAN FENG *Lindera obtusiloba*, SHAN GAN CAO *Mussaenda pubescens*, SHAN WO JU *Lactuca indica*, SHAN YAO *Dioscorea batatas* [Syn. *Dioscorea opposita*], SHENG HONG JI *Ageratum conyzoides*, SHUI TUAN HUA *Adina pilulifera* [Syn. *Cephalanthus pilulifera*], SHUI XIAN CAO *Hedyotis corymbosa* [Syn. *Oldenlandia corymbosa*], SU HUA DANG SHEN *Codonopsis pilosula* var. *modesta* [Syn. *Codonopsis modesta*] (dried root: mean content = 0.0176%<sup>[5508]</sup>), TAI WAN FU RONG *Hibiscus taiwanensis*, TAI WAN GE NA XIANG *Goniothalamus amuyon* (fresh stem and leaf)<sup>[4686]</sup>, TAI WAN JIN GU CAO *Ajuga taiwanensis* (whole herb), TAI WAN PU GONG YING *Taraxacum formosanum* (fresh root), TIAN MING JING *Carpesium abrotanoides*, WU GENG WU JIA PI *Acanthopanax sessiliflorus*, XI XIAN *Siegesbeckia orientalis*, XIANG PI MU *Alstonia scholaris*, XIANG SI ZI *Abrus precatorius*, XIAO HONG SHEN *Rubia yunnanensis* (root)<sup>[4646]</sup>, YANG JIAO TENG *Morinda umbellata*, YANG SHI CAO *Achillea millefolium*, YAO YONG PU GONG YING *Taraxacum officinale*, YE ZI RANG *Cocos nucifera*, YI HE GUO *Ventilago leiocarpa* (stem)<sup>[3057]</sup>, YI MI *Coix lacryma-jobi*, YING HE *Scleropyrum wallichianum* (twig), YING SU *Papaver somniferum*, YU SHU SHU *Zea mays*, YU SHU *Ulmus pumila*, YUN SHI *Caesalpinia decapetala* (leaf), ZAN BI XI BA DOU *Croton zambesicus* (leaf), ZAO JIA *Gleditsia sinensis* [Syn. *Gleditsia horrida*], ZHU YE LAN *Arundina chinensis*, occurs in many plants. Ref: 2, 345, 372, 511, 658, 660, 2529, 3026, 3057, 3075, 3089, 3807, 4369, 4456, 4459, 4483, 4488, 4520, 4646, 4676, 4686, 4706, 5127, 5379, 5427, 5501, 5508.

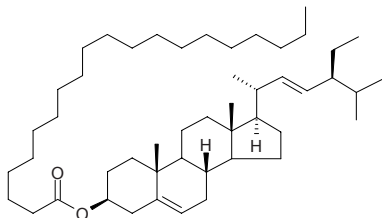
**20370 22-Stigmasterol**

C<sub>29</sub>H<sub>50</sub>O (414.72). mp 158–159°C. **Source:** CHAI HU *Bupleurum chinense*. Ref: 6.

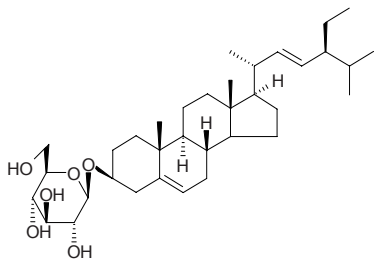


**20371 Stigmasterol arachidate**

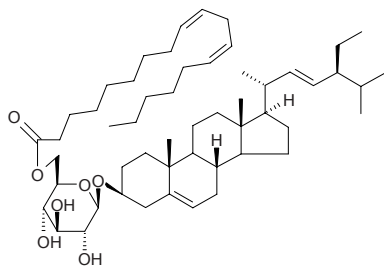
$C_{49}H_{86}O_2$  (707.23). White lamellar crystals, (*n*-hexane) mp 96–98°C. Source: KUI BAN ER YE TAI *Frullania muscicola*. Ref: 2117.

**20372 Stigmasterol-β-D-glucoside**

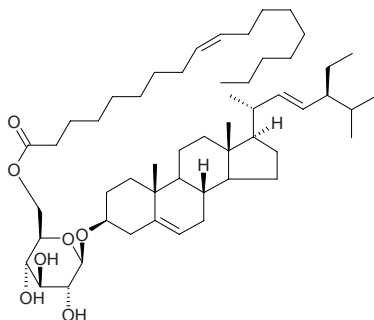
Stigmasterol 3-*O*-β-*D*-glucoside  $C_{35}H_{58}O_6$  (574.85). Source: BIAN ZHONG CHANG YE AN LUO *Polyalthia longifolia* var. *pendula*, DANG SHEN *Codonopsis pilosula*, DANG GUI *Angelica sinensis*, HUANG HUA YUAN ZHI *Polygala arillata*, MANG QI GU *Dicranopteris pedata* [Syn. *Polypodium pedatum*; *Dicranopteris dichotoma*], SAN QI HUA LEI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*] (flower bud: yield = 0.0047%<sup>[4702]</sup>), SHUI LIU DOU *Pongamia pinnata* (stem cortex: yield = 0.0013%<sup>[4721]</sup>). Ref: 2, 345, 4702, 4721, 5386.

**20373 Stigmasterol-3-(6-linoleoyl)glucopyranoside**

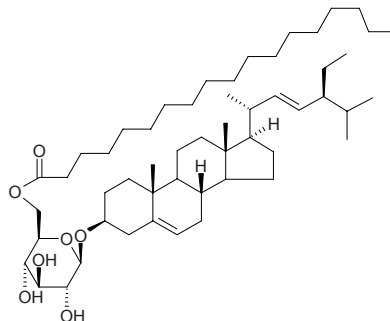
$C_{53}H_{88}O_7$  (837.29). Source: REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 660.

**20374 Stigmasterol-3-(6-oleoyl)glucopyranoside**

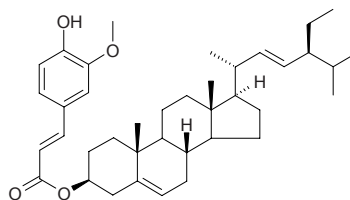
$C_{53}H_{90}O_7$  (839.30). Source: REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 660.

**20375 Stigmasterol-3-(6-stearoyl)glucopyranoside**

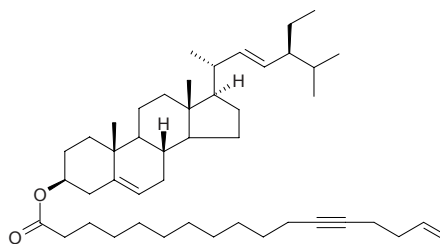
$C_{53}H_{92}O_7$  (841.32). Source: REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 660.

**20376 Stigmasteryl ferulate**

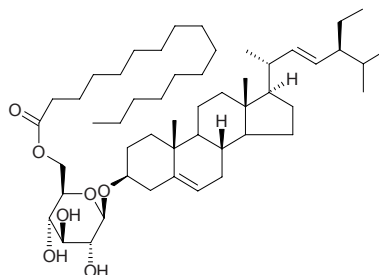
$C_{39}H_{56}O_4$  (588.88). Source: MI PI KANG *Oryza sativa*. Ref: 6.

**20377 Stigmasteryl-3-O-scleropyrate**

$C_{46}H_{74}O_2$  (659.10). Amorphous. Pharm: Antitubercular inactive (*Mycobacterium tuberculosis* H<sub>37</sub>Ra); antiparasitic inactive (parasite *Plasmodium falciparum* K1 multidrug-resistant strain). Source: YING HE *Scleropyrum wallichianum* (twig). Ref: 4520.

**20378 Stigmast-3-O-β-D-glucopyranosyl-6-hexadecanoate**

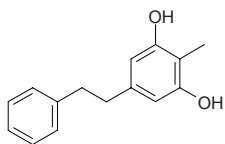
$C_{51}H_{88}O_7$  (813.27). White amorphous powder (methanol). Source: JI YE QIU HAI TANG *Begonia limprichtii*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 431, 660.



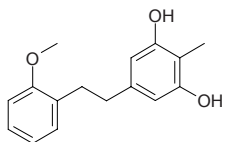


**20379 Stilbostemin B**

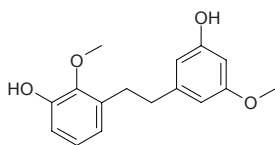
$C_{15}H_{16}O_2$  (228.29). Source: *Stemona cf. pierrei* (underground parts). Ref: 3751.

**20380 Stilbostemin D**

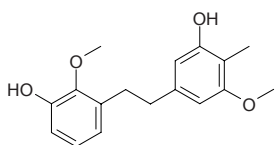
$C_{16}H_{18}O_3$  (256.32). Source: *Stemona cf. pierrei* (underground parts). Ref: 3751.

**20381 Stilbostemin E**

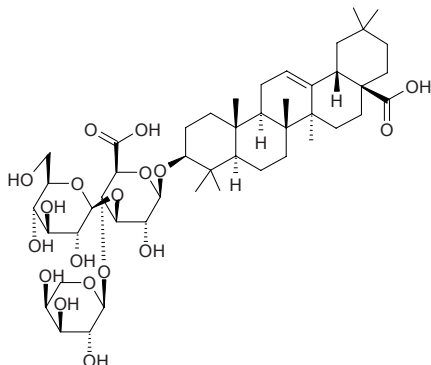
$C_{16}H_{18}O_4$  (274.32). Source: *Stemona cf. pierrei* (underground parts). Ref: 3751.

**20382 Stilbostemin G**

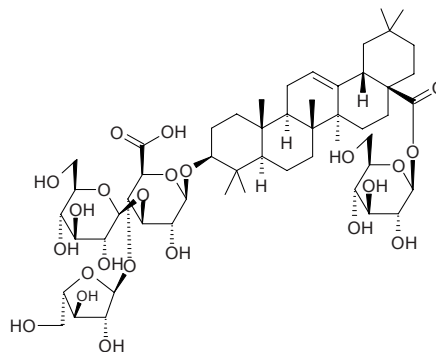
1-(3-Hydroxy-5-methoxy-4-methylphenyl)-2-(3-hydroxy-2-methoxyphenyl)-ethane  $C_{17}H_{20}O_4$  (288.35). Pharm: Antifungal (*Pyricularia grisea*,  $EC_{50} > 200\mu\text{g/mL}$ ,  $EC_{90} > 200\mu\text{g/mL}$ ; *Cladosporium herbarum*,  $EC_{50} = 71\mu\text{g/mL}$ ,  $EC_{90} > 200\mu\text{g/mL}$ ; *Fusarium avenaceum*,  $EC_{50} = 48\mu\text{g/mL}$ ,  $EC_{90} > 200\mu\text{g/mL}$ ; *Alternaria citri*,  $EC_{50} = 144\mu\text{g/mL}$ ,  $EC_{90} > 200\mu\text{g/mL}$ ; *Botrytis cinerea*,  $EC_{50} > 200\mu\text{g/mL}$ ,  $EC_{90} > 200\mu\text{g/mL}$ ). Source: *Stemona cf. pierrei* (underground parts). Ref: 3751.

**20383 Stipuleanoside R<sub>1</sub>**

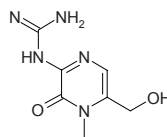
Tatasaponin I [96627-79-1]  $C_{47}H_{74}O_{18}$  (927.10). White amorphous powder, mp 223–225°C; 285–290°C. Pharm: Hypoglycemic (rat, 100mg/mL orl); inhibits alcohol in blood (rat, orl, 100mg/kg). Source: LIAO DONG CONG MU *Aralia elata*. Ref: 900.

**20384 Stipuleanoside R<sub>2</sub>**

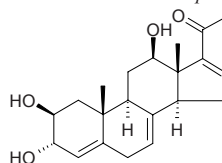
[96627-72-4]  $C_{53}H_{84}O_{23}$  (1089.25). White powder crystals, mp 260–263°C (dec) (methanol–acetone),  $[\alpha]_D^{23.8} = -17.92^\circ$  ( $c = 1$ , methanol). Pharm: Inhibits alcohol in blood (rat orl, 100mg/kg). Source: LIAO DONG CONG MU *Aralia elata*. Ref: 900.

**20385 Stizolamine**

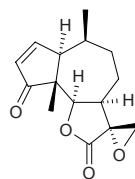
$C_7H_{11}N_5O_2$  (197.20). Source: HUI JIAO *Sophora japonica*, YE GUAN MEN *Lespedeza cuneata*. Ref: 660.

**20386 Stizophyllin**

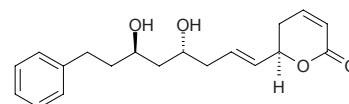
2 $\beta$ ,3 $\alpha$ ,12 $\beta$ -Trihydroxypregna-4,7,16-trien-20-one  $C_{21}H_{28}O_4$  (344.45). Amorphous yellowish solid,  $[\alpha]_D^{20} = +79.1^\circ$  ( $c = 0.58$ ,  $CHCl_3$ ). Source: LU SHENG GE JUN *Thelephora terrestris*. Ref: 4446.

**20387 Stramonin B**

$C_{15}H_{18}O_4$  (262.31). Pharm: Antineoplastic; cytotoxic. Source: family Asteraceae spp. Ref: 658.

**20388 Strictifolione**

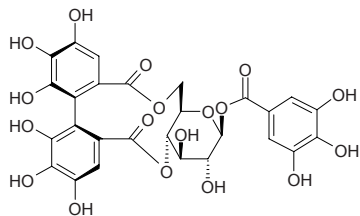
$C_{19}H_{24}O_4$  (316.40). Fine colorless needles, mp 119–121°C,  $[\alpha]_D^{24} = +81.5^\circ$  ( $c = 0.52$ ,  $CHCl_3$ ). Source: ZHI LI YE HOU KE GUI *Cryptocarya strictifolia* (stem cortex). Ref: 5082.



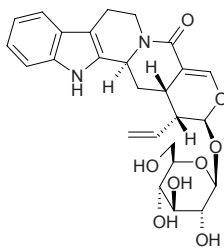


**20389 Strictinin**

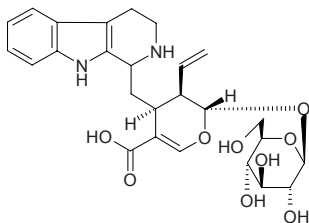
[517-46-4]  $C_{27}H_{22}O_{18}$  (634.46). white-like amorphous powder,  $[\alpha]_D = -3^\circ$  ( $c = 0.4$ , methanol). **Pharm:** Cytotoxic (malanotic carcinoma RPMI-7951,  $ED_{50} = 4.86\mu\text{g/mL}$ ); inhibits lipolysis (rat fat cells, induced by adrenalin); DNA topoisomerase II inhibitor (*in vitro*,  $IC_{100} = 0.5\mu\text{mol/L}$ ); HIV-1 reverse transcriptase inhibitor ( $IC_{50} = 0.087\mu\text{mol/L}$ ); antioxidant (SOD-like activity,  $EC_{50} = 48.9\mu\text{mol/L}$ , control Gallic acid,  $EC_{50} = 31.7\mu\text{mol/L}$ , *L*-Ascorbic acid,  $EC_{50} = 34.6\mu\text{mol/L}$ )<sup>[3408]</sup>; antioxidant (DPPH scavenger,  $EC_{50} = 26.8\mu\text{mol/L}$ , control Gallic acid,  $EC_{50} = 5.88\mu\text{mol/L}$ , *L*-Ascorbic acid,  $EC_{50} = 6.25\mu\text{mol/L}$ )<sup>[3408]</sup>. **Source:** BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (fresh fruit: yield = 0.0076%fw)<sup>[4695]</sup>, BAN LI *Castanea mollissima* (leaf), CHI YANG *Alnus japonica*, DING XIANG *Syzygium aromaticum* [Syn. *Eugenia caryophyllata*], FAN SHI LIU YE *Psidium guajava*, HU TAO REN *Juglans regia*, HUA XIANG SHU YE *Platycarya strobilacea*, MEI GUI HUA *Rosa rugosa*. **Ref:** 660, 900, 3408, 4695.

**20390 Strictosamide**

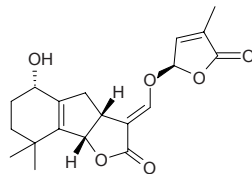
$C_{26}H_{30}N_2O_8$  (498.54). Yellowish amorphous solid, mp 176–177°C (MeOH),  $[\alpha]_D^{22} = -56.3^\circ$  ( $c = 0.15$ , MeOH). **Pharm:** Antibacterial (*in vitro*: *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus coli*, *Bacillus diphtheriae*, *Streptococcus* sp., *Salmonella* sp., *Bacillus proteus*, *Aspergillus niger*, *Bacillus lactis*, *Klebsiella* sp.); antileishmanial. **Source:** DONG FANG WU TAN *Nauclea orientalis* (bark)<sup>[3074]</sup>, GOU TENG *Uncaria rhynchophylla* [Syn. *Nauclea rhynchophylla*], JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig: yield = 0.00024%dw)<sup>[4723]</sup>, KUAN YE WU TAN *Nauclea latifolia* (bark and wood: yield = 0.15%), LIU QIU SHE GEN CAO *Ophiorrhiza liukiensis* (whole herb). **Ref:** 2, 2178, 3074, 4303, 4527, 4723.

**20391 Strictosidinic acid**

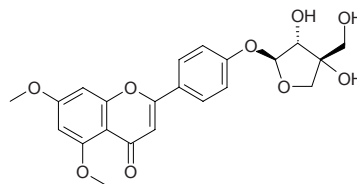
$C_{26}H_{32}N_2O_9$  (516.55). **Source:** XI SHU *Camptotheca acuminata*. **Ref:** 4097.

**20392 Strigol**

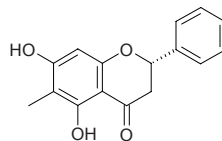
$C_{19}H_{22}O_6$  (346.39). **Pharm:** Promotes germination (seeds of *Striga lutea*). **Source:** LU DI MIAN *Gossypium hirsutum* [Syn. *Gossypium mexicanum*]. **Ref:** 658.

**20393 Strobilanthin**

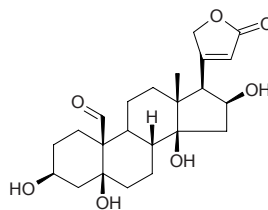
5,7-Dimethoxy-4'-hydroxyflavone-4'-*O*-apioside  $C_{22}H_{22}O_9$  (430.42). Yellowish crystalline powder, mp 214–216°C. **Source:** HONG ZE LAN *Strobilanthes japonicus* [Syn. *Championella japonica*]. **Ref:** 654.

**20394 (–)-Strobopinin**

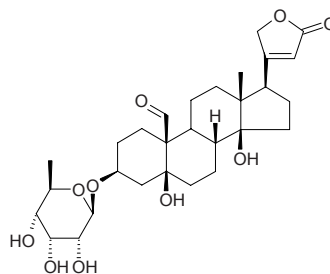
6-Methylpinocembrin  $C_{16}H_{14}O_4$  (270.29).  $[\alpha]_D^{25} = -83.3^\circ$  ( $c = 0.42$ , acetone). **Pharm:** Inhibits cell proliferation of PBMC (activated by phytohemagglutinin (PHA),  $IC_{50} = 36.3\mu\text{mol/L}$ , inhibitory mechanism may involve the blocking of IL-2 and IFN- $\gamma$  production). **Source:** YANG PU TAO YE *Syzygium samarangense*. **Ref:** 4100.

**20395 Strophadogenin**

[808-18-4]  $C_{23}H_{32}O_7$  (420.51). mp 233–237°C,  $[\alpha]_D = +50.1^\circ$ . **Source:** HEI GANG LIU *Periploca nigrescens*. **Ref:** 1521, 2498.

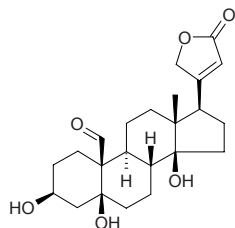
**20396 Strophalloside**

$C_{29}H_{42}O_{10}$  (550.65). **Source:** JIAN XUE FENG HOU *Antiaris toxicaria* [Syn. *Ambora toxicaria*]. **Ref:** 660.

