

Kava lactones and the kava-kava controversy

Phytochemistry, 2003, **64**, 673

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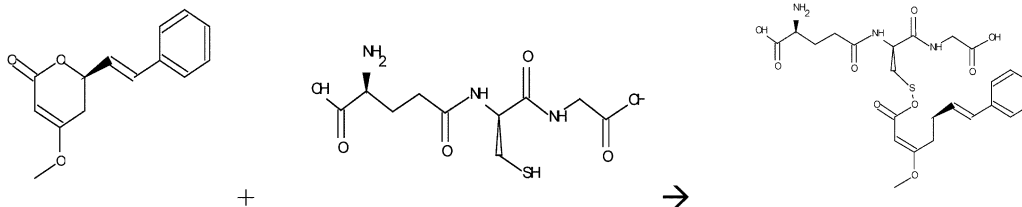
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Extraction of glutathione with kava lactones from roots of *Piper methysticum* prevents hepatotoxic side effects of the kava lactones.



Differential inhibition of *Helicoverpa armigera* gut proteinases by proteinase inhibitors of pigeonpea (*Cajanus cajan*) and its wild relatives

Phytochemistry, 2003, **64**, 681

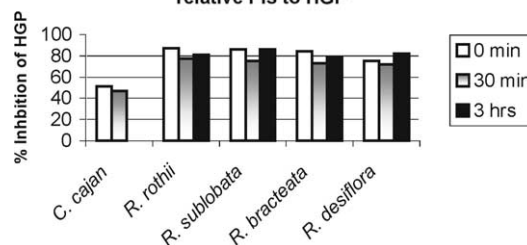
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Protease inhibitors (PIs) of pigeonpea cultivars showed total inhibition of trypsin and chymotrypsin, and moderate inhibition potential towards *Helicoverpa armigera* proteases (HGP) whereas PIs of pigeonpea wild relatives exhibited stronger in vitro inhibition of HGP and were highly stable against HGP.

In vitro inhibition and stability of pigeonpea wild relative PIs to HGP



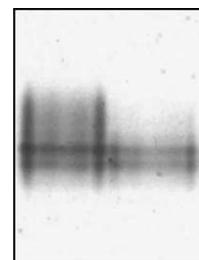
Isolation and characterisation of phytase from dormant *Corylus avellana* seeds

Phytochemistry, 2003, **64**, 689

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This enzyme, which catalyses the stepwise hydrolysis of *myo*-inositol 1,2,3,4,5,6-hexakisphosphate, was purified for the first time from dormant seeds. Its biochemical characteristics and factors regulating its activity are reported.



Molecular and structural analysis of electrophoretic variants of soybean seed storage proteins

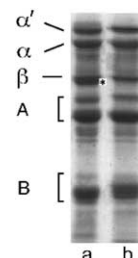
Phytochemistry, 2003, **64**, 701

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Electrophoretic variants of soybean germplasm lines were detected. From analyses of glycans, cDNAs, amino acid sequences and molecular masses, it is suggested that a single or a few amino acid replacements can affect electrophoretic mobilities of seed storage protein.



Formation of novel flavonoids in apple (*Malus domestica*) treated with the 2-oxoglutarate-dependent dioxygenase inhibitor prohexadione-Ca

Phytochemistry, 2003, **64**, 709

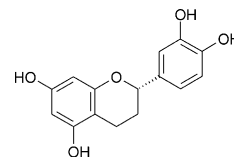
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An altered flavonoid metabolism with the occurrence of novel flavonoids was found in young leaves of apple (*Malus domestica*) after treatment with prohexadione-Ca which is known to have a disease reducing effect on fire blight caused by *Erwinia amylovora*. The isolated novel compounds, however, do not exhibit antibacterial activity.



High isoflavone content and estrogenic activity of 25 year-old *Glycine max* tissue cultures

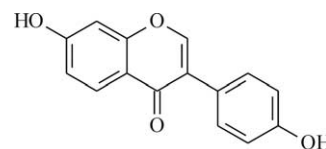
Phytochemistry, 2003, **64**, 717

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The present study reports a high production of bioactive phytoestrogens in a 25 year-old collection of *Glycine max* plant cell cultures.



Effects of temperature on the production of hydrogen peroxide and volatile halocarbons by brackish-water algae

Phytochemistry, 2003, **64**, 725

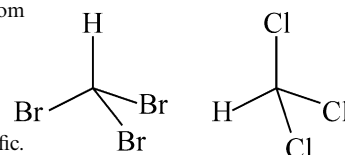
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We studied the production of volatile halocarbons, which have an ozone-depleting potential, by algae from the brackish Baltic Sea. Correlations were found between the releases of H₂O₂ and brominated and some iodinated compounds from the algae to the seawater medium. We conclude that the production of certain halocarbons may increase with temperature in certain algal species, but that the amount and composition of the volatile halocarbons released by algal communities are probably more affected by temperature-associated species shifts because the production of volatile halocarbons is highly species-specific.



