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BOOKS

Review of Organic Functional Groups: Introduction to Medicinal Organic Chemistry. By THOMAS L. LEMKE. Lea and Febiger, Philadelphia, PA. 1983. 131 pp. 15 X 23 cm. Price \$10.50.

The objective of this book is to provide a self-paced review of the nomenclature, physical properties, chemical properties, and metabolism of organic functional groups that are important in medicinal chemistry. The book is designed for use as supplemental material for a pharmacy course in medicinal chemistry as well as a concise reference for students and professional practitioners in pharmacy, medicine, nursing, dentistry, and veterinary medicine. After a general chapter on water solubility and chemical bonding, subsequent chapters focus on specific functional groups. Organic functional groups covered include alkanes, alkenes, aromatic hydrocarbons, halogenated hydrocarbons, alcohols, phenols, ethers, aldehydes, ketones, amines, carboxylic acids and their derivatives, sulfonic acids and sulfonamides, and heterocycles. A chapter on empirical and analytical methods of determining water solubility and an appendix on acidity and basicity are also included. Review questions are placed at the end of chapters to reinforce concepts presented in the text.

Chapters on individual functional groups are concise, and adhere to an outline format where the three major subheadings are Nomenclature, Physical-Chemical Properties, and Metabolism. There are adequate examples and tables of physical data given to illustrate the major points. The sections on nomenclature and physical-chemical properties are especially clearly written and complete. Most of the sections on metabolism are also clear and concise. However, the metabolism sections on aromatic hydrocarbons, halogenated hydrocarbons, and amines may be confusing since they contain several statements which contradict information found in drug metabolism chapters of current medicinal chemistry textbooks.

The major emphasis of this book is in areas of medicinal chemistry which many undergraduate pharmacy students find difficult. The sections on nomenclature and physical-chemical properties should be very helpful to those students who have difficulty extracting information from general organic chemistry textbooks that is directly pertinent to medicinal chemistry. Therefore, this book fills a distinct need in undergraduate medicinal chemistry instruction. As long as weaknesses in some metabolism sections are recognized, this book should be an excellent supplement to most undergraduate pharmacy courses in medicinal chemistry as well as a concise review for students and practitioners of other health professions.

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Applied Clinical Pharmacokinetics. Edited by DENNIS R. MUNGALL. Raven Press, 1140 Avenue of the Americas, New York, NY 10036. 1983. 448 pp.

This book represents the most recent compilation of information related to the discipline of therapeutic drug monitoring. As stated in the preface, the major objective of this text is "to offer students and clinicians in pharmacy, medicine, pharmacology, and clinical chemistry a practical guide to clinical pharmacokinetics." Although a brief introductory chapter discusses general concepts and basic pharmacokinetic principles, students without previous pharmacokinetic course work may have difficulty applying the information presented in the remainder of the textbook. The subsequent chapter which examines protein binding and free drug concentrations is complete, reasonably well referenced, and a good review of the pertinent drug-protein binding literature. However, this chapter cannot be recommended for students because it contains several misleading statements and very minor yet bothersome errors.

The remaining chapters are primarily devoted to the discussion of individual therapeutic agents and include: procainamide, quinidine, digoxin, anticonvulsants, theophylline, aminoglycosides, warfarin, antihypertensives, lithium, tricyclic antidepressants, benzodiazepines, salicylates, and antineoplastics. The absence of a chapter addressing the pharmacokinetics of lidocaine is a limitation of the text and certainly would have proven more useful to the clinician than a chapter discussing antihypertensive agents.

Each of the drugs reviewed has a chapter to itself with the format designed to cover important aspects of clinical pharmacology, pharmacokinetics, plasma concentration and response relationships, dosage regimen design, and assay methods. The book is quite readable in this format and appears to be relatively free from errors. Most chapters contain practice problems along with detailed solutions. The information on each drug is, for the most part, well detailed and referenced. The concluding chapter is devoted to the use of programmable calculators in clinical pharmacokinetics. Included in this chapter is a group of calculator programs that may prove useful to those individuals who utilize such devices in their clinical practice.

On the whole, this book provides a reasonable compilation of the published literature in the areas addressed by the authors. However, this text is not unique in its area of emphasis and a more rigorous and comprehensive examination is available as a reference source. While the practicing clinician may find certain areas of this book of interest, (e.g. practice problems, calculator programs) its general appeal is limited; therefore, the student in either introductory or advanced courses will find currently available texts of greater benefit.

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