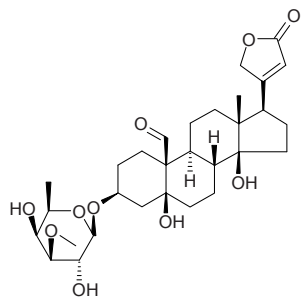


**20397 Strophanthidin**

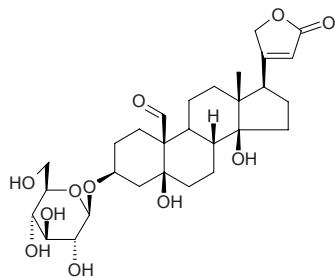
Apocynarin [66-28-4]  $C_{23}H_{32}O_6$  (404.51). Crystals,  $+2H_2O$  ( $H_2O$ ), mp 169~170°C,  $[\alpha]_D^{25} = +43.1^\circ$  (MeOH); mp 235°C (anhydride). **Pharm:** Cytotoxic (*in vitro*, HL-60  $IC_{50} > 10\mu g/mL$ ; PC-3M-1E8  $IC_{50} = 4.48\mu g/mL$ ; BGC823  $IC_{50} = 0.0225\mu g/mL$ ; MDA-MB-435  $IC_{50} = 0.142\mu g/mL$ ; Bel7402  $IC_{50} = 2.34\mu g/mL$ ; HeLa  $IC_{50} = 0.541\mu g/mL$ )<sup>[2548]</sup>. **Source:** BO NIANG HAO *Descurainia Sophia* (seeds), KANG PI DU MAO XUAN HUA *Strophanthus kombe*, HEI GANG LIU *Periploca nigrescens*, LUO BU MA *Apocynum venetum*, GUI ZHU TANG JIE *Erysimum cheiranthoides*, FU SHOU CAO *Adonis amurensis*. **Ref:** 5, 1521, 2498, 2548.

**20398 Strophanthidin- $\beta$ -D-digitaloside**

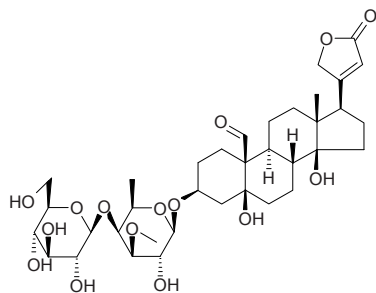
$C_{30}H_{44}O_{10}$  (564.68). **Source:** LUO BU MA *Apocynum venetum*. **Ref:** 2.

**20399 Strophanthidin-glucoside**

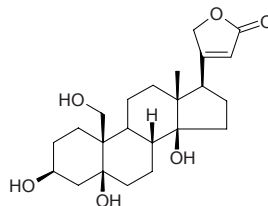
$C_{29}H_{42}O_{11}$  (566.65). mp 163~168°C. **Source:** HEI GANG LIU *Periploca nigrescens*. **Ref:** 1521, 2498.

**20400 Strophanthidin- $\beta$ -D-glucosyl-(1 $\rightarrow$ 4)- $\beta$ -D-digitaloside**

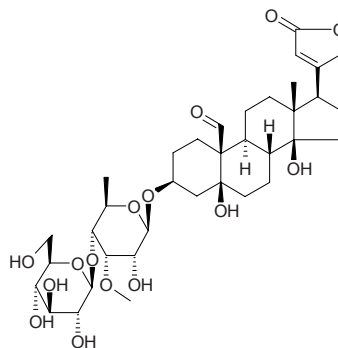
$C_{36}H_{54}O_{15}$  (726.82). **Source:** LUO BU MA *Apocynum venetum*. **Ref:** 2.

**20401 Strophanthidol**

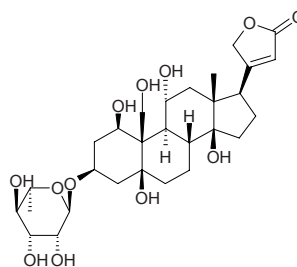
$C_{23}H_{34}O_6$  (406.52). **Source:** HEI GANG LIU *Periploca nigrescens*. **Ref:** 1521, 2498.

**20402 Strophanthin**

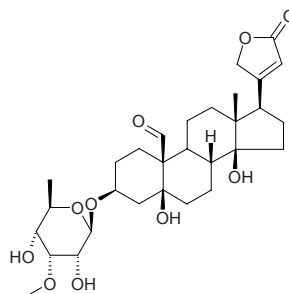
$C_{36}H_{54}O_{15}$  (726.82). mp 195°C. **Source:** FU SHOU CAO *Adonis amurensis*. **Ref:** 6.

**20403 Strophanthin G**

**Ouabain**  $C_{29}H_{44}O_{12}$  (584.67). **Pharm:** Cardiotonic; used in treatment of acute heart failure with edema of lungs and cardiogenic shock; toxin (vertebrate); LD<sub>50</sub> (rat, iv) = 14mg/kg, (cat, iv) = 0.11g/kg, (male Swiss webster mus, ip) = 6.5mg/kg. **Source:** XUAN HUA YANG JIAO AO *Strophanthus gratus*, YANG JIAO AO ZI *Strophanthus divaricatus*. **Ref:** 658, 661, 1395.

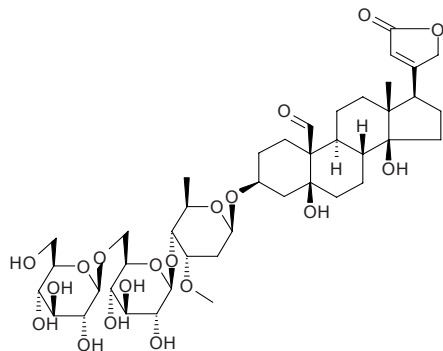
**20404 Strophanthojavoside**

$C_{30}H_{40}O_{10}$  (564.68). **Source:** JIAN XUE FENG HOU *Antiaris toxicaria* [Syn. *Ambora toxicaria*]. **Ref:** 660.

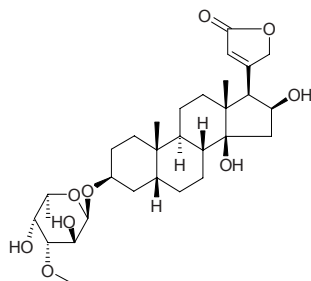


**20405 k-Strophantylside**

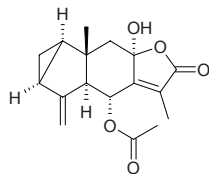
$C_{42}H_{64}O_{19}$  (872.97). mp 199~200°C. **Pharm:** Cardiac glycoside (fast-acting); LD<sub>50</sub> (rat, iv) = 15mg/kg. **Source:** FU SHOU CAO *Adonis amurensis* (root: content = 0.26%), KANG PI DU MAO XUAN HUA *Strophanthus kombe*, YANG JIAO AO ZI *Strophanthus divaricatus*. **Ref:** 4, 5508.

**20406 Strosposide**

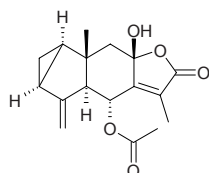
[595-21-1]  $C_{30}H_{46}O_9$  (550.70). mp 246~250°C. **Source:** JIA ZHU TAO *Nerium indicum*, MAO DI HUANG *Digitalis purpurea* (dried leaf: content = 0.002%)<sup>[5508]</sup>. **Ref:** 6, 5508.

**20407 Strychnistenolide 6-O-acetate A**

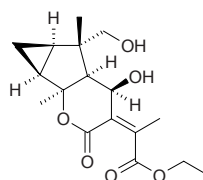
$C_{17}H_{20}O_5$  (304.35). **Pharm:** Anti-HIV-1 inactive (HIV-1 IN inhibitor, IC<sub>50</sub> > 100μmol/L, positive control Suramin, IC<sub>50</sub> = 2.4μmol/L). **Source:** DING HU DIAO ZHANG *Lindera chunii* (root). **Ref:** 4224.

**20408 Strychnistenolide 6-O-acetate B**

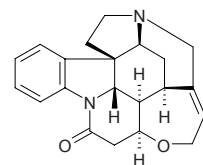
$C_{17}H_{20}O_5$  (304.35). **Pharm:** Anti-HIV-1 inactive (HIV-1 IN inhibitor, IC<sub>50</sub> > 100μmol/L, positive control Suramin, IC<sub>50</sub> = 2.4μmol/L). **Source:** DING HU DIAO ZHANG *Lindera chunii* (root). **Ref:** 4224.

**20409 Strychnilactone**

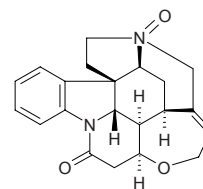
$C_{17}H_{24}O_6$  (324.38). Colorless rods (CHCl<sub>3</sub>-MeOH), mp 181~182°C,  $[\alpha]_D^{20} = -267.6^\circ$  ( $c = 0.2$ , MeOH). **Source:** WU YAO *Lindera strychnifolia* [Syn. *Lindera aggregata*] (root: yield = 0.00059%). **Ref:** 3041.

**20410 Strychnine**

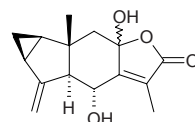
(-)-Strychnine; Strychnidin-10-one [57-24-9]  $C_{21}H_{22}N_2O_2$  (334.42). Colorless cubes (chloroform-ether), mp 286~288°C, bp 270°C/5mmHg,  $[\alpha]_D^{18} = -104.3^\circ$  ( $c = 0.254$ , ethanol),  $[\alpha]_D^{25} = -139^\circ$  ( $c = 0.4$ , chloroform), soluble in chloroform, slightly soluble in ethanol, methanol, benzene, ether, very slightly soluble in peridine<sup>[5507]</sup>. **Pharm:** Stimulant; LD<sub>50</sub> (mus, orl) = 5.0mg/kg, (mus, orl, nitrate) = 3.0mg/kg, (mus, sc, nitrate) = 0.83mg/kg, (mus, im, nitrate) = 0.63mg/kg, (mus, ip, nitrate) = 1.46mg/kg, (mus, iv, nitrate) = 0.5mg/kg, (rat, orl, nitrate) = 9.75mg/kg, (rat, im, nitrate) = 1.40mg/kg, (rat, ip, nitrate) = 1.67mg/kg, (rat, iv, nitrate) = 0.58mg/kg. **Source:** LI JI SAN CHU MAI MA QIAN *Strychnos triplinervia*, LV SONG GUO *Strychnos ignatii* (discovered by P. J. Pelletier and J. B. Caventou from seed of the plant in 1818)<sup>[5507]</sup>, MA QIAN ZI *Strychnos nux-vomica* (dried ripe seed: mean content = 3.67%)<sup>[5508]</sup>, MAO ZHU MA QIAN *Strychnos nitida*. **Ref:** 4, 542, 576, 658, 5501, 5507, 5508.

**20411 Strychnine N-oxide**

$C_{21}H_{22}N_2O_3$  (350.42). **Source:** MA QIAN ZI *Strychnos nux-vomica*. **Ref:** 542.

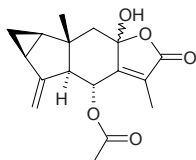
**20412 Strychnistenolide**

$C_{13}H_{18}O_4$  (262.31). Colorless needles (*n*-hexane-EtOAc), mp 185~186°C,  $[\alpha]_D^{20} = +36.3^\circ$  ( $c = 0.3$ , MeOH). **Source:** WU YAO *Lindera strychnifolia* [Syn. *Lindera aggregata*] (root: yield = 0.014%). **Ref:** 3041.

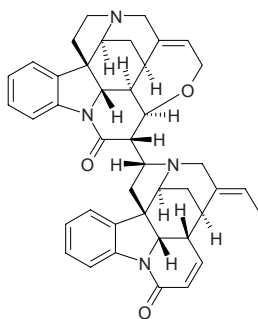


**20413 Strychnistenolide 6-O-acetate**

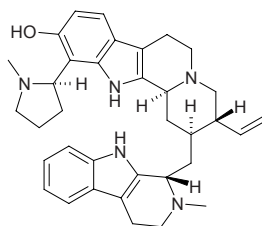
$C_{17}H_{20}O_5$  (304.35). Colorless amorphous powder (*n*-hexane–EtOAc). Source: WU YAO *Lindera strychnifolia* [Syn. *Lindera aggregata*] (root; yield = 0.0035%). Ref: 3041.

**20414 Strychnogucine C**

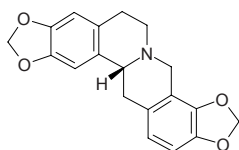
$C_{42}H_{42}N_4O_3$  (650.83). White-yellowish amorphous powder. Pharm: Antimalarial (antiplasmodial). Source: ZHONG FEI MA QIAN *Strychnos icaja*. Ref: 2018.

**20415 Strychnopentamine**

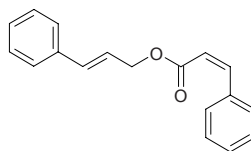
$C_{35}H_{43}N_5O$  (549.77). Pharm: Antiplasmodial (chloroquine-sensitive line:  $IC_{50} = (117 \pm 33) \text{ nmol/L}$ ,  $IC_{90} = 443 \text{ nmol/L}$ , control Quinine,  $IC_{50} = (269 \pm 6) \text{ nmol/L}$ ,  $IC_{90} = 1910 \text{ nmol/L}$ ; chloroquine-resistant line:  $IC_{50} = (145 \pm 20) \text{ nmol/L}$ ,  $IC_{90} = 2982 \text{ nmol/L}$ , Quinine,  $IC_{50} = (413 \pm 11) \text{ nmol/L}$ ,  $IC_{90} = 1720 \text{ nmol/L}$ ). Source: DONG FEI MA QIAN *Strychnos usambarensis* (leaf). Ref: 4925.

**20416 Stylopine**

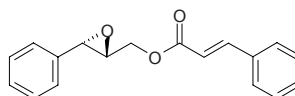
$C_{19}H_{17}NO_4$  (323.35). mp (–) 204°C; (±) 222–223°C. Source: BAI QU CAI *Chelidonium majus*, HE QING HUA *Hylomecon japonica*, JU HUA HUANG LIAN *Corydalis pallida*, YAN HU SUO *Corydalis yanhusuo* [Syn. *Corydalis turtschaninovii* f. *Yanhusuo*]. Ref: 6.

**20417 Styrcin**

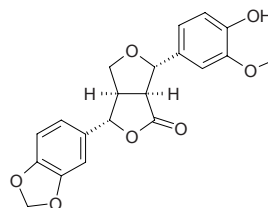
Cinnamoyl cinnamate  $C_{18}H_{16}O_2$  (264.33). Source: AN XI XIANG *Styrax benzoin*, LU LU TONG *Liquidambar formosana* [Syn. *Liquidambar taiwaniana*], SU HE XIANG *Liquidambar orientalis*. Ref: 660.

**20418 Styrcin epoxide**

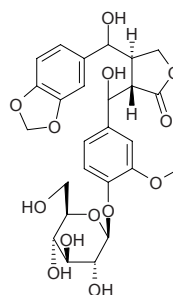
$C_{18}H_{16}O_3$  (280.33). Source: LU LU TONG *Liquidambar formosana* [Syn. *Liquidambar taiwaniana*]. Ref: 660.

**20419 Styrcin**

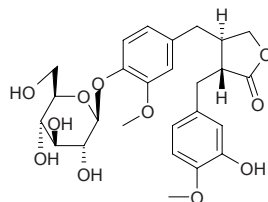
$C_{20}H_{18}O_7$  (370.36). Pharm: Antineoplastic. Source: YAO YONG AN XI XIANG *Styrax officinalis*. Ref: 658.

**20420 Styrcin japonoside A**

7,7'-Dihydroxyburshehnerin 4- $\beta$ -D-glucoside  $C_{26}H_{30}O_{13}$  (550.52). Colorless crystals, mp 156.8–156.9°C (dec),  $[\alpha]_D^{25} = +0.25^\circ$  ( $c = 0.5$ , MeOH). Source: RI BEN AN XI XIANG JING PI *Styrax japonica*. Ref: 2546.

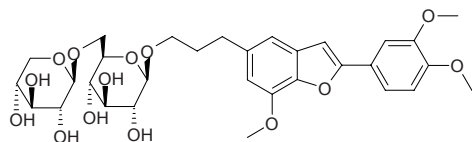
**20421 Styrcin japonoside B**

$C_{26}H_{32}O_{11}$  (520.54). Colorless crystals, mp 84–86°C (dec),  $[\alpha]_D^{25} = -5.09^\circ$  ( $c = 0.3$ , MeOH). Pharm: Matrix metalloproteinase-1 (MMP-1) inhibitor; prevents UV-induced changes in MMP-1 expression. Source: RI BEN AN XI XIANG JING PI *Styrax japonica*. Ref: 2546.

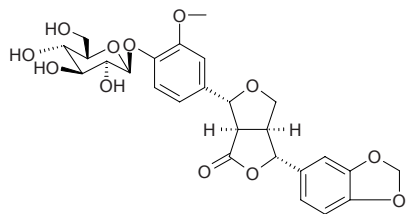


**20422 Styxalignolide A**

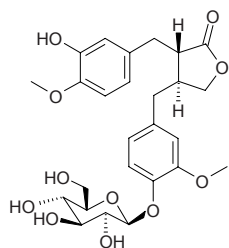
5-(3''-Hydroxypropyl)-7-methoxy-2-(3',4'-dimethoxyphenyl)-benzofuran 3''-O- $\beta$ -D-xylopyranoside-(1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside C<sub>31</sub>H<sub>40</sub>O<sub>14</sub> (636.66). White amorphous powder,  $[\alpha]_D^{22} = -53.7^\circ$  ( $c = 0.8$ , MeOH). **Pharm:** Anticomplement activity (IC<sub>50</sub> = 123 $\mu$ mol/L, ligand only inactive, control Rosmarinic acid, IC<sub>50</sub> = 182 $\mu$ mol/L). **Source:** RI BEN AN XI XIANG JING PI *Styrax japonica*. **Ref:** 4096.

**20423 Styxalignolide B**

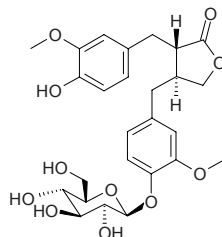
2 $\alpha$ -(4'-Hydroxy-3'-methoxyphenyl)-6 $\alpha$ -(3'',4''-methylenedioxyphenyl)-8-oxo-3,7-dioxabicyclo[3.3.0]octane 4'-O- $\beta$ -D-glucopyranoside C<sub>26</sub>H<sub>28</sub>O<sub>12</sub> (532.51). Brown plates (MeOH), mp 111~113°C,  $[\alpha]_D^{23} = -96.8^\circ$  ( $c = 0.31$ , MeOH). **Pharm:** Antioxidant inactive (*in vitro*, DPPH radical scavenger, IC<sub>50</sub> > 500 $\mu$ mol/L; control Vitamin E, IC<sub>50</sub> = 20.1 $\mu$ mol/L). **Source:** RI BEN AN XI XIANG JING PI *Styrax japonica* (stem cortex: yield = 0.00017%dw). **Ref:** 4787.

**20424 Styxalignolide C**

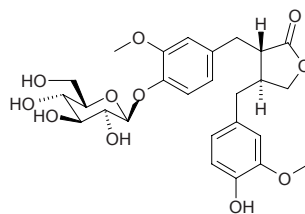
(2*S*,3*S*)-2 $\alpha$ -(3''-Hydroxy-4''-methoxybenzyl)-3 $\beta$ -(4'-hydroxy-3'-methoxybenzyl)- $\gamma$ -butyrolactone 4'-O- $\beta$ -D-glucopyranoside C<sub>26</sub>H<sub>32</sub>O<sub>11</sub> (520.54). Colorless plates (MeOH), mp 106~108°C,  $[\alpha]_D^{23} = -8.7^\circ$  ( $c = 0.23$ , MeOH). **Pharm:** Antioxidant (*in vitro*, DPPH radical scavenger, IC<sub>50</sub> = 380 $\mu$ mol/L; control Vitamin E, IC<sub>50</sub> = 20.1 $\mu$ mol/L). **Source:** RI BEN AN XI XIANG JING PI *Styrax japonica* (stem cortex: yield = 0.0058%dw). **Ref:** 4787.

