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## BOOKS

### REVIEWS

**International Encyclopedia of Pharmacology and Therapeutics—Neuromuscular Blocking and Stimulating Agents, Volumes I and II.** Edited by J. CHEYMOL. Pergamon Press, Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, 1973. 654 pp. 14.5 × 23 cm. Price \$52.50 (two-volume set).

These two comprehensive volumes reviewing the literature on agents which modify neuromuscular transmission represent the joint effort of the following authors: F. Bourillet, D. Bovet, W. C. Bowman, A. S. V. Burgen, C. Chagas, J. Cheymol, R. Couteaux, J. Debecker, J. E. Desmedt, D. Duncalf, Lise Engbaek, F. F. Foldes, G. Genkins, H. Grundfest, J. I. Hubbard, A. R. McIntyre, I. G. Marshall, K. E. Osserman, L. Sollero, G. Suarez-Kurtz, O. Vital-Brazil, G. Vourc'h, S. N. Webb, and P. G. Waser. Both volumes were edited by Professor J. Cheymol.

These two volumes are probably the most comprehensive review of agents that modify neuromuscular transmission that is available. The style of writing and arrangements of the manuscripts are of the highest quality and it is truly a pleasure to read the various chapters. As Professor Cheymol indicates in the Introduction, these volumes are comprehensive and include information that any researcher or clinician must have to understand the basic physiology and pharmacology of transmission. The various sections in the book include an excellent discussion of the anatomy that is involved with the end plate and skeletal muscle. At the physiological level, extensive discussions are included concerning pertinent enzymes, acetylcholine, and the influence of ions on transmission. Most of the volumes are devoted to the pharmacological level of discussion and comprehensive reviews are included covering comparative, chemical, and theoretical aspects of pharmacological actions of neuromuscular blocking agents and stimulants. Detailed discussions of the theoretical receptor as well as basic function of proteins are included. This is followed by discussion of pathological problems involved in neuromuscular transmission and finally the volumes conclude by comprehensive analysis of therapeutic considerations and treatments of various neuromuscular diseases.

Another reason that these are such delightful volumes is that the authors have exercised extreme care in searching the literature. The authors review the printed word all the way from the history of curare to the more recent research on the nerve terminal actions of drugs.

It is a pleasure for this reviewer to recommend these comprehensive volumes and assure any reader that they will be reviewing the most recent published work as well as our important historical heritage that leads to present knowledge. Volume I contains 423 pages and Volume II has 231 pages. Any scientist or clinician who is interested in neuromuscular transmission should have these volumes available as a necessary reference.

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**Foreign Compound Metabolism in Mammals, Volume 2.** By D. E. HATHWAY. The Chemical Society, Burlington House, London, W1V 0BN, England, 1972. xv + 513 pp. 14.5 × 22 cm. Price £ 11.00.

The second volume of this series covers the two-year period 1970–1971. It consists of an introduction section, seven chapters, and an author index and a compound index, the latter being a new feature added with this volume.

In the introduction, the editor D. E. Hathway discusses some broad points relative to the book, such as validation in man, biological availability, selection of animals, implications of metabolic studies on determining “no effect” levels, and perspectives in toxicology.

The first chapter on tracers for metabolism includes general considerations, syntheses of various radioisotopes, reactions, and stable isotopes.

The transference of radioactively labeled foreign compounds is covered in the second chapter; it is subdivided into drugs, pesticides, food additives, and other compounds.

Biotransformations, which comprise the third chapter, are discussed by the subdivisions drugs, food additives, carcinogens, lathrogens, silicon and boron compounds, toxins, rodenticides, insecticides, herbicides, fumigants and fungicides, and other compounds.

Chapter Four includes the mechanisms of biotransformation such as oxidation, reduction, hydrolysis, and conjugation.

The last three chapters cover species, sex, and strain differences in metabolism; drug kinetics; and interactions of drugs and foreign compounds.

Staff Review ■

**The Molecular Basis of Antibiotic Action.** By E. F. Gale, E. Cundliffe, P. E. Reynolds, M. H. Richmond, and M. J. Waring. Wiley, New York, N.Y., 1972. xviii + 456 pp. 14.5 × 23 cm.

The authors have chosen a topic for this book that is so potentially overwhelming in scope and detail one may justifiably wonder whether a single volume could adequately develop a molecular basis for antibiotic action. Their intent, however, is remarkably well approached. The format established is to classify the antibiotics according to whether they are inhibitors of bacterial cell wall synthesis, nucleic acid synthesis, or ribosome function or whether they affect the function of the cytoplasmic membrane. A clear effort is made to include under each classification examples of each major antibiotic known to function in the specified manner. The unifying thread is a lucid and critical discussion of biochemical or intact cell experiments which point to a particular molecular mechanism of action. Included in certain of the surveys, as well as in a separate chapter, is a fine introduction to the biochemical basis for bacterial resistance to antibiotics.

Such broad coverage leads necessarily to deficiencies in detail, as in the chapter dealing with inhibitors of protein synthesis, but these are balanced by expanded discussions on antibiotics of more current interest. In the chapter dealing with drugs affecting the cytoplasmic membrane, present membrane models are briefly and critically discussed. The surveys noting the influences of antibiotics on membrane structure and on energy-dependent transport processes are stimulatory and cause one to reflect on how similar effects might be involved more generally in drug transport and other types of drug action. Inhibitors of nucleic acid synthesis, particularly those which function by intercalation, are discussed in considerable detail. In view of the diversity of biological effects manifested by intercalating agents such emphasis is understandable, even though the specificity of action of these compounds is more generally attributable to other factors governing drug action such as differential permeability. A discussion of the genetic basis for antibiotic resistance is incorporated into the chapter terminating the overall development to support earlier descriptions of resistance mechanisms.

