

Phytochemistry Vol. 68, No. 13, 2007

Reports on Structure Elucidation

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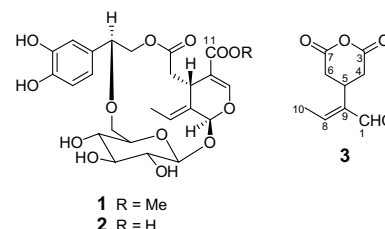
TERPENOIDS

Secoiridoid components from *Jasminum grandiflorum*

pp 1718–1721

Samir Kumar Sadhu, Md. Sojib Khan, Takashi Ohtsuki, Masami Ishibashi*

Two secoiridoid glucosides, 2''-epifraxamoside (**1**) and demethyl-2''-epifraxamoside (**2**), as well as the secoiridoid, jasminanhydride (**3**) were isolated from the aerial parts of *Jasminum grandiflorum*.



Chemotypes in *Achillea collina* based on sesquiterpene lactone profile

pp 1722–1730

Milka Todorova, Antoaneta Trendafilova*, Bozhanka Mikhova, Antonina Vitkova, Helmut Duddeck

The lactone profile of the studied taxa of *Achillea collina* indicated a significant variability. The described chemotypes could be due to the regional ecological specificity and/or possible hybridization with other *Achillea* species.

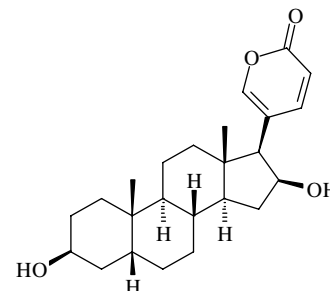
Type	L1	L2	L3	L4	L5	L6
Eu	+	+	-	-	-	-
Ger	+	+	+	+	-	-
Gu:						
Mat	-	+	-	-	+	-
Ach	-	-	+	-	-	-
Azu	-	-	-	+	+	-
Bis	-	-	-	+	-	-

Bufadienolides from the southern African *Drimia depressa* (Hyacinthaceae: Urgineoideae)

pp 1731–1734

Neil R. Crouch, Angela Langlois, Dulcie A. Mulholland*

Two bufadienolides, 3 β ,16 β -dihydroxy-5 β -bufa-20,22-dienolide and 16 β -hydroxy-5 β -bufa-20,22-dienolide-3 β -O- β -D-galactoside, have been isolated from bulbs of the poisonous South African geophyte *Drimia depressa* (Hyacinthaceae).

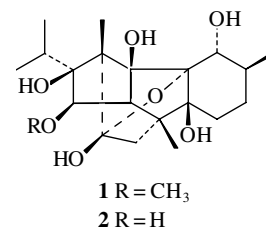


Ryanodane diterpenes from two *Erythroxylum* species

pp 1735–1739

Marizeth L. Barreiros, Juceni P. David*, Jorge M. David,
Lucia M. Xavier Lopes, Matheus S. de Sá, José F.O. Costa,
Mara Z. Almeida, Luciano P. de Queiróz, Antônio E.G. Sant’Ana

Ryanodane diterpenes, named 14-O-methyl-ryanodanol and ryanodanol, were isolated from ripe fruit of *Erythroxylum passerinum*. Compound **2** was also found in the leaves of this species, while **1** was obtained from the leaves of *E. nummularia*. Compound **1** showed insecticidal activity against *Aedes aegypti* larvae.

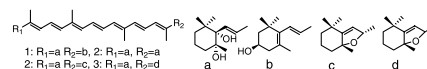


Carotenoids with a 5,6-dihydro-5,6-dihydroxy-β-end group, from yellow sweet potato “Benimasari”, *Ipomoea batatas* LAM

pp 1740–1745

Takashi Maoka*, Naoshige Akimoto, Koji Ishiguro,
Masaru Yoshinaga, Makoto Yoshimoto

Four carotenoids, named ipomoeaxanthins A (**1**), B (**2**), C1 (**3**) and C2 (**4**), were isolated from the flesh of yellow sweet potato “Benimasari”, *Ipomoea batatas*.



Chirality and biosynthesis of lilac compounds in *Actinidia arguta* flowers

pp 1746–1751

A.J. Matich*, B.J. Bunn, D.J. Comeskey, M.B. Hunt, D.D. Rowan

Deuterium labelling and enantioselective GC-MS of 8-hydroxylinalool, 8-oxolinalool, the lilac aldehydes, alcohols, and alcohol epoxides from *Actinidia arguta* flowers identified their biosynthetic pathways and the highly enantioselective steps therein.

