This book provides an up-to-date coverage of the subject and definitively is a useful reference for students, researchers working in this field, biochemists and biotechnologists.

John F. Kennedy
Marion Paterson

Studies in Natural Products Chemistry — Structure Elucidation (Part B), Volume 5. Edited by H. E. J. Atta-ur-Rahman, Elsevier Applied Science, Amsterdam, 1989. xiii + 906 pp. ISBN 0 444 88336 3. Price: US$224.00/Dfl.500.00.

The chemistry of natural products is one of the oldest branches of the chemical sciences. Natural products began to be studied in the first decades of the 19th century. Now, after nearly 200 years of study, natural products chemistry has keen interest continuously shown in it. This interest is in the actual or potential pharmacological activity to be found in antibiotics, coumarins, sugar, alkaloids, flavonoids, terpenoids and lignans, etc.

Nowadays, the sum of the total numbers of chemical compounds known is reaching 10 million. However, only about 50 have been clinically used as anti-cancer agents. Especially significant is that from those 50 compounds, around 35 are natural products, derived from natural products, or are related in some way to natural products.

The present volume is the fifth of the series *Studies in Natural Products*. It is the second volume which covers the area of structure elucidation of new natural products. *Studies in Natural Products — Structure Elucidation* contains 22 chapters which deal with the applications of modern spectroscopy techniques with particular reference to biologically important natural products including coumarinolignans, flavonoids, antimalarials (e.g. artemisinin), furanonaphthoquinones, quassinoids, triterpenes, isoquinoline alkaloids, indole alkaloids, insect pheromones, polysaccharides from fungi and lichens and marine natural products. Other areas which involve studies on carcinogenicity of estrogens, lignans biosynthesis, oligo(*N*-methylpyrrolecarboximide) antibiotics, polyketite antibiotics, antitumor, antifungal and herbicidal antibiotics, sterols, carotane sesquiterpenes, sesquiterpene quinones, prostaglandin synthetase inhibitors and avian hemoglobins are also covered in this volume. It provides a very good overview on the structure

elucidation of new natural products and an informative text for researchers and students working in the field. It could also provide updated information to pharmacological institutions.

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Eduardo H. M. Melo

Studies in Natural Products Chemistry — Stereoselective Synthesis (Part D), Volume 6. Edited by H. E. J. Atta-ur-Rahman, Elsevier Science Publishers, BV, Amsterdam, 1990. x+660 pp. ISBN 0 444 88566 8. Price: US$189.75.

Organic synthesis of complex natural products is becoming increasingly important because of their significant biological activity. During the last decade a greater emphasis has been placed on the development of stereoselective production procedures for the synthesis of these complex natural products.

In the past, basically natural products of plant origin were studied. However, for the last decade at least there has been an increase in the number of researchers of natural products of marine origin, and the synthesis of a large number and variety of compounds. The marine molecules can be grouped in medium and large size heterocycles and isolated carbocyclic systems in which the cyclization reaction is often the key step in the synthesis. Also, of great importance are polycarbocyclic systems because they represent the phase during which the carbocyclic framework is assembled. Therefore, this phase is considered in general the most prominent aspect of the synthetic sequence. Among the natural products of marine origin synthesized are: carotenoids, sterols, terpenoids, indols, etc.

In this book the synthetic studies of amphotericin B can be found for example, which is an important antibiotic belonging to the polyene macrolide class. This substance suppresses yeasts and fungi and has been widely and successfully used for the treatment of candidoses as well as in tumor therapy. The discovery of this compound has therefore been of great importance and necessity.

The content of this book also includes: synthesis of polycarbocyclic marine terpenoids, allenic and acetilenic carotenoids, synthesis of gibberellins and antheridiogens, fungal metabolites, sugar analogues, synthesis of peptidoglycan from bacteria, chemical defence in ants,