

REVIEWS

Major Medicinal Plants: Botany, Culture and Uses. By JULIA F. MORTON. Charles C Thomas, 301-327 E. Lawrence Ave., Springfield, IL 62717. 1977. 429 pp. 17 × 25 cm. Price \$49.50.

The forward by Norman R. Farnsworth and Maynard W. Quimby justifies the need for an authoritative current book on the subject of medicinal plants for pharmacy students, botanists, natural products chemists, and consumers. As stated in the introduction, the book is intended as a supplement to a pharmacology textbook, and its purpose is to delineate briefly but concisely the physical and chemical aspects of the major medicinal plants currently utilized in the United States.

To survey the literature on major medicinal plants in a single volume of about 400 pages is an enormous undertaking. Dr. Julia F. Morton has presented in this book a concise review on this subject. The book covers 28 plant families with 92 figures and 16 color illustrations. With the exception of several poor photoreproductions, *i.e.*, figures 28, 79, and 86 and color illustration 4, the printing is of exceptional quality in an otherwise error-free book.

The bibliography of 635 entries, although limited for such a large field, is relatively up to date and should be sufficient as a starting point for the student.

Principal subdivisions of the text are by plant family with minor subdivisions being botanical name, other names, family, descriptions, origin and distribution, constituents, propagation, cultivation, harvesting, medicinal uses, toxicity, other uses, and related species. In addition, there are two appendixes that list about 70 medicinal plants no longer official in the United States and about 60 plants that serve as pharmaceutical aids or adjuncts. The text makes a useful integration of the disciplines of pharmacognosy, botany, and chemistry.

Each section of the chapters is well balanced and contains a wealth of information. I highly recommend this book for students and professionals.

Reviewed by Phillip G. Vincent
Agricultural Environmental Quality Institute
Beltsville Agricultural Research Center
Beltsville, MD 20705

Progress in Drug Metabolism, Vol. 2. Edited by J. W. BRIDGES and L. F. CHASSEAUD. Wiley, 605 Third Ave., New York, NY 10016. 1977. ix + 348 pp. 15.5 × 23.5 cm. Price \$29.50.

This volume is the second of a new series devoted to reviewing selected topics in the field of drug metabolism research. Thus far, as intended, these topics have been of a general nature, emphasizing principles, methods, and techniques applicable to a wide variety of drugs. The current volume, consisting of six chapters, offers a well-balanced selection of such material.

The first chapter, *Newer Aspects of Glucuronidation*, by G. J. Dutton and B. Burchell, deals primarily with the properties of UDP-glucuronyltransferase and factors affecting glucuronidation. Although this subject is reviewed often, the authors have presented an informative and particularly comprehensive account of recent work. Because of the vast amount of material reviewed (nearly 600 references, of which only 15% appeared before 1970) and the detailed presentation, this review may be more suitable for those experienced in drug metabolism research than for those just entering the field.

The next chapter, *The Metabolism of Xenobiotics in Cell Suspensions and Cell Cultures*, by J. R. Fry and J. W. Bridges, addresses a subject likely to be unfamiliar to many of those engaged in drug metabolism research. In a brief introduction, the authors compare the use of cell suspensions and cultures with *in vivo* and other *in vitro* methods for studying drug metabolism. They then discuss the preparation, characteristics, and application of isolated and cultured cells. This timely review should be particularly valuable to anyone engaged in drug metabolism research.

The third chapter, *Transplacental Transfer of Foreign Compounds and their Metabolism by the Foetus*, by O. Pelkonen, deals primarily with drug metabolism in the fetus and neonate. Throughout the review, species differences are emphasized, particularly the ability of the human fetus,

in contrast to fetuses of common laboratory animals, to metabolize drugs.

The next two chapters deal with two important analytical techniques useful in drug metabolism research. *The Role of Stable Isotopes in Drug Metabolism* by D. R. Hawkins reviews the use of such isotopes for detecting and identifying metabolites, measuring drug and metabolite concentrations in biological fluids, and investigating metabolic pathways. Some general principles are presented, but much of the review is devoted to examples drawn from these three areas of application.

The second analytical technique reviewed, *Ion-Pair Extraction Methods*, by G. Schill *et al.* describes the use of ion-pair methods for batch extraction and partition chromatography of drugs and their metabolites. Both the principles and applications of the methods are discussed in detail. Substantially the same material has been presented by these authors in another review series also published during 1977.

The final chapter, *Bioavailability and Drug Dissolution*, by G. L. Mattock *et al.*, briefly describes concepts and methods for measuring drug dissolution and absorption and factors affecting these parameters. The major part of the chapter, however, is devoted to reviewing the application of these concepts and methods to studies with 23 drugs. Particular attention is given to possible correlations between a drug's bioavailability in humans and its *in vitro* dissolution rate.

The chapters comprising this second volume of "Progress in Drug Metabolism" were well selected by the editors and uniformly well written by the authors. Those with broad involvement in drug metabolism research should find the entire volume both interesting and valuable. Others, with a more specific involvement, will likely find most of the chapters interesting and, perhaps, certain ones valuable. Libraries should add this volume and, indeed, the entire series to their collection.

Reviewed by Richard C. Thomas
Drug Metabolism Research
The Upjohn Company
Kalamazoo, MI 49001

Inflammation and Antiinflammatories. By EDOARDO ARRIGONI-MARTELLI. Spectrum, 175-20 Wexford Terrace, Jamaica, NY 11432. 1977. 343 pp. 15 × 23 cm. Price \$30.00.

"Inflammation and Antiinflammatories" is a comprehensive review covering the current theories on the etiology, pathology, and treatment of inflammation. It is a well-referenced book and is illustrated with appropriate tables and figures (the last figure in the book, No. 48, is for some reason poorly reproduced). The review will be most useful to pharmacologists, biochemists, and immunologists who have a sound background in the areas of inflammation and anti-inflammatories; it is too advanced for the novice in the area who is not familiar with the vernacular.

The review is well organized with an introductory chapter on the "Release of Mediators from Inflammatory Cells" followed by chapters on specific mediators of inflammation including histamine, serotonin, bradykinin, and prostaglandins. Each chapter discusses the chemistry, synthesis, and degradation of the mediator; the role of the mediator in the inflammatory response; and the present methods available for its assay.

Succeeding chapters discuss complement and properdin, slow reacting substances, lysosomal inflammatory materials, and nonantibody lymphocyte activation products (lymphokines). A chapter is also included on the cyclic nucleotides as modulators of inflammation.

Three chapters in the middle of the review are concerned with the experimental evaluation of anti-inflammatory agents and their clinical efficacy.

The third main part of the book deals with the anti-inflammatory agents currently in use or under investigation. Chapters cover the toxicity and proposed mechanisms of actions of nonsteroidal anti-inflammatory agents and immunosuppressive agents. Chapter 16, on nonsteroidal anti-inflammatory agents, is organized according to chemical class and is well illustrated with chemical structures.

While the review is comprehensive, the reader is often confronted with a large number of experimental, well-referenced observations without an attempt by the author to tie them together, although this is done at times.