Phytochemistry, 2004, **65**, 517

Serine carboxypeptidase-like acyltransferases

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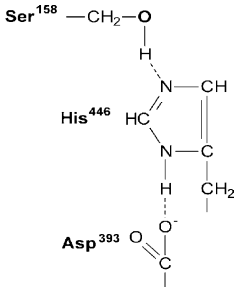

Serine carboxypeptidase-like (SCPL) acyltransferases are involved in the formation of esters, accepting 1-*O*-β-glucose esters as acyl donors. SCPL proteins make use of a catalytic triad formed by a nucleophile, an acid and a histidine acting as a charge relay system for the nucleophilic attack on amide or ester bonds. During evolution, these enzymes apparently have been recruited from serine carboxypeptidases and adapted to take over acyl transfer instead of hydrolysis functions. By sequence comparison, a distinguished number of *Arabidopsis* SCPL proteins cluster with proven SCPL acyltransferases. These enzymes might be ideal systems to investigate principles of functional adaptation and molecular evolution of plant genes.

Phytochemistry, 2004, **65**, 525

Detection of three wound-induced proteins in papaya latex

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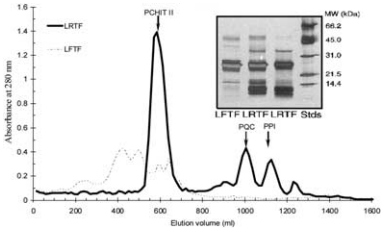


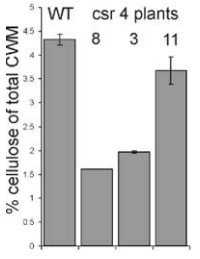
Repeated mechanical wounding was found to affect the protein content of the latexes of regularly tapped fruits (LRTF) compared to those of similar fruits wounded for the first time (LFTF). Among the wound-induced proteins, we identified a class-II chitinase (PCHIT II), a trypsin inhibitor (PPI) and a glutaminyl cyclase (PQC).

Phytochemistry, 2004, **65**, 535

Modulation of the cellulose content of tuber cell walls by antisense expression of different potato (*Solanum tuberosum* L.) *CesA* clones

Ronald J.F.J. Oomen[a], Emmanouil N. Tzitzikas[a], Edwin J. Bakx[b], Irma Straatman-Engelen[a], Maxwell S. Bush[c], Maureen C. McCann[d], Henk A. Schols[b], Richard G.F. Visser[a], Jean-Paul Vincken[a]

[a]*Graduate School Experimental Plant Sciences, Laboratory of Plant Breeding, Wageningen University, Binnenhaven 5, 6709 PD Wageningen, The Netherlands*
[b]*Wageningen University, Laboratory of Food Chemistry, Bomenweg 2, 6703 HD Wageningen, The Netherlands*
[c]*John Innes Centre, Department of Cell and Developmental Biology, Colney, Norwich NR4 7UH, UK*
[d]*Department of Biological Sciences, Purdue University, West Lafayette, Indiana, USA*



Four potato cellulose synthase (*CesA*) homologs (*StCesA1*, *2*, *3* and *4*) were isolated. The complete *StCesA3* cDNA was used for sense and antisense expression. Additionally, the class-specific regions (CSR) of all four potato cellulose synthase genes were used individually for down-regulation of the corresponding *CesA* genes. A 50% reduction of the cellulose content of potato tubers was achieved.

Phytochemistry, 2004, **65**, 547

Cosuppression of limonene-3-hydroxylase in peppermint promotes accumulation of limonene in the essential oil

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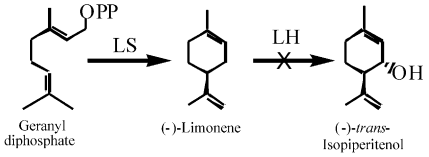
Cosuppression of limonene hydroxylase (LH) produces an essential oil containing 80% limonene (compared to 2% in normal peppermint oil) and is without effect on limonene synthase (LS) or overall yield.



