

PREFACE

The writing of the second edition of *Biochemistry* was influenced significantly by the constructive critiques and suggestions provided by colleagues, students, reviewers, and users of the first edition. With regard to the changes incorporated into the second edition, two new chapters, Lipid Biosynthesis (Chapter 19) and Recombinant DNA Research (Chapter 26), were added, and presentations in many of the other chapters were revised and/or expanded. Some of these changes include a discussion of glycogen synthesis (Chapter 11), the catalytic mechanism of ribonuclease A (Chapter 13), the glyoxylate cycle (Chapter 16), restriction mapping and the newer systems for DNA sequencing (Chapter 21), the mitochondrial genetic code and attenuation (Chapter 22), intracellular transport of proteins (Chapter 23), recent research findings on prostaglandins (Chapter 24), and the mode of action of vitamins A, D, and K (Chapter 25). Particular attention was also given to an expansion of the presentation on nitrogen metabolism (Chapter 20) by including nitrogen fixation, nitrate reduction, and the synthesis and catabolism of all 11 nonessential amino acids. Also, the discussion on purine metabolism is now complemented by one on pyrimidine metabolism.

The expanded second edition may now contain more material than can be conveniently presented in a one-semester, introductory course in biochemistry. If such is the case, it is hoped that individual instructors will select those topics from the book that best suit their treatment of the discipline in meeting the educational needs of their classes.

In preparing the new edition, I was again fortunate to have the assistance of colleagues who provided critical reviews of individual chapters. For their valuable contributions, my sincere appreciation

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