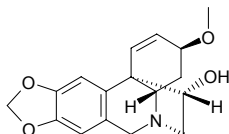


Volume 3 Isolated Compounds (H-M)

H

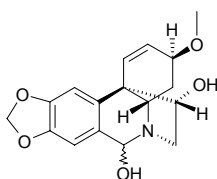
9186 Haemanthamine

Hemanthamine [466-75-1] $C_{17}H_{19}NO_4$ (301.35). mp 203~203.5°C, $[\alpha]_D^{25} = +19.7^\circ$ ($c = 3.8$, methanol), $[\alpha]_D^{25} = +33$ ($c = 1.25$, $CHCl_3$). Pharm: Antihypertensive (mild); antiretroviral and cytotoxic ($ID_{50} = 0.8\mu g/mL$, $TC_{50} = 1.0\mu g/mL$, TI_{50} (TC_{50}/ID_{50}) = 1.3)^[5026]. Source: XUE PIAN LIAN *Leucojum vernum* (bulb), family Amaryllidaceae spp. Ref: 658, 5026.



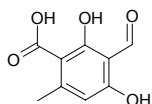
9187 Haemanthidine

Pancratine [466-73-9] $C_{17}H_{19}NO_5$ (317.34). mp 189~190°C (hemihydrate), $[\alpha]_D^{22} = -41^\circ$ ($c = 1$, $CHCl_3$). Exists in solution as a mixture of C6 epimers. Pharm: (-)-Haemanthidine activity: Cytotoxic (hmn prostate cancer LNCaP cell, $ED_{50} = 0.7\mu g/mL$; sarcoma cell HT, $ED_{50} = 1.6\mu g/mL$; A-431, KB, Lu1, ZR-75-1); analgesic (improved Koster trial, stronger than aspirin); sedative (mus, lengthens sleeping time induced by hexobarbital or pentobarbital.). Source: GAN FENG CAO *Zephyranthes candida*, SHI SUAN *Lycoris radiata* [Syn. *Amaryllis radiata*]. Ref: 6, 1719, 1720, 1721.



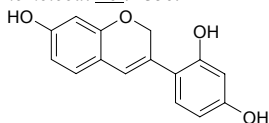
9188 Haematommic acid

$C_9H_8O_5$ (196.16). Source: JIN SI SHUA *Lethariella cladonioides* Ref: 660.



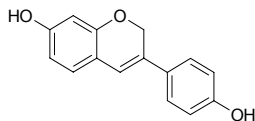
9189 Haginin D

2',4',7-Trihydroxyisoflavone $C_{15}H_{12}O_4$ (256.26). Pharm: Antioxidant (rat brain homogenate lipid peroxidation test, $IC_{50} = 0.2\mu mol/L$, control EGCg, $IC_{50} = 0.07\mu mol/L$). Source: TONG XING LIE PIAN HU ZHI ZI *Lespedeza homoloba*. Ref: 2356.



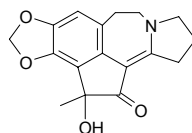
9190 Haginin E

$C_{15}H_{12}O_3$ (240.26). Amorphous powder. Pharm: Antioxidant (rat brain homogenate lipid peroxidation test, $IC_{50} = 0.3\mu mol/L$, control EGCg, $IC_{50} = 0.07\mu mol/L$). Source: TONG XING LIE PIAN HU ZHI ZI *Lespedeza homoloba*. Ref: 2356.



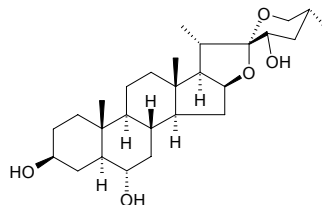
9191 Hainanensine

$C_{17}H_{17}NO_4$ (299.33). Source: HAI NAN CU FEI *Cephalotaxus hainanensis* [Syn. *Cephalotaxus mannii*], SAN JIAN SHAN *Cephalotaxus fortunei*. Ref: 660.



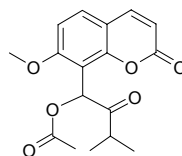
9192 Hainangenin

$C_{27}H_{44}O_5$ (448.65). Source: JIAN MA *Agave sisalana*, WU CI FAN MA *Agave americana* var. *marginata* [Syn. *Agave americana* var. *variegata*]. Ref: 10.



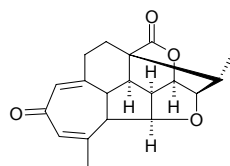
9193 Hainanmurpanin

[95360-22-8] $C_{17}H_{18}O_6$ (318.33). Crystals, mp 98~101°C, $[\alpha]_D^{28} = +7^\circ$ ($CHCl_3$). Source: JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. Ref: 11.



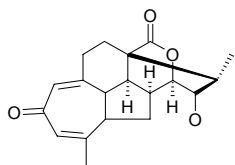
9194 Hainanolide

Harringtonolide [64761-48-4] $C_{19}H_{18}O_4$ (310.35). Pale yellow crystals (CH_2Cl_2 -MeOH), mp 285~288°C (dec), $[\alpha]_D^{30} = +83.0^\circ$ ($c = 1.5$, $CHCl_3$); mp 266~268°C. Pharm: Cytotoxic (KB oral epidermoid carcinoma, $ED_{50} = 0.11\mu g/mL$; Hep3B hepatoma cells, $ED_{50} = 0.05\mu g/mL$; HeLa, $ED_{50} = 0.37\mu g/mL$)^[4253]; antineoplastic (L_{615} , S_{180} , W_{256} , P_{388} , L_{1210} , and Lewis lung cancer); antiviral (influenza virus, Newcastle disease virus, epidemic type-B encephalitis virus and vaccinia virus, tissue culture model). Source: HAI NAN CU FEI *Cephalotaxus hainanensis* [Syn. *Cephalotaxus mannii*], SAN JIAN SHAN *Cephalotaxus fortunei*, TAI WAN CU FEI *Cephalotaxus wilsoniana* (twig), ZHONG GUO CU FEI ZI *Cephalotaxus sinensis* [Syn. *Cephalotaxus harringtonia* var. *sinensis*], ZHONG GUO CU FEI ZHI YE *Cephalotaxus sinensis* [Syn. *Cephalotaxus harringtonia* var. *sinensis*]. Ref: 658, 660, 4253.

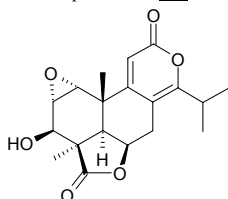


9195 Hainanolidol

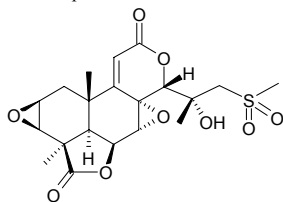
[73213-63-5] $C_{19}H_{20}O_4$ (312.37). Source: HAI NAN CU FEI *Cephalotaxus hainanensis* [Syn. *Cephalotaxus mannii*], SAN JIAN SHAN *Cephalotaxus fortunei*. Ref: 2, 660.

**9196 Hallactone A**

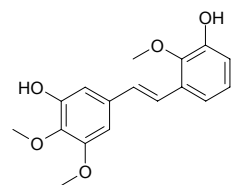
[41787-72-8] $C_{19}H_{22}O_6$ (346.38). Crystals, mp 266~268°C (dec). Pharm: Larvacide (toxic to larva of housefly). Source: HA SHI LUO HAN SONG *Podocarpus hallii*. Ref: 658.

**9197 Hallactone B**

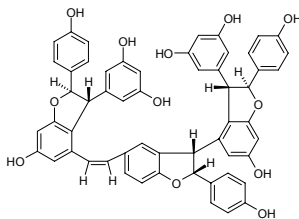
[35470-59-8] $C_{20}H_{24}O_9S$ (440.47). Crystals, mp 325~330°C (dec). Pharm: Larvacide (toxic to larva of housefly). Source: HA SHI LUO HAN SONG *Podocarpus hallii*. Ref: 658.

**9198 Halophilol A**

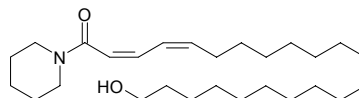
$C_{17}H_{18}O_5$ (302.33). Amorphous powder. Pharm: Cytotoxic (KB, IC_{50} = 17.28 μ mol/L; hmn microvascular endothelial cells HMEC, IC_{50} = 22.47 μ mol/L). Source: XI YAN YUAN WEI *Iris halophila* (seed). Ref: 5429.

**9199 Halophilol B**

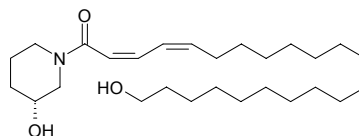
$C_{56}H_{42}O_{12}$ (906.95). Brown amorphous powder, $[\alpha]_D^{25}$ = +152.4° (c = 1.28, MeOH). Pharm: Cytotoxic inactive (KB and HMEC). Source: XI YAN YUAN WEI *Iris halophila* (seed). Ref: 5429.

**9200 Haloxyline A**

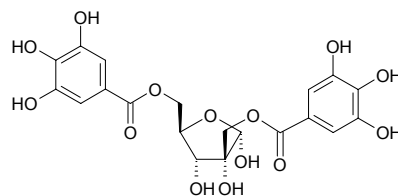
$C_{27}H_{49}NO_2$ (419.70). Colorless crystals, mp 161~162°C. Pharm: AChE inhibitor (*in vitro*, IC_{50} = (25.3±0.02) μ mol/L, control Galanthamine, IC_{50} = (0.5±0.05) μ mol/L); BChE inhibitor (*in vitro*, IC_{50} = (19.0±0.03) μ mol/L, control Galanthamine, IC_{50} = (8.5±0.01) μ mol/L); antifungal (*Trichophyton longifusus*, *Candida albicans*, *Aspergillus flavus*, *Microsporum canis*, *Candida glabrata*, *Fusarium solani*). Source: YAN JIAO CAO SUO SUO *Haloxylon salicornicum* (whole herb). Ref: 4460.

**9201 Haloxyline B**

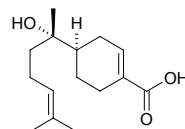
$C_{27}H_{49}NO_3$ (435.70). Colorless crystals, mp 142~143°C. Pharm: AChE inhibitor (*in vitro*, IC_{50} = (20.2±0.01) μ mol/L, control Galanthamine, IC_{50} = (0.5±0.05) μ mol/L); BChE inhibitor (*in vitro*, IC_{50} = (14.7±0.02) μ mol/L, control Galanthamine, IC_{50} = (8.5±0.01) μ mol/L); antifungal (*Trichophyton longifusus*, *Candida albicans*, *Aspergillus flavus*, *Microsporum canis*, *Candida glabrata*, *Fusarium solani*). Source: YAN JIAO CAO SUO SUO *Haloxylon salicornicum* (whole herb). Ref: 4460.

**9202 Hamamelitannin**

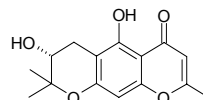
$C_{20}H_{20}O_{14}$ (484.37). Pharm: 5-LOX inhibitor (IC_{50} = 1.0~18.7 μ mol/L)^[4415]. Source: BAI GUO *Ginkgo biloba*, HONG LI *Quercus rubra*, MEI ZHOU JIN LV MEI *Hamamelis virginiana*, OU ZHOU LI *Castanea sativa*. Ref: 660, 1521, 4415.

**9203 Hamanasic acid A**

$C_{15}H_{24}O_3$ (252.36). Source: MEI GUI HUA *Rosa rugosa*. Ref: 660.

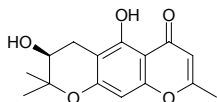
**9204 3'(R)-(+)-Hamaudol**

[204779-06-6] $C_{15}H_{16}O_5$ (276.29). Yellow acicular crystals, mp 187~189°C. Source: MA SHAN QIAN HU *Peucedanum mashanens*. Ref: 803.

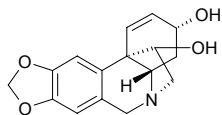


9205 3'(*S*)-(-)-Hamaudol

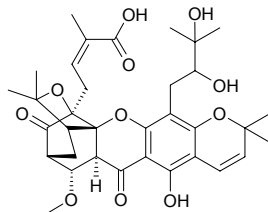
[735-46-6] $C_{15}H_{16}O_5$ (276.29). Needles (C_2H_5OH), mp 202~202.5°C, $[\alpha]_D^{25} = -22.0^\circ$ ($c = 0.46$, $CHCl_3$). Source: FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*]. Ref: 2.

**9206 Hamayne**

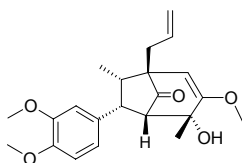
Bulbispermine; Demethylcrinamine [61948-11-6] $C_{16}H_{17}NO_4$ (287.32). Pharm: AChE inhibitor ($IC_{50} = (553 \pm 3) \mu mol/L$, control Galanthamine, $IC_{50} = (1.9 \pm 0.2) \mu mol/L$). Source: GUAN MU WEN SHU LAN *Crinum macowanii*. Ref: 4952.

**9207 Hanburinone**

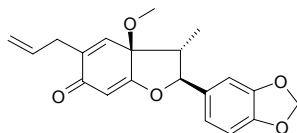
$C_{34}H_{42}O_{11}$ (626.71). Yellow gum, $[\alpha]_D^{28} = -62^\circ$ ($c = 0.09$, $CHCl_3$). Source: TENG HUANG SHU *Garcinia hanburyi* (fresh fruit). Ref: 4487.

**9208 Hancinol**

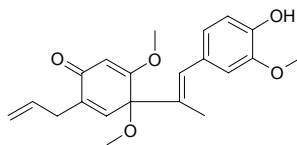
rel-(7*S*,8*S*,1'*R*,3'*S*,4'*R*)-1'-Allyl-7-(3,4-dimethoxyphenyl)-4'-hydroxy-5'-methoxy-8-methyl-2'-oxobicyclo[3.2.1]oct-5'-ene [108864-50-2] $C_{22}H_{28}O_5$ (372.47). Source: SHAN JU *Piper hancei*. Ref: 75.

**9209 Hancinone**

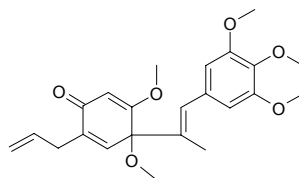
$C_{20}H_{20}O_5$ (340.38). Source: SHAN JU *Piper hancei*, YU LAN *Magnolia denudata* [Syn. *Magnolia heptapata*]. Ref: 54, 660, 4439.

**9210 Hancinone B**

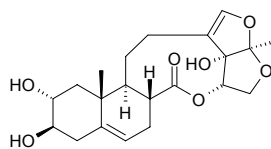
$C_{21}H_{24}O_5$ (356.42). Source: SHAN JU *Piper hancei*. Ref: 660.

**9211 Hancinone C**

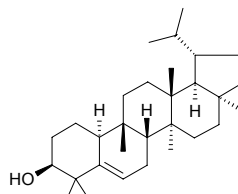
$C_{23}H_{28}O_6$ (400.48). Source: SHAN JU *Piper hancei*. Ref: 660.

**9212 Hancogenin B**

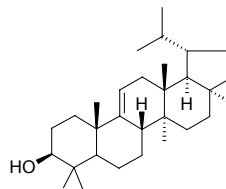
$C_{21}H_{28}O_7$ (392.45). Colorless acicular crystals (acetone), mp 202~203°C. Source: HUA BEI BAI QIAN *Cynanchum hancockianum*. Ref: 237.

**9213 Hancokinol**

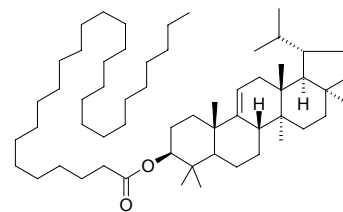
25,26-Dinor-9,13-dimethylpup-5-en-3-ol [132294-77-0] $C_{30}H_{50}O$ (426.73). Needles (MeOH), mp 229~230°C, $[\alpha]_D^{20} = +16.2^\circ$ ($c = 0.77$, $CHCl_3$); mp 221~223°C; colorless acicular crystals (chloroform), mp 223~225°C. Source: HUA BEI BAI QIAN *Cynanchum hancockianum*, LIU YE BAI QIAN *Cynanchum stauntonii*. Ref: 510, 198, 1521.

**9214 Hancolupenol**

$C_{30}H_{50}O$ (426.73). Colorless acicular crystals, mp 184~185°C (chloroform), $[\alpha]_D^{29} = +14.9^\circ$ ($c = 0.3$, chloroform). Source: HUA BEI BAI QIAN *Cynanchum hancockianum*. Ref: 198.

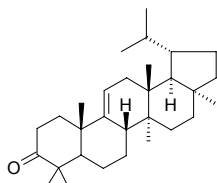
**9215 Hancolupenol octacosanate**

$C_{58}H_{104}O_2$ (833.47). Amorphous powder, mp 99~101°C (chloroform). Source: HUA BEI BAI QIAN *Cynanchum hancockianum*. Ref: 198.

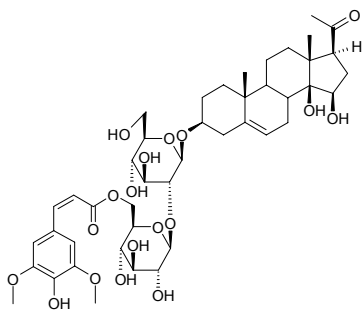


9216 Hancolupenone

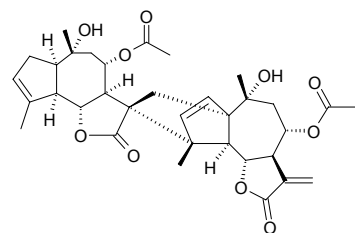
$C_{30}H_{48}O$ (424.72). Colorless acicular crystals, mp 228.0~229.5°C (chloroform), $[\alpha]_D^{29} = +14.9^\circ$ ($c = 0.2$, chloroform). Source: HUA BEI BAI QIAN *Cynanchum hancockianum*. Ref: 198.

**9217 Hancoside A**

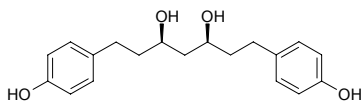
Hancoside [145701-08-2] $C_{44}H_{62}O_{18}$ (878.97). White powder, mp 185~187°C (methanol). $[\alpha]_D^{27} = -12.3^\circ$ ($c = 0.13$, dioxocyclohexane). Pharm: Anti-endotoxin. Source: HUA BEI BAI QIAN *Cynanchum hancockianum*. Ref: 237, 1071.

**9218 Handelin**

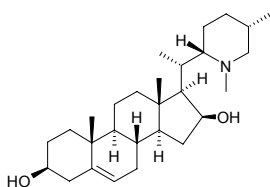
Chrysanthelide $C_{34}H_{42}O_{10}$ (610.70). Source: YE JU HUA *Chrysanthemum indicum*. Ref: 660.

**9219 Hannokinol**

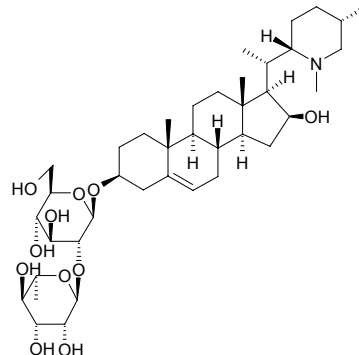
1,7-Bis(4-hydroxyphenyl)-3*R*,5*S*-heptanediol $C_{19}H_{24}O_4$ (316.40). Source: CHI YANG *Alnus japonica*. Ref: 660.

**9220 Hapepunine**

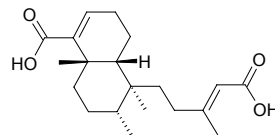
[68422-01-5] $C_{27}H_{47}NO_2$ (429.69). Needles (C_2H_5OH), mp 201~202°C, $[\alpha]_D = -72.6^\circ$. Source: ZHE BEI MU *Fritillaria verticillata* var. *thunbergii* [Syn. *Fritillaria thunbergii*], HEI BAI HE *Fritillaria camtschatcensis*. Ref: 2201.

**9221 Hapepunine 3-O- α -L-rhamnosyl-(1 \rightarrow 2)- β -D-glucopyranoside**

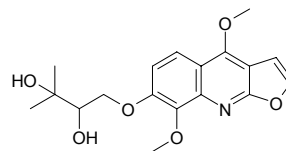
$C_{40}H_{67}NO_{11}$ (737.98). Needles, $+1H_2O$ (MeOH aq.) mp 269~274°C (dec), $[\alpha]_D = -67.2^\circ$ ($c = 1.5$, pyridine). Source: ZHE BEI MU *Fritillaria verticillata* var. *thunbergii* [Syn. *Fritillaria thunbergii*]. Ref: 1521, 2201.

**9222 Haplopappic acid**

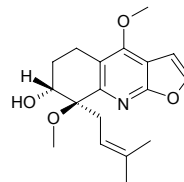
$C_{20}H_{30}O_4$ (334.46). Source: GE LUN BI YA BA DOU *Croton schiedeana* (aerial parts). Ref: 4447.

**9223 Haploperine**

Haplophytin B; Evoxine [522-11-2] $C_{18}H_{21}NO_6$ (347.37). mp 154~155°C, mp 151~152°C, $[\alpha]_D = +5^\circ$ (ethanol), $[\alpha]_D^{22} = +14.6^\circ$ (ethanol); mp 151.5~153°C, $[\alpha]_D = +63.6^\circ$ ($c = 0.33$, MeOH). Pharm: Anticonvulsant (mus and rat, caused by camphor); hypnotic (mus); sedative (mus, chloride); antibacterial inactive (various tested bacteria)^[5175]; antifungal inactive (various tested fungi)^[5175]; LD₅₀ (mus, ip) = 705mg/kg, (mus, iv) = 135mg/kg. Source: DA YE YUN XIANG CAO *Haplophyllum perforatum*, JIAN YE YUN XIANG CAO *Haplophyllum acutifolium*. Ref: 661, 1521, 5175.

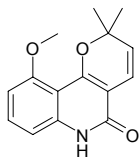
**9224 Haplophyllidine**

[18063-21-3] $C_{18}H_{23}NO_4$ (317.39). Colorless acicular crystals (petroleum ether), mp 110~111°C, $[\alpha]_D^{20} = -16.24^\circ$ ($c = 1.477$, acetone). Pharm: Anti-atropine (dog, iv, 20mg/kg); diuretic (mus); hypnotic (hypnotic synergism with solubilized hexobarbital, phenobarbital, chloral hydrate); sedative (mus). Source: DA YE YUN XIANG CAO *Haplophyllum perforatum*, *Haplophyllum glabrinum*. Ref: 658, 1521.

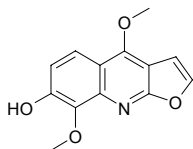


9225 Haplophytin A

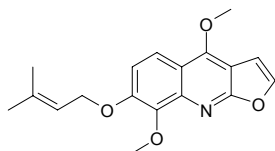
$C_{15}H_{15}NO_3$ (257.29). mp 209~210.5°C, $[\alpha]_D = 0^\circ$ ($c = 0.506$, $CHCl_3$). Pharm: Antibacterial inactive (various tested bacteria); antifungal inactive (various tested fungi). Source: JIAN YE YUN XIANG CAO *Haplophyllum acutifolium*. Ref: 5175.

**9226 Haplopine**

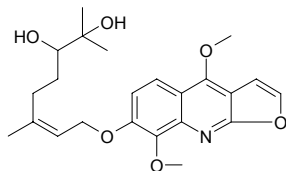
[5876-17-5] $C_{13}H_{11}NO_4$ (245.24). mp 203~204°C. Pharm: Phototoxic (yeast, *Saccharomyces cerevisiae*); photo-activated antibacterial (*Staphylococcus aureus*)^[4989]; photo-activated antifungal (*Candida albicans* weak)^[4989]; photo-activated DNA binding (Asc I and Sma I with restriction sequences consisting only of G and C was very weak)^[4989]; cytotoxic (P₃₈₈ cell line, ED₅₀ = 7.6 μg/mL, control Mithramycin, ED₅₀ = 0.06 μg/mL; HT29, ED₅₀ = 13.1 μg/mL, Mithramycin, ED₅₀ = 0.07 μg/mL; A549, ED₅₀ = 3.3 μg/mL, Mithramycin, ED₅₀ = 0.08 μg/mL)^[5405]. Source: HUA JIAO LE *Zanthoxylum cuspidatum*, SI ROU TUO GUO YE MI ZHU YU *Melicope semecarpifolia*, *Sarcomelicope glauca*. Ref: 658, 1521, 4989, 5405.

**9227 Haplopine-3,3'-dimethylallylether**

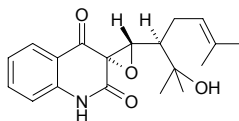
$C_{18}H_{19}NO_4$ (313.36). Yellow needles, mp 100~101°C. Source: GAO GUI YOU MU YUN XIANG *Teclea nobilis* (aerial parts). Ref: 3503.

**9228 Haplotubine**

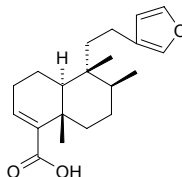
$C_{23}H_{29}NO_6$ (415.49). Amorphous yellow powder, $[\alpha]_D^{22} = -6^\circ$ ($c = 1.2$, CH_2Cl_2). Source: LIU ZHUANG DAN YE YUN XIANG *Ruta tuberculata* [Syn. *Haplophyllum tuberculatum*] (aerial parts). Ref: 5156.

**9229 Haplotubinone**

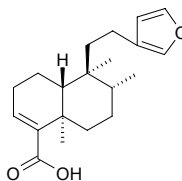
$C_{19}H_{23}NO_4$ (329.40). Colorless crystals (ether), mp 177.0~178.0°C, $[\alpha]_D^{22} = 0^\circ$ ($c = 0.500$, CH_2Cl_2). Source: LIU ZHUANG DAN YE YUN XIANG *Ruta tuberculata* [Syn. *Haplophyllum tuberculatum*] (aerial parts). Ref: 5156.

**9230 (+)-Hardwickiic acid**

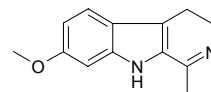
$C_{20}H_{28}O_3$ (316.44). Source: JIA LIAN QIAO YE *Duranta repens*. Ref: 4050.

**9231 (-)-Hardwickiic acid**

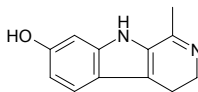
$C_{20}H_{28}O_3$ (316.44). Crystallized (MeOH-H₂O), mp 114~116°C, $[\alpha]_D^{25} = -84.7^\circ$ ($c = 1.0$, $CHCl_3$). Source: *Salvia wagneriana* (aerial parts). Ref: 4976.

**9232 Harmaline**

4,9-Dihydro-7-methoxy-1-methyl-3H-pyrido[3,4-b]indole; Harmidine; Dihydroharmine [304-21-2] $C_{13}H_{14}N_2O$ (214.27). Rhombic columnar crystals (methanol), rhombic octahedral crystals (ethanol), mp 229~231°C, slightly soluble in water, ether, soluble in ethanol.^[5507] Pharm: CNS activity (stimulates pallium, spinal cord and motorium to cause illusion, tremors, and paroxysmal convulsions); striated muscle stimulant (high dose); slows heart rate (frog heart *in vitro* EC = 1:25000); monoamine oxidase inhibitor; intestinal smooth muscle relaxant (small intestine, low dose); stimulates pons (causes spasm and stiffness in limbs). Source: LUO TUO PENG *Peganum harmala*, JI DAN GUO *Passiflora edulis*, FEN HONG SE XI FAN LIAN *Passiflora incarnata*, LUO TUO PENG ZI *Peganum harmala*. Ref: 6, 658, 1521, 5507.

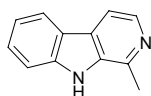
**9233 Harmalol**

[525-57-5] $C_{12}H_{12}N_2O$ (200.24). Trihydrate, red acicular crystals (C_2H_5OH aq.), absolute substance mp 212°C (dec). Pharm: Causes progressive paralysis of CNS (animal model); inhibits transport of active sodium (in bladder); monoamine oxidase inhibitor; Na^+ , K^+ -ATP inhibitor; antihypertensive; Slows heart rate and enhances myocardial contractility (anesthetic dog, chloride). Source: LUO TUO PENG *Peganum harmala*, JI DAN GUO *Passiflora edulis*. Ref: 661, 1521.

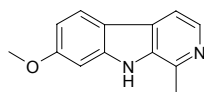


9234 Harman

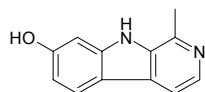
[486-84-0] $C_{12}H_{10}N_2$ (182.23). mp 237~238°C, mp 228°C. **Pharm:** Antifungal (*Trichophyton interdigitalis*, MIC = 1.6~200.0 µg/mL); bidirectional action to nervous system (motor depressant in low dose and causes convulsion in high dose); inhibits transport of active sodium (frog, bladder); Na^+ , K^+ -ATP inhibitor (frog kidney); plant growth inhibitor; uterine stimulant. **Source:** CI JI LI *Tribulus terrestris*, CU LIU GUO *Hippophae rhamnoides*, FEN HONG SE XI FAN LIAN *Passiflora incarnata*, GOU TENG *Uncaria rhynchophylla* [Syn. *Nauclea rhynchophylla*], JI DAN GUO *Passiflora edulis*, LIU QIU SHE GEN CAO *Ophiorrhiza liukuensis* (whole herb), RI BEN SHE GEN CAO *Ophiorrhiza japonica*, SHA ZAO *Elaeagnus angustifolia*, YUAN ZHI *Polygala tenuifolia*, ZHU ZI SHU *Symplocos racemosa*, DONG FANG GOU TENG *Uncaria orientalis*, DUO MAI GOU TENG *Uncaria nervosa*, HOU YE GOU TENG *Uncaria callophylla*, MIAN MAO GOU TENG *Uncaria lanosa*, PO LUO ZHOU GOU TENG *Uncaria borneensis*, QIAN HUI GOU TENG *Uncaria canescens*, SUAN GOU TENG *Uncaria acida*, TUO YUAN GOU TENG *Uncaria elliptica*, XIA GOU TENG *Uncaria attenuata*, *Uncaria barbata*, occurs in many plants. **Ref:** 2, 539, 658, 4527, 5341.

**9235 Harmine**

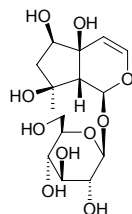
Banisterine; Leucuharmine; Telepathine; Yageine [442-51-3] $C_{13}H_{12}N_2O$ (212.25). Crystals, mp 257~259°C, mp 264~265°C. **Pharm:** Antitrypanosomal; CVS activity (anesthetic dog, chloride, slows heart rate, increases output blood pressure, blood flow in aorta and myocardial contractility); hallucinogen (large dose); uterine relaxant; monoamine oxidase inhibitor (hmn); CNS stimulant. **Source:** CI JI LI *Tribulus terrestris*, JI DAN GUO *Passiflora edulis*, LUO TUO PENG *Peganum harmala*, LUO TUO PENG ZI *Peganum harmala*, SHA ZAO *Elaeagnus angustifolia*, SHAN YOU MA *Trema dielsiana*, XIANG TANG SONG CAO *Thalictrum foetidum*. **Ref:** 4, 6, 658, 660, 1521.

**9236 Harmol**

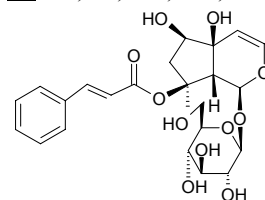
7-Hydroxyharman [149022-16-2] $C_{12}H_{10}N_2O$ (198.23). mp 321°C, mp 304~307°C. **Source:** CU LIU GUO *Hippophae rhamnoides*, LUO TUO PENG ZI *Peganum harmala*, JI LI GEN *Tribulus terrestris*, SHA ZAO *Elaeagnus angustifolia*, FEN HONG SE XI FAN LIAN *Passiflora incarnata*. **Ref:** 6, 1521.

**9237 Harpagide**

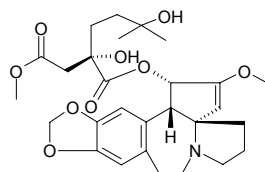
$C_{15}H_{24}O_{10}$ (364.35). **Pharm:** Neuroprotective (primary cultures of rat cortical cells injured by 50 µmol/L glutamate, 0.1 µmol/L, cell viability = 41.4%; control MK-801, cell viability = 31.8%; APV, cell viability = 5.7%; CNQX, cell viability = 28.1%)^[4660]. **Source:** BEI XUAN SHEN *Scrophularia buergeriana* (root: yield = 0.0004%)^[4660]; the compound was isolated from the plant by Isao Kitakawa et al. in 1967^[5505], TAI WAN JIN GU CAO *Ajuga taiwanensis* (whole herb), XUAN SHEN *Scrophularia ningpoensis*. **Ref:** 660, 4483, 4660, 5505.

**9238 Harpagoside**

$C_{24}H_{30}O_{11}$ (494.50). $[\alpha]_D^{21} = -27.7^\circ$ ($c = 0.194$, chloroform); -42.6° ($c = 0.990$, methanol); -37.5° ($c = 0.670$, water). **Pharm:** Analgesic (rbt ear model); anti-inflammatory (granuloma model); nicotine antagonist (gpg, ileum *in vitro*); elastase inhibitor (hmn leukocyte *in vitro*, $IC_{50} > 500 \mu\text{g/mL}$ = $>800 \mu\text{mol/L}$; control Caffeic acid, $IC_{50} = 86 \mu\text{g/mL} = 475 \mu\text{mol/L}$)^[5458]; neuroprotective (primary cultures of rat cortical cells injured by 50 µmol/L glutamate, 0.1 µmol/L, cell viability = 38.2%; control MK-801, cell viability = 31.8%; APV, cell viability = 5.7%; CNQX, cell viability = 28.1%)^[4660]. **Source:** BEI XUAN SHEN *Scrophularia buergeriana* (root: yield = 0.00032%)^[4660], LIN SHENG XUAN SHEN *Scrophularia nodosa*, NAN FEI GOU MA *Harpagophytum procumbens*, XUAN SHEN *Scrophularia ningpoensis* (root: mean content of 22 origins = 0.136%)^[5508], *Lamium* sp. **Ref:** 658, 661, 4660, 5458, 5508.

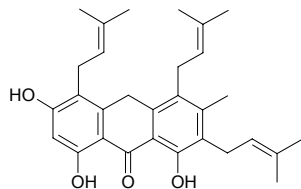
**9239 Harringtonine**

[26833-85-2] $C_{28}H_{37}NO_9$ (531.61). mp 73~75°C. **Pharm:** Antineoplastic (mouse leukemia L₆₁₅ and L₇₂₁₂, sarcoma S₁₈₀, rat Walker sarcoma). **Source:** BI ZI CU FEI *Cephalotaxus oliveri*, HAI NAN CU FEI *Cephalotaxus hainanensis* [Syn. *Cephalotaxus manni*] (branchlet and bark: mean content of 2 samples = 0.032%)^[5508], RI BEN CU FEI *Cephalotaxus harringtonia*, SAN JIAN SHAN *Cephalotaxus fortunei* (branchlet and bark: mean content of 2 origins = 0.021%)^[5508], ZHONG GUO CU FEI ZHI YE *Cephalotaxus sinensis* [Syn. *Cephalotaxus harringtonia* var. *sinensis*]. **Ref:** 4, 658, 660, 5508.