**20425 Styxalignolide D**

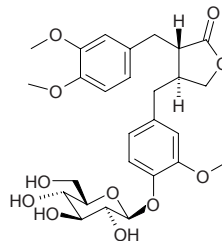
(2*S*,3*S*)-2 $\alpha$ -(4''-Hydroxy-3''-methoxybenzyl)-3 $\beta$ -(4'-hydroxy-3'-methoxybenzyl)- $\gamma$ -butyrolactone 4'-O- $\beta$ -D-glucopyranoside C<sub>26</sub>H<sub>32</sub>O<sub>11</sub> (520.54). Colorless plates (MeOH), mp 100~102°C,  $[\alpha]_D^{23} = -10.0^\circ$  ( $c = 0.28$ , MeOH). **Pharm:** Antioxidant (*in vitro*, DPPH radical scavenger, IC<sub>50</sub> = 278 $\mu$ mol/L; control Vitamin E, IC<sub>50</sub> = 20.1 $\mu$ mol/L). **Source:** RI BEN AN XI XIANG JING PI *Styrax japonica* (stem cortex: yield = 0.0028%dw). **Ref:** 4787.

**20426 Styxalignolide E**

(2*S*,3*S*)-2 $\alpha$ -(4''-Hydroxy-3''-methoxybenzyl)-3 $\beta$ -(4'-hydroxy-3'-methoxybenzyl)- $\gamma$ -butyrolactone 4'-O- $\beta$ -D-glucopyranoside C<sub>26</sub>H<sub>32</sub>O<sub>11</sub> (520.54). Colorless plates (MeOH), mp 102~104°C,  $[\alpha]_D^{23} = -10.4^\circ$  ( $c = 0.23$ , MeOH). **Pharm:** Antioxidant (*in vitro*, DPPH radical scavenger, IC<sub>50</sub> = 194 $\mu$ mol/L; control Vitamin E, IC<sub>50</sub> = 20.1 $\mu$ mol/L). **Source:** RI BEN AN XI XIANG JING PI *Styrax japonica* (stem cortex: yield = 0.0021%dw). **Ref:** 4787.

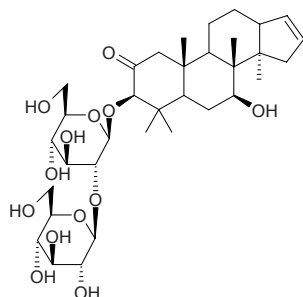
**20427 Styxalignolide F**

(2*S*,3*S*)-2 $\alpha$ -(3'',4''-Dimethoxybenzyl)-3 $\beta$ -(4'-hydroxy-3'-methoxybenzyl)- $\gamma$ -butyrolactone 4'-O- $\beta$ -D-glucopyranoside C<sub>27</sub>H<sub>34</sub>O<sub>11</sub> (534.57). Colorless plates (MeOH), mp 128~130°C,  $[\alpha]_D^{23} = -24.8^\circ$  ( $c = 0.25$ , MeOH). **Pharm:** Antioxidant inactive (*in vitro*, DPPH radical scavenger, IC<sub>50</sub> > 500 $\mu$ mol/L; control Vitamin E, IC<sub>50</sub> = 20.1 $\mu$ mol/L). **Source:** RI BEN AN XI XIANG JING PI *Styrax japonica* (stem cortex: yield = 0.0089%dw). **Ref:** 4787.

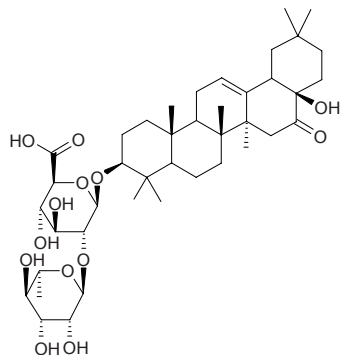


**20428 Styraxoside A**

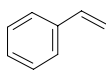
3 $\beta$ ,7 $\beta$ -Dihydroxy-4 $\alpha$ -4 $\beta$ ,8 $\beta$ ,10 $\beta$ ,14 $\alpha$ -pentamethyl-5 $\alpha$ -gon-16-en-2-one  
3-*O*-[ $\beta$ -D-glucopyranoside-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside] C<sub>34</sub>H<sub>54</sub>O<sub>13</sub> (670.80).  
White amorphous powder,  $[\alpha]_D^{26} = -11.0^\circ$  ( $c = 0.1$ , MeOH). **Pharm:** Anticomplement activity (IC<sub>50</sub> > 200 $\mu$ mol/L, inactive, control Rosmarinic acid, IC<sub>50</sub> = 182 $\mu$ mol/L). **Source:** RI BEN AN XI XIANG JING PI *Styrax japonica*. **Ref:** 4096.

**20429 Styraxoside B**

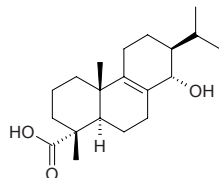
3 $\beta$ ,17 $\beta$ -Dihydroxy-28-norolean-12-en-16-one  
3-*O*-[ $\alpha$ -L-rhamopyranoside-(1 $\rightarrow$ 2)- $\beta$ -D-glucuronopyranoside] C<sub>41</sub>H<sub>64</sub>O<sub>13</sub>  
(764.96). White amorphous powder,  $[\alpha]_D^{26} = -43.7^\circ$  ( $c = 0.9$ , MeOH). **Pharm:** Anticomplement activity (IC<sub>50</sub> = 65 $\mu$ mol/L, ligand only inactive, control Rosmarinic acid, IC<sub>50</sub> = 182 $\mu$ mol/L). **Source:** RI BEN AN XI XIANG JING PI *Styrax japonica*. **Ref:** 4096.

**20430 Styrene**

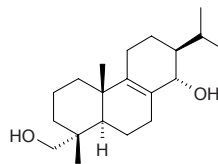
Phenylethylene [100-42-5] C<sub>8</sub>H<sub>8</sub> (104.15). mp -55°C, bp 145.0~145.8°C.  
**Source:** AN XI XIANG *Styrax benzoin*. **Ref:** 6.

**20431 Suaveolic acid**

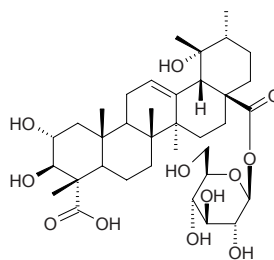
C<sub>20</sub>H<sub>32</sub>O<sub>3</sub> (320.48). mp 198~201°C (dec). **Source:** SHE BAI ZI *Hyptis suaveolens*. **Ref:** 6.

**20432 Suaveolol**

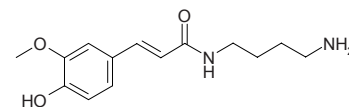
C<sub>20</sub>H<sub>34</sub>O<sub>2</sub> (306.49). mp 186~187°C. **Source:** SHE BAI ZI *Hyptis suaveolens*. **Ref:** 6.

**20433 Suavissimoside R<sub>1</sub>**

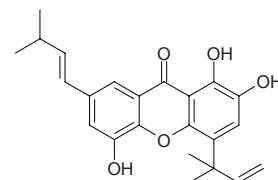
Suavissimoside F<sub>1</sub> C<sub>36</sub>H<sub>56</sub>O<sub>12</sub> (680.84). **Source:** DI YU *Sanguisorba officinalis*, RI BEN LUO SHI *Trachelospermum asiaticum*, TIAN CHA *Rubus suavissimus*. **Ref:** 660, 1521.

**20434 Subaphylline**

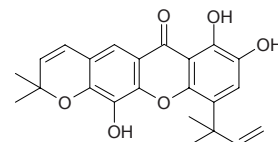
C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub> (264.33). **Pharm:** Antiviral; antihypertensive. **Source:** FENG LI *Ananas comosus*, PU TAO YOU *Citrus paradisi*, QIAN RI HONG *Gomphrena globosa*, YU SHU SHU *Zea mays*, ZHI KE *Citrus aurantium*, *Salix* sp. **Ref:** 658.

**20435 Subelliptenone B**

[155545-30-5] C<sub>23</sub>H<sub>24</sub>O<sub>5</sub> (380.44). **Source:** *Garcinia vilsiana* (bark). **Ref:** 3902.

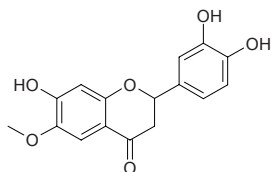
**20436 Subelliptenone H**

C<sub>23</sub>H<sub>22</sub>O<sub>6</sub> (394.43). **Source:** *Garcinia vilsiana* (bark). **Ref:** 3902.

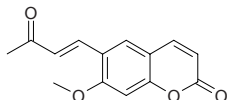


**20437 Suberectin**

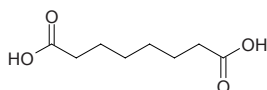
$C_{16}H_{14}O_6$  (302.29). Yellow-green powder, mp 164–165°C. Source: MI HUA DOU *Spatholobus suberectus*. Ref: 2241.

**20438 Suberenone**

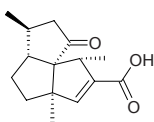
$C_{14}H_{12}O_4$  (244.25). Source: CHOU CAO *Ruta graveolens*. Ref: 6.

**20439 Suberic acid**

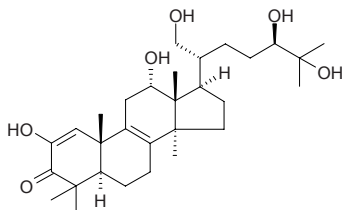
1,6-Hexanedicarboxylic acid [505-48-6]  $C_8H_{14}O_4$  (174.20). mp 144°C. Source: BI MA ZI *Ricinus communis*, CHAN SU *Bufo bufo gargarizans*; *Bufo melanostictus*, MU JIN PI *Hibiscus syriacus*. Ref: 2, 6, 519.

**20440 Suberogorgin**

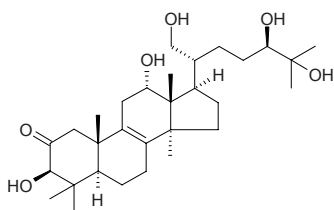
$C_{15}H_{20}O_3$  (248.32). Pharm: AChE inhibitor. Source: LIU SHAN HU *Gorgonia suberogorgia*. Ref: 658.

**20441 Sublateriol A**

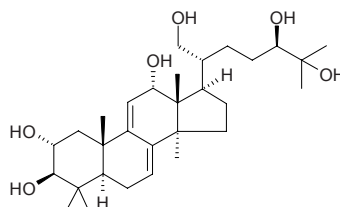
(24*R*)-2,12 $\alpha$ ,21,24,25-Pentahydroxylanosta-1,8-dien-3-one  $C_{30}H_{48}O_6$  (504.71). Amorphous powder,  $[\alpha]_D^{30} = +82.4^\circ$  ( $c = 0.09$ ,  $CHCl_3$ ). Source: ZHUAN HONG REN SAN *Naematoloma sublateritium*. Ref: 3526.

**20442 Sublateriol B**

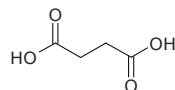
(24*R*)-3 $\beta$ ,12 $\alpha$ ,21,24,25-Pentahydroxylanost-8-en-2-one  $C_{30}H_{50}O_6$  (506.73). Amorphous powder,  $[\alpha]_D^{32} = +89.7^\circ$  ( $c = 0.2$ ,  $CHCl_3$ ). Source: ZHUAN HONG REN SAN *Naematoloma sublateritium*. Ref: 3526.

**20443 Sublateriol C**

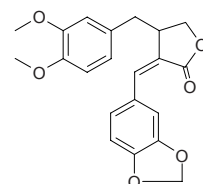
(24*R*)-Lanosta-7,9(11)-diene-2 $\alpha$ ,3 $\beta$ ,12 $\alpha$ ,21,24,25-hexaol  $C_{30}H_{50}O_6$  (506.73). Amorphous powder,  $[\alpha]_D^{28} = +63.4^\circ$  ( $c = 0.07$ ,  $CHCl_3$ ). Source: ZHUAN HONG REN SAN *Naematoloma sublateritium*. Ref: 3526.

**20444 Succinic acid**

1,2-Ethanedicarboxylic acid [110-15-6]  $C_4H_6O_4$  (118.09). mp 150°C, 185–189°C, bp 235°C. Pharm: Analgesic (hot plate method); antibacterial (*Staphylococcus aureus*, *Coccus catarrhal*, *Bacillus pyocyaneus*, *Bacillus proteus*, *B. Typhosus* and *Bacillus dysenteriae*, EC = 2mg/mL); antiulcerative (rat, gastric ulcer induced by pylorus ligation, 50mg/kg, ip or orl); antidote (mus, cobra-poisoning); CNS depressant (mus, rat, gpg, rbt, cat and dog, ip, anti-convulsion); Antipyretic; sedative; used in treatment of tympanitis, onychia lateralis, viral herpes, burn infection, suppurative amygdalitis and enteritis. Source: BAI BU *Stemona tuberosa*, BAI RUI CAO *Thesium chinense*, BAN BIAN LIAN *Lobelia chinensis* [Syn. *Lobelia radicans*], CU LIU GUO *Hippophae rhamnoides*, DANG GUI *Angelica sinensis*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *huechingensis*], JIU JIE CHA *Sarcandra glabra* [Syn. *Chloranthus glaber*], JU YUAN *Citrus medica*, KU HAO *Conyza blinii*, KUAN YE XIANG PU *Typha latifolia*, LU HUI *Aloe vera* [Syn. *Aloe barbadensis*], MAO GENG XI XIAN *Siegesbeckia orientalis* var. *glabrescens* [Syn. *Siegesbeckia glabrescens*], MING DANG SHEN *Changium smyrnioides*, MU XU *Medicago sativa*, MU ZEI *Equisetum hiemale*, PU HUANG *Typha angustata*, QUE MEI TENG *Sageretia theezans* [Syn. *Sageretia thea*], REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], ROU CONG RONG *Cistanche deserticola*, SHAN ZHA *Crataegus pinnatifida* (dried ripe fruit: mean content of 2 origins = 1.55%<sup>[5508]</sup>), SHI GAN ZI *Pothos chinensis*, TIAN MA *Gastrodia elata*, TIAN QIAO MAI GEN *Fagopyrum cymosum* [Syn. *Polygonum cymosum*], XIAO QIAO MU ZI JIN NIU *Ardisia arborescens* (whole herb)<sup>[4769]</sup>, YE GUAN MEN *Lespedeza cuneata*, YI ZHU QIAN MA *Urtica dioica*, YUN NAN SHAN ZHA *Crataegus scabrifolia* (dried ripe fruit: mean content of 2 origins = 1.58%<sup>[5508]</sup>), ZI QI *Osmunda japonica*, occurs in many plants. Ref: 2, 4, 411, 476, 502, 515, 529, 594, 604, 658, 660, 4769, 5501, 5508.

**20445 Suchilactone**

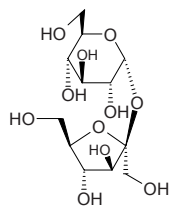
$C_{21}H_{20}O_6$  (368.39). Source: DA JIN NIU CAO *Polygala chinensis* [Syn. *Polygala glomerata*]. Ref: 6.



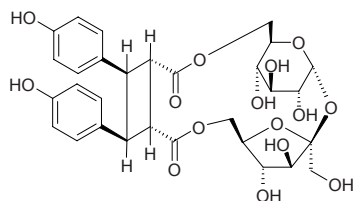


**20446 Sucrose**

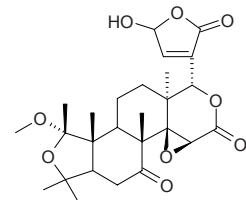
*D*-(+)-Sucrose [57-50-1] C<sub>12</sub>H<sub>22</sub>O<sub>11</sub> (342.30). mp 184–185°C. Source: AN ZI BEI MU *Fritillaria unibracteata*, CHE QIAN *Plantago asiatica*, CHUAN XU DUAN *Dipsacus asperoides*, CI WU JIA *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*], DA QING YE *Isatis indigotica*, FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*], HUANG QI *Astragalus membranaceus*, HUANG QIN *Scutellaria baicalensis*, LU HUI *Aloe vera* [Syn. *Aloe barbadensis*], LU SHAN SHI WEI *Pyrosia shearerii*, MENG GU HUANG QI *Astragalus mongholicus*, QIANG HUO *Notopterygium incisum*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SHAN FAN GEN *Symplocos caudata*, SHI WEI *Pyrosia lingua*, TANG QI *Acer saccharum*, TIAN CAI *Beta vulgaris*, TIAN MA *Gastrodia elata*, XI YANG SHEN *Panax quinquefolium*, YAO YONG GAN ZHE *Saccharum officinarum*, YAO YONG PU GONG YING *Taraxacum officinale*, occurs in many plants. Ref: 2, 660, 2535.

**20447 6,6'-Sucrose ester of (1a,2a,3β,4β)-3,4-bis(4-hydroxyphenyl)-1,2-cyclobutanedicarboxylic acid**

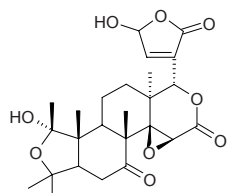
C<sub>30</sub>H<sub>34</sub>O<sub>15</sub> (634.60). White amorphous powder, [α]<sub>D</sub> = +37.1° (*c* = 0.65, MeOH). Pharm: Antihistamine (inhibits histamine release, rat mast cell, induced by antigen-antibody reaction, IC<sub>50</sub> = 41.2 μg/mL, control Indomethacin, IC<sub>50</sub> = 89.5 μg/mL); PGE<sub>2</sub> production inhibitor inactive (30 μg/mL, InRt = 1%). Source: XIAO HUA GUI ZHEN *Bidens parviflora*. Ref: 3364.

**20448 Sudachinoid A**

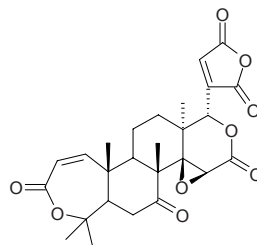
C<sub>26</sub>H<sub>34</sub>O<sub>9</sub> (490.56). Colorless oil, [α]<sub>D</sub><sup>25</sup> = +51.1° (*c* = 0.6, MeOH). Source: SU DA QI GAN JU *Citrus sudachii* (seed). Ref: 3532.

**20449 Sudachinoid B**

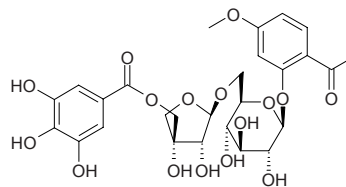
C<sub>25</sub>H<sub>32</sub>O<sub>9</sub> (476.53). Colorless oil, [α]<sub>D</sub><sup>25</sup> = +18.5° (*c* = 0.7, MeOH). Source: SU DA QI GAN JU *Citrus sudachii* (seed). Ref: 3532.

**20450 Sudachinoid C**

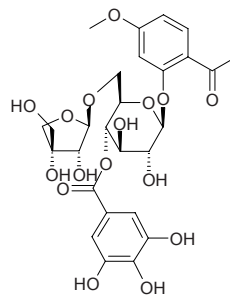
C<sub>26</sub>H<sub>28</sub>O<sub>9</sub> (484.51). Colorless oil, [α]<sub>D</sub><sup>25</sup> = -31.7° (*c* = 0.4, MeOH). Source: SU DA QI GAN JU *Citrus sudachii* (seed). Ref: 3532.

**20451 Suffruticoside A**

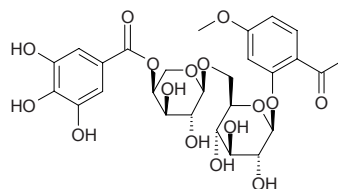
[145898-94-8] C<sub>27</sub>H<sub>32</sub>O<sub>16</sub> (612.54). White powder, [α]<sub>D</sub> = -57.8° (methanol). Pharm: Antioxidant (stronger than vitamin E). Source: MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*]. Ref: 985.

