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Principles of Biochemistry.

Author(s) : [WHITE A.](#) ; [HANDLER, P.](#) ; [SMITH, E.](#) ; [STETTEN, D., Jr.](#)

Book : [Principles of Biochemistry.](#) 1959 No.Edn 2 pp.xiii + 1149 pp.

Abstract : That this textbook should appear in a new edition only 5 years after its first appearance is an indication both of the rapid advance of biochemistry and of the confidence of the authors and publishers that their book should contain the latest information. It also partly explains why the book is so expensive: at nearly £6 it is beyond the reach of many of the private buyers for whom it is designed. However, those who pay will possess a very comprehensive, up-to-date, readable and carefully-illustrated introduction to all aspects of human biochemistry.

This second edition follows closely the arrangement of the first edition. It contains 16 chapters divided into 7 parts. The title of the book may be misleading. Only

parts are really concerned with fundamental principles. The latter sections (specialized biochemistry of man and other mammals, with frequent references to biochemical aspects of disease, and to therapy based on this biochemical understanding). This is proper in a work designed primarily as a textbook for medical students. The aim has been well fulfilled.

The authors assume that their readers have an elementary knowledge of chemistry, but little or no physical chemistry. Physical principles are introduced as they arise, but the structural chemistry is collected into the first part entitled "Composition of Cells". These 200 pages might well have been reduced, as too much material taught under the heading of organic chemistry; some items, such as methods for laboratory synthesis of amino-acids, seem superfluous in a book of this size. The second part is a short section dealing generally with enzymes and individual enzymes being discussed in later parts. The next section deals with metabolism. It occupies one-third of the text, and rightly so, for here are the real foundations of biochemistry. After a full discussion on biological oxidation, there is the classification of metabolism into metabolism of carbohydrates, lipids and proteins. While it is metabolism of carbohydrates is primarily discussed, due emphasis is laid on the important contributions made in this field by the study of micro-organisms, plants and animals, and of the fundamental chemical unity among living organisms which is revealed by the study of comparative biochemistry.

Part 4 deals with body fluids, including not only blood, lymph, urine and milk, but also specialized extracellular fluids such as the secretions of the intestinal tract. The biochemistry of the main animal tissues is described—liver, muscle, nervous tissue, connective tissues, bone, eyes and skin. The control system operated by the hormones is discussed fully in Part 6, while the final section on nutrition is mainly concerned with the nature and functions of the vitamins, since many other aspects of nutrition have already been described in other chapters.

There follows an index of 100 pages, double the size of the index in the first edition. This is a further indication of the care with which this work has been prepared. It is to be hoped that the book will continue to be used as a reference source in the years to come. In its formal use as a textbook. Certainly this index enhances its value in this respect. The aids to easy consultation are the liberal use of cross-references and the well-chosen page-headings.

The production of the book is of a high standard. Mistakes are very few. The use of clear structural formulae and diagrams. References follow each chapter and are deliberately confined to books and review articles, mostly of very recent date. *C. E. Stickings.*

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