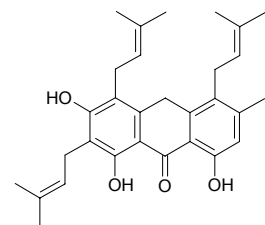


9240 Harunganol B

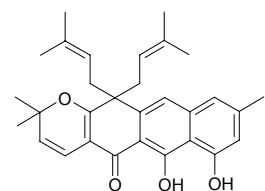
1,3,8-Trihydroxy-4,5,7-tris-(3,3-dimethylallyl)-6-methyl-anthrone $C_{30}H_{36}O_4$ (460.62). Yellow crystals (hexane-ethyl acetate), mp 200°C. Pharm: Antioxidant (DPPH scavenger, $IC_{50} = (64.8 \pm 5.5) \mu\text{mol/L}$; control 3-*t*-Butyl-4-hydroxyanisole, $IC_{50} = (44.2 \pm 1.2) \mu\text{mol/L}$). Source: MA DAO HA NI MU *Harungana madagascariensis* (stem cortex). Ref: 5286.

**9241 Harungin anthrone**

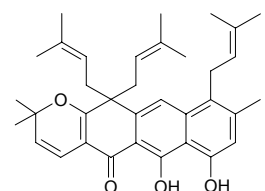
1,3,8-Trihydroxy-2,4,5-tris-(3,3-dimethylallyl)-6-methylanthrone $C_{30}H_{36}O_4$ (460.62). Brown crystals (hexane), mp 170.6°C. Pharm: Antioxidant (DPPH scavenger, $IC_{50} = (92.1 \pm 4.5) \mu\text{mol/L}$; control 3-*t*-Butyl-4-hydroxyanisole, $IC_{50} = (44.2 \pm 1.2) \mu\text{mol/L}$). Source: MA DAO HA NI MU *Harungana madagascariensis* (stem cortex). Ref: 5286.

**9242 Harunmadagascarin A**

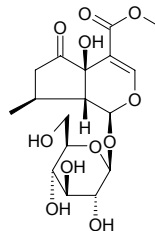
8,9-Dihydroxy-4,4-bis-(3,3-dimethylallyl)-6-methyl-2,3-(2,2-dimethylpyran o)anthrone $C_{30}H_{34}O_4$ (458.60). Orange crystals (hexane), mp 149°C. Pharm: Antioxidant (DPPH scavenger, $IC_{50} = (61.0 \pm 3.2) \mu\text{mol/L}$; control 3-*t*-Butyl-4-hydroxyanisole, $IC_{50} = (44.2 \pm 1.2) \mu\text{mol/L}$). Source: MA DAO HA NI MU *Harungana madagascariensis* (stem cortex). Ref: 5286.

**9243 Harunmadagascarin B**

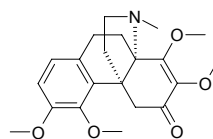
8,9-Dihydroxy-4,4,5-tris-(3,3-dimethylallyl)-6-methyl-2,3-(2,2-dimethylpyran o)anthrone $C_{35}H_{42}O_4$ (526.72). Orange crystals (MeOH), mp 122.5°C. Pharm: Antioxidant (DPPH scavenger, $IC_{50} = (155.4 \pm 2.5) \mu\text{mol/L}$; control 3-*t*-Butyl-4-hydroxyanisole, $IC_{50} = (44.2 \pm 1.2) \mu\text{mol/L}$). Source: MA DAO HA NI MU *Harungana madagascariensis* (stem cortex). Ref: 5286.

**9244 Hastatoside**

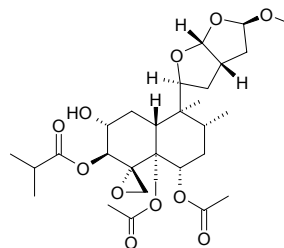
$C_{17}H_{24}O_{11}$ (404.37). Source: JI YE MA BIAN CAO *Verbena hastata*, MA BIAN CAO *Verbena officinalis*. Ref: 660.

**9245 Hasubanone**

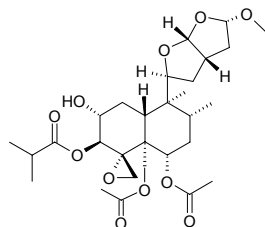
O-Methylaknadinine [1805-85-2] $C_{21}H_{27}NO_5$ (373.45). mp 116–117°C, $[\alpha]_D^{27} = -214^\circ$ ($c = 2.0$, MeOH). Source: QIAN JIN TENG *Stephania japonica*, AO DA LI YA QIAN JIN TENG *Stephania japonica* var. *australis*, YA LI QIAN JIN TENG *Stephania elegans*. Ref: 6, 1521.

**9246 Hativene A**

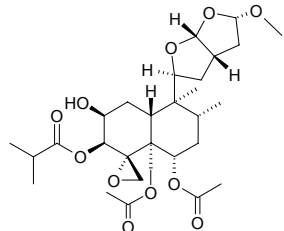
$C_{29}H_{44}O_{11}$ (568.67). Colorless oil, $[\alpha]_D^{20} = -12.1^\circ$ ($c = 0.3$, $CHCl_3$). Source: *Ajuga pseudoiva* (leaf). Ref: 2412.

**9247 Hativene B**

$C_{29}H_{44}O_{11}$ (568.67). Colorless oil, $[\alpha]_D^{20} = -2.8^\circ$ ($c = 0.12$, $CHCl_3$). Source: *Ajuga pseudoiva* (leaf). Ref: 2412.

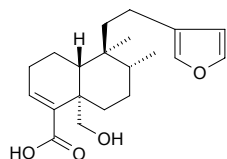
**9248 Hativene C**

$C_{29}H_{44}O_{11}$ (568.67). Colorless oil. Source: *Ajuga pseudoiva* (leaf). Ref: 2412.

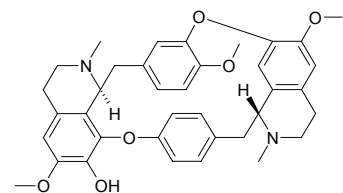


9249 Hautriwaic acid

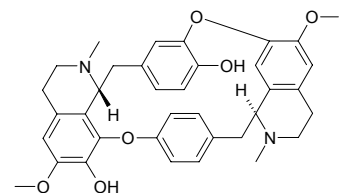
[18411-75-1] $C_{20}H_{28}O_4$ (332.44). mp 183~184°C, $[\alpha]_D = -105^\circ$. Source: CHE SANG ZI YE *Dodonaea viscosa*. Ref: 6, 1521.

**9250 Hayatidine**

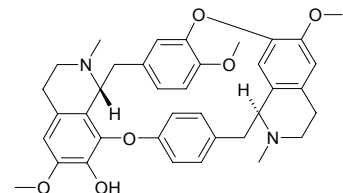
[16543-77-4] $C_{37}H_{40}N_2O_6$ (608.74). mp 179~180°C, $[\alpha]_D = -109^\circ$ (pyridine). Source: XI SHENG TENG *Cissampelos pareira*. Ref: 6, 1521.

**9251 Hayatine**

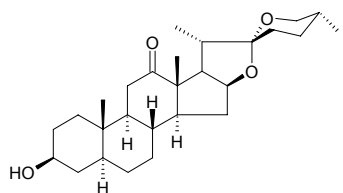
$C_{36}H_{38}N_2O_6$ (594.71). mp 281°C (dec), (\pm) 303°C (dec). Source: XI SHENG TENG *Cissampelos pareira*. Ref: 4.

**9252 Hayatinine**

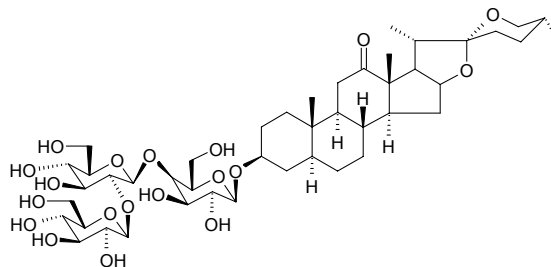
$C_{37}H_{40}N_2O_6$ (608.74). mp 231~232°C. Source: XI SHENG TENG *Cissampelos pareira*. Ref: 6.

**9253 Hecogenin**

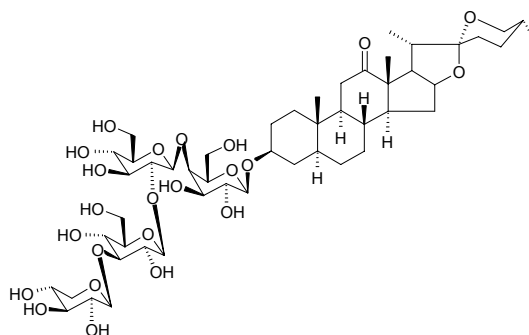
12-Oxotigogenin; 3 β -Hydroxy-5 α ,25D-spirostan-12-one [467-55-0] $C_{27}H_{42}O_4$ (430.63). mp 245°C, mp 253°C, mp 265°C, mp 268°C, $[\alpha]_D = -10^\circ$ (dioxane). Source: DONG YI HAO JIAN MA *Agave east-one*, DUAN YE LONG SHE LAN *Agave angustifolia*, FAN MA *Agave americana*, JIAN MA *Agave sisalana*, WEN ZHU *Asparagus setaceus* [Syn. *Asparagus plumosus*], WU CI FAN MA *Agave americana* var. *marginata* [Syn. *Agave americana* var. *variegata*], XIA YE LONG SHE LAN *Agave cantala*, YIN BIAN LONG SHE LAN *Agave angustifolia* var. *marginata*. Ref: 6, 10, 658, 1521.

**9254 Hecogenin 3-O- β -D-glucopyranosyl-(1 \rightarrow 2)- β -D-glucopyranosyl-(1 \rightarrow 4)- β -D-galactopyranoside**

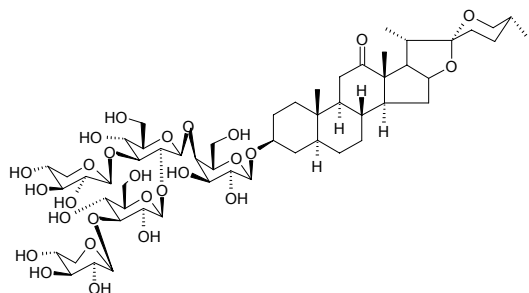
$C_{45}H_{72}O_{19}$ (917.06). Pharm: Cytotoxic (*in vitro*, HeLa, $IC_{50} = 8.6\mu g/mL$; control *cis*-Platin, $IC_{50} = 0.75\mu g/mL$). Source: WAN XIANG YU *Polianthes tuberosa* (tuber: yield = 0.0048%fw). Ref: 3002.

**9255 Hecogenin 3-O- β -D-glucopyranosyl-(1 \rightarrow 2)-[β -D-xylopyranosyl-(1 \rightarrow 3)]- β -D-glucopyranosyl-(1 \rightarrow 4)- β -D-galactopyranoside**

$C_{50}H_{80}O_{23}$ (1049.18). Pharm: Cytotoxic (*in vitro*, HeLa, $IC_{50} = 8.2\mu g/mL$; control *cis*-Platin, $IC_{50} = 0.75\mu g/mL$). Source: WAN XIANG YU *Polianthes tuberosa* (tuber: yield = 0.041%fw). Ref: 3002.

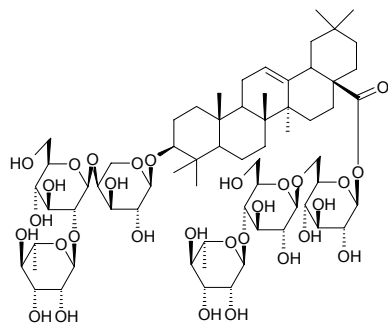
**9256 Hecogenin 3-O- β -D-xylopyranosyl-(1 \rightarrow 3)- β -D-glucopyranosyl-(1 \rightarrow 2)-[β -D-xylopyranosyl-(1 \rightarrow 3)]- β -D-glucopyranosyl-(1 \rightarrow 4)- β -D-galactopyranoside**

$C_{55}H_{88}O_{27}$ (1181.3). Pharm: Cytotoxic (*in vitro*, HeLa, $IC_{50} = 4\mu g/mL$; control *cis*-Platin, $IC_{50} = 0.75\mu g/mL$). Source: WAN XIANG YU *Polianthes tuberosa* (tuber: yield = 0.0035%fw). Ref: 3002.

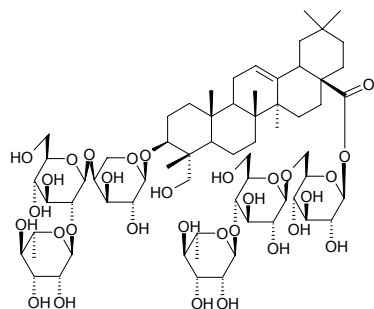


9257 Hederacolchiside E

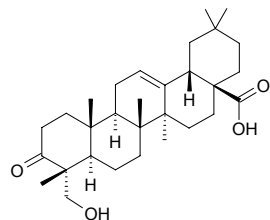
$C_{65}H_{106}O_{30}$ (1367.55). **Pharm:** Antioxidant (75 μ g/mL, total antioxidant activity (lipid peroxidation of linoleic acid emulsion) = 88%, control α -Tocopherol, total antioxidant activity = 67%; reducing power = 0.508, α -Tocopherol, reducing power = 1.929; DPPH scavenging, IC_{50} = 73.5 μ g/mL, α -Tocopherol, IC_{50} = 48.1 μ g/mL; superoxide radical scavenging, IC_{50} = 46.3 μ g/mL, α -Tocopherol, IC_{50} = 50.0 μ g/mL; iron chelating, IC_{50} = 70.8 μ g/mL, α -Tocopherol, IC_{50} = 50.0 μ g/mL; H_2O_2 scavenging, IC_{50} = 41.2 μ g/mL, α -Tocopherol, IC_{50} = 40.3 μ g/mL). **Source:** QIU SHUI XIAN CHANG CHUN TENG *Hedera colchica*. **Ref:** 4993.

**9258 Hederacolchiside F**

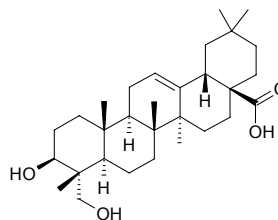
$C_{65}H_{106}O_{31}$ (1383.55). **Pharm:** Antioxidant (75 μ g/mL, total antioxidant activity (lipid peroxidation of linoleic acid emulsion) = 75%, control α -Tocopherol, total antioxidant activity = 67%; reducing power = 0.282, α -Tocopherol, reducing power = 1.929; DPPH scavenging, IC_{50} = 96.2 μ g/mL, α -Tocopherol, IC_{50} = 48.1 μ g/mL; superoxide radical scavenging, IC_{50} = 45.8 μ g/mL, α -Tocopherol, IC_{50} = 50.0 μ g/mL; iron chelating, IC_{50} = 60.5 μ g/mL, α -Tocopherol, IC_{50} = 50.0 μ g/mL; H_2O_2 scavenging, IC_{50} = 67.0 μ g/mL, α -Tocopherol, IC_{50} = 40.3 μ g/mL). **Source:** QIU SHUI XIAN CHANG CHUN TENG *Hedera colchica*. **Ref:** 4993.

**9259 Hederagenic acid**

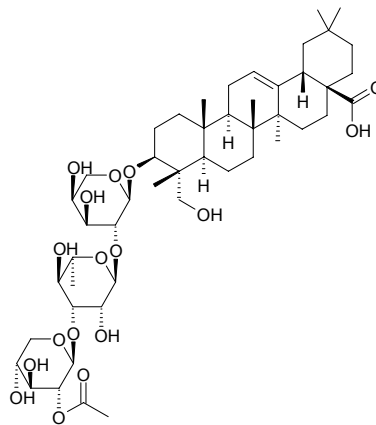
$C_{30}H_{46}O_4$ (470.70). **Source:** HONG JIA MI *Viburnum erubescens*, MA TI YE *Caltha palustris*. **Ref:** 660, 1521.

**9260 Hederagenin**

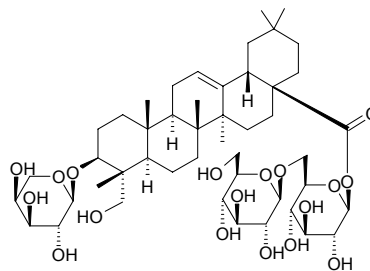
Mukurosigenin; Caulosapogenin; Hederidin; Kalosapogenin; Melanthigenin; Astrantiagenin E [465-99-6] $C_{30}H_{48}O_4$ (472.71). White powder, mp 332–334°C. **Source:** BAI TOU WENG *Pulsatilla chinensis*, CHUAN XU DUAN *Dipsacus asperoides*, GUAN MU TONG *Aristolochia manshuriensis*, HUANG HUA BAI JIANG *Patrinia scabiosaeifolia*, JIN YIN HUA *Lonicera japonica*, LU CAO *Rhaponticum carthamoides*, MU TONG *Akebia quinata*, WEI LING XIAN *Clematis chinensis*. **Ref:** 2, 6, 638, 660, 698.

**9261 Hederagenin 3-O-(2-O-acetyl- β -D-xylopyranosyl)-(1 \rightarrow 3)- α -L-rhamnopyranosyl-(1 \rightarrow 2)- α -L-arabinopyranoside**

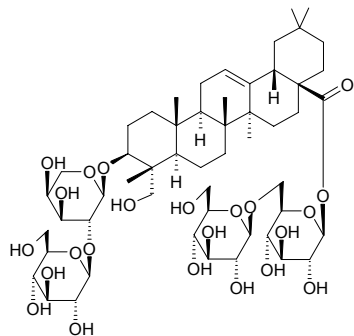
$C_{48}H_{76}O_{17}$ (925.13). White amorphous powder, $[\alpha]_D^{22} = +5.9^\circ$ ($c = 3.7$, MeOH). **Source:** AO TOU WU HUAN ZI *Sapindus emarginatus* (pericarp). **Ref:** 4123.

**9262 ragenin-3-O- α -L-arabinopyranosyl-28-O- β -D-glucopyranosyl(1 \rightarrow 6)- β -D-glucopyranoside**

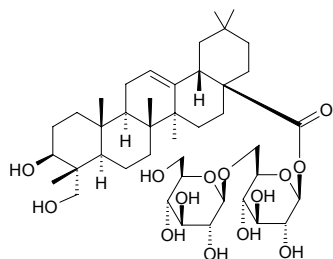
$C_{47}H_{76}O_{18}$ (929.12). **Source:** HUANG HUA BAI JIANG *Patrinia scabiosaeifolia*, REN DONG TENG *Lonicera japonica*. **Ref:** 660.



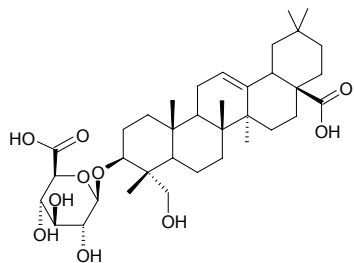
9263 Hederagenin-3-*O*- β -*D*-glucopyranosyl(1 \rightarrow 2)- α -*L*-arabinopyranosyl-28-*O*- β -*D*-glucopyranosyl(1 \rightarrow 6)- β -*D*-glucopyranoside
 $C_{53}H_{86}O_{23}$ (1091.26). Source: REN DONG TENG *Lonicera japonica*. Ref: 660.



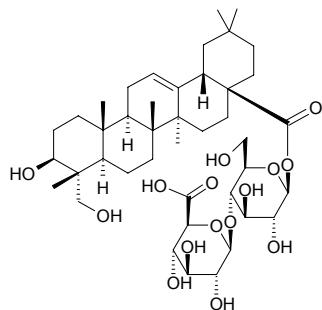
9264 Hederagenin-28-*O*- β -*D*-glucopyranosyl(1 \rightarrow 6)- β -*D*-glucopyranoside
 $C_{42}H_{68}O_{14}$ (797.00). Source: CHUAN XU DUAN *Dipsacus asperoides*. Ref: 660.



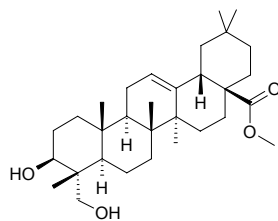
9265 Hederagenin-3-*O*- β -glucuronopyranoside
 $C_{36}H_{56}O_{10}$ (648.84). White amorphous powder (MeOH), mp 224–227°C, $[\alpha]_D^{20} = +22.6^\circ$ ($c = 1.00$, MeOH). Source: CI WU JIA *Acanthopanax senticosus* [Syn. *Eleutherococcus senticosus*] (seed). Ref: 4904.



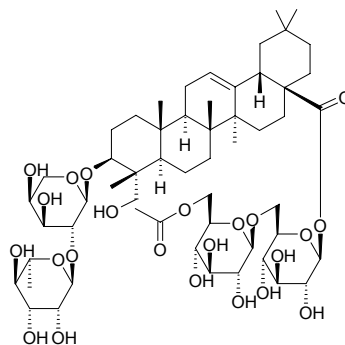
9266 Hederagenin-28-*O*- β -*D*-glucuronopyranosyl (1 \rightarrow 4)- β -*D*-glucopyranoside
 $C_{42}H_{66}O_{15}$ (810.99). White powder, mp 204–206°C (dec). Source: TOU XU CONG MU *Aralia dasyphylla*. Ref: 876.



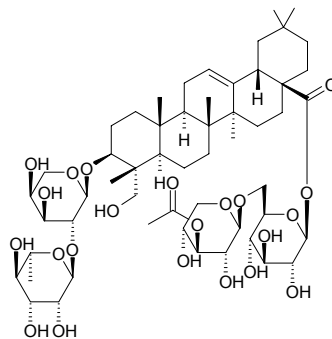
9267 Hederagenin methyl ester
 $C_{31}H_{50}O_4$ (486.74). Source: XIANG SI ZI *Abrus precatorius*. Ref: 660.



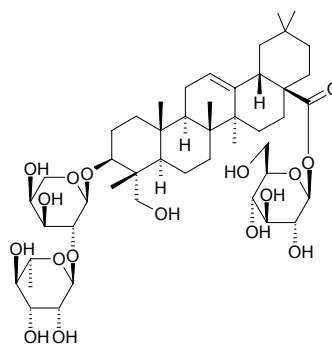
9268 Hederagenin-3-*O*- α -*L*-rhamnopyranosyl(1 \rightarrow 2)- α -*L*-arabinopyranosyl-28-*O*-6-acetyl- β -*D*-glucopyranosyl(1 \rightarrow 6)- β -*D*-glucopyranoside
 $C_{55}H_{88}O_{23}$ (1117.30). Source: REN DONG TENG *Lonicera japonica*. Ref: 660.



9269 Hederagenin-3-*O*- α -*L*-rhamnopyranosyl(1 \rightarrow 2)- α -*L*-arabinopyranosyl-28-*O*-3-acetyl- β -*D*-xylopyranosyl(1 \rightarrow 6)- β -*D*-glucopyranoside
 $C_{54}H_{86}O_{22}$ (1087.27). Source: REN DONG TENG *Lonicera japonica*. Ref: 660.

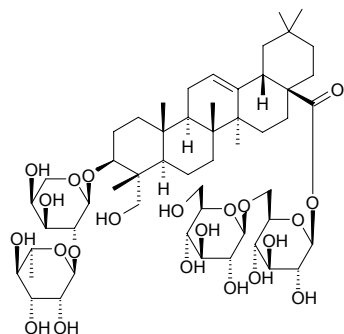


9270 Hederagenin-3-*O*- α -*L*-rhamnopyranosyl(1 \rightarrow 2)- α -*L*-arabinopyranosyl-28-*O*- β -*D*-glucopyranoside
 $C_{47}H_{76}O_{17}$ (913.12). Source: REN DONG TENG *Lonicera japonica*. Ref: 660.



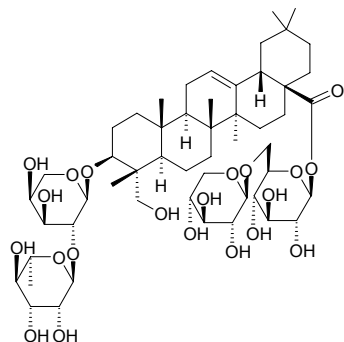
9271 deragenin-3-*O*- α -L-rhamnopyranosyl-(1 \rightarrow 2)- α -L-arabinopyranosyl-28-*O*- β -D-glucopyranosyl-(1 \rightarrow 6)- β -D-glucopyranoside

C₅₃H₈₆O₂₂ (1075.26). Source: REN DONG TENG *Lonicera japonica*. Ref: 660.



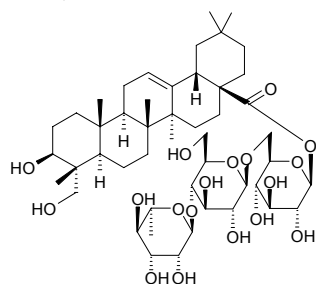
9272 Hederagenin-3-*O*- α -L-rhamnopyranosyl-(1 \rightarrow 2)- α -L-arabinopyranosyl-28-*O*- β -D-xylopyranosyl-(1 \rightarrow 6)- β -D-glucopyranoside

C₅₂H₈₄O₂₁ (1045.24). Source: LIAO DONG CONG MU YE *Aralia elata*, REN DONG TENG *Lonicera japonica*. Ref: 660, 4471.



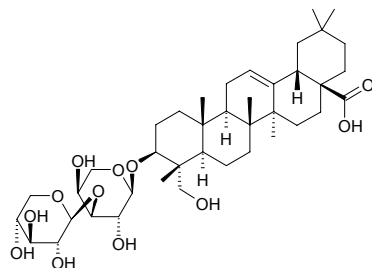
9273 Hederagenin 28-*O*- α -L-rhamnopyranosyl-(1 \rightarrow 4)- β -D-glucopyranosyl-(1 \rightarrow 6)- β -D-glucopyranoside

C₄₈H₇₈O₁₈ (943.15). White powder, mp 214–216 °C [α]_D²⁰ = –3.0° (*c* = 0.5, MeOH). Source: DONG BEI CI REN SHEN *Oplopanax elatus*. Ref: 467.



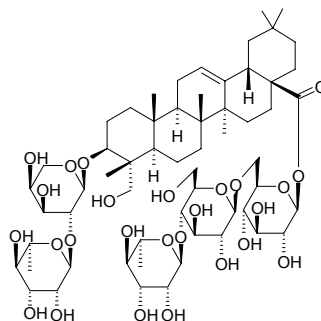
9274 Hederagenin-3-*O*- β -D-xylopyranosyl-(1 \rightarrow 3)- α -L-arabinopyranoside

C₄₀H₆₄O₁₂ (736.95). Source: YU ZHI ZI *Akebia quinata*. Ref: 660.



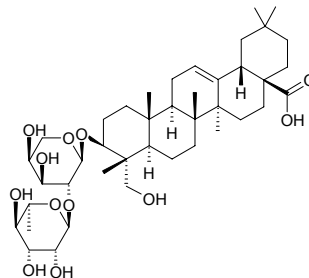
9275 Hederasaponin C

Pericarsaponin Pk C₅₉H₉₆O₂₆ (1221.41). Amorphous powder, [α]_D²⁰ = +16.2° (*c* = 0.10, MeOH). Pharm: Antioxidant (75μg/mL, total antioxidant activity (lipid peroxidation of linoleic acid emulsion) = 86%, control α -Tocopherol, total antioxidant activity = 67%; reducing power = 0.696, α -Tocopherol, reducing power = 1.929; DPPH scavenging, IC₅₀ = 82.4μg/mL, α -Tocopherol, IC₅₀ = 48.1μg/mL; superoxide radical scavenging, IC₅₀ = 45.8μg/mL, α -Tocopherol, IC₅₀ = 50.0μg/mL; iron chelating, IC₅₀ = 52.9μg/mL, α -Tocopherol, IC₅₀ = 50.0μg/mL; H₂O₂ scavenging, IC₅₀ = 59.5μg/mL, α -Tocopherol, IC₅₀ = 40.3μg/mL)^[4993]. Source: DUO YE JI DOU *Oxytropis myriophylla* (whole herb), SAN YE MU TONG *Akebia trifoliata* (stem), XI ZANG TIE XIAN LIAN *Clematis tibetana* (aerial parts), YANG CHANG CHUN TENG *Hedera helix*. Ref: 3530, 4222, 4545, 4993.



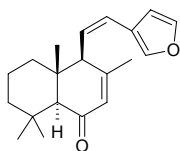
9276 α -Hederin

Kalopanaxasaponin A; Kalopanax septemlobus asponin A; Prosapogenin CP₃₆; Hederagenin-3-*O*- α -L-rhamnopyranosyl-(1 \rightarrow 2)- α -L-arabinopyranoside C₄₁H₆₆O₁₂ (750.98). mp 228–230°C. Pharm: Anti-inflammatory (male ICR mus, orl, dose = 50mg/kg)^[4212]; anti-inflammatory (modulator of cytokine network: prevents formation of TNF- α in RAW264.7 macrophages stimulated with LPS, IC₅₀ = 5μmol/L)^[4416]; antioxidant (75μg/mL, total antioxidant activity (lipid peroxidation of linoleic acid emulsion) = 94%, control α -Tocopherol, total antioxidant activity = 67%; reducing power = 1.412, α -Tocopherol, reducing power = 1.929; DPPH scavenging, IC₅₀ = 69.4μg/mL, α -Tocopherol, IC₅₀ = 48.1μg/mL; superoxide radical scavenging, IC₅₀ = 50.7μg/mL, α -Tocopherol, IC₅₀ = 50.0μg/mL; iron chelating, IC₅₀ = 51.4μg/mL, α -Tocopherol, IC₅₀ = 50.0μg/mL; H₂O₂ scavenging, IC₅₀ = 45.2μg/mL, α -Tocopherol, IC₅₀ = 40.3μg/mL)^[4993]. Source: CHANG CHUN TENG *Hedera nepalensis* var. *sinensis*, ZHUO SE CI QIU *Kalopanax pictum*, CI QIU SHU PI *Kalopanax septemlobus*, HONG MAO WU JIA PI *Acanthopanax giraldii* [Syn. *Acanthopanax giraldii* var. *inermis*; *Eleutherococcus giraldii*], HUANG HE MAO REN DONG *Lonicera fulvotomentosa*, HUANG HUA BAI JIANG *Patrinia scabiosaefolia*, MA TI YE *Caltha palustris*, REN DONG TENG *Lonicera japonica*, WEI LING XIAN *Clematis chinensis*, XI ZANG TIE XIAN LIAN *Clematis tibetana* (aerial parts), YANG CHANG CHUN TENG *Hedera helix*, YU ZHI ZI *Akebia quinata*. Ref: 6, 660, 3530, 4212, 4416, 4993.

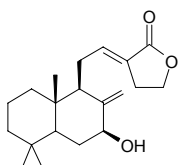


9277 Hedychenone

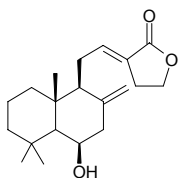
[56324-54-0] C₂₀H₂₆O₂ (298.43). Crystals (hexane), mp 135~136°C, [α]_D = +142° (CHCl₃). Source: DIAN JIANG HUA *Hedychium yunnanense*, TU LIANG JIANG *Hedychium spicatum*, TU QIANG HUO *Hedychium coronarium* (rhizome), YUAN BAN JIANG HUA *Hedychium forrestii*. Ref: 6, 322, 660, 1521, 4221.

**9278 Hedychilactone A**

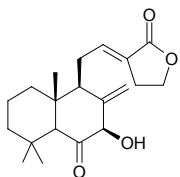
C₂₀H₃₀O₃ (318.46). Pharm: β -Hexosaminidase inhibitor (RBL-2H3 cells, 100 μ mol/L, InRt = (39.1 \pm 2.7)%, p <0.01)^[4221]. Source: TU QIANG HUO *Hedychium coronarium* (rhizome). Ref: 4221.

**9279 Hedychilactone B**

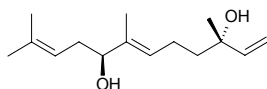
C₂₀H₃₀O₃ (318.46). Source: TU QIANG HUO *Hedychium coronarium* (rhizome). Ref: 4221.

**9280 Hedychilactone C**

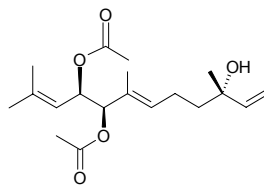
C₂₀H₂₈O₄ (332.44). Source: TU QIANG HUO *Hedychium coronarium* (rhizome). Ref: 4221.

**9281 Hedychiol A**

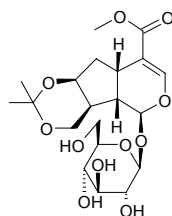
C₁₅H₂₆O₂ (238.37). Colorless oil, [α]_D²⁶ = -2.4° (c = 0.800, CHCl₃). Source: TU QIANG HUO *Hedychium coronarium* (rhizome). Ref: 4221.

**9282 Hedychiol B 8,9-diacetate**

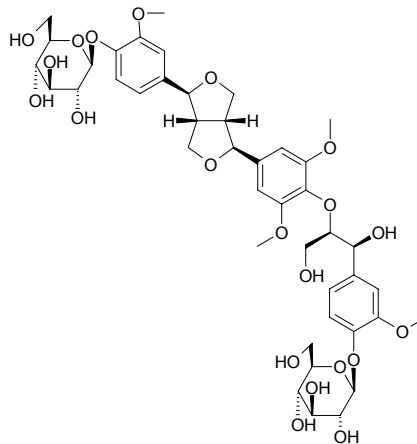
C₁₉H₃₀O₅ (338.45). Colorless oil, [α]_D²¹ = -18.8° (c = 0.300, CHCl₃). Pharm: β -Hexosaminidase inhibitor (RBL-2H3 cells, 100 μ mol/L, InRt = (11.4 \pm 1.2)%, p <0.01)^[4221]. Source: TU QIANG HUO *Hedychium coronarium* (rhizome). Ref: 4221.

**9283 Hedyoside**

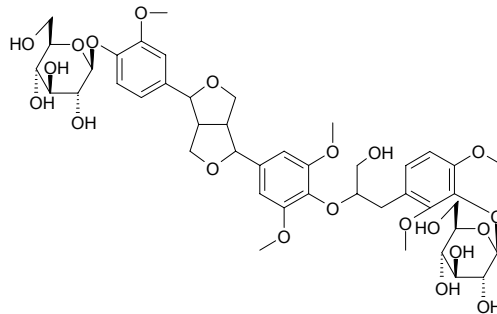
[209115-90-2] C₂₀H₃₀O₁₁ (446.46). White powder, [α]_D = -26.3° (c = 0.049, methanol). Source: JIN MAO ER CAO *Hedyotis chrysotricha* [Syn. *Oldenlandia chrysotricha*]. Ref: 40.

**9284 Hedytol C 4,4''-di-*O*- β -D-glucopyranoside**

[107668-75-7] C₄₃H₅₆O₂₁ (908.91). Source: DU ZHONG *Eucommia ulmoides*. Ref: 2, 184.

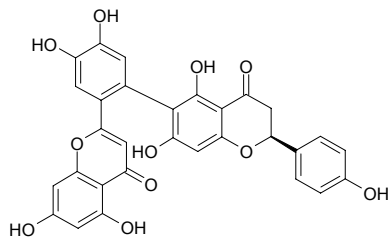
**9285 Hedyalignan A**

C₄₄H₅₈O₂₁ (922.94). White powder, mp 160~164°C, [α]_D²⁵ = +4.0° (c = 0.22, MeOH). Source: DUO XU YAN HUANG QI *Hedysarum polybotrys*. Ref: 2470.

