

Book Reviews

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BOOK REVIEWS

Progress in the Chemistry of Organic Natural Products, Vol. 61, edited by W. HERZ, G. W. KIRBY, R.E. MOORE, W. STEGLICH, and CH. TAMM. Springer-Verlag KG, Sachsenplatz 4-6, P.O. Box 89, A-1201 Wein, Austria. 1993. ix+206 pp., 15.5×23 cm. DM 220. ISBN: 3-211-82388-3.

At intervals a novel natural product with outstandingly interesting medicinal properties appears on the scene with the result that the whole field attracts fresh attention from a broad new constituency and is revitalized. Taxol is such a substance. Indeed, in an important recent review, it was given runner-up status for "molecule of the year" [E. Culotta and D.E. Koshland, *Science* **262**, 1961 (1993)]. The literature on taxol and related molecules has been growing exponentially so that keeping up has become a burden for all but those intimately involved with research in this fascinating area. Consequently, the appearance of a comprehensive review by an authority active in the field is particularly welcome. Professor Kingston was one of the earliest to appreciate the potential of the taxoids and has made continuous important contributions to this field so his views and those of his associates, Drs. Molinero and Rimoldi, all of Virginia Polytechnic Institute and State University, are particularly useful and insightful.

Professor Kingston and his colleagues review "The Taxane Diterpenoids" in 206 pages (with 371 references covering the literature until early in 1992), and the resulting chapter constitutes the whole of Volume 61 of "Progress in the Chemistry of Organic Natural Products" (founded by L. Zechmeister and presently edited by W. Herz, G.W. Kirby, R.E. Moore, W. Steglich, and Ch. Tamm). This chapter upholds the standards of this well established authoritative series. The text covers the history, nomenclature, structures, techniques for isolation, spectroscopy, selective reactions, total syntheses (the work of 39 groups is reviewed), partial synthesis, biosynthetic postulations, bioactivity, assays and the uses of the taxoids. The narrative is quite readable, the type and, especially, the formulae, are excellent and essentially free of error. The sections on the natural products aspects are especially well done. Structure proof of new taxoids becomes progressively easier as more examples become available. This section is an excellent guide for such work. The section on total synthesis is more of an introduction. The volume and variety of contributions to this aspect defies comprehensive analysis without significant synopsis. This is extremely difficult to do to everyone's satisfaction. This part of the review is useful primarily as a key to the literature which will have to be read in the original to extract full value. The "Synthesis Club" has adopted taxol as its current darling and no-one's membership is in good standing who has not published a credible attempt. A successful synthesis still lies ahead because of the diabolical assembly of stereochemical and reactive features of taxol although word-of-mouth suggests more than one group to be close.

No human activity is intrinsically perfect so a few trivial flaws have persisted into the final manuscript, however this chapter is amazingly free of errors and omissions for a work of this magnitude.

About 50 cents a page is a very reasonable cost for such a focused and timely text. All libraries serving natural products chemists should have a copy and many individuals will want to have their own copies of this outstanding work.

LESTER A. MITSCHER, *University of Kansas*

Advances in Natural Product Chemistry, ATTA-UR-RAHMAN. Harwood Academic Publishers GmbH, Poststrasse 22, 7000 Chur, Switzerland. 1992. xiii+498 pp. 17 cm×24.5 cm. \$140.00. ISBN 3-7186-5319-2.

This work represents a collection of contributed papers presented at the Fifth International *Symposium on Natural Products Chemistry* which was held in Karachi, Pakistan from January 5-9, 1992. In his forward, Heinz G. Floss states "Like its predecessors, it [the present volume] presents a fascinating view of current developments in natural products and related chemistry. The organizers are to be congratulated on again having assembled a stellar group of authors, making this volume a fascinating compendium of current research in this field." The following scientists have contributed to this work: D. Barton, B.M. Trost, P. Helquist, K.P.C. Vollhardt, R.R. Schmidt, P.W. Le Quesne, I. Ugi, A. Malik, M. Shekhani, A. Krief, W.-S. Zhou, M.V. Sargent, G.J. Koomen, C. Szantay, F.Z. Basha, M. Hasan, C. Tamm, H. Budzikiewicz, L. Mitscher, N.R. Farnsworth, P. Dowd, M. Choudhary, G. Topçu, S. Siddiqui, B. Sener, B.-N. Zhou, G.A. Cordell, M.S. Ali, and Atta-ur-Rahman. Each of the invited authors focused on their own contributions to the field. This volume will be of interest to natural product chemists, medicinal chemists and organic chemists.

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