

## Book Reviews

**About Your Medicines.** The United States Pharmacopeial Convention, Inc., Washington, DC. 1981. xviii + 398 pp. 14 × 21 cm. \$4.50.

This new publication is the abridged consumer edition, covering the 200 most common monographs, from the "Advice to the Patient" section of "United States Pharmacopeia Dispensing Information" (USP DI); all of the consumer sections of USP DI are contained in a separate, complete reference edition entitled, "USP D I About Your Medicines", for \$8.95. Bimonthly updates are available for a subscription of \$3.00/year.

The presentation includes general information on the use of medicines as well as specific material on drugs and drug products, such as proper use, side effects, precautions, drug and food interactions, and storage. The index is cross referenced by generic, common, and selected brand names. The presentation is extensive, well organized, in lay language, and highly readable.

This volume appears more useful to consumers than its two major competitors, "Handbook of Nonprescription Drugs" by the American Pharmaceutical Association and "The Medicine Show" by Consumers Union. It contains information in a more cogent, instructional, and applicable form than the other books and covers prescription drugs not contained in the APhA resource. "About Your Medicines" is highly recommended.

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**United States Pharmacopeia Dispensing Information.** The United States Pharmacopeial Convention, Inc., Washington, DC. 1981. xxiii + 1163 pp. 20 × 28 cm. \$18.75.

This new, annual publication from USP represents an admirable attempt to organize therapeutic, pharmacologic, pharmaceutical, and consumer information about drugs and drug products in one volume addressed to a broad audience which includes prescribers, dispensers, and users. The publication is divided into two sections. The "professional guidelines" section includes category of use, pharmacology, precautions to consider, drug preparation immediately prior to administration, side effects with an indication of their significance and incidence, guidelines for patient consultation, dosing information, and requirements for packaging and storage. The "advice for the patient" section presents this information in lay language for potential use in patient education programs. The volume is kept current by means of a bimonthly update.

Entries are listed both by generic heading of the drug product (e.g., acetaminophen and acetaminophen plus codeine have separate entries) and therapeutic category (e.g., adrenocorticoids and prednisone have separate entries). This facilitates broad use of the information in terms of general material pertinent to a therapeutic category as well as specific information for drugs within the class. The index is extensive and organized by generic and product citations.

Perusal of the information in USP DI suggests that practitioners and consumers would be hard pressed to find omissions of information pertinent to the prescribing, dispensing, and use of drugs and drug products. The presentation is extensive, well organized, and highly readable. No other source presents so much material in as germane, cogent, and useful manner. USP DI is recommended as a major reference source for inclusion in professional and personal libraries.

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**Advances in Biochemical Psychopharmacology. Volume 26. GABA and Benzodiazepine Receptors.** Edited by E. Costa, Gaetano DiChiara, and G. L. Gessa. Raven Press, New York. 1981. xviii + 303 pp. 16 × 24 cm. \$36.00.

This volume is the product of a symposium organized by the editors and held in Porto Cervo (Sardagna), Italy (date not mentioned). Since Costa first advanced the GABA hypothesis for benzodiazepine action in 1975, a wealth of new knowledge, including the link of benzodiazepine receptors to GABA transmission in the CNS, has lent great support to the initial hypothesis. This volume summarizes the contributions of 28 research groups throughout the world whose investigations have led to significant advances in our basic understanding of the biochemistry, electrophysiology, and pharmacology of the pro-GABAergic actions of the benzodiazepines. Costa points out that a message that has permeated the symposium is that benzodiazepines, by displacing GABA-modulin, a protein that allosterically limits the expression of high-affinity GABA binding sites, enhance the response to synaptically released GABA. Moreover, cotransmitter receptors may exist for other chemical synaptic messengers and provide bases for the discovery of novel drugs with greater selectivity. This monograph is a valuable addition to the library of any pharmacologist or medicinal chemist with an interest in these drugs. Because of the broad interest in the subject matter, every biomedical library should have at least two copies of this book.

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**The Chemistry of Heterocyclic Compounds. Volume 36. Chromans and Tocopherols.** Edited by G. P. Ellis and I. M. Lockhart. Wiley, New York. 1981. xii + 469 pp. 17 × 24 cm. \$125.00.

In Volume 31 of this series, the chemistry of several types of 1-benzopyrans was presented. The present volume seeks to complete the treatment of 1-benzopyrans in which the pyran ring does not carry a double bond at the 2 or 3 position. The subject matter is compiled in ten separate chapters, with an introduction in the first. With the exception of the final chapter dealing with discussions on spirochromans, each chapter covers chromans containing a different functional group. Thus, the eight remaining chapters are comprised of alkyl- and arylchromans, chromanols and tocopherols, alkoxychromans, halogenochromans, nitro- and aminochromans, Bz-oxochromans, chroman carboxaldehydes, and chroman carboxylic acids and their derivatives.

Compounds that have appeared in the literature are listed in tables according to their principal groups at the end of each chapter. For convenience, the compounds are divided into subclasses, each of which has its own table of compounds. To determine quickly whether or not a particular compound is reported, the main entries are arranged according to their molecular formulas. Melting point or boiling point and literature citations are given for each compound in the table. The authors are to be complimented for the extensive compilation.

