

## REVIEWS

**Proceedings of the First International Symposium on Cyclodextrins. (Budapest, Hungary, 30 September–2 October 1981).** Edited by J. SZEJTLI. D. Reidel Publishing Co., 1300AA Dordrecht, Holland. (U.S. Distributor, Kluwer Boston, Inc., 190 Old Derby St., Hingham, MA 02043.) 1982. 544 pp. 17 × 24 cm. Price \$84.50.

The cyclodextrins (cycloamyloses) are cyclic oligomers of D-glucose produced by the action of cyclodextrin glycosyltransferases on starch. The products consisting of 6, 7, and 8 glucose units are called  $\alpha$ -,  $\beta$ -, and  $\gamma$ -cyclodextrins, respectively; these substances are commercially available, and have attracted the interest of many researchers because the cyclodextrin molecule possesses a cavity of molecular dimensions and is capable of forming an inclusion complex, by acting as the "host," with "guest" species small enough to enter the cavity. In the autumn of 1981, a conference was held in Budapest, Hungary at which workers in the cyclodextrin field presented their results; this book is the proceedings of the conference.

The symposium, and the book, was organized into six parts: Chemistry and Production of Cyclodextrins (7 papers); Enzymology, Toxicology, and Metabolism (10); Cyclodextrin Complexes (16); Cyclodextrin Derivatives (8); Cyclodextrins in Pharmaceuticals (13); and Applications of Cyclodextrins in Foods, Agriculture, and Other Industries (9). Most of the commercial production and applications research is being carried out in Hungary and Japan, and these countries were well represented at the symposium. Only two U.S. laboratories presented papers, so the book does not give a balanced view of the world-wide activity in the field.

Many of the papers will interest pharmaceutical researchers, because the cyclodextrins' capability of forming inclusion complexes can alter the effective properties of a guest drug molecule. This "molecular encapsulation" can affect drug solubility, volatility, dissolution rate, chemical reactivity, and even biological activity. Although cyclodextrins are unlikely ever to become widely used formulation ingredients, it is probable that they will merit occasional specialized application, and laboratories working with drug delivery systems will find this book a useful introduction to current ideas, literature, and workers in the field.

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**Formulation of Veterinary Dosage Forms.** Edited by JACK BLODINGER. Marcel Dekker, New York, NY 10016. 1983. 316 pp. 15 × 23 cm. Price \$48.50 (20% higher outside the U.S. and Canada).

This book is a member of a continuing set, which until now collectively comprises 17 volumes of text books and monographs entitled "Drugs and Pharmaceutical Sciences." As stated in the preface of this volume, the book describes the types of drug formulations administered to animals, the art and science used in their development, and the techniques needed to administer them so as to ensure optimum efficacy.

The first five chapters of this volume cover the details of all phases of veterinary dosage formulation from initial development to final stability testing. They are "The Basis For Selection Of The Dosage Form," "Specialized Dose Dispensing Equipment," "Formulation of Drug Dosage Forms For Animals," "Formulation of Drugs For Administration Via Feed Or Drinking Water," and "Stability Studies Of Veterinary Formulation." The sixth chapter, "Regulatory Clearance," is well placed at the end and covers the requirements for registration of animal health products in the United States, Australia, Brazil, the European Economic Community, and Japan.

Each chapter is written by an expert on the subject in a crisp, authoritative, and comprehensive manner. Useful details on the development of drug forms for animals which differ from those known in the human field are presented in a logical and succinct manner. Each chapter is well referenced through 1980. The index is extensive and good, providing the

reader with cross-referencing to both specific and broad general categories.

This book fills a previous void, and anyone actively involved in formulation of veterinary dosage forms will find it to be of great value.

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**Radioimmunoassay and Related Procedures in Medicine—1982.** Proceedings series; International Atomic Energy Agency. 1983. 823 pp. 15 × 24 cm.

This volume resulted from an international symposium on radioimmunoassay and related procedures in medicine held in Vienna, Austria in June 1982. The symposium was organized and the book edited by the International Atomic Energy Agency. The volume consists of 9 review papers, abstracts of 65 presentations, 23 poster presentations, and edited summaries of the discussions. Areas that were reviewed and had original research presentations include: reagents and separation procedures, assays for free hormones, receptors, biological substances, and drugs. Other areas covered include data processing, intralaboratory control, automation, external surveillance of assay performance, assay services in developing countries, public health, and clinical applications and alternatives to radioassays.

