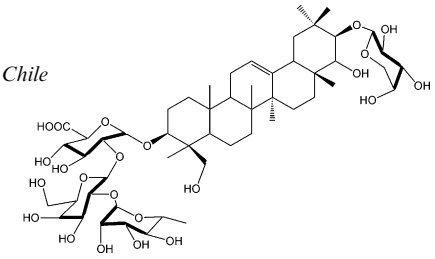
Phytochemistry, 2003, **63**, 853

Triterpenoidal lupin saponins from the Chilean legume *Lupinus oreophilus* Phil.

Girma M. Woldemichael[a], Gloria Montenegro[b], Barbara N. Timmermann[a]

[a]*Department of Pharmacology and Toxicology, College of Pharmacy, University of Arizona, 1703 E. Mabel St., Tucson, AZ 85721-0207, USA*
[b]*Departamento de Ecologia, Pontificia Universidad Católica de Chile, Casilla 114-D, Santiago, Chile*

A triterpene and 10 triterpenoidal saponins were isolated from aerial parts of *Lupinus oreophilus*, and their structures were determined on the basis of spectral (NMR, HRMS, IR) analysis.



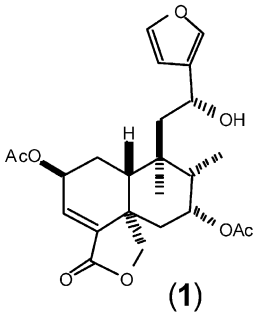
Phytochemistry, 2003, **63**, 859

Diterpenoid from *Salvia greggii*

Nobuo Kawahara[a], Mayumi Inoue[a], Ken-ichi Kawai[b], Setsuko Sekita[a], Motoyoshi Satake[c], Yukihiro Goda[a]

[a]*National Institute of Health Sciences (NIHS), Kamiyoga 1-18-1, Setagaya-ku, Tokyo 158-8501, Japan*
[b]*Faculty of Pharmaceutical Sciences, Hoshi University, Ebara 2-4-41, Shinagawa-ku, Tokyo 142-8501, Japan*
[c]*Japan Pharmacists Education Center (JPEC), Toranomon 19 Mori Bldg. Toranomon 1-2-20 Minato-ku, Tokyo 105-0001, Japan*

The structure of the diterpenoid-designated salvigresin (**1**), that was isolated from the aerial parts of *Salvia greggii*, has been confirmed by spectroscopic investigation and X-ray analysis.



(1)

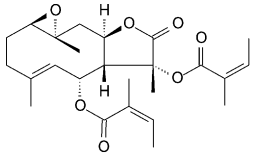
Phytochemistry, 2003, **63**, 863

Germacranolides from seeds of the endangered Umbelliferae species *Rouya polygama*

Bernard Muckensturm[a], Fatih Sen[a], Anna Boulanger[a], Jean-Pierre Reduron[b]

[a]*Laboratoire de Chimie Organique et Bioorganique associé au CNRS, Université de Haute Alsace, Ecole Nationale Supérieure de Chimie de Mulhouse, 3 rue Alfred Werner, F-68093 Mulhouse Cedex, France*
[b]*Conservatoire Botanique de la Ville de Mulhouse, 2 rue Pierre et Marie Curie, F-68200 Mulhouse, France*

From the etheral extract of *Rouya polygama* seeds (Umbelliferae) six new germacranolides were isolated. The structures were elucidated by chemical methods and spectroscopic analysis.



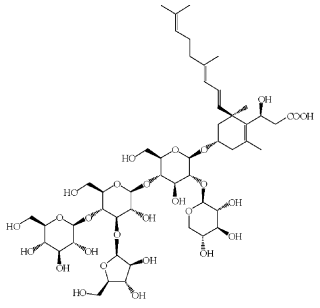
Phytochemistry, 2003, **63**, 869

A trinorsesterterpene glycoside from the North American fern *Woodwardia virginica* (L.) Smith

Lumír O. Hanuš[a], Tomáš Řezanka[b], Valery M. Dembitsky[a]

[a]*Department of Medicinal Chemistry and Natural Products, School of Pharmacy, PO Box 12065, The Hebrew University of Jerusalem, Jerusalem 91120, Israel*
[b]*Institute of Microbiology, Czech Academy of Sciences, Videnska 1083, 142 20 Prague, Czech Republic*

A new trinorsesterterpene glycoside made by having 3-[6-(4,8-dimethyl-nona-1,3,7-trienyl)-4-hydroxy-2,6-dimethyl-cyclohex-1-enyl]-3-hydroxypropionic acid, as the aglycone and a saccharide moiety linked at C-4 glucoses, xylose or arabinofuranose was isolated from the ethanol extract of the American fern *Woodwardia virginica*. The structure was elucidated using extensive spectroscopic analysis (1D and 2D NMR, MS, IR and UV) including determination of absolute stereochemistry by means of the MTPA and PGME derivatives and also by chemical methods.