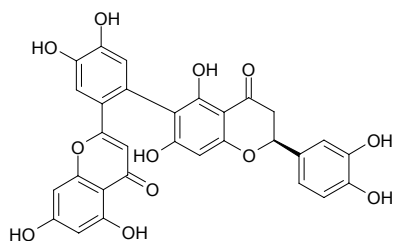


9286 Hegoflavone A

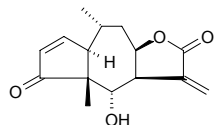
2,3-Dihydro-3'''-hydroxy-6'''-biapigenin $C_{30}H_{20}O_{11}$ (556.49). Source: SUO LUO *Alsophila spinulosa*. Ref: 660.

**9287 Hegoflavone B**

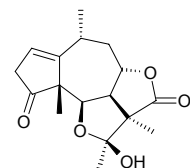
2,3-Dihydro-6,6'''-biluteolin $C_{30}H_{20}O_{12}$ (572.49). Source: SUO LUO *Alsophila spinulosa*. Ref: 660.

**9288 Helenalin**

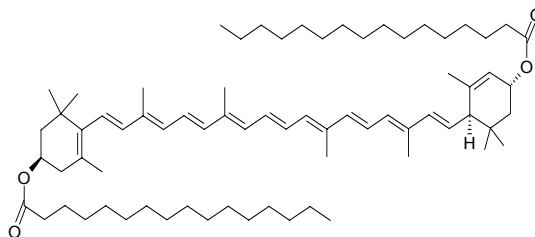
[6754-13-8] $C_{15}H_{18}O_4$ (262.31). Crystals (C_2H_5OH or C_6H_6), mp 225~228°C, $[\alpha]_D^{25} = -102.8^\circ$ ($CHCl_3$). Pharm: Antibacterial (*Staphylococcus aureus*, MIC = 100µg/mg; *Bacillus subtilis*, MIC = 100µg/mg); antineoplastic (mus, P₃₈₈, *in vivo*); anti-inflammatory (rat swollen foot model caused by carrageenan, 2.5mg/kg, InRt = 72%, rat experimental arthritis, 2.5mg/kg, InRt = 73%); anthelmintic; cytotoxic (HeLa *in vitro*, ED₅₀ = 0.03µg/mL, normal hmn diploid fibrocyte WI-38 *in vitro*, ED₅₀ = 0.03µg/mL, hmn throat epidermic carcinoma cells H-Ep-2, ED₅₀ = 0.08µg/mL, W-18Va-2 cells, ED₅₀ = 0.07µg/mL); molluscicide; toxin (hmn, animals, fish and insects); anti-inflammatory (NF-κB pathway)^[4415]. Source: DUI XIN JU *Helenium autumnale*, FANG XIANG DUI XIN JU *Helenium aromaticum*, SHAN DI DUI XIN JU *Helenium autumnale* var. *montanum*, XI YE DUI XIN JU *Helenium tenuifolium*, XIAO TOU DUI XIN JU *Helenium microcephalum*. Ref: 4, 658, 1521, 4415.

**9289 Heleniamarin**

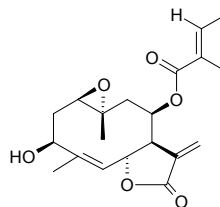
[66607-74-7] $C_{17}H_{22}O_5$ (306.36). Crystals (Et_2O), mp 151~153°C, $[\alpha]_D^{21} = +58.5^\circ$ ($c = 0.25$, $CHCl_3$). Source: KU WEI DUI XIN JU *Helenium amarum*. Ref: 4, 1521.

**9290 Helenien**

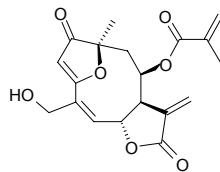
Xantofyl palmitate; Adaptinol; Aptinol [547-17-1] $C_{72}H_{116}O_4$ (1045.72). Red crystals (C_2H_5OH), mp 92°C. Pharm: Yellow pigment. Source: WAN SHOU JU *Tagetes erecta*, DUI XIN JU *Helenium autumnale*, KONG QUE CAO *Tagetes patula*, DI TANG HUA *Kerria japonica*. Ref: 6, 658, 1521.

**9291 Heliangin**

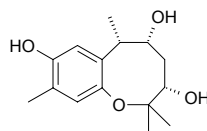
[13323-48-3] $C_{20}H_{26}O_6$ (362.43). Crystals ($MeOH$), mp 227~229°C, $[\alpha]_D^{23} = -110^\circ$ ($c = 0.5$, $CHCl_3$). Pharm: Plant growth regulator. Source: CHENG GAN SHENG MA *Eupatorium lindleyanum* (whole plant: yield = 0.0012%dw)^[4762], JU YU *Helianthus tuberosus*, XIANG RI KUI YE *Helianthus annuus*, XIANG RI KUI ZI *Helianthus annuus*. Ref: 6, 658, 1521, 4762.

**9292 Heliangolide 17,18-dehydro-viguiepinin**

$C_{19}H_{20}O_7$ (360.37). Source: *Viguiera eriophora* ssp. *eriophora* (aerial parts). Ref: 5090.

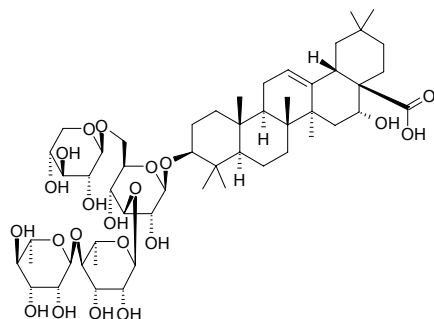
**9293 Heliannuol L**

$C_{15}H_{22}O_4$ (266.34). Colorless oil. Source: XIANG RI KUI YE *Helianthus annuus*. Ref: 1927.

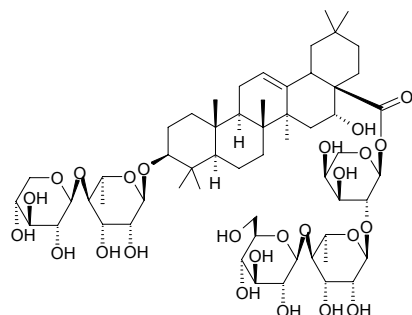


9294 Helianthoside A

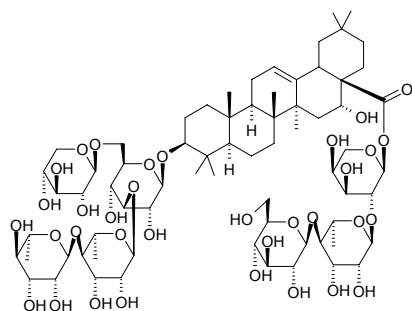
[139164-70-8] $C_{53}H_{86}O_{21}$ (1059.26). Pharm: Hemolytic. Source: XIANG RI KUI ZI *Helianthus annuus*. Ref: 658.

**9295 Helianthoside B**

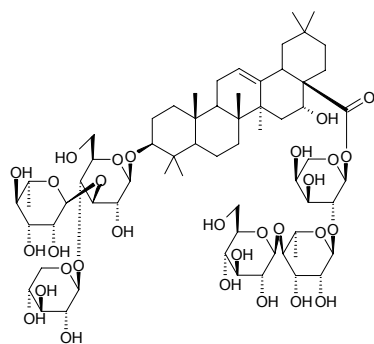
[29108-67-6] $C_{58}H_{94}O_{25}$ (1191.38). Source: XIANG RI KUI HUA *Helianthus annuus*. Ref: 6.

**9296 Helianthoside C**

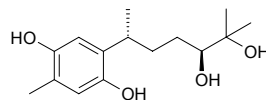
$C_{70}H_{114}O_{34}$ (1499.67). mp 215~217°C. Source: XIANG RI KUI HUA *Helianthus annuus*. Ref: 6.

**9297 Helianthussaponin 2**

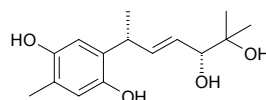
$C_{64}H_{104}O_{30}$ (1353.52). Source: MAI XIAN WENG *Agrostemma githago* (root). Ref: 5464.

**9298 Helibisabonol A**

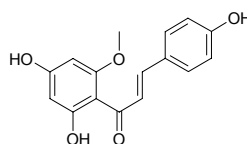
$C_{15}H_{24}O_4$ (268.36). Colorless oil, $[\alpha]_D^{25} = -44.9^\circ$ ($c = 0.1$, CH_3COCH_3). Source: XIANG RI KUI YE *Helianthus annuus*. Ref: 1927.

**9299 Helibisabonol B**

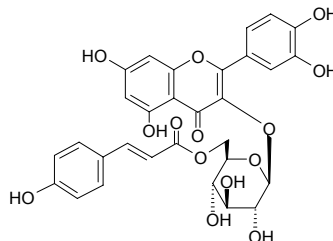
$C_{15}H_{22}O_4$ (266.34). Colorless oil, $[\alpha]_D^{25} = -7.2^\circ$ ($c = 0.1$, CH_3COCH_3). Source: XIANG RI KUI YE *Helianthus annuus*. Ref: 1927.

**9300 Helichrysetin**

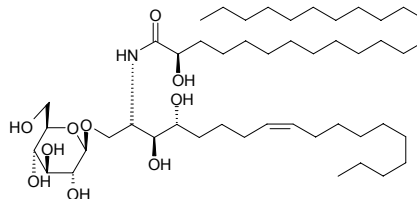
$C_{16}H_{14}O_5$ (286.29). Pharm: Cytotoxic (Colon26-L5, $ED_{50} = 64.7 \mu\text{mol/L}$; HT1080, $ED_{50} = 40.1 \mu\text{mol/L}$). Source: YUN NAN CAO KOU *Alpinia blepharocalyx* (seed: yield = 0.00079%). Ref: 3042.

**9301 Helichrysoside**

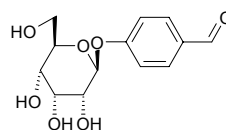
[56343-26-1] $C_{30}H_{26}O_{14}$ (610.53). Bright yellow lamellar crystals (with 1.5 H_2O), mp 181~184°C, $[\alpha]_D^{21} = -44^\circ$ ($c = 1.0$, methanol). Pharm: Antihypertensive (rat, inhibits sympathetic nervous system and relaxes blood vessels). Source: ZANG HONG HUA *Crocus sativus*. Ref: 1029, 1173.

**9302 Helicia cerebroside A**

1- β -D-Glucopyranosyl-(2S,3S,4R,8Z)-2-[(2'R)-2'-hydroxylignocenoyl-amino]-8-octadecene-1,3,4-triol $C_{48}H_{93}NO_{10}$ (844.28). White crystalline powder. Source: SHEN LU SHAN LONG YAN *Helicia nilagirica* (leaf). Ref: 4843.

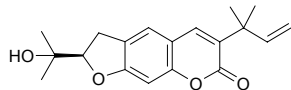
**9303 Helicide**

$C_{13}H_{16}O_7$ (284.27). Source: SHEN LU SHAN LONG YAN *Helicia nilagirica*. Ref: 660.

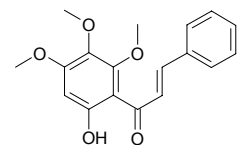


9304 Heliettin

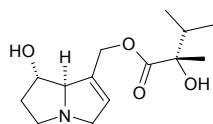
Chalepin; Rutamarin alcohol [33054-89-6] $C_{19}H_{22}O_4$ (314.38), mp 165°C. Pharm: Cytotoxic (*in vitro*); phyto-growth inhibitor (100 μ g/mL, *Amaranthus hypochondriacus*, InRt = (45.1 \pm 1.3)%, $P < 0.05$; *E. crusgalli*, InRt = (88.5 \pm 1.8)%)^[5253]. Source: CHOU CAO *Ruta graveolens*, SUI ZHUANG YUN XIANG *Ruta chalepensis*, *Stauranthus perforatus* (root). Ref: 6, 658, 5253.

**9305 Helilandin B**

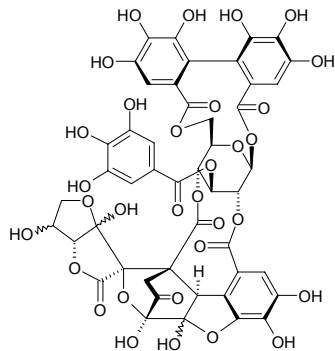
$C_{18}H_{18}O_5$ (314.34). Source: *Didymocarpus pedicellata*, *Helichrysum sutherlandii*. Ref: 660.

**9306 Heliohoustine**

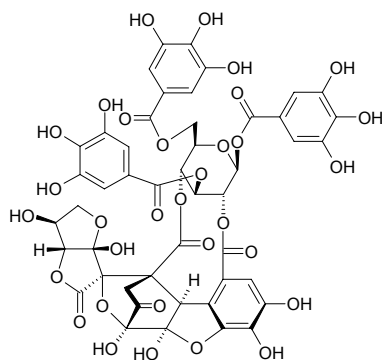
O^9 -(2*S*-2 α -Hydroxy-2,3-dimethyl-butanoyl) $C_{14}H_{23}NO_4$ (269.34). Source: XIONG ER CAO *Ageratum houstonianum* (aerial parts). Ref: 5173.

**9307 Helioscopin A**

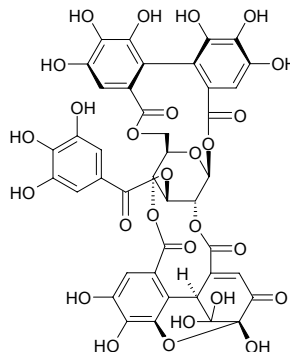
$C_{47}H_{34}O_{32}$ (1110.78). Source: ZE QI *Euphorbia helioscopia*. Ref: 660.

**9308 Helioscopin B**

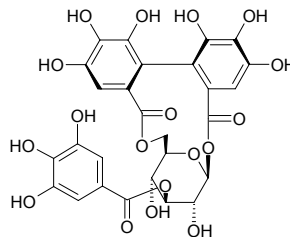
$C_{47}H_{36}O_{32}$ (1112.79). Source: ZE QI *Euphorbia helioscopia*. Ref: 660.

**9309 Helioscopin A**

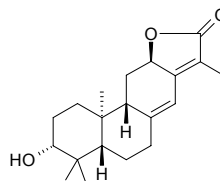
$C_{41}H_{28}O_{27}$ (952.66). Source: ZE QI *Euphorbia helioscopia*. Ref: 660.

**9310 Helioscopin B**

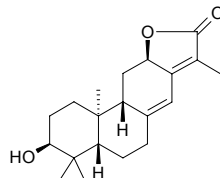
$C_{27}H_{22}O_{18}$ (634.47). Source: ZE QI *Euphorbia helioscopia*. Ref: 660.

**9311 Helioscopinolide A**

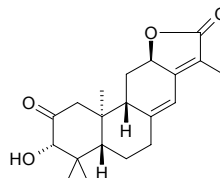
$C_{20}H_{28}O_3$ (316.44). Colorless needles. Source: DA GUO DA JI *Euphorbia wallichii* (root), ZE QI *Euphorbia helioscopia*. Ref: 660, 4585.

**9312 Helioscopinolide B**

$C_{20}H_{28}O_3$ (316.44). Source: ZE QI *Euphorbia helioscopia*. Ref: 660.

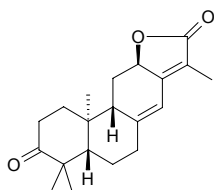
**9313 Helioscopinolide C**

$C_{20}H_{26}O_4$ (330.43). Colorless needles. Source: DA GUO DA JI *Euphorbia wallichii* (root), ZE QI *Euphorbia helioscopia*. Ref: 660, 4585.

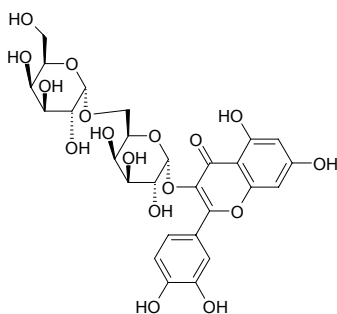


9314 Helioscopinolide E

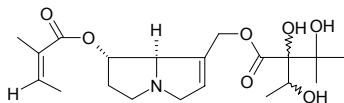
$C_{20}H_{26}O_3$ (314.43). Colorless needles. Source: DA GUO DA JI *Euphorbia wallichii* (root). Ref: 4585.

**9315 Heliosin**

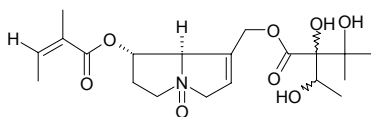
$C_{27}H_{30}O_{17}$ (626.53). Hemi-hydrate, yellow acicular crystals, mp 187°C, $[\alpha]_D = -104.4^\circ$ ($c = 0.498$, 95% ethanol). Pharm: Antitussive (used in treatment of chronic bronchitis, in 286 cases, 5 days constituting a single therapeutic course, excellent effective rate = 50%). Source: ZE QI *Euphorbia helioscopia*. Ref: 661.

**9316 Heliosupine**

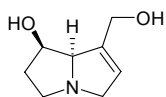
[32728-78-2] $C_{20}H_{31}NO_7$ (397.47). mp 148~149°C. Pharm: Hepatotoxin. Source: ZHUO SE LIU LI CAO *Cynoglossum pictum*, CU XI MEN FEI CAO *Symphytum asperum*, LAN JI *Echium vulgare*, NAN FANG LIU LI CAO *Cynoglossum australe*, XI MEN FEI CAO *Symphytum officinale*, YANG XIN TIAN JIE CAI *Heliotropium supinum*, YAO YONG DAO TI HU *Cynoglossum officinale*. Ref: 6, 658.

**9317 Heliosupine N-oxide**

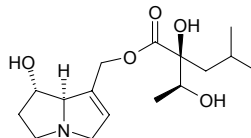
$C_{20}H_{31}NO_8$ (413.47). mp 165°C (dec). Source: YAO YONG DAO TI HU *Cynoglossum officinale*. Ref: 6.

**9318 Heliotridine**

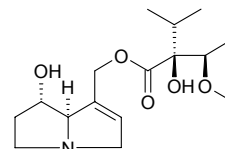
Retronecine† [480-85-3] $C_8H_{13}NO_2$ (155.20). Crystals (Me_2CO), mp 121~122°C, $[\alpha]_D^{26} = +50.2^\circ$ (ethanol). Pharm: Hepatotoxin. Source: JIA DONG FANG QIAN LI GUANG *Senecio pseudoorientalis*, *Crotalaria* sp., *Heliotropium* sp. Ref: 658, 1521.

**9319 Heliotridine 2S-hydroxy-2S-(1S-hydroxyethyl)-4-methyl-pentanoyl ester**

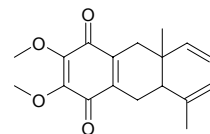
$C_{16}H_{27}NO_5$ (313.40). Yellow-orange oil, $[\alpha]_D^{25} = +14.3^\circ$ ($c = 0.1$, MeOH). Source: CU MAO NIU SHE CAO *Anchusa strigosa* (flower, leaf and root). Ref: 5298.

**9320 Heliotrine**

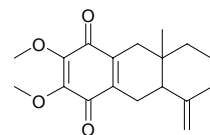
[303-33-3] $C_{16}H_{27}NO_5$ (313.40). Prisms (Me_2CO), mp 125~126°C, mp 128°C, $[\alpha]_D^{20} = +63.8^\circ$ ($CHCl_3$), $[\alpha]_D = +17.6^\circ$ (ethanol). Pharm: Antineoplastic (adenoma 755, S₁₈₀, subcutaneous Walker sarcoma and Walker sarcoma in murine muscle *in vivo*); cytotoxic (KB *in vitro*, ED₅₀ = 15 µg/L); mutagen (Ames, drosophila, rat experiments); teratogen (Ames, drosophila, rat experiments). Source: A GU JI TIAN JIE CAI *Heliotropium arguzioides*, AI SHI TIAN JIE CAI *Heliotropium eichwaldii*, AO ER JIA TIAN JIE CAI *Heliotropium olgae*, DA WEI YAO *Heliotropium indicum*, DUO ZHI TIAN JIE CAI *Heliotropium ramosissimum*, OU ZHOU TIAN JIE CAI *Heliotropium europaeum*, YAN TIAN JIE CAI *Heliotropium curassavicum*, YAO YONG DAO TI HU *Cynoglossum officinale*. Ref: 5, 658.

**9321 Heliotropinone A**

7-Isopropenyl-2,3-dimethoxy-6-methyl-6-vinyl-5,6,7,8-tetrahydronaphthalene-1,4-dione $C_{18}H_{22}O_4$ (302.37). Dark yellow oil, $[\alpha]_D = 0^\circ$ ($c = 0.05$, MeOH). Pharm: Antifungal (*Cladosporium cucumerinum*, MIA = 2 µg, control Nystatin, MIA = 1 µg; *Candida albicans*, MIA = 4 µg, Nystatin, MIA = 1 µg)^[5203], antibacterial (*Bacillus subtilis*, MIA = 0.2 µg; control Chloramphenicol, MIA = 0.01 µg)^[5203]. Source: LUAN YE TIAN JIE CAI *Heliotropium ovalifolium* (aerial parts). Ref: 5203.

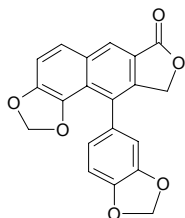
**9322 Heliotropinone B**

2,3-Dimethoxy-8α-methyl-5-methylene-5,6,7,8,8α,9,10,10a-octahydroanthracene-1,4-dione $C_{18}H_{22}O_4$ (302.37). Dark yellow oil, $[\alpha]_D = +4^\circ$ ($c = 0.05$, MeOH). Pharm: Antifungal (*Cladosporium cucumerinum*, MIA = 2 µg, control Nystatin, MIA = 1 µg; *Candida albicans*, MIA = 2 µg, Nystatin, MIA = 1 µg); antibacterial (*Bacillus subtilis*, MIA = 0.2 µg; control Chloramphenicol, MIA = 0.01 µg). Source: LUAN YE TIAN JIE CAI *Heliotropium ovalifolium* (aerial parts). Ref: 5203.

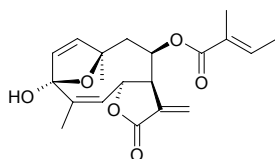


9323 Helioxanthin

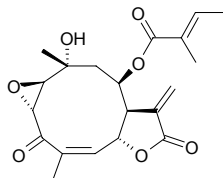
[18920-47-3] $C_{20}H_{12}O_6$ (348.32). mp 240~241°C. **Pharm:** Cytotoxic (A549, $ED_{50} = 11.3\mu\text{mol/L}$, $ED_{50} = 32.4\mu\text{g/mL}$, control Adriamycin, $ED_{50} = 0.01\mu\text{mol/L}$, $ED_{50} = 0.02\mu\text{g/mL}$; MCF7, $ED_{50} = 12.6\mu\text{mol/L}$, $ED_{50} = 36.1\mu\text{g/mL}$, Adriamycin, $ED_{50} = 0.1\mu\text{mol/L}$, $ED_{50} = 0.1\mu\text{g/mL}$; HT29, $ED_{50} = 13.4\mu\text{mol/L}$, $ED_{50} = 38.6\mu\text{g/mL}$, Adriamycin, $ED_{50} = 0.1\mu\text{mol/L}$, $ED_{50} = 0.1\mu\text{g/mL}$)^[5088]. **Source:** DA JIN NIU CAO *Polygala chinensis* [Syn. *Polygala glomerata*], QIANG DAO YAO *Hypoestes purpurea* [Syn. *Justicia purpurea*; *Hypoestes sinica*] (aerial parts: yield = 0.000067%dw)^[4783], TAI WAN SHAN *Taiwania cryptomerioides* (heartwood). **Ref:** 6, 4783, 5088.

**9324 Helivypolide D**

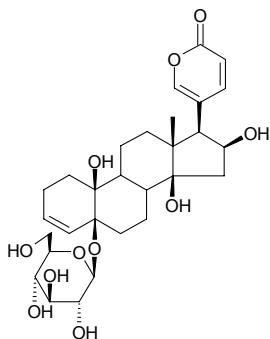
$C_{20}H_{24}O_6$ (360.41). Colorless oil. **Source:** ZAI PEI XIANG RI KUI YE *Helianthus annuus* cv. **Ref:** 2370.

**9325 Helivypolide E**

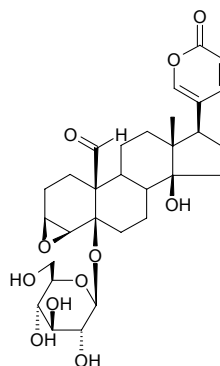
$C_{20}H_{24}O_7$ (376.41). Colorless oil. **Source:** ZAI PEI XIANG RI KUI YE *Helianthus annuus* cv. **Ref:** 2370.

**9326 Hellebortin A**

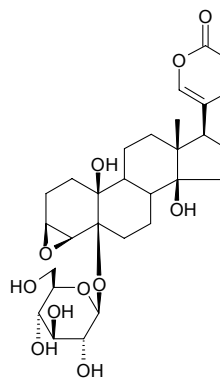
5-[β -D-Glucopyranosyloxy]-10,14,16-trihydroxy-19-nor-{5 β ,10 β ,14 β ,16 β }-bufa-3,20,22-trienolide $C_{29}H_{40}O_{11}$ (564.64). Colorless glassy solid. **Pharm:** Ecdysteroid agonist or antagonist inactive (*Drosophila melanogaster* B₁₁ cell line, 1~1000 $\mu\text{mol/L}$). **Source:** NIU QU TI GEN CAO *Helleborus torquatus* [Syn. *Helleborus serbicus*] (seed). **Ref:** 5142.

**9327 Hellebortin B**

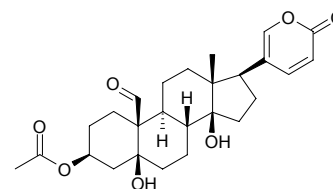
5-[β -D-Glucopyranosyloxy]-3,4-epoxy-14-hydroxy-19-oxo-bufa-20,22-dienolide $C_{30}H_{40}O_{11}$ (576.65). White glassy solid. **Source:** NIU QU TI GEN CAO *Helleborus torquatus* [Syn. *Helleborus serbicus*] (seed). **Ref:** 5142.

**9328 Hellebortin C**

5-[β -D-Glucopyranosyloxy]-3,4-epoxy-10,14-dihydroxy-19-nor-bufa-20,22-dienolide $C_{29}H_{40}O_{11}$ (564.64). Colorless glassy solid. **Source:** NIU QU TI GEN CAO *Helleborus torquatus* [Syn. *Helleborus serbicus*] (seed). **Ref:** 5142.

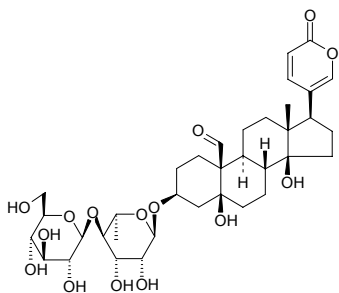
**9329 Hellebrigenin 3-acetate**

$C_{26}H_{34}O_7$ (458.56). **Pharm:** Antineoplastic. **Source:** TI GEN CAO *Helleborus niger*, TIE KUAI ZI *Helleborus thibetanus*, CHAN CHU *Bufo bufo gargarizans*; *Bufo melanostictus*. **Ref:** 658.

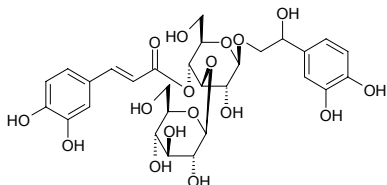


9330 Hellebrin

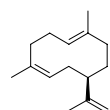
Hellebrigenin glucorhamnoside [13289-18-4] $C_{36}H_{52}O_{15}$ (724.81). mp 283~284°C. **Pharm:** Anticonvulsant (caused by pentylenetetrazol); anti-electroshock; cardiac glycoside; cytotoxic (hmn epidermoid carcinoma KB cells, *in vitro*); LD₅₀ (gpg, perfusion in stomach) = 0.85μmol/kg. **Source:** TI GEN CAO *Helleborus niger*, ZI TI GEN CAO *Helleborus purpurascens*, TIE KUAI ZI *Helleborus thibetanus*, XIANG TIE KUAI ZI *Helleborus odoratus*, MA TI YE *Caltha palustris*. **Ref:** 5, 658, 660.

**9331 Hellicoside**

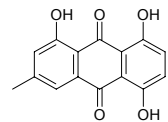
[132278-04-7] $C_{29}H_{36}O_{17}$ (656.59). Amorphous powder, mp 182.6~190.3°C, $[\alpha]_D^{23} = -27^\circ$ ($c = 1.0$, MeOH). **Pharm:** 5-LOX Inhibitor (IC₅₀ = 0.316μmol/L); aldose reductase inhibitor (IC₅₀ = 926μmol/L); cAMP phosphodiesterase inhibitor (*in vitro*, IC₅₀ = 169μmol/L); cyclo-adenyl mononucleotide phosphodiesterase inhibitor. **Source:** CHE QIAN *Plantago asiatica*. **Ref:** 658, 1096.

**9332 (+)-Helminthogermacrene**

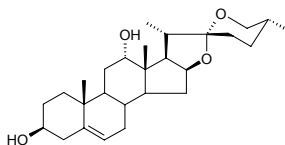
$C_{15}H_{24}$ (204.36). Colorless oil. **Source:** BO BAN HE YE TAI *Scapania undulata* (essential oil). **Ref:** 3752.

**9333 Helminthosporin**

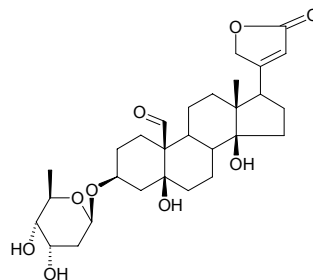
[518-80-9] $C_{15}H_{10}O_5$ (270.24). Red needles (pyriding or Et₂O), mp 228°C. **Source:** LU HUI *Aloe vera* [Syn. *Aloe barbadensis*], WANG JIANG NAN *Cassia occidentalis*. **Ref:** 2, 1521.

**9334 Heloniogenin**

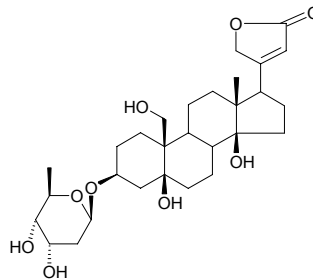
[6869-16-5] $C_{27}H_{42}O_4$ (430.63). Crystals (MeOH), mp 212~213°C, $[\alpha]_D = -91^\circ$ (CHCl₃). **Source:** LEI GONG QI *Clintonia alpina*. **Ref:** 6, 1521.

**9335 Helveticoside**

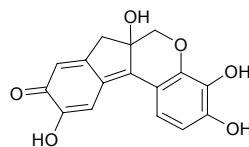
Alleoside A; Erysimin; Erysimotoxin [630-64-8] $C_{29}H_{42}O_9$ (534.65). Crystals +2H₂O (EtOH aq.), mp 168~172°C (dec), $[\alpha]_D^{20} = +43.5^\circ$ (ethanol); mp 153~157°C. **Pharm:** Cardiac glycoside; contracts blood vessels (cat heart, vasa coronaria, *in vitro*, high concentration); diuretic (mus); sedative (cat); LD₅₀ (cat) = 0.09mg/kg. **Source:** BO NIANG HAO *Descurainia sophia*, CHANG SHUO HUANG MA *Corchorus olitorius*, GUI ZHU TANG JIE *Erysimum cheiranthoides*, HUAN YANG SHEN YE TANG JIE *Erysimum crepidifolium*, HUANG BAI TANG JIE *Erysimum ochroleucum*, HUANG MA YE *Corchorus capsularis*, HUANG MA ZI *Corchorus capsularis*, TANG JIE *Erysimum diffusum*, KANG PI DU MAO XUAN HUA *Strophanthus kombe*. **Ref:** 5, 6, 658, 1521.

**9336 Helveticosol**

[18695-02-8] $C_{29}H_{44}O_9$ (536.67). Plates (H₂O), mp 147~152°C. **Source:** GUI ZHU TANG JIE *Erysimum cheiranthoides*, KANG PI DU MAO XUAN HUA *Strophanthus kombe*, *Castilla elastica*. **Ref:** 6, 1521.

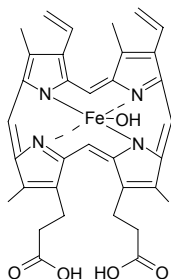
**9337 Hematein**

Hydroxybrazilein $C_{16}H_{12}O_6$ (300.27). mp > 200°C, mp 250°C (dec), insoluble in benzene, chloroform, very slightly soluble in water, slightly soluble in ethanol, ether.^[5507] **Pharm:** Anti-inflammatory (modulator of cytokine network: reduces expression of VCAM-1 in aorta of hypercholesterolemic New Zealand rabbits; reduces TNF-α-induced VCAM-1 expression in HUVECs; diminishes increase in VCAM-1 and MCP-1 levels induced by TNF-α and oxidized LDL in HUVECs, respectively, as well as reducing TNF-α and IL-1β production in peritoneal macrophages stimulated with LPS plus IFNγ; reduces cell surface expression of adhesion molecules, resulting in inhibition of THP-1 monocyte adhesion to TNF-α stimulated HUVECs)^[4416]. **Source:** SU MU *Caesalpinia sappan*. **Ref:** 4416, 5507.

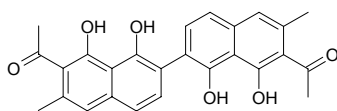


9338 Hematin

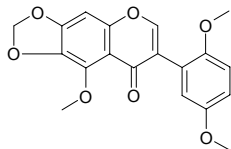
Haematin [15489-90-4] $C_{34}H_{33}FeN_4O_5$ (633.51). mp 200°C (dec). Source: NIU XUE *Bos taurus domesticus*; *Bubalus bubalis*. Ref: 6, 1521.

**9339 Hemerocallin**

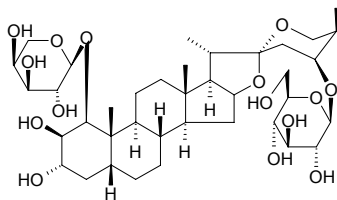
Stypanol [99305-33-6] $C_{26}H_{22}O_6$ (430.46). Orange needles ($CHCl_3$), mp 256–266°C (dec); mp 266–269°C. Pharm: Schistosomacide (main effective component in Orange Daylily, *Hemerocallis fulva* XUAN CAO GEN, used in treatment of schistosomiasis); toxin (animal, sheep and goat, neurotoxic, cumulative poisoning, palsy and death). Source: SHE XIANG XUAN *Hemerocallis thunbergii*, XIAO XUAN CAO GEN *Hemerocallis minor*, family Liliaceae spp. Ref: 6, 658, 660, 1521.

**9340 Hemerocallone**

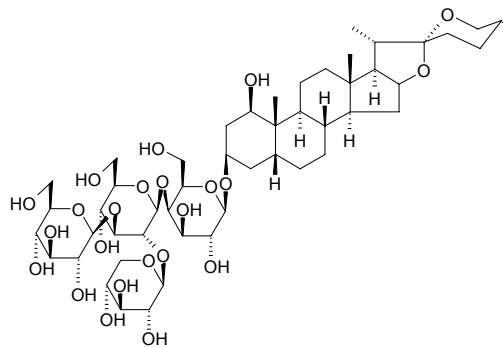
[82869-19-0] $C_{19}H_{16}O_7$ (356.34). Colorless long acicular, mp 177–179°C. Pharm: Diuretic (rat). Source: XIAO XUAN CAO GEN *Hemerocallis minor*. Ref: 658, 1521.

