under it "Edestin from hemp seed," "Edestinase from hemp seed," and "Quaternary bases in *Cannabis*" only. For the amount of biochemical studies published on the cannabinoids, the biochemists will be disturbed with this type of index coverage.

A large number of incorrect spellings of common and technical words are found in the abstracts. These errors are self-evident for the most part but confusing in cases such as, for example, citation 2914 where "Cannabidivarian" appears in the title of the article and "Cannabidivarin" in the abstract, the latter presumably correct. In a few cases, words and/or phrases are apparently missing in titles of articles or in the abstracts. These omissions are usually not too much of a problem as in citations 368, 431, 474, 740, 1290, 1321, 1679, 1905, 1927, 2058, 2480, 2493, 2708, 2722, and 2914. The journal citation in 301 is confusing, and citation 2212 does not refer to the journal cited.

When abstracts are given, there is a great degree of inconsistency regarding content. Also, the summary table on p. XXII hardly can be considered complete.

However, even though these minor problems were found, the book at a very reasonable price of $13.95 is a bargain. It will be an indispensable, and much used addition to the personal library of anyone having even a remote interest in *Cannabis*. It will be of special interest to researchers in the field of *Cannabis*, to students in the medical professions and social sciences, to the pharmaceutical industry, and to reporters in the media and should be available in every library.

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Essentials of Medicinal Chemistry. By ANDREJUS KOROLKOVAS and JOSEPH H. BURCKHALTER. Wiley, 605 Third Ave., New York, N Y 10016, 1976. 697 pp. 16 × 23.5 cm. Price $22.50.

The book is designed as an undergraduate text in medicinal chemistry as well as a resource work for the chemist and biologist interested in several aspects of drugs. The composition of the book is built around succinctly stated facts and theories, which the authors hope are presented in a palatable, yet useful, form for the student. The authors have in mind the role of the pharmacist as an information source helping the physician and patient.

The book is in eight parts and generally follows pharmacological or therapeutic categories. These are Introduction: Basics, Drug Development and Theories; CNS Drugs; Drugs Acting at the Peripheral Nervous System; Cardiovascular, Blood and Renal Systems; Chemotherapeutics; Vitamins; Hormones; and Miscellaneous Agents including Diagnostics. The appendix lists drugs in the USP and NF.

Each part consists of several chapters dealing with discrete topics. They are concisely written along the lines of precis or compendia. The highlights of drug structure and action, as well as side effects and dosage, are recorded. Structural formulas and tables are utilized to illustrate structure–activity relationships in some cases. Useful references are appended to each chapter and are divided into general background and specific citations by class of agents.

The book should prove useful as a compendium of information in medicinal chemistry. This book plus a text organized in depth over the same topics should provide the student with a good background in course work, for board exams, and for professional practice.

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Manual of Clinical Immunology. Edited by NOEL R. ROSE and HERMAN FRIEDMAN. American Society for Microbiology, 1913 I St. N.W., Washington, DC, 20006, 1976. 932 pp. 17.5 × 26 cm. Price $16.00, flexible binding; $20.00, cloth binding.

This much needed volume, written by 180 authorities in various aspects of the rapidly expanding field of immunology, presents the latest information. The book is directed mainly to laboratory directors and technologists but should prove extremely useful to graduate students, medical students, postdoctoral fellows, residents, and clinicians. The greatest value of this book is the presentation of methodologies, allowing a stepwise approach to various procedures currently used in both clinical and research immunology. Of particular importance is the discussion of the pros and cons of each procedure with emphasis on the pitfalls encountered. Suggestions as to sources of materials and equipment required for each test can save time when setting up a new method.

The arrangement of the book in sections covering different aspects of the components involved in immunological responses and the cross-referencing between chapters allow the investigator to understand not only his or her own area but also the influence of cellular *versus* humoral aspects of immunology. Of particular importance are the chapters covering delayed hypersensitivity, lymphocyte subpopulations, and lymphocyte transformation.

The principles of radioimmunoassay are well presented, and the methods for determining various hormones in body fluids have general applicability not only in the clinic but also in the research laboratory.

Coverage of the immunological aspects of bacterial, mycotic, parasitic, viral, rickettsial, and chlamydial diseases will assist the clinician in more accurate diagnosis. The disadvantages of immunofluorescence and radioimmunoassays in immunodiagnosis of viral diseases are discussed, and suggestions for the use of microplate enzyme methods are given. The main advantages of the latter are a long shelflife, cheap simple equipment, and the same degree of sensitivity as the other procedures.

In the immunohematology section, the chapters on autoimmune and drug immune hemolytic anemia and the immunology of clotting factors point out the importance of modern immulogical methods in the diagnosis of often fatal diseases. Allergic disease testing is well covered, but the importance of testing for drug hypersensitivity is not adequate, being confined almost entirely to penicillin. The subject of autoimmune diseases receives full treatment, including tests for antibodies to tissue-specific antigens. The section on tumor immunology covers the present state of the art and indicates the necessity for further research to improve early tumor diagnosis. The section on transplantation immunology presents the immunological aspects of tissue transplantation, particularly the rejection phenomenon. The last section is of importance to clinical laboratories because it covers legal requirements, quality control, standardization of materials and methods, and proficiency testing of laboratory personnel.

This volume should be available to clinical and research workers in immunology and, because the field is expanding so rapidly, it should be updated more often than most such manuals.

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Aliphatic Chemistry. Vol. 4. A Specialist Periodical Report. Edited by A. McKILLOP *et al.* The Chemical Society, Burlington House, London, W1V 0BN, England, 1976. 281 pp. 14 × 22.5 cm. Price $49.50.

The fourth volume of the Specialist Periodical Reports on aliphatic chemistry is comprised of four chapters which summarize developments reported during 1974 in each of the chosen areas. Chapter 1, on the chemistry of acetylenes, alkanes, allenes, and alkenes, was contributed by D. W. Dunwell, J. C. Saunders, and B. P. Swann. The second chapter, which deals with aliphatic compounds having other functional groups (carboxylic acids and their derivatives, amino acids, aldehydes and ketones, alcohols, amines, alkyl halides, ethers, sulfur compounds, and miscellaneous aliphatic compounds) was prepared by E. W. Colvin, who also contributed the analogous reviews in all of the preceding volumes of this series.

The remainder of the volume is devoted to surveys of the literature dealing with naturally occurring polyolefinic and polyacetylenic compounds (Chapter 3) and with the chemistry of prostaglandins (Chapter 4). Both of these chapters were written by G. Pattenden, as were the corresponding chapters of Volumes 2 and 3. The reviews of Chapter 3 include, in addition to other topics, summaries of new work on polyolefinic antibiotics (*e.g.*, ansamycins) and other microbial metabolites, a variety of plant-product structures, polyolefins and polyacetylenes of marine origin, and insect pheromones. The fact that the chapter on prostaglandins is less than one-third of the length of the same chapter in Volume 3 is cogent testimony to the author's opening assertion of the