

Phytochemistry Vol. 66, No. 4, 2005

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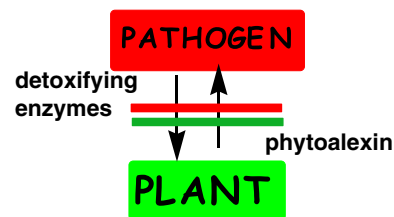
REVIEWS

Metabolism and detoxification of phytoalexins and analogs by phytopathogenic fungi

pp 391–411

M. Soledade C. Pedras\*, Pearson W.K. Ahiahonu

This review describes the pathways used by plant pathogenic fungi to metabolize and detoxify phytoalexins.



Comprehensive post-genomic data analysis approaches integrating biochemical pathway maps

pp 413–451

B. Markus Lange\*, Majid Ghassemian

This review provides an overview of currently available bioinformatic tools for the analyses of complex post-genomic data sets using biochemical pathway maps and introduces a novel tool, termed BioPathAt, which is particularly useful for scientists interested in the regulation of metabolic pathways in the model plant *Arabidopsis thaliana*.



FULL PAPERS

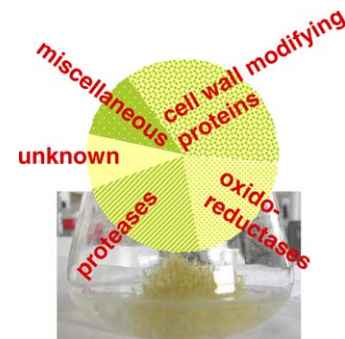
PROTEIN BIOCHEMISTRY

Proteomic analysis of secreted proteins from *Arabidopsis thaliana* seedlings: improved recovery following removal of phenolic compounds

pp 453–461

Stéphane Charmont, Elisabeth Jamet, Rafael Pont-Lezica, Hervé Canut\*

Proteins secreted from the whole plant were recovered from *Arabidopsis thaliana* seedlings grown in liquid culture. The use of PVPP increased significantly the efficiency of mass mapping by MALDI-TOF. Forty-four cell wall proteins were identified among which 31 belonging to all functional classes were not found in previous proteomic studies.

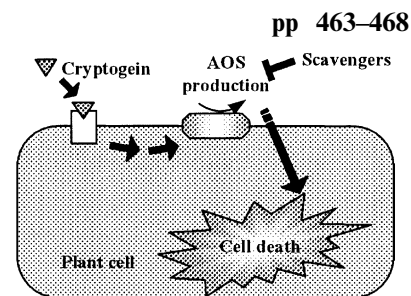


## ECOLOGICAL BIOCHEMISTRY

### Effects of scavengers for active oxygen species on cell death by cryptogein

Ken-ichi Hirasawa, Toyoki Amano\*, Yuzo Shioi

Active oxygen species (AOS) are known to trigger programmed cell death in plants. We examined the effects of a variety of AOS scavengers on the death program. Since none of the reagents suppressed cell death, AOS produced in the extracellular space is likely not involved in the death reaction.



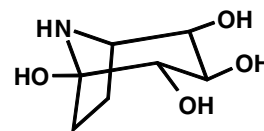
## CHEMOTAXONOMY

### Calystegines as chemotaxonomic markers in the Convolvulaceae

pp 469–480

Thomas Schimming, Kristina Jenett-Siems, Petra Mann, Britta Tofern-Reblin, Jenny Milson, Robert W. Johnson, Thierry Deroin, Daniel F. Austin, Eckart Eich\*

A GC–MS study of 129 convolvulaceous species belonging to 29 genera and all 12 tribes revealed the occurrence of calystegines in 62 spp. belonging to 22 genera and 11 tribes. In addition, the presence of their putative precursors (lipophilic basal tropanes) has been checked.



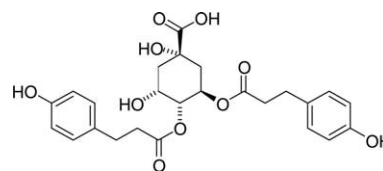
## BIOACTIVE PRODUCTS

### Tyrosine kinase inhibitors from the rainforest tree *Polyscias murrayi*

pp 481–485

Malcolm S. Buchanan, Anthony R. Carroll, Annette Edser, John Parisot, Rama Addepalli, Ronald J. Quinn\*

A series of 3-(4-hydroxyphenyl) propanoic acid derivatives, which inhibit Itk (interleukin-2 inducible T-cell kinase), a Th2-cell target, were isolated from the Australian rainforest tree *Polyscias murrayi*.

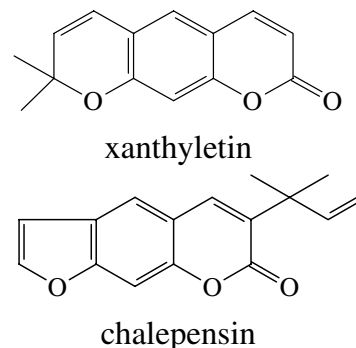


### Allelochemicals from *Stauranthus perforatus*, a Rutaceous tree of the Yucatan Peninsula, Mexico

pp 487–494

Ana Luisa Anaya\*, Martha Macías-Rubalcava, Rocío Cruz-Ortega, Clara García-Santana, Perla N. Sánchez-Monterrubio, Blanca E. Hernández-Bautista, Rachel Mata

Pyranocoumarins, furanocoumarins, lignans, a sesquiterpene, and an alkylamide were isolated from *Stauranthus perforatus* (Rutaceae). Phytotoxicity is one of the more pronounced bioactivities shown by the extracts and isolates, in particular by xanthyletin and chalepensis.

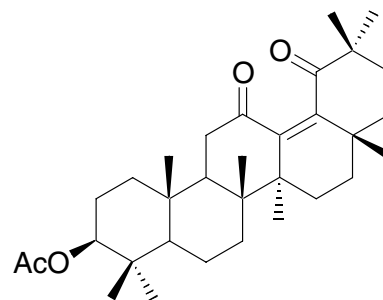


**Cytotoxic triterpenes from the aerial roots of *Ficus microcarpa***

pp 495–501

Yi-Ming Chiang, Jang-Yang Chang, Ching-Chuan Kuo, Chi-Yen Chang,  
Yueh-Hsing Kuo\*

Six triterpenes along with nine known triterpenes were isolated from the aerial roots of *Ficus microcarpa*, and their structures elucidated by spectroscopic methods. The in vitro cytotoxic efficacy of these triterpenes against three human cancer cell lines was investigated.

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**Guide for Authors**

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