

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.

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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.

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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.

Other criticisms include the placement of Chapter 16, "Non-Steroidal Antiinflammatory Agents." This chapter should logically precede and not succeed the other two chapters on nonsteroidal anti-inflammatories (Chapters 14 and 15).

In summary, "Inflammation and Antiinflammatories" is a well organized and well-written review on the current concepts of the field. It will prove a valuable resource to the laboratory investigator as well as to the clinician.

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Recent Advances in the Chemistry of β -Lactam Antibiotics. Edited by J. ELKS. The Chemical Society, Burlington House, London W1V 0BN, England. 1977. 313 pp. 14 × 21 cm. Price \$29.00.

This volume consists of 32 papers presented at a Chemical Society Symposium held in June 1976 in Cambridge, England. Included are two papers on the biosynthesis of β -lactams, nine papers dealing primarily with modification or incorporation of unique side chains on the penam or cephem nucleus, and 15 papers on the synthesis of the β -lactam ring systems or incorporation of substituents into the cephem or penam ring systems. While most papers in the last group deal with the synthesis of penicillins or cephalosporins, Ajay Bose discusses his general β -lactam synthesis. Also of special note are the papers outlining synthetic approaches to the biologically interesting 3-chloro and 3-hydroxy cephems.

The remaining six chapters include a paper on extraction of cephalosporins from fermentation broth, a chiroptical study of penicillins, a study of the nonenzymatic hydrolysis of β -lactams, and a review by R. B. Woodward of the work at the Woodward Research Institute. Also included are one paper on the norcardicins, monocyclic β -lactams with antibacterial activity, and one paper covering clavulanic acid, a bicyclic β -lactam, which is a potent irreversible inhibitor of β -lactamase enzymes.

Although the prime emphasis of this volume is the chemistry of β -lactam antibiotics, nine chapters contain tables of antibacterial activity of various analogs. As with most symposium volumes, no subject or author indexes are included. With the exception of Woodward's article, which contains no references, the papers are for the most part adequately referenced (references into the early 1976 literature are included). As is expected in a symposium paper, some authors make liberal use of references to unpublished results.

This volume is a valuable updating of the voluminous literature on β -lactam antibiotic chemistry. It should prove to be a useful information source not only to individuals involved in antibiotic research but also to individuals with teaching responsibilities in this field.

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NOTICES

Phenomenology and Treatment of Schizophrenia. Edited by WILLIAM E. FANN, ISMET KARACAN, ALEX D. POKORNY, and ROBERT L. WILLIAMS. Spectrum, 175-20 Wexford Terrace, Jamaica, NY 11432. 1978. 549 pp. 15 × 23 cm. Price \$30.00.

Predicting the Properties of Mixtures: Mixture Rules in Science and Engineering. By LAWRENCE E. NIELSEN. Dekker, 270 Madison Ave., New York, NY 10016. 1978. 96 pp. 15 × 23 cm. Price \$12.50.

Receptors in Pharmacology. (Modern Pharmacology-Toxicology Series, Vol. 11). Edited by JOHN R. SYMTHIES and RONALD J. BRADLEY, Jr. Dekker, 270 Madison Ave., New York, NY 10016. 1978. 506 pp. 15 × 23 cm. Price \$45.00.

Current Chemotherapy. Vols. I and II. Proceedings of the 10th International Congress of Chemotherapy. Edited by WALTER SIEGENTHALER and RUEDI LUTHY. American Society for Micro-

biology, 1913 I St., N.W., Washington, DC 20006. 1978. Vol. I, 736 pp.; Vol. II, 1361 pp. 17 × 26 cm. Price \$75.00 (two-volume set).

Zinc and Copper in Clinical Medicine. Edited by K. MICHAEL HAMBIDGE and BUFORD L. NICHOLS, Jr. Spectrum, 175-20 Wexford Terrace, Jamaica, NY 11432. 1978. 132 pp. 15 × 23 cm. Price \$15.00.

The Molecular Biology of Animal Viruses, Vol. 2. Edited by DEBI PROSAD NAYAK. Dekker, 270 Madison Ave., New York, NY 10016. 1978. 1006 pp. 15 × 23 cm. Price SFr. 140.—

pH Measurements. By C. CLARK WESTCOTT. Academic, 111 Fifth Ave., New York, NY 10003. 1978. 172 pp. 15 × 23 cm. Price \$16.00.

Behavioral Neurology. 2nd Ed. By JONATHAN H. PINCUS and GARY J. TUCKER. Oxford University Press, 200 Madison Ave., New York, NY 10016. 1978. 284 pp. 12 × 21 cm. Price \$5.95 (paper), \$11.95 (cloth).

