

Verpoorte, R., Alfermann, A.W. (ed.): **Metabolic Engineering of Plant Secondary Metabolism.** - Kluwer Academic Publishers, Dordrecht 2000. 296 pp. EUR 136.00. ISBN 0-7923-6360-4.

Over the centuries man has made extensive use of plant products. Number of fine chemicals are of the plant origin, *e.g.* pharmaceuticals, fragrances, pigments, insecticides, pheromones and stimulants, enzymes of their metabolism and other proteins - generally primary and secondary metabolites.

This book, consisting of 13 chapters, give the overview about the possibility of engineering plant secondary metabolite pathways and illustrate this approach using published results.

In the first part of this book, a general introduction is given on plant secondary metabolism, followed by an overview of the possible approaches that could be used to alter secondary metabolite pathways (Chapters: 1. Plant secondary metabolism, 2. General strategies; 3. *Agrobacterium*, a natural metabolic engineer of plants; 4. Particle gun methodology as a tool in metabolic engineering). In the second part of book an selected examples are given for important groups of secondary metabolites (Chapters: 5. Modulation of plant function

and plant pathogens by antibody expression; 6. Transcriptional regulators to modify secondary metabolism; 7. Plant colour and fragrance; 8. Metabolic engineering of condensed tannins and other phenolic pathways in forage and fodder crops; 9. Metabolic engineering of crops with the tryptophan decarboxylase of *Catharanthus roseus*; 10. Metabolic engineering of enzymes diverting amino acids into secondary metabolism; 11. Modification of plant secondary metabolism by genetic engineering; 12. Expression of the bacterial UBIC gene opens a new biosynthetic pathway in plants; 13. Regulation of tropane alkaloid metabolism in plants an plant cell cultures).

Because no books have been published on this topic so far, this first one will give useful overview about results published in this field up to now. Of course, not all representative examples of this approach are mentioned, maybe because of limited book size. This book will be thus very useful as a first information about this quickly developed field of research.

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