

Book Reviews*

Studies in Natural Product Chemistry, Vol. 16: Stereoselective Synthesis (Part J). Edited by Atta-ur-Rahman (University of Karachi). Elsevier Science, The Netherlands. 1995. xiv + 757 pp. 16.5 × 24 cm. \$435.25. ISBN 0-444-82264-X.

There are 16 chapters in this newest volume of the excellent series begun by Professor Atta-ur-Rahman in the late 1980's. The median page length of the chapters is in the 40's. There is one book-length contribution, a review of The Use of Cyclic Monoterpenoids as Enantiopure Starting Materials in Natural Product Synthesis, 165 pages and 377 literature citations, by Money and Wong. The chapter is beautifully illustrated with 224 schemes, each accompanied by a short, lucid commentary. This chapter is the outstanding feature of this volume. At the other end of the scale is the 17-page chapter on Fluoro- β -lactams by Welch and Kaweck. The brevity, the short bibliography (26 references), the low standard of English, and the narrow focus make for a disappointing chapter. Professor Weinreb's chapter on Actinobolin and Bactobolin illustrates how informative and well-written a chapter can be on a limited topic. Weinreb gives us a complete and authoritative review in 23 pages with 34 references on all the synthetic work done on these antibiotics, much of it from his own group. The chapter on Fredericamycin by the Clive group is well-written but is completely focused on the Clive contribution; there is no presentation of other work, except in the bibliography. This reviewer felt the perspective of direct comparison with the work of others would have improved the review. Another well-written chapter where the focus is largely on the writer's own contributions is that by Engler on Stereoselective Syntheses of Naturally Occurring 2-Aryl-2,3-dihydrobenzofuran Systems. Two excellent and somewhat complementary reviews are on Furan in the Synthesis of Natural Products by Rackzo and Jurczak and Enantiomerically Pure γ -Butyrolactones by Koch and Chamberlin. A trio of reviews that are nicely grouped are by Angle and Breitenbucher on Synthesis of Piperidine and Indolizidine Alkaloids, by Hoshino on the Aporphine Alkaloids, and by Backvall and Tanner on Palladium-mediated Synthesis of Alkaloids. They are all comprehensive and not limited to descriptions of the work of single groups. The theme of organometallics is continued in chapters by Larock on Organopalladium Approaches to Prostaglandins and by Stephenson on Transition-Metal Organometallic Synthesis of Amino Acids. Two traditional natural products reviews which have been nicely done are on the Brassinosteroids by Back and on the Iridoids by Isoe. Taking a slightly more biogenetic and mechanistic tack, Endo presents a masterful survey of Phenol Photooxygenation. A review which seems out-of-place in this volume, although brilliantly presented and very interesting, is by Nishimura on Siastatin B. There is a solid section on the synthesis of these carbohydrate-like glycosidase inhibi-

tors, and there are also 14 tables of bioactivity data (with accompanying text) and seven illustrations of X-ray data and modeling. Thus, the chapter is the story about the "big picture" of the research project, from beginning to end including, for example, the synthesis of an affinity adsorbent for sialidase. This reviewer believes that the volume is a worthy addition to a chemistry library and that many of the chapters deserve close reading by the organic synthesis community. Unfortunately, the cost is high for most personal libraries.

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*Unsigned book reviews are by the Book Review Editor.