

Preface

The wide national and international acceptance of "Newer Methods of Nutritional Biochemistry" encouraged the publishers to invite the editor to undertake compilation of this second volume and to consider preparation of additional volumes. In short, the series will constitute an open-end treatise. This would seem to be a logical step in view of the fact that nutritional biochemistry is a rapidly growing field. An indication of the growth rate can be gained from the fact that at the 1965 meetings of the Federation of American Societies for Experimental Biology, intersociety sessions involving nutrition and biochemistry outnumbered those for each of the individual disciplines.

Developments in enzyme concepts and methodology, heretofore the preserve of biochemists, are now extensively and successfully poached by clinical investigators in the life sciences. These multidiscipline attacks on biological problems have already yielded information which has alleviated much human suffering—with a promise of even greater achievements in the foreseeable future. Thus, it was felt to be timely and productive to invite Dr. Sprince to prepare the chapter on Abnormal Metabolites of Amino Acid Origin. This presentation, the editor finds, clarifies the understanding of mechanisms of many inborn errors of metabolism and describes the methods by which these errors may be detected. The chapter by Professor Chiancone on Enzymes of the Tryptophan → Nicotinic Acid Pathway delineates the detection of aberrations in the metabolism of tryptophan which may be induced by pathological stress and the manner in which the tryptophan transformation to nicotinic acid may influence lipid metabolism.

The impact of hormones on the utilization of various nutrients is now an area of considerable research activity. The combined contributions of Dr. O. H. Gaebler, on Growth and Pituitary Hormones, Drs. Aaron Arnold and Gordon Potts, on Anabolic Steroids, and Dr. Leo Lutwak, on Calcium and Phosphorus Metabolism, provide treatments in depth of the nutritional facets of endocrinology. The reader will find that the newer knowledge on utilization and needs of the essential nutrients, e.g., amino acids, fat-soluble vitamins, folic acid, biotin, and pantothenic acid has been expertly described by investigators pre-eminent in their specialties.

One of the greatest problems facing nutritionists is interpretation of observed body weight changes in the test organism. In the chapter on Body Composition, Dr. Pearson has discussed in detail and great clarity

the various approaches to this most important problem confronting the nutritional sciences.

Last, but not least, the chapter on Energy Metabolism by Drs. Passmore and Draper provides a concise, thorough, and delightful description of principles and methods of the oldest, yet ever new, criterion of nutritional needs.

It is the hope of the editor that this volume will prove useful in orienting the graduate student in some of the practicalities of nutritional research. It is also hoped that the volume will prove of service to those investigators in the life sciences who wish to brush up on areas outside their primary field of interest.

ANTHONY A. ALBANESE

White Plains, New York
August, 1965