

## Review of Drugs of Natural Origin. A Treatise of Pharmacognosy. 6th Revised Edition

**Drugs of Natural Origin. A Treatise of Pharmacognosy. 6th Revised Edition.** By G. Samuelson and L. Bohlin. (Uppsala University). Apotekarsocieten (Swedish Academy of Pharmaceutical Sciences): Stockholm, Sweden. 2009. 776 pp. 16 × 24 cm. €70.34. ISBN: 978-91-976510-5-9.

A great text has become even better. While maintaining its classic strengths through a focus on phytochemical biosynthesis, this sixth revised edition has added a significant number of pages dealing with new natural products, many with clinical importance. Its expansion is seen in the area of vitamins, marine natural products, and herbal remedies, as well as natural products derived from amino acids, purines, and pyrimidines. While two chapters from the fifth edition have been dropped, over 150 pages of new material have been added, representing the diversity and vibrancy of the science.

The chapter on “Compounds Derived from Acetate” is still the longest in the text (Chapter 7, 242 pages). New material here includes discussions on mupirocin, the epothilones, leptospermone, nitisinone, and the enedrinones, for which excellent updates of the PKS and isoprenoid pathways form the basis of their discussions. In the aforementioned revision of compounds derived biosynthetically from amino acids (Chapter 9, 88 pages), relevant and timely discussions on exenatide, ziconotide, the cyclotides, and the streptogramin antibiotics are included. Other useful areas of this text are its comprehensive index; a new appendix on “Plant Derived Drugs Used in the Preparation of Herbal Remedies”; numerous new references; and a new introductory chapter that introduces the reader to recent advances in natural products from marine organisms, the relevance of systems biology to the sciences, and the necessity of maintaining basic research in pharmacognosy on a worldwide basis. Indeed, to support the latter, the authors estimate that natural sources hold an estimated  $10^{60}$  small molecules.

This text is, in this reviewer’s opinion, the definitive offering on the subject of pharmacognosy. It should be in the library of every researcher who investigates natural products and should serve all students of the science well. It is eminently applicable to the related fields of biochemistry, organic chemistry, phytochemistry, and ethnobotany. The authors deserve congratulations on a job well done!

**Robert Krueger**

Ferris State University  
Big Rapids, Michigan

10.1021/np200134r

