

BOOK REVIEWS

MTP International Review of Science. Biochemistry Series One, 12 volumes

Consultant Editors: H. L. Kornberg and D. C. Phillips. Each volume is published at £10.45 and contains 300–400 pages. Butterworths; London: University Park Press; Baltimore

The aim of this Review of Science is to provide a comprehensive, critical and continuing survey of progress in research. Insofar as the series on biochemistry is concerned, the editors state the volume of the literature in the molecular aspects of biology is such that it is threatening to overwhelm the reader so that any one person cannot appreciate the advance of the subject as a whole. It has, therefore, been the aim of each Editor and the contributors to each volume not only to provide authoritative and up-to-date reviews but carefully to place these reviews into the context of existing knowledge so that their significance to the overall advances in biochemical understanding can be understood also by advanced students and by non-specialist biochemists. It is expected that further or revised volumes will appear from time to time.

The reviewers are all members of the Staff of the Department of Biochemistry at the University of Leeds. It was thought that it might be interesting for a group of biochemists who are actively concerned with teaching biochemistry to a wide range of undergraduates to assess to what extent the volumes succeed in the objectives laid down by the Consultant Editors. The verdict seems to be that the quality of both the editing and contributions is patchy. Some of the volumes are outstanding, especially no. 10, others succeed to a reasonable degree, but in our view five fail in their objective. Much of the fault must be the responsibility of the volume editors. The volumes are well produced and the good ones are a sound investment for the departmental library.

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*MTP International Review of Science. Biochemistry Series One. Vol. 1.**Chemistry of Macromolecules*

Edited by H. Gutfreund

Butterworths; London: University Park Press; Baltimore, 1974

ii + 411 pages. £10.45

In spite of the general title, this volume is concerned almost exclusively with proteins. Coverage of other types of macromolecules is planned for future volumes. The book contains several excellent chapters which will prove interesting and informative reading at both undergraduate and research levels. However, if judged as an attempt to present an integrated view of proteins the book is not wholly successful. There is a general lack of coordination between the various chapters and a considerable element of repetition of material. For example, the basis of X-ray crystallography is discussed independently in chapters 2, 3 and 8 as is the structure of the non-haem iron proteins in chapters 2 and 6. In the latter case the overlap goes so far as to include the repetition of diagrams, figs 2.2 and 6.10 being identical. Some of the diagrams, especially those in the first part of the book depicting protein structure are of poor quality and difficult to interpret.

Chapter 1 on "Proteins and Evolution" certainly merits inclusion in the volume and contains some useful information and ideas, but is longer than is

necessary to develop this theme. Chapters 2 and 3 on "Three Dimensional Structure" and "Sub-unit Symmetry" are well written, but would have had more impact had they been combined into one chapter. Chapters 4, 5 and 6 on "Protein Conformation in Solution", "Chemical Modification" and "Metallo-proteins" are well balanced, useful articles. Chapter 7 is a good, concise account of the equilibria and kinetics of ligand binding to proteins. Chapter 8 on "Regulatory Phenomena" is a well written self contained article but the first two-thirds of the text is largely repetition of material in other parts of the book. Chapter 9 is an excellent review in a short space of the role of physical methods in determining protein structure. The final chapter "Proteins as Devices" represents an attempt to draw the rest of the book together but might have been more successful in this role, had it appeared at the beginning.

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*MTP International Reviews of Science. Biochemistry Series One. Vol. 2.**Biochemistry of Cell Walls and Membranes*

Edited by C. F. Fox

Butterworths; London: University Park Press; Baltimore, 1975

ii + 316 pages. £10.45

It is symptomatic of the recent progress in membrane related research that a subject which a

decade ago would have occupied little more than one or two chapters in a review on lipids, now commands