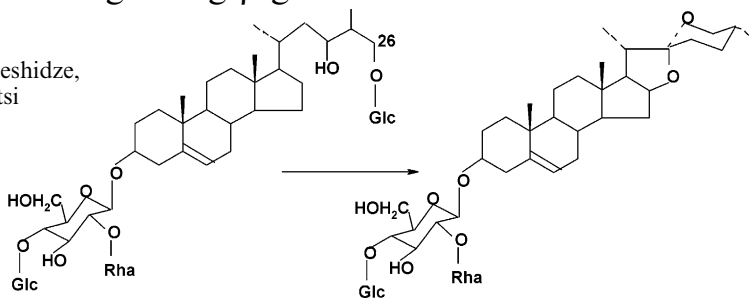
Phytochemistry, 2004, **65**, 555

Tissue and subcellular localization of oligofurostanosides and their specific degrading β-glucosidase in *Dioscorea caucasica* Lipsky

Koba Gurielidze, Mzevinar Gogoberidze, Inga Dadeshidze, Maia Vardosanidze, Maia Djaoshvili, Nino Lomkatsi

Durmischidze Institute of Biochemistry and Biotechnology, Department of Cell Culture and Biologically Active Compounds, Tbilisi 0159, Georgia

The different inter-tissue localization of the oligofurostanosides and their degrading glucosidase in the leaves of *Dioscorea caucasica* Lipsky is reported.



Phytochemistry, 2004, **65**, 561

Xanthohumol metabolites in faeces of rats

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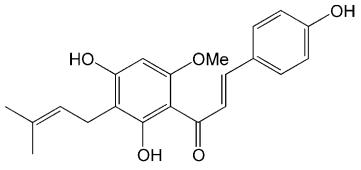
[b]*German Cancer Research Center (DKFZ), Division of Toxicology and Cancer Risk Factors, 69120 Heidelberg, Germany*
[c]*Instrumental Analysis und Bioanalysis, University of the Saarland, 66041 Saarbrücken, Germany*
[d]*Max-Planck-Institute for Chemical Ecology, Beutenberg Campus, Winzerlaer Str. 10, D-07745 Jena, Germany*

In vivo metabolites of xanthohumol from rat faeces are described.



Phytochemistry, 2004, **65**, 571

Daffodil flowers delay senescence in cut *Iris* flowers

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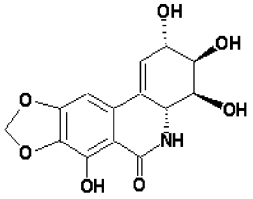
[a]*Wageningen University and Research Centre, PO Box 17, 6700 AA Wageningen, The Netherlands*
[b]*Biotechnological-Biomedical Center, University of Leipzig, Linnéstr.3, D-04103 Leipzig, Germany*

Visible senescence of cut *Iris* flowers was delayed by placing a daffodil flower in the water. The effect was due to narciclasine in daffodil stem mucilage. It inhibited senescence-associated processes such as bulk protein degradation.



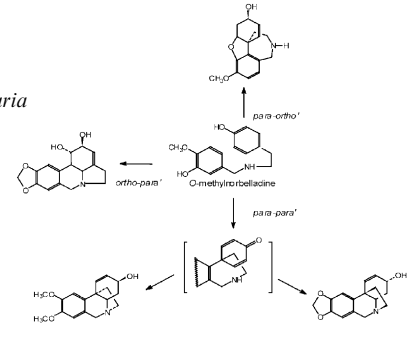
Phytochemistry, 2004, **65**, 579

Intraspecific variability in the alkaloid metabolism of *Galanthus elwesii*

Strahil Berkov[a], Borjana Sidjimova[a], Luba Evstatieva[a], Simeon Popov[b]

[a]*Institute of Botany, Bulgarian Academy of Sciences, 23 Acad. G. Bonchev Str., 1113 Sofia, Bulgaria*
[b]*Institute of Organic Chemistry with Centre of Phytochemistry, Bulgarian Academy of Sciences, 9 Acad. G. Bonchev Str., 1113 Sofia, Bulgaria*

