

Venoms: Chemistry and Molecular Biology

by Anthony T. Tu
John Wiley and Sons; New York, 1977
x + 560 pages. £25.90, \$43.00

There are numerous specialized books on animal venoms and toxins available, like reports on symposia and congresses, the three volume set edited by Bücherl et al., 'Neuropoisons' by Simpson et al., the monumental monograph by Halstead on poisonous and venomous marine animals and others. There are also popular booklets, e.g., Habermehls 'Gift-Tiere und ihre Waffen'. However, for about 20 years no updated, comprehensible book existed, which would specially interest, e.g., undergraduates for this field of research. Now A. T. Tu had the courage to write a full-sized, single-author book on animal venoms. Beyond any doubt, Tu is fully qualified for this difficult task. He is author of numerous publications on snake venoms and his seminars are well known for their lucidity.

Since about 80% of papers on animals venoms deal with those of snakes, 27 of the 32 chapters of his book are devoted to this subject. The monograph starts with a chapter on low molecular substances. The following eight chapters summarize our present knowledge on the enzymes of snake venoms. The next part covers general qualities of

venoms in relation to the zoological taxonomy, aspects. The remaining 5 chapters deal with the venoms of scorpions, spiders bees and wasps, ants and of the lizard Gila monster. Only venoms with well-known chemical structure are considered. There are no data on venoms (or toxins) of cnidaria, echinodermata, mollusca, arthropods not mentioned above, venomous rays and pisces or mice.

There are indices by subjects and species, but not by authors. The approx. 2300 references are amazingly well up-to-date. Author and publisher obviously hastened to come out with the book. There are some misprintings, like page 436 'herapin' instead of 'heparin' and hidden errors, e.g., page 524, line 7 'Intern. Encyclo. Pharmacol., Spring Verlag' should be replaced by 'Handbook of Pharmacology, Vol. 48, Springer-Verlag'.

Most parts of the book are well comprehensible for students, it is enjoyable to read and very helpful as a source of information and literature for the specialist.

Heribert Michl

Bioenergetics of Membranes

Edited by L. Packer, G. C. Papageorgiou and A. Trebst
Elsevier; Amsterdam, New York, 1977
x + 538 pages. Dfl 150, \$61.25

This book consists of the contributions presented at the International Symposium on Membrane Bioenergetics, held on the Greek island of Spetsai. The Symposium was attended by a wide cross-section

of scientists working on membranes in diverse systems.

Perhaps the most useful feature of such a meeting is the opportunity it affords for discussion and constructive criticism. It is thus unfortunate to find that,

apart from one very short summary, this volume makes no attempt to report the discussions that must have followed each paper.

The papers presented in this book are, as one might expect, of variable quality. Most of the material, however, has either already been published in conventional journals or (on the authors' own admission in

the text!) has been submitted for publication.

Hence these Proceedings will have only a very transient value and I would not recommend their purchase either by individuals or by libraries.

B. Halliwell

Cryobiochemistry: An Introduction

by Pierre Douzou

Academic Press; London, New York, San Francisco, 1977
x + 286 pages. £12.60, \$24.65

The idea of using low temperatures to slow up biochemical rates of reaction so that their detailed mechanisms can be disentangled is a very attractive one. This book reviews the work of a team who for several years have been attempting to develop the theoretical and practical basis for this type of procedure. It would have been more correct to entitle the book Cryoenzymology since this forms the main body of the approach. The book is excellent in that there is clear discussion of those conditions that are essential for the successful investigation of enzyme systems at sub-zero temperatures. In most circumstances mixed solvent media are necessary and much new basic information is given on the physical and chemical properties of mixed solvents. Other problems discussed are the preservation of solubility,

the avoidance of denaturation, the necessity for higher enzyme concentrations in order to maintain enzyme activity at low temperatures, and the vital point that the slowing of the reaction rates must leave the mechanism unaltered. The author then discusses direct experiments at low temperatures in which reaction mechanisms are determined from the spectroscopic analysis of stabilised enzyme-substrate intermediates. This book is clearly written and laid out and forms an introduction into what is essentially a new field, that will be of increasing interest in the future. It is highly recommended to biochemists interested in enzyme reaction mechanisms and also to all those working with biological systems at low temperatures.

John Farrant.

Comprehensive Biochemistry

Volume 32, part 4:
A History of Biochemistry

by Marcel Florkin
Elsevier; Amsterdam, New York, 1977
368 pages. Dfl 98.00, \$39.95

Molecular biology is a branch of science concerning biological activity at the molecular level. The field of molecular biology overlaps with biology and chemistry and in particular, genetics and biochemistry. and, Genetics is the study of genes, heredity, and genetic variation in living organisms. It is generally considered a field of biology, but it intersects frequently with many of the life sciences and is strongly linked with the study of information systems. Biochemistry and Molecular Biology (BMB) is a peer-reviewed and open access journal that provides an international forum for researchers, scholars and practitioners of biochemistry and molecular biology to share experiences and communicate ideas. It is to publish refereed, well-written original research articles that describe the latest research and developments in the area of biochemistry and molecular biology. Articles may discuss fundamental or applied issues, and should offer clear evidence of novelty and significance.Â Shamaladevi Nagarajarao Department of Chemistry, Everglades University Miami, Florida, USA. Shamroop Kumar Mallela Department of Medicine, University of Miami Miami, Florida, USA.