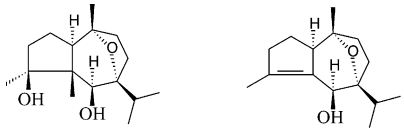
Phytochemistry, 2003, **63**, 877

Guaiane-type sesquiterpenoids from *Alisma orientalis*

Guo-Ping Peng[a], Gang Tian[a], Xian-Feng Huang[a], Feng-Chang Lou[b]

[a]*Nanjing University of Traditional Chinese Medicine, Nanjing, 210029, PR China*
[b]*China Pharmaceutical University, Nanjing, 210029, PR China*

The guaiane-type sesquiterpenoids named orientalol E and F were isolated from the rhizome of *Alisma orientalis* (SAM) JUZEP. Their structures as well as stereostructures were elucidated by 2D-NMR spectroscopic analysis and chemical correlation.



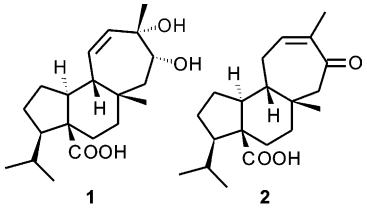
Phytochemistry, 2003, **63**, 883

Mulinane-type diterpenoids from *Mulinum spinosum*

Alejandra I. Chiaramello, Carlos E. Ardanaz, Eduardo E. García, Pedro C. Rossomando

Química Orgánica, Facultad de Química, Bioquímica y Farmacia, Universidad Nacional de San Luis, Chacabuco 917, D5700 BWS, San Luis, Argentina

The isolation of mulin-11-ene-13-α, 14-α-dihydroxy-20-oic (**1**) and mulin-12-ene-14-one-20-oic (**2**) acids from *M. spinosum* is reported.



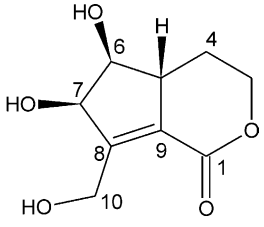
Phytochemistry, 2003, **63**, 887

Iridoids from *Kigelia pinnata* DC. fruits

Yaser G. Gouda[a], Afaf M. Abdel-baky[a], Faten M. Darwish[a], Khaled M. Mohamed[a], Ryoji Kasai[b], Kazuo Yamasaki[b]

[a]*Department of Pharmacognosy, Faculty of Pharmacy, Assiut University, Assiut 71526, Egypt*
[b]*Institute of Pharmaceutical Sciences, Hiroshima University Faculty of Medicine, 1-2-3 Kasumi, Minami-Ku, Hiroshima 734, Japan*

From the fruits of *Kigelia pinnata*, four new iridoids and a new furanone derivative have been isolated together with seven known iridoids.



(**2**)

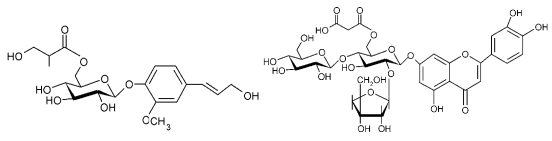
Phytochemistry, 2003, **63**, 893

Isolation and structure elucidation of flavonoid and phenolic acid glycosides from pericarp of hot pepper fruit *Capsicum annuum* L.

Małgorzata Materska[a], Sonia Piacente[b], Anna Stochmal[c], Cosimo Pizza[b], Wiesław Oleszek[c], Irena Perucka[a]

[a]*Agricultural University, Department of Chemistry, ul. Akademicka 15, 20-950 Lublin, Poland*
[b]*Dipartimento di Scienze Farmaceutiche, Universita degli Studi di Salerno, via Ponte Don Melillo, 84084 Fisciano, Salerno, Italy*
[c]*Institute of Soil Science and Plant Cultivation, Department of Biochemistry, ul. Czartoryskich 8, 24-100 Puławy, Poland*

Nine compounds were isolated from pericarp of pepper fruits *Capsicum annuum* L. by preparative HPLC. Their structures were identified by UV, NMR and MS techniques. Two compounds were found for the first time in the plant kingdom.