**9341 Hemeroside A**

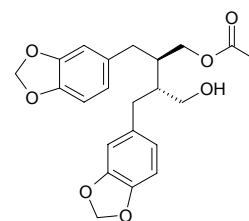
24*S*-Hydroxy-neotokorogenin 1-*O*- α -L-arabinopyranosyl 24-*O*- β -D-glucopyranoside $C_{38}H_{62}O_{15}$ (758.91). White powder, mp 120–125°C, $[\alpha]_D^{26} = 17.6^\circ$ ($c = 0.9$, MeOH). Source: CHONG BAN XUAN CAO *Hemerocallis fulva* var. *kwanso* (aerial parts). Ref: 3514.

**9342 Hemeroside B**

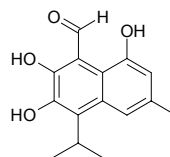
Isorhodeasapogenin 3-*O*- β -D-glucopyranosyl-(1→3)-[β -D-xylopyranosyl-(1→2)]- β -D-glucopyranosyl-(1→4)- β -D-galactopyranoside $C_{50}H_{82}O_{23}$ (1050.20). Colorless needles, mp 287–290°C, $[\alpha]_D^{26} = 56.0^\circ$ ($c = 1.5$, pyridine). Source: CHONG BAN XUAN CAO *Hemerocallis fulva* var. *kwanso* (aerial parts). Ref: 3514.

**9343 Hemiriensin**

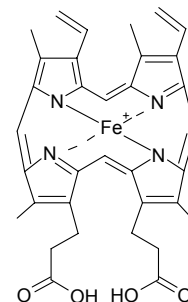
4-Acetoxy-2,3-bis(3,4-methylene-dioxybenzyl)-butan-1-ol $C_{22}H_{24}O_7$ (400.43). Source: BI CHENG QIE *Piper cubeba*. Ref: 660.

**9344 Hemigossypol**

[40817-07-0] $C_{15}H_{16}O_4$ (260.29). Yellow crystals ($CHCl_3$), mp 159–163°C (dec). Pharm: Antifungal. Source: LU DI MIAN *Gossypium hirsutum* [Syn. *Gossypium mexicanum*], MIAN HUA GEN *Gossypium herbaceum*. Ref: 6, 658.

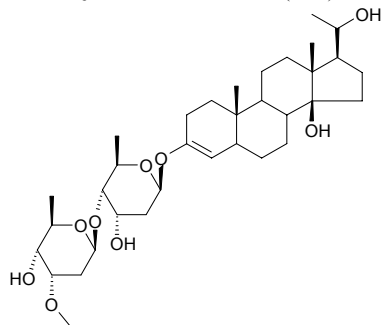
**9345 Hemin**

Haemin; Protoporphyrin iron(III) complex [16009-13-5] $C_{34}H_{32}FeN_4O_4^+$ (616.51). Source: CU LIU GUO *Hippophae rhamnoides*. Ref: 6, 1521.

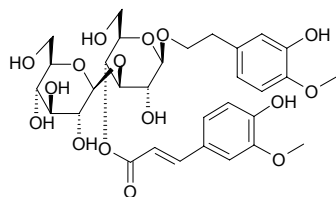


9346 Heminine

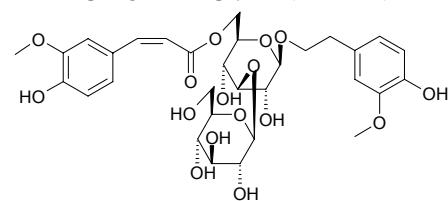
Calogenin 3-*O*- β -D-cymaropyranosyl-(1 \rightarrow 4)-*O*- β -D-digitoxopyranoside
 $C_{34}H_{56}O_9$ (608.82). mp 132°C, $[\alpha]_D = -62.5^\circ$ ($c = 0.11$, MeOH). Source: YIN DU BA QIA *Hemidesmus indicus* (stem). Ref: 5081.

**9347 Hemiphroside A**

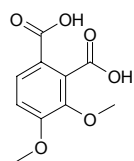
$C_{31}H_{40}O_{16}$ (668.65). Pharm: Antioxidant (hydroxyl radical scavenger, $IC_{50} = 110.5 \mu\text{mol/L}$, control Ascorbic acid, $IC_{50} = 51.8 \mu\text{mol/L}$, superoxide anion radical scavenger, $IC_{50} = 208.5 \mu\text{mol/L}$, control Ascorbic acid, $IC_{50} = 86.2 \mu\text{mol/L}$). Source: XI ZANG HU HUANG LIAN *Picrorhiza scrophulariiflora* (root). Ref: 4289.

**9348 Hemiphroside C**

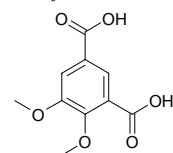
$C_{31}H_{40}O_{16}$ (668.65). Yellowish amorphous powder. Source: BIAN DA XIU QIU *Hemiphragma heterophyllum* (whole herb). Ref: 4816.

**9349 Hemipic acid**

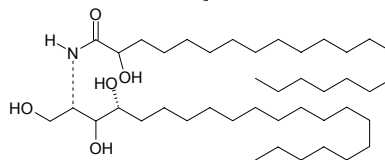
Hemipinic acid $C_{10}H_{10}O_6$ (226.19). Source: YING SU *Papaver somniferum*. Ref: 660.

**9350 m-Hemipic acid**

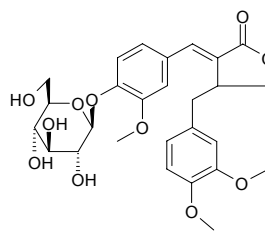
m-Hemipinic acid $C_{10}H_{10}O_6$ (226.19). Source: YING SU *Papaver somniferum*. Ref: 660.

**9351 Hemisceramide**

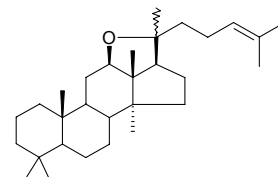
$C_{42}H_{85}NO_5$ (684.15). White powdery crystals (MeOH), mp 129~130°C. Source: NI HU CAI *Hemistepta lyrata* [Syn. *Hemistepta carthamoides*; *Saussurea carthamoides*]. Ref: 2231.

**9352 Hemislienoside**

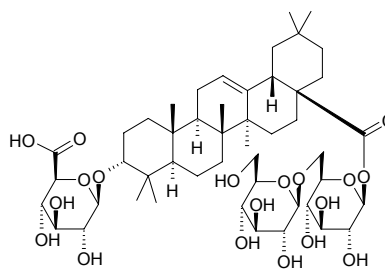
$C_{27}H_{32}O_{11}$ (532.55). Colorless granulous crystals, mp 112~113°C. Source: NI HU CAI *Hemistepta lyrata* [Syn. *Hemistepta carthamoides*; *Saussurea carthamoides*]. Ref: 2127.

**9353 Hemistriterpene ether**

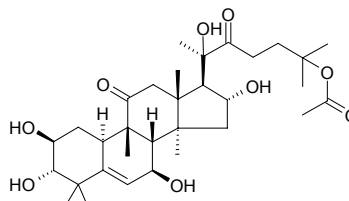
$C_{30}H_{50}O$ (426.73). Colorless granular crystals (MeOH), mp > 300°C, $[\alpha]_D^{20} = +13.6^\circ$ ($c = 0.000151$, MeOH). Source: NI HU CAI *Hemistepta lyrata* [Syn. *Hemistepta carthamoides*; *Saussurea carthamoides*]. Ref: 2231.

**9354 Hemsgiganoside B**

$C_{48}H_{76}O_{19}$ (957.13). White powder. Source: JU HUA XUE DAN *Hemseleya gigantea*. Ref: 2491.

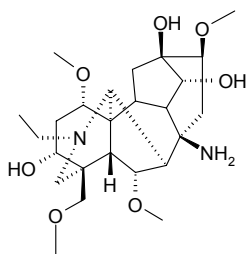
**9355 Hemslecin G**

$C_{32}H_{50}O_9$ (578.75). White powder, mp 132~138°C. Source: JU HUA XUE DAN *Hemseleya gigantea*. Ref: 2491.

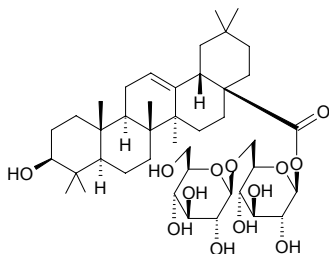


9356 Hemsleyatine

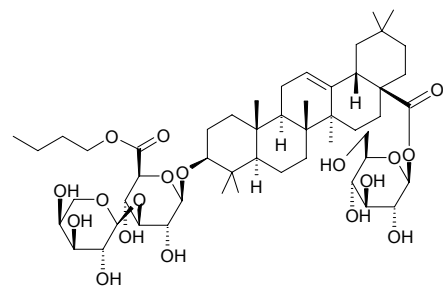
$C_{25}H_{42}N_2O_7$ (482.62). White amorphous powder, mp 89~90°C (chloroform–acetone–diethylamine), $[\alpha]_D^{25} = +36.5^\circ$ ($c = 0.55$, $CHCl_3$).
Source: GUA YE WU TOU *Aconitum hemsleyanum* (root). Ref: 4343.

**9357 Hemsionin A**

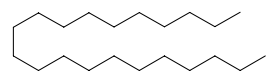
Oleanolic acid 28-*O*- β -D-glucopyranosyl-(1 \rightarrow 6)- β -D-glucopyranoside $C_{42}H_{68}O_{13}$ (781.00). White crystals, mp 245~250°C (dec), $[\alpha]_D^{26} = 18.52^\circ$ ($c = 0.19$, MeOH). Source: GU LIN XUE DAN *Hemsleya penxianensis* var. *gulinensis*. Ref: 2484.

**9358 Hemsionin B**

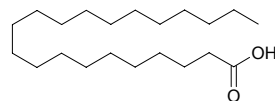
3-*α*-*O*-L-Arabinopyranosyl(1 \rightarrow 3)-(6'-butyl ester)- β -D-glucopyranosyl-oleanolic acid-28-*O*- β -D-glucopyranoside $C_{51}H_{82}O_{18}$ (983.21). White powder, mp 198~200°C (dec), $[\alpha]_D^{26} = +16.62^\circ$ ($c = 0.361$, MeOH).
Source: GU LIN XUE DAN *Hemsleya penxianensis* var. *gulinensis*. Ref: 2484.

**9359 Heneicosane**

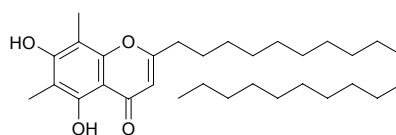
[629-94-7] $C_{21}H_{44}$ (296.58). Wax, mp 40.5°C, bp 356.5°C, bp 215°C/15mmHg, bp 129°C/0.05mmHg. Source: DANG SHEN *Codonopsis pilosula*, ROU CONG RONG *Cistanche deserticola*, SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 2, 1521.

**9360 Heneicosanoic acid**

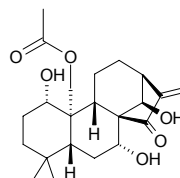
[2363-71-5] $C_{21}H_{42}O_2$ (326.57). Needles (Me₂CO), mp 73~74°C. Source: DANG SHEN *Codonopsis pilosula*, ROU CONG RONG *Cistanche deserticola*, SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f. *Huechingensis*]. Ref: 2, 660.

**9361 2-*n*-Heneicosyl-5,7-dihydroxy-6,8-dimethyl chromone**

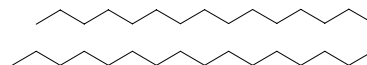
$C_{32}H_{52}O_4$ (500.77). Source: KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. Ref: 660.

**9362 Henryin**

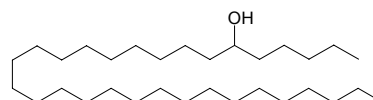
1 α ,7 α ,14 β -Trihydroxy-20-acetoxy-*ent*-kaur-16-en-15-one; Reniformin A $C_{22}H_{32}O_6$ (392.50). mp 201~203°C, $[\alpha]_D^{12} = -88^\circ$ ($c = 0.1$, MeOH). Pharm: Cytotoxic (*in vitro*, P₃₈₈, ED₅₀ = 0.58 μ g/mL)^[3012]. Source: WEI YE XIANG CHA CAI *Rabdosia excisa* (aerial parts: yield = 0.00003%dw), E XI XIANG CHA CAI *Isodon henryi*. Ref: 3012, 4067.

**9363 Hentriacontane**

Untriacontane [630-04-6] $C_{31}H_{64}$ (436.86). Wax, mp 68°C, bp 458°C, bp 302°C/15mmHg. Pharm: Fruit protective film. Source: FAN QIE *Lycopersicon esculentum*, ZANG HONG HUA SE SHUI QIN *Oenanthe crocata*, SHUANG BIAN GUA LOU *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*], YIN YANG HUO *Epimedium brevicornum*, RI BEN LU TI CAO *Pyrola japonica*, CHE QIAN *Plantago asiatica*. Ref: 2, 658, 660, 1521.

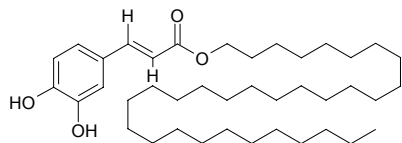
**9364 Hentriacontanol-6**

$C_{31}H_{64}O$ (452.86). Source: PU HUANG *Typha angustata*. Ref: 2.

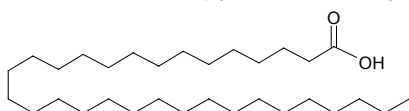


9365 Hentriacontanyl caffeate

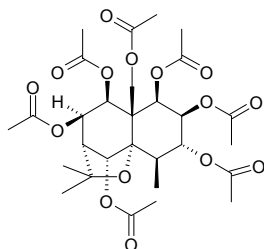
3,4-Dihydroxy-*trans*-cinnamic acid hentriacontanylester $C_{40}H_{70}O_4$ (615.50).
Pharm: Anti-inflammatory (COX-1 inhibitor, $1000\mu\text{mol/L}$, $\text{InRt} = (52\pm 2)\%$, positive control Indomethacin, $1.7\mu\text{mol/L}$, $\text{InRt} = (43\pm 3)\%$)^[4413]. **Source:** LUO YE SONG YE JIN SI TAO *Hypericum laricifolium* (aerial parts). **Ref:** 4413.

**9366 Hentriacontic acid**

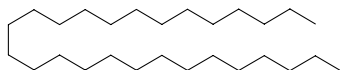
Melissic acid B [38232-01-8] $C_{31}H_{62}O_2$ (466.84). mp $93.5\text{--}94.0^\circ\text{C}$. **Source:** GOU QI GEN PI *Lycium chinense*, SHUANG BIAN GUA LOU *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*]. **Ref:** 2, 660.

**9367 1 β ,2 β ,3 α ,5 α ,7 β ,8 β ,11-Heptaacetoxy-dihydroagarofuran**

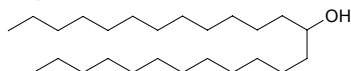
$C_{29}H_{40}O_{15}$ (628.63). Amorphous powder, $[\alpha]_D^{25} = -19.7^\circ$ ($c = 2.1$, MeOH).
Pharm: Immunosuppressant (inhibits lymphocyte transformation, $80\mu\text{g/mL}$, $\text{InRt} = 34\%$, control Dexamethasone, $50\mu\text{g/mL}$, $\text{InRt} = 61\%$). **Source:** LEI GONG TENG *Tripterygium wilfordii* (xylem). **Ref:** 4466.

**9368 *n*-Heptacosane**

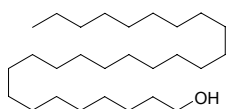
Heptacosane [593-49-7] $C_{27}H_{56}$ (380.75). mp 59.5°C , bp 422°C , bp $270^\circ\text{C}/15\text{mmHg}$. **Source:** SHUANG BIAN GUA LOU *Trichosanthes rosthornii* [Syn. *Trichosanthes uniflora*], JIAN YE LONG XUE SHU *Dracaena cochinchinensis*. **Ref:** 2, 616, 660, 1521.

**9369 14-Heptacosanol**

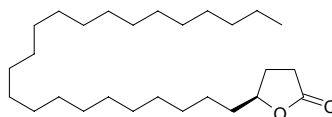
$C_{27}H_{56}O$ (396.75). **Source:** MO HAN LIAN *Eclipta prostrata* [Syn. *Eclipta alba*]. **Ref:** 660.

**9370 Heptacosanol**

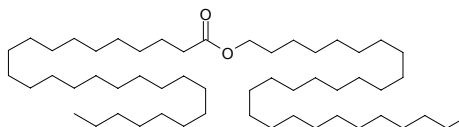
1-Heptacosanol [2004-39-9] $C_{27}H_{56}O$ (396.75). mp 81.5°C , mp 76°C . **Source:** MAO GENG XI XIAN *Siegesbeckia orientalis* var. *glabrescens* [Syn. *Siegesbeckia glabrescens*]. **Ref:** 476.

**9371 Heptacosan-4-olide**

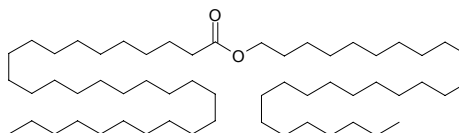
$C_{27}H_{52}O_2$ (408.71). **Source:** FU CHUI FE LAO JU *Flourensia cernua*. **Ref:** 3433.

**9372 Heptacosyl heptacosanate**

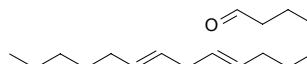
$C_{54}H_{108}O_2$ (789.46). **Source:** CHONG BAI LA *Ericerus pela*. **Ref:** 6.

**9373 Heptacosyl melissate**

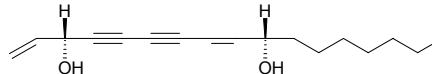
$C_{57}H_{114}O_2$ (831.54). **Source:** CHONG BAI LA *Ericerus pela*. **Ref:** 6.

**9374 (Z,Z)-8,11-Heptadecadienal**

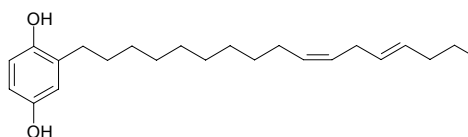
$C_{17}H_{30}O$ (250.43). **Source:** KONG SHI CHUN *Ulva pertusa*. **Ref:** 660.

**9375 1,8-Heptadecadiene-4,6-diyne-3,10-diol**

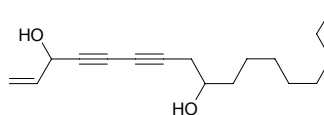
$C_{17}H_{24}O_2$ (260.38). **Source:** FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*], REN SHEN XI YANG SHEN ZA JIAO ZHONG *Panax ginseng* x *P. quinquefolium* (hairy root). **Ref:** 2, 5495.

**9376 10'-(Z),13'(E)-Heptadecadienylhydroquinone**

$C_{23}H_{36}O_2$ (344.54). Colorless oil. **Pharm:** Cytotoxic (*in vitro*, HeLa, $\text{IC}_{50} = 4.6\mu\text{g/mL}$; Huh7, $\text{IC}_{50} = 6\mu\text{g/mL}$; HCT116, $\text{IC}_{50} = 3.5\mu\text{g/mL}$; LoVo, $\text{IC}_{50} = 5.6\mu\text{g/mL}$; C6, $\text{IC}_{50} = 1\mu\text{g/mL}$); antioxidant (iron/ascorbate system with linoleic acid as substrate for antioxidative potency (AOP) determination, 4mg/L , AOP = 95%; control BHT, AOP = 100%). **Source:** LIN BEI ZI *Toxicodendron succedaneum* [Syn. *Rhus succedanea*] (sap: yield = 3.15%). **Ref:** 4662.

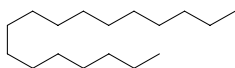
**9377 Heptadeca-1-en-4,6-diyne-3,9-diol**

$C_{17}H_{26}O_2$ (262.40). **Source:** FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*]. **Ref:** 2.

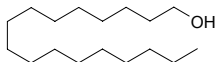


9378 Heptadecane

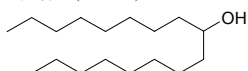
[629-78-7] $C_{17}H_{36}$ (240.48). Source: DANG SHEN *Codonopsis pilosula*, REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], ROU CONG RONG *Cistanche deserticola*, SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*]. Ref: 2.

**9379 1-Heptadecanol**

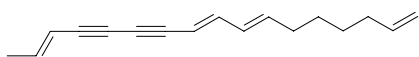
[1454-85-9] $C_{17}H_{36}O$ (256.48). Source: BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], REN SHEN *Panax ginseng* [Syn. *Panax schinseng*]. Ref: 2.

**9380 9-Heptadecanol**

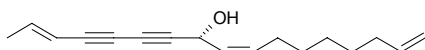
$C_{17}H_{36}O$ (256.48). Source: BAN XIA *Pinellia ternata*. Ref: 660.

**9381 Heptadeca-1,7,9,15-tetraene-11,13-diyne***

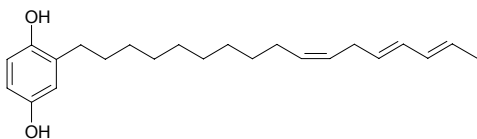
$C_{17}H_{20}$ (224.35). Yellowish powder, mp 72~73°C. Pharm: Cytotoxic (HL-60, $IC_{50} = 2.3\mu g/mL$, K562, $IC_{50} = 5.6\mu g/mL$). Source: GUI ZHEN CAO *Bidens bipinnata* (whole herb). Ref: 4596.

**9382 2(E),9(Z),16-Heptadecatriene-4,6-diyne-8-ol**

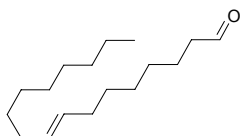
$C_{17}H_{22}O$ (242.36). $[\alpha]_D^{20} = +173.5^\circ$ ($c = 0.3$, $CHCl_3$). Pharm: NFAT transcription factor inhibitor ($IC_{50} = (4.95 \pm 0.24)\mu mol/L$, control Cyclosporin A, $IC_{50} = (0.31 \pm 0.01)\mu mol/L$). Source: CHAO XIAN LUO WAN *Gymnaster koraiensis* (leaf). Ref: 4511.

**9383 10'(Z),13'(E),15'(E)-Heptadecatrienylhydroquinone**

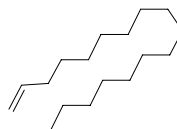
$C_{23}H_{34}O_2$ (342.53). Pale yellow oil. Pharm: Cytotoxic (*in vitro*, HeLa, $IC_{50} = 2.8\mu g/mL$; Huh7, $IC_{50} = 3.9\mu g/mL$; HCT116, $IC_{50} = 2\mu g/mL$; LoVo, $IC_{50} = 4.5\mu g/mL$; C6, $IC_{50} = 0.9\mu g/mL$); antioxidant (iron/ascorbate system with linoleic acid as substrate for antioxidative potency (AOP) determination, 4mg/L, AOP = 97%; control BHT, AOP = 100%). Source: LIN BEI ZI *Toxicodendron succedaneum* [Syn. *Rhus succedanea*] (sap: yield = 2.30%). Ref: 4662.

**9384 8-Heptadecenal**

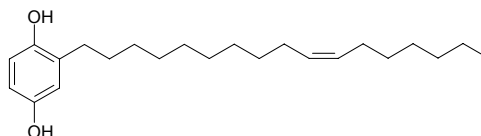
$C_{17}H_{32}O$ (252.44). Source: JIAO MO *Monostroma nitidum*, KONG SHI CHUN *Ulva pertusa*, TIAO HU TAI *Enteromorpha clathrata*. Ref: 660.

**9385 1-Heptadecene**

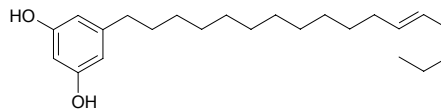
$C_{17}H_{34}$ (238.46). Source: HONG HUA *Carthamus tinctorius*, MIAN MA *Dryopteris filix-mas*, NIU BANG GEN *Arctium lappa*, XIAO GUO QIANG WEI GEN *Rosa cymosa*, XUE LIAN *Saussurea involucrata*. Ref: 660.

**9386 10'(Z)-Heptadecenylhydroquinone**

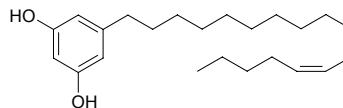
$C_{23}H_{38}O_2$ (346.56). Pharm: Cytotoxic (*in vitro*, HeLa, $IC_{50} = 4.7\mu g/mL$; Huh7, $IC_{50} = 6.4\mu g/mL$; HCT116, $IC_{50} = 3.4\mu g/mL$; LoVo, $IC_{50} = 2.9\mu g/mL$; C6, $IC_{50} = 1.1\mu g/mL$); antioxidant (iron/ascorbate system with linoleic acid as substrate for antioxidative potency (AOP) determination, 4mg/L, AOP = 60%; control BHT, AOP = 100%). Source: LIN BEI ZI *Toxicodendron succedaneum* [Syn. *Rhus succedanea*] (sap: yield = 3.15%). Ref: 4662.

**9387 5-(Heptadec-12E-enyl)resorcinol**

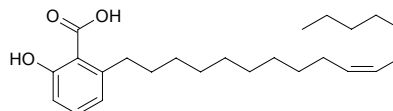
$C_{23}H_{38}O_2$ (346.56). Pharm: Antifungal (*Alternaria alternata*). Source: MANG GUO *Mangifera indica*. Ref: 658.

**9388 5-(Heptadec-12Z-enyl)resorcinol**

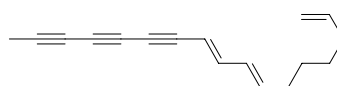
$C_{23}H_{38}O_2$ (346.56). Pharm: Cytotoxic (*in vitro*, A2780 ovarian cancer cell line, $IC_{50} = 9\mu g/mL$, marginal activity, control Actinomycin D, $IC_{50} = 1\sim 3ng/mL$). Source: *Protorhus thouvenotii* (dried fruit). Ref: 5006.

**9389 6-(10'Z-Heptadecenyl)salicylic acid**

$C_{24}H_{38}O_3$ (374.57). Yellowish oil. Pharm: Prolyl endopeptidase inhibitor ($K_i = 0.80\mu mol/L$, $IC_{50} = (0.62 \pm 0.02)\mu mol/L$, control Oleic acid $IC_{50} = (31.3 \pm 2.4)\mu mol/L$, Salicylic acid $IC_{50} = (1650 \pm 70)\mu mol/L$, Z-Pro-prolinal $IC_{50} = (0.00219 \pm 0.00022)\mu mol/L$). Source: BAI GUO YE *Ginkgo biloba*. Ref: 4098.

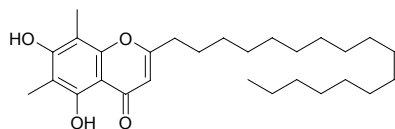
**9390 Heptadec-1,7,9-trien-11,13,15-triyne**

$C_{17}H_{18}$ (222.33). mp 18°C. Source: AI YE *Artemisia argyi*. Ref: 6.

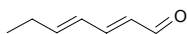


9391 2-*n*-Heptadecy-5,7-dihydroxy-6,8-dimethyl chromone

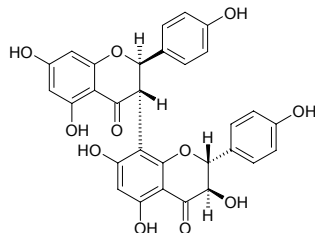
C₂₈H₄₄O₄ (444.66). Source: KU SHEN *Sophora flavescens* [Syn. *Sophora angustifolia*]. Ref: 660.

**9392 (E,E)-2,4-Heptadienal**

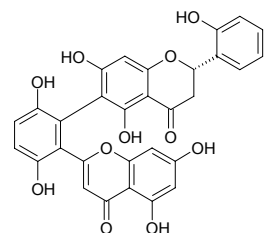
C₇H₁₀O (110.16). Source: KUN BU *Laminaria japonica*. Ref: 660.

**9393 3'',4'',5'',7''-Heptahydroxy-3,8''-biflavanone**

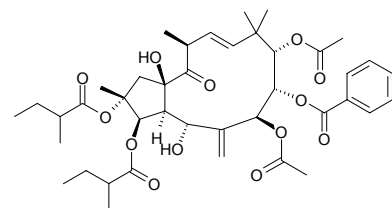
C₃₀H₂₂O₁₁ (558.50). Faint brown powder. Pharm: Antibacterial (methicillin-resistant *Staphylococcus aureus* (MRSA), MIC = 32 μg/mL; vancomycin-resistant *Enterococci* sp. (VRE), MIC = 128 μg/mL). Source: KE LE TENG HUANG *Garcinia kola* (root). Ref: 4495.

**9394 (1-2S)-1-5,11-5,1-7,11-7,1-2',11-2',11-5'-Heptahydroxy-[1-6,11-6']-flavanonylflavone**

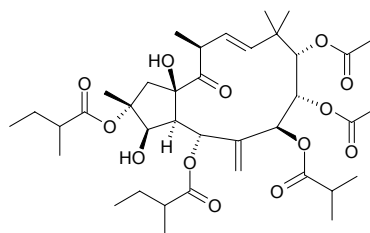
C₃₀H₂₀O₁₁ (556.49). Yellow needles (MeOH), mp 217~218°C (dec). Source: KE AI HUANG QIN *Scutellaria amabilis* (root; yield = 0.0052% dw). Ref: 2072.

**9395 (2R,3R,4R,5R,7S,8S,9S,11E,13S,15R)-2,3,5,7,8,9,15-Heptahydroxyjatropa-6(17),11-diene-14-one-7,9-diacetate-8-benzoate-2,3-bis(2-methylbutyrate)**

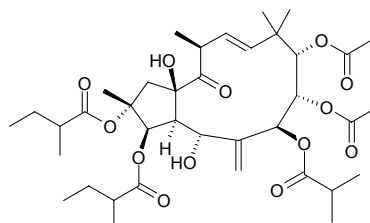
[250293-39-1] C₄₁H₅₆O₁₃ (756.90). Oil, [α]_D = +18° (c = 0.88, CHCl₃); [α]_D²⁵ = +18° (c = 0.88, CHCl₃). Pharm: NADH oxidase inhibitor (submitochondrial particles from bovine heart, IC₅₀ = (7.0±3.7) μmol/L, control Rotenone, IC₅₀ = (0.0051±0.0009) μmol/L)^[5356]. Source: DUN YE DA JI *Euphorbia obtusifolia* var. *obtusifolia*. Ref: 2365, 5356.

**9396 (2R,3R,4R,5R,7S,8S,9S,11E,13S,15R)-2,3,5,7,8,9,15-Heptahydroxyjatropa-6(17),11-diene-14-one-8,9-diacetate-7-isobutyrate-2,5-bis(2-methylbutyrate)**

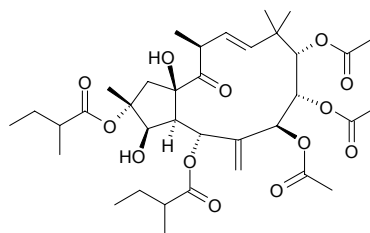
[250293-37-9] C₃₈H₅₈O₁₃ (722.88). Oil, [α]_D = +26° (c = 0.86, CHCl₃); [α]_D²⁵ = +26° (c = 0.86, CHCl₃). Pharm: NADH oxidase inhibitor (submitochondrial particles from bovine heart, IC₅₀ = (6.3±1.4) μmol/L, control Rotenone, IC₅₀ = (0.0051±0.0009) μmol/L)^[5356]. Source: DUN YE DA JI *Euphorbia obtusifolia* var. *obtusifolia*. Ref: 2365, 5356.

**9397 (2R,3R,4R,5R,7S,8S,9S,11E,13S,15R)-2,3,5,7,8,9,15-Heptahydroxyjatropa-6(17),11-diene-14-one-8,9-diacetate-7-isobutyrate-2,3-bis(2-methylbutyrate)**

[250293-40-4] C₃₈H₅₈O₁₃ (722.88). Oil, [α]_D = +8° (c = 2.2, CHCl₃); [α]_D²⁵ = +8° (c = 2.2, CHCl₃). Pharm: NADH oxidase inhibitor (submitochondrial particles from bovine heart, IC₅₀ = (5.1±0.2) μmol/L, control Rotenone, IC₅₀ = (0.0051±0.0009) μmol/L)^[5356]. Source: DUN YE DA JI *Euphorbia obtusifolia* var. *obtusifolia*. Ref: 2365, 5356.

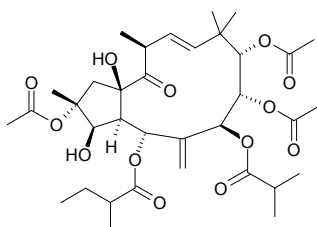
**9398 (2R,3R,4R,5R,7S,8S,9S,11E,13S,15R)-2,3,5,7,8,9,15-Heptahydroxyjatropa-6(17),11-diene-14-one-7,8,9-triacetate-2,5-bis(2-methylbutyrate)**

[250293-34-6] C₃₆H₅₄O₁₃ (694.82). Oil, [α]_D = +23° (c = 0.78, CHCl₃); [α]_D²⁵ = +23° (c = 0.78, CHCl₃). Pharm: NADH oxidase inhibitor (submitochondrial particles from bovine heart, IC₅₀ = (10.9±2.4) μmol/L, control Rotenone, IC₅₀ = (0.0051±0.0009) μmol/L)^[5356]. Source: DUN YE DA JI *Euphorbia obtusifolia* var. *obtusifolia*. Ref: 2365, 5356.



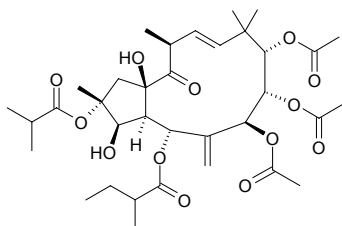
9399 (2R,3R,4R,5R,7S,8S,9S,11E,13S,15R)-2,3,5,7,8,9,15-Heptahydroxyjatropa-6(17),11-diene-14-one-2,8,9-triacetate-7-isobutyrate-5-(2-methylbutyrate)

[250293-38-0] $C_{35}H_{52}O_{13}$ (680.80). Oil, $[\alpha]_D = +32^\circ$ ($c = 0.68$, $CHCl_3$); $[\alpha]_D^{25} = +32^\circ$ ($c = 0.68$, $CHCl_3$). **Pharm:** NADH oxidase inhibitor (submitochondrial particles from bovine heart, $IC_{50} = (12.7 \pm 3.6) \mu\text{mol/L}$, control Rotenone, $IC_{50} = (0.0051 \pm 0.0009) \mu\text{mol/L}$)^[5356]. **Source:** DUN YE DA JI *Euphorbia obtusifolia* var. *obtusifolia*. **Ref:** 2365, 5356.



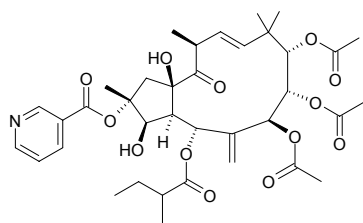
9400 (2R,3R,4R,5R,7S,8S,9S,11E,13S,15R)-2,3,5,7,8,9,15-Heptahydroxyjatropa-6(17),11-diene-14-one-7,8,9-triacetate-2-isobutyrate-5-(2-methylbutyrate)

[250293-35-7] $C_{35}H_{52}O_{13}$ (680.80). Oil, $[\alpha]_D = +29^\circ$ ($c = 0.68$, $CHCl_3$); $[\alpha]_D^{25} = +29^\circ$ ($c = 0.68$, $CHCl_3$). **Pharm:** NADH oxidase inhibitor (submitochondrial particles from bovine heart, $IC_{50} = (13.9 \pm 1.6) \mu\text{mol/L}$, control Rotenone, $IC_{50} = (0.0051 \pm 0.0009) \mu\text{mol/L}$)^[5356]. **Source:** DUN YE DA JI *Euphorbia obtusifolia* var. *obtusifolia*. **Ref:** 2365, 5356.



