



## Phytochemistry Vol. 85

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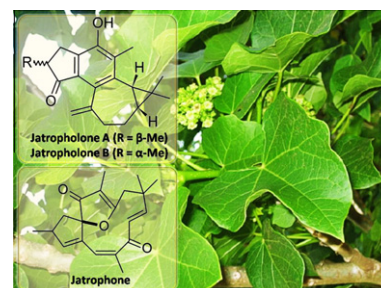
## REVIEW

**Medicinal property, phytochemistry and pharmacology of several *Jatropha* species (Euphorbiaceae): A review**

pp 7–29

Carla W. Sabandar, Norizan Ahmat\*, Faridahanim Mohd Jaafar, I. Sahidin

Species from *Jatropha* are used in medicinal folklore and known as a purgative. Crude extracts and compounds such as cyclic peptide alkaloids, diterpenes with various skeletons and other compounds from this genus have been reported for cytotoxicity, tumor-promoting, antimicrobial, antiprotozoal, anticoagulant, immunomodulating, anti-inflammatory, antioxidant, protoscolicidal, insecticidal, molluscicidal, inhibition AChE and toxicity activities.



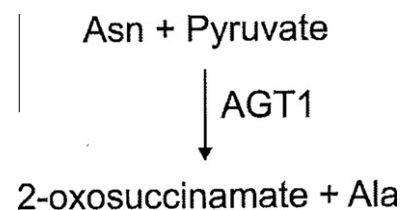
## PROTEIN BIOCHEMISTRY AND PROTEOMICS

**Characterization of Arabidopsis serine:glyoxylate aminotransferase, AGT1, as an asparagine aminotransferase**

pp 30–35

Qianyi Zhang, Jamie Lee, Sudhakar Pandurangan, Matthew Clarke, Agnieszka Pajak, Frédéric Marsolais\*

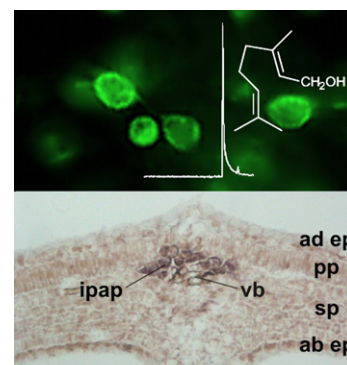
Recombinant serine:glyoxylate aminotransferase, AGT1, from Arabidopsis, preferred asparagine over serine or alanine as substrate. *AGT1* transcripts were induced by asparagine in roots suggesting a function in asparagine metabolism.

**Characterization of the plastidial geraniol synthase from Madagascar periwinkle which initiates the monoterpenoid branch of the alkaloid pathway in internal phloem associated parenchyma**

pp 36–43

Andrew J. Simkin, Karel Miettinen, Patricia Claudel, Vincent Burlat, Grégory Guirimand, Vincent Courdavault, Nicolas Papon, Sophie Meyer, Stéphanie Godet, Benoit St-Pierre, Nathalie Giglioli-Guivarc'h, Marc J.C. Fischer, Johan Memelink, Marc Clastre\*

The *Catharanthus roseus* geraniol synthase is localized in plastids and transcripts are detected in internal phloem associated parenchyma (IPAP) cells in young developing leaves.



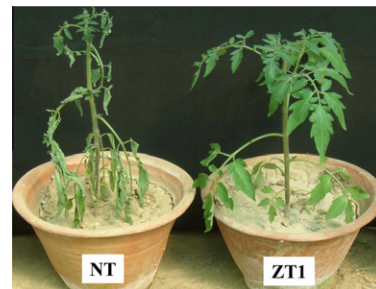
## MOLECULAR GENETICS AND GENOMICS

### Engineering drought tolerant tomato plants over-expressing *BcZAT12* gene encoding a C<sub>2</sub>H<sub>2</sub> zinc finger transcription factor

pp 44–50

Avinash Chandra Rai, Major Singh, Kavita Shah\*

Tomato transformed with *ZAT12* gene for drought stress tolerance were obtained. *BcZAT12* transformed lines ZT1 and ZT5 were drought tolerant having potential in tomato yield under drought conditions.



## METABOLISM

### Cell wall compositional modifications of *Miscanthus* ecotypes in response to cold acclimation

pp 51–61

Jean-Marc Domon, Laëtitia Baldwin, Sébastien Acket, Elodie Caudeville, Stéphanie Arnoult, Hélène Zub, Françoise Gillet, Isabelle Lejeune-Hénaut, Maryse Brancourt-Hulmel, Jérôme Pelloux, Catherine Rayon\*

The cell wall composition of three *Miscanthus* clones with contrasted frost tolerance has been determined during cold acclimation. The plants were harvested at the juvenile stage and cell wall composition of each clone during cold acclimation was compared to the one of non cold-treated plants.



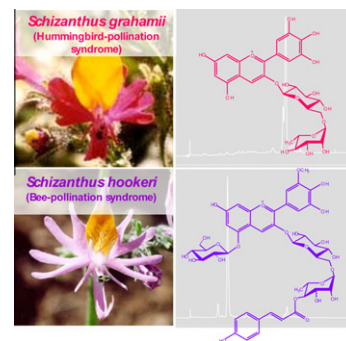
## ECOLOGICAL BIOCHEMISTRY

### *Schizanthus grahamii* and *Schizanthus hookeri*. Is there any relationship between their anthocyanin compositions and their different pollination syndromes?

pp 62–71

C. Alcalde-Eon, J.C. Rivas-Gonzalo, O. Muñoz, M.T. Escribano-Bailón\*

The anthocyanin compositions of *Schizanthus grahamii* and *Schizanthus hookeri* flowers are qualitatively and quantitatively different, thus contributing to the different pollination syndromes that they show.

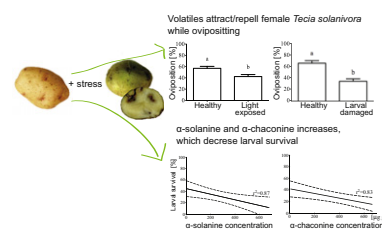


### Guatemalan potato moth *Tecia solanivora* distinguish odour profiles from qualitatively different potatoes *Solanum tuberosum* L.

pp 72–81

Miriam Frida Karlsson\*, Göran Birgersson, Peter Witzgall, Jonas Duus Stevens Lekkfeldt, P.A. Nimal Punyasiri, Marie Bengtsson

Volatile compound mediated oviposition and larval survival of *Tecia solanivora* on healthy vs. stressed tubers. This supports the preference performance hypothesis for insect herbivores.



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