

Book Reviews

Current Drug Handbook, 1960-61, by Mary W. Falconer, Instructor in Pharmacology, and H. Robert Patterson, Associate Professor of Bacteriology and Biology, San Jose State College and O'Connor Hospital, San Jose, California. W. B. Saunders Co., Philadelphia and London, 1960, 15 × 23.5 cm. viii and 164 pp. \$2.50.

This is the first continuation of the 1958 volume of *Current Drug Handbook* which has been reviewed in This Journal, 1, 196 (1959). The arrangement of the data and tables is the same as in the earlier volume. Approximately the same types of drugs and diseases are covered, with information concerning names, preparations, dosage (strength) and administration listed for each drug. Great accuracy prevails again for the latter three categories, while quite a number of errors have been noted in the brief historical reviews of several drugs, and in nomenclature. However, this book is written for the general practitioner and especially for nurses to give them at a glance dosages, routes of administration, contra-indications, incompatibilities, etc. Drugs covered by the *U.S. Pharmacopeia XV*, the *National Formulary X*, NNR (1960), *The Modern Drug Encyclopedia*, and *The American Drug Index* are listed. For some of the newest drugs, information furnished by the pharmaceutical manufacturers of the drug has been used also.

The new booklet will be needed by nurses and doctors anywhere, and will bring them up to date on newer drugs used in their daily practice.

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Index Chemicus, Vol. I (Eugene Garfield, ed). Institute for Scientific Information, 1122 Spring Garden Street, Philadelphia 23, Pa., 1960. 21 × 27.5 cm, ca. 150 pp. per monthly issue. Annual Subscription, \$500.00 (Educational Institutions and Hospitals, \$250.00).

An estimated 60,000 new chemical compounds, mostly organic, are reported in scientific journals each year, but current access to this information is not available. Existing indexes of the great Abstracts Journals

appear two to four years behind original publications, and the time lag is increasing. This makes it virtually impossible for an organic chemist who wishes to enter upon a new structural area, to make an up-to-date literature search as an absolutely essential beginning of his work. This difficulty has kept many investigators out of currently active fields of medicinal research, such as steroids, antineoplastic and antiviral agents, hypotensives and diuretics.

Index Chemicus is trying to improve this situation, by listing each new compound *within 30 days* after its first original publication in a journal. It consists of three sections. The Register of New Compounds (approximately 80 per cent of each issue) contains the article title in English, the author's name, institution and address, and the complete journal reference including the 'received' date of the manuscript. In addition, a structural and molecular formula and usually the name of each compound is provided, and even its Roman numeral and/or the exact page on which it has been described in the original reference article. Each month a molecular formula and author index is furnished, and these are cumulated quarterly and yearly. The molecular formulas are listed by serial numbers which refer to specific lines on the page of the Register where the compound has been described.

The use of this indexing system and of structural formulas will greatly reduce the amount of time required for an up-to-date literature search. The almost immediate and complete coverage of pertinent journals, and the accuracy of the abstract should provide a reliable source of information for all organic chemists. The subscription price is probably prohibitive for individuals, but larger industrial and institutional libraries should avail themselves as soon as possible of this badly-needed and unique service.

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Lipid Chemistry, by Donald J. Hanahan, with contributing chapters by Frank R. N. Gurd and Irving Zabin. John Wiley and Sons, Inc., New York, 1960. 14.7 × 22.8 cm. 330 pp. \$10.00.

In this book, the author has commendably accomplished his stated aims of providing a suitable and flexible text for an advanced course in lipid chemistry, an introduction to the subject for the uninitiated and a concise resumé of the field for the expert. Primary emphasis has been placed upon developments of the past decade in a field which has grown at an extremely rapid rate, making this work an invaluable adjunct to the earlier treatises of Duel, Hilditch, Witteoff and Gunstone.

Chapter 1 consists of a brief introduction to the subject, a consideration of nomenclature and the operative definition of the term 'lipid', and a brief summary of metabolic functions. Procedures for isolation of lipids from natural (primarily mammalian) sources, removal of non-lipid contaminants and fractionation and purification of the lipid mixtures are critically reviewed in the second chapter. Specific citations are given for the various techniques employed, e.g. solvent extraction, counter-current distribution, column and paper chromatography. A valuable admonitory note is provided by a discussion of possible alterations in structure during extraction procedures.

