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Book Reviews

Studies in Natural Products Chemistry. Vol. 4: Stereoselective Synthesis, Part C. Edited by Atta-ur Rahman. Elsevier, Amsterdam, 1989. ISBN 0-444-88033-X. xii + 760 pp. Price: US$236·75/Dfl. 450·00.

This is the third volume in the series to concentrate on synthesis, only some of which is stereoselective. There are 18 chapters which cover a whole range of natural product types and, although some of the topics have been reviewed frequently (e.g. sceletium-type alkaloids and anthracyclinones), many of them are new.

Among the highlights are: the synthesis of higher carbon sugars (J. S. Brimacombe); the use of camphor as a chiral starting material for natural product synthesis (an update of a review written in 1985 by T. Money); non-Wittig reactions of phosphorus ylids for the construction of natural products (H. J. Bestmann); the use of chiral sulphoxides and of low-valent titanium species in the synthesis of a very wide range of structural types; and the conversion of amino acids into amino sugars using high pressure techniques (J. Jurczak and A. Golebiowski). To these should be added a number of chapters that provide useful experimental information. For example, the chapter on the synthesis of oligonucleotides (T. Tanaka and M. Ikehara) has a list of protecting groups for the 5′-hydroxyl; the synthesis of prenylated phenolics (M. A. Velo and N. H. Fischer) contains a valuable collection of synthetic methods; and the chapter on the synthesis of vindoline and related alkaloids (B. Danieli *et al.*) includes much useful proton NMR data. In addition, some topics appear for the first time, such as hexopyranose nucleosides (K. Antonakis) and the synthesis of thienamycin

and related beta-lactam antibiotics from 3-hydroxybutanoic acid (G. I. Georg).

All of the reviews are reproduced from camera-ready copy, but are of a uniformly high print standard. There is a comprehensive index of 28 pages. The book thus contains a wealth of interesting and varied chemistry, and many libraries will be asked to purchase a copy by synthetic chemists who cannot afford the high price of a personal copy.

J. Mann

Micronutrients in Milk and Milk Based Food Products. Edited by E. Renner. Elsevier, Amsterdam, 1989. ISBN 1-85166-309-6. xiv + 311 pp. Price: £48·00.

This book reviews the quantitatively minor components present in milk, the concentrations in most cases being below 1000 ppm. The approach concentrates on the physiological and nutritional implications rather than on the analytical methodology that has been employed in obtaining the wide spectrum of information summarised and discussed in the reviews. The book is presented in the form of four major sections.

Chapter 1, contributed by Renner *et al.*, is a general review of micronutrients in milk, including comparisons between cow's milk, human milk and milks of other species. Major subdivisions, virtually chapters in themselves, cover the lipid, protein and carbohydrate micronutrients, minerals and trace elements, vitamins, enzymes, organic acids and hormones. With the extensive referencing of such a wide field a variety of units are used, though in many sections the authors have sought to help the reader by quoting equivalents, e.g. mg/litre and μM.

Chapter 2, contributed by Scott, reviews micronutrients in milk products, dealing with the interaction between the processing and the components. This section is primarily concerned with cow's milk.

Chapter 3, by Harzer and Hasche, contributed a major section (114 pages) on micronutrients in human milk. This section complements and considerably extends the review in the first chapter.

The final chapter, by Hurrell *et al.*, reviews the application of the body of knowledge to the provision of micronutrients in infant formulae. This covers the modification of cow's milk to provide micronutrients at levels more closely approximating to those in human milk and, in feed for preterm babies, to provide a feed that should more closely meet these special needs. The nutritional considerations form a major part of this review.

The text is extensively referenced, covering the period up to and including 1987. Summary tables and graphs are used extensively but chemical structures are omitted.