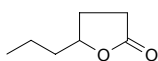
9401 (2R,3R,4R,5R,7S,8S,9S,11E,13S,15R)-2,3,5,7,8,9,15-Heptahydroxyjatropa-6(17),11-diene-14-one-7,8,9-triacetate-2-nicotinate-5-(2-methylbutyrate)

[250293-36-8] $C_{37}H_{49}NO_{13}$ (715.80). Oil, $[\alpha]_D = -6^\circ$ ($c = 0.68$, $CHCl_3$); $[\alpha]_D^{25} = -6^\circ$ ($c = 0.68$, $CHCl_3$). **Pharm:** NADH oxidase inhibitor (submitochondrial particles from bovine heart, $IC_{50} = (13.9 \pm 1.8) \mu\text{mol/L}$, control Rotenone, $IC_{50} = (0.0051 \pm 0.0009) \mu\text{mol/L}$)^[5356]. **Source:** DUN YE DA JI *Euphorbia obtusifolia* var. *obtusifolia*. **Ref:** 2365, 5356.



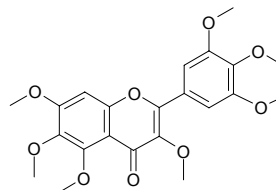
9402 γ -Heptalactone

[105-21-5] $C_7H_{12}O_2$ (128.17). **Source:** CHAI HU *Bupleurum chinense*. **Ref:** 2.



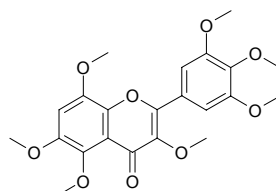
9403 3,5,6,7,3',4',5'-Heptamethoxyflavone

$C_{22}H_{24}O_9$ (432.43). mp $156\sim 157^\circ\text{C}$. **Source:** JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. **Ref:** 6, 11.



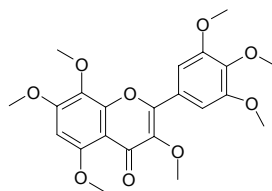
9404 3,5,6,8,3',4',5'-Heptamethoxy flavone

$C_{22}H_{24}O_9$ (432.43). **Source:** JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. **Ref:** 660.



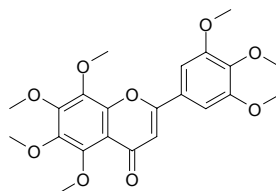
9405 3,5,7,8,3',4',5'-Heptamethoxyflavone

Hibiscetin-heptamethylether $C_{22}H_{24}O_9$ (432.43). **Source:** JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. **Ref:** 11.



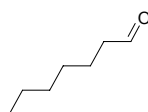
9406 5,6,7,8,3',4',5'-Heptamethoxy flavone

5'-Methoxynobiletin $C_{22}H_{24}O_9$ (432.43). **Pharm:** Cytotoxic (HeLa, $IC_{50} = 43.3 \mu\text{g/mL}$, control Mitomycin C, $IC_{50} = 1.7 \mu\text{g/mL}$)^[4092]. **Source:** JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], TUAN JI AI NA XIANG *Blumea glomerata*. **Ref:** 660, 4092.



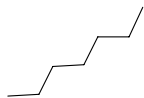
9407 Heptanal

[111-71-7] $C_7H_{14}O$ (114.19). mp -43.3°C , bp 152.8°C , bp $59.6^\circ\text{C}/30\text{mmHg}$. **Source:** KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*]. **Ref:** 2, 660, 1521.

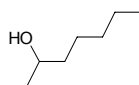


9408 Heptane

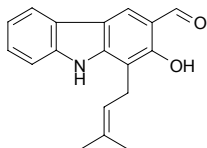
[142-82-5] C₇H₁₆ (100.21). mp -91.61°C, bp 98.3°C. Source: SHAN ZHA *Crataegus pinnatifida*, SHENG JIANG *Zingiber officinale*. Ref: 2, 1521.

**9409 2-Heptanol**

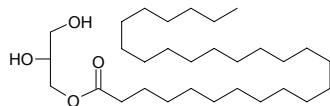
[543-49-7] C₇H₁₆O (116.21). Source: GAN JIANG *Zingiber officinale*, SHENG JIANG *Zingiber officinale*. Ref: 2, 1521.

**9410 Heptaphylline**

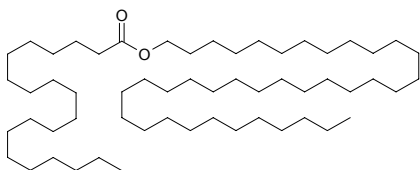
2-Hydroxy-1-(3-methyl-2-butenyl)-carbazole-3-carboxaldehyde [17750-35-5] C₁₈H₁₇NO₂ (279.34). Bright-yellow needles (Et₂O or CHCl₃-hexane), mp 171~172°C. Source: SHAN HUANG PI *Clausena excavata*, QI YE HUANG PI *Clausena heptaphylla*. Ref: 703, 1521.

**9411 (2S)-1-O-Heptacosanoyl glycerol**

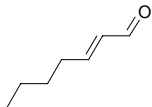
C₃₀H₆₀O₄ (484.81). White powder, mp 64~65°C. Source: XI NANG MA WEI ZAO *Sargassum parvivesiculosum*. Ref: 2591.

**9412 Heptatriacontanyl eicosanoate**

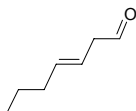
C₅₇H₁₁₄O₂ (831.54). mp 73.9°C. Source: CHANG YE AI JU *Tanacetum longifolium*. Ref: 1934.

**9413 α-Heptenal**

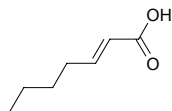
[18829-55-5] C₇H₁₂O (112.17). bp 165~167°C, bp 61~62°C/15mmHg. Source: CHA YE *Camellia sinensis* [Syn. *Thea sinensis*]. Ref: 6, 1521.

**9414 3-Heptenal**

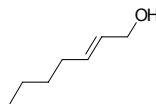
C₇H₁₂O (112.17). bp 151°C. Source: CHA YE *Camellia sinensis* [Syn. *Thea sinensis*]. Ref: 6.

**9415 2-Heptenic acid**

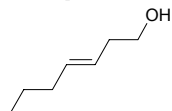
[18999-28-5] C₇H₁₂O₂ (128.17). Source: CHAI HU *Bupleurum chinense*. Ref: 2.

**9416 β-Heptenol**

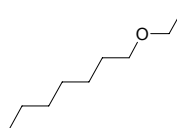
[22104-77-4] C₇H₁₄O (114.19). bp 177~179°C. Source: CHA YE *Camellia sinensis* [Syn. *Thea sinensis*]. Ref: 6, 1521.

**9417 γ-Heptenol**

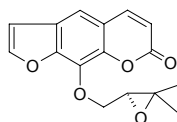
[1708-81-2] C₇H₁₄O (114.19). bp (*cis*- and *trans*-) 81~83°C/19mmHg, (*trans*-) 170~171°C. Source: CHA YE *Camellia sinensis* [Syn. *Thea sinensis*]. Ref: 6.

**9418 Heptyl ethyl ether**

[1969-43-3] C₉H₂₀O (144.26). bp 166.6°C. Source: WEN PO *Cydonia oblonga*. Ref: 6.

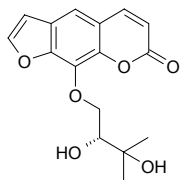
**9419 Heraclenin‡**

Epoxyimperatorin C₁₆H₁₄O₅ (286.29). Yellowish slender acicular crystals (hexane-ethyl acetate), mp (+) 111°C, (-) 106.5~108.0°C, (±) 113.0~114.5°C. [α]_{589nm}²³ = +25.8°, [α]_{500nm}²³ = +29.5°, [α]_{450nm}²³ = +41.6°; [α]_{400nm}²³ = +66.4° (c = 1.085, pyridine); [α]_D³² = +22° (pyridine). Pharm: Anti-inflammatory (rat, swollen foot model caused by carrageenan, 100mg/kg orl, InRt = 69%); antispasmodic (rat intestine *in vitro*); CVS activity (enhances arterial tension and myocardial contractility); respiratory stimulant (rat, 1~2mg/kg); T-Cell Proliferation inhibitor^[4071]. Source: GOU JU HE *Poncirus trifoliata*, YIN DU JIU LI XIANG *Murraya koenigii*, HUI BAI DU HUO *Heracleum canescens*, GUANG RONG YIN YU *Skimmia laureola*, BEI FANG DANG GUI *Angelica ursina*, SHUAN CHI QIN *Prangos pabularia*, AO PA CAO *Oppopanax chironium* (root). Ref: 6, 900, 1521, 4071. ‡Note: See compound 16447.

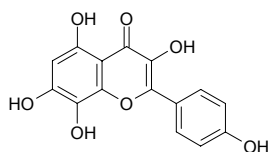


9420 Heraclenol

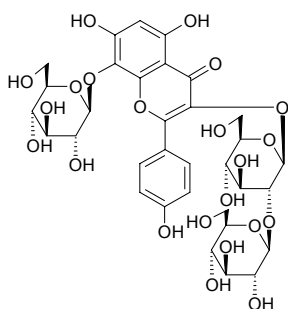
Prangenin hydrate; Komalin [2817-09-6] $C_{16}H_{16}O_6$ (304.30). mp 115~117°C; mp 117~118°C, $[\alpha]_D^{32} = +16.5^\circ$ (pyridine). Source: GOU JU ZHI SHI *Poncirus trifoliata*, YAN JIAO CAO *Boenninghausenia albiflora*, YUN NAN QIANG HUO *Pleurospermum rivulorum*. Ref: 551, 1521, 2495, 3302.

**9421 Herbacetin**

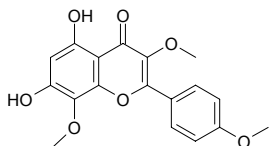
[527-95-7] $C_{15}H_{10}O_7$ (302.24). Pharm: Yellow pigment. Source: MA HUANG *Ephedra sinica*. Ref: 2, 658.

**9422 Herbacetin-3-β-D-(2-O-β-D-glucopyranosylglucopyranoside)-8-β-D-glucopyranoside**

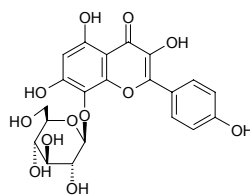
$C_{33}H_{40}O_{22}$ (788.67). Source: MU ZEI *Equisetum hiemale*. Ref: 2.

**9423 Herbacetin 3,8,4'-trimethyl ether**

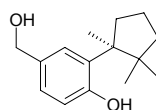
$C_{18}H_{16}O_7$ (344.32). Pharm: Antioxidant (Takamatsu DCFH method, myelomonocytic HL-60 cells, $IC_{50} > 62.5\mu g/mL$; control NDGA, $IC_{50} = (0.7 \pm 0.3)\mu g/mL$, Vitamin C, $IC_{50} = (1.9 \pm 0.7)\mu g/mL$, Trolox, $IC_{50} = (1.4 \pm 0.5)\mu g/mL$)^[3850]; cytotoxic (XTT assay, HL-60 cells, $IC_{50} > 50.0\mu g/mL$; control NDGA, $IC_{50} = (2.6 \pm 0.2)\mu g/mL$, Vitamin C, $IC_{50} > 10.0\mu g/mL$, Trolox, $IC_{50} > 10.0\mu g/mL$)^[3850]. Source: JIAN TENG BAI JIU CAO *Conyza stricta*, SAN CHI LA RUI A *Larrea tridentata* (leaf), SAN JIAO FEN YE JUE *Pityrogramma triangularis*, XIAO XING HUA YAN QIANG WEI *Cistus parviflorus*. Ref: 1521, 3850.

**9424 Herbacin**

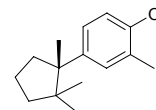
[11021-22-0] $C_{21}H_{20}O_{12}$ (464.39). mp 212~214°C. Source: SHU KUI HUA *Althaea rosea*. Ref: 6, 1521.

**9425 (-)-Herbertene-1,12-diol**

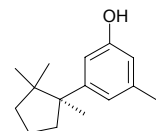
(-)-4-Hydroxymethyl-2-(1',2',2'-trimethylcyclopentyl) phenol $C_{15}H_{22}O_2$ (234.34). Colorless oil. Source: *Tylimanthus renifolius*. Ref: 3491.

**9426 β-Herbertenol**

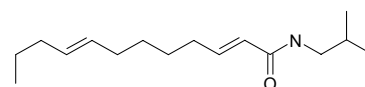
$C_{15}H_{22}O$ (218.34). Source: DI SUO LUO *Marchantia polymorpha*. Ref: 660.

**9427 (-)-γ-Herbertenol**

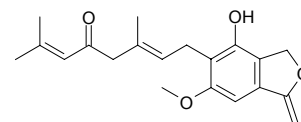
(-)-5-Methyl-3-(1',2',2'-trimethylcyclopentyl) phenol $C_{15}H_{22}O$ (218.34). Colorless oil. Source: *Tylimanthus renifolius*. Ref: 3491.

**9428 Herculin**

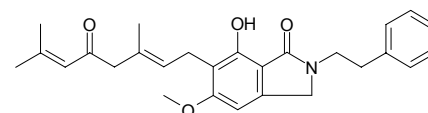
$C_{16}H_{29}NO$ (251.42). Crystals (light petroleum), disgusting pungent odor, mp 59~60°C. Pharm: Pesticide. Source: MEI GUO CI JIAO *Zanthoxylum clava-hercules*, HUANG BAI *Phellodendron amurense*. Ref: 661.

**9429 Hericenone A**

$C_{19}H_{22}O_5$ (330.38). Source: HOU TOU JUN *Herichium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 660, 4513.

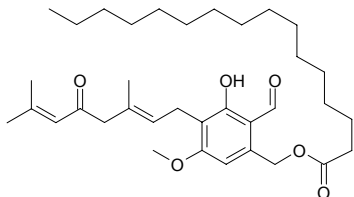
**9430 Hericenone B**

$C_{27}H_{31}NO_4$ (433.55). Source: HOU TOU JUN *Herichium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 660.

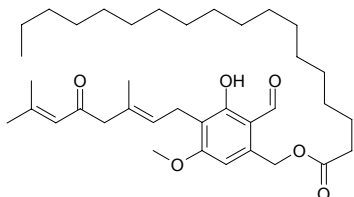


9431 Hericenone C

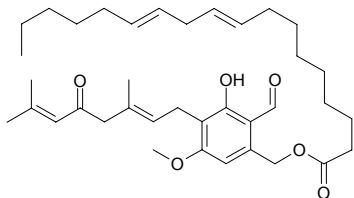
$C_{35}H_{54}O_6$ (570.82). Source: HOU TOU JUN *Heridium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 660.

**9432 Hericenone D**

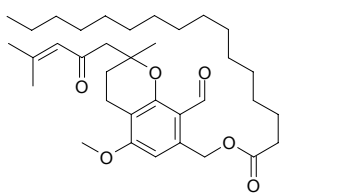
$C_{37}H_{58}O_6$ (598.87). Source: HOU TOU JUN *Heridium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 660.

**9433 Hericenone E**

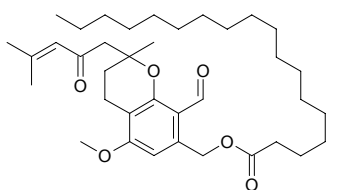
$C_{37}H_{54}O_6$ (594.84). Source: HOU TOU JUN *Heridium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 660.

**9434 Hericenone F**

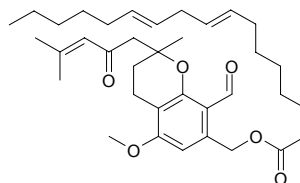
$C_{35}H_{54}O_6$ (570.82). Source: HOU TOU JUN *Heridium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 660.

**9435 Hericenone G**

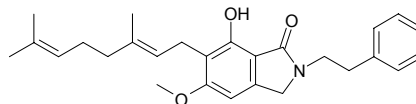
$C_{37}H_{58}O_6$ (598.87). Source: HOU TOU JUN *Heridium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 660.

**9436 Hericenone H**

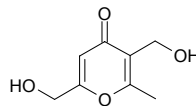
[141973-37-7] $C_{36}H_{52}O_6$ (580.81). Yellowish oil. Pharm: Inhibits biosynthesis of PGE_2 (25 μ g/mL, rat macrophage); NGF synthetic stimulant (induces mus spider neuroglia cell, 33 μ g/mL, 4 times normal NGF). Source: HOU TOU JUN *Heridium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 1521, 1095.

**9437 Hericerin**

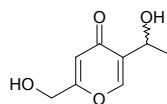
$C_{27}H_{33}NO_3$ (419.57). Source: HOU TOU JUN *Heridium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 660.

**9438 Herierin III**

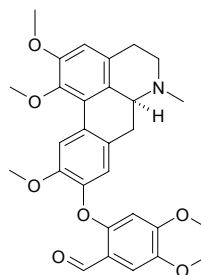
6-Methyl-2,5-dihydroxymethyl- γ -pyranone III $C_8H_{10}O_4$ (170.17). Colorless columnar crystals, mp 122~123°C. Source: HOU TOU JUN *Heridium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 161, 660.

**9439 Herierin IV**

$C_8H_{10}O_4$ (170.17). Source: HOU TOU JUN *Heridium erinaceus* [Syn. *Hydnum erinaceus*]. Ref: 660.

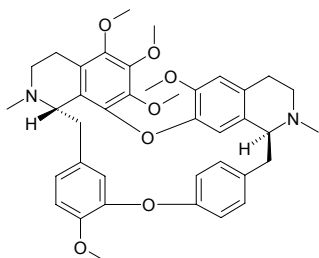
**9440 Hernandaline**

$C_{29}H_{31}NO_7$ (505.57). Source: LIAN YE TONG *Hernandia Sonora* [Syn. *Hernandia ovigera*]. Ref: 660.

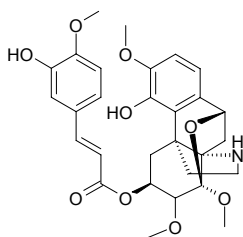


9441 Hernandezine

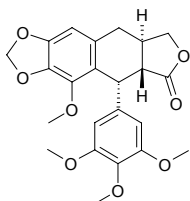
Thalicsimine; Thaliximine [6681-13-6] $C_{39}H_{44}N_2O_7$ (652.79). Crystals (hexane), mp 192~193°C, mp 122~124°C, mp 158~159°C, $[\alpha]_D^{20} = +250^\circ$ ($c = 0.2$, chloroform). Pharm: Antibacterial (*Mycobacterium smegmatis*, MIC = 25 µg/mg; *Staphylococcus aureus*, MIC = 100 µg/mg); Antifungal (*Candida albicans*, MIC = 50 µg/mg); anti-inflammatory; antihypertensive (cat, iv, 1~3 mg/kg); LD (cat, leads to rapid reduction of blood pressure until death) = 10 mg/kg. Source: BAN RUI TANG SONG CAO *Thalictrum petaloideum* (root: content < 0.001%)^[5508], BING GUO TANG SONG CAO *Thalictrum podocarpum*, DA YE TANG SONG CAO *Thalictrum faberi* (root: content < 0.001%)^[5508], FEN SHI TANG SONG CAO *Thalictrum fendleri*, HE SHI TANG SONG CAO *Thalictrum hernandezii*, JIN SI MA WEI LIAN *Thalictrum glandulosissimum* (root: content = 0.21%)^[5508], MA WEI LIAN *Thalictrum foliolosum* (root: content = 0.45%)^[5508], RU LAN *Stephania hernandifolia*, XIA XU TANG SONG CAO *Thalictrum atriplex* (root: content = 0.09%)^[5508], XIAO GUO TANG SONG CAO *Thalictrum microgynum* (root: content < 0.001%)^[5508], YAN GUO CAO *Thalictrum thunbergii* (root: content = 0.07%)^[5508], YING SHUI HUANG LIAN *Thalictrum simplex* [Syn. *Thalictrum simplex* var. *brevipes*] (root: content < 0.001%)^[5508]. Ref: 6, 658, 660, 5508.

**9442 Hernandifoline**

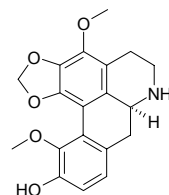
[30511-63-8] $C_{29}H_{33}NO_9$ (539.59). Crystals ($CHCl_3$ - Et_2O), mp 133~135°C ($CHCl_3$ solvate), $[\alpha]_D^{32} = +48^\circ$ ($c = 0.82$, MeOH), $[\alpha]_D = -25^\circ$ (EtOH). Source: RU LAN *Stephania hernandifolia*. Ref: 6, 1521.

**9443 Hernandin**

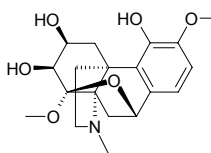
$C_{23}H_{24}O_8$ (428.44). Source: LIAN YE TONG *Hernandia Sonora* [Syn. *Hernandia ovigera*]. Ref: 660.

**9444 Hernandine**

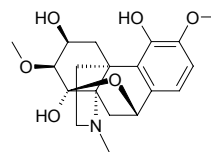
$C_{19}H_{19}NO_5$ (341.37). Pharm: Anti-HIV-1 inactive (HIV-1 IN inhibitor, $IC_{50} > 100 \mu\text{mol/L}$, positive control Suramin, $IC_{50} = 2.4 \mu\text{mol/L}$)^[4224]. Source: DING HU DIAO ZHANG *Lindera chunii* (root). Ref: 4224.

**9445 Hernandine A**

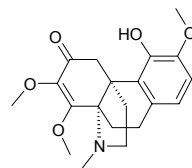
Hernandine [32593-70-7] $C_{19}H_{25}NO_6$ (363.41). mp 197~199°C, $[\alpha]_D = -33^\circ$ (EtOH). Source: RU LAN *Stephania hernandifolia*. Ref: 6, 1521.

**9446 Hernandine B**

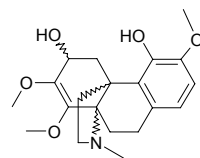
$C_{19}H_{25}NO_6$ (363.41). Source: RU LAN *Stephania hernandifolia*. Ref: 6.

**9447 Hernandoline**

Aknadinine [24148-86-5] $C_{20}H_{25}NO_5$ (359.43). mp 70°C, $[\alpha]_D^{29} = -283^\circ$ ($c = 0.1$, EtOH). Source: RU LAN *Stephania hernandifolia*, YA LI QIAN JIN TENG *Stephania elegans*, TAI WAN QIAN JIN TENG *Stephania sasakii*. Ref: 6, 1521.

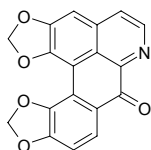
**9448 Hernandolinol**

[35452-61-0] $C_{20}H_{27}NO_5$ (361.44). $[\alpha]_D = -97.9^\circ$ (EtOH). Source: RU LAN *Stephania hernandifolia*. Ref: 6, 1521.

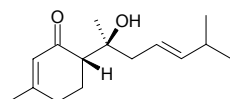


9449 Hernandonine

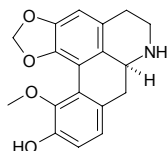
$C_{18}H_{19}NO_5$ (319.28). **Pharm:** Anti-HIV-1 (HIV-1 IN inhibitor, IC_{50} = 16.3 μ mol/L, positive control Suramin, IC_{50} = 2.4 μ mol/L). **Source:** DING HU DIAO ZHANG *Lindera chunii* (root). **Ref:** 4224.

**9450 (+)-Hernandulcin**

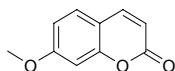
$C_{15}H_{24}O_2$ (236.36). **Source:** TIAN SHE CAO *Lippia dulcis* (aerial parts). **Ref:** 4508.

**9451 Hernangerine**

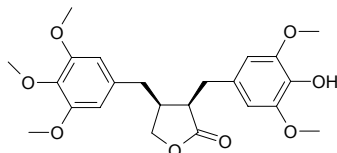
Nandigerine $C_{18}H_{17}NO_4$ (311.34). **Pharm:** Anti-HIV-1 inactive (HIV-1 IN inhibitor, IC_{50} > 100 μ mol/L, positive control Suramin, IC_{50} = 2.4 μ mol/L)^[4224]. **Source:** DING HU DIAO ZHANG *Lindera chunii* (root), LIAN YE TONG *Hernandia Sonora* [Syn. *Hernandia ovigera*], YUE GUI YE *Laurus nobilis*. **Ref:** 660, 2601, 4224.

**9452 Herniarin**

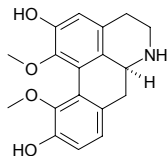
7-Methoxycoumarin [531-59-9] $C_{10}H_8O_3$ (176.17). mp 117~118°C. **Pharm:** Cytotoxic inactive (*in vitro*, HONE-1 and NUGC cancer cell lines, no significant activity)^[3069]. **Source:** A YA PAN ZE LAN *Eupatorium ayapana*, BO NIANG HAO *Descurainia sophia*, YA JIAO AI *Artemisia lactiflora* (whole plant: mean content in different growth period = 0.70%^[5508]), YU ZHUANG YUN XIANG *Ruta pinnata*, ZHONG GUO XIU QIU *Hydrangea chinensis* (root)^[3069]. **Ref:** 6, 660, 1521, 3069, 5508.

**9453 (-)-Hernolactone**

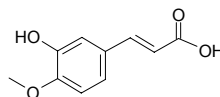
$C_{23}H_{28}O_8$ (432.47). $[\alpha]_D^{20}$ = -24.9° (c = 2.0, $CHCl_3$). **Source:** LIAN YE TONG *Hernandia Sonora* [Syn. *Hernandia ovigera*] (seed). **Ref:** 5030.

**9454 Hernovine**

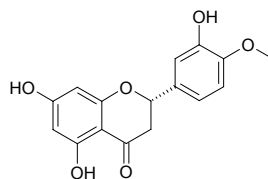
$C_{18}H_{19}NO_4$ (313.36). **Source:** LIAN YE TONG *Hernandia Sonora* [Syn. *Hernandia ovigera*]. **Ref:** 660.

**9455 Hesperetic acid**

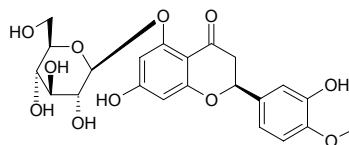
Isoferulic acid; Hesperetin acid [537-73-5] $C_{10}H_{10}O_4$ (194.19). Colorless acicular crystals, mp 225~229°C; mp 238~240°C; plates, mp 233~234°C. **Pharm:** Antipyretic; anti-inflammatory. **Source:** DA SAN YE SHENG MA *Cimicifuga heracleifolia* (dried rhizome: content = 0.20%^[5508]), DAN SHEN *Salvia miltiorrhiza*, HUANG SAN QI *Souliea vaginata* (dried rhizome: content = 0.07%^[5508]), LEI YE SHENG MA *Cimicifuga asiatica* (dried rhizome: content = 0.05%^[5508]), MAO LIAN HAO *Artemisia vestita*, NAN CHUAN SHENG MA *Cimicifuga nanchuanensis* (dried rhizome: content = 0.10%^[5508]), SAN MIAN DAO *Cimicifuga acerina* (dried rhizome: content = 0.03%^[5508]), SHENG MA *Cimicifuga foetida* (dried rhizome: content scope = 0.03%~0.26%^[5501], content = 0.13%^[5508]), TIE PO LUO *Beesia calthaeifolia* (dried rhizome: content = 0.12%^[5508]), XIE CAO *Valeriana officinalis*, XING AN SHENG MA *Cimicifuga dahurica* (dried rhizome: content = 0.26%^[5508]), YE SHENG MA *Cimicifuga simplex* (dried rhizome: content = 0.15%^[5508]), ZI BAI PI *Catalpa ovata*, ZONG ZHUANG SHENG MA *Cimicifuga racemosa*. **Ref:** 2, 6, 474, 660, 1521, 5501, 5508.

**9456 Hesperetin**

Hesperitin [520-33-2] $C_{16}H_{14}O_6$ (302.29). Triangular lamellar matter (ethanol), mp 216~218°C, $[\alpha]_D^{27}$ = -37.6° (c = 1.80, ethanol). **Pharm:** Antibacterial; antiviral; feeding-inhibitor (*Schizaphis graminis* and *Myzus persicae*); inhibits lipolysis (rat fat cells, induced by adrenaline and theocin); anti-tumor promotor; 3- α -hydroxysteroid dehydrogenase inhibitor; aldose reductase inhibitor (0.01 mg/mL, InRt = 25.6%); promotes biosynthesis of DNA (karyons of murine hepatic cells *in vitro*); anti-inflammatory (modulator of cytokine network: inhibits LPS-stimulated TNF- α release in RAW264.7 macrophages, IC_{50} \approx 50 μ mol/L)^[4416]; passive cutaneous anaphylaxis inhibitor (inhibits IgE-induced β -hexosaminidase release from RBL-2H3 cells, IC_{50} = (71 \pm 2) μ mol/L, control Azelastine, IC_{50} = (35 \pm 2) μ mol/L; PCA reaction inhibitor, 5 mg/kg ip, InRt = (65.9 \pm 2.9)%^[5041]. **Source:** JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*], NING MENG *Citrus limon*, TIAN CHENG *Citrus sinensis*, WU HE MI JU *Citrus unshiu* (pericarp). **Ref:** 2, 900, 1521, 4416, 5041.

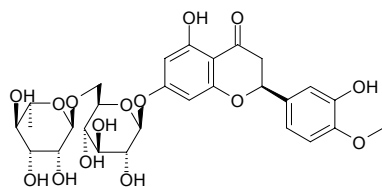
**9457 Hesperetin-5-glucoside**

[69651-80-5] $C_{22}H_{24}O_{11}$ (464.43). mp 257~258°C, $[\alpha]_D$ = -112.8° (ethanol). **Source:** TAO GEN *Prunus persica*. **Ref:** 6, 1521.

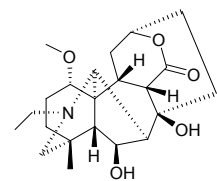


9458 Hesperidin

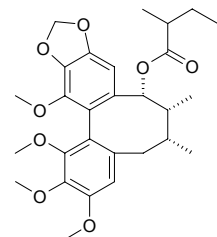
Citrus-hesperidin; Cirontin; Vitamin B; Cirantin [520-26-3] $C_{28}H_{34}O_{15}$ (610.57). Needles, mp 258~262°C (softens at 250°C), $[\alpha]_D^{20} = -47.3^\circ$ (pyridine). **Pharm:** Antiviral; aldose reductase inhibitor (rat eye lens); promotes oviposition (*Papilio xuthus* and *Papilio protenor*); frostbite preventive; enhances effects of vitamin C; passive cutaneous anaphylaxis inhibitor (inhibits IgE-induced β -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, $\text{InRt} = (71.9 \pm 5.5)\%$)^[5041]. **Source:** BA XIAN *Galium aparine*, FO SHOU *Citrus medica* var. *sarcodactylis*, GAN PI *Citrus chachiensis* (dried ripe pericarp: content = 2.10%)^[5508], GOU JU *Poncirus trifoliata*, JI CAI *Capsella bursa-pastoris*, JIAO GAN *Citrus tankan*, JIAO GAN PI *Citrus tankan*, JING JIE *Schizonepeta tenuifolia* [Syn. *Nepeta tenuifolia*], JU PI *Citrus reticulata* (dried ripe pericarp: content scope = 3.4%~7.2%)^[5501], mean content = 5.81%^[5508], JU YUAN *Citrus medica*, LI MENG PI *Citrus limonia*, NAN CHUAN GUAN CHUN HUA *Microtoena prainiana* (stem: yield = 0.000014%dw)^[4752], NING MENG *Citrus limon*, NING MENG PI *Citrus limon*, OU BO HE *Mentha longifolia*, SU ZHU YANG YANG *Galium mollugo*, WU HE MI JU *Citrus unshiu* (pericarp), ZHI KE *Citrus aurantium* (dried ripe pericarp: content = 3.10%)^[5508], ZHI SHI *Citrus aurantium* (dried ripe pericarp: content = 0.99%)^[5508]. **Ref:** 2, 4, 658, 660, 4752, 5041, 5501, 5508.

**9459 Heteratisine**

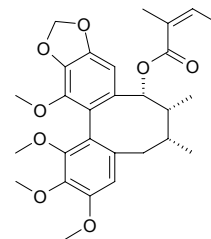
[3328-84-5] $C_{22}H_{33}NO_5$ (391.51). mp 267~269°C, $[\alpha]_D^{28} = +40^\circ$ ($c = 1$, MeOH). **Pharm:** Increases blood pressure (short acting). **Source:** YI YE WU TOU *Aconitum heterophyllum*, GAN QING WU TOU *Aconitum tanguticum*, ZE WU TOU *Aconitum zeravschanicum*. **Ref:** 658, 1521.

**9460 Heteroclitin A**

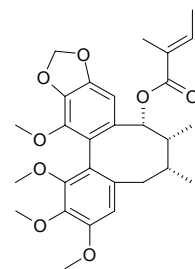
[140369-75-1] $C_{28}H_{36}O_8$ (500.59). **Source:** YI XING NAN WU WEI ZI *Kadsura heteroclita* [Syn. *Uvaria heteroclita*]. **Ref:** 2436.

**9461 Heteroclitin B**

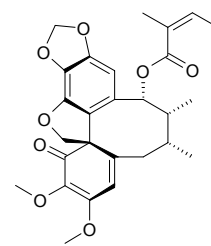
[140461-47-8] $C_{28}H_{34}O_8$ (498.58). **Source:** YI XING NAN WU WEI ZI *Kadsura heteroclita* [Syn. *Uvaria heteroclita*]. **Ref:** 2436.

**9462 Heteroclitin C**

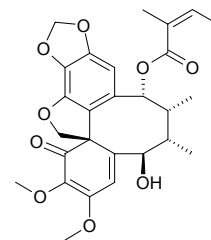
[140460-42-0] $C_{28}H_{34}O_8$ (498.58). **Source:** YI XING NAN WU WEI ZI *Kadsura heteroclita* [Syn. *Uvaria heteroclita*]. **Ref:** 2436.

**9463 Heteroclitin D**

[140369-76-2] $C_{27}H_{30}O_8$ (482.54). **Pharm:** Antineoplastic (screened as potential antitumor promoters, EBV-EA induced by TPA, mol ratio/TPA = 1000, relative percentage of EBV-EA = $(9.4 \pm 0.5)\%$ (positive control value 32pmol, 20ng TPA = 100%), viability of Raji cells = 70%)^[4644]. **Source:** NEI NAN WU WEI ZI *Kadsura interior* (stem), YI XING NAN WU WEI ZI *Kadsura heteroclita* [Syn. *Uvaria heteroclita*]. **Ref:** 2436, 4644.

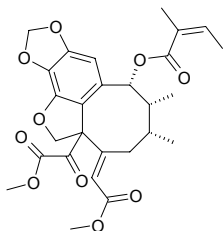
**9464 Heteroclitin E**

[140369-77-3] $C_{27}H_{30}O_9$ (498.53). **Source:** YI XING NAN WU WEI ZI *Kadsura heteroclita* [Syn. *Uvaria heteroclita*]. **Ref:** 2436.

