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Book Reviews

Pesticide Chemistry. Edited by A. S. Tahori, Gordon and Breach, New York, N. Y. 1971. Vol. II, *Insecticide Resistance, Synergism, Enzyme Induction*, with 20 contributors. viii + 302 pp. 16 × 23.5 cm. \$12.50. Vol. III, *Chemical Releasers in Insects*, with 24 contributors. viii + 227 pp. 16 × 23.5 cm. \$12.50.

The Second International Congress of Pesticide Chemistry, sponsored by IUPAC and by the Israel National Council for Research and Development, was held in Israel Feb 22–26, 1971. The proceedings of the 18 invited symposia and 14 workshop sessions on various aspects of the chemistry of insecticides, herbicides, and fungicides will be published as a six-volume set entitled "Pesticide Chemistry." The first three volumes relate to insect chemistry. Volumes II and III were published initially and Volume I concerned with insecticides has recently appeared.

The individual presentations vary in length and breadth but all are scholarly and thought provoking. The chapters in Volume II by Fumio Matsumura on the Biochemistry of Resistance to Insecticides, C. F. Wilkinson on the Mode of Action of Synergists, and by I. Ishaaya and W. Chefurka on RNA and Protein-biosynthesis Induction in Housefly Microsomes represent the high-caliber work reported in this volume.

Volume III covers insect hormones, pheromones, and defense substances. The discussion by Peter Karlson on the mode of action of ecdysone and juvenile hormone is an excellent summary of over a decade or work in his laboratory. Equally fine reviews are offered by Beroza, Silverstein, and Roelofs and Comeau on pheromones.

All of the papers are well documented and have sufficient introductory material to allow the nonexpert to grasp the significance of the presentations. Each chapter is preceded by an abstract and, in a few instances, followed by questions, answers, and comments. The composition is not uniform since the books were reproduced directly from original manuscripts. In a few cases structures and tables are minimal for perception by the naked eye, due to photoreduction of the originals. The variety of type and lack of a common format with regard to spacing of lines, citations, paragraph indentation, figure headings, etc., distracts from the volumes; however, these are minor drawbacks when judged against the wealth of current material offered by recognized experts in the field of insect chemistry.

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Methods in Cyclic Nucleotide Research. Edited by Mark Chasin with 11 other contributors. Marcel Dekker, New York, N. Y. 1972. x + 315 pp. 16 × 23.5 cm. \$15.75.

This book is not meant to be a comprehensive review but is a collection of methods important in cyclic nucleotide research. The volume is comprised of three main divisions—Assays of Cyclic Nucleotides, Enzymology of Cyclic Nucleotides, and Uses of Whole Cell Systems. The individual chapters of these divisions were written so that each could be used as a laboratory manual, and most of the authors seem to have been successful in doing this.

Part I concerning assays of cyclic nucleotides has a section which is interesting from a historical point of view describing the phosphorylase activation method for quantitation of cyclic AMP. This method was used by Sutherland and his coworkers in much of their work with cyclic AMP and is still used to some extent. Two of the assay procedures given for measurement of cyclic AMP (high-pressure chromatographic purification and ultraviolet monitoring of cyclic AMP and the luciferase-luminescence assay) are relatively time consuming and require fairly specialized equipment although these procedures can also be used for the quantitation of other nucleotides. Details of the immunoassay and the protein kinase binding assay for cyclic AMP are given including not only the actual execu-

tion of the assay but also the purification of protein kinase and the preparation of the antibody and [¹²⁵I] labeled cyclic AMP antigen. The high specificity for cyclic AMP, convenience, and rapidity with which these two assays can be carried out is well known.

The middle section of the book entitled "Enzymology of Cyclic Nucleotides" includes methods of working with cyclic GMP as well as with cyclic AMP. The preparation of membranes and fat cell ghosts for adenyl cyclase assay, as well as preparation and purification of material for assay of guanylate cyclase activity, is described along with the details of several ways of performing the two assays. The isolation and assay for activity of phosphodiesterase are also given. Isolation of cyclic AMP and cyclic GMP specific protein kinases is well described; however, the method given for determination of the activity of protein kinase involving precipitation, centrifugation, dissolution, and reprecipitation of the labeled protein seems rather laborious.

The third section of the book deals with the measurement of cyclic AMP in preparations of whole cells. Procedures are described for the isolation of fat cells and adrenal cortical cells responsive to agents which affect cyclic AMP levels. And finally, the problems of detecting cyclic AMP by producing radioactive pools of ATP in whole cells and tissues are examined. This chapter covers findings from a large number of tissues and might be useful as a short review of the literature on this subject.

Although many of the procedures described in this volume can be found in some form in the literature, the authors give more details here and quite often give warnings and hints which should save time and tempers. This, as well as the wide scope of the work, should make it quite useful as a reference volume.

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Drug Metabolism in Man. Edited by Elliot S. Vessell with 63 contributors. New York Academy of Sciences, New York, N. Y. 1972. 773 pp. 14.9 × 22.7 cm. \$35.00.

This volume represents the proceedings of a conference held in mid 1970 in which a reasonably successful attempt has been made to bring together a majority of the individuals who have and are making significant contributions to the study of drug metabolism in man. As might be expected from such a large number of contributors, the presentations run the gamut from broad outlines of the basic problems in the area to detailed studies of the metabolism of specific drugs and finally to a few presentations which would appear to be gratuitous as they have little to do with drug metabolism in man or animals.

Many of the general studies represent the collective efforts of numerous collaborators in the authors' laboratories and are valuable reviews of many basic problems both in the study of the basic mechanisms of drug metabolism at the cellular level and the overall metabolism of drugs in intact humans. Yet most of these reviews have been compiled to give a better understanding of current problems in the various investigators' laboratories rather than from a didactic point of view. Because of this, little attention has been paid to giving an overview of such important areas as the principles and pitfalls of pharmacodynamics or the role of conjugation in drug metabolism. For this reason this volume is definitely not a primer in drug metabolism. On the other hand, it is an invaluable collection of a number of well-rounded studies in drug metabolism in man which will often be cited in the years to come. It is, therefore, a volume which should be of great value to anyone who has an active interest in this area but it cannot be recommended as a general text.

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