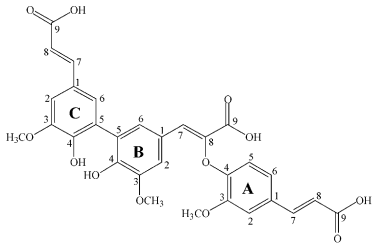


A dehydrotrimer of ferulic acid from maize bran

Phytochemistry, 2003, **63**, 899

Xavier Rouau[a], Véronique Cheynier[b], Anne Surget[a], Damien Gloux[c], Cécile Barron[a], Emmanuelle Meudec[b], Jean Louis-Montero[d], Marc Criton[c]

[a]*Unité Mixte de Recherche Ingénirie des Agropolyméres et Technologies Emergentes, 2 place Pierre Viala, 34060 Montpellier cedex 01, France*
[b]*Unité Mixte de Recherche Sciences pour l'Oenologie, 2 place Pierre Viala, 34060 Montpellier cedex 01, France*
[c]*UMR5032, Mayoly Spindler Ecole Nationale Supérieure de Chimie de Montpellier, 8 rue de l'Ecole Normale, 34296 Montpellier cedex 5, France*
[d]*UMR5032, Ecole Nationale Supérieure de Chimie de Montpellier, 8 rue de l'Ecole Normale, 34296 Montpellier cedex 5, France*



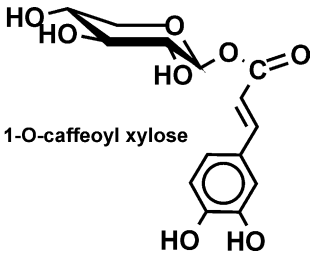
A new trimer of phenolic acid was ectracted from maize bran after saponification and identified by NMR spectrometry as 4—*O*-8′,5′-5″-dehydrotriferulic acid.

Caffeoyl sugar esters and an ellagitannin from *Rubus sanctus*

Phytochemistry, 2003, **63**, 905

Sahar A.M. Hussein[a], Nahla A. Ayoub[b], Mahmoud A.M. Nawwar[a]

[a]*National Research Center, Dokki, Cairo, Egypt*
[b]*Department of Pharmacognosy, Faculty of Pharmacy, Ain-Shams University, Cairo, Egypt*



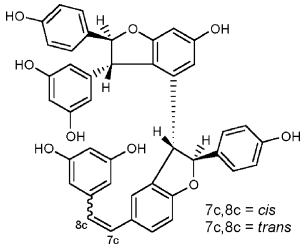
The new natural phenolics, 3,6-di-*O*-caffeoylglucose, 1-*O*-caffeoylxylose and 2,3-*O*-hexahydroxydiphenoyl-4,6-*O*-sanguisorboyl-(α/β)-$^4C_1$-glucopyranose have been isolated and fully characterized from *Rubus sanctus* Schreb.

Two oligostilbenes, c*is*- and *trans*-diptoindonesin B, from *Dryobalanops oblongifolia*

Phytochemistry, 2003, **63**, 913

Yana M. Syah[a], Nanik S. Aminah[a], Euis H. Hakim[a], Norio Aimi[b], Mariko Kitajima[b], Hiromitsu Takayama[b], Sjamsul A. Achmad[a]

[a]*Natural Products Chemistry Group, Department of Chemistry, Institut Teknologi Bandung, Jalan Ganesha 10, Bandung 40132, Indonesia*
[b]*Graduate School of Pharmaceutical Sciences,Chiba University, 1-33, Yayoi-cho, Inage-ku, Chiba 263-8522, Japan*



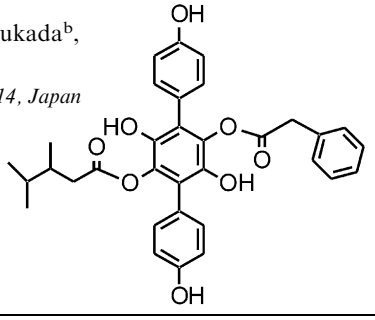
Two oligostilbenes, *cis*- and *trans*-diptoindonesin B, have been isolated from the tree bark of *Dryobalanops oblongifolia* (Dipterocarpaceae).

