Principles of Biochemistry. 3rd Ed. Edited by ABRAHAM WHITE, PHILIP HANDLER, and EMIL L. SMITH. The Blakiston Division, McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York 36, N. Y., 1964. xiv + 1106 pp. 16.5 × 24 cm. Price $16.50.

This book, like the second edition, is a masterful and lucid compilation of facts and concepts in biochemistry. This is accomplished through the use of a well-indexed (111 pages) text of 993 pages, broken up into 56 chapters and organized into seven parts which include Chemical Composition of Cells, Catalysis, Metabolism, Body Fluids, Biochemistry of Specialized Tissues, Biochemistry of the Endocrine Glands, and Nutrition.

While no notations are made to specific references, there are books and review articles listed at the end of a chapter or series of associated chapters. These should serve the reader with sufficient source material to examine any subject in greater depth and with more concern for experimental procedures.

The most notable additions are the two chapters on the Genetic Aspects of Metabolism. These include recent work on deoxyribonucleic acid replication, ribonucleic acid synthesis and its relationship to protein biosynthesis, the coding of the amino acid sequences of proteins, and the induction and repression of enzymes. Other welcome additions include amino acid sequences in proteins, conformation of proteins, stereochemistry, the role of tetrahydrofolic acid, bacterial wall synthesis, and countercurrent multiplication mechanisms for the formation of hypertonic urine.

This book constitutes a very valuable addition to the reference library of a pharmaceutical scientist. Despite the unfortunate omission of the IUPAC 1957 Rules covering the nomenclature of steroids, it places most of the fundamental knowledge in biochemistry within arm's reach.

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Advances in Chemotherapy. Vol. 1. Edited by A. GOLDIN and F. HAWKING. Academic Press Inc., 111 Fifth Ave., New York, N. Y., 1964. xi + 579 pp. 15 × 23 cm.

It is a pleasure to welcome this series of "Advances" in a field where such a diverse variety of disciplines must now be considered. This volume provides critical, comprehensive reviews of the monograph type, covering both theoretical and experimental considerations, and offers a common meeting ground for the various types of investigators in chemotherapeutic research.

Following a brief historical essay (E. K. Marshall, Jr.), the chapters included are as follows: Quantitative Concepts in the Clinical Study of Drugs (C. G. Zubrod), Mechanisms of Action of Phenanthridine and Aminoquinaldine Trypanocides (B. A. Newton), Chemoprophylaxis and Chemotherapy of Viral Diseases (R. L. Thompson), The Vinca Alkaloids (N. Neuss, I. S. Johnson, J. G. Armstrong, and C. J. Jansen), Cell Culture and Cancer Chemotherapy (G. E. Foley and S. S. Epstein), Immunoreactions in Antiparasitic Chemotherapy (F. C. Goble), Drug Synergism in Antineoplastic Chemotherapy (J. M. Venditti and A. Goldin), and New Concepts in the Use of Inhibitors in Chemotherapy (N. O. Kaplan and M. Friedkin).

While the emphasis is not on clinical chemotherapy, the attempt is made to place clinical research on a more scientific basis. The biochemistry (and structural chemistry in the case of the vinca alkaloids) and possible mechanisms of action of chemotherapeutic agents are discussed as well. Some of the chapters succeed in the stated purpose of pointing to new generalizations and hypotheses, and all of them hold some interest for the pharmaceutical chemist. The manifold and interrelated biochemical, microbiological, and immunological problems discussed should provide new considerations for the design of chemotherapeutic agents.

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Pharmaceutical Microbiology. By M. HARRIS. Bailliere, Tindall & Cox Ltd., 7–8 Henrietta St., London, W.C. 2, England, 1964. U. S. Agent: The Williams & Wilkins Co., Baltimore 2, Md. 269 pp. Price $7.00.

The reviewer shares the view of the author in that there is a definite important area of research and instruction which could be grouped under the heading of "Pharmaceutical Microbiology." Dr. Harris' aim in writing this book was to bridge the existing gap between microbiology and pharmaceutics. Unfortunately, because the style of this book is primarily descriptive with far too much emphasis being placed on experimental procedures at the expense of the development of any underlying basic theory, Dr. Harris has failed to achieve his objective. The book is divided into two equal parts: the first portion consists of a discussion of basic aspects; the second part is concerned with the applied aspects of microbiology.

The treatment of the subject matter in the first section is superficial and purely classical, while modern developments in microbiology have been ignored. Basic important phenomena, such as genetic recombination, enzyme adaptation, permeability problems, protoplast formation, repression, and feedback control, etc., are not even discussed. On the other hand, a great deal of overemphasis is placed on procedures for medium preparation, staining methods, and graphical representations of elementary laboratory techniques. In fact, the contents of the first six chapters may be visualized as a condensed version of "Handbook of Bacteriological Technique" by R. J. Baker. But due to its lack of details, it is unsuitable as a laboratory manual.

The applied section is equally unsatisfactory. The chapter on chemotherapy is far from being comprehensive. With the possible exception of the section on penicillin, more information on antibiotics could be obtained from the "Merck Index." Virtually nothing is said concerning the mode of action, biosynthesis, stability, and chemistry of antibiotics. Such pertinent topics as drug resistance and combined use of antibiotics also are not mentioned. The chapter on chemistry of bacteria is poorly handled. One could hardly expect a