**20452 Suffruticoside B**

[145898-95-9] C<sub>27</sub>H<sub>32</sub>O<sub>16</sub> (612.54). White powder, [α]<sub>D</sub> = -32.7° (methanol). Pharm: Antioxidant (stronger than vitamin E). Source: MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*]. Ref: 985.

**20453 Suffruticoside C**

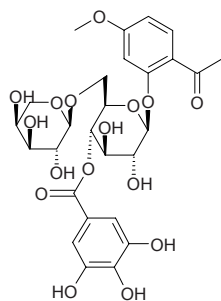
[145898-96-0] C<sub>27</sub>H<sub>32</sub>O<sub>16</sub> (612.54). White powder, [α]<sub>D</sub> = -8.8° (methanol). Pharm: Antioxidant (stronger than vitamin E). Source: MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*]. Ref: 985.



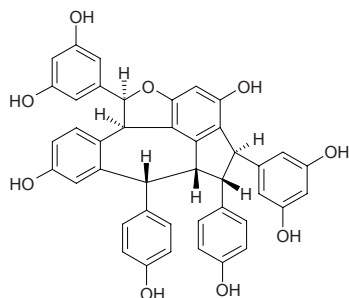


**20454 Suffruticoside D**

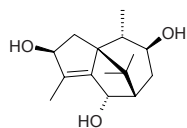
[145898-97-1] C<sub>27</sub>H<sub>32</sub>O<sub>16</sub> (612.54). White powder,  $[\alpha]_D = -5.3^\circ$  (methanol).  
**Pharm:** Antioxidant (stronger than vitamin E). **Source:** MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*]. **Ref:** 985.

**20455 Suffruticosol A**

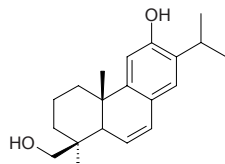
C<sub>42</sub>H<sub>32</sub>O<sub>9</sub> (680.72). **Source:** MU DAN PI *Paeonia moutan* [Syn. *Paeonia suffruticosa*]. **Ref:** 2234.

**20456 Sugetriol**

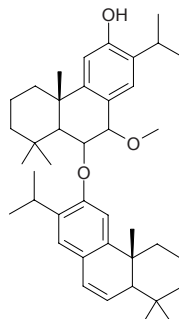
C<sub>15</sub>H<sub>24</sub>O<sub>3</sub> (252.36). **Source:** XIANG FU *Cyperus rotundus*. **Ref:** 660.

**20457 Sugikurojin A**

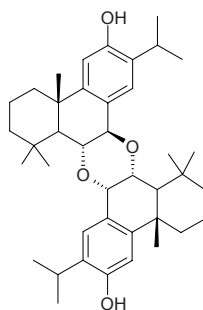
C<sub>20</sub>H<sub>28</sub>O<sub>2</sub> (300.44). Colorless solid,  $[\alpha]_D^{25} = +32.8^\circ$  ( $c = 0.39$ , CHCl<sub>3</sub>). **Source:** RI BEN LIU SHAN *Cryptomeria japonica* (black heartwood). **Ref:** 4268.

**20458 Sugikurojin B**

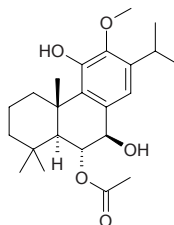
C<sub>41</sub>H<sub>58</sub>O<sub>3</sub> (598.92). Colorless solid,  $[\alpha]_D^{25} = +148.2^\circ$  ( $c = 1.57$ , CHCl<sub>3</sub>). **Source:** RI BEN LIU SHAN *Cryptomeria japonica* (black heartwood). **Ref:** 4268.

**20459 Sugikurojin C**

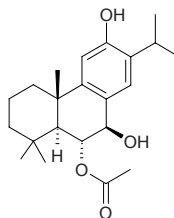
C<sub>40</sub>H<sub>56</sub>O<sub>4</sub> (600.89). Colorless solid,  $[\alpha]_D^{20} = -35.9^\circ$  ( $c = 0.62$ , CHCl<sub>3</sub>). **Source:** RI BEN LIU SHAN *Cryptomeria japonica* (black heartwood). **Ref:** 4268.

**20460 Sugikurojin D**

6 $\alpha$ -Acetoxy-7 $\beta$ ,11-dihydroxy-12-methoxy-8,11,13-abietatriene C<sub>23</sub>H<sub>34</sub>O<sub>5</sub> (390.52). Colorless solid,  $[\alpha]_D^{25} = +45.5^\circ$  ( $c = 1.2$ , CHCl<sub>3</sub>). **Source:** RI BEN LIU SHAN *Cryptomeria japonica* (bark: yield = 0.0009%). **Ref:** 1710.

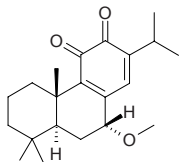
**20461 Sugikurojin E**

6 $\alpha$ -Acetoxy-7 $\beta$ ,12-dihydroxy-8,11,13-abietatriene C<sub>22</sub>H<sub>32</sub>O<sub>4</sub> (360.50). Colorless solid,  $[\alpha]_D^{25} = +30.0^\circ$  ( $c = 1.2$ , CHCl<sub>3</sub>). **Source:** RI BEN LIU SHAN *Cryptomeria japonica* (bark: yield = 0.0004%). **Ref:** 1710.

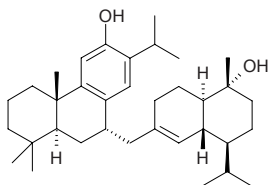


**20462 Sugikurojin F**

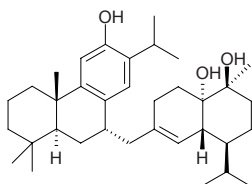
7 $\alpha$ -Methoxy-8,13-abietadien-11,12-dione C<sub>21</sub>H<sub>30</sub>O<sub>3</sub> (330.47). Colorless solid, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -43.9° (*c* = 0.4, CHCl<sub>3</sub>). Source: RI BEN LIU SHAN *Cryptomeria japonica* (bark: yield = 0.00095%). Ref: 1710.

**20463 Sugikurojin G**

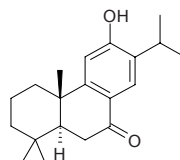
C<sub>35</sub>H<sub>54</sub>O<sub>2</sub> (506.82). Colorless solid, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -5.2° (*c* = 1.5, CHCl<sub>3</sub>). Pharm: Cytotoxic (HL-60, IC<sub>50</sub> = 35.4  $\mu$ mol/L; HCT15, IC<sub>50</sub> = 100  $\mu$ mol/L). Source: RI BEN LIU SHAN *Cryptomeria japonica* (bark: yield = 0.00085%). Ref: 1710.

**20464 Sugikurojin H**

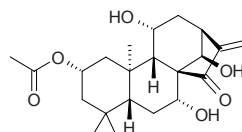
C<sub>35</sub>H<sub>54</sub>O<sub>3</sub> (522.82). Colorless solid, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -6.1° (*c* = 0.2, CHCl<sub>3</sub>). Source: RI BEN LIU SHAN *Cryptomeria japonica* (bark: yield = 0.00075%). Ref: 1710.

**20465 Sugiol**

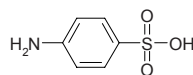
[511-05-7] C<sub>20</sub>H<sub>28</sub>O<sub>2</sub> (300.44). [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +28.3° (*c* = 2.0, pyridine); mp 289–291°C (*n*-hexane–EtOAc), [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +24.8° (*c* = 0.44, EtOH); mp 292–294°C, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = +26°, mp (+) 298–299°C (dec); mp 281.3°C, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = -5.0° (*c* = 0.5, EtOH). Pharm: Cytotoxic (EBV-EA inhibitor TPA-induced, mol ratio/TPA = 1000, InRt = 100%)<sup>[5352]</sup>; cytotoxic inactive (KB oral epidermoid carcinoma, ED<sub>50</sub> > 10  $\mu$ g/mL, Hep3B hepatoma cells, ED<sub>50</sub> > 10  $\mu$ g/mL, HeLa, ED<sub>50</sub> > 10  $\mu$ g/mL, Colon205, ED<sub>50</sub> > 10  $\mu$ g/mL)<sup>[4253]</sup>; antiproliferative (*in vitro*, MTT assay, CEM, IC<sub>50</sub> = 10.3  $\mu$ mol/L, control Doxorubicin, IC<sub>50</sub> = 0.036  $\mu$ mol/L, HeLa, IC<sub>50</sub> = 7.7  $\mu$ mol/L, control Doxorubicin, IC<sub>50</sub> = 0.027  $\mu$ mol/L, HCT8, IC<sub>50</sub> = 75.0  $\mu$ mol/L, control Doxorubicin, IC<sub>50</sub> = 0.024  $\mu$ mol/L, MCF7, IC<sub>50</sub> > 83.3  $\mu$ mol/L, control Doxorubicin, IC<sub>50</sub> = 0.183  $\mu$ mol/L, B-16, IC<sub>50</sub> > 83.3  $\mu$ mol/L, control Doxorubicin, IC<sub>50</sub> = 0.056  $\mu$ mol/L)<sup>[4940]</sup>; 12(S)-LOX inhibitor inactive (hmn Platelets, 100  $\mu$ g/mL, 12(S)-HETE Production inhibitor inactive)<sup>[4980]</sup>. Source: CHANG GENG CU FEI *Cephalotaxus harringtonia* var. *drupacea*, DU SONG SHI *Juniperus rigida*, GAN XI SHU WEI CAO *Salvia przewalskii*, LU BIAN QING *Clerodendron cyrtophyllum*, RI BEN XIANG BAI JING PI *Thuja standishii*, SAN YE SHU WEI CAO *Salvia trijuga*, TAI WAN CU FEI *Cephalotaxus wilsoniana* (twig), ZHU TAI SHU WEI CAO *Salvia candelabrum*, *Aegiphila lhotzkyana* (root), OU ZHOU CI BAI *Juniperus communis* (wood). Ref: 6, 182, 660, 4253, 4538, 5352, 5376, 5401, 4940, 4980.

**20466 Suimiyain A**

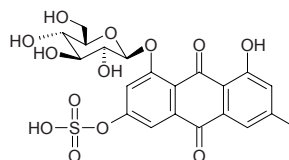
C<sub>22</sub>H<sub>32</sub>O<sub>6</sub> (392.50). mp 248–249°C. Source: DONG LING CAO *Rabdosia rubescens*. Ref: 4067.

**20467 Sulfanilic acid**

4-Aminobenzenesulfonic acid [121-57-3] C<sub>6</sub>H<sub>7</sub>NO<sub>3</sub>S (173.19). Source: JI CAI *Capsella bursa-pastoris*. Ref: 6.

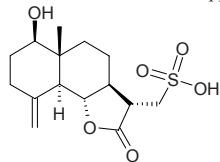
**20468 Sulfemodin-8-O- $\beta$ -D-glucoside**

Emodin 8-O- $\beta$ -D-glucopyranosyl-6-O-sulfate C<sub>21</sub>H<sub>20</sub>O<sub>13</sub>S (512.45). Dark orange amorphous substance. Source: ZANG BIAN DA HUANG *Rheum emodi* [Syn. *Rheum australe*] (root: yield = 0.0011%dw). Ref: 4711.

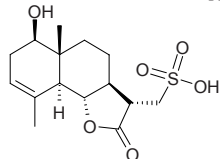


**20469 13-Sulfo-dihydroreynosin**

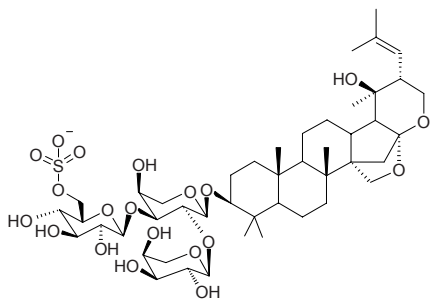
$C_{15}H_{22}O_6S$  (330.40). mp >300°C,  $[\alpha]_D^{20} = +48.3^\circ$  ( $c = 0.002$ , MeOH). Source: MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*]. Ref: 4485.

**20470 13-Sulfo-dihydrosantamarine**

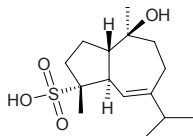
$C_{15}H_{22}O_6S$  (330.40). mp >300°C,  $[\alpha]_D^{20} = +22.5^\circ$  ( $c = 0.002$ , MeOH). Source: MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*]. Ref: 4485.

**20471 3-O-[6-O-Sulfonyl-β-D-glucopyranosyl-(1→3)]-[α-L-arabinopyranosyl-(1→2)]-α-L-arabinopyranosyl-pseudojubilogenin**

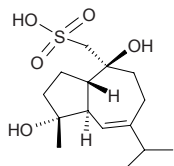
$C_{46}H_{73}O_{20}S^-$  (978.15). Source: JIA MA CHI XIAN *Bacopa monniera* (whole herb: yield = 0.0020%fw). Ref: 4664.

**20472 Sulfoorientalol A**

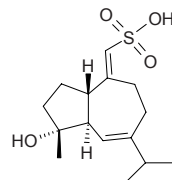
[151171-36-7]  $C_{15}H_{26}O_4S$  (302.44). White powder,  $[\alpha]_D^{22} = \pm 0^\circ$  ( $c = 1.0$ , methanol). Pharm: Bladder smooth muscle relaxant (gpg, *in vitro*, induced by carbacholine, 100 μmol/L, contractive rate = 52%). Source: ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*] (tuber: content = 0.002%<sup>[5501]</sup>). Ref: 987, 988, 5501.

**20473 Sulfoorientalol B**

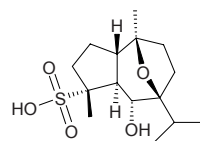
[151171-38-9]  $C_{15}H_{26}O_5S$  (318.43). White powder,  $[\alpha]_D^{22} = \pm 0^\circ$  ( $c = 1.0$ , methanol). Pharm: Bladder smooth muscle relaxant (gpg, *in vitro*, induced by carbacholine, 100 μmol/L, contractive rate = 51.3%). Source: ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*] (tuber: content = 0.0008%<sup>[5501]</sup>). Ref: 987, 988, 5501.

**20474 Sulfoorientalol C**

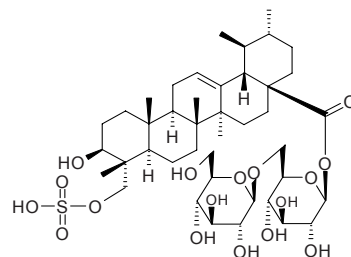
[150975-28-3]  $C_{15}H_{24}O_4S$  (300.42). White powder,  $[\alpha]_D^{22} = \pm 0^\circ$ . Pharm: Bladder smooth muscle relaxant (gpg, *in vitro*, induced by carbacholine). Source: ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*] (tuber: content = 0.0002%<sup>[5501]</sup>). Ref: 987, 5501.

**20475 Sulfoorientalol D**

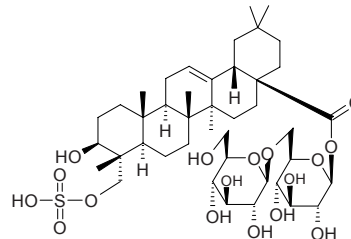
[151171-37-8]  $C_{15}H_{26}O_5S$  (318.43). White powder,  $[\alpha]_D^{22} = \pm 0.9^\circ$  ( $c = 0.9$ , methanol). Pharm: Bladder smooth muscle relaxant (gpg, *in vitro*, induced by carbacholine, 100 μmol/L, contractive rate 46.2%). Source: ZE XIE *Alisma orientale* [Syn. *Alisma plantago-aquatica* var. *orientale*] (tuber: content = 0.0004%<sup>[5501]</sup>). Ref: 987, 988, 5501.

**20476 Sulfopatrinoside I**

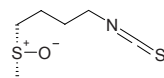
Sulfopatrinoside I  $C_{42}H_{68}O_{17}S$  (877.06). Pharm: Anti-HIV. Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 2, 660, 1843.

**20477 Sulfopatrinoside II**

Sulfopatrinoside II  $C_{42}H_{68}O_{17}S$  (877.06). Pharm: Anti-HIV. Source: HUANG HUA BAI JIANG *Patrinia scabiosaefolia*. Ref: 2, 660, 1843.

**20478 Sulforathane**

[4478-93-7]  $C_6H_{11}NOS_2$  (177.29). bp 130–135°C/0.03 mmHg,  $[\alpha]_D = -79.3^\circ$  ( $c = 1.2$ ,  $CHCl_3$ ). Pharm: Cancer-preventing activity (animal trial, stronger). Source: MAO DU XING CAI *Lepidium draba*. Ref: 1521, 1582.

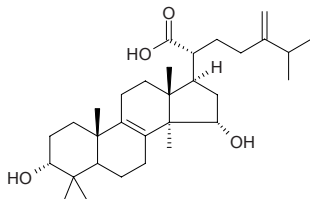


**20479 Sulfur dioxide**

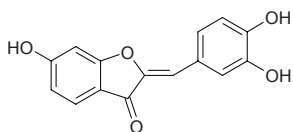
[7446-09-5] O<sub>2</sub>S (64.06). Source: DA SUAN *Allium sativum*. Ref: 2.

**20480 3 $\alpha$ -Sulfurenic acid**

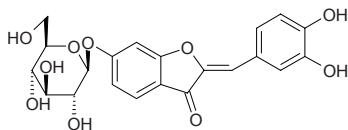
3 $\alpha$ ,15 $\alpha$ -Dihydroxy-24-methylene-lanost-8-en-21-oic acid C<sub>31</sub>H<sub>50</sub>O<sub>4</sub> (486.74). White amorphous powder, mp 252–254°C, mp 203–205°C, [ $\alpha$ ]<sub>D</sub><sup>22</sup> = +26.7° (c = 0.04, CHCl<sub>3</sub>:MeOH = 1:1). Source: ALI HONG *Fomes officinalis*. Ref: 6, 2566.

**20481 Sulfuretin**

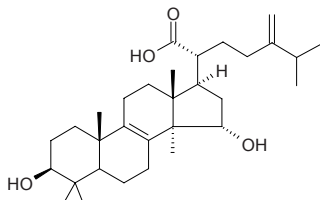
C<sub>15</sub>H<sub>10</sub>O<sub>5</sub> (270.24). Orange-yellow prisms (MeOH), mp 280–285°C (dec). Pharm: Iodine-induced thyronine deiodinase inhibitor (rat, microsome membrane of hepatic cells); cytotoxic (antioxidant assay)<sup>[5038]</sup>; anti-rheumatoid arthritis (oral administration 30mg/kg, significantly decreased rheumatoid arthritis (RA) and C-reactive protein (CRP) factors in Freund's complete adjuvant)<sup>[5460]</sup>. Source: HUANG LU *Cotinus coggygria*, QI ZI *Rhus verniciflua* [Syn. *Toxicadendron verniciflum*], *Cotinus* sp, XIAO YE HONG *GUANG SHU Knema globularia*. Ref: 6, 658, 2209, 5038, 5460.

**20482 Sulfuretin glucoside**

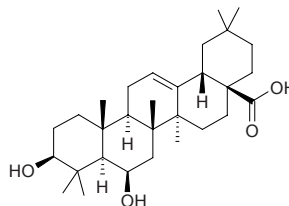
C<sub>21</sub>H<sub>20</sub>O<sub>10</sub> (432.39). mp 200°C (dec). Pharm: Cytotoxic (antioxidant assay). Source: HUANG LU *Cotinus coggygria*. Ref: 6, 5038.

**20483 3 $\beta$ -Sulphurenic acid**

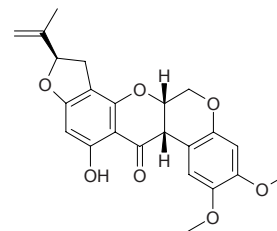
C<sub>31</sub>H<sub>50</sub>O<sub>4</sub> (486.74). Source: ALI HONG *Fomes officinalis*. Ref: 660.