Thelephantins D—H: five *p*-terphenyl derivatives from the inedible mushroom *Thelephora aurantiotincta*

Phytochemistry, 2003, **63**, 919

Dang Ngoc Quang[a], Toshihiro Hashimoto[a], Yuki Hitaka[a], Masami Tanaka[a], Makiko Nukada[b], Isao Yamamoto[b], Yoshinori Asakawa[a]

[a]*Faculty of Pharmaceutical Sciences, Tokushima Bunri University, Yamashiro-cho, Tokushima 770-8514, Japan*
[b]*Faculty of Food Culture, Kurashiki Sakuyo University, Kurashiki 710-0290 Japan*



Five *p*-terphenyl derivatives named thelephantins D—H (**1**—**5**) together with nine known compounds were isolated were isolated from the methanolic extract of fruit bodies of the Thelephoraceous Basidiomycete *Thelephora aurantiotincta*.

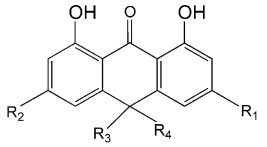
Phytochemistry, 2003, **63**, 925

1-Methyl anthraquinones and their biogenetic precursors from *Stereospermum personatum*

U. Sampath Kumar[a], P. Aparna[a], R. Jagadeeshwar Rao[a], T. Prabhakar Rao[b], J. Madhusudana Rao[a]

[a]*Natural Products Laboratory, Division of Organic Chemistry-1, Hyderabad-500 007, India*
[b]*NMR Division, Indian Institute of Chemical Technology, Hyderabad-500 007, India*

Two novel 1(17)-methyl anthraquinones, sterequinone-A and -D, their biogenetic precursors sterequinone-B, -C, and a new naphthoquinone sterequinone-E have been isolated along with a known naphthoquinone, sterekunthal-B, from the petroleum ether extract of stem bark of *Stereospermum personatum*.



1 $R_1 = CH_3$; $R_2 = -OCH_3$; $R_3 = H$; $R_4 = -OCO-(CH_2)_7-CH=CH-(CH_2)_7-CH_3$
2 $R_1 = CH_3$; $R_2 = R_3 = H$; $R_4 = -OCO-(CH_2)_{26}-CH_3$
3 $R_1 = CH_3$; $R_2 = -O-(CH_2)_{21}-CH_3$; $R_3 = R_4 = O$
4 $R_1 = CH_2OH$; $R_2 = R_3 = -OH$; $R_4 = -O-(CH_2)_{17}-CH_3$

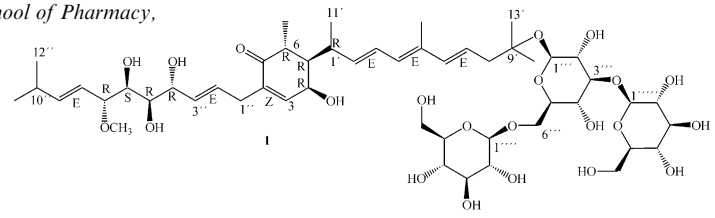
Phytochemistry, 2003, **63**, 931

Two cyclohexenone glycosides from the North American fern *Woodwardia virginica* (L.) Smith

Tomáš Řezanka[a], Valery M. Dembitsky[b], Lumír O. Hanuš[b]

[a]*Institute of Microbiology, Czech Academy of Sciences, Vídenská 1083, 142 20 Prague, Czech Republic*
[b]*Department of Medicinal Chemistry and Natural Products, School of Pharmacy, P.O. Box 12065, The Hebrew University of Jerusalem, Jerusalem 91120, Israel*

New glycosides having multisubstituted cyclohex-2-enones as aglycones and saccharide moieties consisting of three and four glucoses, respectively, were isolated from the fern *Woodwardia virginica*.



1

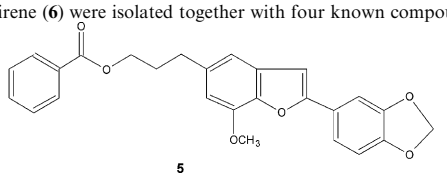
Phytochemistry, 2003, **63**, 939

Benzofurans and another constituent from seeds of *Styrax officinalis*

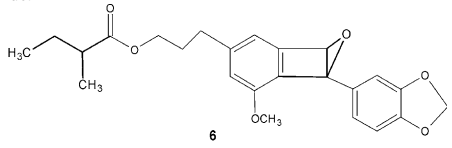
Yurdanur Yayla Akgul, Huseyin Anil

Chemistry Department, Faculty of Science, University of Ege, 35100 Bornova, Izmir, Turkey

The benzofuran constituents of the seeds of *Styrax officinalis* were investigated. From the hexane extract, two new constituents named 5-(3″-benzoyl-oxypropyl)-7-methoxy-2-(3′,4′-methylenedioxyphenyl)benzofuran (**5**) and 4-[3″-(1c-methylbutanoyloxy)propyl]-2-methoxy-1a-(3′,4′-methylenedioxy-phenyl)-1a-5b-dihydrobenzo [3,4] cyclobutaoxirene (**6**) were isolated together with four known compounds.



