Additions and Corrections

Enantioselective Total Synthesis of Gracilins B and C Using Catalytic Asymmetric Diels–Alder Methodology [*J. Am. Chem. Soc.* **1995**, *117*, 9616–9617]. E. J. COREY* AND MICHAEL A. LETAVIC

Page 9617, column 2, line 5: 2-*endo*-hydroxy-3-*exo*-acetoxytetrahydrofuran should be 2-*endo*-acetoxy-3-*exo*-hydroxytetrahydrofuran.

Supporting Information: Corrected pages 3, 14, and 16 of the supporting information (3 pages). This material is contained in many libraries on microfiche, immediately follows this article in the microfilm version of the journal, can be ordered from the ACS, and can be downloaded from the Internet; see any current masthead page for ordering information and Internet access instructions.

JA955029V

Book Reviews

Enediyne Antibiotics as Antitumor Agents. Edited by D. B. Borders (BioSource Pharm, Inc.) and T. W. Doyle (OncoRx, Inc.). Dekker: New York. 1995. xii + 461 pp. $165.00. ISBN 0-582-06420-1.

The first reports in 1987 of the structures of esperamicin and calicheamicin came as an enormous surprise and boost for natural products chemistry in general. Since that time a large number a papers have appeared that describe the biology, structure, mechanism of action, and synthesis of enediynes. The once esoteric backwater of physical organic chemistry quite suddenly became the new lead structures for the design of antitumor agents. Predictable? Unfortunately not. Nature is well adhead of homosapiens in the design of biologically active molecules and will remain so for many generations of scientists to come.

With so much information being published in such a relatively short period of time, it is very pleasing to see the vast majority, if not all, of the key papers collected together and reviewed by experts in the area. The contents of this book are as follows: Part I. Calicheamicins, The Biochemical Induction Assay and its Application in the Detection of the Calicheamicins. Taxonomy, Fermentation, and Yield Improvement. Identification, Isolation, and Structure Determination. Disulfide Calicheamicins and the Chemistry of the Allylic Trisulfide Group. Preparations of Conjugates to Monoclonal Antibodies. Genetic Analysis of Calicheamicin Biosynthesis. Biological Activities of Calicheamicin. DNA-Cleaving Properties of Calicheamicin γ_1^I. Part II. Fermentation and Isolation of Esperamicins. Structure Determination of the Esperamicins. Biosynthesis of Esperamicin. Mechanism of Action and Molecular Modeling for Esperamicin A_1, Calicheamicin γ_1^I, and Dynemicin A. Biological Properties of Esperamicin and Other Enediyne Antibiotics. Part III. Dynemicins. Part IV. Neocarzinostatin: Chemical and Biological Basis of Oxidative DNA Damage. The Clinical Effects of Neocarzinostatin and its Polymer Conjugate, SMANCS. Part V. Synthetic Methodologies. Synthetic Studies of the Enediyne Antibiotics.

While one could quibble that the format of the book has been determined by the Bristol-Myers Squibb and Lederle groups describing their respective efforts on esperamicin and calicheamicin and that this could have been combined into a single chapter. However, it is a small point that in no way detracts from the usefulness that this book will have for chemists and biologists who are interested in enediyne compounds. There is the usual surfeit of structural drawing errors that abound with computerized drawing programs, but none is sufficiently bad as to be misleading. Overall, this is a timely and high-quality treatise which will be used by a relatively narrow audience, and hence the high price.

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JA955136P

Studies in Natural Products Chemistry, Vol. 15, Structure and Chemistry (Part C). By A. U. Rahman (University of Karachi, Pakistan). Elsevier: Amsterdam. 1994. xv + 577 pp. $322.75. ISBN 0-444-82083-3.

The fifteenth volume of the Atta-ur-Rahman series on natural products provides 14 chapters addressing a variety of elements from the tapestry that comprises this discipline including isolation, structure determination, structure–activity, detection, and biological activity.

Chapters on structural diversity by Capon (marine sesquiterpenes and quinones) and Tsantrizos (*Phompsis* metabolites) reveal the ever-expanding variety of natural products from all sources. This overview is strengthened by chapters describing specific classes of natural products and their structural variations from defined sources. In this area, the chapters by Minale bring together a valuable extensive collection of structural information on saponins from the Echinoderms; by Takeda and Ghisalbeti, on terpenoids from *Rabdisia* and from *Eremophila*; by Takayama and Saito, on alkaloids; and by McInerney, on biologically active dihydroisocoumarins.

A third theme on the isolation and detection of natural products is illustrated by chapters on saponin structural elucidation which nicely complements that of Minale's on structural variation and a report on the circular dichroism of carbohydrate complexes. Finally, consideration of the biological activity of natural products is provided by reviews on natural products with pronounced sweet taste by Kinghorn; on the antimicrobial activity of amphibian venoms by Habermehl; on cardenolide detection by ELISA by Yoshimatsu; and on oncogene function inhibitors by Umezawe.

Each of the chapters is produced by a recognized expert in their respective field and there is a wide variation in presentation styles from a catalog of natural products to incisive commentary.

This book and others in the series are characterized by a broad approach to the many classes of natural products, and each contain chapters that will be standard references for many years. On the other hand, one wonders if is this the best format for the publication of extensive spectral data at 56 cents per page!

The book is produced from camera-ready copy leading to a sometimes disturbing, variety of formats. It would be best if the editors required submission to future volumes in a standard format.