**20484 Sumaresinolic acid**

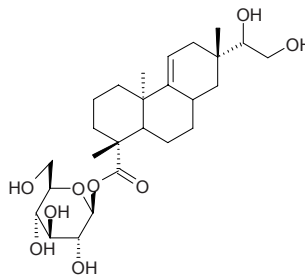
C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). mp 298–299°C. Source: AN XI XIANG *Styrax benzoin*. Ref: 6.

**20485 Sumatrol**

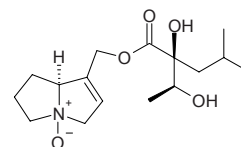
C<sub>23</sub>H<sub>22</sub>O<sub>7</sub> (410.43). Pharm: Antineoplastic (Inhibition of DMBA-induced preneoplastic lesions *in vitro*, MMOC assay, IC<sub>50</sub> > 47 μmol/L; control Sulforaphane, IC<sub>50</sub> = 11 μmol/L)<sup>[4718]</sup>, pesticide. Source: DU HUI MAO DOU *Tephrosia toxicaria* (stem: yield = 0.0093% dw)<sup>[4718]</sup>, MA LIU JIA YU TENG *Derris malaccensis*. Ref: 658, 4718.

**20486 Sumogaside**

[132210-61-8] C<sub>26</sub>H<sub>42</sub>O<sub>9</sub> (498.62). White crystals, mp 210–214°C. Pharm: IL-8 secretion inhibitor (TNF- $\alpha$ -stimulated hmn colon adenocarcinoma cell line HT29, 1 μmol/L, 10 μmol/L and 100 μmol/L, InRt = 14.0%, 34.7% and 42.5%, respectively); TNF- $\alpha$  secretion inhibitor (trypsin-stimulated hmn leukemic mast cell line HMC-1, 1 μmol/L, 10 μmol/L and 100 μmol/L, InRt = 0.2%, 7.9% and 10.2%, respectively). Source: CHAO XIAN WU JIA *Acanthopanax koreanum* (root). Ref: 4346.

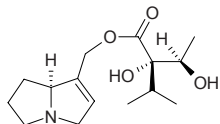
**20487 Supinidine N-oxide 2S-hydroxy-2S-(1S-hydroxyethyl)-4-methylpentanoyl ester**

C<sub>16</sub>H<sub>27</sub>NO<sub>5</sub> (313.40). Orange oil, [ $\alpha$ ]<sub>D</sub><sup>25</sup> = -4.3° (c = 0.1, MeOH). Source: CU MAO NIU SHE CAO *Anchusa strigosa*. Ref: 5441.

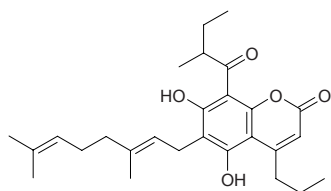


**20488 Supinine**

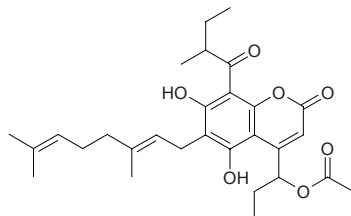
$C_{15}H_{25}NO_4$  (283.37). **Pharm:** Anticholinergic; teratogen (chromosome in plant cells); hepatotoxin. **Source:** DA MA YE ZE LAN *Eupatorium cannabinum*, DA WEI YAO *Heliotropium indicum*, DUO XU GONG *Eupatorium stoechadosmum*, WAN HUA ZE LAN *Eupatorium serotinum*, YANG XIN TIAN JIE CAI *Heliotropium supinum*. **Ref:** 658.

**20489 Surangin A**

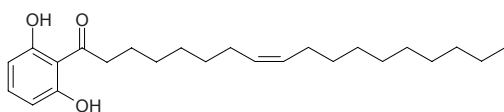
$C_{27}H_{36}O_5$  (440.58). Crystals (hexane), mp 83–85°C,  $[\alpha]_D^{26} = -1.6^\circ$  ( $c = 0.3$ , chloroform). **Pharm:** Antibacterial (*Staphylococcus* sp., *in vitro*, 7.8 µg/mL). **Source:** CHANG YE MAN MI PING GUO *Mammea longifolia*. **Ref:** 661.

**20490 Surangin B**

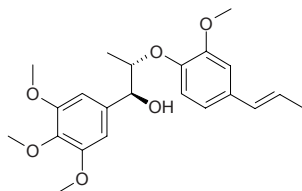
$C_{29}H_{38}O_7$  (498.62). Crystals (dichloroethane–hexane), mp 98–100°C,  $[\alpha]_D^{24} = -30^\circ$ . **Pharm:** Against neurovaccine; pesticide (larvae of mosquito, mustard beetles and houseflies, 0.05 µg/mL); LD<sub>50</sub> (mus, ip) = 50 mg/kg. **Source:** CHANG YE MAN MI PING GUO *Mammea longifolia*, MEI ZHOU MAN MI PING GUO *Mammea americana*. **Ref:** 661.

**20491 Suranone**

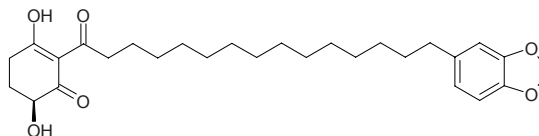
1-(2,6-Dihydroxyphenyl)-octadec-8-en-1-one  $C_{24}H_{38}O_3$  (374.57). Yellowish oil,  $[\alpha]_D^{25} = \pm 0^\circ$  ( $c = 0.15$ ,  $CHCl_3$ ). **Source:** *Peperomia sui*. **Ref:** 3401.

**20492 Surinamensin**

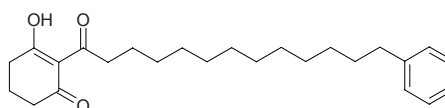
$C_{22}H_{28}O_6$  (388.47). **Pharm:** Schistosomacide. **Source:** SU LI NAN ROU DOU KOU *Virola surinamensis* [Syn. *Myristica surinamensis*] (leaf). **Ref:** 658, 5099.

**20493 Surinone A**

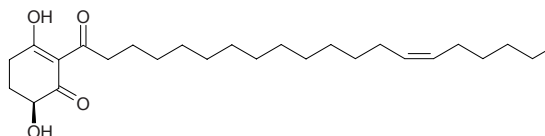
(-)-2-(15-Benzo[1,3]dioxol-5-yl-pentadecanoyl)-3,6-dihydroxy-cyclohex-2-enone  $C_{28}H_{40}O_6$  (472.63). Yellowish oil,  $[\alpha]_D^{25} = -15.8^\circ$  ( $c = 0.070$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic (*in vitro*, HONE-1 cell line, 50 µmol/L, cell growth InRt = 31%; NUGC-3 cell line, 50 µmol/L, cell growth InRt = 38%). **Source:** *Peperomia sui*. **Ref:** 3401.

**20494 Surinone B**

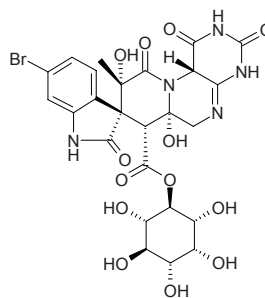
3-Hydroxy-2-(13-phenyltridecanoyl)-cyclohex-2-enone  $C_{25}H_{36}O_3$  (384.56). Yellowish oil. **Source:** *Peperomia sui*. **Ref:** 3401.

**20495 Surinone C**

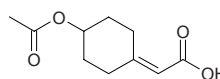
(Z)-(-)-3,6-Dihydroxy-2-icos-14-enoyl-cyclohex-2-enone  $C_{26}H_{44}O_4$  (420.64). Colorless gum,  $[\alpha]_D^{25} = -29.1^\circ$  ( $c = 0.075$ ,  $CHCl_3$ ). **Pharm:** Cytotoxic (*in vitro*, HONE-1 cell line, 50 µmol/L, cell growth InRt = 39%; NUGC-3 cell line, 50 µmol/L, cell growth InRt = 27%). **Source:** *Peperomia sui*. **Ref:** 3401.

**20496 Surugatoxin**

Surugatoxin  $C_{25}H_{26}BrN_5O_{13}$  (684.42). **Pharm:** Blocks self-discipline nerve; cytotoxic; mydriatic (mus, MED = 0.02 µg/kg); nicotine antagonist. **Source:** NI DONG FENG LUO *Babylonia lutosa*. **Ref:** 658.

**20497 Suspenolic acid**

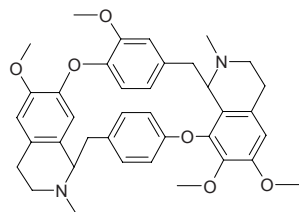
$C_{10}H_{14}O_4$  (198.22). Amorphous powder, mp 74–76°C,  $[\alpha]_D^{20} = +4.7^\circ$  ( $c = 0.1010$ ,  $CHCl_3$ ). **Source:** LIAN QIAO *Forsythia suspensa*. **Ref:** 8.



**20498 Sutchuensine**

$C_{38}H_{42}N_2O_6$  (622.77). Colorless powder,  $[\alpha]_D^{27} = -110^\circ$  ( $c = 0.13$ , EtOH).

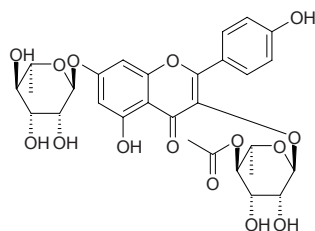
**Source:** LUN HUAN TENG *Cyclea racemosa*. **Ref:** 274.

**20499 Sutchuenside A**

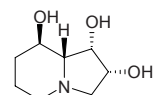
Kaempferol 3-*α*-L-(4-*O*-acetyl)rhamnopyranoside-7-*α*-L-rhamnopyranoside

$C_{29}H_{31}O_{15}$  (620.57). Pale yellow amorphous powder,  $[\alpha]_D = -170^\circ$  ( $c = 0.1$ ,

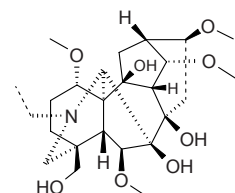
MeOH). **Pharm:** Anti-HIV-1 (RT (RDDP) inhibitor,  $IC_{50} = 405\mu\text{mol/L}$ , positive control Adriamycin,  $IC_{50} = 46\mu\text{mol/L}$ ; DDDP inhibitor,  $IC_{50} = 23\mu\text{mol/L}$ , positive control Adriamycin,  $IC_{50} = 6\mu\text{mol/L}$ ; RnaseH inhibitor,  $IC_{50} > 500\mu\text{mol/L}$ , positive control Illimaquinone,  $IC_{50} = 50\mu\text{mol/L}$ ). **Source:** GUAN ZHONG *Dryopteris crassirhizoma*. **Ref:** 3522.

**20500 Swainsonine**

$C_8H_{15}NO_3$  (173.22). **Pharm:**  $\alpha$ -Mannosidase inhibitor<sup>[2617]</sup>; toxin (livestock)<sup>[2617]</sup>; antineoplastic (potent activity)<sup>[2617]</sup>. **Source:** DAN HUANG KU MA DOU *Swainsonia luteola*, HUI BAI KU MA DOU *Swainsonia canescens*, SHAN YANG DOU YE KU MA DOU *Swainsonia galegifolia*. **Ref:** 658, 2617.

**20501 Swatinine**

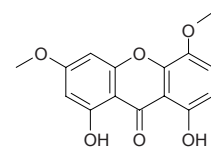
$C_{25}H_{41}NO_8$  (483.61). Amorphous powder,  $[\alpha]_D^{30} = +12.5^\circ$  ( $c = 2$ ,  $CHCl_3$ ). **Pharm:** Anti-inflammatory (modified assay of Berridge,  $100\mu\text{g/mL}$ ,  $\text{InRt} = 22.82\%$ ); tyrosinase inhibitor inactive (control Kojic acid,  $IC_{50} = (16.67 \pm 0.52)\mu\text{mol/L}$ , *L*-Mimosine,  $IC_{50} = (3.68 \pm 0.02)\mu\text{mol/L}$ ); antioxidant (DPPH scavenger,  $1\mu\text{mol/L}$ ,  $\text{ScRt} = 54.1\%$ ; control 3-*t*-Butyl-4-hydroxyanisole,  $1\mu\text{mol/L}$ ,  $\text{ScRt} = 92.5\%$ ). **Source:** *Aconitum leave* (aerial parts). **Ref:** 5271.

**20502 Swerchirin**

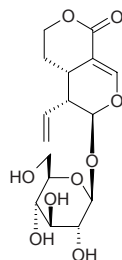
$C_{15}H_{12}O_6$  (288.26). Yellow acicular crystals, mp  $194\sim 195^\circ\text{C}$ . **Pharm:**

Antihepatotoxin (animal model); monoamine oxidase A inhibitor (*in vitro*).

**Source:** BAO E ZHANG YA CAI *Swertia calycina*, RU BAI LONG DAN *Gentiana lactea*, QI RUI TA ZHANG YA CAI *Swertia chirata*. **Ref:** 634, 658.

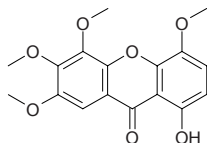
**20503 Sweroside**

[14215-86-2]  $C_{16}H_{22}O_9$  (358.35).  $[\alpha]_D^{27} = -190.6^\circ$  ( $c = 0.83$ , MeOH). **Pharm:** Hepatoprotective (inhibits SGPT, SGOT, ALP (reduces the raised activity of SGPT, SGOT, ALP due to acute liver injury induced by GAIN)). **Source:** BAO E ZHANG YA CAI *Swertia calycina* (whole herb: content =  $0.1543\%$ )<sup>[5508]</sup>, CHANG CHUN HUA *Catharanthus roseus* [Syn. *Vinca rosea*; *Lochera rosea*], CHUAN XU DUAN *Dipsacus asperoides*, CU HUA ZHANG YA CAI *Swertia fasciculata* (whole herb: content =  $3.540\%$ )<sup>[5508]</sup>, CU JING QIN JIAO *Gentiana crassicaulis* (root: mean content =  $0.04\%$ )<sup>[5534]</sup>, DA ZI ZHANG YA CAI *Swertia macrosperma* (whole herb: content =  $0.3242\%$ )<sup>[5508]</sup>, DANG YAO *Swertia chinensis* (the compound was isolated from the plant by H.Inouye et al. in 1966)<sup>[5505]</sup>, HONG ZHI ZHANG YA CAI *Swertia erythrosticta* (whole herb: content =  $3.138\%$ )<sup>[5508]</sup>, JI ZI MU *Sinoadina Racemosa* [Syn. *Adina racemosa*] (leaf, flower and twig: yield =  $0.019\% \text{dw}$ )<sup>[4723]</sup>, LIU QIU SHE GEN CAO *Ophiorrhiza liukuensis* (whole herb), LONG DAN *Gentiana scabra*, MAO ZHANG YA CAI *Swertia pubescens* (whole herb: content =  $1.705\%$ )<sup>[5508]</sup>, QING YE DAN *Swertia mileensis* (whole herb: content =  $0.696\%$ )<sup>[5501]</sup>, RI BEN SHUANG HU DIE *Tripterosperrum japonicum*, SHAN ZHU YU *Cornus officinalis* [Syn. *Macrocarpium officinale*], WU SHI REN DONG *Lonicera quinquelocularis* (root), XI NAN ZHANG YA CAI *Swertia cincta* (whole herb: content =  $0.4531\%$ )<sup>[5508]</sup>, XIA YE ZHANG YA CAI *Swertia angustifolia*, XIAN MAI ZHANG YA CAI *Swertia nervosa* (whole herb: content =  $0.7165\%$ )<sup>[5508]</sup>, ZHANG YA CAI *Swertia pseudochinensis* (whole herb: content =  $0.2965\%$ )<sup>[5508]</sup>, ZI HONG ZHANG YA CAI *Swertia punicea* (whole herb: content =  $1.179\%$ )<sup>[5508]</sup>. **Ref:** 2, 6, 220, 272, 660, 3533, 3926, 4527, 4723, 5501, 5505, 5508, 5534.

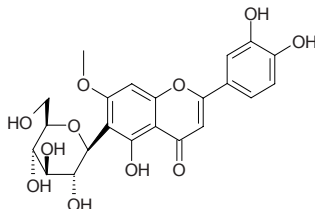


**20504 Swertiadecoraxanthone**

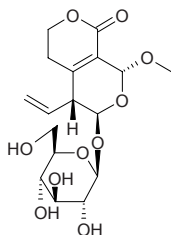
1-Hydroxy-4,5,6,7-tetramethoxy-9*H*-xanthen-9-one C<sub>17</sub>H<sub>16</sub>O<sub>7</sub> (332.31). Orange-yellow cuboid mass crystals, mp 163~165°C (acetone). Source: GUAN SHANG ZHANG YA CAI *Swertia decora*. Ref: 4598.

**20505 Swertijaponin**

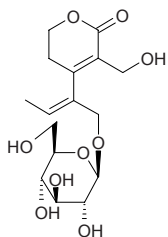
C<sub>22</sub>H<sub>22</sub>O<sub>11</sub> (462.41). mp 265°C (dec). Pharm: Hepatoprotective (rat, inhibits SGPT, reduces the raised SGPT due to acute liver injury induced by CCl<sub>4</sub>). Source: DOU CHI CAO *Iris sanguinea*, QING YE DAN *Swertia mileensis*, RI BEN ZHANG YA CAI *Swertia japonica*, XI YE SHI *Achillea leptophylla*, XIAN ZHOU MAI MA TENG *Gnetum gnemon*, *Tragopogon* sp. Ref: 6, 658, 5501.

**20506 Swertijaposide A**

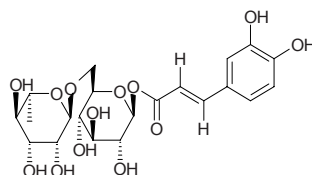
C<sub>17</sub>H<sub>24</sub>O<sub>10</sub> (388.37). Amorphous powder, [α]<sub>D</sub><sup>25</sup> = -121° (c = 0.061, MeOH). Source: RI BEN ZHANG YA CAI *Swertia japonica*. Ref: 2528.

**20507 Swertijaposide B**

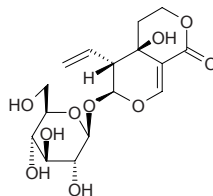
C<sub>16</sub>H<sub>24</sub>O<sub>9</sub> (360.36). Amorphous powder, [α]<sub>D</sub><sup>25</sup> = -25.6° (c = 0.117, MeOH). Source: RI BEN ZHANG YA CAI *Swertia japonica*. Ref: 2528.

**20508 Swertiamacroside**

*trans*-Caffeic acid-1-*O*-rutinose ester C<sub>21</sub>H<sub>28</sub>O<sub>13</sub> (488.45). Yellowish amorphous powder. Source: DA ZI ZHANG YA CAI *Swertia macrosperma*. Ref: 149.