5



6

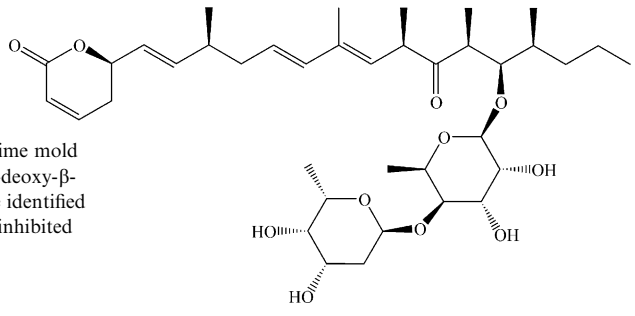
Phytochemistry, 2003, **63**, 945

Polypropionate lactones of deoxysugars glycosides from slime mold *Lycogala epidendrum*

Tomáš Řezanka[a], Radmila Dvořáková[b]

[a]*Institute of Microbiology, Vídeňská 1083, 14220 Prague, Czech Republic*
[b]*South-Moravian Museum, Přemyslovců 8, Znojmo, 66902, Czech Republic*

The determination of chemical structures of two lactones glycosides from slime mold is described. Glycosides contain disaccharides 2-deoxy-α-L-fucopyranosyl-6-deoxy-β-D-gulopyranoside and β-D-olivosyl-β-D-fucopyranoside. The structures were identified by means of ^1H and ^{13}C NMR, MS, UV and IR spectra. Both compounds inhibited the growth of Gram-positive bacteria.



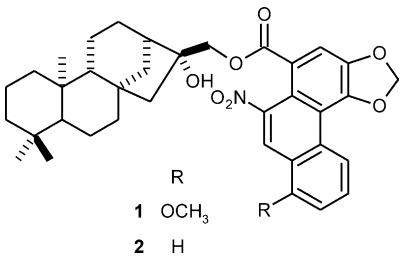
Phytochemistry, 2003, **63**, 953

Diterpene esters of aristolochic acids from *Aristolochia pubescens*

Isabele R. Nascimento, Lucia M.X. Lopes

Instituto de Química, Universidade Estadual Paulista—Unesp, CP 355. 14801-970, Araraquara, SP, Brazil

Two diterpene esters of aristolochic acids, along with 23 other known compounds, were isolated from the tubercula of *Aristolochia pubescens*. Their structures were established by spectroscopic analysis.



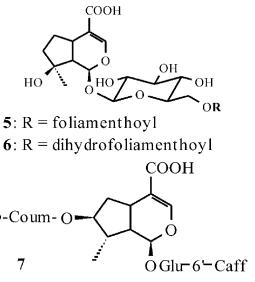
Phytochemistry, 2003, **63**, 959

Glucosides from *Vitex agnus-castus*

Ayşe Kuruüzüm-Uz[a], Karsten Ströch[b], L. Ömür Demirezer[a], Axel Zeeck[b]

[a]*Hacettepe University, Faculty of Pharmacy, Department of Pharmacognosy, TR-06100 Ankara, Turkey*
[b]*Georg-August University, Institute of Organic Chemistry, D-37077 Göttingen, Germany*

Vitex agnus-castus L. (Verbenaceae) contains three new iridoid glucosides (agnucastosides A—C, **5**—**7**), besides five known glucosides. All pure compounds (**1**—**8**) showed no inhibition against tested micro-organisms and cell lines.



