ment of analytical procedures. One chapter deals with the radioimmunoassay for digoxin. The successful growth and vitality of a clinical pharmacokinetics program depend on the investigators' ability to measure drug levels in biological specimens. Therefore, innovators of diversified analytical methodology must be an integral part of such a group.

Several of the chapters deal with the pharmacokinetic control of the clinical therapy of different drugs or drug classes. These chapters provide the greatest insight into the contributions that clinical pharmacokinetics can provide for rational drug therapy. Although dealing with specific drugs, the chapters contain much in the way of providing the basis for other investigators to monitor drug levels and/or design studies for other drugs which should be monitored as outlined in the final chapter.

Two chapters deal with the use of a clinical pharmacokinetics laboratory for bioavailability assessment and discuss the design and evaluation of bioavailability studies. Another chapter discusses the role of the clinical pharmacist as an interface with the physician. However, the book lacks input from the clinical pharmacologist involved in such studies.

Overall, the book represents a useful contribution which provides a valuable insight into the potential of clinical pharmacokinetics in rational drug therapy.

Reviewed by Stanley A. Kaplan
Research Division
Hoffmann–La Roche, Inc.
Nutley, NJ 07110

Principles of Medicinal Chemistry. Edited by WILLIAM O. FOYE. Lea & Febiger, Philadelphia, Pa., 1974. 857 pp. 19 × 27 cm. Price $29.50.

This text, as the editor notes in the preface, is aimed primarily at undergraduate students, and it has been written by 38 teachers and researchers in medicinal chemistry. The book demonstrates that extensive literature has been taken into consideration in developing an account of the various classes of drugs and types of drug action. The reviewer agrees with the editor that the major objective of introducing the appropriate fundamental chemical principles to beginning students is to provide the basis for the understanding of drug action. Moreover, the reviewer feels that the understanding of chemical principles of drug action is essential to the study of therapeutics, biopharmaceutics, and clinical pharmacy; hence this book should be useful not only to students in medicinal chemistry, but also to students in pharmacology, clinical pharmacy, and pharmaceutics.

Foye excellently edited a total of 37 chapters as a review of the vast area of medicinal chemistry. The first six chapters cover general topics which are usually found in contemporary medicinal chemistry and pharmacology textbooks: historical milestones in the development of drug therapy; physicochemical properties and bioactivity; modern approaches to rational drug design; the relationship between stereochemistry and pharmacological properties; drug metabolism; and drug–receptor interactions. These preliminary chapters provide an effective introduction to the rest of the book and to the fields of medicinal chemistry and pharmacology.

The treatment of the major classes of medicinal agents begins with those affecting the central nervous system—an effective approach to the study of the chemistry of drug action relating to neuropharmacology. Subsequently, agents acting on the peripheral nervous system are surveyed. Cardiovascular drugs, anticoagulants, coagulants, plasma expanders, and diuretics are included in three chapters by the same author, thus providing continuity that makes for easy reading. Anti-allergenic agents are well covered with emphasis on the relevant biochemical principles and discussion of the major structural classes.

The medicinal chemistry of steroid endocrinology is introduced with sections on cholesterol metabolism and antilipidemic agents. For more effective utilization by undergraduates, it seems that the chapter (24) on amino acids, peptides, and proteins should precede or immediately follow the consideration of steroid hormones to relate the hypothalamic and pituitary peptides to their effects on steroid hormone production; then, the chapter on insulin and other agents affecting carbohydrate metabolism would follow logically with the thyroid agents.

The field of chemotherapy is covered (nine chapters) as an overview emphasizing modern concepts of metabolite antagonism, antibiotics, and the various classes of chemotherapeutics. As the author notes, the chapter titled, "Antibiotics," discusses only those antibiotics used in the treatment of infections caused by Gram-positive and by Gram-negative bacteria, whereas respective chapters deal with antimycobacterial, antifungal, antineoplastic, and antiprotozoan antibiotics.

Most principal chemotherapeutic agents are structurally characterized and their biochemical actions are related to therapeutic significance.

Finally, miscellaneous medicinals affecting the respiratory system (*e.g.*, nasal decongestants, antitussives, *etc.*,) and diagnostic agents are presented in two chapters.

Perhaps other educators agree with the reviewer that for undergraduate teaching a combination of texts (*e.g.*, Foye's; Burger's *Medicinal Chemistry;* and Wilson, Gisvold, and Doerge's *Textbook of Organic Medicinal and Pharmaceutical Chemistry*) together with appropriate journal articles serve the best purpose in presenting a well-balanced complementation of lecture material in medicinal chemistry, thus providing students with a good introduction to the literature *via* selected bibliographies. In this capacity, Foye's text will be a contribution to the pharmaceutical sciences and pharmaceutical education in general. This book can also serve as a useful review for pharmaceutical scientists who feel a need for updating in elementary medicinal chemistry. Furthermore, pharmacy and medical practitioners will find this text important for refamiliarization with the chemical basis of modern drug therapy.

Reviewed by Jaime N. Delgado
College of Pharmacy
University of Texas
Austin, TX 78712