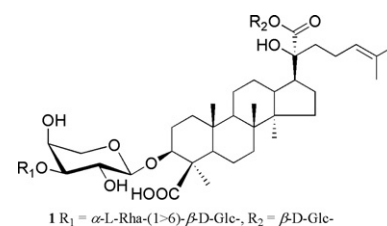


Dammarane-type glycosides from *Gynostemma pubescens*

pp 1752–1761

Zhengyi Yang, Qiuqun Chen, Lihong Hu*

Eight triterpene saponins were isolated from an ethanol extract of the aerial parts of *Gynostemma pubescens*. Their structural elucidation was accomplished by extensive spectroscopic methods including 1D and 2D NMR experiments, HRESIMS analysis, as well as by chemical degradation.

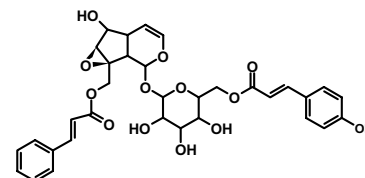


Pensteminoside, an unusual catalpol-type iridoid from *Penstemon gentianoides* HBK (Plantaginaceae)

pp 1762–1766

Mariana Domínguez, J. Camilo Marín, Baldomero Esquivel, Carlos L. Céspedes*

The investigation of *Penstemon gentianoides*, afforded, in addition to plantarenalloside (2), globularisicin (3), luteolin (4), diosmetin (5), verbascoside (6) and martynoside (7); an unusual catalpol-type iridoid, pensteminoside [8-*O-trans*-cinnamoyl, 6-hydroxy, 1-[β-D-glucopyranoside-6'-*O*-((4''-hydroxy)-cinnamoyl)]-catalpol (1)]. Its structure was elucidated by spectroscopic analyses, including high field NMR spectroscopy.



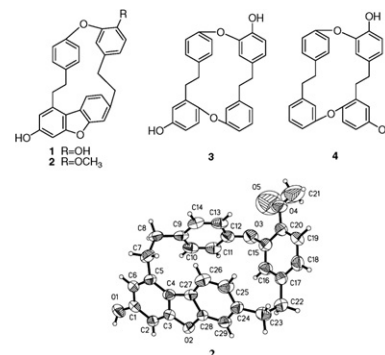
PHENOLICS

Antifungal dibenzofuran bis(bibenzyl)s from the liverwort *Asterella angusta*

pp 1767–1774

Jianbo Qu, Chunfeng Xie, Huaifang Guo, Wentao Yu, Hongxiang Lou*

Bioactivity-guided separation of an antifungal extract from the liverwort *Asterella angusta* (Aytoniaceae) afforded four bis(bibenzyl)s (1–4) and six known ones. All bis(bibenzyl)s exhibited moderate inhibitory effects against the common clinical pathogenic fungus, *Candida albicans*.

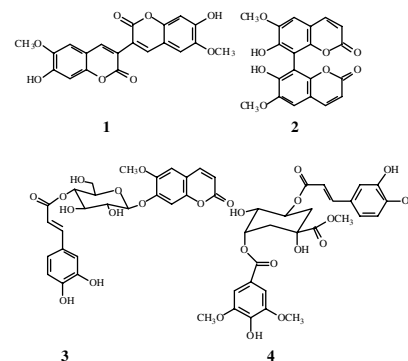


Rare biscoumarins and a chlorogenic acid derivative from *Erycibe obtusifolia*

pp 1775–1780

Jian Liu, Ziming Feng, Jianfu Xu, Yinghong Wang, Peicheng Zhang*

Four compounds including two symmetrical biscoumarins were isolated from the roots of *Erycibe obtusifolia*. Their structures were elucidated by spectroscopic methods.

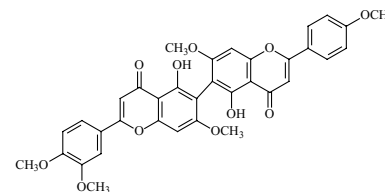


An unusual C₆–C₆ linked flavonoid from *Miconia cabucu* (Melastomataceae)

pp 1781–1784

Juliana Rodrigues, Daniel Rinaldo, Lourdes Campaner dos Santos*, Wagner Vilegas

The flavone dimer, 5-hydroxy-4',7-dimethoxyflavone-(6-*C*-6'')-5''-hydroxy-3''',4''', 7'''-trimethoxyflavone, was isolated from a methanol extract of leaves from *Miconia cabucu*. Its structure was established on the basis of 1D and 2D NMR and HRTOFMS spectroscopic analyses.

