

Phytochemistry Vol. 66, No. 2, 2005

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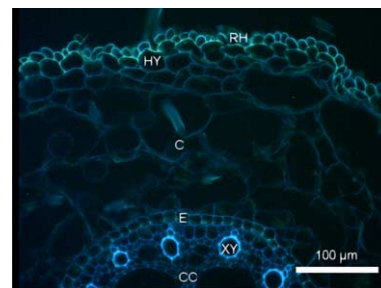
PROTEIN BIOCHEMISTRY

Biochemical characterization of elongase activity in corn (*Zea mays* L.) roots

pp 131–138

Lukas Schreiber*, Rochus Franke, René Lessire

Elongase activities in corn (*Zea mays* L.) roots were biochemically characterized and root suberin composition was analysed by gas chromatography and mass spectrometry.

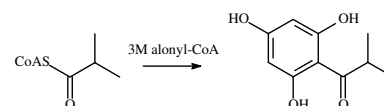


Biosynthesis of the hyperforin skeleton in *Hypericum calycinum* cell cultures

pp 139–145

Petra Klingauf, Till Beuerle, Annett Mellenthin, Safaa A.M. El-Moghazy, Zakia Boubakir, Ludger Beerhues*

Three type III polyketide synthases were detected, one of which catalyzes the formation of phlorisobutyrophenone.

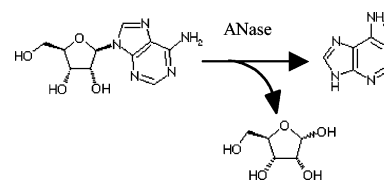


Purification and characterisation of adenosine nucleosidase from *Coffea arabica* young leaves

pp 147–151

Alexandre Campos, Maria J. Rijo-Johansen, Maria F. Carneiro, Pedro Fevereiro*

The purification and preliminary characterization of an adenosine nucleosidase (ANase) (EC 3.2.2.7) of *Coffea arabica* L. cv. Catimor is reported.

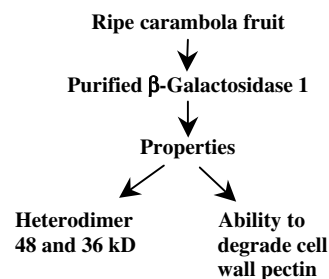


Purification and properties of a β -galactosidase from carambola fruit with significant activity towards cell wall polysaccharides

pp 153–163

Sumathi Balasubramaniam, Heng Chin Lee, Hamid Lazan, Roohaida Othman, Zainon Mohd. Ali*

Four β -galactosidase isoforms (β -gal I, II, III, IV) were isolated from ripe carambola fruit and β -gal I, the predominant isoform, was purified to electrophoretic homogeneity and the properties is reported.



METABOLISM

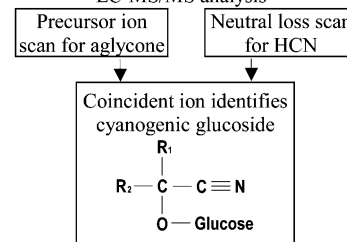
Cyanogenic glucosides in grapevine: polymorphism, identification and developmental patterns

pp 165–173

T.K. Franks*, Y. Hayasaka, S. Choimes, R. van Heeswijk

Cyanogenic glucosides that accumulate polymorphically in leaves but not in other tissues of grapevine were identified using an LC-MS/MS method.

Leaf extracts from grapevine varieties with or without cyanogenic compounds compared by LC-MS/MS analysis

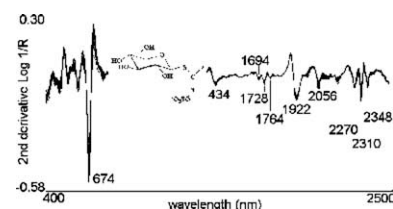


Quantification of glucosinolates in leaves of leaf rape (*Brassica napus* ssp. *pabularia*) by near-infrared spectroscopy

pp 175–185

Rafael Font, Mercedes del Río-Celestino, Elena Cartea, Antonio de Haro-Bailón

Near-infrared spectra and chemometrics are used to develop predictive models to measure glucosinolates in leaves of *Brassica napus*.

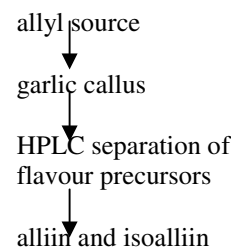


Synthesis of the flavour precursor, alliin, in garlic tissue cultures

pp 187–194

J. Hughes, A. Tregova, A.B. Tomsett, M.G. Jones, R. Cosstick, H.A. Collin*

Uptake and metabolism of allyl thiol and allyl cysteine by undifferentiated callus of garlic and onion led to the formation of the flavour precursors alliin and isoalliin.