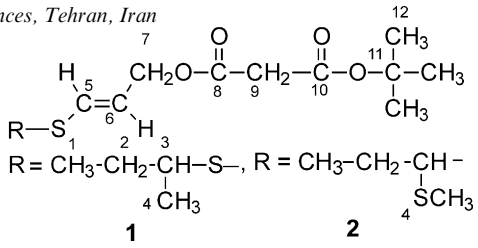
Phytochemistry, 2003, **63**, 965

Sulfur containing derivatives from *Ferula persica* var. *latisecta*

Mehrdad Iranshahi[a], Gholam-Reza Amin[a], Mohsen Amini[b], Abbas Shafiee[b]

[a]*Department of Pharmacognosy, Faculty of Pharmacy, Tehran University of Medical Sciences, Tehran, Iran*
[b]*Department of Chemistry, Faculty of Pharmacy, Tehran University of Medical Sciences, PO Box 14155/6451 Tehran 14174, Iran*

Two sulfur containing compounds **1** and **2** were isolated from roots of *Ferula persica* Willd. var. *latisecta* D. F. Chamberlain.



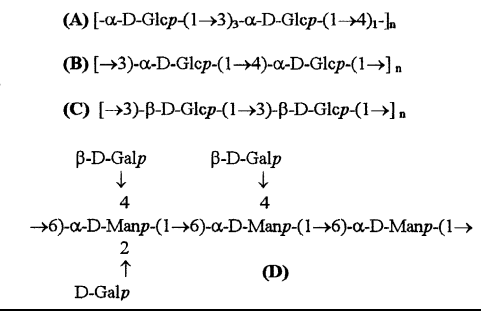
Phytochemistry, 2003, **63**, 967

Comparative studies of the polysaccharides from species of the genus *Ramalina*—lichenized fungi—of three distinct habitats

Lucimara M.C. Cordeiro[a], Elfriede Stocker-Wörgötter[b], Philip A.J. Gorin[a], Marcello Iacomini[a]

[a]*Departamento de Bioquímica, Universidade Federal do Paraná, CP 19.046, CEP 81.531-990, Curitiba, PR, Brazil*
[b]*Institute of Plant Physiology, University of Salzburg, Hellbrunner Str. 34, A-5020 Salzbug, Austria*

In four species of the genus *Ramalina* were found the polysaccharides isolichenans (A) and nigerans (B), with (1→3)-(1→4)-linked -glucosyl units in a 3:1 and 1:1 ratio, respectively; laminarans with (1→3)-linked -glucosyl units (C) and galactomannans (D). Glucans and galactomannans with related structures have been found in *R. celastri* and *R. usnea* examined to date, indicating that the heteropolysaccharide could be used in chemotaxonomy.



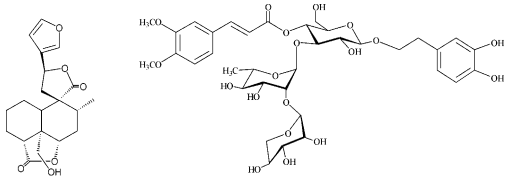
Phytochemistry, 2003, **63**, 977

Neo-clerodane diterpenoids and phenylethanoid glycosides from *Teucrium chamaedrys* L.

Erdal Bedir[a], Rangavalli Manyam[a], Ikhlas A. Khan[a,b]

[a]*National Center for Natural Products Research, Research Institute of Pharmaceutical Sciences, School of Pharmacy, University of Mississippi, MS 38677, USA*
[b]*Department of Pharmacognosy, School of Pharmacy, University of Mississippi, MS 38677, USA*

Three compounds, a neo-clerodane, and two phenylpropanoid glycosides, were isolated from *Teucrium chamaedrys* L.



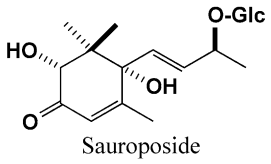
Phytochemistry, 2003, **63**, 985

Lignan and megastigmane glycosides from *Sauropus androgynus*

Tripetch Kanchanapoom[a], Phannipha Chumsri[b], Ryoji Kasai[c], Hideaki Otsuka[c], Kazuo Yamasaki[c]

[a]*Department of Pharmaceutical Botany and Pharmacognosy, Faculty of Pharmaceutical Sciences, Khon Kaen University, Khon Kaen 40002, Thailand*
[b]*Department of Pharmacognosy, Mahidol University, Bangkok 10400, Thailand*
[c]*Division of Medicinal Chemistry, Graduate School of Biochemical Sciences, Hiroshima University, Hiroshima 734-8551, Japan*

From the aerial part of *Sauropus androgynus*, (−)-isolariciresinol 3α-*O*-β-apiofuranosyl-(1→2)-*O*-β-gluopyranoside and sauroposide were isolated together with five known compounds.



Sauroposide