Chasseaud, and Drug-Serum Protein Interactions and Their Biological Significance by J. W. Bridges and A. G. E. Wilson.

This volume is English in origin and evidently was planned to serve in conjunction with the Chemical Society's series "Foreign Compound Metabolism in Mammals." According to D. V. Parke's foreword, "Progress in Drug Metabolism" will review advances in the general fundamentals of drug metabolism, reactions, phenomena, techniques, *etc.*, while "Foreign Compound Metabolism in Mammals" will deal with the metabolic fate of individual chemicals. Presumably, this philosophy will continue to be observed in future volumes of this series.

Four of these five reviews are on topics that have been extensively and repeatedly reviewed in the past several years (Bioactivation and Cytotoxicity is the exception). Mass spectrometry, epoxidation, enzyme induction, and serum protein binding are all, of course, topics of continuing and intense interest in the area of drug metabolism, but progress is never sufficiently rapid to permit completely original reviews every 2 years or so. Most of the content of these reviews, therefore, has been covered recently. Three of the reviews, as originally written, had 1974 as their last reference dates, although one of these contained 1975 references in a note added in proof. The other two reviews, which have the editors of the volume among their authors, have 1975 references (and one reference to a 1976 paper of the authors in press). This first volume of "Progress in Drug Metabolism" was evidently a long time a-borning.

The reviews are uniformly well written, quite readable, and contain some interesting insights. Those who are relatively unfamiliar with the subject matter would do well to read these reviews in preference to other almost as recent reviews of the same topics. The rest of us could profit by rereading for fresh insight on these subjects. I'm glad I did. Libraries will certainly need to collect this series. Perhaps what's really needed is a series of short monographs which provide an annual drug metabolism-centered update.

The content of the review on plasma protein binding of drugs is especially interesting when it indicates that there is still a dearth of fundamental understanding of this area. Bridges and Wilson find it necessary to correct many of the same misconceptions that Goldstein was correcting in 1949. Perhaps there can't be too many reviews on topics of central importance to drug metabolism and pharmacokinetics.

Reviewed by Morris Pfeffer
Bristol Laboratories
Syracuse, NY 13201

Lehrbuch der Pharmazeutischen Chemie, 8th Ed. By HARRY AUTERHOFF and JOACHIM KNABE. Wissenschaftliche Verlagsgesellschaft m.b.H., 7 Stuttgart 1, Postfach 40, W. Germany, 1976. 591 pp. 17 × 25 cm. Price $25.00 (62 DM).

This review was undertaken on the assumption that my colleagues might find it of interest to know what is available to teachers of medicinal chemistry/pharmaceutical chemistry in German-speaking countries.

This book by Auterhoff (who is a professor at Tübingen University) and Knabe is in its eighth edition since 1962 and thus has had ample opportunity for frequent updating. However, despite occasional lapses into modernity, such as a brief discussion of prostaglandins (p. 177) and a mention of cyclic AMP (p. 487), it is basically an old-fashioned textbook.

There are several positive points. The first 99 pages, the so-called inorganic part, is a good review for the student. Beginning with nomenclature and going through the seven groups of the periodic system (each as a chapter), a mini subtext of inorganic pharmaceutical chemistry is presented. This section is not truly inorganic because organometallic drugs are discussed (*e.g.*, bismuth subgallate and tartar emetic), as are organic analytical reagents such as rhodamine B because of its use for the analysis of antimony compounds.

The second part of the book (the remainder) is much more organic than current American texts because it mixes more organic with the medicinal chemistry. Not only syntheses (which are certainly not excessive) but also some refresher material such as nomenclature, ring systems, fundamentals of physical methods (spectroscopy), and organic reactions, including aromatic substitution rules, are given. A little biochemistry is also reviewed, *e.g.*, the stereochemistry of amino and fatty acids and coenzyme A. The division of this section is very reminiscent of the older editions of Olsen's and Gisvold's "Textbook of Organic Medicinal and Pharmaceutical Chemistry" in that it contains chapters on olefins, alcohols, ketones, *etc.*, followed by chapters based on therapeutics. There is a separate chapter on hormones, vitamins, and enzymes and one on ADME, which curiously is at the end of the book rather than with the introductory chapters. There are some references, and the index appears adequate. The American reader will encounter unfamiliar trade names (*e.g.*, Endoxan for cyclophosphamide) and unfamiliar variants of familiar drugs [*e.g.*, flucloxacillin (floxacillin), where fluorine replaces one chlorine in dicloxacillin].

The grave shortcoming of the book, however, is the almost total absence of discussions of drug action mechanisms. A newcomer to the field, say one conversant with organic and some biochemistry, after studying the text, would still not really know what drugs are—in the modern sense. There are occasional brief, almost meaningless statements such as: "polymixin raises the permeability of the cell membrane," or, regarding penicillin, "it is the building of cell wall construction material, murein, which is inhibited," with no further explanation or discussion. Rather than discovering that asparagus contains 1.2 mg of folic acid/100 g, I would have preferred to see a discussion devoted to dihydrofolic acid reductase inhibition mechanisms of antimalarials, methotrexate, or sulfonamide action. In the chapter on sympathomimetics, there is a statement on receptors but no real explanation—not a word on structure–activity relationships. Because of this glaring shortcoming, I feel this book is not suitable for the modern pharmaceutical curriculum.

Reviewed by Alex Gringauz
Arnold and Marie Schwartz College of Pharmacy and Health Sciences
Long Island University
Brooklyn, NY 11201

Interactions of Drugs of Abuse. Annals of the New York Academy of Sciences, Vol. 281. Edited by ELLIOT S. VESELL and MONIQUE C. BRAUDE. The New York Academy of Sciences, 2 East 63rd St., New York, NY 10021, 1976. 489 pp. 15 × 23 cm.

This book contains the proceedings of the first Conference on Interactions of Drugs of Abuse held in New York, March 9–11, 1976, at the New York Academy of Sciences. This conference was rather timely since there is an ever-increasing polydrug use throughout the United States and the world.

The subject matter of the conference was divided into two parts: (*a*) general information concerning the molecular, cellular, and clinical aspects of drug interaction; and (*b*) the major thrust of the conference, determination of the interaction of specific drugs and drug classes including marijuana, narcotics and narcotic antagonists, CNS depressants, CNS stimulants, and hallucinogens. Although extensive effort was made to define all the potential ramifications of drug interactions, it is quite obvious that only the surface has been scratched. In discussing molecular, cellular, and clinical aspects of drug interaction, one could devote several volumes to describing results of experiments designed to study such interactions. Likewise, specific drug interactions could be the subject of a tremendous amount of research effort. In general, this book is well written and the data are presented in an organized fashion.

This conference has opened up a new area of research which will be explored vigorously in the next several years. Because our society is prone to polydrug use, the importance of drug interaction research becomes paramount not only for drugs of abuse but for all drugs in general.

Reviewed by R. Duane Sofia
Wallace Laboratories
Cranbury, NJ 08512

NOTICES

Venous Thromboembolism. Prevention and Treatment. Edited by JOHN L. MADDEN and MICHAEL HUME. Appleton-Century-Crofts, 292 Madison Ave., New York, NY 10017, 1976. 240 pp. 15 × 23 cm.