

Hormones and their Actions: Part 1

Edited by B.A. Cooke, R.J.B. King and H.J. Van der Molen

Elsevier; Amsterdam, 1988

xiii + 293 pages. \$105.25, Dfl.200.00

This book is volume 18A of the New Comprehensive Biochemistry series edited by Neuberger and Van Deenen. The first 10 Chapters deal with general features of hormones and their actions, the remaining 5 describe specific actions of steroids. Each Chapter has a different author and is a concise and readable review complete with bibliography of up to 100 references. Despite the multiple authorship the style of presentation is consistent and clear. The emphasis is firmly on various aspects of receptors and events leading to gene expression but other intracellular events such as steroid biosynthesis and metabolism of internalised peptide hormones are also dealt with.

From its style, the book is aimed at students who already have a reasonable background knowledge of the subject but need to be brought up to date

and given some indication of the probable direction of future work. To achieve this the authors have generally included enough data and practical detail to sustain the pace of the text whose primary role is obviously to give a general review. Two of the Chapters, those on the purification and characterisation of receptors, deal with some of the practical issues and are timely reminders that esoteric theory is one thing but obtaining unambiguous laboratory evidence may be quite another.

The volume is slim and easily portable. One obvious disadvantage is that for its size the book is very expensive. That could be the major factor against it for the private reader or specialists buying a copy for their research group.

Keith Burdett

Synthetic Peptides in Biotechnology

Edited by A. Mizrahi

Alan R. Liss; New York, 1988

xi + 233 pages. \$69.50

This work forms the tenth volume of the series 'Advances in Biotechnological Processes'. All previous volumes have been edited by Mizrahi. There are 9 chapters which cover a wide range of peptide chemistry, although some of the chapters would appear to be out of place in a textbook on biotechnology.

In the preface the editor claims that the book 'offers a comprehensive view of the chemical and enzymatic production of synthetic peptides'. Unfortunately the book fails badly in this important aim. The chemical synthesis chapter only presents

information on solid phase synthesis and this, with the exception of a single 1986 reference, is rather dated. Only 13 references are associated with the chapter, the figures are crudely produced and several careless phrases such as 'strong organic solvents' and '3m excess' appear. The second synthetic chapter 'Recent Developments in Enzymatic Synthesis of Peptides' covers a rapidly moving subject, but unfortunately many of the references are again, rather dated. There are only four references after 1985 and some key papers and reviews published in that year are not quoted.

Chapters 2, 3, 4, 5 and 7 cover aspects centred on the use of peptides in vaccines and in the immunodiagnosis of viruses. These chapters are generally well written, up-to-date and contain much useful reference material. The general overview by S.J. Barteling is particularly informative (206 references, over 40% being 1985 or later).

Chapters 5 and 9 are unrelated to the rest of the book. Chapter 5 is a fascinating article on fluoropeptides – which will be of great interest to

the synthetic chemist, but less so for biotechnologists. Likewise chapter 9 concerns enkephalins and is of more relevance to the medicinal chemist and pharmacologist.

The editor has not completely succeeded in his claim to have presented a state-of-the-art analysis of the role of synthetic peptides in biotechnology.

R.C. Hider

Bacterial Cell Surface Techniques

By I.C. Hancock and I.R. Poxton

Wiley; Chichester, 1988

xvi + 329 pages. £40.00

This book is a multiauthor text with approximately 40% being written by the two named authors and the rest by 14 other experts who have contributed to parts of chapters. It is the second in a series of books whose stated aim is to stimulate the development of microbiology by 'promoting the use of new and updated methods'. I suspect that no book on practical methods is likely to encourage new practitioners, but instead will be read only by those who are already involved in matters microbiological. For such a readership this present volume represents an excellent compilation of the methodology associated with a wide range of aspects of research into the surface structures of bacteria.

The opening two chapters deal with bacterial wall/envelope structures and bacterial culture. These provide good short reviews of the subjects and give the general background to the rest of the book. The next two chapters concentrate on methods for isolating cell walls/envelopes and their individual components, followed by a chapter on the chemical analysis of polysaccharides, peptidoglycan, lipopolysaccharides and other wall polymers. The next chapter deals with immunological methods that are used in the analysis of cell surfaces. The last chapter is a miscellany of methods and applications related to adhesion, vaccine development and diagnostic assays. There are two appendices, the first on general methods and

the second giving a list of major suppliers' names and addresses.

These chapters contain many well-tryed and established methodologies as well as those which have been developed only recently. However, although the book will find justified use as a practical manual in laboratories, it is more than a compilation of recipes. There is a lot of useful background information and the methods are generally presented in a critical manner with indications of their limitations and some of the problems that might be encountered.

Overall I was pleased with both the content and the approach of this book, despite the fact that the information is usually available in other sources such as *Methods in Microbiology*. What this volume does is to bring together in a critical and informative manner those techniques specifically related to bacterial cell surfaces. Inevitably there are omissions: personally I would have liked to see more about Gram-negative membrane preparation. The archaeobacteria are given scant coverage, and no doubt other readers may find that their particular specialist bacterium is not mentioned. Nonetheless the coverage is broad but detailed and authoritative. I would certainly recommend that anyone already carrying out or embarking on a study of bacterial surfaces should purchase a copy.

N.J. Russell