BOOK REVIEWS

TWO NEW REVIEW VOLUMES

A. Progress in Drug Research. Vol. 2. ERNST JUCKER, Editor. Interscience Publishers, Inc., New York, N. Y., 1960. 636 pp. 16 × 25 cm. $22.50.

The second volume of this series continues to offer several comprehensive review articles written by experts in their respective fields. No attempt has been made to include all compounds ever prepared and tested in a given series, but broad factual and critical reviews listing the most representative substances in support of each theory or activity are presented. In this class of articles one finds Newer Diuretics by K. H. Beyer and J. E. Baer; Anabolic Steroids by B. Camerino and G. Sala; and Quaternary Ammonium Salts, by C. J. Cavallito and A. P. Gray. These subjects, written in English, offer up-to-date authoritative multi-facet and well documented reviews. This holds also for three articles in German: The Significance of Indole Structures in Medicine and Biology by A. Cerletti; Ganglionic Blocking Agents, by K. Nador; and Monoamine Oxidase Inhibitors by A. Pletcher, K. F. Gey and P. Zeller. However, neither the biochemically nor the therapeutically significant drugs have been distinguished adequately in these last three articles from the informative but purely empirical data derived from countless laboratory tests and test compounds. This holds even more so for an article by D. W. Woolley on Antimetabolites and Their Revolution in Pharmacology. The almost passionate defense of antimetabolites as "the" working principle of drug research and drug design overlooks the limited good that has come from this approach; also, only a segment of the antimetabolite field is considered, and only a scattering of references accompanies the text of this rather biased chapter. W. A. Sexton reviews facts and fancy of the biogenesis of a few antibiotics; this fascinating intellectual search for biogenetic pathways is, of course, only of small value at present for an understanding of the therapeutic properties of antibiotics. Finally, W. Kuntz gives one of his well-known annual surveys of newly introduced therapeutic agents from all parts of the world. It leaves the reader somewhat unhappy to realize how few novel ideas arise in a year's time, and how many gifted scientists are occupied with imitating each other's efforts, and developing drugs for economical reasons primarily. Nevertheless, in an age when the literature of borderline fields has outdistanced the ability of any individual to keep abreast of even his own specialty, chemists and biologists concerned with every aspect of therapeutic agents will want to have this volume on their desk for authoritative reference. Good paper and a fine printing job combine to make this book a pleasure to own.

B. Progress in Medicinal Chemistry. Vol. 1. G. P. ELLIS and G. B. WEST, Editors. Butterworths, London, 1961. ix + 262 pp. 16 × 25.5 cm. $11.25.

The six articles in this compact volume read more like chapters in an advanced textbook than reviews. Whereas Jucker's book (*vide supra*) is addressed to the serious and experienced reader who expects an analysis of complicated data in reviews requiring much concentration, Ellis and West have edited the first volume of their series in a more generally informative manner. Chemists and biologists who wish to become acquainted with certain topics in medicinal chemistry without insisting on exhaustive presentation of all available data will find this book to their liking. The chapters have been written uniformly well, easily, and yet

highly authoritatively. They introduce the reader to the principal needs and features of all aspects of the field, point out proven and controversial data and interpretations, and yet never lose their ease of readability. The contrast in depth between the two books under review can be seen in the number of references in comparable chapters: Beyer and Baer (above), writing on diuretics, list 487 references, while H. Heller and M. Ginsburg document their review on diuretic drugs with 249 references. But these figures reflect only part of the difference: one should read Heller and Ginsburg's article first to get an over-all thorough introduction to the problems of diuretics, and intensify details of knowledge thus gained by reading the more profound account of the American authors.

Significantly, the present volume is called Progress in Medicinal Chemistry but features an introductory essay on Pharmacological Screening Tests by W. G. Smith. Thus the interdependence of medicinal chemistry and pharmacology is emphasized and the reader is put in the right frame of mind for the ensuing specialized chapters. They comprise Hypotensive Agents by R. Wien; Tranquillizers by M. W. Parkes; the chapter on Diuretic Drugs already mentioned; Oral Hypoglycemic Drugs by J. D. H. Slater; and Antifungal Agents by E. P. Taylor and P. F. D'Arcy. Those readers who have followed these fields even remotely will recognize the names of these authors as those of experienced investigators. The excellent editorial job of ironing out different levels of approach recommends this volume to every medicinal chemist who wants to study surveys before he tackles the original literature. American readers may encounter an occasional tussle with British nomenclature, but this should be met easily by a good-natured attitude in our shrinking world.

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Diethyl Ether, Its Effects in the Human Body. ROBERT B. DODD, Washington University School of Medicine, and JOHN P. BUNKER, Stanford University School of Medicine. xii + 120 pp. 15 × 23 cm., flexible binding. Charles C Thomas, Publisher, Springfield, Illinois, 1962.

The volatile general anesthetics have not lent themselves to extended studies in medicinal chemistry, mostly because of limitations imposed by their low molecular weights, and because of their lack of chemical reactivity. The present small monograph comes at an appropriate time when a new view of the action of anesthetics is being considered [L. Pauling, *Science*, **134**, 15 (1961)]. It reviews not only the clinical uses of ether, but also its absorption and distribution, and the effects of ether on the central nervous system, on respiration, circulation and metabolism. It is interesting to read that lipid levels remain essentially unchanged during ether anesthesia, and that ether seems to have a direct effect on carbohydrate metabolism, possibly by interfering with the entrance of glucose into peripheral tissue. These and many other observations should prove to be thought-provoking and provide the anesthesiologist, pharmacologist, and medicinal chemist with ideas leading to a revival of interest in this field.

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