Purine alkaloids in *Paullinia*

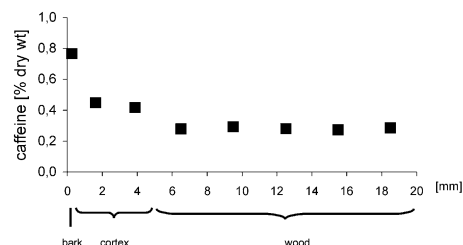
Phytochemistry, 2003, **64**, 735

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The within-the-plant distribution of purine alkaloids in three *Paullinia* species (*P. cupana*, *P. pachycarpa*, *P. yoco*) is analyzed by HPLC. *P. pachycarpa* was hitherto not known to contain purine alkaloids. A basipetal gradient is found as a common feature in all three species.



Essential oil analysis and antimicrobial activity of eight *Stachys* species from Greece

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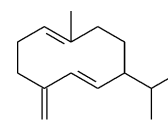
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^bLaboratory of Pharmacognosy, Department of Pharmacy, School of Health Science, Aristotle University of Thessaloniki, GR-541 24 Thessaloniki, Greece

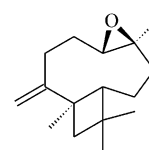
^cDepartment of Plant Physiology, Mycological Laboratory, Institute for Biological Research, 29 November 142, 11 000 Belgrade, Yugoslavia

The volatile composition of eight *Stachys* species (Labiatae) were investigated by GC–MS analyses. These investigated taxa were *St. alopecuroides* (L.) Benth., *St. scardica* (Griseb.) Hayek, *St. cretica* L. ssp. *cretica*, *St. germanica* L. ssp. *heldreichii* (Boiss.) Hayek, *St. recta* L., *St. spinulosa* L., *St. euboica* Rech. and *St. menthifolia* Vis., growing wild in Greece. Sesquiterpene hydrocarbons were shown to be the main group of constituents of all taxa. Furthermore, the obtained essential oils were tested against six bacteria, as well as against five fungi. The tested essential oils showed better activity against bacterial species than against fungi. The essential oil of *St. scardica* has been proved the most active against both bacteria and fungi.

Phytochemistry, 2003, **64**, 743



Germacrene D



Caryophyllene oxide

Isoflavonoids from roots of *Erythrina zeyheri*

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^bFaculty of Agriculture, Shizuoka University, Shizuoka 422-8529, Japan

^cGifu Pharmaceutical University, Mitahora-higashi, Gifu 502-8585, Japan

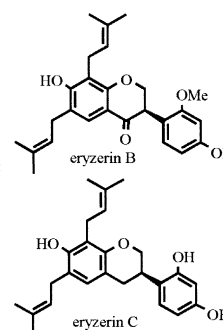
^dSchool of Pharmaceutical Sciences, Toho University, Miyama, Funabashi, Chiba 274-8510, Japan

^eDepartment of Oral Pathology, Asahi University School of Dentistry, 1851-Hozumi, Hozumi-cho, Motosu-gun, Gifu 501-0296, Japan

^fBotanical Gardens, Graduate School of Science, The University of Tokyo, Hakusan, Bunkyo-ku, Tokyo 112-0001, Japan

^gFaculty of Education, University of the Ryukyus, Okinawa 903-0129, Japan

Five isoflavonoids, eryzerins A–E were isolated from the roots of *Erythrina zeyheri* and their antibacterial activities against methicillin-resistant *Staphylococcus aureus* (MRSA) were estimated.



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Stilbenes from the roots of *Pleuropterus ciliinervis* and their antioxidant activities

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^aKorea Food and Drug Administration, 122-704, Seoul, South Korea

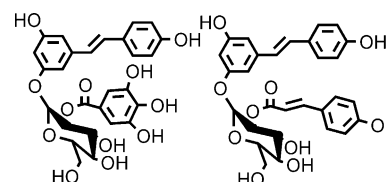
^bLaboratory of Immunomodulator, Korea Research Institute of Bioscience and Biotechnology, Daejeon, 305-333, South Korea

^cCollege of Pharmacy, Chungnam National University, Daejeon 305-764, South Korea

^dInstitute of Natural Drug Resources, Cheongju 360-060, South Korea

^eNatural Products Research Institute, Seoul National University, Seoul 151-747, South Korea

Two stilbene glycosides, (*E*)-pieceid-2''-*O*-gallate and (*E*)-pieceid 2''-*O*-cumarate, were isolated from the roots of *P. ciliinervis*, together with resveratrol and pieceid. They showed antioxidant activities.