Behavioral Tolerance: Research and Treatment Implications. NIDA Research Monograph 18. Edited by NORMAN A. KRASNEGOR. National Institute on Drug Abuse, 5600 Fishers Lane, Rockville, MD 20852. 1978. 151 pp. 14 × 24 cm.

Neisseria gonorrhoeae and Gonococcal Infections. World Health Organization, 49 Sheridan Ave., Albany, NY 12210. 1978. 142 pp. 13 × 20 cm. Price \$5.40.

Handbook of Clinical Pharmacology. By FELIX BOCHNER, GEORGE CARRUTHERS, JENS KAMPMANN, and JANICE STEINER. Little, Brown, 34 Beacon St., Boston, MA 02106. 1978. 313 pp. 11 × 20 cm. Price \$9.95.

Handbook of Clinical Drug Data. 4th Ed. By JAMES E. KNOBEN, PHILIP O. ANDERSON, and ARTHUR S. WATANABE. Drug Intelligence Publications, Hamilton, IL 62341. 1978. 467 pp. 11 × 18 cm.

Nursing Pharmacology: A Systems Approach to Drug Therapy and Nursing Practice. By ALVIN K. SWONGER. Little, Brown, 34 Beacon St., Boston, MA 02106. 1978. 329 pp. 19 × 24 cm. Price \$9.95.

Respiratory Tract Mucus. Ciba Foundation Symposium 54 (new series). Elsevier Scientific, 52 Vanderbilt Ave., New York, NY 10017. 1978. 334 pp. 16 × 24 cm.

The Economics of Medical Malpractice. Edited by SIMON ROTTENBERG. American Enterprise Institute for Public Policy Research, 1150 Seventeenth St., N. W., Washington DC 20036. 1978. 293 pp. 15 × 23 cm. Price \$5.75.

Polymeric Drugs. Edited by L. GUY DONARUMA and OTTO VOGL. Academic, 111 Fifth Ave., New York, NY 10003. 1978. 397 pp. 15 × 23 cm. Price \$19.50.

Mycotoxic Fungi, Mycotoxins, and Mycotoxicoses. An Encyclopedic Handbook, Vol. 2. Edited by THOMAS D. WYLLIE and LAWRENCE G. MOREHOUSE. Dekker, 270 Madison Ave., New York, NY 10016. 1978. 570 pp. 17 × 26 cm. Price \$75.00.

Actualités Pharmacologiques. Edited by RENE HAZARD. Masson, 120 Boulevard Saint-Germain, 75280 Paris Cedex 06, France. 1978. 222 pp. 16 × 24 cm. Price 180 Fr.

The Biochemical Basis of Neuropharmacology, 3rd Ed. By JACK R. COOPER, FLOYD E. BLOOM, and ROBERT H. ROTH. Oxford University Press, 200 Madison Ave., New York, NY 10016. 1978. 327 pp. 13 × 21 cm. Price \$6.95 (paper), \$13.95 (cloth).

Advances in Chromatography, Vol. 16. Edited by J. CALVIN GIDDINGS, ELI GRUSHKA, JACK CAZES, and PHYLLIS R. BROWN. Dekker, 270 Madison Ave., New York, NY 10016. 1978. 290 pp. 14 × 23 cm. Price \$28.75.

Further Perspectives in Organic Chemistry. Ciba Foundation Symposium 53 (new series). Elsevier North-Holland, 52 Vanderbilt Ave., New York, NY 10017. 1978. 212 pp. 16 × 24 cm.

Gaddum's Pharmacology. 8th Ed. By A. S. V. BURGEN and J. F. MITCHELL. Oxford University Press, 200 Madison Ave., New York, NY 10016. 1978. 269 pp. 15 × 24 cm. Price \$11.95.

Ophthalmica. Band II. Pharmazeutische Grundlagen ihrer Zubereitung. By R. DOLDER and F. S. SKINNER. Wissenschaftliche Verlagsgesellschaft mbH 40, 7000 Stuttgart 1, Germany. 1978. 638 pp. 14 × 21 cm. Price \$94.00.

Effectors of Thermogenesis. Proceedings of a Symposium Held at Geneva (Switzerland) 14-16 July 1977. Edited by G. GIRARDIER and J. SEYDOUX. Birkhauser Verlag, P. O. Box 34, CH-4010 Basel, Switzerland. 1978. 345 pp. 17 × 24 cm. Price Sfr. 68.