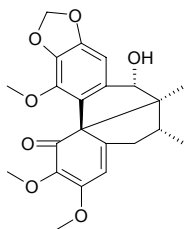


9465 Heteroclitin F

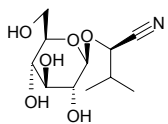
[144049-67-2] $C_{27}H_{30}O_{10}$ (514.53). **Pharm:** Antineoplastic (screened as potential antitumor promoters, EBV-EA induced by TPA, mol ratio/TPA = 1000, relative percentage of EBV-EA = $(16.5 \pm 0.6)\%$ (positive control value 32 pmol , 20 ng TPA = 100%), viability of Raji cells = 60%)^[4644]. **Source:** NEI NAN WU WEI ZI *Kadsura interior* (stem: yield = 0.00039% dw), YI XING NAN WU WEI ZI *Kadsura heteroclita* [Syn. *Uvaria heteroclita*]. **Ref:** 2436, 4644.

**9466 Heteroclitin G**

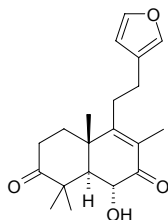
Kadsulignan K [144027-74-7] $C_{22}H_{24}O_7$ (400.43). **Source:** YI XING NAN WU WEI ZI *Kadsura heteroclita* [Syn. *Uvaria heteroclita*]. **Ref:** 2436.

**9467 Heterodendrin**

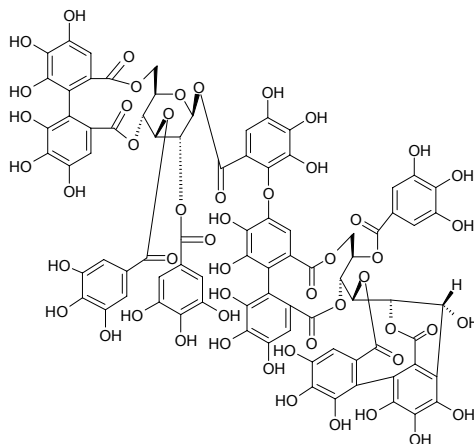
(S)-2-(β-D-Glucopyranosyloxy)-3-methylbutanenitrile [66465-22-3] $C_{11}H_{19}NO_6$ (261.28). mp $106\sim 107^\circ\text{C}$ (as tetra-Ac), $[\alpha]_D^{25} = -45^\circ$ ($c = 0.5$, MeOH). **Pharm:** Toxin. **Source:** SHENG DI HONG JING TIAN *Rhodiola sacra*, MAI YA *Hordeum vulgare*, XI BO JIN HE HUAN *Acacia sieberiana*, *Passiflora* sp., *Acacia* sp. **Ref:** 658, 742, 1521.

**9468 Heteronone A**

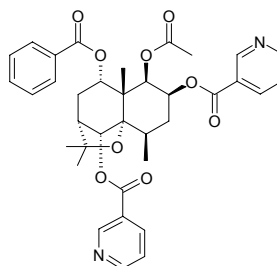
6β-Hydroxy-labdane-15,16-epoxy-14,13(16),8(9)-trien-3,7-dione $C_{20}H_{26}O_4$ (330.43). White needles, mp $160\sim 161^\circ\text{C}$. **Source:** YI MU CAO *Leonurus heterophyllus* [Syn. *Leonurus artemisia*] (aerial parts). **Ref:** 4428.

**9469 Heterophyllin B**

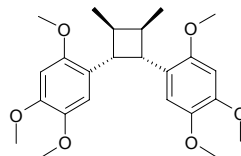
$C_{82}H_{56}O_{52}$ (1873.33). Grey-white powder, $[\alpha]_D = +104^\circ$ ($c = 1.0$, MeOH). **Source:** ZHEN *Corylus heterophylla* (leaf). **Ref:** 4584.

**9470 Heterophylline**

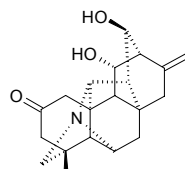
1β-Acetoxy-9α-benzoyloxy-2β,6α-dinicotinoyloxy-β-dihydroagarofuran $C_{36}H_{38}N_2O_9$ (642.71). mp $132\sim 135^\circ\text{C}$, $[\alpha]_D = +63.2^\circ$ ($c = 1.00$, CHCl_3). **Source:** YI YE MEI DENG MU *Maytenus heterophylla*. **Ref:** 5189.

**9471 Heterotropan**

$C_{24}H_{32}O_6$ (416.52). **Source:** BI CHENG QIE *Piper cubeba*. **Ref:** 660.

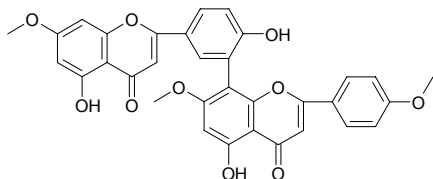
**9472 Hetisinone**

11,13-Dihydroxyhetisan-2-one; Dihydrohetisine [4829-55-4] $C_{20}H_{25}NO_3$ (327.43). Colorless crystals, mp $268\sim 270^\circ\text{C}$; Rhombs (C_6H_6), mp $273\sim 275^\circ\text{C}$, $[\alpha]_D = +18^\circ$. **Source:** GAN QING WU TOU *Aconitum tanguticum*, YI YE WU TOU *Aconitum heterophyllum*, KANG DING CUI QUE HUA *Delphinium tatsienense*. **Ref:** 2203.

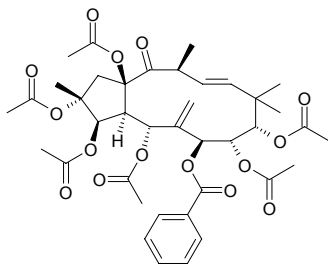


9473 Heveaflavone

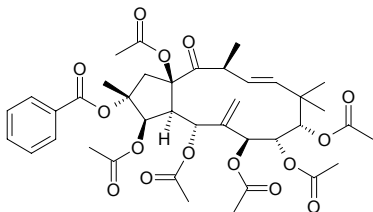
$C_{33}H_{24}O_{10}$ (580.55). Source: DA YE CAI *Selaginella doederleinii*. Ref: 660.

**9474 2 α ,3 β ,5 α ,8 α ,9 α ,15 β -Hexaacetoxy-7 β -benzoyloxyjatropho-6(17), 11 E -dien-14-one**

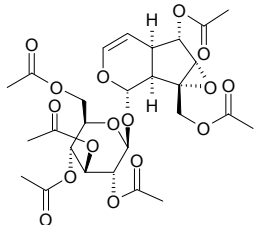
$C_{39}H_{48}O_{15}$ (756.81). Colorless crystals, mp 166~168°C, $[\alpha]_D^{25} = +12.9^\circ$ ($c = 0.50$, $CHCl_3$). Pharm: Cytotoxic (*in vitro*, B16 melanoma cell line, $IC_{50} > 5\mu g/mL$, no significant cytotoxicity)^[3078]; irritant inactive (mouse ear inflammation model, $ID_{50} > 100\mu g/ear$). Source: *Euphorbia turczaninowii* (whole herb). Ref: 3078.

**9475 3 β ,5 α ,7 β ,8 α ,9 α ,15 β -Hexaacetoxy-2 α -benzoyloxyjatropho-6(17), 11 E -dien-14-one**

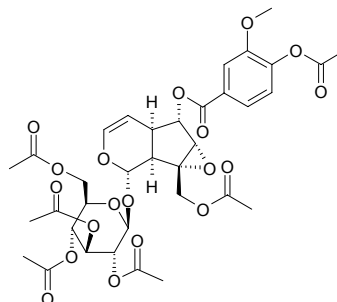
$C_{39}H_{48}O_{15}$ (756.81). Colorless crystals, mp 139~141°C, $[\alpha]_D^{25} = -59.1^\circ$ ($c = 0.62$, $CHCl_3$). Pharm: Cytotoxic (*in vitro*, B16 melanoma cell line, $IC_{50} > 5\mu g/mL$, no significant cytotoxicity)^[3078]; irritant inactive (mouse ear inflammation model, $ID_{50} > 100\mu g/ear$). Source: *Euphorbia turczaninowii* (whole herb). Ref: 3078.

**9476 Hexaacetyl catalpol**

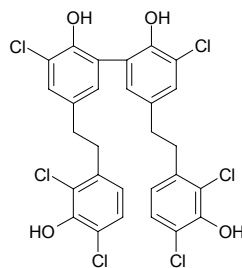
$C_{27}H_{34}O_{16}$ (614.56). Source: HU HUANG LIAN *Picrorhiza kurroa*. Ref: 660.

**9477 Hexaacetyl-6-vaniloyl catalpol**

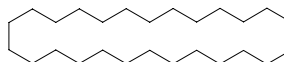
$C_{35}H_{40}O_{19}$ (764.70). Source: HU HUANG LIAN *Picrorhiza kurroa*. Ref: 660.

**9478 6,6',10,10',12,12'-Hexachloroisoperrottetin A**

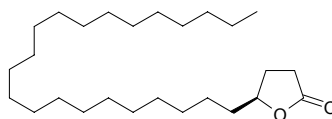
$C_{28}H_{20}Cl_6O_4$ (633.19). $[\alpha]_D^{20} = +0.0^\circ$ ($c = 0.2$, $CHCl_3$). Source: YUAN YE TAI *Jamesoniella colorata*. Ref: 3375.

**9479 n-Hexacosane**

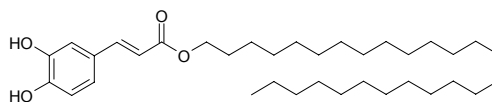
$C_{26}H_{54}$ (366.72). Source: MENG GU LI *Quercus mongolica*. Ref: 660.

**9480 Hexacosan-4-olide**

$C_{26}H_{50}O_2$ (394.69). White powder, mp 69°C (Hexane:EtOAc = 9:1). Pharm: Phytotoxin inactive (doesn't inhibit radicle growth of *Amaranthus hypochondriacus* and *Echinochloa crusgalli*)^[3433]; CaM interactor inactive^[3433]. Source: FU CHUI FE LAO JU *Flourensia cernua*. Ref: 3433.

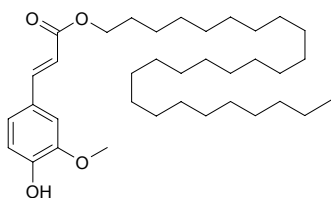
**9481 Hexacosanyl caffeate**

$C_{35}H_{60}O_4$ (544.87). Source: TAI WAN FU RONG *Hibiscus taiwanensis*. Ref: 2529.

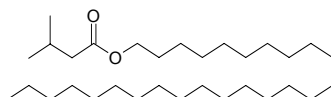


9482 Hexacosanyl ferulate

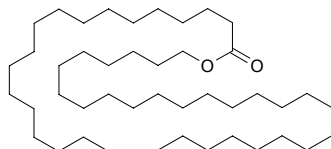
[63034-29-7] $C_{36}H_{62}O_4$ (558.89). Source: JIAN YE LONG XUE SHU *Dracaena cochinchinensis*. Ref: 616.

**9483 n-Hexacosanyl isovalerate**

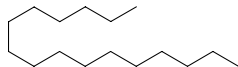
$C_{31}H_{62}O_2$ (466.84). Source: GAN SONG *Nardostachys chinensis*. Ref: 6.

**9484 Hexacosyl stearate**

$C_{44}H_{88}O_2$ (649.12). White waxy solid, mp 79~82°C. Source: HUANG LIAN HUA *Lysimachia davurica*. Ref: 2525.

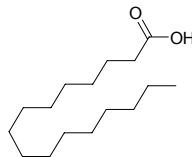
**9485 Hexadecane**

Cetane [544-76-3] $C_{16}H_{34}$ (226.45). mp 18.17°C, bp 287°C/160mmHg, bp 105~110°C/0.1mmHg. Source: REN SHEN *Panax ginseng* [Syn. *Panax schinseng*], SAN QI *Panax pseudo-ginseng* var. *notoginseng* [Syn. *Panax notoginseng*], XI YANG SHEN *Panax quinquefolium*, MEI GUI HUA *Rosa rugosa*, BI BA *Piper longum*. Ref: 2, 1521.

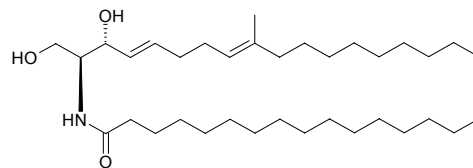
**9486 Hexadecanoic acid**

Palmitic acid; Aethalic acid; Cetyl acid [57-10-3] $C_{16}H_{32}O_2$ (256.43). Crystals, mp 63~64°C, bp 390°C, bp 268.5°C/100mmHg, bp 215°C/15mmHg. Pharm: Antifungal inactive (hmn pathogenic yeasts *Candida albicans*, *Candida glabrata* and *Candida tropicalis*); COX-1 and COX-2 inhibitor (IC₅₀ = 3.9~180 μmol/L, lacking selectivity)^[4415]; platelet aggregation inhibitor (washed rabbit platelets, 100 μg/mL, 100 μmol/L AA-induced, InRt = 4.5%, control 50 μmol/L Aspirin, InRt = 100%; 10 μg/mL collagen-induced, InRt = 3.9%, 100 μmol/L Aspirin, InRt = 4.9%; 0.1 U/mL thrombin-induced, InRt = 6.0%, 100 μmol/L Aspirin, InRt = 1.7%; 2 ng/mL PAF-induced, InRt = 3.5%, 100 μmol/L Aspirin, InRt = 2.1%)^[5427]; LD₅₀ (mus, iv) = 57 mg/kg. Source: BA DOU *Croton tiglium*, BAI CHANG *Acorus calamus*, BAI ZHI *Angelica dahurica* [Syn. *Angelica porphyrocaulis*], BING LANG *Areca catechu*, CHAI HU *Bupleurum chinense*, CHUAN XIONG *Ligusticum chuanxiong* [Syn. *Ligusticum wallichii*], CU LIU GUO *Hippophae rhamnoides*, DA CHE QIAN *Plantago major*, DA QING YE *Isatis indigotica*, DA ZAO *Ziziphus jujuba*, DANG GUI *Angelica sinensis*, DANG SHEN *Codonopsis pilosula*, DONG CHONG XIA CAO *Cordyceps sinensis*, DONG LING CAO *Rabdosia rubescens*, FU LING *Poria cocos*, GAN DI HUANG *Rehmannia glutinosa* [Syn. *Rehmannia glutinosa* f.

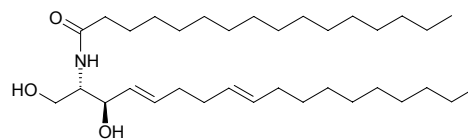
Huechingensis], GUA LOU *Trichosanthes kirilowii*, GUANG YE DING GONG TENG *Erycibe schmidtii*, HONG HUA *Carthamus tinctorius*, HUA DONG LAN CI TOU *Echinops grijsii*, HUANG QI *Astragalus membranaceus*, HUANG QIN *Scutellaria baicalensis*, LANG DANG ZI *Hyoscyamus niger* (dried ripe seed: content = 6.5%)^[5508], LU HUI *Aloe vera* [Syn. *Aloe barbadensis*], MU XIANG *Saussurea lappa* [Syn. *Aucklandia lappa*], PU HUANG *Typha angustata*, QIANG HUO *Notopterygium incisum*, QING HAO *Artemisia apiacea* [Syn. *Artemisia carvifolia*; *Artemisia caruifolia*], QUAN XIE *Buthus martensi*, 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*], SHAN YAO *Dioscorea batatas* [Syn. *Dioscorea opposita*], SHAN ZHA *Crataegus pinnatifida*, SHAN ZHU YU *Cornus officinalis* [Syn. *Macrocarpium officinale*], TIAN HUA FEN *Trichosanthes kirilowii*, TIAN MA *Gastrodia elata*, 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 YANG HUO *Epimedium brevicornum*, YU XING CAO *Houttuynia cordata*, occurs in many plants. Ref: 2, 531, 549, 551, 557, 576, 582, 585, 596, 601, 660, 1521, 2576, 4309, 4415, 5427, 5508.

**9487 (2S,3R,4E,8E)-N-Hexadecanoyl-2-amino-9-methyl-4,8-octadecadiene-1,3-diol**

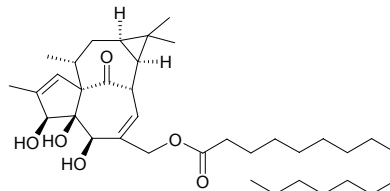
$C_{33}H_{67}NO_3$ (549.93). Amorphous powder, $[\alpha]_D^{21} = -11.6^\circ$ ($c = 0.09$, $CHCl_3$). Source: HOU SHU SHAN GU *Panellus serotinus*. Ref: 4195.

**9488 (2S,3R,4E,8E)-2-Hexadecanoylamino-4,8-octadecadiene-1,3-diol**

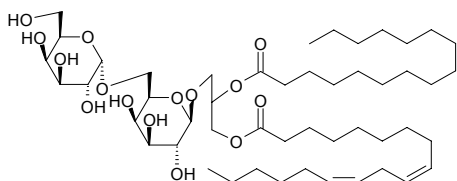
$C_{34}H_{65}NO_3$ (535.90). Colorless solid, mp 98~100°C, $[\alpha]_D^{28} = +12.1^\circ$ ($c = 0.05$, $CHCl_3$). Pharm: Cytotoxic (hmn peripheral blood mononuclear cells (PBMC), ED₅₀ = 20 μg/mL). Source: *Lobophytum* sp. Ref: 4432.

**9489 20-Hexadecanoylinganol**

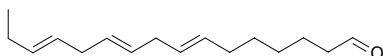
$C_{36}H_{58}O_6$ (586.86). Source: QIAN JIN ZI *Euphorbia lathyris*. Ref: 6.



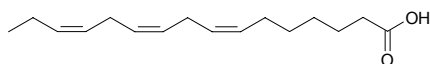
9490 1-*O*-Hexadecanoyl-2-*O*-(9*Z*,12*Z*-octadecadienyl)-3-*O*-[α -*D*-galactopyranosyl-(1''-6')-*O*- β -*D*-galactopyranosyl]-glycerol
 $C_{49}H_{88}O_{15}$ (917.24). White amorphous powder. **Pharm:** PAF antagonist.
Source: XI LAN ROU GUI *Cinnamomum zeylanicum*. **Ref:** 2199.



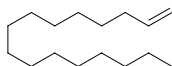
9491 7,10,13-Hexadecatrienal
 $C_{16}H_{26}O$ (234.39). **Source:** KONG SHI CHUN *Ulva pertusa*. **Ref:** 660.



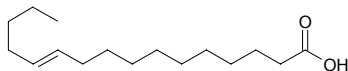
9492 7*Z*,10*Z*,13*Z*-Hexadecatrienoic acid
 $C_{16}H_{26}O_2$ (250.38). **Source:** FU PING *Lemna minor*. **Ref:** 660.



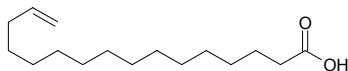
9493 1-Hexadecene
 $C_{16}H_{32}$ (224.43). **Source:** HONG HUA *Carthamus tinctorius*. **Ref:** 660.



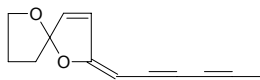
9494 11*Z*-Hexadecenoic acid
 $C_{16}H_{30}O_2$ (254.42). **Source:** FU PING *Lemna minor*. **Ref:** 660.



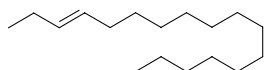
9495 ω -Hexadecenoic acid
 $C_{16}H_{30}O_2$ (254.42). **Source:** KUN BU *Laminaria japonica*. **Ref:** 660.



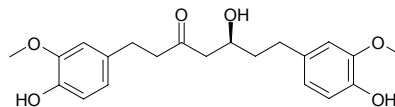
9496 2-(Hexa-2,4-diyn-1-ylidene)-1,6-dioxaspiro[4.4]non-3-ene
[50257-98-2] $C_{13}H_{12}O_2$ (200.24). Yellowish crystals (petroleum ether), mp 48.5–49.5°C, $[\alpha]_D = -45.3^\circ$ (Et₂O). **Pharm:** Anti-inflammatory; insect antifeedant. **Source:** MU⁽³⁾ JU *Matricaria chamomilla* [Syn. *Matricaria recutita*], *Chrysanthemum* spp. **Ref:** 6, 1521.



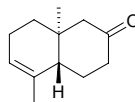
9497 Hexahydroaplotaxene
Z-14-Heptadecene $C_{17}H_{34}$ (238.46). **Source:** DA JI⁽⁴⁾ *Cirsium japonicum*. **Ref:** 660.



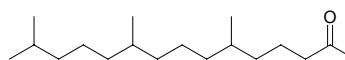
9498 Hexahydrocurcumin
 $C_{21}H_{26}O_6$ (374.44). mp 90–91°C (benzene), $[\alpha]_D^{24} = +9^\circ$. **Pharm:** Choleric (animals, *in vivo*); antihypercholesterolemic. **Source:** GAN JIANG *Zingiber officinale*, GAO LIANG JIANG *Alpinia officinarum*, JIANG HUANG *Curcuma longa*. **Ref:** 658, 660.



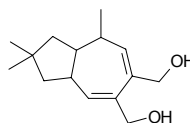
9499 (+)-3,4,4*aR*,7,8,8*aR*-Hexahydro-5,8*a*-dimethylnaphthalen-2(1*H*)-one
 $C_{12}H_{18}O$ (178.28). Colorless oil. **Source:** *Tritomaria polita* (essential oil). **Ref:** 3446.



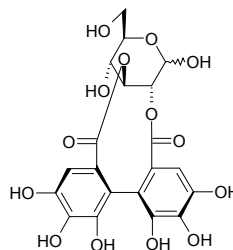
9500 Hexahydrofarnesyl acetone
6,10,14-Trimethyl-pentadecan-2-one $C_{18}H_{36}O$ (268.49). **Source:** AI YE *Artemisia argyi*, DENG XIN CAO *Juncus effusus*, HONG CHAI HU *Bupleurum scorzoniferifolium*, LING XIANG CAO *Lysimachia foenum-graecum*, WU LIAN MEI *Cayratia japonica*, XIAO GUO XIANG CAO *Lysimachia microcarpa*, XUE LIAN *Saussurea involucrata*. **Ref:** 660.



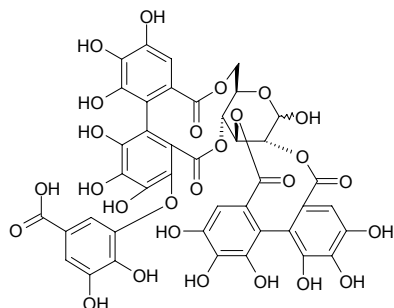
9501 1,2,3,3*a*,8,8*a*-Hexahydro-2,2,8-trimethyl-5,6-azulene- dimethanol
 $C_{15}H_{24}O_2$ (236.36). **Source:** WU WEI ZI *Schisandra chinensis*. **Ref:** 2.



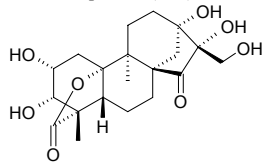
9502 2,3-*O*-(*S*)-Hexahydroxydiphenoyl-*D*-glucopyranose
 $C_{20}H_{18}O_{14}$ (482.36). **Pharm:** Antioxidant (SOD-like activity, EC₅₀ = 166 μmol/L, control Gallic acid, EC₅₀ = 31.7 μmol/L, *L*-Ascorbic acid, EC₅₀ = 34.6 μmol/L)^[3408], antioxidant (DPPH free radical scavenger, EC₅₀ = 4.35 μmol/L, control Gallic acid, EC₅₀ = 5.88 μmol/L, *L*-Ascorbic acid, EC₅₀ = 6.25 μmol/L)^[3408]. **Source:** AN MO LE *Phyllanthus emblica* (root), BAI SHAO *Paeonia albiflora* [Syn. *Paeonia lactiflora*] (fresh fruit: yield = 0.010%fw)^[4695], HU TAO REN *Juglans regia*. **Ref:** 3065, 3408, 4695.



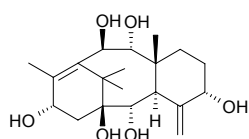
9503 2,3-*O*-Hexahydroxydiphenyl-4,6-*O*-sanguisorboyl- (α/β)-glucose
 $C_{41}H_{28}O_{27}$ (952.66). Source: SHEN SHENG XUAN GOU ZI *Rubus sanctus*.
Ref: 3421.



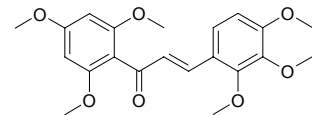
9504 2 α ,3 α ,10 α ,13 α ,16 α ,17-Hexahydroxy-9 α -methyl-15-oxo-20-norkauran-19-oic acid (19,10)-lactone
 $C_{20}H_{28}O_8$ (396.44). White amorphous solid, mp 150°C(dec), $[\alpha]_D^{25} = +16.0^\circ$ ($c = 0.1$, MeOH). Pharm: Cytotoxic inactive (Lu1, Col2, KB, LNCaP, hTERT-RPE1, HUVEC; control Taxol, $ED_{50} = 0.002\mu\text{g/mL}$, $0.003\mu\text{g/mL}$, $0.0005\mu\text{g/mL}$, $0.001\mu\text{g/mL}$, $0.004\mu\text{g/mL}$, $0.008\mu\text{g/mL}$, respectively). Source: *Parinari sprucei* (leaf). Ref: 4991.



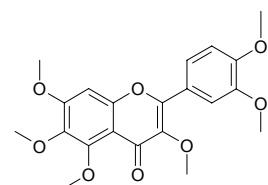
9505 Hexahydroxytaxadiene
 $1\beta,2\alpha,5\alpha,9\alpha,10\beta,13\alpha$ -Hexahydroxy-4(20),11-taxadiene $C_{20}H_{32}O_6$ (368.47).
mp 120~121°C, $[\alpha]_D = -5.6^\circ$ (CHCl_3). Source: HONG DOU SHAN *Taxus chinensis*. Ref: 662.



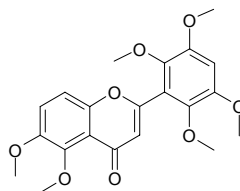
9506 2,3,4,2',4',6'-Hexamethoxychalcone
 $C_{21}H_{24}O_7$ (388.42). Pale orange-yellow solid (CHCl_3), mp 174~176°C.
Source: *Andrographis neesiana* (whole herb). Ref: 4357.



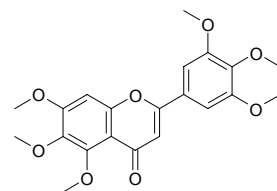
9507 3,5,6,7,3',4'-Hexamethoxyflavone
 $C_{21}H_{22}O_8$ (402.40). Pale yellow amorphous solid, mp 179~180°C. Pharm: Cytotoxic inactive (*in vitro*, Col2, $ED_{50} > 20\mu\text{g/mL}$; hTERT-RPE1, $ED_{50} > 20\mu\text{g/mL}$; HUVEC, $ED_{50} > 20\mu\text{g/mL}$; KB, $ED_{50} > 20\mu\text{g/mL}$; HUVEC, $ED_{50} > 20\mu\text{g/mL}$; Lu1, $ED_{50} > 20\mu\text{g/mL}$). Source: HUANG JING YE *Vitex negundo*. Ref: 4699.



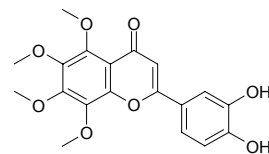
9508 5,6,2',3',5',6'-Hexamethoxyflavone
 $C_{21}H_{22}O_8$ (402.40). Yellow amorphous solid. Source: SI JI XIANG ROU
GUO Casimiroa tetrameria (leaf). Ref: 5262.



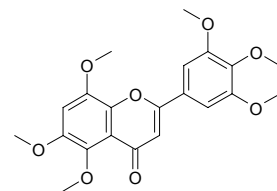
9509 5,6,7,3',4',5'-Hexamethoxyflavone
 $C_{21}H_{22}O_8$ (402.40). White needles (acetone). Pharm: Cytotoxic (HeLa, $IC_{50} = 42.9\mu\text{g/mL}$, control Mitomycin C, $IC_{50} = 1.7\mu\text{g/mL}$)^[4092]. Source: JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*], LONG XU TENG *Bauhinia championii*, SHENG HONG JI *Ageratum conyzoides*, TUAN JI AI NA XIANG *Blumea glomerata*. Ref: 660, 4092, 4548.



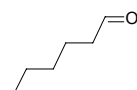
9510 5,6,7,8,3',4'-Hexamethoxyflavone
 $C_{19}H_{18}O_8$ (374.35). Source: JU PI *Citrus reticulata*. Ref: 2.



9511 5,6,8,3',4',5'-Hexamethoxyflavone
 $C_{21}H_{22}O_8$ (402.40). Source: JIU LI XIANG *Murraya paniculata* [Syn. *Chalcas paniculata*]. Ref: 660.



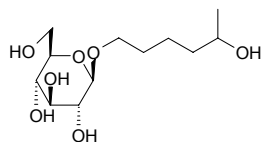
9512 Hexanal
[66-25-1] $C_6H_{12}O$ (100.16). Source: FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*], KUAN YE QIANG HUO *Notopterygium forbesii* [Syn. *Notopterygium franchetii*], SHAN XING REN *Prunus armeniaca* var. *ansu*. Ref: 2, 660.



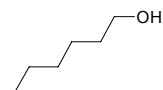
9513 Hexane-1,5-diol-1-*O*- β -D-glucopyranoside

$C_{12}H_{24}O_7$ (280.32). Amorphous powder, $[\alpha]_D^{21} = -19^\circ$ ($c = 0.4$, MeOH).

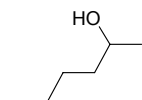
Source: HUI QIN *Pimpinella anisum* (fruit). Ref: 3402.

**9514 Hexanol**

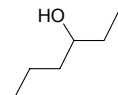
[111-27-3] $C_6H_{14}O$ (102.18). Source: FANG FENG *Saposhnikovia divaricata* [Syn. *Ledebouriella seseloides*]. Ref: 2.

**9515 2-Hexanol**

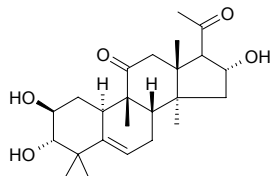
$C_6H_{14}O$ (102.18). Source: BO HE *Mentha haplocalyx* [Syn. *Mentha canadaensis*; *Mentha arvensis* var. *haplocalyx*; *Mentha arvensis*], HONG HUA *Carthamus tinctorius*. Ref: 660.

**9516 3-Hexanol**

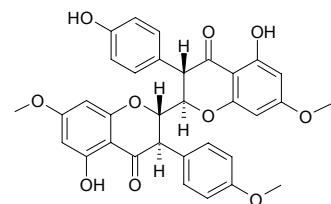
$C_6H_{14}O$ (102.18). Source: HONG HUA *Carthamus tinctorius*. Ref: 660.

**9517 Hexanorcucurbitacin F**

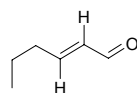
[96253-53-1] $C_{24}H_{36}O_5$ (404.55). Colorless needles (Me₂CO), mp 128~130°C, $[\alpha]_D^{28} = +140.2^\circ$ ($c = 0.180$, MeOH). Source: KU XUAN SHEN *Picria felterrae* (whole herb). Ref: 4853.

**9518 Hexaspermone C**

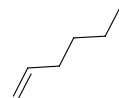
$C_{33}H_{28}O_{10}$ (584.59). Pharm: Antibacterial inactive (MDR *Staphylococcus aureus*: RN4220 strain, 64µg/mL, control Erythromycin, MIC = 128µg/mL; XU212 strain, 64µg/mL, control Tetracycline, MIC = 128µg/mL; SA-1199-B strain, 64µg/mL, control Norfloxacin, MIC = 32µg/mL). Source: CHANG E JIN LIAN MU PI *Ochna macrocalyx*, LIU ZI SAI JIN LIAN MU *Oureatea hexasperma*. Ref: 5372.

**9519 (*E*)-2-Hexenal**

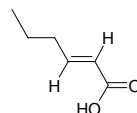
[6728-26-3] $C_6H_{10}O$ (98.15). Source: SHAN XING REN *Prunus armeniaca* var. *ansu*. Ref: 2.

**9520 1-Hexene**

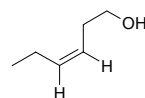
[592-41-6] C_6H_{12} (84.16). Source: JIN YIN HUA *Lonicera japonica*. Ref: 2.

**9521 *trans*-2-Hexenoic acid**

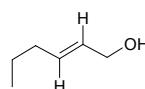
[13419-69-7] $C_6H_{10}O_2$ (114.15). mp 36~37°C, bp 217°C. Source: NIU BANG GEN *Arctium lappa*. Ref: 6.

**9522 β -Hexenol**

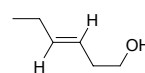
[928-96-1] $C_6H_{12}O$ (100.16). bp (*cis*-) 156~157°C. Pharm: Attractant for many plant-eating insects. Source: CI HUAI HUA *Robinia pseudoacacia*, PI PA YE *Eriobotrya japonica*, HUO XIANG *Agastache rugosus*. Ref: 6, 658, 660.

**9523 *trans*-2-Hexenol**

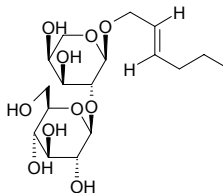
[928-95-0] $C_6H_{12}O$ (100.16). mp 158~160°C. Source: XING ZI *Prunus armeniaca*. Ref: 6.

**9524 γ -Hexenol**

trans-3-Hexen-1-ol [928-97-2] $C_6H_{12}O$ (100.16). bp 153~156°C. Source: PI PA YE *Eriobotrya japonica*, HUO XIANG *Agastache rugosus*. Ref: 6, 660.

**9525 (*E*)-2-Hexenyl- α -L-arabinopyranosyl-(1 \rightarrow 2)- β -D-glucopyranoside**

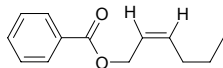
$C_{17}H_{30}O_{10}$ (394.42). Source: CHUAN DANG SHEN *Codonopsis tangshen*. Ref: 2, 660.



9526 2-Hexenyl benzoate

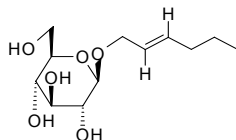
$C_{13}H_{16}O_2$ (204.27). Source: CHA YE *Camellia sinensis* [Syn. *Thea sinensis*].

Ref: 6.

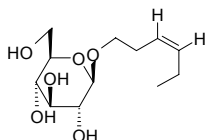
**9527 (E)-2-Hexenyl-β-D-glucopyranoside**

$C_{12}H_{22}O_6$ (262.31). Source: CHUAN DANG SHEN *Codonopsis tangshen*.

Ref: 2, 660.

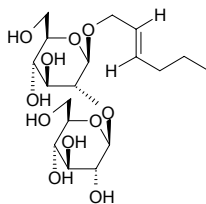
**9528 (Z)-3-Hexenyl-β-D-glucopyranoside**

$C_{12}H_{22}O_6$ (262.31). Amorphous powder, $RI(23, D) = -31^\circ$. Pharm: To induce expression of defense genes in uninfected leaves. Source: CHUAN DANG SHEN *Codonopsis tangshen*, JIN WU MAO SAO JU *Pertya glabrescens*, SHE XIANG CAO *Thymus vulgaris*. Ref: 2, 660, 2592.

**9529 (E)-2-Hexenyl-β-D-glucopyranosyl-(1→2)-β-D-glucopyranoside**

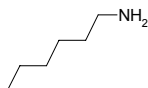
$C_{18}H_{32}O_{11}$ (424.45). Source: CHUAN DANG SHEN *Codonopsis tangshen*.

Ref: 2, 660.

