

## Book Reviews

**Lipid Pharmacology. Volume II.** Edited by R. Paoletti and C. J. Glueck. Academic Press, New York, N.Y. 1976. xv + 326 pp. 15.5 × 23.5 cm. \$27.50.

This second volume, issued as *Medicinal Chemistry*, a series of monographs, volume 2-II, appears 12 years after the first and much new basic knowledge has been gained in that period of time, particularly in human pharmacology. While the first volume dealt primarily with experimental drug substances and animal pharmacology, the present volume deals only with drugs in clinical use and with clinical pharmacology, diagnosis, and treatment of disorders of lipid metabolism. Chapter 1, Clinical Evaluation of Atherosclerosis (by G. Schettler and H. Mörl), gives a descriptive account of various forms, symptoms, and degree of severity of this disease. Chapter 2, Essential Fatty Acids—Recent Developments (by R. B. Alfin-Slater and L. Aftergood), updates concisely this very active field of ongoing research, including discussions of the relationship of EFA to brain development, platelet aggregation, cholelithiasis, and prostaglandins. Chapter 3, Evaluation of Hypolipidemic Drugs in Man (by T. A. Mietinen), summarizes clinical methods of measurement of cholesterol and triglyceride metabolism and discusses the mechanism of action of lipid-lowering agents: ion-exchange resins, neomycin, plant sterols, clofibrate, nicotinic acid, thyroid hormones, and probucol. The clinical use of these drugs is dealt with in Chapter 4, Dietary and Drug Regulation of Cholesterol Metabolism in Man (by S. M. Grundy), which also gives a detailed account of dietary regulation and therapy. Chapter 5, Diet and Drugs in Obesity Control (by D. L. Azarnoff and D. W. Shoeman), includes brief discussions of high-protein, high-fat, and low-carbohydrate diet and drugs such as dinitrophenol and thyroxine, chorionic gonadotropin, biguanides, amphetamine, amphetamine-drugs, fenfluramine, aminorex, and mazindol. Chapter 6, Ethanol and Lipid Metabolism (by C. S. Lieber), reviews the immediate effects of the oxidation of ethanol on lipid and intermediary metabolism and adaptive changes (tolerance, fatty liver, hepatomegaly, cirrhosis) following chronic ethanol consumption in humans and in animal models. Chapter 7, Cholestyramine and Ion-exchange Resins (by H. R. Casdorph), gives a very thorough review of the clinical use of cholestyramine. It contains a considerable amount of original clinical data (by the author) on long-term cholestyramine use, including data on single-dose administration and side effects. Chapter 8, Treatment of Hyperlipoproteinemias in Children (by C. J. Glueck, R. W. Fallat, and R. C. Tsang), reviews data on the incidence of pediatric hyperlipidemias (acquired and familial) and recommendations for diet and drug therapy. Chapter 9, Femoral Angiography to Evaluate Hyperlipidemia Therapy (by D. H. Blankenhorn), gives a concise review of this technique, the difficulties of interpretation, and its first use for evaluation of hyperlipidemia therapy.

Due to the propitious selection of topics and distinguished authors, each of the nine chapters presents complex subject matter in a thorough, authoritative, yet clear and concise, fashion. A balanced presentation of relevant findings is emphasized, providing perspective as well as access to literature sources. This book should be useful to teachers, graduate students, and researchers in medicine, biochemical pharmacology, and medicinal chemistry working in the field of lipid pharmacology and on diseases related thereto. Chapters 3–5 are particularly useful to those involved in drug research. References date well into 1975. The printing is immaculate and author and subject indices provide for cross reference.

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**Progress in Medicinal Chemistry. Volume 13.** Edited by G. P. Ellis and G. B. West. North Holland Publishing Co., Amsterdam and Oxford. 1976. x + 357 pp. 15 × 22.5 cm. \$43.95.

When one purchases an expensive book that promises to illuminate the progress of medicinal chemistry, one has a right to expect information indicated in the title of the volume. It is therefore bewildering to find in the 357 pages of this book a chapter of 158 pages with 1371 references on clinical enzymology which, even by the most generous definition, has nothing to do with medicinal research. Instead, it discusses rather primitively instruments and techniques of enzymology and methods of assay of 12 classes of enzymes and their isoenzymes. Included also are clinical and diagnostic implications of concentrations of such enzymes, as well as a few selected enzymic abnormalities in genetic disorders. It is difficult to fathom why this chapter—almost one-half of the book—has been sneaked into a medicinal review, where it will not be read but remain inaccessible to clinicians who would look for such an article in compendia on clinical biochemistry.

The second chapter, dealing with the release of pharmacologically active substances in parasitic infections (45 pages, 283 references), is almost as lacking in medicinal pertinence. After a low-level recital of infectious parasites and of the kinin system, a detailed account is given of the release of histamine, 5-HT, catecholamines, AcCh and AcChE, slow-releasing substance, and prostaglandins in anaphylaxis, parasitic infections, and after chemotherapy. This chapter confirms the well-known fact that parasitic cells and organisms release all kinds of chemicals, indifferent and toxic ones, into the circulation and tissues of the host. This chapter does not even allude to what one can do about that without medicinal interference with the parasite's life processes.

Finally, after 204 pages of all this, the book turns in the right direction. The best of the remaining three chapters, written by G. D. Daves and C. C. Cheng, covers the chemistry and biochemistry of C-nucleotides. Both the 11 naturally occurring C-nucleotides, six of which are antibiotics, and numerous synthetic analogues are described with the care and thoroughness one has come to expect of C. C. Cheng's writings. A good balance is maintained between the organic chemistry and synthesis of these compounds and their inhibitory activities.

Another chapter covers the medicinal chemistry of 1,2,3-triazines, both monocyclic and condensed derivatives. Although no 1,2,3-triazines have yet made it to clinical utility, their analogies to similar compounds with diverse pharmacological activities suggest further research in this structural area. Tables listing experimental biological activities of 23 types of 1,2,3-benzotriazin-4(3H)-ones could serve as a starting point for such projects. It would have been nicer if the reader, presumably a specialized medicinal chemist, would have been presented with a more sophisticated account of triazine chemistry. The derivation of *vic*-triazines from diazonium ions and the suggestions concerning diazo coupling of macromolecules in affinity labeling are within the confines of undergraduate chemistry students.

Included as a special chapter is a review of glutaraldehyde. This compound is used in tanning, sterilization, disinfection, and tissue fixation for electron microscopy. Anyone interested in this substance will find here an adequate discussion of its chemistry and biological uses documented by 171 references.

The second half of this volume will be useful to some medicinal chemists. It is to be hoped that the progress in our field will be given preference in all of the pages of future numbers of this series.

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