

Vol 131, 2016

## Graphical abstracts

## EDITORIAL COMMENT

**Naming natural products: Uses, abuses and a proposal for discussion**

Catherine Lavaud and Georges Massiot\*

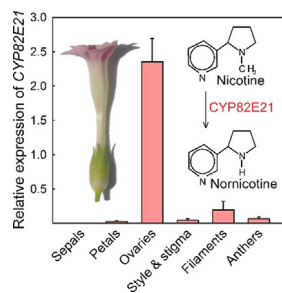
pp. 7–8

## MOLECULAR GENETICS AND GENOMICS

**Identification of CYP82E21 as a functional nicotine *N*-demethylase in tobacco flowers**

Verena Liedschulte\*, Joanne Deborah Schwaar, H el ene Laparra, Aline Vuarnoz, B erang ere Philippon, Nicolas Bakaher, Nicolas Sierro, Lucien Bovet, Gerhard Lang and Simon Goepfert

pp. 9–16



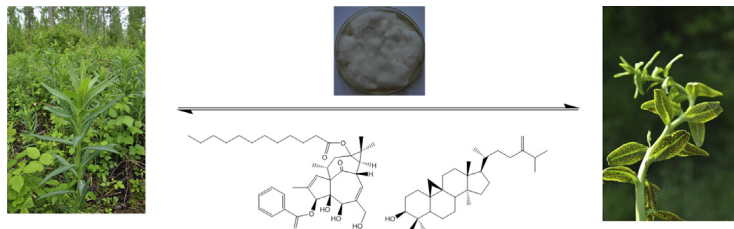
A nicotine *N*-demethylase (CYP82E21) was identified and its expression was shown in flowers, more specifically in ovaries. Nicotine demethylase function was confirmed using expression and RNAi silencing experiments.

## METABOLISM

**Metabolic changes in *Euphorbia palustris* latex after fungal infection**

Gordana Krstić, Boban Andelković, Young Hae Choi, Vlatka Vajs, Tatjana Stević, Vele Tešević and Dejan Godevac\*

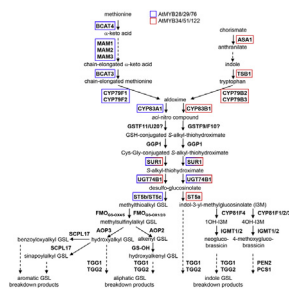
pp. 17–25



## Regulation of plant secondary metabolism and associated specialized cell development by MYBs and bHLHs

William R. Chezem and Nicole K. Clay\*

pp. 26–43

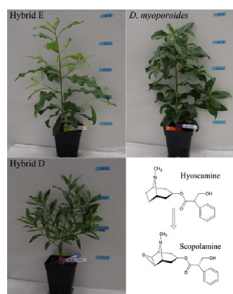


This review highlights the recent developments in the investigation of gene regulatory networks controlling the production of plant secondary metabolites and the differentiation of specialized cell types that are important to their defensive function. Also discussed are their possible origins in the more ancient gene regulatory networks controlling the differentiation of fundamental cell types.

## Discrimination of wild types and hybrids of *Duboisia myoporoides* and *Duboisia leichhardtii* at different growth stages using $^1\text{H}$ NMR-based metabolite profiling and tropane alkaloids-targeted HPLC-MS analysis

Sophie Friederike Ullrich, Nils J.H. Aversch, Leonardo Castellanos, Young Hae Choi, Andreas Rothauer and Oliver Kayser\*

pp. 44–56

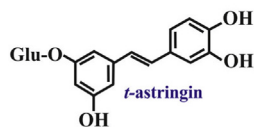


$^1\text{H}$  NMR and HPLC-MS were applied to distinguish leaf extracts of *Duboisia* hybrids and wild types at different developmental stages grown under controlled conditions in climate chambers and under agricultural field plantation.

## Stilbene biosynthesis in the needles of spruce *Picea jezoensis*

K.V. Kiselev\*, V.P. Grigorchuk, Z.V. Ogneva, A.R. Suprun and A.S. Dubrovina

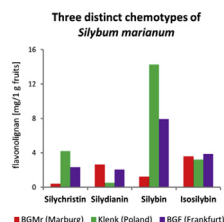
pp. 57–67



## Variation in the flavonolignan composition of fruits from different *Silybum marianum* chemotypes and suspension cultures derived therefrom

Lennart Poppe and Maike Petersen\*

pp. 68–75



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