**20509 Swertiamarin**

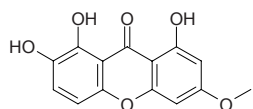
[17388-39-5] C<sub>16</sub>H<sub>22</sub>O<sub>10</sub> (374.35). mp 103~104°C. Pharm: Analgesic; anticonvulsant (mus, ip, inhibits spontaneous movement and convulsion induced by corazol); anti-inflammatory (rat, swollen foot model caused by carrageenan); sedative. Source: BAO E ZHANG YA CAI *Swertia calycina* (whole herb: content = 0.0222%)<sup>[5508]</sup>, BAO JING ZHANG YA CAI *Swertia franchetiana* (whole herb: content = 1.08%)<sup>[5508]</sup>, CHUAN DONG ZHANG YA CAI *Swertia davidii* (whole herb: content = 1.70%)<sup>[5508]</sup>, CU HUA ZHANG YA CAI *Swertia fasciculata* (whole herb: content = 0.765%)<sup>[5508]</sup>, CU JING QIN JIAO *Gentiana crassicaulis* (root: mean content = 0.94%)<sup>[5534]</sup>, CU ZHUANG LONG DAN *Gentiana robusta* (root: content = 0.55%)<sup>[5508]</sup>, DA ZI ZHANG YA CAI *Swertia macrosperma* (whole herb: mean content = 0.08%)<sup>[5508]</sup>, DAN HUANG ZHANG YA CAI *Swertia punicea* var. *lutescens* (whole herb: content = 1.15%)<sup>[5508]</sup>, DANG YAO *Swertia chinensis* (the compound was isolated from the plant by T.Kubota et al. in 1961)<sup>[5505]</sup>, DIAN LONG DAN *Gentiana rigescens* (root: mean content of 8 origins = 0.06%)<sup>[5508]</sup>, DONG BEI LONG DAN *Gentiana manshurica* (root: mean content of 3 origins = 0.04%)<sup>[5508]</sup>, GUI ZHOU ZHANG YA CAI *Swertia kouitchensis* (whole herb: content = 4.08%)<sup>[5508]</sup>, HONG HUA LONG DAN *Gentiana rhodantha* (aerial parts: mean content of 2 origins = 0.03%)<sup>[5508]</sup>, HONG ZHI ZHANG YA CAI *Swertia erythrosticta* (whole herb: content = 0.113%)<sup>[5508]</sup>, LONG DAN *Gentiana scabra* (root: mean content collected in Jun. to Sep. = 0.157%)<sup>[5508]</sup>, MAO ZHANG YA CAI *Swertia pubescens* (whole herb: content = 0.095%)<sup>[5508]</sup>, QI RUI TA ZHANG YA CAI *Swertia chirata*, RI BEN ZHANG YA CAI *Swertia japonica*, TOU HUA LONG DAN *Gentiana cephalantha* (whole herb: content = 0.11%)<sup>[5508]</sup>, XI NAN ZHANG YA CAI *Swertia cincta* (whole herb: mean content = 0.05%)<sup>[5508]</sup>, XIE JING ZHANG YA CAI *Swertia angustifolia* (whole herb: content = 3.420%)<sup>[5508]</sup>, XIA YE ZHANG YA CAI *Swertia patens*, XIAN MAI ZHANG YA CAI *Swertia nervosa* (whole herb: content = 0.072%)<sup>[5508]</sup>, ZHANG YA CAI *Swertia pseudochinensis* (whole herb: mean content = 0.52%)<sup>[5508]</sup>, ZHE JIANG ZHANG YA CAI *Swertia hickinii* (whole herb: content = 7.67%)<sup>[5508]</sup>, ZI HONG ZHANG YA CAI *Swertia punicea* (whole herb: mean content = 1.85%)<sup>[5508]</sup>. Ref: 6, 220, 272, 658, 5501, 5505, 5507, 5508, 5534.



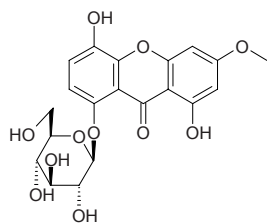


**20510 Swertianin**

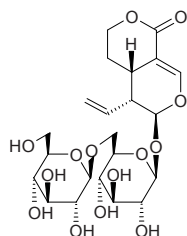
1,2,8-Trihydroxy-6-methoxyxanthone;  $C_{14}H_{10}O_6$  (274.23). **Pharm:** Vasodilator (rat aortic preparations, pre-contracted by  $3\mu\text{mol/L}$  arterenol,  $pIC_{50} = 4.95 \pm 0.068$ ;  $20\mu\text{mol/L}$  KCl,  $pIC_{50} = 4.59 \pm 0.069$ )<sup>[5434]</sup>; mutagen (*Salmonella typhimurium*); **Source:** BA FA LI YA LONG DAN *Gentiana bavarica*, BAO E ZHANG YA CAI *Swertia calycina* (whole herb: content = 0.0315%)<sup>[5508]</sup>, CU HUA ZHANG YA CAI *Swertia fasciculata* (whole herb: content = 2.670%)<sup>[5508]</sup>, DA ZI ZHANG YA CAI *Swertia macrosperma* (whole herb: content = 0.1020%)<sup>[5508]</sup>, DAN HUANG ZHANG YA CAI *Swertia punicea* var. *lutescens* (whole herb: content = 0.6130%)<sup>[5508]</sup>, DUAN YE LONG DAN *Gentiana brachyphylla*, HONG ZHI ZHANG YA CAI *Swertia erythrosticta* (whole herb: content = 0.9507%)<sup>[5508]</sup>, KU HE LONG DAN *Gentiana kochiana*, RI BEN LONG DAN *Gentiana japonica*, XIA YE ZHANG YA CAI *Swertia angustifolia* (whole herb: content = trace)<sup>[5508]</sup>, XIAN MAI ZHANG YA CAI *Swertia nervosa* (whole herb: content = 0.0303%)<sup>[5508]</sup>, XUE LONG DAN *Gentiana nivalis*, ZHANG YA CAI *Swertia pseudochinensis* (whole herb: content = 0.0201%)<sup>[5508]</sup>, ZI HONG ZHANG YA CAI *Swertia punicea* (whole herb: content = 0.3990%)<sup>[5508]</sup>. **Ref:** 658, 5434, 5508.

**20511 Swertianolin**

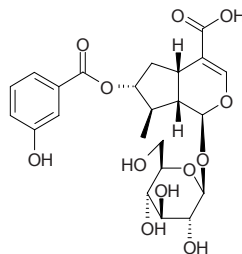
Bellidifolin 8-*O*- $\beta$ -glucopyranoside  $C_{20}H_{20}O_{11}$  (436.38). Yellowish powder, mp 227–229°C. **Pharm:** Antibacterial (*Mycobacterium tuberculosis*); AChE inhibitor (MIC = 0.08 $\mu\text{g}$  = 0.18nmol; control Galanthamine MIC = 0.01 $\mu\text{g}$  = 0.03nmol, Physostigmine MIC = 0.005 $\mu\text{g}$  = 0.002nmol, Huperzine A MIC = 0.002 $\mu\text{g}$  = 0.0008nmol)<sup>[5039]</sup>. **Source:** BAO E ZHANG YA CAI *Swertia calycina*, DE GUO LONG DAN *Gentiana germanica*, DUO ZHI LONG DAN *Gentiana ramosa*, RI BEN ZHANG YA CAI *Swertia japonica*, SHANG ZUO ZHOU ZHANG YA CAI *Swertia tosaensis*, SU GEN ZHANG YA CAI *Swertia perennis*, TIAN YE LONG DAN *Gentiana campestris*, ZI SE ZHANG YA CAI *Swertia purpurascens*. **Ref:** 634, 658, 5039.

**20512 Swertiapunimarin**

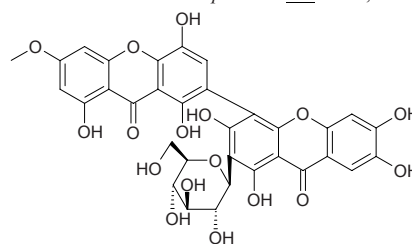
6'-*O*- $\beta$ -D-Glucopyranosylsweroside  $C_{22}H_{32}O_{14}$  (520.49). White powder, mp 95–97°C,  $[\alpha]_D^{26} = -169^\circ$  (H<sub>2</sub>O). **Source:** RI BEN ZHANG YA CAI *Swertia japonica*, ZI HONG ZHANG YA CAI *Swertia punicea*. **Ref:** 272, 2573.

**20513 Swertiaside A**

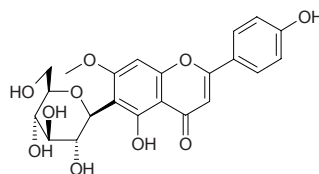
$C_{23}H_{28}O_{12}$  (496.47). **Source:** LIU QIU SHE GEN CAO *Ophiorrhiza liukiensis* (whole herb). **Ref:** 4527.

**20514 Swertipunicoside**

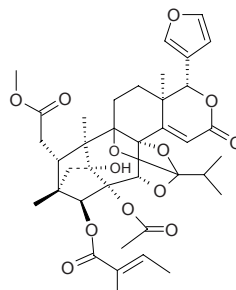
[137570-21-9]  $C_{33}H_{26}O_{17}$  (694.55). Yellow powder, mp > 360°C. **Pharm:** HIV-1 reverse transcriptase inhibitor (EC<sub>50</sub> = 3 $\mu\text{g}/\text{mL}$ ). **Source:** ZI HONG ZHANG YA CAI *Swertia punicea*. **Ref:** 1055, 1076.

**20515 Swertisin**

[6991-10-2]  $C_{22}H_{22}O_{10}$  (446.41). mp 248°C (dec). **Pharm:** Xanthinoxidase inhibitor (50 $\mu\text{g}/\text{mL}$ , InRt = 24.9%); flu virus sialidase inhibitor (91 $\mu\text{g}/\text{mL}$ , InRt = 7.5%); antihepatotoxin (rat, liver toxicosis induced by CCl<sub>4</sub> and GalN, 1.0mg/mL); hepatic sialidase inhibitor (mus). **Source:** DA ZAO *Ziziphus jujuba*, SUAN ZAO REN *Ziziphus jujuba* var. *spinosa*. **Ref:** 2, 1632, 1675, 1676, 1677.

**20516 Swietephragmin A**

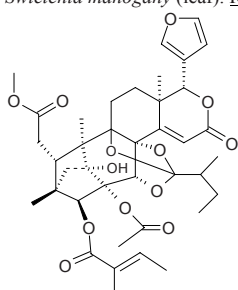
$C_{38}H_{46}O_{13}$  (710.78). White amorphous powder. **Source:** TAO HUA XIN MU *Swietenia mahogany* (leaf). **Ref:** 4420.



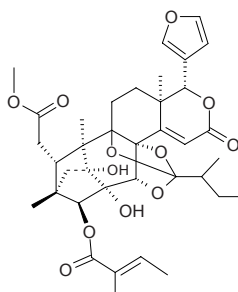


**20517 Swietephragmin B**

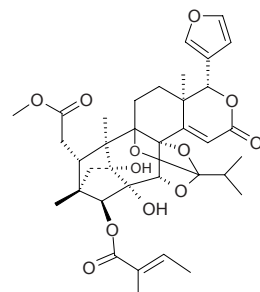
$C_{39}H_{48}O_{13}$  (724.81). White amorphous powder. Source: TAO HUA XIN MU *Swietenia mahogany* (leaf). Ref: 4420.

**20518 Swietephragmin C**

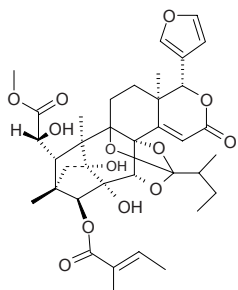
$C_{37}H_{46}O_{12}$  (682.77). White amorphous powder. Source: TAO HUA XIN MU *Swietenia mahogany* (leaf). Ref: 4420.

**20519 Swietephragmin D**

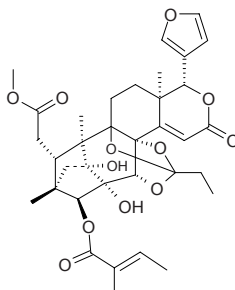
$C_{36}H_{44}O_{12}$  (668.74). White amorphous powder. Source: TAO HUA XIN MU *Swietenia mahogany* (leaf). Ref: 4420.

**20520 Swietephragmin E**

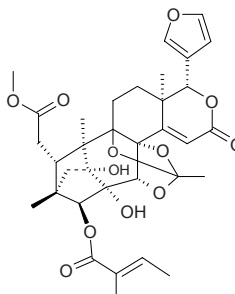
$C_{37}H_{46}O_{13}$  (698.77). White amorphous powder. Source: TAO HUA XIN MU *Swietenia mahogany* (leaf). Ref: 4420.

**20521 Swietephragmin F**

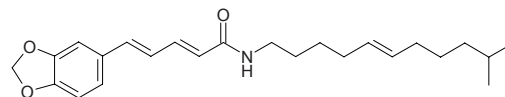
$C_{35}H_{42}O_{12}$  (654.72). White amorphous powder. Source: TAO HUA XIN MU *Swietenia mahogany* (leaf). Ref: 4420.

**20522 Swietephragmin G**

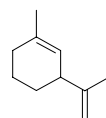
$C_{34}H_{40}O_{12}$  (640.69). White amorphous powder. Source: TAO HUA XIN MU *Swietenia mahogany* (leaf). Ref: 4420.

**20523 Sylvatine**

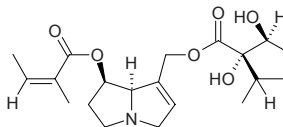
$C_{24}H_{33}NO_3$  (383.54). Source: BI BA *Piper longum*. Ref: 660.

**20524 Sylvestrene**

(*R*)-(+)-*m*-Mentha-6,8-diene [1461-27-4]  $C_{10}H_{16}$  (136.24). Source: DU HUO *Angelica pubescens* f. *biserrata* [Syn. *Angelica pubescens*]. Ref: 2.

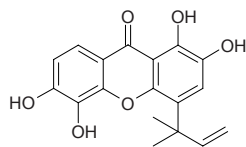
**20525 Symlandine**

$C_{20}H_{31}NO_6$  (381.47). Gum,  $[\alpha]_D = +4.4^\circ$  ( $c = 0.3$ ,  $CHCl_3$ ). Source: XI MEN FEI CAO *Symphytum officinale* (root: yield = 0.00015%dw). Ref: 3039.

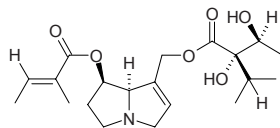


**20526 Symphoxanthone**

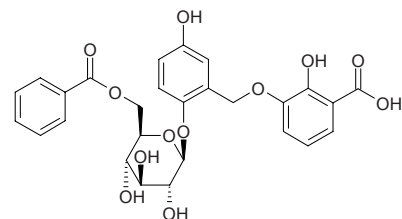
$C_{18}H_{16}O_6$  (328.32). Source: KA MAI LONG XIN FO NI A *Symphonia globulifera*, *Garcinia vilsiana* (bark). Ref: 1521, 3902.

**20527 Symphytine**

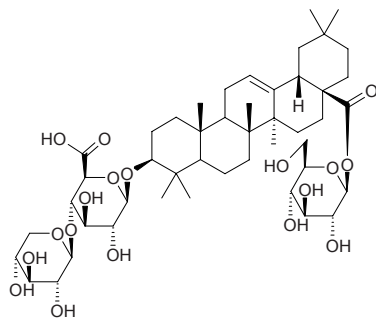
$C_{20}H_{31}NO_6$  (381.48). Pharm: Carcinogen (liver). Source: E GUO XI MEN FEI CAO *Symphytum x uplandicum*, DONG FANG XI MEN FEI CAO *Symphytum orientale*, XI MEN FEI CAO *Symphytum officinale* (root: yield = 0.00040%dw)<sup>[3039]</sup>. Ref: 658, 3039.

**20528 Symplocoside**

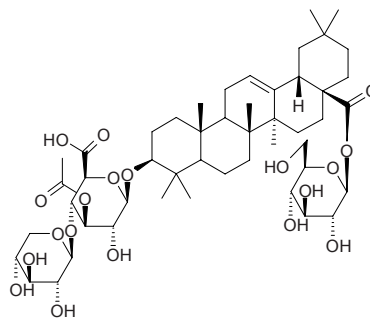
$C_{27}H_{26}O_{12}$  (542.50). White powder. Pharm: Phosphodiesterase I inhibitor (*in vitro*,  $IC_{50} = (122 \pm 0.02) \mu\text{mol/L}$ , control Cysteine,  $IC_{50} = (274 \pm 0.07) \mu\text{mol/L}$ ); thymidine phosphorylase inhibitor (*in vitro*,  $IC_{50} = (190 \pm 1) \mu\text{mol/L}$ , control 7-Deazaxanthine,  $IC_{50} = (38.68 \pm 4.42) \mu\text{mol/L}$ ); urease inhibitor ( $IC_{50} = (54.13 \pm 0.71) \mu\text{mol/L}$ , control Thiourea,  $IC_{50} = (21.01 \pm 0.93) \mu\text{mol/L}$ ). Source: ZHU ZI SHU *Symplocos racemosa*. Ref: 4093.

**20529 Symplocos glomerata saponin 1**

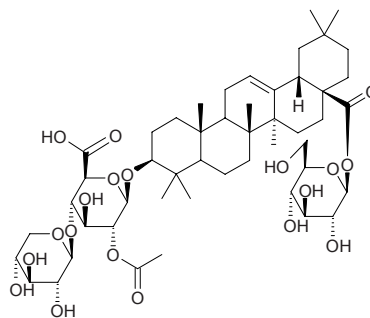
3-*O*-[ $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -*D*-glucuronopyranosyl]-28-*O*-[ $\beta$ -*D*-glucopyranosyl]-oleanolic acid; Salsolside C  $C_{47}H_{74}O_{18}$  (927.10). Source: TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex), TU DANG GUI *Aralia cordata*, *Salsola micranthera*. Ref: 3783.

**20530 Symplocos glomerata saponin 2**

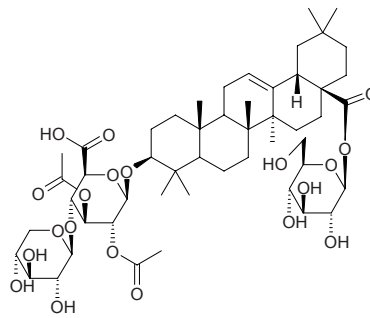
3-*O*-[ $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 4)-[3-*O*-acetyl]- $\beta$ -*D*-glucuronopyranosyl]-28-*O*-[ $\beta$ -*D*-glucopyranosyl]-oleanolic acid; 3'-*O*-Acetylsalsolside C  $C_{49}H_{76}O_{19}$  (969.14). White powder,  $[\alpha]_D^{21} = +9^\circ$  ( $c = 0.5$ , MeOH). Source: TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex). Ref: 3783.

**20531 Symplocos glomerata saponin 3**

3-*O*-[ $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 4)-[2-*O*-acetyl]- $\beta$ -*D*-glucuronopyranosyl]-28-*O*-[ $\beta$ -*D*-glucopyranosyl]-oleanolic acid; 2'-*O*-Acetylsalsolside C  $C_{49}H_{76}O_{19}$  (969.14). White powder,  $[\alpha]_D^{21} = 0^\circ$  ( $c = 0.46$ , MeOH). Source: TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex). Ref: 3783.

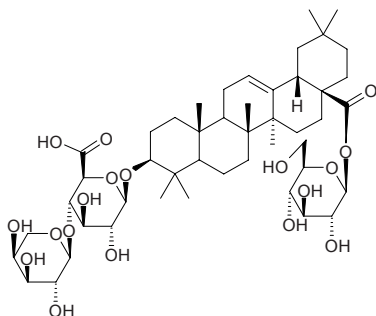
**20532 Symplocos glomerata saponin 4**

3-*O*-[ $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 4)-[2,3-*O*-diacetyl]- $\beta$ -*D*-glucuronopyranosyl]-28-*O*-[ $\beta$ -*D*-glucopyranosyl]-oleanolic acid; 2',3'-*O*-Diacetylsalsolside C  $C_{51}H_{78}O_{20}$  (1011.18). White powder,  $[\alpha]_D^{21} = +1.5^\circ$  ( $c = 0.2$ , MeOH). Source: TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex). Ref: 3783.

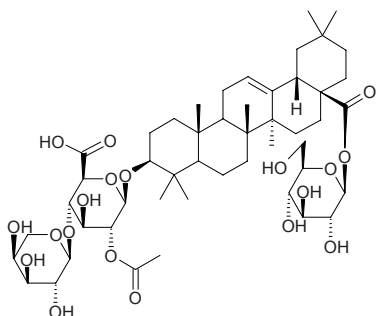


**20533 *Symplocos glomerata* saponin 5**

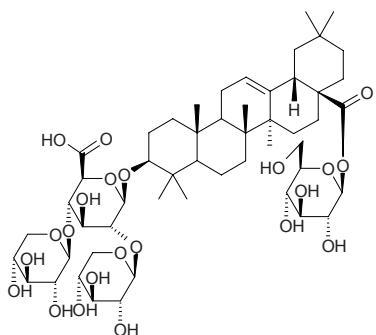
3-*O*-[ $\alpha$ -*L*-Arabinopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -*D*-glucuronopyranosyl]-28-*O*-[ $\beta$ -*D*-glucopyranosyl]-oleanolic acid C<sub>47</sub>H<sub>74</sub>O<sub>18</sub> (927.10). White powder,  $[\alpha]_D^{21} = +4.7^\circ$  ( $c = 0.38$ , MeOH). **Source:** TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex). **Ref:** 3783.