Chapter III deals with chromanols and tocopherols and has more pages compared to other chapters in the book and over 530 references. Included in this chapter, as in others, is the synthesis, chemical reactions, and physical and spectral properties of the compounds described. X-ray crystallography, UV, IR, <sup>1</sup>H and <sup>13</sup>C NMR, and mass spectra are presented and discussed in the chapter, as well as in other places, whenever available and wherever applicable. Furthermore, because of the natural occurrence and biological importance of tocopherol, discussion is also given on analytical methodology, biological significance, and

its biosynthesis. In selected parts of the volume, uses of compounds and biological and pharmacological activities are presented. In the discussions on biosynthesis on page 95, scheme 9, the well-known pathway of shikimic acid to tyrosine is structurally illustrated. It appears, however, that it would have been clear and lucid if the less familiar biotransformations of tyrosine or homogentisic acid to tocopherols were also structurally shown or sequentially presented with the names of the progenitors involved. Nevertheless, barring this point and few other minor errors, the text and over 1300 original references cited offer an excellent entry into the literature concerning the compounds discussed. Although literature cited is through 1977, at quite a few places recent references are also included. The prohibitive cost makes the volume beyond the reach of an average heterocyclic chemist. Yet, because of the vast storehouse of information on 1-benzopyrans, this volume should serve as a valuable reference source for the researchers, educators, and graduate students in heterocyclic chemistry and would be a useful acquisition for a science library.

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**Biology of Carbohydrates. Volume 1.** Edited by Victor Ginsburg and Phillips Robbins. Wiley-Interscience, New York. 1981. 320 pp. 15.5 × 23.5 cm. \$49.50.

This series expects to present selected topics on the biochemistry of carbohydrates.

In this first volume, Chapter 1 written by Vincent C. Hascall on "Proteoglycans: Structure and Function" covers 49 pages and discusses structure and some possible functions of several proteoglycans. Although emphasis is on cartilage proteoglycans, those from aorta, follicular fluid, cornea, and liver membrane are briefly discussed. Chapter 2, "Structural Polysaccharides of Plants and Fungi: Comparative and Morphogenetic Aspects", by Enric Cabit and Eleanor M. Shematek covering 39 pages deals with cell walls of filamentous fungi *S. cerevisiae* and briefly those of plants. There is a short discussion of the synthesis, structure, and turnover of chitin, (1→3)- $\beta$ -D-glucan, cellulose, and mannan. Chapter 3, "Teichoic Acid and Peptidoglycan Assembly in Gram Positive Organisms", by Robert S. Muson and Luis Glazer covering 31 pages describes cell-wall growth, topology, and turnover with discussion of the various teichoic acids and peptidoglycans. In Chapter 4, "Glycophorin: A Model Membrane Glycoprotein", by Heinz Furthmayr covering 75 pages, structure and function of glycophorins are described with discussion of red blood cell and other membranes. Chapter 5, "Comparative Biochemistry of Glycogen and Starch", by Jack Preiss and Donal A. Walsh encompasses one-third of the book and gives a general description of function, metabolism, and regulation of these polymers where they may occur in plants, animals, and bacteria.

In general, the book contains up-to-date information and represents a good review of assigned topics. Several of the early chapters employ the rather confusing technique of leading the

reader through experimental findings rather than presenting the information in a more easily followed, straightforward manner.

It is recommended to the editors that instructions to further authors request the use of proper scientific nomenclature, at least in the naming of simple sugars. For example, anomeric designators are meaningless when used alone and not attached to the series designators D and L. This omission is not only bad science but confusing for galactose, since both D and L forms are present in nature.

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**Progress in Pharmacology. Volume 3. Number 2. Action of Drugs on the Cerebellar Electrical Activities.** By G. Goglák and Ch. Stumpf. **Cyclic Nucleotides and the Nervous System.** By V. V. Myllylä, E. R. Heikkinen, E. Hokkanen, and H. Vapaatalo. Gustav Fischer Verlag, Stuttgart and New York. 1980. 106 pp. 13.5 × 19 cm. \$42.50.

This monograph contains two independent chapters—one concerned with electrophysiological methods and drug action on cerebellar activities (66 pp) and the other is a shorter review of the pertinent cyclic nucleotide literature in relation to the nervous system (40 pp).

This reader found the first review most delightful to read. The authors discuss both micro- and macroelectrode recordings of electrical activity from the cerebellum. The text is excellent in both written clarity and relevance. The authors include a generous number of "typical recordings" which serve to illustrate very well major points of the written text. The summary of the literature concerning drug-induced modification of electrical activity is presented and illustrated. The authors discuss the usefulness and limitations of electrophysiological recordings to define drug action. The extensive literature in this area of research is summarized into 1979.

The second review summarizes the research background for cAMP and cGMP and factors involved in enzymatic control of formation and metabolism of second messengers. Very readable sections of the review discuss neuronal function, cyclic nucleotides, and drug actions in relation to possible biological significance. Several chapters relate possible involvement of cyclic nucleotides with various diseases. The review is quite complete in topics. One negative feature is that the manuscript was accepted for publication in April 1978 and published in 1980. Consequently, there are no literature citations beyond 1977. This extensive delay in publication detracts from the scientific value of this fine chapter.

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