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Biosynthesis

Antibiotics: Volume IV

Edited by J. W. Corcoran
Springer-Verlag; Berlin, Heidelberg, New York, 1981
xii + 380 pages. DM 198.00

This volume IV of the series on 'Antibiotics' is the long missing update of 'Biosynthesis' edited in 1967 (vol. II). There has been an immense research activity since then, which is obvious when one compares both compilations. Whereas vol. II contained 32 very heterogeneous articles, J. W. Corcoran has managed to collect 16 more comprehensive treatments, with an average of 80 references dating almost exclusively within the last decade. Major primary contributors are assembled: E. P. Abraham and J. O. Sullivan (β -lactams); J. W. Corcoran (erythromycins); H. G. Floss (macrolides, isochromane quinones and some aromatic compounds); G. Lancine (ansamycins); U. Horneman (methylenomycin, mitomycins and streptozocin); L. H. Hurley (pyrrolo(1,4)benzodiazepins); C. R. Hutchinson (tetracyclines and anthracyclins); K. Kurahashi (peptides); S. Omura (16-membered macrolides); C. J. Pearce and K. L. Rinehart

(aminocyclitols); R. J. Suhadolnik (nucleosides); and J. W. Westley (polyethers). Most studies have not yet approached a biochemical level of genetic and enzyme studies but are primarily concerned with the construction of the complex compounds from specifically labeled precursors in vivo or sometimes in vitro. This pathway elucidation is a prerequisite for further biochemical characterization and, as has been repeatedly documented, of use for the organic chemist in the design of biomimetic reactions. This book can be recommended to all individuals involved in structural elucidation and synthesis of natural compounds, in the study and production of antibiotics and related bioactive compounds from biological or chemical backgrounds. It is the only available text on biosynthesis of the broad spectrum of antibiotic structures.

H. Kleinkauf

Affinity Chromatography – Bioselective Adsorption on Inert Matrices

Monographs on Chemical Analysis: Volume 59

by William H. Scouten
Edited by P. J. Elvig and J. D. Wienfordner
Wiley Interscience, New York, 1981
xiv + 348 pages. £27.05

This book is divided into 11 chapters which cover: basic concepts; matrices and spacer arms; synthetic methods; quantitative approaches; group-specific ligands; covalent chromatography; bioselective desorption; nucleic acid chromatography; hydrophobic chromatography; and two miscellaneous chapters

covering antibodies, protein-protein interactions and other applications. The publishers note on the cover states that the book 'is presented in easily understood language and offers a much simplified treatment of the concept of affinity chromatography' – a statement which I find entirely reasonable. The lucid style

is a pleasure to read and the text is comprehensive. However, my reading was marred by the very large number of typographical errors — over 200 in a relatively short text must ultimately be blamed on the author, but the fact that the printer's name is left off the frontispiece probably hides a multitude of sins! Forty-six formulae are sadly incorrect containing a variety of curiosities. Perhaps the most amusing of which is cyclohexane rings with delicate 'S's in their centres (p.80)!

The author clearly does not intend the book to be a highly up-to-date review of the latest advances, which may be found elsewhere. What the book does very well is to explain the principles of affinity chromatography to the uninitiated in a very digestible manner. One feature of the book which I found to be most helpful is the extensive set of recipes dealing

with immobilisation techniques, and preparations of spacers; a wide selection of useful tables is included such as side-chain reactivities of amino acids, and eluates for immunoadsorbents. I was disappointed to read the section on affinity partitioning which I did not feel gives credit to recent work of Kula and her group. I found the over-use of 'per se' a little heavy, but these criticisms are unimportant, looking at the book as a whole.

There are now at least 10 books in affinity chromatography. This latest and welcome addition will fill an important gap in the teaching of the subject at the undergraduate level and furthermore will be a useful cookbook on the practical side at the research level.

P. D. G. Dean

The Biochemistry of Parasites

Edited by G. M. Slutzky
Pergamon Press; Oxford, 1981
viii + 228 pages. £16.70

This is a deceptively titled book for it is actually the proceedings of a satellite conference of the 13th FEBS meeting held in Jerusalem in 1980. The topics covered are necessarily selective and are unevenly divided between parasite membranes (8 papers) and metabolism (protozoal, 2 papers, and helminth, 2 papers) plus 1 paper on immunostimulants and a number of abstracts related to the 2 major areas. There is no apparent theme although a proportion of the papers is devoted to leishmaniasis but overall there is little in the volume that cannot be obtained elsewhere and the index is so brief as to be virtually worthless. Nevertheless, this book does give biochemists some indication of the kinds of things that

parasitologists are trying to do and it is certainly worth glancing at for this purpose. For anyone who wants to look properly at this subject, however, he or she would be better advised to read *Biochemistry of Parasitic Helminths* by J. Barrett (Blackie, Glasgow, 1981) or the proceedings of the 3rd International Symposium on the Biochemistry of Parasites and Host Parasite Relationships (*The Host—Invader Interplay*, edited by H. van den Bossche, Elsevier Biomedical, Amsterdam, 1980) which is over 3 times as big as Slutzky's book, much more wide ranging and informative and much better value for money.

F. E. G. Cox