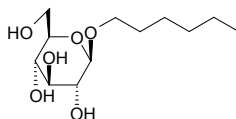
**9530 Hexyl amine-1**

[111-26-2] $C_6H_{15}N$ (101.19). mp $-19^\circ C$, bp $129-130^\circ C/742 mmHg$. Source:

MAI JIAO *Claviceps purpurea*. Ref: 6.

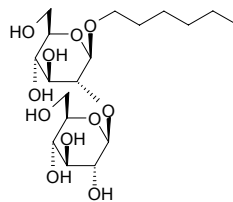
**9531 n-Hexyl-β-D-glucopyranoside**

$C_{12}H_{24}O_6$ (264.32). Source: DANG SHEN *Codonopsis pilosula*. Ref: 2.

**9532 Hexyl-β-D-glucopyranosyl-(1→2)-β-D-glucopyranoside**

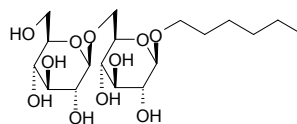
$C_{18}H_{34}O_{11}$ (426.47). Source: CHUAN DANG SHEN *Codonopsis tangshen*.

Ref: 2, 660.

**9533 Hexyl-β-D-glucopyranosyl-(1→6)-β-D-glucopyranoside**

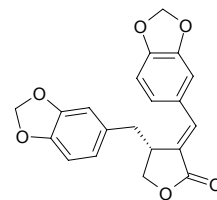
$C_{18}H_{34}O_{11}$ (426.47). Source: CHUAN DANG SHEN *Codonopsis tangshen*.

Ref: 2, 660.

**9534 (–)-(R,E)-Hibacalzone**

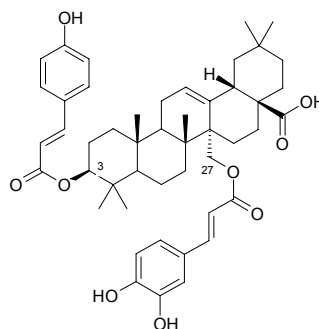
$C_{20}H_{16}O_6$ (352.35). Source: QIANG DAO YAO *Hypoestes purpurea* [Syn. *Justicia purpurea*; *Hypoestes sinica*] (aerial parts: yield = 0.00074%dw).

Ref: 4783.

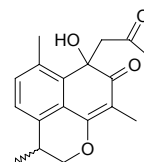
**9535 Hibicusin**

$C_{48}H_{60}O_9$ (781.01). White powder, mp $211-213^\circ C$, $[\alpha]_D = +31.7^\circ$ ($c = 0.32$, MeOH). Pharm: Anti-HIV (H9 lymphocytic cells, inhibits replication, IC_{50} (concentration that inhibits uninfected H9 cell growth by 50%) $> 25 \mu g/mL$); cytotoxic (hmn, A549 $EC_{50} = 16.4 \mu g/mL$, MCF7 $EC_{50} > 20 \mu g/mL$)^[2529].

Source: TAI WAN FU RONG *Hibiscus taiwanensis*. Ref: 2529.

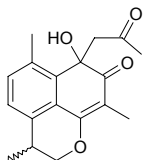
**9536 Hibicuslide A**

$C_{18}H_{20}O_4$ (300.36). Yellow syrup, $[\alpha]_D = +15^\circ$ ($c = 0.1$, MeOH). Source: TAI WAN FU RONG *Hibiscus taiwanensis*. Ref: 2529.

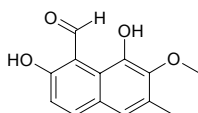


9537 Hibicuslide B

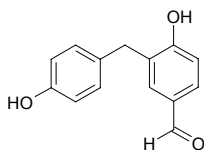
$C_{18}H_{20}O_4$ (300.36). Yellow syrup, $[\alpha]_D = +77.0^\circ$ ($c = 0.13$, MeOH). Source: TAI WAN FU RONG *Hibiscus taiwanensis*. Ref: 2529.

**9538 Hibicuslide C**

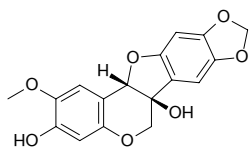
$C_{13}H_{12}O_4$ (232.24). Colorless oil. Source: TAI WAN FU RONG *Hibiscus taiwanensis*. Ref: 2529.

**9539 Hibicutaiwanin**

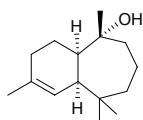
$C_{14}H_{12}O_3$ (228.25). Colorless oil. Source: TAI WAN FU RONG *Hibiscus taiwanensis*. Ref: 2529.

**9540 Hildecarpin**

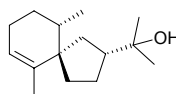
[99624-64-3] $C_{17}H_{14}O_7$ (330.30). Pharm: Insect antifeedant; antifungal. Source: XI SHI HUI MAO DOU *Tephrosia hildebrandtii*. Ref: 658.

**9541 Himachalol**

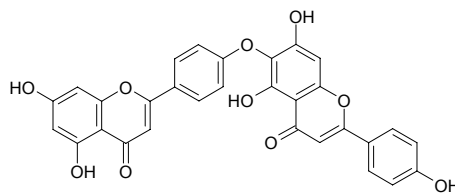
[1891-45-8] $C_{15}H_{26}O$ (222.37). White acicular crystals (ethanol), mp 67–68°C, $[\alpha]_D = +72.9^\circ$ ($c = 0.18$); colorless trapezoid crystals, mp 67°C. Pharm: Antispasmodic (ileum in gpg, jejunum in rbt, uterus in rat); smooth muscle relaxant (caused by acetylcholine, 5-HT, nicotine and $BaCl_2$); LD₅₀ (mus, orl) = 265mg/kg, (mus, ip) = 247mg/kg. Source: XUE SONG *Cedrus deodara*. Ref: 660, 661.

**9542 Hinesol**

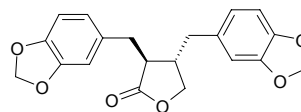
1(10)-Spirovetiven-11-ol [23811-08-7] $C_{15}H_{26}O$ (222.37). Crystals (MeOH), mp 59–60°C, $[\alpha]_D^{20} = -40.2^\circ$. Source: BEI CANG ZHU *Atractylodes chinensis* (dried rhizome: content = 3.42%^[5531]), CANG ZHU *Atractylodes lancea* (dried rhizome: content scope of 5 origins = 0.13%~1.94%, mean content = 0.71%^[5531]), GUAN CANG ZHU *Atractylodes japonica* (dried rhizome: content = 0.01%^[5531]). Ref: 2, 660, 1521, 5501, 5531.

**9543 Hinokiflavone**

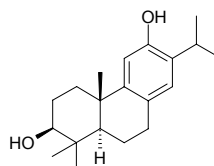
[19202-36-9] $C_{30}H_{18}O_{10}$ (538.47). mp 353~355°C (dec). Pharm: Cyclo-nucleotide phosphodiesterase inhibitor; anti-HIV (HIV-RT inhibitor). Source: BAI SHU YE *Cupressus funebris*, CE BAI YE *Thuja orientalis* [Syn. *Platycladus orientalis*; *Biota orientalis*], CUI YUN CAO *Selaginella uncinata* (whole herb), DU SONG SHI *Juniperus rigida*, HUI⁽⁴⁾ YE *Sobina chinensis*, JI MAO SONG *Podocarpus imbricatus*, JUAN BAI *Selaginella tamariscina*, LIN BEI ZI *Toxicodendron succedaneum* [Syn. *Rhus succedanea*], LIU SHAN *Cryptomeria fortunei*, LUO HAN SONG SHI *Podocarpus macrophyllus*, LUO HAN SONG YE *Podocarpus macrophyllus*, SHAN ZHU ZI *Garcinia multiflora*, SU TIE SHU GUO *Cycas revoluta*. Ref: 6, 580, 658, 2268, 4398.

**9544 (+)-Hinokinin**

$C_{20}H_{18}O_6$ (354.36). $[\alpha]_D^{25} = +41.5^\circ$ ($c = 0.20$, $CHCl_3$). Pharm: Cytotoxic (P₃₈₈, ED₅₀ = 1.54μg/mL, control Mithramycin, ED₅₀ = 0.08μg/mL; HT29, ED₅₀ = 4.61μg/mL, Mithramycin, ED₅₀ = 0.07μg/mL; A549, ED₅₀ = 8.01μg/mL, Mithramycin, ED₅₀ = 0.06μg/mL)^[4947]. Source: E SHEN *Anthriscus sylvestris*, PI ZHEN XING YAO HUA *Wikstroemia lanceolata* (stem and root). Ref: 4947, 5499.

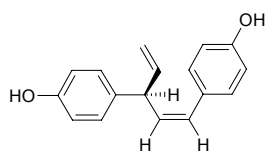
**9545 Hinokiol**

$C_{20}H_{30}O_2$ (302.46). mp 233~235°C, $[\alpha]_D^{22} = +72.5^\circ$ ($c = 0.46$, $CHCl_3$). Source: DAN HUANG XIANG CHA CAI *Isodon flavidus*. Ref: 4067.

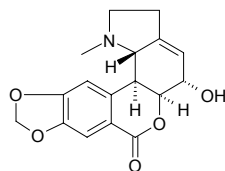


9546 cis-Hinokiresinol

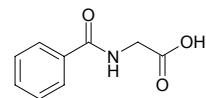
Nyasol C₁₇H₁₆O₂ (252.32). [α]_D²¹ = +137.0° (*c* = 1.40, Me₂CO). **Pharm**: cAMP phosphodiesterase inhibitor; cytotoxic (*in vitro*, HO-8910, IC₅₀ = (30.6±1.2)μmol/L, Vincristine, IC₅₀ = (25.1±1.9)μmol/L; Bel7405, IC₅₀ = (29.4±2.9)μmol/L, Vincristine, IC₅₀ = (31.4±3.4)μmol/L)^[4975]; cytotoxic (*in vitro*, HOG.R5, CC₅₀ = 15.6μg/mL (58.1μmol/L), control Ellipticine, HOG.R5, IC₅₀ = 0.02μg/mL (0.08μmol/L))^[3009]; cytotoxic inactive (KB, Col2, LNCaP, Lu1, HUVEC, IC₅₀ > 20μg/mL)^[3009]; anti-HIV (IC₅₀ = 11.7μg/mL (46.4μmol/L))^[3009]; antifungal (1~50μg/mL, inhibits mycelian growth of *Colletotrichum orbiculare*, *Phytophthora capsici*, *Pythium ultimum*, *Rhizoctonia solani*, *Cladosporium cucumerinum*, did not affect the growth of bacteria and yeast)^[3476]. **Source**: GE BI TIAN MEN *Asparagus gobicus* (root), RI BEN BIAN BAI *Chamaecyparis obtusa*, TIAN MEN DONG *Asparagus cochinchinensis* [Syn. *Asparagus lucidus*] (dried root: yield = 0.00011%dw)^[3009], ZHAI YE NAN YANG SHAN *Araucaria angustifolia*, ZHI MU *Anemarrhena asphodeloides*. **Ref**: 658, 3009, 3476, 4975.

**9547 Hippeastrine**

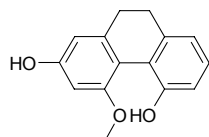
Trisphaerine; Trispherine; (+)-Hippeastrine [477-17-8] C₁₇H₁₇NO₅ (315.33). mp 214~215°C, [α]_D²² = +160° (*c* = 0.3, CHCl₃). **Pharm**: Insect antifeedant (pento-larva of *Euremaheca mandarina*); antibacterial (*Staphylococcus aureus*, MIC = 125μg/mL)^[3829]; antifungal (*Candida albicans*, IZD = 25mm, MIC = 125μg/mL)^[3829]. **Source**: GU TING HUA *Amaryllis belladonna* (bulb), JUN ZI LAN *Clivia miniata*, SU MEN DA LA WEN SHU LAN *Crinum amabile*, XI NAN WEN SHU LAN *Crinum latifolium*, SHI SUAN *Lycoris radiata* [Syn. *Amaryllis radiata*], HUANG SI TAN BAO *Sternbergia lutea*. **Ref**: 6, 658, 3829.

**9548 Hippuric acid**

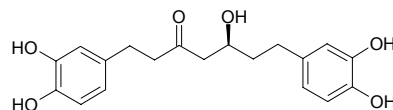
[495-69-2] C₉H₉NO₃ (179.18). mp 187°C. **Source**: REN NIAO *Homo sapiens*. **Ref**: 6.

**9549 Hircinol**

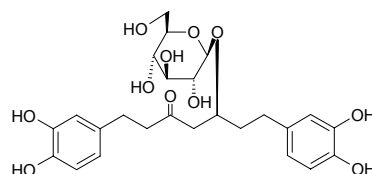
[41060-05-3] C₁₅H₁₄O₃ (242.28). **Pharm**: Antifungal (*Aspergillus niger*); inhibits fermentation of indole-3-acetic acid (IAA). **Source**: YUAN SHU YU *Dioscorea rotundata* [Syn. *Dioscorea cayenensis*]. **Ref**: 658.

**9550 Hirsutanonol**

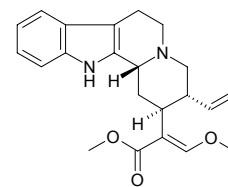
[91998-02-6] C₁₉H₂₂O₆ (346.38). **Pharm**: Antioxidant (superoxide radical scavenger, IC₅₀ = 3.0μmol/L; DPPH scavenger, IC₅₀ = 3.1μmol/L)^[4535]. **Source**: CHI YANG *Alnus japonica* (leaf). **Ref**: 4535.

**9551 Hirsutanonol-5-O-β-D-glucopyranoside**

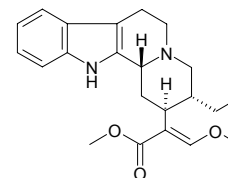
C₂₅H₃₂O₁₁ (508.53). **Pharm**: Antioxidant (3.125μg/mL, superoxide radical scavenging activity = 3.4%, control Urcumin 16.1%; 6.25μg/mL, DPPH radical scavenging activity = 3.9%, control Urcumin 50.0%). **Source**: CHI YANG *Alnus japonica* (leaf). **Ref**: 4535.

**9552 Hirsuteine**

[35467-43-7] C₂₂H₂₆N₂O₃ (366.46). mp 92~94°C. **Source**: BI LU GOU TENG *Uncaria tomentosa*, DUO MAI GOU TENG *Uncaria nervosa*, GOU TENG *Uncaria rhynchophylla* [Syn. *Nauclea rhynchophylla*], GUI YA NA GOU TENG *Uncaria guianensis*, HUA GOU TENG *Uncaria sinensis*, XIA GOU TENG *Uncaria attenuata*. **Ref**: 2, 660, 1521, 5341.

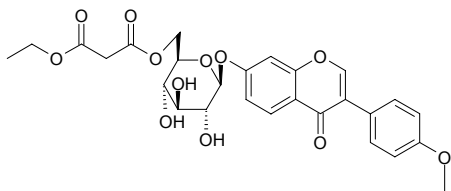
**9553 Hirsutine**

[7729-23-9] C₂₂H₂₈N₂O₃ (368.48). Crystals (Et₂O), mp 101°C, [α]_D²³ = +68.6° (*c* = 0.32, CHCl₃). **Pharm**: Calcium antagonist (anesthetic rat and dog, hypotensor and vasodilator); antiarrhythmic (mus, arrhythmia induced by aconitine, gpg, arrhythmia induced by ouabain); CNS depressant; LD₅₀ (mus, iv) = 35mg/kg, LD₅₀ (mus, ip) = 110mg/kg. **Source**: BAI GOU TENG *Uncaria sessilifrutus* [Syn. *Nauclea sessilifrutus*], BI LU GOU TENG *Uncaria tomentosa*, DUO MAI GOU TENG *Uncaria nervosa*, FENG XIANG SHU YE *Cephalanthus occidentalis*, GOU TENG *Uncaria rhynchophylla* [Syn. *Nauclea rhynchophylla*], GUI YA NA GOU TENG *Uncaria guianensis*, HUA GOU TENG *Uncaria sinensis*, XIA GOU TENG *Uncaria attenuata*, *Uncaria kunstleri*. **Ref**: 2, 6, 1688, 1689, 1521, 5341.

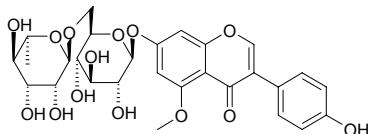


9554 Hirsutissimide A

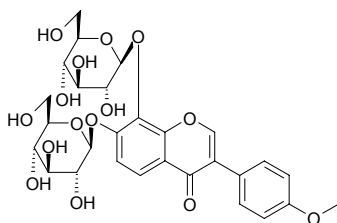
Formononetin 7-*O*- β -D-(6"-ethylmalonyl)-glucopyranoside C₂₇H₂₈O₁₂ (544.52). White powder, $[\alpha]_D^{25} = -26.3^\circ$ ($c = 0.13$, MeOH:H₂O = 1:0.5). Source: FENG CHENG JI XUE TENG *Milletia nitida* var. *hirsutissima* (stem). Ref: 4455.

**9555 Hirsutissimide B**

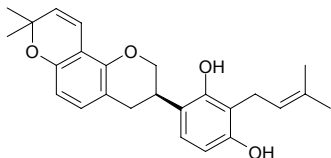
5-*O*-Methyl genistein 7-*O*- α -L-rhamnopyranosyl-(1 \rightarrow 6)- β -D-glucopyranoside C₂₈H₃₂O₁₄ (592.56). White powder, $[\alpha]_D^{25} = -73.3^\circ$ ($c = 0.19$, MeOH). Source: FENG CHENG JI XUE TENG *Milletia nitida* var. *hirsutissima* (stem). Ref: 4455.

**9556 Hirsutissimide C**

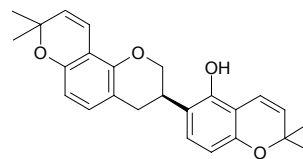
Retusin 7,8-di-*O*- β -D-glucopyranoside C₂₈H₃₂O₁₅ (608.56). White powder, $[\alpha]_D^{25} = -38.0^\circ$ ($c = 0.14$, MeOH:H₂O = 1:1). Source: FENG CHENG JI XUE TENG *Milletia nitida* var. *hirsutissima* (stem). Ref: 4455.

**9557 Hispaglabridin A**

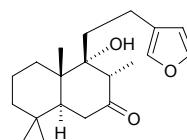
[68978-03-0] C₂₅H₂₈O₄ (392.50). Crystals (cyclohexane), mp 132~133°C, $[\alpha]_D^{25} = -8.23^\circ$ ($c = 2.43$, CHCl₃). Pharm: Antibacterial (*Staphylococcus aureus* ATCC13709, MIC = 3.12 μ g/kg; *Mycobacterium smegmatis* ATCC607, MIC = 3.12mg/kg). Source: GAN CAO *Glycyrrhiza uralensis*, GUANG GUO GAN CAO *Glycyrrhiza glabra*. Ref: 658, 1521.

**9558 Hispaglabridin B**

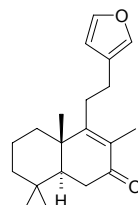
[68978-02-9] C₂₅H₂₆O₄ (390.48). Amorphous powder, $[\alpha]_D^{25} = -25.7^\circ$ ($c = 2.35$, CHCl₃). Pharm: Antibacterial (*Staphylococcus aureus* ATCC13709, MIC = 6.25 μ g/mL; *Mycobacterium smegmatis* ATCC607, MIC = 3.12 μ g/mL). Source: OU YA GAN CAO *Glycyrrhiza glabra* var. *typica*, GAN CAO *Glycyrrhiza uralensis*, GUANG GUO GAN CAO *Glycyrrhiza glabra*. Ref: 2, 658, 1521.

**9559 Hispanolone**

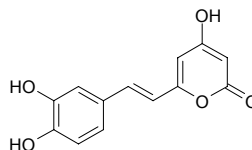
C₂₀H₃₀O₃ (318.46). Crystals. Source: YI MU CAO *Leonurus heterophyllus* [Syn. *Leonurus artemisia*]. Ref: 660, 2499, 4493.

**9560 Hispanone**

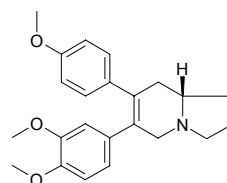
C₂₀H₂₈O₂ (300.44). Source: YI MU CAO *Leonurus heterophyllus* [Syn. *Leonurus artemisia*] (aerial parts). Ref: 4493, 4534.

**9561 Hispidin**

C₁₃H₁₀O₅ (246.22). Pharm: Chymotrypsin inhibitor inactive (20.0 μ mol/L, InRt = (1.4 \pm 0.3)%); trypsin inhibitor inactive (20.0 μ mol/L, InRt = (1.0 \pm 0.2)%); elastase inhibitor inactive (20.0 μ mol/L, InRt = (3.1 \pm 1.3)%); PEP inhibitor (20.0 μ mol/L, InRt = (61.3 \pm 7.0)%); TACE inhibitor inactive (20.0 μ mol/L, InRt = (1.1 \pm 0.1)%); BACE1 inhibitor (20.0 μ mol/L, InRt = (63.4 \pm 3.1)%). Source: LIE TI MU CENG KONG JUN *Phellinus linteus*. Ref: 4934.

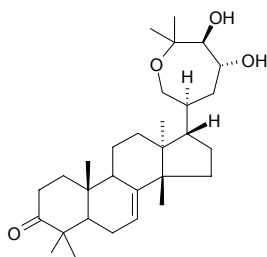
**9562 Hispidine**

C₂₃H₂₇NO₃ (365.48). Source: DUI YE RONG *Ficus hispida*. Ref: 660.

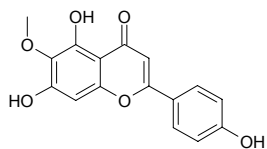


9563 Hispidone

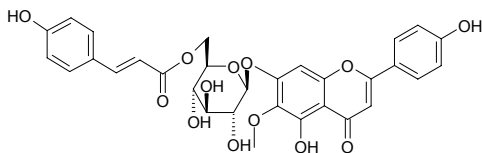
[73891-72-2] C₃₀H₄₈O₄ (472.71). Source: CHANG YE KUAN MU *Eurycoma longifolia*. Ref: 1521, 4556.

**9564 Hispidulin**

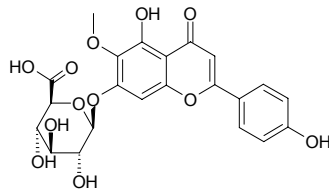
Dinatin [1447-88-7] C₁₆H₁₂O₆ (300.27). Pale yellow powder, mp 287~289°C, mp 281~282°C, mp 291~292°C, mp 304~305°C. Pharm: Antihepatotoxin; antitussive; cytotoxic (KB *in vitro*, ED₅₀ = 96µg/mL); antitussive (dispels phlegm); platelet aggregation inhibitor; binding activity to benzodiazepine receptor (IC₅₀ = (1.3±0.2)µmol/L, control Diazepam, IC₅₀ = (0.05±0.01)µmol/L)^[5366]; PFTase inhibitor (100µg/mL, InRt = 75%)^[5378]; cytotoxic (strongly inhibits growth of ZR-75-1 cells, GI₅₀ = 1.2µg/mL)^[5378]; cytotoxic inactive (hmn breast cancer cell lines: MDA-MB-231, MCF7, T47D, 20µg/mL)^[5378]; angiogenesis inhibitor inactive (chicken embryo chorioallantoic membrane (CAM) assay, 10µg)^[5378]. Source: AI YE *Artemisia argyi*, CHANG GUAN JIA MO LI *Clerodendron indicum*, CHOU MO LI *Clerodendron fragrans*, DUI XIN JU *Helenium autumnale*, LI ZHI CAO *Salvia plebeia*, SU DA QI GAN JU *Citrus sudachii*, XIU MAO DI HUANG *Digitalis ferruginea*, YA PIAN *Papaver somniferum*, YI WA JU *Iva frutescens*, YIN DU JIA JING JIE *Nepeta hindostana*, ZI MEI SHU *Millingtonia hortensis*, MAO HUA MAO DI HUANG *Digitalis lanata*, CU YING MAO TUN CAO *Ambrosia hispida*, AI YE HUANG QIN *Scutellaria przewalskii*, FU CHUI FE LAO JU *Flourensia cernua*, YAO YONG DAN SHEN YE *Salvia officinalis*, *Warionia saharae*. Ref: 5, 658, 1521, 5366, 5378, 5399.

**9565 Hispidulin 7-(6-E-p-coumaroyl-β-D-glucopyranoside)**

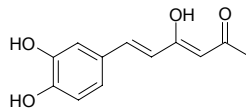
C₃₁H₂₈O₁₃ (608.56). Amorphous yellowish powder, mp 288~289°C, [α]_D²⁵ = -46.4° (c = 0.5, CHCl₃). Source: GU JING CAO *Eriocaulon buergerianum*. Ref: 1923.

**9566 Hispidulin-7-O-glucuronide**

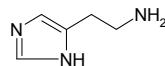
C₂₂H₂₀O₁₂ (476.40). mp 220~222°C. Source: JIN SI TAO GUO SHI *Hypericum chinense*. Ref: 6.

**9567 Hispolon**

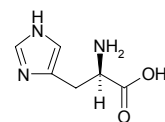
[173933-40-9] C₁₂H₁₂O₄ (220.23). Pharm: Cytotoxic (*in vitro*, A549, IC₅₀ = 0.183µmol/L; BGC823, IC₅₀ = 0.205µmol/L; MCF7, IC₅₀ = 0.025µmol/L; Bel7402, IC₅₀ = 0.038µmol/L; Ketr3, IC₅₀ = 0.206µmol/L; HCT8, IC₅₀ = 0.199µmol/L; control Topotican, A549, IC₅₀ = 0.0032µmol/L; BGC823, IC₅₀ = 0.0043µmol/L; MCF7, IC₅₀ = 0.0018µmol/L; Bel7402, IC₅₀ = 0.0012µmol/L; Ketr3, IC₅₀ = 0.0049µmol/L; HCT8, IC₅₀ = 0.0015µmol/L)^[4747]. Source: CU YING MAO XIAN KONG JUN *Inonotus hispidus*, SANG HUANG *Phellinus igniarius* (sporocarp: yield = 0.0022%dw)^[4747]. Ref: 1521, 4747.

**9568 Histamine**

[51-45-6] C₅H₉N₃ (111.15). mp 75~80°C, mp 86°C, bp 167°C/0.8mmHg. Pharm: An important medium of inflammation and anaphylaxis; bronchial smooth muscle stimulant; irritant; vasodilator. Source: BAI QU CAI *Chelidonium majus*, BO CAI *Spinacia oleracea*, CHUN *Brasenia schreberi*, FENG DU *Apis cerana*, LI YU *Cyprinus carpio*, MAI JIAO *Claviceps purpurea*, MAN LI YU *Anguilla japonica*, MIAN HUA *Gossypium herbaceum*, QIE YE *Solanum melongena*, SAN XIAO CAO *Trifolium repens*, SHANG LU *Phytolacca esculenta* [Syn. *Phytolacca acinosa*] (dried root: content = 0.103%)^[5508], WU GONG *Scolopendra subspinipes mutilans* (dried body: mean content of 4 origins = %0.044^[5508]), XIANG JIAO *Musa paradisiaca* var. *sapientum* [Syn. *Musa sapientum*], YE DU ZHONG *Euonymus grandiflorus*, YI ZHU QIAN MA *Urtica dioica*, *Sarracenia* sp., *Drosera* sp., *Nepenthes* sp. Ref: 6, 658, 5508.

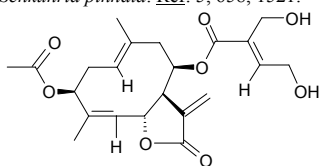
**9569 L-Histidine**

[71-00-1] C₆H₉N₃O₂ (155.16). Pharm: An essential amino acid for children; promotes ulcer healing. Source: BAN XIA *Pinellia ternata* (dried tuber: content scope of 4 origins = 0.22%~2.33%, mean content = 0.88%)^[5521], HU LU BA *Trigonella foenum-graecum*^[658], YI YE JIA FAN LV *Pseudostellaria heterophylla* (tuberosity: mean content of 5 origins = 0.0456%)^[5508]. Ref: 658, 5508, 5521.

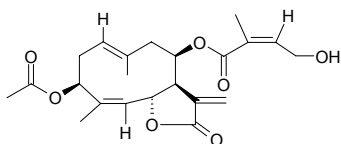


9570 Hiyodorilactone A

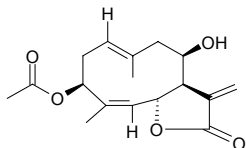
Schkuhrin I; Eucannabinolide; Hydroxychromolaenide [38458-58-1]
 $C_{22}H_{28}O_8$ (420.46). Gum or yellow oil, $[\alpha]_D = -121^\circ$ ($CHCl_3$). **Pharm:**
 Antibacterial (gram-positive bacteria); cytotoxic (KB); insect antifeedant.
Source: DA MA YE ZE LAN *Eupatorium cannabinum*, KU YE DAO ZE LAN *Eupatorium sachalinense* [Syn. *Eupatorium glehni*], SHI KU JU
Schkuhria pinnata. **Ref:** 5, 658, 1521.

**9571 Hiyodorilactone B**

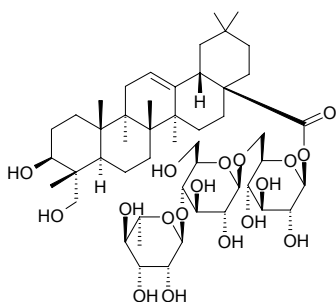
[68539-58-2] $C_{22}H_{28}O_7$ (404.46). Yellow oil, $[\alpha]_D^{24} = -140^\circ$ ($c = 0.67$, ethanol). **Pharm:** Antineoplastic. **Source:** KU YE DAO ZE LAN *Eupatorium sachalinense* [Syn. *Eupatorium glehni*]. **Ref:** 661, 1521.

**9572 Hiyodorilactone C**

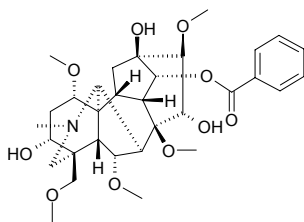
[68628-57-9] $C_{17}H_{22}O_5$ (306.36). Oil, $[\alpha]_D^{24} = -109^\circ$ ($c = 0.91$, ethanol). **Pharm:** Antineoplastic. **Source:** KU YE DAO ZE LAN *Eupatorium sachalinense* [Syn. *Eupatorium glehni*]. **Ref:** 661, 1521.

**9573 HN Saponin H**

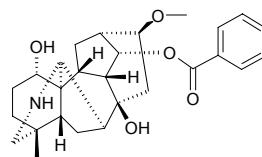
$C_{48}H_{78}O_{18}$ (943.15). **Source:** XI ZANG TIE XIAN LIAN *Clematis tibetana* (aerial parts). **Ref:** 3530.

**9574 Hokbusine A**

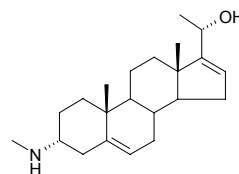
$C_{32}H_{45}NO_{10}$ (603.72). **Source:** WU TOU *Aconitum carmichaeli*. **Ref:** 660.

**9575 Hokbusine B**

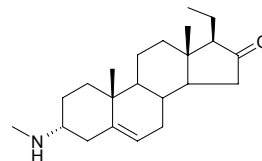
$C_{27}H_{35}NO_5$ (453.58). **Source:** WU TOU *Aconitum carmichaeli*. **Ref:** 660.

**9576 Holadysamine**

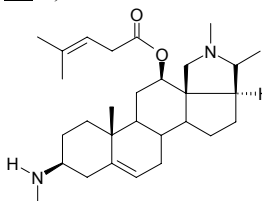
$C_{22}H_{35}NO$ (329.53). Crystals (hexane), mp $173^\circ C$, $[\alpha]_D = -78^\circ$ ($c = 1$, $CHCl_3$). **Source:** ZHI XIE MU PI *Holarrhena antidysenterica*. **Ref:** 6, 1521.

**9577 Holadysine**

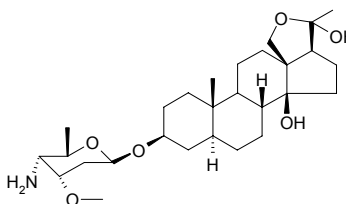
3 α -(Methylamino)pregn-5-en-16-one $C_{22}H_{35}NO$ (329.53). Crystals (hexane), mp $120^\circ C$, $[\alpha]_D = -199^\circ$ ($c = 1.2$, $CHCl_3$). **Source:** ZHI XIE MU PI *Holarrhena antidysenterica*. **Ref:** 6, 1521.

**9578 Holafrine**

Holarrhesine [70866-29-4] $C_{29}H_{46}N_2O_2$ (454.70). Platelets (Me_2CO), mp $116-117^\circ C$, $[\alpha]_D^{20} = -19.1^\circ$ ($c = 0.93$, $CHCl_3$). **Source:** ZHI XIE MU PI *Holarrhena antidysenterica*, FEI ZHOU ZHI XIE MU *Holarrhena africana*. **Ref:** 6, 1521.

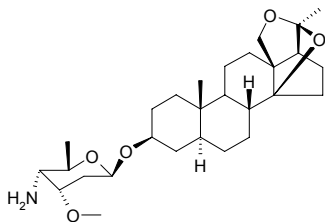
**9579 Holantosine A**

[28719-38-2] $C_{28}H_{47}NO_6$ (493.69). **Source:** ZHI XIE MU PI *Holarrhena antidysenterica*. **Ref:** 6, 1521.

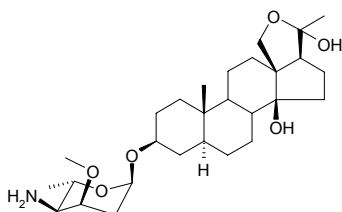


9580 Holantosine B

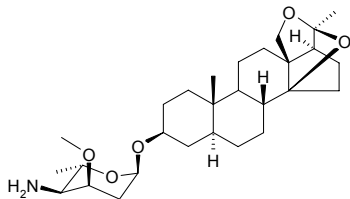
[28719-39-3] $C_{28}H_{45}NO_5$ (475.67). Source: ZHI XIE MU PI *Holarrhena antidysenterica*. Ref: 6, 1521.

**9581 Holantosine C**

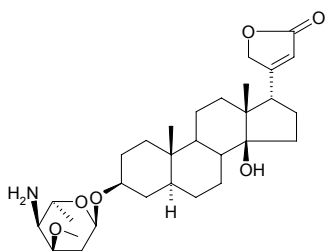
[34312-24-8] $C_{28}H_{47}NO_6$ (493.69). Source: ZHI XIE MU PI *Holarrhena antidysenterica*. Ref: 6, 1521.

**9582 Holantosine D**

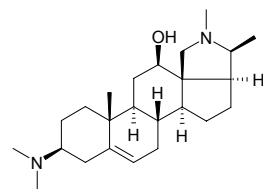
[33662-04-3] $C_{28}H_{45}NO_5$ (475.67). $[\alpha]_D = -67^\circ$ ($c = 6$, $CHCl_3$). Source: ZHI XIE MU PI *Holarrhena antidysenterica*. Ref: 6, 1521.

**9583 Holarosine A**

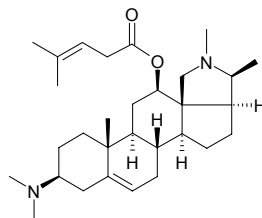
[34303-94-1] $C_{30}H_{47}NO_6$ (517.71). Source: ZHI XIE MU PI *Holarrhena antidysenterica*. Ref: 6, 1521.