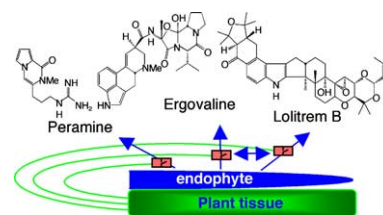
ECOLOGICAL BIOCHEMISTRY

Distribution of the fungal endophyte *Neotyphodium lolii* is not a major determinant of the distribution of fungal alkaloids in *Lolium perenne* plants

pp 195–202

Martin J. Spiering*, Geoffrey A. Lane, Michael J. Christensen, Jan Schmid

Levels and distribution of the fungal endophyte *Neotyphodium lolii* in perennial ryegrass (*Lolium perenne*) had only small effects on the distributions of three fungal-produced bioactive alkaloids, indicating regulation of alkaloid accumulation in grass tissues inhabited by the endophyte.

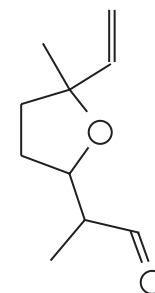


Qualitative and quantitative analyses of flower scent in *Silene latifolia*

pp 203–213

Stefan Dötterl*, Lorne M. Wolfe, Andreas Jürgens

The variability in floral scent of *Silene latifolia*, which is part of a nursery pollination system, was investigated. The most typical compounds were lilac aldehyde isomers, but scent variability was very high.

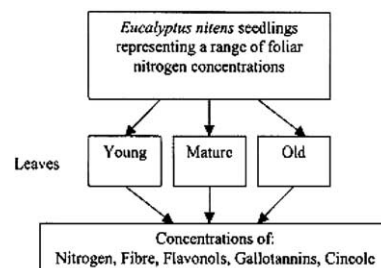


Differential distribution of leaf chemistry in eucalypt seedlings due to variation in whole-plant nutrient availability

pp 215–221

Dugald C. Close*, Clare McArthur, Ann E. Hagerman, Hugh Fitzgerald

The effects of whole-plant nutrient-availability on the distribution of nitrogen, fibre, flavonols, gallotannins and cineole in young, mature and old leaves of seedlings of *Eucalyptus nitens* is reported.



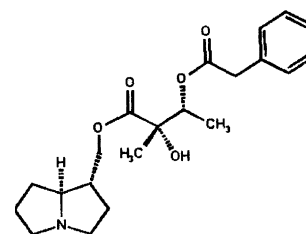
CHEMOTAXONOMY

Ipangulines and minalobines, chemotaxonomic markers of the infrageneric *Ipomoea* taxon subgenus *Quamoclit*, section *Mina*

pp 223–231

Kristina Jenett-Siems, Sonja C. Ott, Thomas Schimming, Karsten Siems, Frank Müller, Monika Hilker, Ludger Witte, Thomas Hartmann, Daniel F. Austin, Eckast Eich*

A comprehensive GC–MS analysis of 8 spp. revealed altogether 52 ipangulines (unique platynecine esters) and 21 minalobines (unique trachelanthamidine esters), respectively. Two minalobines have been isolated and structurally elucidated.



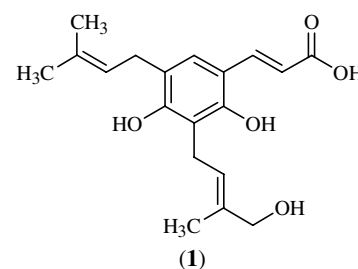
BIOACTIVE PRODUCTS

Bioactive constituents of *Artemisia monosperma*

pp 233–239

Michael Stavri, Christopher H.J. Ford, Franz Bucar, Bernhard Streit,
Michael L. Hall, R. Thomas Williamson, K.T. Mathew, Simon Gibbons*

In a phytochemical study of *Artemisia monosperma* (Asteraceae), three compounds including **1** were characterised by spectroscopic means. Compounds were evaluated for their ability to inhibit 12-lipoxygenase, as antibacterials and in a cytotoxicity assay.

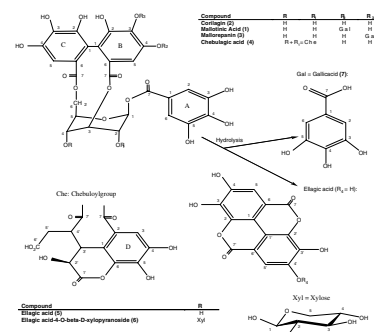


Bioactive ellagitannins from *Cunonia macrophylla*, an endemic Cunoniaceae from New Caledonia

pp 241–247

Bruno Fogliani, Phila Raharivelomanana, Jean-Pierre Bianchini,
Saliou Bouraïma-Madjèbi, Edouard Hnawia

Ellagitannins identified as ellagic acid-4-*O*- β -D-xylopyranoside, mallorepanin, mallotinic acid along with corilagin, chebulagic acid, ellagic acid and gallic acid were isolated from *Cunonia macrophylla* leaves. Their antimicrobial activities on human and plant pathogens and their inhibitory effects against xanthine oxidase were investigated and revealed bioactivities first time detected.



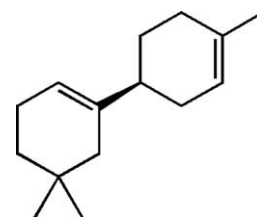
CHEMISTRY

Sesquiterpenes from *Cupressus macrocarpa* foliage

pp 249–260

Laurence G. Cool*

Ten sesquiterpenes, many of them with unusual carbon skeletons, were identified in foliage of *Cupressus macrocarpa*. Their possible single-enzyme biosynthesis is discussed.



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* Corresponding author

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