The review papers in this volume are relatively complete discussions of specialized topics in radioimmunoassay technology. The scientific and poster presentations are sufficiently detailed that meaningful scientific information on methods, results, and discussion can be extracted. Because of the large cross section of radioimmunoassay concepts and technology that are covered in this volume, potential readers should carefully examine the specific topics of review or original research to be certain that individual areas of interest are present prior to purchasing or reading this book.

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**Central Analgetics.** Edited by DANIEL LEDNICER. Wiley-Interscience, New York, N.Y., 1982. 219 pp. 15 × 23 cm. Price \$47.50.

*Central Analgetics* is the inaugural volume in the *Chemistry and Pharmacology of Drugs* series under the editorship of Daniel Lednicer. This book provides for the first time a comprehensive collection of reviews of the physiology, pharmacology, and chemistry involved in the transmission of pain, as well as its alleviation by drug therapy.

The book is divided into four chapters, each contributed by an author active in the forefront of the field chosen for critical review. In the first chapter, by J. S. Mohrland, basic physiology of pain is outlined; this includes the complex network of neural pathways, transmitters, and modulators which interact prior to the sensation of pain. Of special interest are discussions pertaining to the interplay between pain stimuli and other central nervous system functions. The second chapter, by P. F. Von Voigtlander, is a compilation of animal models, both *in vivo* and *in vitro*, which have proven usefulness in predicting clinically effective analgetics. In examining the various test methods for abuse potential, dysphoria, and other side effects, the author also presents an overview of current concepts of opioid receptors, thus adding new dimensions and greater depth to his discussions. Chapter 3, by J. S. Morley, deals with

one of the most interesting aspects of analgesic research: the endogenous, pain-regulating peptides and their synthetic analogues. This chapter should be of prime interest to those who seek the new challenges (and opportunities) of designing enkephalin releasers, metabolic inhibitors, as well as antagonists for substance P as analgetics of the future. The book concludes with a chapter by D. Lednicer on the evolution and SAR of major synthetic analgetics based on morphine. Although a good portion of the material treated in this chapter is historical in nature, it nonetheless serves as a useful guide to medicinal chemists and pharmacologists who are embarking on analgesic research. One minor blemish in this otherwise comprehensive coverage lies in the omission of some recently disclosed tricyclic analgetics, which deviate considerably from the partial morphine derivatives, both in structure and in activity profile.

Overall, the quality of production of this volume is excellent; figures and structures are clearly drawn and errors are minimal. It is a fine reference book which fulfills its purpose.

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**Chromatography of Alkaloids, Part A: Thin-Layer Chromatography.** (*Journal of Chromatography*, Vol. 23A). By A. BAERHEIM SVENDSEN and R. VERPOORTE. Elsevier Science Publishing Co., New York, NY 10017. 1982. 533 pp. 16 × 24 cm. Price \$104.25 (Dfl. 245).

Although this is the twenty-third volume in a continuing series which began in 1973 with the publication of "Chromatography of Antibiotics" (Volume 1), this is the first volume that is exclusively devoted to the discussion of the chromatography of alkaloids. Because of the large amount of information available, it was decided to publish this volume in two parts: Part A (thin-layer chromatography) and Part B (gas-liquid and high-performance liquid chromatography).

The book is divided into two major portions entitled a "General Part" and a "Special Part." The "General Part," consists of four chapters covering about 60 pages. Chapter 1 includes a discussion of adsorbents, solvent systems, development techniques, sample application, and several tables describing solvent classification and selectivity. Chapter 2 presents a discussion of the various methods of detection, including reagents, tables with color reactions, and a consideration of nonalkaloidal components capable of eliciting false-positive reactions with Dragendorff Reagent. Chapter 3 consists of a general consideration of thin-layer chromatographic separation and identification of alkaloids. This chapter also discusses the use of various reagents, solvent systems, fluorescence, ion-pair adsorption, and ion-exchange thin-layer chromatography. Finally, Chapter 4 includes a discussion of isolation methods and artifact formation resulting from different isolation techniques.

The "Special Part" of the book consists of 17 chapters, about 420 pages, which are devoted to the following classes of alkaloids: pyrrolidine, pyrrolizidine, pyridine, piperidine, quinolizidine, tropane, quinoline, phenethylamine and isoquinoline-derived, indole, steroidal, and miscellaneous. Each chapter consists of an extensive discussion of adsorbents, developing solvents,  $R_f$  values, detecting reagents, and references and is richly endowed with tables.

The Appendix alphabetically lists the 106 different reagents that have been discussed throughout the book and includes detailed instructions for their preparation. Finally, the Index is composed of a Subject Index, which contains general topics and classes, and a Compound Index, which contains only compounds.

