

GRAPHICAL ABSTRACTS

Expression profiling of the response of *Arabidopsis thaliana* to methanol stimulation

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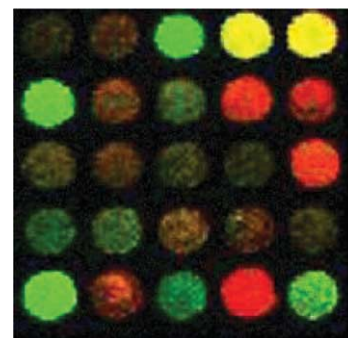
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Gene expression in response to methanol stimulation was analysed in leaves of *Arabidopsis thaliana* through the use of a 26,090 element microarray. A total of 484 (1.9%) transcripts were shown to be regulated in response to a 10% methanol application with genes encoding detoxification proteins by far the most strongly regulated group.

Phytochemistry, 2004, **65**, 2305



Flavonoids and andrographolides from *Andrographis paniculata*

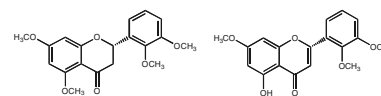
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Two flavonoids as well as 21 known compounds were isolated from the whole plant of *Andrographis paniculata*. Their structures were established on the basis of spectral evidence.

Phytochemistry, 2004, **65**, 2317



Isolation, identification and stability of acylated derivatives of apigenin 7-*O*-glucoside from chamomile (*Chamomilla recutita* [L.] Rauschert)

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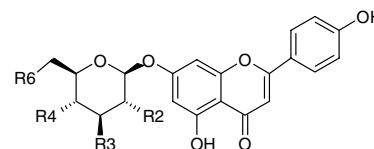
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Apigenin 7-*O*-glucoside and various acylated derivatives of apigenin 7-*O*-glucoside were identified in chamomile petals using a combination of rapid purification, LC/MS, LC/MS/MS and NMR. Two of these apigenin derivatives (mono-acetyl/mono-malonyl-glucosides) have not been previously reported in plants. Stability studies showed that many of these apigenin acyl-glucosides can degrade to form mono-acetyl and di-acetylglucosides; previously reported as predominant in dried chamomile flower samples.

Phytochemistry, 2004, **65**, 2323



Composition and antimicrobial activities of volatile components of *Lippia javanica*

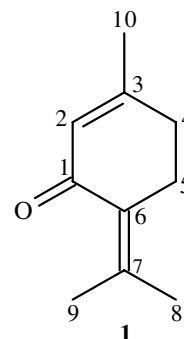
Nkhumeleni Geoffrey Manenzhe ^a, Natasha Potgieter ^b, Teunis van Ree ^a

^a Department of Chemistry, University of Venda for Science and Technology, Private Bag X5050, Thohoyandou 0950, South Africa

^b Department of Microbiology, University of Venda for Science and Technology, Private Bag X5050, Thohoyandou 0950, South Africa

The antimicrobial volatile oil of *Lippia javanica* is active against *Plasmodium falciparum* and contains several terpenoids, the major component being 3-methyl-6-(1-methylethylidene)-cyclohex-2-en-1-one (**1**).

Phytochemistry, 2004, **65**, 2333



Guaianolides from two subspecies of *Amphoricarpus neumayeri* from Montenegro

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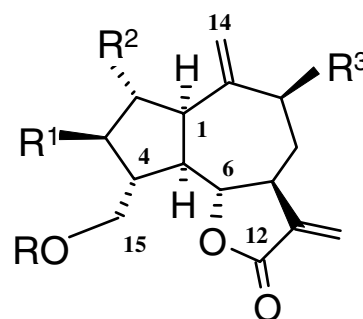
^d Faculty of Chemistry, University of Belgrade, Studentski trg 16, P.O. Box 158, 11001 Belgrade, Serbia and Montenegro

^e Department of Biochemistry, Mayo Clinic, College of Medicine, Rochester, MN 55905, USA

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Aerial parts of two subspecies of *Amphoricarpus neumayeri* from Montenegro afforded guaianolides **1**–**13** with the same (1 α H,4 β H,5 α H,6 β H,7 α H) relative configuration of the basic skeleton.

Phytochemistry, 2004, **65**, 2337



Structure of a heteroxylan of gum exudate of the palm *Scheelea phalerata* (uricuri)

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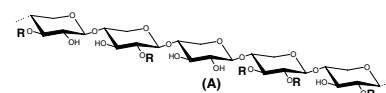
^a Departamento de Bioquímica, Universidade Federal do Paraná, C.P. 19046, CEP 81531-990 Curitiba, PR, Brazil

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A polysaccharide from gum exudate of palm *Scheelea phalerata* was characterized as an highly-substituted, complex acidic heteroxylan with a (1 \rightarrow 4)-linked β -Xylp main chain and having the unusual feature of non reducing end-units of fucosyl residues characteristic of gum exudates from palm trees.