**20534 *Symplocos glomerata* saponin 6**

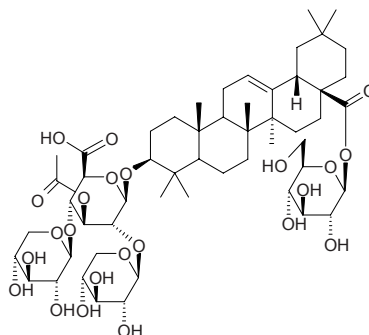
3-*O*-[ $\alpha$ -*L*-Arabinopyranosyl-(1 $\rightarrow$ 4)]-2-*O*-acetyl]- $\beta$ -*D*-glucuronopyranosyl]-28-*O*-[ $\beta$ -*D*-glucopyranosyl]-oleanolic acid C<sub>49</sub>H<sub>76</sub>O<sub>19</sub> (969.14). White powder,  $[\alpha]_D^{21} = +8^\circ$  ( $c = 0.55$ , MeOH). **Source:** TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex). **Ref:** 3783.

**20535 *Symplocos glomerata* saponin 7**

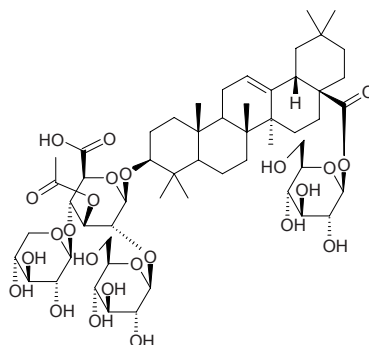
3-*O*-{[ $\beta$ -*D*-Xylopyranosyl(1 $\rightarrow$ 2)]-[ $\beta$ -*D*-xylopyranosyl(1 $\rightarrow$ 4)]- $\beta$ -*D*-glucuronopyranosyl}-28-*O*-[ $\beta$ -*D*-glucopyranosyl]-oleanolic acid; Salsolside E C<sub>52</sub>H<sub>82</sub>O<sub>22</sub> (1059.22). **Source:** TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex). **Ref:** 3783.

**20536 *Symplocos glomerata* saponin 8**

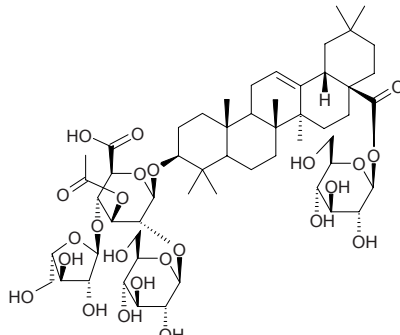
3-*O*-{[ $\beta$ -*D*-Xylopyranosyl-(1 $\rightarrow$ 2)]-[ $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 4)]-[3-*O*-acetyl]- $\beta$ -*D*-glucuronopyranosyl]-28-*O*-[ $\beta$ -*D*-glucopyranosyl]-oleanolic acid C<sub>54</sub>H<sub>84</sub>O<sub>23</sub> (1101.26). White powder,  $[\alpha]_D^{21} = +1.4^\circ$  ( $c = 0.416$ , pyridine). **Source:** TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex). **Ref:** 3783.

**20537 *Symplocos glomerata* saponin 9**

3-*O*-{[ $\beta$ -*D*-Glucopyranosyl-(1 $\rightarrow$ 2)]-[ $\beta$ -*D*-xylopyranosyl-(1 $\rightarrow$ 4)]-[3-*O*-acetyl]- $\beta$ -*D*-glucuronopyranosyl}-28-*O*-[ $\beta$ -*D*-glucopyranosyl]-oleanolic acid C<sub>55</sub>H<sub>86</sub>O<sub>24</sub> (1131.28). White powder,  $[\alpha]_D^{21} = +7.7^\circ$  ( $c = 0.21$ , pyridine). **Source:** TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex). **Ref:** 3783.

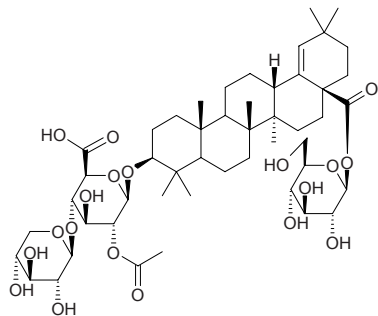
**20538 *Symplocos glomerata* saponin 10**

3-*O*-{[ $\beta$ -*D*-Glucopyranosyl(1 $\rightarrow$ 2)]-[ $\alpha$ -*L*-arabinofuranosyl-(1 $\rightarrow$ 4)]-[3-*O*-acetyl]- $\beta$ -*D*-glucuronopyranosyl}-28-*O*-[ $\beta$ -*D*-glucopyranosyl]-oleanolic acid C<sub>55</sub>H<sub>86</sub>O<sub>24</sub> (1131.28). White powder,  $[\alpha]_D^{21} = -10.8^\circ$  ( $c = 0.61$ , MeOH). **Source:** TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex). **Ref:** 3783.

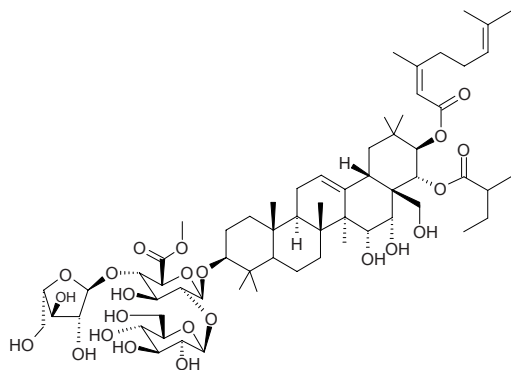


**20539 *Symplocos glomerata* saponin 11**

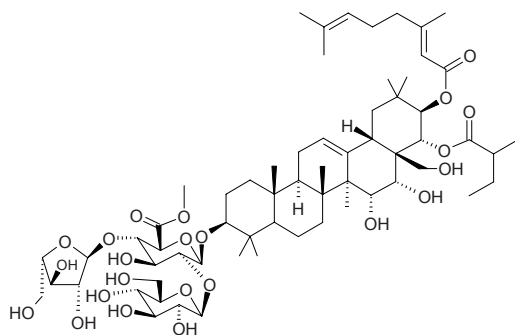
3 $\beta$ -O-[ $\beta$ -D-Xylopyranosyl(1 $\rightarrow$ 4)-[2-O-acetyl]- $\beta$ -D-glucuronopyranosyl]-28-O-[ $\beta$ -D-glucopyranosyl]-morolic acid C<sub>49</sub>H<sub>76</sub>O<sub>19</sub> (969.14). [ $\alpha$ ]<sub>D</sub><sup>21</sup> = -8.1° (*c* = 0.28, MeOH). Source: TUAN HUA SHAN FAN *Symplocos glomerata* (stem cortex). Ref: 3783.

**20540 *Symplocoside A***

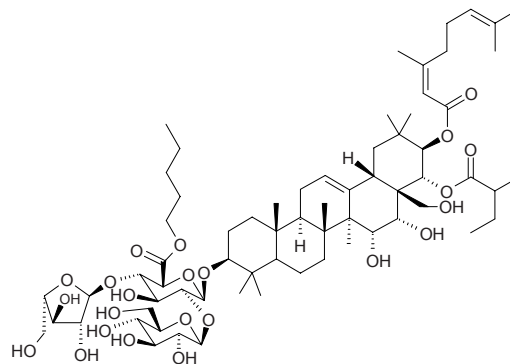
C<sub>63</sub>H<sub>100</sub>O<sub>23</sub> (1225.49). White amorphous powder, mp 189–191°C, [ $\alpha$ ]<sub>D</sub><sup>18</sup> = -29° (*c* = 0.99, MeOH). Pharm: Cytotoxic (*in vitro*, KB, IC<sub>50</sub> = 1.72  $\mu$ g/mL; HCT8, IC<sub>50</sub> = 4.31  $\mu$ g/mL; A549, IC<sub>50</sub> = 0.67  $\mu$ g/mL; normal hmn embryo lung fibroblasts HELF, IC<sub>50</sub> = 4.62  $\mu$ g/mL). Source: HUA SHAN FAN *Symplocos chinensis* (root). Ref: 4785.

**20541 *Symplocoside B***

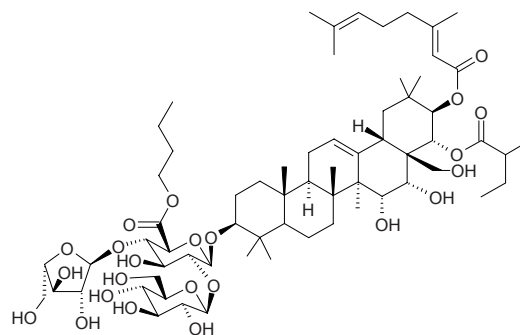
C<sub>63</sub>H<sub>100</sub>O<sub>23</sub> (1225.49). White amorphous powder, mp 189–191°C, [ $\alpha$ ]<sub>D</sub><sup>18</sup> = -23° (*c* = 1.02, MeOH). Source: HUA SHAN FAN *Symplocos chinensis* (root). Ref: 4785.

**20542 *Symplocoside C***

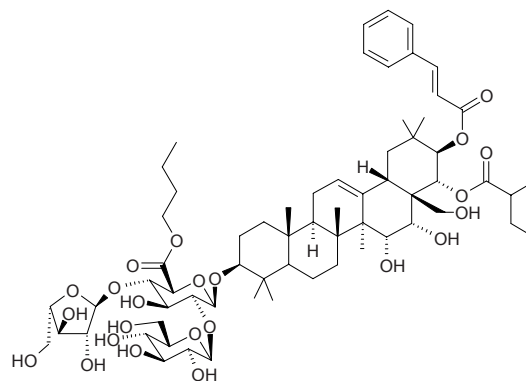
C<sub>66</sub>H<sub>106</sub>O<sub>23</sub> (1267.57). White amorphous powder, mp<sup>21</sup> 7–219°C, [ $\alpha$ ]<sub>D</sub><sup>24</sup> = -23.3° (*c* = 1.03, MeOH). Pharm: Cytotoxic (*in vitro*, HCT8, IC<sub>50</sub> = 2.86  $\mu$ g/mL; BGC823, IC<sub>50</sub> = 7.29  $\mu$ g/mL). Source: HUA SHAN FAN *Symplocos chinensis* (root). Ref: 4785.

**20543 *Symplocoside D***

C<sub>66</sub>H<sub>106</sub>O<sub>23</sub> (1267.57). White amorphous powder, mp 213–215°C, [ $\alpha$ ]<sub>D</sub><sup>24</sup> = -15.8° (*c* = 0.70, MeOH). Source: HUA SHAN FAN *Symplocos chinensis* (root). Ref: 4785.

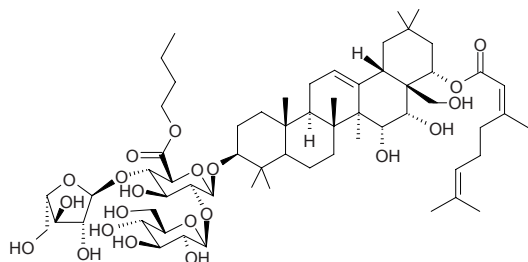
**20544 *Symplocoside E***

C<sub>65</sub>H<sub>98</sub>O<sub>23</sub> (1247.49). White amorphous powder, mp 211–213°C, [ $\alpha$ ]<sub>D</sub><sup>24</sup> = -21.4° (*c* = 1.02, MeOH). Source: HUA SHAN FAN *Symplocos chinensis* (root). Ref: 4785.

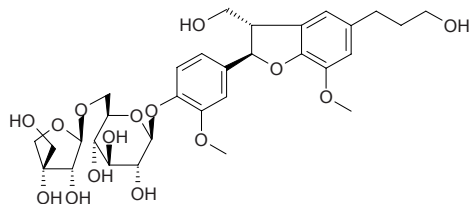


**20545 Symplocoside F**

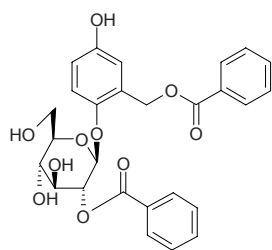
$C_{61}H_{98}O_{21}$  (1167.45). White amorphous powder, mp 234~236°C,  $[\alpha]_D^{24} = -24.3^\circ$  ( $c = 0.70$ , MeOH). **Pharm:** Cytotoxic (*in vitro*, HCT8,  $IC_{50} = 4.04\mu\text{g/mL}$ ).  
**Source:** HUA SHAN FAN *Symplocos chinensis* (root). **Ref:** 4785.

**20546 Symploglignanoside A**

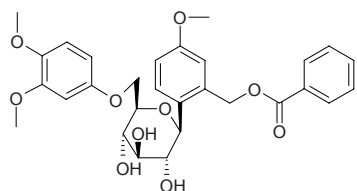
$C_{31}H_{42}O_{15}$  (654.67). White powder, mp 130~132°C,  $[\alpha]_D^{25} = -24.8^\circ$  ( $c = 0.05$ , MeOH). **Source:** SHAN FAN GEN *Symplocos caudata*. **Ref:** 2535.

**20547 Symploside**

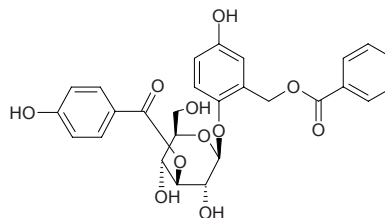
$C_{27}H_{26}O_{10}$  (510.50). White powder. **Pharm:** Phosphodiesterase I inhibitor (*in vitro*,  $IC_{50} = (722\pm 0.03)\mu\text{mol/L}$ , control Cysteine,  $IC_{50} = (274\pm 0.07)\mu\text{mol/L}$ ); thymidine phosphorylase inhibitor (*in vitro*,  $IC_{50} = (208\pm 1)\mu\text{mol/L}$ , control 7-Deazaxanthine,  $IC_{50} = (38.68\pm 4.42)\mu\text{mol/L}$ ). **Source:** ZHU ZI SHU *Symplocos racemosa*. **Ref:** 4093.

**20548 Symploveroside**

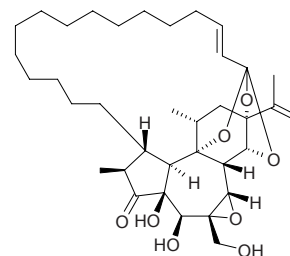
$C_{29}H_{32}O_{10}$  (540.57). Colorless amorphous solid. **Pharm:** Phosphodiesterase I inhibitor (*in vitro*,  $IC_{50} = (909\pm 0.1)\mu\text{mol/L}$ , control Cysteine,  $IC_{50} = (274\pm 0.07)\mu\text{mol/L}$ ); thymidine phosphorylase inhibitor (*in vitro*,  $IC_{50} = (489\pm 4)\mu\text{mol/L}$ , control 7-Deazaxanthine,  $IC_{50} = (38.68\pm 4.42)\mu\text{mol/L}$ ). **Source:** ZHU ZI SHU *Symplocos racemosa*. **Ref:** 4093.

**20549 Symponoside**

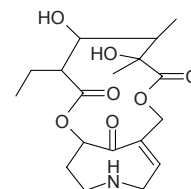
$C_{27}H_{26}O_{11}$  (526.50). White powder. **Pharm:** Phosphodiesterase I inhibitor (*in vitro*,  $IC_{50} = (698\pm 0.06)\mu\text{mol/L}$ , control Cysteine,  $IC_{50} = (274\pm 0.07)\mu\text{mol/L}$ ); thymidine phosphorylase inhibitor (*in vitro*,  $IC_{50} = (196\pm 2)\mu\text{mol/L}$ , control 7-Deazaxanthine,  $IC_{50} = (38.68\pm 4.42)\mu\text{mol/L}$ ). **Source:** ZHU ZI SHU *Symplocos racemosa*. **Ref:** 4093.

**20550 Synaptolepis factor K<sub>1</sub>**

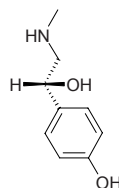
$C_{36}H_{54}O_8$  (614.83). **Pharm:** Irritant. **Source:** family Thymelaeaceae spp. **Ref:** 658.

**20551 Syneilesine**

$C_{18}H_{27}NO_7$  (369.42). **Source:** TU ER SAN *Syneilesis palmata* (in 1974, the compound was isolated from the plant by M.Hikichi et al.). **Ref:** 5505.

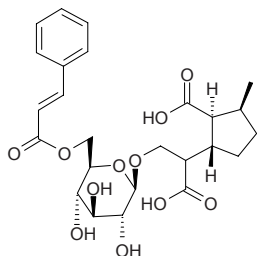
**20552 Synephrine**

Oxedrine [94-07-5]  $C_9H_{13}NO_2$  (167.21). mp 151~152°C, 184~185°C, 118~119°C (dec). **Source:** GAN PI *Citrus chachiensis* (dried ripe pericarp: content = 0.023%)<sup>[5508]</sup>, JU PI *Citrus reticulata* (dried ripe pericarp: content = 0.28%)<sup>[5508]</sup>, content = 0.058%<sup>[5501]</sup>, WU ZHU YU *Evodia rutaecarpa* (fruit: content = 0.19%)<sup>[5501]</sup>, ZHI SHI *Citrus aurantium* (young fruit: content scope = 0.24%~1.45%)<sup>[5501]</sup>. **Ref:** 4, 5501, 5508.

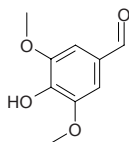


**20553 Syringafghanoside**

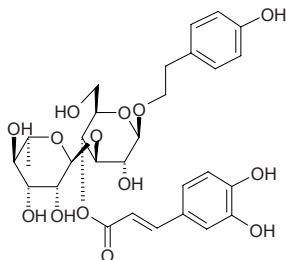
$C_{25}H_{32}O_{11}$  (508.53). Colorless amorphous powder,  $[\alpha]_D^{28} = -28^\circ$  ( $c = 1.01$ , MeOH). Source: A FU HAN DING XIANG *Syringa afghanica*. Ref: 2006.

**20554 Syringaldehyde**

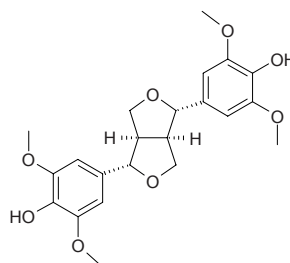
[134-96-3]  $C_9H_{10}O_4$  (182.18). Pharm: Cytotoxic ( $P_{388}$ ,  $ED_{50} > 50\mu\text{g/mL}$ , control Mithramycin,  $ED_{50} = 0.58\mu\text{g/mL}$ ; A549,  $ED_{50} > 50\mu\text{g/mL}$ , Mithramycin,  $ED_{50} = 0.073\mu\text{g/mL}$ ; HT29,  $ED_{50} > 50\mu\text{g/mL}$ , Mithramycin,  $ED_{50} = 0.076\mu\text{g/mL}$ )<sup>[5421]</sup>; cytotoxic inactive (*in vitro*, HONE-1 and NUGC cancer cell lines, no significant activity)<sup>[3069]</sup>. Source: DANG SHEN *Codonopsis pilosula*, TAI WAN FU RONG *Hibiscus taiwanensis*, TAI WAN PU GONG YING *Taraxacum formosanum* (fresh root), ZHONG GUO XIU QIU *Hydrangea chinensis* (root), MO ZHI JIAO GU CUI *Casearia membranacea* (stem). Ref: 2, 2529, 3069, 4488, 5421.

**20555 Syringalide 3'- $\alpha$ -L-rhamnopyranoside**

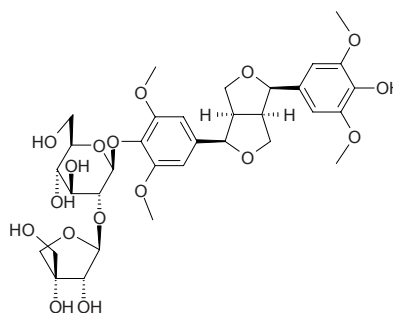
$C_{29}H_{36}O_{14}$  (608.60). Source: ROU CONG RONG *Cistanche deserticola*, GUAN HUA ROU CONG RONG *Cistanche tubulosa*. Ref: 2448.