There is sufficient content to this book for it to be of interest to students and researchers in nearly all areas of the basic health sciences. This reviewer can recommend it highly.

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**Fundamentals of Chemotherapy.** By WILLIAM B. PRATT. Oxford University Press, 200 Madison Ave., New York, NY 10016, 1973. 332 pp. 14 × 20.5 cm. Price \$6.95.

Primarily intended as a textbook, this book's chapters are organized by grouping drugs according to their biochemical site of action. In general, the biochemical process affected by a particular drug is described as is its mechanism of action. Drug resistance and drug interactions are also emphasized. The four major sections are drugs employed in the treatment of bacterial and fungal infection, parasitic disease, viral infection, and neoplastic disease.

Staff Review ■

**Hypersensitivity to Drugs, Volume I. International Encyclopedia of Pharmacology and Therapeutics, Section 75.** Edited by M. SAMTER and C. W. PARKER. Pergamon Press, Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, 1973. xii + 439 pp. 14.5 × 23 cm. Price \$36.00.

It is now recognized that the clinical symptoms which are the result of hypersensitivity to drugs are the final step in a long and often complicated sequence. This volume of the well-regarded *International Encyclopedia of Pharmacology and Therapeutics* series identifies the known conditions which must be met by the drug and by the host before immunological reactions can occur. The wide variety of responses which drugs can induce in organs and systems are covered. Precise definition of the requirements to be met by drug and host will eventually allow prediction of probable hypersensitivity development and will permit the development of measures to prevent it.

Staff Review ■

*Polymerization in Biological Systems.* Ciba Foundation Symposium 7. Associated Scientific Publishers, 52 Vanderbilt Ave., New York, NY 10017, 1972. 314 pp. 17 × 25 cm.

*Physiology, Emotion & Psychosomatic Illness.* Ciba Foundation Symposium 8. Associated Scientific Publishers, 52 Vanderbilt Ave., New York, NY 10017, 1972. 421 pp. 17 × 25 cm.

*Intrauterine Infections.* Ciba Foundation Symposium 10. Associated Scientific Publishers, 52 Vanderbilt Ave., New York, NY 10017, 1973. 219 pp. 17 × 25 cm.

*Actualités Pharmacologiques.* By RENÉ HAZARD. Masson & Cie, Editeurs, 120 Boulevard Saint-Germain, Paris, France, 1972. 268 pp. 16 × 24 cm. Price 105 fr. (French)

*A Depolarization-Hyperpolarization Cycle (A Molecular Model).* By CLARA TORDA. Torda, 101 W. 12th St., New York, NY 10011, 1972. 100 pp. 15.5 × 23.5 cm.

*Contamination in the Manufacture of Pharmaceutical Products.* Proceedings of the Stockholm meeting, April 1972. Secretariat of the European Free Trade Association, Rue de Varembe 9-11-1211, Geneva 20, Switzerland, 1973. 64 pp. 15 × 21 cm.

*The Quality of Pharmaceutical Products: The Role of the Inspector.* Proceedings of a Seminar held at the Ecole nationale de la sante publique, Rennes, France, Sept. 1972. Secretariat of the European Free Trade Association, Rue de Varembe 9-11-1211, Geneva 20, Switzerland, 1973. 131 pp. 15 × 21 cm.

*Protein Turnover.* Ciba Foundation Symposium. Associated Scientific Publishers, 52 Vanderbilt Ave., New York, NY 10017, 1973. 319 pp. 17 × 24.5 cm.

*Enzyme Inhibitors of Microbial Origin.* By HAMAO UMEZAWA. University Park Press, Chamber of Commerce Building, Baltimore, MD 21202, 1972. 114 pp. 15.5 × 23.5 cm. Price \$9.50.

*Agonist and Antagonist Actions of Narcotic Analgesic Drugs.* Edited by H. W. KOSTERLITZ, H. O. J. COLLIER, and J. E. VILLARREAL. University Park Press, Chamber of Commerce Building, Baltimore, MD 21202, 1973. 290 pp. 15.8 × 24 cm. Price \$19.50.

*Advances in Antimicrobial and Antineoplastic Chemotherapy, Volume 1/1.* University Park Press, Chamber of Commerce Building, Baltimore, MD 21202, 1972. 677 pp. 17.3 × 24.4 cm. Price \$24.50.

*Advances in Antimicrobial and Antineoplastic Chemotherapy, Volume 1/2.* University Park Press, Chamber of Commerce Building, Baltimore, MD 21202, 1972. 772 pp. 17.3 × 24.4 cm. Price \$24.50.

*Advances in Antimicrobial and Antineoplastic Chemotherapy, Volume II.* University Park Press, Chamber of Commerce Building, Baltimore, MD 21202, 1972. 868 pp. 17.4 × 24.4 cm. Price \$29.95.

*Progress in Organic Chemistry, Volume 8.* Edited by W. CARRUTHERS and J. K. SUTHERLAND. Wiley, 605 Third Ave., New York, NY 10016, 1973. 343 pp. 15 × 24 cm. Price \$32.50.

*Smoking Behavior: Motives and Incentives.* Edited by WILLIAM DUNN, JR. V. H. Winston & Sons, Inc., 1511 K St., Washington, DC 20005, 1973. 309 pp. 14.5 × 23 cm. Price \$9.95.

## NEW JOURNALS

*Journal of Pharmacokinetics and Biopharmaceutics.* Plenum, 227 W. 17th St., New York, NY 10011, 1973. 15 × 23 cm. Price \$32.00 (six issues).

*Journal of International Research Communication.* Published by M. C. S. Buckingham. IRCS, University Park Press, Chamber of Commerce Building, Baltimore, MD 21202, 1973. 20.5 × 29.5 cm. Price \$77.00 (monthly).