Phytochemistry, 2004, **65**, 2347



R: AraF-(1 \rightarrow 3)-AraF-(1 \rightarrow)_n R: AraF-(1 \rightarrow 2 or 4)-Xylp-(1 \rightarrow)_n

Fucp-(1 \rightarrow 3)-AraF-(1 \rightarrow)_n Fucp-(1 \rightarrow 2 or 4)-Xylp-(1 \rightarrow)_n

AraF-(1 \rightarrow 3)-AraF-(1 \rightarrow)_n AraF-(1 \rightarrow 2 or 4)-Xylp-(1 \rightarrow)_n

Xylp-(1 \rightarrow 3)-AraF-(1 \rightarrow)_n Xylp-(1 \rightarrow 2 or 4)-Xylp-(1 \rightarrow)_n

GlcAp-(1 \rightarrow 3)-AraF-(1 \rightarrow)_n GlcAp-(1 \rightarrow 2 or 4)-Xylp-(1 \rightarrow)_n

Terpenoids from the liverwort *Blepharostoma trichophyllum*

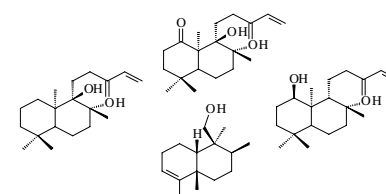
Hildegard Feld ^a, Josef Zapp ^a, Joseph D. Connolly ^b, Hans Becker ^a

^a Pharmakognosie und Analytische Phytochemie der Universität des Saarlandes, FR 8.7, Postfach 151150, 66041 Saarbrücken, Germany

^b Chemistry Department, University of Glasgow, Glasgow G12 8QQ, UK

Blepharostol, a new sesquiterpenoid alcohol with a rearranged drimane skeleton and five new *ent*-labdanes have been isolated from the liverwort *Blepharostoma trichophyllum*. Their structures were elucidated by NMR spectroscopy.

Phytochemistry, 2004, **65**, 2357



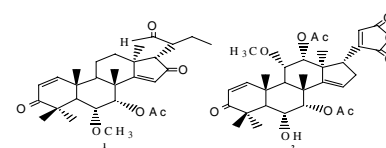
Tetracyclic triterpenoids from the leaves of *Azadirachta indica*

Bina S. Siddiqui, Farhana Afshan, Tahsin Gulzar, Muddasar Hanif

International Center for Chemical Sciences, H.E.J. Research Institute of Chemistry, University of Karachi, Karachi, 75270, Pakistan

Tetracyclic triterpenoids, zafaral (**1**) and meliacinanhydride (**2**) have been isolated from the leaves of *Azadirachta indica*. The structures of these constituents have been elucidated through spectral studies.

Phytochemistry, 2004, **65**, 2363



Iridoids from the aerial parts of *Verbena littoralis* (Verbenaceae)

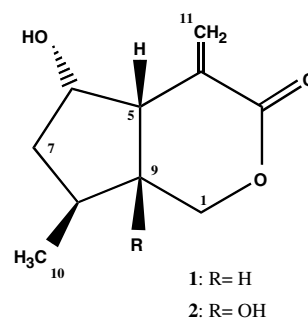
Ian Castro-Gamboa ^a, Oscar Castro ^b

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^b Departamento de Química, Universidad Nacional de Heredia (UNA), Heredia, Costa Rica

Iridoids (**1**) and (**2**), were isolated from the aerial parts of *Verbena littoralis*. Both showed moderate in vitro activity against gram positive and negative bacteria, and peristaltic action in the mouse. Free radical scavenging activity against 1,1-diphenyl-2-picrylhydrazyl (DPPH) as well as antioxidant activity as evidenced by redox properties measured on EICD-HPLC were observed.

Phytochemistry, 2004, **65**, 2369



Xanthones from a microfungus of the genus *Xylaria*

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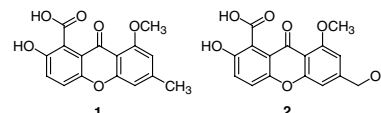
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^c Department of Primary Industries and Fisheries, 80 Meiers Road, Indooroopilly, QLD 4068, Australia

^d Department of Biological and Physical Sciences, University of Southern Queensland, Toowoomba, QLD 4351, Australia

Chemical investigations of a microfungus *Xylaria* sp. isolated from the Australian rainforest tree *Glochidion ferdinandi* have afforded two new natural products, 2-hydroxy-6-methyl-8-methoxy-9-oxo-9H-xanthene-1-carboxylic acid (**1**) and 2-hydroxy-6-hydroxymethyl-8-methoxy-9-oxo-9H-xanthene-1-carboxylic acid (**2**). This paper reports the full spectroscopic characterisation of these xanthones by NMR, UV, IR and MS data.

