

Peroxisomes and Glyoxysomes

Edited by R. Kindl and P.B. Lazarow

Annals of the New York Academy of Sciences Vol. 386, New York Academy of Sciences; New York, 1982
xii + 550 pages. \$102 (approx. £62)

Interest in peroxisomes and glyoxysomes has increased recently with the discovery that part of the metabolic pathway of β -oxidation of fatty acids in animal tissues is located in the former organelles. Other thriving research areas include the mechanism of organelle assembly, the effects of hypolipidaemic drugs on peroxisome proliferation and the peroxisomes of brown adipose tissue.

The current volume, one of the 'Annals of the New York Academy of Sciences' series is based upon the proceedings of a conference held in September 1981. It has thus appeared reasonably quickly. All aspects of peroxisome and glyoxysome metabolism are covered, and most authors took the trouble to place their work in context. An

especially useful feature of the book is the carefully edited discussions that follow each chapter; these often contain new and useful information as well as highlighting areas of disagreement.

I enjoyed this volume and would recommend it highly to anyone interested in the field. My two major points of criticism are the price, which seems excessive for a soft-bound volume, and the absence of a subject index. The book does have an index of contributors but a subject index, although harder work to compile, would have been far more useful.

B. Halliwell

Plant Virology *(Second Edition)*

by R.E.F. Matthews

Academic Press; New York, London, Toronto, Sydney, San Francisco, 1981
897 pages. £39.40. \$60.00

This book is by far the best textbook on plant virology available. The updated edition will be warmly welcomed by students and teachers in plants virology and also by those in the field of plant pathology, microbiology, general virology and biochemistry.

In this book all aspects ranging from symptoms, transmission and control of viruses to virus isolation, architecture and expression are covered on a level adequate for graduate students. The book is

written with notable lucidity, is well illustrated and has a good index. Due to the extensive bibliography (more than 2500 references, predominantly of recent papers) it will also serve as a useful reference book for research workers in the fields mentioned above. Important methods are briefly, but clearly outlined with their assets and limitations. Enough biological background is given, so that non-biologists can profit from this book without having to resort continuously to

other textbooks. A clear example of this is for instance the way in which disease symptoms and movement of viruses through the hosts are presented in relationship to the growth patterns of mono- or dicotyledons. Another good example can be found in the chapter on transmission of virus by insects, where the feeding behaviour and the relevant anatomy of the insects are clearly described.

Compared with the previous edition the main differences are found in the chapters dealing with virus architecture, organization and expression of plant virus genomes and replication of viruses in protoplasts. In all these fields progress has been rapid and an enormous amount of data has appeared in the last 10 years. Presentation of too much details might have led to confusion of the reader. Matthews has succeeded in presenting a coherent general picture together with enough details on the different virus groups to avoid overgeneralization.

This book reflects the profound knowledge of plant virology acquired by Matthews during his more than 30 years research in this field. It represents an unique fusion between the older knowledge of phytopathology with the more recent understanding of the molecular biology of plant viruses.

The only disadvantage about this book is its price. For a well-illustrated book of this size, the price is not unreasonable. However, one has to realise that this is not a book for just reading once and putting it back on the shelf in the library, it is a book that people will want to keep close at hand. Therefore a cheap student edition is urgently needed. It is to be hoped that the publisher will produce this as soon as possible so that more people can profit from this excellent book.

L. van Vloten-Doting

Handbook of Enzyme Inhibitors (1965–1977)

by M.K. Jain

John Wiley & Sons; New York, 1982

ix + 447 pages. £73.50

The title of this book is almost (but not quite) self-explanatory. It contains information gleaned from over 6000 pages published in about 30 journals during the relevant years. The first 380 pages contain an alphabetical list of inhibitors followed by the enzyme being inhibited and its source, the type of inhibition observed (e.g., competitive), the inhibition constant, the reference (all authors but only first page given) and sometimes a short comment (up to three lines). The next 65 pages contain an alphabetical list of enzymes and the names of the ligands to be found in Part I, which inhibit them.

It is a staggering achievement for one person to have compiled such a list. There are, however, several questions one could ask: (1) Has it been done well, which really means is it comprehensive

and easy to use? (2) What use is it? (3) Is it worth £73.50?

As far as I can tell the answer to both parts of (1) is yes. For example, there are 13 examples of RNA polymerase inhibition by alpha-amanitin; clofibrate has 17 references including bile acid output, cholesterol synthesis, fatty acid synthesis, HMG CoA reductase, lipid synthesis, sterol synthesis and triglyceride levels; prostaglandins have over 50 references. While the total number of papers using these as inhibitors for a particular metabolic investigation may be 10 or 100 times these numbers, the papers listed are these which discuss the interaction from an enzymological standpoint. The two alphabetical lists are very straightforward to consult.

The question of what use is it is a little more dif-