**9584 Holarrhenine**

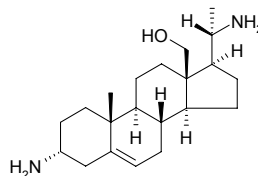
12 β -Hydroxyconessine [561-22-8] $C_{24}H_{40}N_2O$ (372.60). Needles (EtOAc), mp 197~198°C, $[\alpha]_D = -7.1^\circ$ ($CHCl_3$). Source: ZHI XIE MU PI *Holarrhena antidysenterica*, GANG GUO HE ZHI XIE MU *Holarrhena congolensis*, WEN ROU ZHI XIE MU *Holarrhena mitis*. Ref: 6, 1521.

**9585 Holarrhetine**

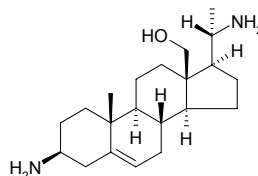
$C_{30}H_{48}N_2O_2$ (468.73). mp 74~75°C, $[\alpha]_D = -4.6^\circ$ ($c = 1.12$, EtOH), $[\alpha]_D = -14.9^\circ$ ($c = 1.12$, $CHCl_3$). Source: ZHI XIE MU PI *Holarrhena antidysenterica*, FEI ZHOU ZHI XIE MU *Holarrhena africana*. Ref: 6, 1521.

**9586 Holarrhidine**

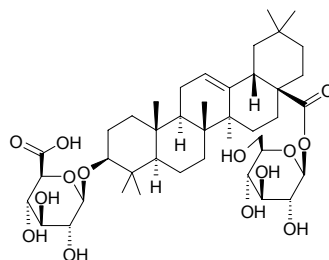
$C_{21}H_{36}N_2O$ (332.53). mp 180~181°C, $[\alpha]_D = -23^\circ$ ($CHCl_3$). Source: ZHI XIE MU PI *Holarrhena antidysenterica*. Ref: 6, 1521.

**9587 Holarrhimine**

[468-31-5] $C_{21}H_{36}N_2O$ (332.53). mp 183°C, $[\alpha]_D = -14^\circ$ ($CHCl_3$). Source: ZHI XIE MU PI *Holarrhena antidysenterica*, WEN ROU ZHI XIE MU *Holarrhena mitis*, TUI RE ZHI XIE MU *Holarrhena febrifuga*. Ref: 6, 1521.

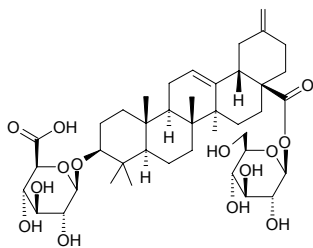
**9588 Hollow alternanthera saponin A**

Calendula officinalis Glycoside D₂ Momordin IIb [51415-02-2] $C_{42}H_{66}O_{14}$ (794.99). White amorphous powder, mp 218~220°C. Source: JIN ZHAN JU *Calendula officinalis* (flower), KONG XIN XIAN *Alternanthera philoxeroides*, LUO KUI HUA *Basella rubra* (aerial parts). Ref: 700, 3544, 3551.

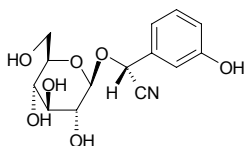


9589 Hollow alternanthera saponin D

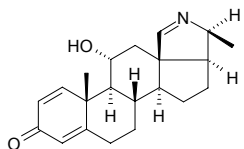
$C_{41}H_{62}O_{14}$ (778.94). White amorphous powder, mp 311~312°C. Pharm: Molluscicide (*Oncomelania*). Source: KONG XIN XIAN *Alternanthera philoxeroides*. Ref: 700.

**9590 Holocalin**

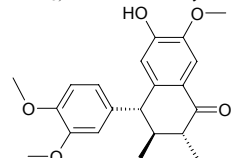
$C_{14}H_{17}NO_7$ (311.29). Pharm: Plant growth stimulatory or inhibitory activity (radicle length: *Lactuca sativa*, 1μmol/L, InRt = (31~60)%, 10μmol/L, InRt = (31~60)%, 100μmol/L, InRt = (31~60)%, 1mmol/L, InRt > 61%; *Raphanus sativus*, 1μmol/L, InRt = (10~30)%, 10μmol/L, InRt = (10~30)%, 100μmol/L, InRt = (31~60)%, 1mmol/L, InRt > 61%; *Allium cepa*, 1μmol/L, StRt or InRt < 10%, 10μmol/L, StRt or InRt < 10%, 100μmol/L, StRt or InRt < 10%, 1mmol/L, InRt = (31~60)%). Source: XI YANG JIE GU MU *Sambucus nigra*. Ref: 5217.

**9591 Holonamine**

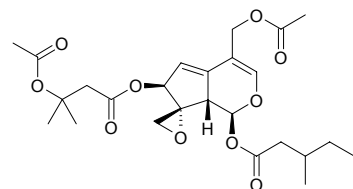
$C_{21}H_{27}NO_2$ (325.45). mp 257~259°C, $[\alpha]_D^{21} = -14.8^\circ$ ($c = 1.1$, MeOH). Source: ZHI XIE MU PI *Holarrhena antidysenterica*. Ref: 6, 1521.

**9592 (+)-Holostylone**

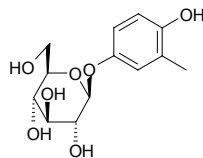
(7'R,8R,8'S)-8,8'-Dimethyl-4-hydroxy-3',4',5-trimethoxy-2,7'-cycloglignan-7-one $C_{21}H_{24}O_5$ (356.42). Amorphous yellow solid, $[\alpha]_D^{25} = -27.4^\circ$ ($c = 0.31$, $CHCl_3$). Source: *Holostylis reniformis* (root). Ref: 3784.

**9593 1-Homoacevaltrate**

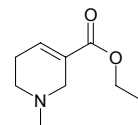
$C_{25}H_{34}O_{10}$ (494.54). Oil, $[\alpha]_D^{24} = +175.9^\circ$ ($c = 0.01$, MeOH). Source: ZHI ZHU XIANG *Valeriana jatamansii* [Syn. *Valeriana wallichii*]. (rhizome and root: yield = 0.000007%dw). Ref: 4672.

**9594 Homoarbutin**

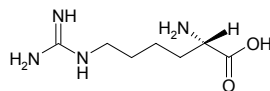
[25712-94-1] $C_{13}H_{18}O_7$ (286.28). mp 192~193°C, $[\alpha]_D^{21} = -79.2^\circ$. Pharm: Cytotoxic (P₃₈₈). Source: DA LI LU TI CAO *Pyrola forrestiana* (whole herb: content = 0.092%)^[5508], HONG HUA LU TI CAO *Pyrola incarnata*, LU XIAN CAO *Pyrola calliantha* [Syn. *Pyrola rotundifolia* ssp. *chinensis*] (whole herb: mean content = 0.102%)^[5508], PU TONG LU TI CAO *Pyrola decorata* (whole herb: content = 0.063%)^[5508], RI BEN LU TI CAO *Pyrola japonica*, XI ZANG LU TI CAO *Pyrola calliantha* var. *tibetana* (whole herb: content = 0.075%)^[5508], YUAN YE LU TI CAO *Pyrola rotundifolia*, ZHOU YE LU TI CAO *Pyrola rugosa* (whole herb: content = 0.061%)^[5508], ZI BEI LU TI CAO *Pyrola atropurpurea* (whole herb: content = 0.0051%)^[5508]. Ref: 6, 660, 1562, 5508.

**9595 Homoarecoline**

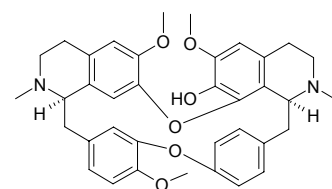
[28125-84-0] $C_9H_{15}NO_2$ (169.23). Source: BING LANG *Areca catechu*. Ref: 2.

**9596 L-Homoarginine**

[156-86-5] $C_7H_{16}N_4O_2$ (188.23). Pharm: Antibacterial (*Streptococcus* sp. and *Bacillus coli*); antifungal (*Candida albicans*); germination inhibitor; toxin (mus and some insects). Source: BIAN JIA SHAN LI DOU *Lathyrus cicera*, CAO XIANG WAN DOU *Lathyrus sativus*, *Lotus helleri*. Ref: 658, 1521.

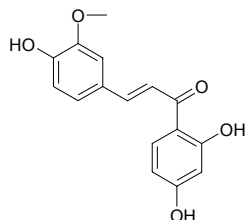
**9597 Homoaromoline**

O-Methylaromoline; Homoaromoline; Thalrugosamine; Homo-thalicrine; *N*-Methyldaphnandrine [17132-74-0] $C_{37}H_{40}N_2O_6$ (608.74). Crystals (MeOH), mp 235~237°C, $[\alpha]_D^{19} = +409^\circ$ ($CHCl_3$); mp 238~240°C, mp 235~236°C (dec). Pharm: Antibacterial (*Mycobacterium smegmatis*, MIC = 100μg/mL); antifungal (*Candida albicans*, MIC = 1000μg/mL); antihypertensive (anesthetic dog, 1~4mg, venae femoralis injection, blood pressure is lowered by 2.67kPa); muscle relaxant (animals, methyl iodide salt). Source: BAI YAO ZI *Stephania cepharantha*, YIN BU HUAN *Cyclea barbata*, TOU MING TANG SONG CAO *Thalictrum lucidum*, YAN GUO CAO *Thalictrum thunbergii*, ZOU WEN TANG SONG CAO *Thalictrum rugosum*, ZHI LI QIAN JIN TENG *Stephania erecta*, *Albertisia papuana*, *Pycnarrhena longifolia*. Ref: 6, 658, 1311, 1521.

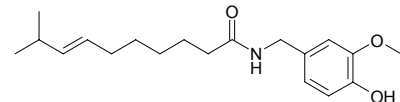


9598 Homobutein

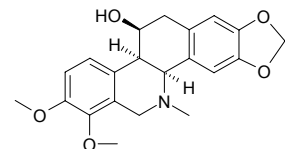
$C_{16}H_{14}O_5$ (286.29). Pharm: Antimalarial (*Plasmodium falciparum* D6, $IC_{50} = (15.0 \pm 2.8) \mu\text{g/mL}$, control Chloroquine, $IC_{50} = (0.009 \pm 0.002) \mu\text{g/mL}$, Quinine, $IC_{50} = (0.04 \pm 0.01) \mu\text{g/mL}$; *Plasmodium falciparum* W2, $IC_{50} = (16.1 \pm 2.1) \mu\text{g/mL}$, Chloroquine, $IC_{50} = (0.08 \pm 0.003) \mu\text{g/mL}$, Quinine, $IC_{50} = (0.21 \pm 0.01) \mu\text{g/mL}$)^[3879]. Source: A BI XI NI YA CI TONG *Erythrina abyssinica* (stem cortex), DI XIA CHE ZHOU CAO *Trifolium subterraneum*, GUAN MU ZHUANG CHE ZHOU CAO *Trifolium fruticosum*, *Iryanthera polyneura*, *Acacia* spp. Ref: 1521, 3879.

**9599 Homocapsaicin**

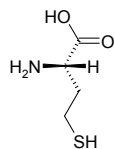
$C_{19}H_{29}NO_3$ (319.45). Source: HONG HAI JIAO *Capsicum annum*. Ref: 660.

**9600 Homochelidonine**

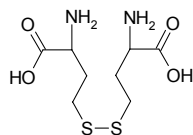
α -Homochelidonine [476-33-5] $C_{21}H_{23}NO_5$ (369.42). mp 169~170°C, mp 182°C, mp 192~193.5°C, $[\alpha]_D = +116^\circ$ ($CHCl_3$). Source: BAI QU CAI *Chelidonium majus*. Ref: 6, 1521.

**9601 L-Homocysteine**

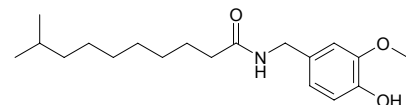
[6027-13-0] $C_4H_9NO_2S$ (135.19). Pharm: Flavorant. Source: BO CAI *Spinacia oleracea*. Ref: 658.

**9602 Homocystine**

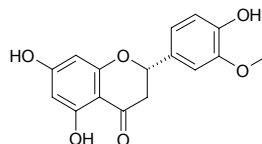
$C_8H_{16}N_2O_4S_2$ (268.36). mp L(+) 281~284°C (dec), D(-) 281~284°C (dec), (DL) 260~265°C (dec). Source: MO GU *Agaricus campestris*. Ref: 6.

**9603 Homodihydrocapsaicin**

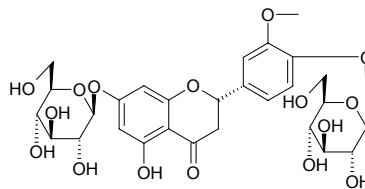
$C_{19}H_{21}NO_3$ (321.46). Source: HONG HAI JIAO *Capsicum annum*. Ref: 660.

**9604 Homoeriodictyol**

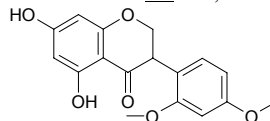
3'-O-Methyl eriodictyol; Eriodictyonone [446-71-9] $C_{16}H_{14}O_6$ (302.29). Crystals (70% acetic acid), high vacuum (0.003~0.050mm); 190~195°C sublimates as acicular crystals; diluting ethanol yield lamellar crystals; 225°C (dec, 100°C dried in vacuum), $[\alpha]_D^{20} = -28^\circ$ (ethanol). Pharm: Platelet aggregation inhibitor (50 $\mu\text{mol/L}$, InRt = 17%; 100 $\mu\text{mol/L}$, InRt = 50%)^[5171]; Diuretic (rbt); insect antifeedant (*Schizaphis graminum* and *Myzus persicae*). Source: HU JI SHENG *Viscum coloratum*, LENG ZHI HU JI SHENG *Viscum angulatum* (whole plant: yield = 0.00074%dw)^[4626], MI HUA SHI *Dendrobium densiflorum* (stem), SI BO LI YA AI JU *Tanacetum sibiricum* [Syn. *Filifolium sibiricum*], TIAN YE HAO *Artemisia campestris*. Ref: 661, 1434, 1521, 4626, 5171.

**9605 (2S)-Homoeriodictyol 7,4'-di-O-β-D-glucopyranoside**

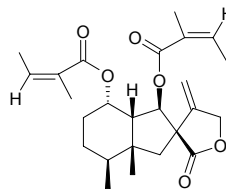
$C_{28}H_{34}O_{16}$ (626.57). Pale yellow amorphous powder. Pharm: Antioxidant (hydroxyl radical, $IC_{50} = 0.21 \text{ mmol/L}$, control EGCG, $IC_{50} = 0.58 \text{ mmol/L}$; superoxide anion, $IC_{50} = 0.39 \text{ mmol/L}$, EGCG, $IC_{50} = 0.53 \text{ mmol/L}$). Source: HU JI SHENG *Viscum coloratum* (branche and leaf: yield = 0.0015%dw). Ref: 920.

**9606 Homoferreirin**

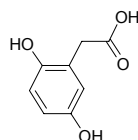
[482-01-9] $C_{17}H_{16}O_6$ (316.31). Rectangular plates (C_6H_6 -petroleum ether or MeOH aq.), mp 168~169°C. Pharm: Antifungal. Source: HUI HUI DOU *Cicer arietinum*. Ref: 658, 1521.

**9607 Homofukinolide**

[41059-96-5] $C_{25}H_{34}O_6$ (430.55). Crystals (petroleum ether), mp 184~186°C, $[\alpha]_D^{22} = -127^\circ$ ($c = 1, CHCl_3$). Source: FENG DOU CAI *Petasites japonicus*. Ref: 6, 1521.

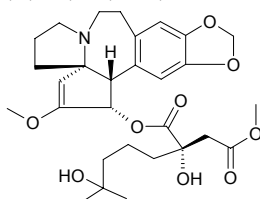
**9608 Homogentisic acid**

(2,5-Dihydroxyphenyl)acetic acid; Alcapton [451-13-8] $C_8H_8O_4$ (168.15). Source: BAN XIA *Pinellia ternata*. Ref: 2, 1521.

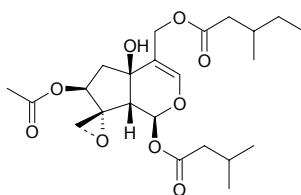


9609 Homoharringtonine

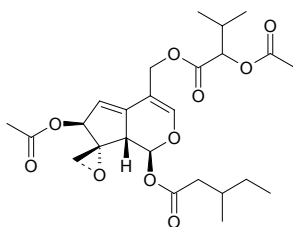
[26833-87-4] $C_{29}H_{39}NO_9$ (545.64). mp 144~146°C, $[\alpha]_D = -119^\circ$ ($c = 0.96$, $CHCl_3$). **Pharm:** Antineoplastic (curative for nonlymphatic leukemia, mus lymphatic leukemia, HeLa, L₁₂₁₀ cells and colon carcinoma). **Source:** HAI NAN CU FEI *Cephalotaxus hainanensis* [Syn. *Cephalotaxus mannii*] (branchlet and bark: mean content of 2 samples = 0.041%^[5508]), HE GUO CU FEI *Cephalotaxus drupacea*, RI BEN CU FEI *Cephalotaxus harringtonia*, SAN JIAN SHAN *Cephalotaxus fortunei* (branchlet and bark: mean content of 2 origins = 0.070%^[5508]), ZHONG GUO CU FEI ZHI YE *Cephalotaxus sinensis* [Syn. *Cephalotaxus harringtonia* var. *sinensis*]. **Ref:** 2, 4, 658, 660, 1521, 5508.

**9610 11-Homohydroxydidrovaltrate**

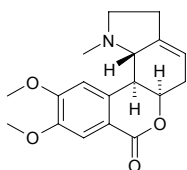
$C_{23}H_{34}O_9$ (454.52). Oil, $[\alpha]_D^{24} = -67.3^\circ$ ($c = 0.01$, MeOH). **Source:** ZHI ZHU XIANG *Valeriana jatamansii* [Syn. *Valeriana wallichii*]. (rhizome and root: yield = 0.000009%dw). **Ref:** 4672.

**9611 1-Homoisoacevaltrate**

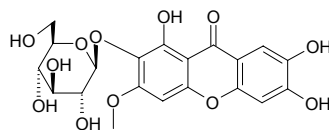
$C_{25}H_{34}O_{10}$ (494.54). Oil, $[\alpha]_D^{24} = +198.5^\circ$ ($c = 0.01$, MeOH). **Source:** ZHI ZHU XIANG *Valeriana jatamansii* [Syn. *Valeriana wallichii*]. (rhizome and root: yield = 0.000008%dw). **Ref:** 4672.

**9612 Homolycorine**

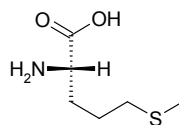
Narcipoetine [477-20-3] $C_{18}H_{21}NO_4$ (315.37). mp 175°C, $[\alpha]_D = +85^\circ$ (95% EtOH); pale-yellow crystals, 177~178°C, $[\alpha]_D^{28} = +98^\circ$ ($c = 0.1$, EtOH). **Pharm:** Antiretroviral and cytotoxic ($ID_{50} = 7.3\mu g/mL$, $TC_{50} = 12.8\mu g/mL$, TI_{50} (TC_{50}/ID_{50}) = 1.8)^[5026]. **Source:** DA YI ZHI JIAN *Lycoris aurea*, SHI SUAN *Lycoris radiata* [Syn. *Amaryllis radiata*], HONG KOU SHUI XIAN *Narcissus poeticus*, XUE PIAN LIAN *Leucojum vernum* (bulb), family Amaryllidaceae spp. **Ref:** 6, 1521, 5026.

**9613 Homomangiferin**

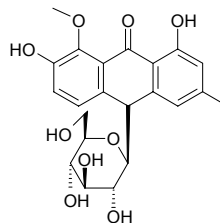
$C_{20}H_{20}O_{12}$ (452.38). **Source:** MANG GUO SHU PI *Mangifera indica*. **Ref:** 6.

**9614 Homomethionin**

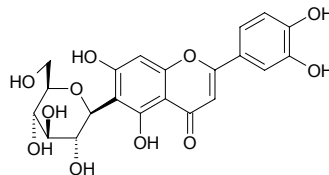
$C_6H_{13}NO_2S$ (163.24). **Source:** GAN LAN *Brassica oleracea* var. *capitata*, LA GEN *Armoracia lapathifolia*. **Ref:** 660.

**9615 Homonataloin**

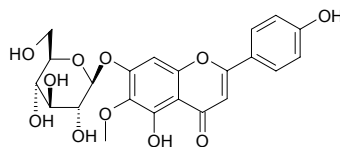
[477-66-7] $C_{22}H_{24}O_9$ (432.43). mp 202~204°C, $[\alpha]_D = -112.3^\circ$. **Source:** LU HUI *Aloe vera* [Syn. *Aloe barbadensis*], *Aloe cremnophila*, *Aloe distans*, *Aloe jacksonii*. **Ref:** 2, 1521.

**9616 Homoorientin**

Isoorientin; Luteolin-6-C- β -D-glucopyranoside [4261-42-1] $C_{21}H_{20}O_{11}$ (448.39). Lightyellow needles, mp 235°C, $[\alpha]_D^{20} = +30.8^\circ$ ($c = 1.2$, pyridine), $[\alpha]_D^{22} = 0^\circ$ ($c = 0.73$, pyridine). **Pharm:** Phytoalexin^[4727]; β -glucosidase inhibitor^[4727]; pectinase inhibitor^[4727]. **Source:** HONG CAO *Polygonum orientale*, HU LU BA *Trigonella foenum-graecum*, HU ZHI ZI *Lespedeza bicolor*, HUANG GUA *Cucumis sativus* (leaf)^[4727], NAN ZHU ZI *Vaccinium bracteatum*, QIAO MAI JIE *Fagopyrum esculentum*, RI BEN SHUANG HU DIE *Tripterospermum japonicum*, SUAN JIAO *Tamarindus indica*, XIA KU CAO *Prunella vulgaris*, YA MA *Linum usitatissimum*, ZHANG YA CAI *Swertia pseudochinensis*. **Ref:** 6, 1521, 2508, 3533, 4727.

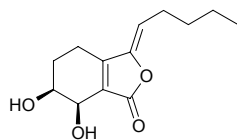
**9617 Homoplataginin**

Hispidulose [17680-84-1] $C_{22}H_{22}O_{11}$ (462.41). Yellow needles (EtOH), mp 241~242°C (dec). **Pharm:** Antitussive (dispels phlegm). **Source:** LI ZHI CAO *Salvia plebeia*, CHE QIAN *Plantago asiatica*. **Ref:** 6, 658, 660, 1521.

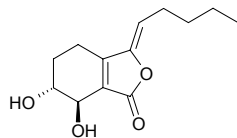


9618 Homosenkyunolide H

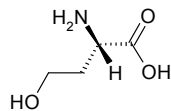
$C_{13}H_{28}O_4$ (238.29). Colorless oil. Source: DANG GUI *Angelica sinensis*. Ref: 2474.

**9619 Homosenkyunolide I**

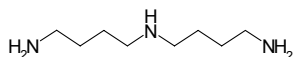
$C_{13}H_{28}O_4$ (238.29). Colorless oil. Source: DANG GUI *Angelica sinensis*. Ref: 2474.

**9620 L-Homoserine**

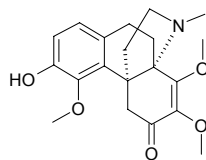
[672-15-1] $C_4H_9NO_3$ (119.12). mp (+) 203°C (dec). Pharm: Plays a key role in biosynthesis of threonine, isoleucine and methionine. Source: AN YE *Eucalyptus globulus*, DAO DOU *Canavalia gladiata*, DUO HUA HUANG JING *Polygonatum cyrtonema* [Syn. *Polygonatum multiflorum*], SAN YE SHU WEI CAO *Salvia trijuga*, WAN DOU *Pisum sativum*, ZI YUN YING ZI *Astragalus sinicus*. Ref: 6, 182, 658, 660.

**9621 sym-Homospermidine**

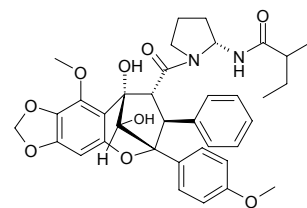
4,4'-Diaminobutylamine; 1,9-Diamino-5-azanonane [4427-76-3] $C_8H_{21}N_3$ (159.28). Source: TAN XIANG *Santalum album*, SHUI HU LU *Eichhornia crassipes* (root). Ref: 6, 1521.

**9622 Homostephanoline**

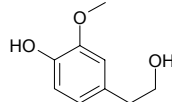
[2689-15-8] $C_{20}H_{25}NO_5$ (359.43). mp 233°C, $[\alpha]_D^{22} = -247.8^\circ$ (CHCl₃). Source: QIAN JIN TENG *Stephania japonica*. Ref: 6, 660, 1521.

**9623 Homothapsakin A**

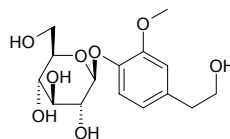
(-)-(2*R*,3*S*,4*R*,5*R*,10*S*,2'*S*)-1-[2,3,4,5-Tetrahydro-5,10-dihydroxy-2-(4-methoxyphenyl)-6-methoxy-7,8-methylenedioxy-3-phenyl-2,5-methano-1-benzoxepin-4-carbonyl]-2-(2-methylbutanoylamino)-pyrrolidine $C_{36}H_{40}N_2O_9$ (644.73). $[\alpha]_D^{20} = -135^\circ$ ($c = 0.3$, CHCl₃). Source: KE SHI MI ZI LAN *Aglaia edulis*. Ref: 2355.

**9624 Homovanillyl alcohol**

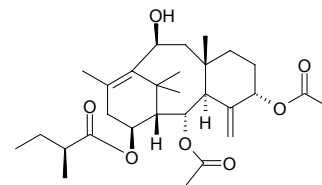
$C_9H_{12}O_3$ (168.19). Source: QIAN MA *Urtica cannabina*. Ref: 660.

**9625 Homovanillyl alcohol-4-O-glucoside**

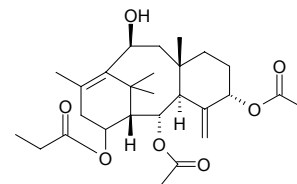
$C_{15}H_{22}O_8$ (330.34). Source: QIAN MA *Urtica cannabina*. Ref: 660.

**9626 Hongdoushan A**

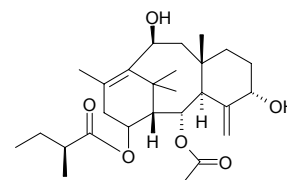
$C_{29}H_{44}O_7$ (504.67). Colorless amorphous solid, $[\alpha]_D^{25} = +81.3^\circ$ ($c = 0.06$, CHCl₃). Pharm: Cytotoxic (*in vitro*, 26-L5, EC₅₀ = 61 μg/mL; HT1080, EC₅₀ = 40.1 μg/mL; control 5-Fluorouracil, Colon26-L5, EC₅₀ = 0.29 μg/mL; HT1080, EC₅₀ = 0.07 μg/mL)^[4661]; antioxidant (DPPH scavenger, IC₅₀ > 200 μmol/L, control Caffeic acid, IC₅₀ = 25.5 μmol/L)^[5407]; NO production inhibitor (IC₅₀ = 15.0 μmol/L, control L-NMMA, IC₅₀ = 28.5 μmol/L)^[5407]. Source: YUN NAN HONG DOU SHAN *Taxus yunnanensis* (wood: yield = 0.0018%dw). Ref: 4661, 5407.

**9627 Hongdoushan B**

$C_{27}H_{40}O_7$ (476.62). Colorless amorphous solid, $[\alpha]_D^{25} = +68.9^\circ$ ($c = 0.08$, CHCl₃). Pharm: Cytotoxic (*in vitro*, 26-L5, EC₅₀ > 100 μg/mL; HT1080, EC₅₀ = 70.4 μg/mL; control 5-Fluorouracil, Colon26-L5, EC₅₀ = 0.29 μg/mL; HT1080, EC₅₀ = 0.07 μg/mL)^[4661]; NO production inhibitor (IC₅₀ = 43.5 μmol/L, control L-NMMA, IC₅₀ = 28.5 μmol/L)^[5407]. Source: YUN NAN HONG DOU SHAN *Taxus yunnanensis* (wood: yield = 0.0042%dw). Ref: 4661, 5407.

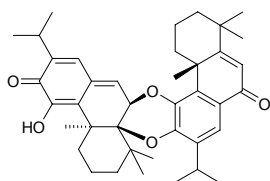
**9628 Hongdoushan C**

$C_{27}H_{42}O_6$ (462.63). Colorless amorphous solid, $[\alpha]_D^{25} = +77.4^\circ$ ($c = 0.14$, CHCl₃). Pharm: Cytotoxic (*in vitro*, 26-L5, EC₅₀ = 61.1 μg/mL; HT1080, EC₅₀ = 3.8 μg/mL; control 5-Fluorouracil, Colon26-L5, EC₅₀ = 0.29 μg/mL; HT1080, EC₅₀ = 0.07 μg/mL). Source: YUN NAN HONG DOU SHAN *Taxus yunnanensis* (wood: yield = 0.00034%dw). Ref: 4661.

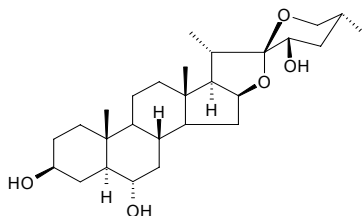


9629 Hongencaotone

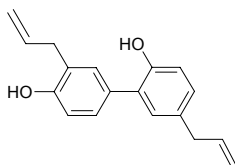
$C_{40}H_{50}O_5$ (610.84). Yellow plates (cyclohexane), mp 191~192°C, $[\alpha]_D^{25} = 588^\circ$ ($c = 0.05$, MeOH). **Pharm:** Cytotoxic inactive (*in vitro*, HL-60 and Bel7402 tumor cell lines). **Source:** HONG GEN CAO *Salvia prionitis* (root). **Ref:** 3072.

**9630 Hongguanggenin**

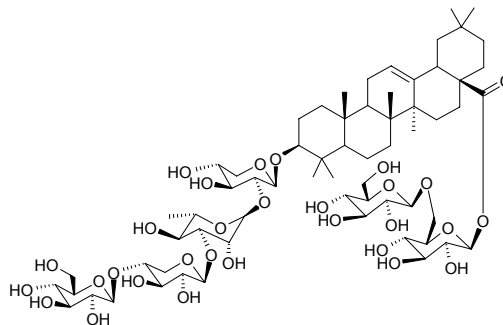
[65620-57-7] $C_{27}H_{44}O_5$ (448.65). **Source:** JIAN MA *Agave sisalana*. **Ref:** 10, 1521.

**9631 Honokiol**

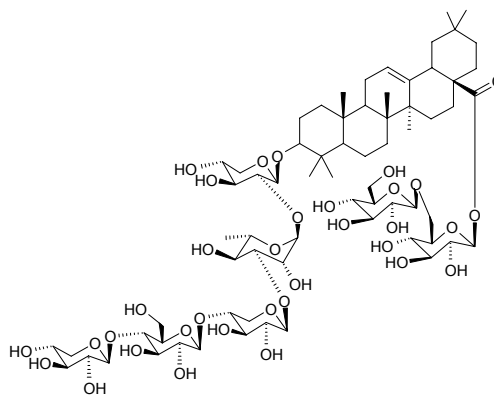
[35354-74-6] $C_{18}H_{18}O_2$ (266.34). mp 87.5°C. **Pharm:** Hepatoprotective (inhibits cellular leakage of LDH and AST, and cell death, induced by 1.5 $\mu\text{mol/L}$ tBH for 1h, effective dose = 20 $\mu\text{mol/L}$, 40 $\mu\text{mol/L}$; induced by 30 $\mu\text{mol/L}$ GalN, effective dose = 1 $\mu\text{mol/L}$, 5 $\mu\text{mol/L}$, and 20 $\mu\text{mol/L}$)^[5344]; hepatoprotective (inhibits tBH-induced lipid peroxidation, primary cultured rat hepatocytes, thiobarbituric acid reactive substance (TBARS) assay, effective dose = 5, 20 and 40 $\mu\text{mol/L}$)^[5344]; hepatoprotective (inhibits GSH depletion, GSH concentration in tBH-treated hepatocytes was significantly reduced to 17 % of that of normal hepatocytes, effective dose = 5 $\mu\text{mol/L}$, 20 $\mu\text{mol/L}$, and 40 $\mu\text{mol/L}$; induced by GalN, effective dose = 1 $\mu\text{mol/L}$, 5 $\mu\text{mol/L}$ and 20 $\mu\text{mol/L}$)^[5344]; antioxidant (protects rat heart and liver mitochondria against lipidperoxidation; hydroxyl radical scavenger)^[5362]; platelet aggregation inhibitor^[5362]; antiarrhythmic^[5362]; anti-ischemia myocardial (myocardial ischemia-reperfusion injury)^[5362]; anti-myocardial infarction (rat, reduces area of coronary artery infarction)^[5362]; increases tolerance to anoxia (rat, no significant hemodynamic change after intravenous infusion of honokiol at the dosages of 0.01 $\mu\text{g/kg}$, 0.1 $\mu\text{g/kg}$ and 1.0 $\mu\text{g/kg}$, however significantly reduces total volume of infarction at 0.1 $\mu\text{g/kg}$ or 1.0 $\mu\text{g/kg}$)^[5362]; antibacterial (gram-negative bacteria and acid-fast bacteria); anticaries (inhibits tooth decay); antifungal; CNS depressant; pesticide; skeletal muscle relaxant. **Source:** AO YE HOU PO *Magnolia biloba*, HOU PO *Magnolia officinalis* (bark: content scope of 5 origins = 1.05%~6.82%, mean content= 4.61%^[5508]), RI BEN HOU PO *Magnolia obovata* (dried bark). **Ref:** 2, 625, 658, 660, 1521, 5344, 5362, 5501, 5508.

**9632 Hookeroside A**

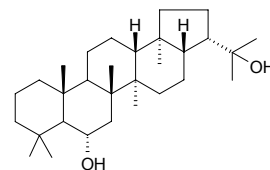
$C_{64}H_{104}O_{30}$ (1353.52). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, 1mg/mL, InRt comparing the control = 73%). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole plant: yield = 0.0010%dw). **Ref:** 3021.

**9633 Hookeroside B**

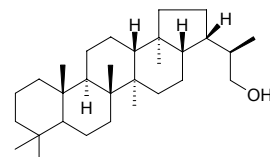
$C_{69}H_{112}O_{34}$ (1485.64). **Pharm:** Pancreatic lipase inhibitor (*in vitro*, 1mg/mL, InRt comparing the control = 92%). **Source:** HUA BEI LAN PEN HUA *Scabiosa tschiliensis* (whole plant: yield = 0.00048%dw). **Ref:** 3021.

**9634 6 α ,22-Hopanediol**

Zeorin $C_{30}H_{52}O_2$ (444.75). **Source:** SHI DI QIAN *Reboulia hemisphaerica*, XUE LING ZHI *Arenaria kansuensis* [Syn. *Arenaria kumaonensis*]. **Ref:** 660.

**9635 29-Hopanol**

Neriifolioside [34620-75-2] $C_{30}H_{52}O$ (428.75). Crystals, mp 242~244°C, $[\alpha]_D = +35^\circ$. **Source:** GUAN ZHONG *Dryopteris crassirhizoma*, DA YE GU SUI BU *Davallia divaricata* [Syn. *Davallia formosana*; *Davallia orientalis*]. **Ref:** 6, 660, 1521.



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