Phytochemistry, 2004, **65**, 2373



Acylated flavonoids and phenol glycosides from *Veronica thymoides* subsp. *pseudocinerea*

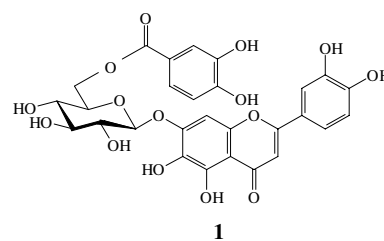
Iclal Saracoglu ^a, Mehtap Varel ^a, U. Sebnem Harput ^a, Akito Nagatsu ^b

^a Faculty of Pharmacy, Department of Pharmacognosy, Hacettepe University, 06100 Ankara, Turkey

^b Graduate School of Pharmaceutical Sciences, Nagoya City University, Tanabe-dori 3-1, Mizuho-ku, Nagoya 467-8603, Japan

A new acylated flavone glucoside, 3'-hydroxyscutellarein 7-O-(6-O-protocatechuoyl)-β-glucopyranoside (**1**) and a new phenol glucoside, 3,5-dihydroxyphenethyl alcohol 3-O-β-glucopyranoside (**6**) were isolated from the aerial parts of *Veronica thymoides* subsp. *pseudocinerea* together with seven known flavone, phenol and lignan glycosides. The structures of the isolated compounds were determined on the basis of spectral analysis. Five known glycosides were reported for the first time in the genus *Veronica*. Isolated compounds exhibited potent radical scavenging activity against the 2,2-diphenyl-1-picrylhydrazyl (DPPH) radical.

Phytochemistry, 2004, **65**, 2379



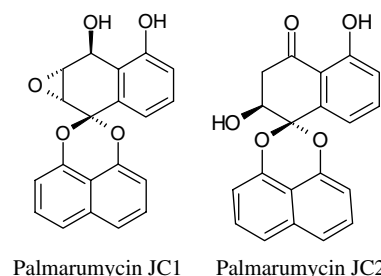
Deoxypreussomerins from *Jatropha curcas*: are they also plant metabolites?

N. Ravindranath, M. Ravinder Reddy, G. Mahender, R. Ramu, K. Ravi Kumar, Biswanath Das

Indian Institute of Chemical Technology, Organic Chemistry Division - I, Hyderabad 500 007, India

Two deoxypreussomerins, palmarumycins JC1 and JC2, along with the known compound, palmaromycin CP1, were isolated from *Jatropha curcas*.

Phytochemistry, 2004, **65**, 2387



Polyphenols from peanut skins and their free radical-scavenging effects

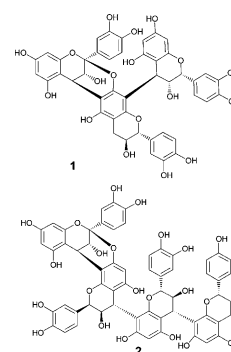
Hongxiang Lou^a, Huiqing Yuan^b, Bin Ma^a, Dongmei Ren^a, Mei Ji^a, Syuichi Oka^c

^a School of Pharmaceutical Sciences, Shandong University, Jinan 250012, PR China

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Two proanthocyanidins, identified to be epicatechin-(2 β →O→7, 4 β →6)-[epicatechin-(4 β →8)]-catechin (**1**), and epicatechin-(2 β →O→7, 4 β →8) epicatechin-(4 β →8)-catechin-(4 α →8)-epicatechin (**2**), as well as procyanidins B2, B3 and B4, were isolated from peanut skins. The isolated polyphenols show strong radical-scavenging properties against DPPH radical.



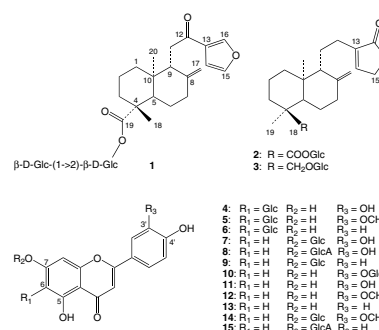
Phytochemistry, 2004, **65**, 2391

Identification of the polar constituents of *Potamogeton* species by HPLC-UV with post-column derivatization, HPLC-MSⁿ and HPLC-NMR, and isolation of a new *ent*-labdane diglycoside

Patrice Waridel, Jean-Luc Wolfender, Jean-Bernard Lachavanne, Kurt Hostettmann

A new diglycosylated *ent*-labdane diterpene was isolated from *Potamogeton pectinatus*.

Known flavones and *ent*-labdanes were identified in the polar extracts of *P. pectinatus*, *P. lucens*, *P. perfoliatus* and *P. crispus* by various hyphenated techniques.



Phytochemistry, 2004, **65**, 2401

Essential oil composition of aerial parts of *Angelica glauca* growing wild in North-West Himalaya (India)

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^a Regional Research Laboratory (CSIR), Natural Product Chemistry Division, Canal Road, Jammu Tawi-180001, Jammu and Kashmir, India

^b Head, Chemistry Division, D.A.V. College, Kanpur, Uttar Pradesh, India

The essential oil composition of the fresh Himalayan *Angelica glauca* herb at flowering stage from different locations has been determined for the first time. Twenty five monoterpenoids and nine sesquiterpenoids have been identified in a refreshing light pale coloured essential oil with characteristic floral woody flavour.

Phytochemistry, 2004, **65**, 2411

Angelica glauca $\xrightarrow{\text{Hydrodistillation}}$ Essential oil (0.06%)

(Fresh Flowering herb)