**20556 (+)-Syringaresinol**

Lirioresinol B [21453-69-0]  $C_{22}H_{26}O_8$  (418.45). Colorless prismatic crystals ( $\text{CH}_3\text{OH}$ ), mp 169–171°C;  $[\alpha]_D^{24} = -7.47^\circ$  ( $c = 0.3$ ,  $\text{CHCl}_3$ ). Pharm: Cytotoxic (Meth-A sarcoma cell line,  $ED_{50} > 10\mu\text{g/mL}$ , LLC cell line,  $ED_{50} > 10\mu\text{g/mL}$ ); aldose reductase inhibitor inactive ( $IC_{50} > 100\mu\text{mol/L}$ ,  $100\mu\text{mol/L}$  InRt = 13%, control Epalrestat,  $IC_{50} = 0.072\mu\text{mol/L}$ )<sup>[4530]</sup>; NO production inhibitor ( $IC_{50} = 53.5\mu\text{mol/L}$ )<sup>[4526]</sup>; DPPH scavenger ( $IC_{50} = 19.5\mu\text{mol/L}$ )<sup>[4526]</sup>; antioxidant (superoxide anion scavenger ( $100\mu\text{mol/L}$ , InRt =  $(55.1 \pm 0.3)\%$ , positive control (+)-Catechin,  $IC_{50} = (3.67 \pm 0.14)\mu\text{mol/L}$ )<sup>[4514]</sup>; bone resorption inhibitor (bones were cultured with PTH  $200\mu\text{mol/L}$ ,  $^{45}\text{Ca}$  release =  $(23.3 \pm 1.9)\%$ ,  $p < 0.001$ , control  $^{45}\text{Ca}$  release =  $(15.4 \pm 1.3)\%$ )<sup>[4921]</sup>. Source: HAI JIN BI XIE *Dioscorea spongiosa* (rhizome), HOU PO *Magnolia officinalis*, HUO YAN HUA *Phlogacanthus curviflorus* (root: yield = 0.00031%dw)<sup>[4799]</sup>, KAI KOU JIAN *Tupistra chinensis* (underground part)<sup>[4676]</sup>, LANG DU *Stellera chamaejasme*, LEI GONG TENG *Tripterygium wilfordii*, LIAO GE WANG GEN *Wikstroemia indica*, MAO CI JIN JI ER *Caragana tibetica* (stem), OU ZHOU SHUI QING GANG *Fagus sylvatica*, QING FENG TENG *Sinomenium acutum*, QING HAO *Artemisia apiacea* [Syn. *Artemisia carvifolia*; *Artemisia caruifolia*] (aerial parts), SHUI MU XUE LIAN HUA *Saussurea medusa* (whole herb), TAI WAN FU RONG *Hibiscus taiwanensis*, WU GENG WU JIA PI *Acanthopanax sessiliflorus*, *Populus* sp., *Wikstroemia* sp. Ref: 2, 660, 683, 658, 2529, 3510, 4514, 4526, 4530, 4676, 4799, 4921.

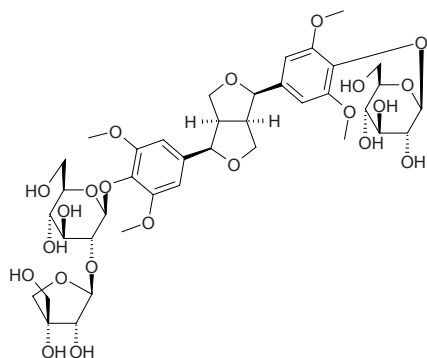
**20557 Syringaresinol-4-O- $\beta$ -D-apiofuranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-glucopyranoside**

[136997-64-3]  $C_{33}H_{44}O_{17}$  (712.71). Source: HE HUAN PI *Albizzia julibrissin*. Ref: 660.



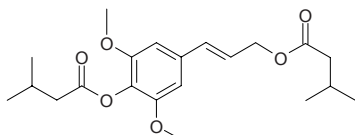
**20558 Syringaresinol-4-O-β-D-apiofuranosyl-(1→2)-β-D-glucopyranosyl-4'-O-β-D-glucopyranoside**

[136997-65-4] C<sub>39</sub>H<sub>54</sub>O<sub>22</sub> (874.85). Source: HE HUAN PI *Albizia julibrissin*. Ref: 660.



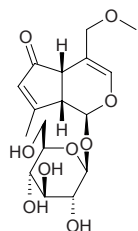
**20559 Syringenin diisovalerate**

Sinapyl alcohol diisovalerate [112561-77-0] C<sub>21</sub>H<sub>30</sub>O<sub>6</sub> (378.47). Crystals (hexane), mp 68–59°C. Source: *Artemisia assoana*. Ref: 1521.



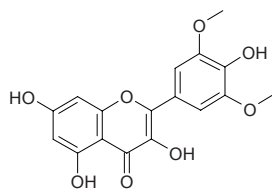
**20560 Syringenone**

[58546-53-5] C<sub>17</sub>H<sub>24</sub>O<sub>9</sub> (372.37). Amorphous. Source: OU DING XIANG *Syringa vulgaris*. Ref: 1521.



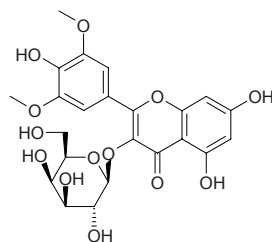
**20561 Syringetin**

C<sub>17</sub>H<sub>14</sub>O<sub>8</sub> (346.30). Source: BAI GUO YE *Ginkgo biloba*. Ref: 660.



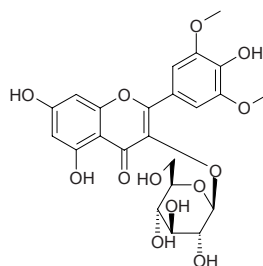
**20562 Syringetin-3-O-β-D-galactopyranoside**

C<sub>23</sub>H<sub>24</sub>O<sub>13</sub> (508.44). Source: TIAN CONG *Philydrum lanuginosum*. Ref: 6.



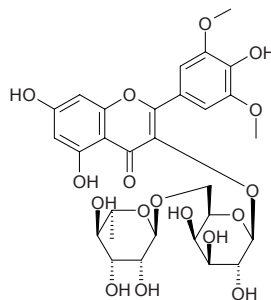
**20563 Syringetin-3-O-β-D-glucoside**

C<sub>23</sub>H<sub>24</sub>O<sub>13</sub> (508.44). Yellow powder. Source: LUO TUO CI *Alhagi pseudalhagi*. Ref: 498.



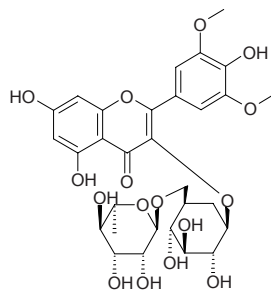
**20564 Syringetin-3-O-robinobioside**

Syringetin-3-O-α-L-rhamnopyranosyl-(1→6)-β-D-galactopyranoside C<sub>29</sub>H<sub>34</sub>O<sub>17</sub> (654.58). Amorphous yellow powder. Source: CHANG CHUN HUA *Catharanthus roseus* [Syn. *Vinca rosea*; *Lochera rosea*]. Ref: 1885.



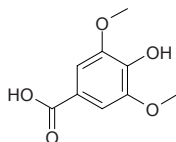
**20565 Syringetin-3-rutinoside**

C<sub>30</sub>H<sub>36</sub>O<sub>16</sub> (652.61). Source: BAI GUO YE *Ginkgo biloba*. Ref: 660.

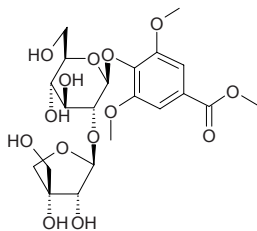


**20566 Syringic acid**

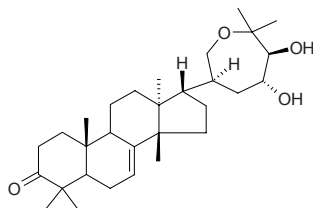
4-Hydroxy-3,5-dimethoxybenzoic acid [530-57-4] C<sub>9</sub>H<sub>10</sub>O<sub>5</sub> (198.18). mp 204–205°C. **Pharm:** Antioxidant (hydroxyl radical scavenger, IC<sub>50</sub> = 2.61 μmol/L, control EGCG, IC<sub>50</sub> = 0.43 μmol/L, superoxide anion radical scavenger, IC<sub>50</sub> = 3.46 μmol/L, control EGCG, IC<sub>50</sub> = 0.53 μmol/L)<sup>[4499]</sup>; antibacterial; antifungal; local anesthetic; sedative; β-Hexosaminidase inhibitor inactive (RBL-2H3 cells, inhibits release of β-hexosaminidase, 100 μmol/L, InRt = (7.6±5.4)%<sup>[4347]</sup>); NO production inhibitor (*in vitro*, LPS-activated mouse peritoneal macrophages, 3 μmol/L, 10 μmol/L, 30 μmol/L, 100 μmol/L, InRt = 9.3%, 7.5%, 7.2%, 28%, respectively; control L-NMMA, 3 μmol/L, 10 μmol/L, 30 μmol/L, 100 μmol/L, InRt = 10.3%, 15%, 34.1%, 63.1%, respectively)<sup>[4691]</sup>. **Source:** BAI HUA YING SHAN HONG *Rhododendron mucronatum*, BAN LAN GEN *Isatis indigotica* (dried root: mean content of 5 origins = 0.00029%)<sup>[5508]</sup>, DA CHE QIAN *Plantago major*, DA YE JIN HUA CAO *Stenoloma chusanum*, HEI DA DOU *Glycine max*, HUI XIANG *Foeniculum vulgare*, HUI XIANG JING YE *Foeniculum vulgare*, JI XING ZI *Impatiens balsamina*, KAI KOU JIAN *Tupistra chinensis* (underground part)<sup>[4676]</sup>, MAN SHAN HONG *Rhododendron dauricum*, MO SHI ZI *Quercus infectoria* (parasitic bee: *Cynips gallae-tinctoriae*), QI ZHOU YI ZHI HAO *Conyza canadensis* [Syn. *Erigeron canadensis*], SANG HUANG *Phellinus igniarius* (sporocarp: yield = 0.00060%<sup>[4747]</sup>), TAI WAN FU RONG *Hibiscus taiwanensis*, TAI WAN PU GONG YING *Taraxacum formosanum* (fresh root), TU FU LING *Smilax glabra*, XIAN MAO *Curculigo orchioides* (rhizome), XIAO HONG SHEN *Rubia yunnanensis* (root: yield = 0.0021%<sup>[4747]</sup>), XUAN FU HUA *Inula britannica*, YAO SHU KUI *Althaea officinalis*, YING SHAN HONG *Rhododendron mucronulatum*, ZHAO SHAN BAI *Rhododendron micranthum*, ZI BAI PI *Catalpa ovata*, *Citrus* sp., occurs in many plants. **Ref:** 6, 336, 658, 660, 2529, 4347, 4488, 4499, 4676, 4691, 4747, 5508.

**20567 Syringic acid methyl ester-4-O-β-D-apiofuranosyl-(1→2)-β-D-glucopyranoside**

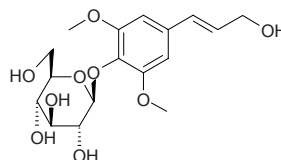
C<sub>21</sub>H<sub>30</sub>O<sub>14</sub> (506.46). **Source:** HE HUAN PI *Albizia julibrissin*. **Ref:** 660.

**20568 Syringic aldehyde**

C<sub>30</sub>H<sub>48</sub>O<sub>4</sub> (472.71). **Source:** *Eurycoma* sp. **Ref:** 4556.

**20569 Syringin**

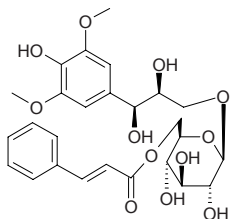
Sinapyl alcohol 4'-O-β-glucopyranoside; Magnolenin; Shashenoside I; Syringopicroside [118-34-3] C<sub>17</sub>H<sub>24</sub>O<sub>6</sub> (372.38). White granular crystals, mp 192°C (MeOH). **Pharm:** Anti-inflammatory (mouse, inhibits increased vascular permeability by acetic acid, 30mg/(kg·d), orl, InRt = 25%, control Indomethacin, 100mg/(kg·d), orl, InRt = 45%)<sup>[4073]</sup>; anti-inflammatory (rat, acute paw edema by carrageen, 30mg/(kg·d), orl, 1h,3h,5h, InRt = 8%, 31%, 16%, control Ibuprofen, 100mg/(kg·d), orl, 1h,3h,5h, InRt = 42%, 55%, 47%)<sup>[4073]</sup>; analgesic (mouse: acetic acid induced writhing, 30mg/(kg·d), orl, InRt = 37%, control Aspirin, 100mg/(kg·d), orl, InRt = 68%; hot plate test, 30mg/(kg·d), orl, increased action time = 51%; control Morphine, increased action time = 138%)<sup>[4073]</sup>; anti-inflammatory (inhibits production of COX metabolite PGE<sub>2</sub>, IC<sub>50</sub> = 35.5 μmol/L; reduces TXB2 level, IC<sub>50</sub> = 29.3 μmol/L)<sup>[4455]</sup>; antioxidant inactive (*in vitro*, DPPH scavenger, IC<sub>50</sub> > 500 μmol/L; control Vitamin E, IC<sub>50</sub> = 20.1 μmol/L)<sup>[4787]</sup>; α-glucosidase inhibitor inactive (type VI, control 1-Deoxyojirimycin, IC<sub>50</sub> = 0.3mmol/L)<sup>[4155]</sup>; thrombin inhibitor inactive<sup>[4155]</sup>; β-glucuronidase inhibitor inactive<sup>[4155]</sup>. **Source:** CANG ZHU *Atractylodes lancea*, CHANG MAO FENG MAO JU *Saussurea superba* [Syn. *Saussurea hieracioides*] (whole herb: content = 0.0304%)<sup>[5508]</sup>, CHUAN DANG SHEN *Codonopsis tangshen*, CI WU JIA *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*] (root and rhizome: mean content = 0.069%<sup>[5508]</sup>), DANG SHEN *Codonopsis pilosula*, DONG BEI CI REN SHEN *Oplopanax elatus*, DU ZHONG *Eucommia ulmoides*, DUN BAO XUE LIAN *Saussurea nigrescens* (whole herb: content = 0.0304%)<sup>[5508]</sup>, HE HUA XUE LIAN *Saussurea phaeantha* (whole herb: content = 0.0102%)<sup>[5508]</sup>, HE HUA YU LAN *Magnolia grandiflora*, HE YE FENG MAO JU *Saussurea graminea* (whole herb: content = 0.0154%)<sup>[5508]</sup>, HONG MAO WU JIA PI *Acanthopanax giraldii* [Syn. *Acanthopanax giraldii* var. *inermis*; *Eleutherococcus giraldii*] (root and stem: content = 0.035%)<sup>[5508]</sup>, KUO YE OU NV ZFEN *Phillyrea latifolia* (leaf), LIU CHUAN YU *Linaria vulgaris*, LIU YE CEN *Fraxinus stylosa*, MAO PAO TONG *Paulownia tomentosa*, MEI HUA FENG MAO JU *Saussurea pulchella* (whole herb: content = 0.0138%)<sup>[5508]</sup>, MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*], PAO TONG *Paulownia fortunei*, RI BEN AN XI XIANG JING PI *Syrax japonica* (stem cortex: yield = 0.00077%<sup>[4787]</sup>), *Saussurea amarafisch* (whole herb: content = 0.0241%)<sup>[5508]</sup>, *Saussurea prostrata* (whole herb: content = 0.0636%)<sup>[5508]</sup>, *Saussurea soroseris* (whole herb: content = 0.0044%)<sup>[5508]</sup>, SHI LUO ZI *Anethum graveolens* (fruit), SHU QU FENG MAO JU *Saussurea gnaphaloides* (whole herb: content = 0.0327%)<sup>[5508]</sup>, SI JI QING *Ilex chinensis* [Syn. *Ilex purpurea*], TIAN NV MU LAN *Magnolia sieboldii* (stem cortex), WU JIA PI *Acanthopanax gracilistylus* (dried root cortex: mean content = 0.0228%)<sup>[5508]</sup>, XIAO HUA FENG MAO JU *Saussurea parviflora* (whole herb: content = 0.0176%)<sup>[5508]</sup>, XUE LIAN *Saussurea involucreta* (whole herb: content = 0.0232%)<sup>[5508]</sup>, YUN NAN TU SI ZI *Cuscuta reflexa*, ZI DING XIANG *Syringia oblata* (leaf: content = 0.144%)<sup>[5508]</sup>. **Ref:** 2, 6, 450, 523, 527, 660, 1227, 4073, 4155, 4177, 4237, 4348, 4415, 4787, 5508.



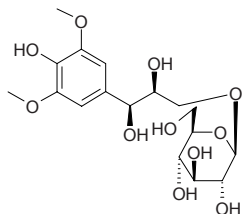


**20570 (7*S*,8*S*)-Syringoylglycerol 9-*O*-(6'-*O*-cinnamoyl)- $\beta$ -*D*-glucopyranoside**

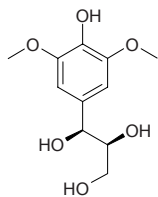
$C_{26}H_{32}O_{12}$  (536.54). Colorless oil,  $[\alpha]_D^{23} = -31.5^\circ$  ( $c = 1.0$ , MeOH). **Pharm:**  $\alpha$ -Glucosidase inhibitor (rat intestinal  $\alpha$ -glucosidase, 3mmol/L, InRt = 54%; control 1-Deoxynojirimycin, 0.3 $\mu$ mol/L, InRt = 58%). **Source:** SHEN XIANG CAO *Hyssopus officinalis* (leaf). **Ref:** 3750.

**20571 (7*S*,8*S*)-Syringoylglycerol 9-*O*- $\beta$ -*D*-glucopyranoside**

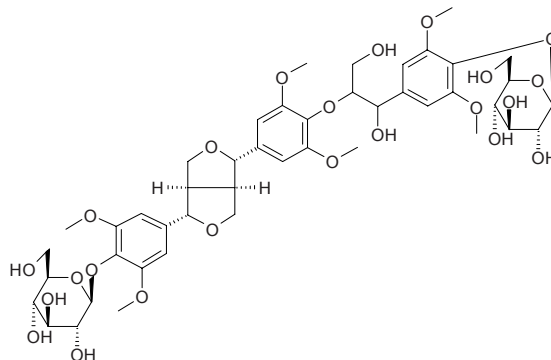
$C_{17}H_{26}O_{11}$  (406.39). Colorless oil,  $[\alpha]_D^{23} = -17.7^\circ$  ( $c = 0.5$ , MeOH). **Pharm:**  $\alpha$ -Glucosidase inhibitor (rat intestinal  $\alpha$ -glucosidase, 3mmol/L, InRt = 53%; control 1-Deoxynojirimycin, 0.3 $\mu$ mol/L, InRt = 58%). **Source:** SHEN XIANG CAO *Hyssopus officinalis* (leaf). **Ref:** 3750.

**20572 erythro-1-*C*-Syringylglycerol**

$C_{11}H_{16}O_6$  (244.25). **Source:** *Eurycoma* sp. **Ref:** 4556.

**20573 Syringylglycerol- $\beta$ -syringaresinol ether-4'',4'''-di-*O*- $\beta$ -*D*-glucopyranoside**

$C_{45}H_{60}O_{23}$  (968.97). **Source:** DU ZHONG *Eucommia ulmoides*. **Ref:** 2.

**20574 threo-1-*C*-Syringylglycerol**

$C_{11}H_{16}O_6$  (244.25). **Source:** *Eurycoma* sp. **Ref:** 4556.

