

BOOK REVIEWS

D-GLUCOSE UND VERWANDTE VERBINDUNGEN IN MEDIZIN UND BIOLOGIE (D-GLUCOSE AND RELATED COMPOUNDS IN MEDICINE AND BIOLOGY). Edited by H. Bartelheimer, W. Heyde and W. Thorn. \$60.00. 1126 pp., 173 illustrations and 124 tables. Ferdinand Enke Verlag, Stuttgart, West Germany, 1966.

This monumental work in the tradition of the old German handbooks undertakes to describe and to correlate in a comprehensive fashion the knowledge and concepts concerning dextrose and related sugars as they have developed in the fields of chemistry, biochemistry, biophysics, plant and animal physiology, pharmacology, pathology and the various clinical specialties. The sugars lend themselves well to such approach, since they are not only the most common organic compounds but also of equally great importance to the basic scientist and to the clinician, and since their role in human biology, physiology and pathology is intimately related to the biological processes in which they are involved in lower living animals. A monograph reviewing and correlating all the many functional and structural parameters in which these compounds are involved should be of great value, therefore, to a wide variety of students and scientists. In the field of medicine, carbohydrate metabolism and its disturbances are of primary concern to the nutritionist, the endocrinologist and diabetologist, but the recognition that carbohydrates may be key constituents of many macromolecular compounds, that they play a significant role in protein and nucleoprotein metabolism has extended their importance far beyond into the fields of the geneticist, the immunologist, the oncologist and others.

The editors have assembled more than fifty scientists from the various disciplines who deal with their topics, from photosynthesis and energy production to diabetes mellitus, under seven main headings: Chemistry and Pharmaceutical Chemistry; Methodology; Origin; Occurrence and Significance in Plants and Micro-Organisms; Biochemistry and Physiology; Pharmacology; Pathologic Physiology and Nosology; Sport and Alimentation. These aspects are discussed on 1,100 pages with more than 8,000 literature references. The subtitles of the clinical part may give an impression of the wide scope and thoroughness of the work. Besides diabetes and the primary disturbances of carbohydrate metabolism, chapters are devoted to the carbohydrate metabolism in diseases of the kidney, the heart, the liver, in rheumatology, neurology, oncology, dermatology, etc.

As to be expected in an area with rapid scientific development, not all chapters are equally thorough and up to date.

This reviewer, for instance, was somewhat disappointed with the discussions of intestinal absorption of glucose and of the disturbances of carbohydrate metabolism in renal diseases. This, however, is a minor objection; sound basic information is provided, nevertheless.

A comprehensive and authoritative work like this will bridge the deplorable interdisciplinary "information gap" of our times and serve not only the retrieval of information but stimulate new approaches and new concepts. It should be a useful addition to every biomedical library.

VASCULAR COMPLICATIONS OF DIABETES MELLITUS—WITH SPECIAL EMPHASIS ON MICROANGIOPATHY OF THE EYE. Edited by Samuel J. Kimura, M.D., and Wayne M. Caygill, M.D. \$19.75. 277 pp. C. V. Mosby Co., St. Louis, 1967.

This text book is composed of manuscripts prepared by the participants of a symposium held at the University of California Medical Center in San Francisco in December, 1965. Outstanding investigators in the field contributed to each chapter. The book is divided into five parts:

Part I includes the XX Francis I. Proctor Lecture given by Norman Ashton on oxygen and the growth and development of retinal vessels. In Part II are discussed different problems of diabetic retinopathy including method of fundus examination. Part III is a review of the vascular pathology, including light and electron microscope studies. In Part IV, the medical treatment is discussed; and finally one complete section of the book, Part V, is devoted to the treatment of diabetic retinopathy by the anterior pituitary approach. Each of the nineteen chapters and two panel discussions contains an up-to-date review of the problems concerned and is presented with unusual clarity and precision.

Unfortunately, not all the presentations to this symposium were included in the book. There is an excellent chapter about the natural causes of diabetic retinopathy and the high percentage of patients with spontaneous improvement, and another one on diet and diabetes. However, except for a few comments in the discussion of some presentations, no detailed information is presented on the influence of insulin, oral hypoglycemic compounds, and diabetes control on the progression of the diabetic retinopathy.

The many photographs in the book are excellent. The book will serve as an excellent reference for those who desire current information about diabetic retinopathy.