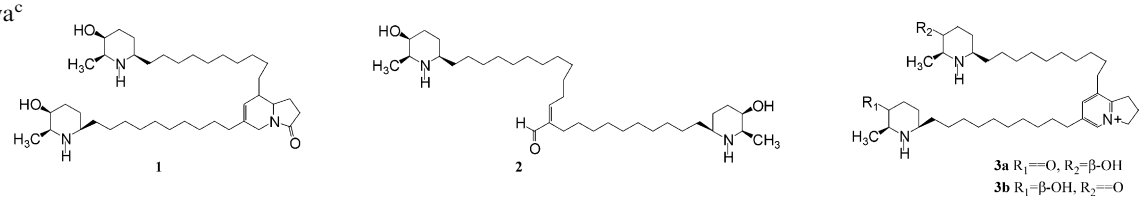
Alkaloid pattern of 16 Bulgarian *Galanthus elwesii* populations was investigated by GC/MS and TLC. Some populations showed remarkable differences in respect to their alkaloid pattern—type of biosynthesis, main alkaloids and number of alkaloids.



Phytochemistry, 2004, **65**, 587

Growth inhibitory alkaloids from mesquite (*Prosopis juliflora* (Sw.) DC.) leaves

Hiroshi Nakano[a], Eri Nakajima[b], Syuntaro Hiradate[b], Yoshiharu Fujii[b], Kosumi Yamada[c], Hideyuki Shigemori[c], Koji Hasegawa[c]



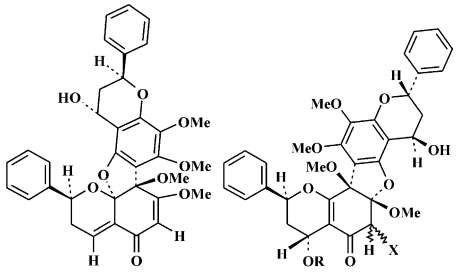
Plant growth inhibitory alkaloids, 3′′′′-oxo-juliprosopine (**1**), secojuliprosopinal (**2**), and a (1:1) of 3-oxo-juliprosine (**3a**) and 3′-oxo-juliprosine (**3b**) were isolated from the extract of mesquite [*Prosopis juliflora* (Sw.) DC.] leaves.

Phytochemistry, 2004, **65**, 593

Five biflavonoids from *Calycopteris floribunda* (Combretaceae)

Ralf Mayer

Pharmazeutisches Institut, Rheinische Friedrich-Wilhelms-Universität, Kreuzbergweg 26, D-53115 Bonn, Germany



Five flavonoids from *Calycopteris floribunda* are characterised through their NMR, MS and chiroptical data.

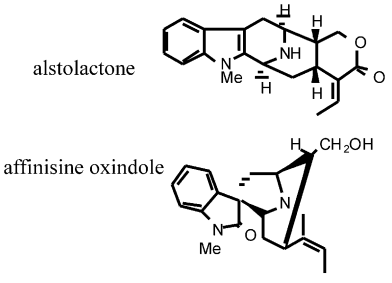
Phytochemistry, 2004, **65**, 603

Alkaloids from A*lstonia angustifolia*

Toh-Seok Kam, Yeun-Mun Choo

Department of Chemistry, University of Malaya, 50603 Kuala Lumpur, Malaysia

Six new alkaloids (e.g. alstolactone, affinisine oxindole) were obtained from the leaf extract of *Alstonia angustifolia* var. *latifolia*.



Phytochemistry, 2004, **65**, 609

Structural analysis of a pectic polysaccharide from the leaves of *Diospyros kaki*

Jinyou Duan, Yun Zheng, Qun Dong, Jinian Fang

Shanghai Institute of Materia Medica, Shanghai Institutes for Biological Sciences, Chinese Academy of Science, People's Republic of China, 201203

The structure of a pectic polysaccharide from the leaves of *Diospyros kaki* has been investigated and shown to possess a backbone of α-(1→4)-galacturonan with some insertions of α-1,2-Rha*p* residues. The side chains of arabino-3,6-galactan were attached to the backbone via O-4 of Rha*p* residues and O-3 of GalA*p* residues at the same time, while 4-linked Xyl*p* residues forming short linear chains were attached to O-4 of rhamnose residues.