

## Book Reviews

**Experimental Chemotherapy. Volume IV.** Edited by R. J. SCHNITZER and FRANK HAWKING with 30 contributors. Academic Press Inc., New York, N. Y. 1966. 670 pp. 23 × 15.5 cm.

This fourth part of the projected five-volume treatise offers, in its first 377 pages, several facets of the chemotherapy of neoplastic diseases (approaches to cancer chemotherapy, methods of drug evaluation, antimetabolites, antitumor antibiotics). The remainder of the book is an appendix supplementing various chapters of Vol. I-III. The same thorough literature referencing and careful reporting which have characterized the earlier volumes has been maintained in the present book. However, in the new section on cancer chemotherapy, no mention is made of the alkylating agents, and the relations of antiviral and antitumor drugs are not considered. The chapter on methods of evaluation of anticancer drugs may be useful to the many chemists who want to decipher the cryptic activity reports they receive from screening agencies.

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ALFRED BURGER

**Handbook of Experimental Pharmacology. Volume XIX. 5-Hydroxytryptamine and Related Indolealkylamines.** Edited by VITTORIO ERSFAMER with 14 contributors. Springer-Verlag, New York, N. Y. 1966. xx + 928 pp. 25.5 × 18 cm. \$46.00.

The Table of Contents of this formidable volume lists the following topics: Histology of the Enterochromaffin Cell System; Chemical Analysis of Indolealkylamines and Related Compounds; Bioassay, Occurrence in Nature, Biosynthesis, Metabolism, and Peripheral Physiological and Pharmacological Actions of Indolealkylamines; Participation of 5-Hydroxytryptamine in Physiopathological Processes; Pharmacological Actions of Indolealkylamines and Precursor Amino Acids on the Central Nervous System; Drugs which Antagonize 5-Hydroxytryptamine and Related Indolealkylamines; Drugs which Block the Storage of 5-Hydroxytryptamine and Related Amines; Inhibitors of Monoamine Oxidase and Decarboxylase of Aromatic Amino Acids; Morphological Changes Caused by Injections of 5-HT in Animals and Man; and Clinical Aspects of Cerebral and Extracerebral 5-Hydroxytryptamine. However, this list does not do justice to the actual content of the book. Each chapter goes far beyond the relation of its announced title to indolealkylamines and comprises areas which might well have been discussed in connection with catecholamines, adrenergic amines, and their related amino acids in general; the occurrence, isolation, and analytical identification; and the chemical, biochemical, and pharmacological investigations of such materials. Thus, the indolealkylamines, their manifold studies, and those of their antagonists and interplaying drugs are put in proper perspective to the total *in vitro* and especially the *in vivo* systems in which they have aroused interest.

This is a book for experimental pharmacologists, and the only facet of medicinal chemistry included is a discussion of structure-activity relationships of agonists and antagonists of the title compounds. It can be said that all aspects of the histochemistry, biosynthesis, pharmacology, and clinical aspects of the indolealkylamines have been treated and documented exhaustively. As it always goes with such large books, most chapters have to be finished years ahead of the publication date; in the present volume, the literature from 1962 on has been considered lightly or not at all in several chapters. However, the information prior to that time appears to be complete. The critical evaluation of this published information is particularly gratifying: some areas of 5-HT biochemistry and activities, especially on the CNS, have been put in their proper niche, and the exalted claims of some previous monographs have been cut down to size.

The book will prove to be an invaluable and detailed source of theoretical and practical information for all investigators of indolealkylamines and closely and not-so-closely related materials.

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**Chemical Aspects of the Autonomic Nervous System.** By D. J. TRIGGLE. Academic Press Inc., London, 1965. ix + 329 pp. 16 × 24.5 cm. 75 shillings.

The intense interest in fundamental autonomic mechanisms, in catecholamines, and adrenergic and cholinergic processes has led to a continuous series of worldwide symposia during the last decade. The published proceedings of these meetings have been addressed mostly to specialists and have assumed that the reader would be familiar with the basic findings in these fields. A volume on autonomic mechanisms and facts for biologists and chemists has been missing. The present book admirably fills this need to acquaint them with these areas of research, from simple beginnings to sophisticated and debatable conclusions.

Books written by one author inevitably reflect his preoccupation with a given facet of his subject, and this volume is no exception to this rule. It mirrors the chemical inclination of the author. The short introduction on the structure and function of the nervous system and of excitable tissue will barely satisfy a neurologist, but then, it is intended to orient chemists, biochemists and physiologists to the task ahead. After the introductory chapters the book turns to neuropharmacology and neurobiochemistry. Sites of action of both major autonomic nervous systems are described, and the tone of the approach may be gathered from the fact that nine chapters mention "mechanisms" in their titles, and the remaining ones discuss receptors. No effort has been spared to support all facts and theories by kinetic, modern stereochemical, and biochemical evidence. Some titles look strange at first glance, such as "Adrenergic Mechanisms: The Cholinergic Site of Action." However, they point to the searching treatment of comparative data the author has attempted in order to give a virtually complete picture of autonomic events at a molecular level.

In a book on such a very complex field dozens of important questions must be left wide open in spite of all the work already recorded. This makes a lot of speculation unavoidable. Here these speculations, frequently illustrated by interesting drawings, consist of the interpretation of facts and opinions expressed by others. One will not agree with all these opinions, and the author should have been more selective in perpetuating them from the literature. For example, it is difficult to visualize the adrenergic  $\alpha$ -receptor as a "substrate." Some discussions like this one end in blind alleys, but most of them are provocative and stimulating.

This book can be recommended to any chemist or biologist who wants to see to what level chemical explanations of biological processes have advanced, not only in the field of nervous phenomena but in pharmacobiochemistry in general.

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**Drill's Pharmacology in Medicine.** Edited by JOSEPH R. DI PALMA. 3rd ed. The Blakiston Division, McGraw-Hill Book Co., Inc., New York, N. Y. 1965. xiii + 1488 pp. 20 × 26 cm. \$22.50.

**The Pharmacological Basis of Therapeutics.** Edited by L. S. GOODMAN and A. GILMAN. 3rd ed. The Macmillan Co., New York, N. Y. 1965. xviii + 1785 pp. 19 × 26 cm. \$22.50.

**The Pharmacologic Principles of Medical Practice.** By J. C. KRANTZ, JR., and C. J. CARR. 6th ed. Williams and Wilkins Co., Baltimore, Md. 1965. viii + 994 pp. 18 × 26 cm. \$14.75.

**An Introduction to Pharmacology.** By J. J. LEWIS. Williams and Wilkins Co., Baltimore, Md. 1964. xvi + 1048 pp. 14 × 21.5 cm. \$11.50.

A student is fortunate in taking pharmacology at this time on account of the new editions of the standard texts published during the past two years. The third edition of Drill's "Pharmacology" has appeared with a new editor and many new contributors. This is a comprehensive textbook written by many authors, with