REVIEWS

Autonomic Pharmacology: Experimental and Clinical Aspects. By MICHAEL D. DAY. Churchill Livingstone, 19 West 44th St., New York, NY 10036. 1979. 255 pp. 14 × 21 cm. Price $15.00 (soft cover).

This excellent small book, in the words of the author, "is intended primarily for undergraduate students of medical sciences." Students of medicine, pharmacy, dentistry, nursing, and other health sciences also should be included. Written for British students, this book contains many drug names that are not familiar to American students. This is due mainly to the fact that the FDA considers some of these drugs neither safe nor effective, even though they have been used in England for many years. The fact that drugs available on this side of the Atlantic are not identified may be a slight handicap. However, by describing these foreign drugs, this book gives the American student a better and more complete view of autonomic drug development.

There are three chapters covering the anatomy, physiology, and chemistry of the autonomic motor system and neurohumoral transmission. Ten chapters cover adrenergic and cholinergic agonists and blocking agents. For each drug class, one or two prototype compounds are described in detail. Other drugs of the same category then are briefly compared clinically to the prototype. The historical aspects of autonomic physiology and pharmacology are well covered. As far as the drugs that are included and the mechanism of actions described are concerned, this work is up to date. The only thing missing is some mention of radioligand studies of receptors. This book is recommended for all biomedical students.

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The Anticancer Drugs. By WILLIAM B. PRATT and RAYMOND W. RUDDON. Oxford University Press, 200 Madison Ave., New York, NY 10016. 1979. 323 pp. 15 × 23 cm. Price $18.95 hard cover or $12.95 soft cover.

The stated purpose of this text is to offer "a full, but concise description of anticancer drugs, both old and new." The authors have achieved their objective with respect to describing currently used agents for human neoplastic diseases. There is excellent integration of the proposed mechanism of action of the agent, its uses against specific tumor types, and toxicity of the agent in humans.

The first chapter is a cursory review of the incidence of cancer in the United States and the world, biochemical and genetic characteristics of malignant cells, and role of drugs in cancer therapy.

Historical milestones in the development of the major chemical categories of antineoplastic agents are dealt with in the second chapter.

The third chapter discusses Gompertizian cell growth of tumors, the cell cycle, fraction of cells in mitosis, development of drug-resistant states, and determinant factors of the host involved in drug response.

Chapter 4 reviews, as general concepts, the responsiveness of tumors to chemotherapy drugs, the choice of drugs for specific types of tumors, combination chemotherapy, adjuvant therapy, and toxicity of antineoplastics.

Individual alkylating agents, antimetabolites, antibiotics, hormones, plant alkaloids, enzymes, and miscellaneous drugs are delineated in Chapters 5–9. The chemical structure, mechanism of action, administration routes, absorption, bioactivation, metabolism, distribution, excretion, causes of resistant states, and toxicity are given.

The last chapter briefly describes how new drugs are established as antineoplastic agents in animal models. Thirteen new drugs are discussed that are currently in human clinical trials, potent in animal screens, or unique in structure as an approach to drug design. This chapter also includes a treatment of biological markers of neoplastic cells, *e.g.*, antigens or enzymes, which is more appropriately included in an earlier chapter.

There are several weaknesses of the book as a general text in academic instruction. There is no discussion of structure–activity relationships or the reasons some agents are restricted from use in this country. Only a limited conceptual discussion of immunotherapy agents and their uses in neoplastic therapy and the use of chemotherapy prior to and post-surgery and/or radiation is presented. Neither percentages of response in the clinic to a specific agent for a given tumor type nor the percentage of relapses from therapy is delineated in the text. Furthermore, no differentiation is made between singular and combination therapy in the discussion of the uses of an agent.

The primary emphasis of this book is on the mechanisms of action as seen from the viewpoint of both biochemistry and molecular biology. Few texts have achieved such a complete description of all major agents.

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Index of Antibiotics from Actinomycetes, Vol. 11. Edited by HAMAO UMEZAWA. University Park Press, 233 E. Redwood St., Baltimore, MD 21202. 1979. 1466 pp. 18 × 23 cm. Price $97.50.

This update of a 1966 index lists the antibiotics produced by Actinomycetes reported mainly between 1966 and 1976. Chapter I lists generic names, common names, trivial names, and selected trade names, including those from the previous volume, in alphabetical order followed by those antibiotics designated by letter and numerical arrangement. The group to which the antibiotic belongs and its synonyms are given along with a page reference to an entry in the previous or present volume.

Chapter II gives data on the antibiotics. A typical compound entry includes the antibiotic group, synonyms and similar compounds, molecular weight and formula, structure, isolation, physical properties such as melting point and solubility, elemental analysis, UV characteristics, IR spectrum, activity, LD_{50} value, and literature references.

Staff Review

Analytical Profiles of Drug Substances, Vol. 8. Edited by KLAUS FLOREY. Academic, 111 Fifth Ave., New York, NY 10003. 1979. 558 pp. 15.5 × 23.5 cm.

This ongoing series is concerned with reporting supplemental information on drug substances that are listed in the official compendia but for which the compendia do not provide detailed physical or chemical data, methods of synthesis, or pathways of physical or biological degradation and metabolism.

Volume 8 contains individual monographs for the following drugs: aspirin, bromocriptine methanesulphonate, calcitrol, chlortetracycline hydrochloride, dobutamine hydrochloride, erythromycin, gramicidin, griseofulvin, halcinonide, hydralazine hydrochloride, calcium leucovorin, methimazole, nalidixic acid, neomycin, pseudoephedrine hydrochloride, triprolidine hydrochloride, and sodium valproate and valproic acid. The monographs contain some or all of the general headings such as introductory information (*e.g.*, history, appearance, and odor), physicochemical properties (*e.g.*, elemental analysis, spectra, crystal properties, solubility, and partition coefficients), synthesis, stability and degradation, biopharmaceutics (*e.g.*, pharmacokinetics and metabolism), toxicology, analytical methods, and literature references. Most of the monographs seem to have surveyed the drug literature through 1977 or 1978. The spectra and other analytical curves in the book have been reproduced in a clear and uncluttered fashion.

The entire series should be available in libraries of drug firms, FDA laboratories, toxicology laboratories, and schools of medicine and pharmacy. The volumes are not organized for use as textbooks in courses such