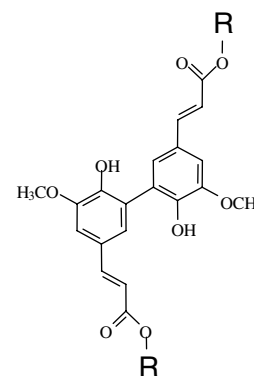


Effects of partial enzymic degradation of sugar beet pectin on oxidative coupling of pectin-linked ferulates *in vitro*

pp 1785–1790

Roula M. Abdel-Massih, Elias A.-H. Baydoun*, Keith W. Waldron, Christopher T. Brett

Cross-linking of beet pectin after treatment with different enzymes showed a decrease in molecular size after α -arabinosidase and polygalacturonase treatment. Ratios of different dehydrodiferulates formed were studied.



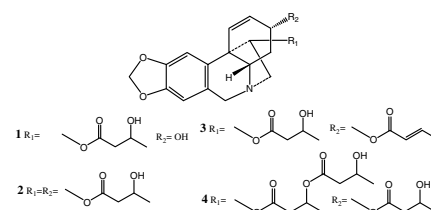
ALKALOIDS

Alkaloids from *Galanthus nivalis*

pp 1791–1798

Strahil Berkov, Carles Codina, Francesc Viladomat, Jaume Bastida*

Five compounds: 11-*O*-(3'-hydroxybutanoyl)hamayne (**1**); 3,11-*O*-(3',3''-dihydroxybutanoyl)hamayne (**2**); 3-*O*-(2''-butenoyl)-11-*O*-(3'-hydroxybutanoyl)-hamayne (**3**); 3,11,3''-*O*-(3',3'',3'''-trihydroxybutanoyl)hamayne (**4**); 2-*O*-(3'-acetoxybutanoyl)lycorine (**5**) together with hamayne, lycorine, tazettine, ungeremine and ismine were isolated from *Galanthus nivalis*.



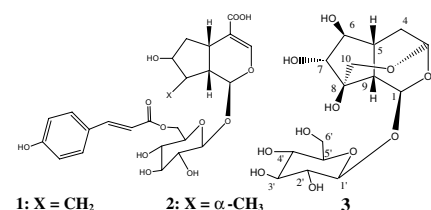
GENERAL CHEMISTRY

Iridoids from *Scutellaria albida* ssp. *albida*

pp 1799–1804

Chrysoula Gousiadou, Anastasia Karioti, Jörg Heilmann, Helen Skaltsa*

Three iridoid glycosides, 6'-*O*-*E*-*p*-coumaroylgardoside (**1**), 6'-*O*-*p*-*E*-coumaroyl-8-*epi*-loganic acid (**2**) and scutelloside (**3**) were isolated from the aerial parts of *Scutellaria albida* subsp. *albida*, in addition to an anomeric mixture in equilibrium of one iridoid aglycone (**4**, **4a**), nine iridoid glycosides (**5**–**13**), four known phenylethanoid glycosides (**14**–**17**) and six known phenolic derivatives (**18**–**23**).

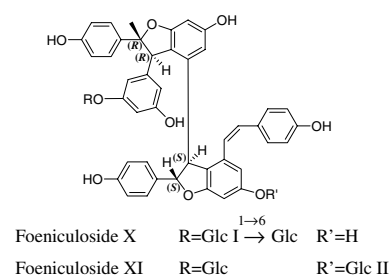


Phenolic glycosides from *Foeniculum vulgare* fruit and evaluation of antioxidative activity

pp 1805–1812

Simona De Marino, Fulvio Gala, Nicola Borbone, Franco Zollo, Sara Vitalini, Francesco Visioli, Maria Iorizzi*

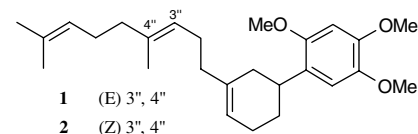
Two diglucoside stilbene trimers and a benzoisofuranone derivative were isolated from *Foeniculum vulgare* fruits, together with nine known compounds. Their structures were elucidated by spectral methods including 1D, 2D NMR and MS. The antioxidant activity was tested using three methods: DPPH, total antioxidant capacity and assay of lipid peroxidation.



An alkaloid, two conjugate sesquiterpenes and a phenylpropanoid from *Pachypodanthium confine* Engl. and Diels**pp 1813–1818**

Hilarion Mathouet, Abdelhakim Elomri, Pedro Lameiras, Adam Daïch, Philippe Vérité*

Two conjugate sesquiterpenes, a phenylpropanoid and an aporphine alkaloid were isolated in addition to several known compounds from cyclohexane, dichloromethane and alkaloid extracts of the bark of *Pachypodanthium confine*. The structures of these compounds were established based on interpretation of their high resolution NMR (HSQC, HMBC, COSY and NOESY) spectral data.

**OTHER CONTENTS****Corrigendum****p 1819****Announcement: 1st Brazilian Conference on Natural Products (1st BCNP)/XXVII Annual Meeting on Micromolecular Evolution, Systematics and Ecology (RESEM)****p 1820****Announcement: The Phytochemical Society of Europe****p I**

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