

BOOK REVIEWS

Methods in Enzymology, Vol. 77, Detoxication and Drug Metabolism: Conjugation and Related Systems. Edited by WILLIAM B. JAKOBY, Academic Press, New York, 1981. \$45.00.

Volume 77 is a superb addition to the "Methods in Enzymology" series. William B. Jakoby has assimilated an unusually high caliber and consistently excellent group of contributors. This volume greatly exceeds the initial expectations derived from its title.

The book is divided into four sections: (I) Animal Organ and Cell Preparations, (II) Enzyme Preparations, (III) Assay Systems, and (IV) Synthesis. Most notable and long overdue in the "Methods in Enzymology" series is Section I on Animal Organ and Cell Preparation which is divided into three distinct subsections: (A) General Methods, (B) Organ Perfusion, and (C) Cells. The chapters comprising these three classes are, almost without exception, painstakingly detailed, excellently written, and present the most complete work of this treatise to date. The details incorporated in a majority of these chapters allow any dedicated investigator the ability to establish and perform the techniques described. Section I clearly establishes the requirement of this book for all libraries and laboratories associated with drug metabolism research/education.

Section II, Enzyme Preparations, presents methodology and purification procedures for all major enzymes of detoxication that catalyze the hydrolysis and conjugation of endogenous and xenobiotic compounds. Ex-

cellent detail of all standard enzyme purification procedures as well as the formulation/preparation of specialty items required are included in virtually all chapters. Generally, only a very brief introduction on each enzyme is provided. Therefore, I strongly recommend that "Enzymatic Basis of Detoxication," Vols. 1 and 2, Edited by William B. Jakoby, Academic Press, 1980, be acquired as companion texts to afford investigators the current biochemical, pharmacological, and toxicological overviews of each detoxication process.

Section III, Assay Systems, and Section IV, Synthesis, contain relatively few subjects. This is due to the limited availability of complete subject material. Again, as is the standard for this volume, sections are complete and well organized.

In summary, this book contains a graphic account of most enzymes and associated techniques useful to investigators interested in detoxication processes. The overall quality of information and advice offered in this volume is excellent. Section I, which deals with the techniques required for studying detoxication pathways with higher levels of biological organization, will be an invaluable asset and reference text for both beginning and advanced investigators.

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Methods in Enzymology. Edited by J. M. LOWENSTEIN, Vol. 71, **Lipids**, Part C, 896 pp., and Vol. 72, **Lipids**, Part D, 864 pp. Academic Press, New York, 1981. \$65.00 each.

Dr. Lowenstein's third and fourth volumes in the lipid series illustrate the many new advances in lipid biochemistry and the growing interest in this field on the part of other biochemists. There are 160 articles in the two books, as well as a list of most of the previously published volumes in the "Methods" series. Both books have generous subject indexes and lists of cited authors. The author citations are shown even for pages that do not mention them by name, only by reference number. This kind idea helps make the books a particularly useful key to the methodological literature.

The articles in Vol. 71 are on specific enzymes, particularly their purification and assay. The lipid enzymes cover a wide area—many are on fatty acid synthesis and metabolism, five are on hydroxymethylglutaryl-CoA, and a considerable number are on enzymes dealing with phospholipids. The glycolipid enzymes are definitely underrepresented (but see Vol. 28 on Complex Carbohydrates). Sterols and terpenoids (Vol. 15), lipid immunology, and lipid transport proteins have not been included in this set.

Volume 72 describes lipid methodology—methods of preparing naturally occurring lipids and inhibitors of lipid enzymes, separation and analytical techniques, and some enzyme assays. The uses and modes of action of the lipid inhibitors are given. It is impressive to see the