

is not available, a copy can probably be obtained by writing one of the editors. The errors were corrected in the second printing.

A rapid reading revealed surprisingly few misspelled words and only a few errors in the other chapters. Most errors are minor and do not significantly detract from the usefulness of the material.

Errors in structural formulas include carbenicillin indanyl sodium, p. 289; cephalothin sodium, p. 292; cephalirin sodium, cephamycin, and cefoxitin, p. 294; anhydrotetracycline, p. 308; oleandomycin, p. 317; lincosycin, p. 320; nystatin, p. 330; carbachol intermediate, p. 469; and neostigmine, p. 472.

Other minor errors were also noted. On p. 306, a "2" should be replaced by a "3" to read, "... protonation of the enol group on carbon atom 3 . . . ." In the "Mechanism of Hydrolysis of AChE," p. 467, a positive charge was omitted and the orientation of a water molecule is misleading. On p. 477, the acid proton is incorrectly placed on pilocarpine hydrochloride. The structural formula number (I) was omitted on p. 555. In the third line on p. 560 "R" should replace "S," which refers to the absolute configuration of bisquaternary species. Since rotoxamine is the levorotatory isomer of carbinoxamine, the following statement should be deleted from pp. 652 and 654: "In compounds that exhibit optical isomerism the dextrorotatory isomer possesses most of the antihistaminic activity." Finally, on p. 665, the acid proton is incorrectly placed on antazoline hydrochloride.

A footnote in the chapter on Analgesic Agents explains that the popular term "analgesic" is used in preference to the etymologically correct term "analgetic." Perhaps it would be appropriate to explain a similar relationship in the usage of the terms "antitubercular" and "antituberculous" either on p. 144 or 331.

In the reviewer's opinion, the seventh edition is an improvement of an already good textbook. It should be well received in the classroom and is highly recommended as a textbook for courses in undergraduate medicinal and pharmaceutical chemistry.

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**Assessing Drug Reactions—Adverse and Beneficial, Vol. 7: Philosophy and Technology of Drug Assessment.** Edited by FRANK N. ALLAN. Interdisciplinary Communication Associates, Smithsonian Institute, Washington, DC, 1976. 158 pp. 15 × 23 cm.

This book contains the report of the seventh conference in a series on the Philosophy and Technology of Drug Assessment. This conference dealt with the basic problem of defining, detecting, reporting, and assessing adverse drug reactions. The conference was conducted by the Interdisciplinary Communications Program of the Smithsonian Institution.

The topics discussed in the book include terminology and definition of adverse drug reactions, risk-benefit analysis of adverse drug reactions, and various approaches that can be used in collecting data about adverse drug reactions. The book is written in a narrative style and includes edited statements of conference participants.

The book indicates that there was a lack of agreement among the conference participants regarding the magnitude of the problem, how to assess that magnitude, or who needed the most increased understanding. However, there was a consensus agreement that a national adverse drug reaction monitoring system is needed and that the system should be part of a larger system that includes data collection of the patient's whole response to drug therapy.

The book provides an informative insight into the controversy surrounding the collection and evaluation of adverse drug reaction data. The personal experiences of some conference participants are very enlightening and enable the reader to obtain a better grasp of the problems associated with collecting and evaluating adverse drug reaction data.

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**AMA Drug Evaluations, 3rd Ed.** Prepared by the AMA Department of Drugs in cooperation with the American Society for Clinical Pharmacology and Therapeutics. Publishing Sciences Group, 545 Great Rd., Littleton, MA 01460, 1977. 1327 pp. 18 × 26 cm. Price \$29.50.

The third edition of this valuable reference source has been completely reorganized, updated, and expanded. The book is divided into 19 sections based on therapeutic category. Each section contains more specific chapters, which begin with a brief introduction and include detailed evaluations for individual drugs and compounds.

The book gives information on dosage, contraindications, and adverse reactions and includes structural formulas for most single-entity drugs. It also lists generic and proprietary names and available dosage forms and sizes. Included are evaluations of over 1300 drugs, information on investigational agents, and extensive listings for normal values of clinical laboratory tests. Also, there is information on drug interactions, labeling, and use of drugs during pregnancy.

This book is essential for those who prescribe, dispense, or administer drugs or who require information on applied therapeutics.

*Staff review*

**Organic Chemistry of Drug Synthesis.** By DANIEL LEDNICER and LESTER A. MITSCHER. Wiley, 605 Third Ave., New York, NY 10016, 1977. 471 pp. 16 × 23 cm. Price \$22.50.

This book is an attempt to present to synthetic organic and medicinal chemists the synthetic routes used to prepare a great majority of organic compounds used as drugs. The book focuses on compounds that are either used in the clinic or have undergone clinical trial, concentrating on those assigned generic names by the USAN Council. There are 22 chapters, each of which is organized by structural rather than pharmacological classes. The pharmacology involved in the various disease states discussed and the mode of action in selected drug classes are written in terms useful to the chemist with a rudimentary knowledge of biology. A glossary of commonly used pharmacological terms is included.

The book is filled with errors of all types, which the reviewer found to be extremely irritating. In at least three places, the authors refer to substituted ureas as carbamates (structure 10, p. 7). No chapter was error free. Frequently compounds were given wrong numbers in the discussion section. Structure 61 (p. 36) is a piperidyl derivative, not a pyrrolidino derivative as listed. Structure 30 (p. 150) is referred to twice (p. 151) as an allylic halide when it is not one. Alkylation reactions using *N*-(2-chloroethyl)diethylamine are common throughout the book. Only twice is an aziridinium salt mentioned as an intermediate (methadone, p. 79, and promethazine, p. 373). It is quite possible that aziridinium salts play important roles in all such alkylations, not just the two unsymmetrical cases listed by the authors.

The only three groups of compounds with recent references are the benzodiazepines, prostaglandins, and cephalosporins. Only at the end of the chapter on steroids do the authors indicate that drug research in this area has not stopped. This statement can surely be made about all of the other areas covered in the book and should not have been limited to the steroids alone. No mention was made of any drugs for neoplastic diseases, which is certainly another shortcoming of the book.

Short statements related to medicinal chemistry appear throughout the book (rigid analogs, pp. 355 and 387; the role of aromatic rings, pp. 40 and 108; and receptor, p. 218). The statements are often vague, and it would have been helpful if the authors had included an introductory chapter covering the major aspects of medicinal chemistry.

Organic chemists with no background in drugs should find this a useful introduction to the subject. This book provides only a superficial coverage of the subjects included and cannot be recommended as either an introductory text or as a reference source for anyone actively engaged in drug research.

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