
The first edition of this book, published in 1960, had an enthusiastic reception by reviewers and was quickly recognized as one of a select company of great books in biology and medicine. No department of biochemistry, physiology, and human genetics could afford not to have a copy.

To the first edition of over 1400 pages there were 46 contributors, and the coverage of the subject was remarkably complete. However, accumulation of new knowledge in six years has been enormous and the new edition is welcome. The page size has been increased, which makes for easier reading and is particularly helpful in a book with so many well-chosen diagrams and photographs, and the number of chapters has risen to 60 with a corresponding increase in the number of distinguished contributors.

Very little of the first edition has escaped considerable revision, many sections have been rewritten entirely, and there are several new chapters. These additions deal with the more recently identified defects involving amino acid and lipid metabolism and with a number of specific disorders where fresh approaches were needed. They include new sections reviewing the biochemistry of the muscular dystrophies and other myopathies, a chapter on the hereditary haemolytic anaemias, and a number of disorders previously dealt with in the same chapter are now considered separately.

The general arrangement of the first edition has been retained. Chapters are grouped in sections by diseases characterized by disturbances of metabolism of carbohydrates, amino acids, lipids, steroids, purines, metals, porphyrins and hemes, and connective muscle and skeletal tissues, haematopoietic system, epithelial transport and circulatory enzymes and plasma proteins.

It is the reviewer's impression that the presentation of genetic information and evidence has been improved in many chapters and the initial presentation of genetic theory has been expanded to three chapters; one of these by M. B. Hoagland on information theory and protein synthesis is very helpful, particularly because, as the authors point out in their introduction, in many chapters it has been possible to attempt a molecular biological explanation of the disorders being considered.

It is remarkable that, in a book with so many chapters by different contributors, such a useful uniformity of presentation has been maintained without apparently inhibiting the characteristic styles of writing by the authors. Thus, most chapters start with a history of the discovery and development of knowledge of disorders to be described, and all end with numbered summary paragraphs which will prove most helpful as an orientation to those who are using the book as a source of reference.

The book will need no recommendation to those familiar with its predecessor. It is impossible to review the contents in detail even if any one reviewer was competent to undertake such a vast task. All that can usefully be said is that this is a unique book which has no rival in its scope and excellence, either as an introduction to many aspects of metabolism or as a source of reference to those working in most disciplines of biology and medicine.


Both these books are important—the first as a lucid and up-to-date textbook of genetic principles as applied to medicine, and the second as a thoughtful essay on the social implications of medical genetics. Both works call for close study.

The Thompsons of Toronto cover an exceptionally wide field in their 15 chapters, which are all concerned with basic considerations. Only the one chapter which deals with modes of inheritance follows the pattern of the older books. For the rest, there are discussions on the chromosomes and their aberrations, and on the molecular, biochemical, immunity, mathematical, and population aspects of human genetics. Other chapters deal with genes in differentiation and development, with studies on twins and with dermatoglyphs. The book is intended for the medical student and is offered as a contribution to the unsolved problem as to the place of genetics in the medical curriculum. It should find a ready welcome, from the post-graduate student and the inquiring clinician, but its catholicity is also likely to fire the enthusiasm of an occasional exceptional student.

Dr Smith's much shorter contribution also aims mainly at the undergraduate. It starts with the recognition of the facts that simply inherited characters are