This is a well-referenced and richly tabled book which should be extremely useful to anyone involved with the detection, isolation/separation, and identification of alkaloids from any source. It is not highly theoretical, nor is it intended to be, and is a practical work which addresses the subject concisely. The price is steep for the individual scientist, but certainly departmental, school, and institutional libraries would want this book in their collection.

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**Controlled Release Delivery Systems.** Edited by THEODORE J. ROSEMAN and S. Z. MANSORF. Marcel Dekker, Inc., 270 Madison Ave., New York, N.Y. 10016. 1983. 402 pp. 15 × 23 cm. Price \$57.50 (20% higher outside the U.S. and Canada).

The book, which contains 25 chapters, describes the proceedings of the Eighth International Symposium on Controlled Release of Bioactive Materials held in Fort Lauderdale, Florida, July 26–29, 1981. The editors of the book are recognized leaders in the field of polymeric controlled-release systems, and the authors selected to contribute full-length manuscripts represent a broad international array of experts in this area.

The topics covered in the book range from biomedical applications to agricultural uses for release vehicles for pesticides and herbicides. Heavy emphasis is placed on polymeric delivery systems with only one chapter on the use of prodrugs and one on liposomes. Subjects covered in the book include liposomes, microencapsulation, reservoir and monolithic devices, biodegradable and swellable matrices, prodrugs, and a contribution on magnetically controlled polymeric systems. All chapters contain a discussion section and all are adequately referenced. A subject index is also included.

This is a useful book, providing a reader with an overview of the various applications in controlled-release technology. It cannot be recommended for an individual seeking an in-depth discussion on any one given subject. However, it is well written and serves to elucidate the current status of this rapidly growing field.

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*Advances in Steroid Analysis.* Edited by S. GOROG. Elsevier Scientific Publishing Co., 52 Vanderbilt Ave., New York, NY 10017. 1982. 551 pp. 16 × 24 cm. Price \$104.75 (Dfl. 225.00).

*Analytical Profiles of Drug Substances. Vol. II.* Edited by KLAUS FLOREY, Academic Press, 111 5th Ave., New York, NY 10003. 1982. 665 pp. 15 × 23 cm.

*Application of Pharmacokinetics to Patient Care.* Edited by CHARLES A. WALKER and LAMBROS P. TTERLIKKIS. Praeger, 521 Fifth Ave., New York, NY 10175. 1982. 175 pp. 15 × 24 cm. Price \$26.50.

*Assessing Causes of Adverse Drug Reactions. (With Special Reference to Standardized Methods).* Editor: JAN VENULET. Coeditors: GARRY-CLAUDE BERNEKER and ANTONIO G. CIUCCI. Academic Press, 111 Fifth Ave., New York, NY 10003. 1982. 223 pp. 15 × 23 cm.

*Benzodiazepines. A Handbook. (Basic Data, Analytical Methods, Pharmacokinetics and Comprehensive Literature).* By HAROLD SCHULTZ, Springer-Verlag New York Inc., 175 5th Ave., New York, NY 10010. 1982. 439 pp. 19 × 27 cm. Price \$88.00.

*British National Formulary, Number 4 (1982).* Publications of the Pharmaceutical Society of Great Britain. 1 Lambeth High Street, London, SE1 7JN, England. 1982. 454 pp. 13 × 22. Price £4.50.

*Cancer Mortality by Occupation and Social Class 1851–1971.* (IARC Scientific Publications No. 36) Office of Population Censuses and Surveys, Studies on Medical and Population Subjects No. 44. By W. P. D. LOGAN, Her Majesty's Stationary Office, London, and Lyons International Agency for Research on Cancer. 1982. 253 pp. 20 × 30 cm. Price \$30.00 (Sw Fr. 60).

*Chromatographic Separation and Extraction with Foamed Plastics and Rubbers.* By G. J. MOODY and J. D. R. THOMAS. Marcel Dekker, Inc., 270 Madison Ave., New York, NY 10016. 1982. 139 pp. 14 × 23 cm. Price \$29.75. (20% higher outside the U.S. and Canada).

*Critical Stability Constants. Vol. 5. First Supplement.* By ARTHUR E. MARTELL and ROBERT M. SMITH. Plenum Publishing Corp., 233 Spring St., New York, NY 10013. 1982. 604 pp. 21 × 28 cm. Price \$69.50.

*Crown Compounds. (Their Characteristics and Applications.)* By MICHIO HIRAOKA. Elsevier Scientific Publishing Co., 52 Vanderbilt Ave., New York, NY 10017. 1982. 275 pp. 16 × 25 cm. Price \$83.75. (Dfl. 180.00).