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BOOKS

REVIEWS

The *Catharanthus* Alkaloids. Edited by W. I. TAYLOR and N. R. FARNSWORTH. Dekker, 270 Madison Ave., New York, NY 10016, 1975. 323 pp. 16 × 32.5 cm. Price $29.50.

This valuable book for students, teachers, researchers, and clinicians interested in the pharmacognosy of the *Catharanthus* alkaloids opens with a concise and significant introduction by Gordon H. Svoboda, in which he outlines the history and discovery of the outstanding alkaloid pair, vinblastine and vincristine. Dr. Svoboda, responsible for much of this research, reviews the scientific and medical aspects of these and other *Catharanthus* alkaloids in terms of their biological specificity and their relative clinical merit.

The book includes chapters dealing with the following topics: a Synopsis of the Genus *Catharanthus* (William T. Stearn, British Museum), the Photochemistry and Pharmacology of *Catharanthus roseus* (G. H. Svoboda and D. A. Blake), the Phytochemistry of the Minor *Catharanthus* Species (M. Tin-Wa and N. R. Farnsworth), Structure Elucidation and Chemistry of the Bis *Catharanthus* Alkaloids (D. J. Abrahams), the Biosynthesis of *Catharanthus* Alkaloids (R. J. Parry), and Tissue Culture Studies of *Catharanthus roseus* (David P. Carew). The final chapters, dealing with Biochemistry (William A. Creasey) and the Clinical Aspects of the Dimeric *Catharanthus* Alkaloids (R. C. DeConti and W. A. Creasey), comprehensively and thoroughly review these important topics.

The book is well organized; tables, figures, and text are of professional quality; and, in spite of the many botanical terms used, the number of misprints is remarkably small, a rare exception being a twice misspelled catharanthine (I) (p. 128).

The total amount of multidisciplinary information contained in this monograph is considerable. The book, therefore, constitutes a valuable reference work for diverse professionals needing reliable information. The authors all have worked extensively in their various specialties, thus endowing the book with an authoritative quality. In particular, the chapter on clinical effects of vinblastine and vincristine as well as other alkaloids of lesser efficacy summarizes the relative and specific clinical activity in a clear and comprehensive manner. For researchers not having easy access to detailed medical literature in this area, this chapter by DeConti and Creasey constitutes a good source for reliable information on clinical usages of currently available oncolytic *Catharanthus* alkaloids.

The only regret felt during the reading of various chapters, especially those dealing with topics presently in an active state of investigation, is in the time lag during writing and publication. Few references beyond 1972 are included in most chapters. Much excellent work during the following years thus remains unmentioned through no fault of authors or publishers.

In summary, the editors have made an excellent selection of topics and authors. The resulting book summarizes available information on this important class of alkaloids in a most readable and reliable manner. The book is heartily recommended for readers wanting to become acquainted or reacquainted with the chemistry or biology of these complex herbal products of outstanding medicinal value.

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Pro-drugs as Novel Drug Delivery Systems. Edited by T. HIGUCHI and V. STELLA. American Chemical Society, 1155 16th Street, N.W., Washington, DC 20036, 1975. 245 pp. 16 × 24 cm. Price $13.50.

This volume is a collection of papers presented during a symposium on prodrugs held in Atlantic City, September 10, 1974, under the sponsorship of the ACS Division of Medicinal Chemistry. The book consists of six sections. The first section, which constitutes approximately half of the volume, is a review of the basic concepts and approaches to the design of prodrugs. The second section covers applications of the prodrug approach to antibiotics. The remainder of the volume describes, in the form of research papers, chemical and biological studies on prodrug candidates performed in the laboratories of the authors. These chapters deal with prodrugs of phenytoin (diphenylhydantoin) and epinephrine and with the use of prodrugs in the formulation of cytotoxic agents for parenteral administration.

Although the enzymatic and some biological aspects, which are important in the design of new prodrugs, are not discussed, this book represents an excellent compilation of data on the subject. The extensive bibliography, particularly of the first two sections, and the excellent examples selected to illustrate the chemical approaches to the problem of drug delivery should make this volume a valuable addition to the library of every researcher in this field.

The book is easily readable and is recommended to graduate students and faculty of both chemistry and pharmacy. The material described in this book by the authors, who are experts in this field, ought to stimulate greatly the thinking of those who are seeking new ideas in the application of chemistry to biology and pharmacy.

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The Effect of Disease States on Drug Pharmacokinetics. Edited by LESLIE Z. BENET. American Pharmaceutical Association, 2215 Constitution Ave. N.W., Washington, DC 20037, 1976. 252 pp. 15.5 × 23 cm. Price $9.25 (APhA Member Rate, $6.50).

"The Effect of Disease States on Drug Pharmacokinetics" is a collection of the papers presented at the April 1976 symposium sponsored by the Academy of Pharmaceutical Sciences of the American Pharmaceutical Association. The 29 contributors to this symposium are among the most prominent researchers in the field of clinical pharmacokinetics.

The introduction is a general orientation to the subject and a brief discussion of various possible approaches to the investigation of potential pharmacokinetic changes. The book is divided into four parts, each of which contains one chapter that discusses the subtopic in general and one or more chapters that deal with specific examples.

In the first section, Body Perfusion, Chapter 2 presents an overview of pharmacokinetics in disease states that modify blood flow and organ perfusion. Chapter 3 deals specifically with the effects of cardiac failure on GI absorption.