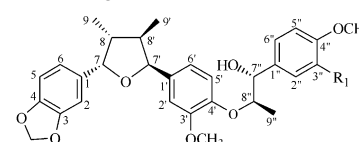
Phytochemistry, 2003, **64**, 759

Lignans from *Saururus chinensis* inhibiting the transcription factor NF-κB

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Anticancer Research Laboratory, Korea Research Institute of Bioscience and Biotechnology, PO Box 115, Yuseong, Daejeon 305-600, South Korea

Two sesquieolignans, saucerneol D (1) and saucerneol E (2), and four known lignans, manassantin A, manassantin B, (–)-saucerneol methyl ether, and (+)-saucerneol were isolated from the roots of *Saururus chinensis* as inhibitors of transcription factor NF-κB.



R₁
1 -OCH₃
2 -OH

Phytochemistry, 2003, **64**, 765

Phytochemistry, 2003, **64**, 773

Anti-plasmodial activities and X-ray crystal structures of rotenoids from *Millettia usaramensis* subspecies *usaramensis*

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^aDepartment of Chemistry, University of Nairobi, PO Box 30197, Nairobi, Kenya

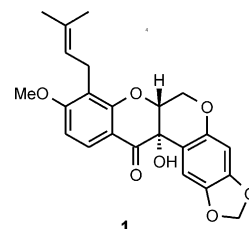
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^eUnited States Army Medical Research Unit-Kenya MRU 64109, APO, AE 09831-4109, USA

A new anti-plasmodial rotenoid, **1**, along with known flavonoids were isolated from the stem bark of *Millettia usaramensis* subspecies *usaramensis*. The structures were determined on the basis of spectroscopic evidence. CD and X-ray analysis established absolute configurations.

**1**

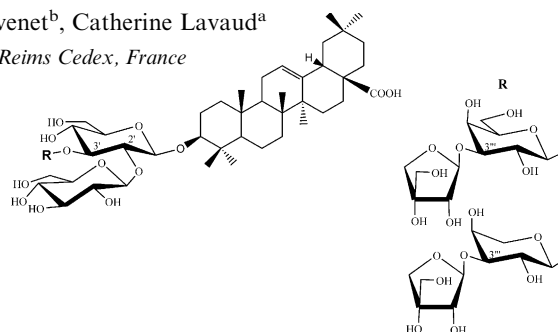
Oleanolic glycosides from *Pometia ridleyi*

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^aLaboratoire de Pharmacognosie, UMR CNRS 6013, Bât. 18, BP 1039, 51097 Reims Cedex, France

^bICSN, UPR 2031, Avenue de la Terrasse, 91198 Gif/Yvette Cedex, France

Six monodesmosidic oleanolic acid saponins were isolated from the stem bark of *Pometia ridleyi* with two known saponins, acutoside A and calendulose C. The structures were established by spectroscopic methods.

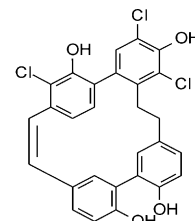
Phytochemistry, 2003, **64**, 781

Bazzanins L-R, chlorinated macrocyclic bisbibenzyls from the liverwort *Lepidozia incurvata*

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Bazzanins L-R, seven new chlorinated bisbibenzyls of the isoplagiochin C type, as well as isoplagiochin C, have been isolated from the liverwort *Lepidozia incurvata*. The structures have been elucidated based on extensive NMR spectral evidence and by mass spectrometry.



Bazzanin M

Phytochemistry, 2003, **64**, 791

Cornutins C–L, neo-clerodane-type diterpenoids from *Cornutia grandifolia* var. *intermedia*

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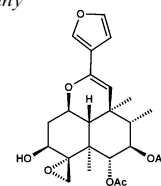
^aInstitut für Pharmazie (Pharmazeutische Biologie), Freie Universität Berlin, Königin-Luise-Str. 2-4, D-14195 Berlin, Germany

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^cCentro de Investigaciones Farmacognósticas de la Flora Panameña (CIFLORPAN), Facultad de Farmacia, Universidad de Panamá, Panamá

^dInstitut für Tropenmedizin, Medizinische Fakultät der Charité, Humboldt-Universität, D-14050 Berlin, Germany

Ten novel neo-clerodane diterpenoids, named cornutins C–L, were isolated from the leaves of *Cornutia grandifolia* var. *intermedia*. The in vitro antiplasmodial activity of four isolated compounds (cornutin C–F) has been evaluated.

Phytochemistry, 2003, **64**, 797