The following five chapters, comprising over half of the text, are devoted to discussion of each of the major classes of lipids: phosphoglycerides, phosphoinositides, sphingolipids (contributed by I. Zabin), the minor phospholipids and simple lipids. In each chapter, the dominant examples of the major class are examined with respect to chemical properties, structural proof, synthesis, isolation, identification and occurrence. The treatment is essentially exhaustive and provides a comprehensive review of the chemistry of these substances; areas of inconsistency and inadequate knowledge are indicated.

The final two chapters (contributed by F. R. N. Gurd) review the current state of knowledge regarding the lipoproteins; the phenomenal advances in this field are attested by the fact that over half of the references cited are from the period 1955-1958. A detailed description is given of the polar and non-polar characteristics of lipids and proteins, self-association phenomena of lipids and proteins, and the association of lipids with proteins. A specific treatment of the lipoprotein systems of plasma and of tissue origin provides detailed application of the preceding discussion.

While a wide range of highly complex material is presented, the chapters have a strong coherence. The text is documented by approximately one thousand references, indicating the thoroughness of coverage, which appears to be complete till 1958 with a small number of 1959 references, primarily as footnotes. The book is well produced typographically, but the inadequacy of the subject index and the lack of an author index diminishes its utility to a slight degree.

This book is highly recommended to both the organic- and bio-chemist of general interests and, most certainly, to anyone initiating or engaged in lipid research. The appearance of the companion volume, *Lipid Metabolism* by Konrad Bloch, should further enhance its value.

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Medicinal Chemistry, edited by Alfred Burger. Second Edition. Interscience Publishers Inc., New York and London, 1960. 1243 pp. 280/-.

This second edition of 'Medicinal Chemistry' will be welcomed by all workers in this field. The nine years since the first edition, which was written by Burger himself, have seen remarkable and ever increasing developments in this field and, as the editor points out, its revision was too large a task for one author. The present edition is the work of some thirty-four contributors all of whom have international reputations in the fields which they report.

The earlier articles are concerned with historical developments of medicinal chemistry, biological considerations, metabolite antagonism and structure-activity relationships; these are well covered in the main and offer a good introduction to the subject, although it is felt that the latter section was worthy of considerably greater length than that given. The next chapter, on vitamins, is undoubtedly one of the best in the book and is followed by a section devoted to the physiology of the central nervous system which serves as an introduction to some twenty-five articles on pharmacodynamic agents—anaesthetics, analgesics for pain and in rheumatoid diseases, hypnotics and sedatives, anticonvulsant and analeptic drugs, psychopharmacological agents, cholinergics, local anaesthetics, antispasmodics and antiulcer drugs, muscle relaxants, antiallergenic drugs, hypotensive agents, adrenergic drugs, diuretics, anticoagulants and anti-atherosclerotics, expectorants and antitussives.

After two sections devoted to steroidal and non-steroidal hormones, the remainder of the book is concerned with chemotherapy in all its aspects—sulphonamides, antimalarials, antiamoebic agents, antibiotics, chemotherapy of acid-fast infections, trypanocides, antifungal drugs, anthelmintics, chemotherapy of neoplastic diseases, antiviral agents, and disinfectants and antiseptics.

In general the subject matter is well covered, accurate, beautifully set out and indeed of the standard to be expected from contributors and publishers of this standing. Our regret is that although a number of advances to the end of 1957 have been recorded, only the literature up to early 1957 has been fully covered; of course, no publication of this nature can be expected to cater for those who have specialized in a prescribed field—this book is meant for the general reader and for those wishing to get a background in a new field.

This is a very large book and the reviewer is grateful to a number of his colleagues who have read sections in which they have specialized knowledge; we are agreed that this book is a 'must' for all those interested in the subject and hope that its inevitable success will encourage authors and publishers to produce further editions with reasonable frequency.

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