

Preface

In the past decade, medical education achieved great development in Capital Medical University, China (CCMU), serving the students coming from all parts of China and overseas. On the one hand, the growing number of foreign students at CCMU crave for English books suitable for the teaching and learning with the Chinese medical education system; on the other hand, the Chinese students are asked and eager to actively participate in the international academic exchanges nowadays. To meet the needs of both foreign and Chinese students majoring in basic and clinic medical sciences, CCMU puts forward a project to compile textbooks in English as a part of the university's developing strategy and objectives, which are "based on Beijing, embracing the nation; leading in China and recognized around the world". Thus, the textbook of biochemistry in English was prepared by the senior instructors in the Department of Biochemistry and Molecular Biology, CCMU.

As our experience, medicine students may sometimes complain about biochemistry courses with the overload of information and boring contents in lectures. Unfortunately, the nature of this course indeed decides that there are a lot to be learned and memorized. We have intentionally arranged the texts as straight forward as possible, therefore hopefully, this simple direct "focus and concise" style will be accepted by teachers and students. The first three chapters introduce to the structures, properties and functions of proteins (including enzymes) and nucleic acids. Chapters 4 to 8 are the discussion about the metabolisms of carbohydrates, lipids, amino acids and nucleotides, and of biological oxidation (the formation of ATP and water) in cells. Chapter 9 summarizes the integrated metabolic pathways of glucose, fatty acids, amino acids, and nucleotides, and emphasizes the regulation of metabolisms. Chapters 10 to 12 focus on the processes and regulation of replication, transcription and translation (genetic information transmission). Chapters 13 and 14 briefly introduce the biochemistry at the tissue level of blood and liver, providing students some examples prior to their subsequent learning of medicine in relation to clinical aspects. Unlike some other biochemical texts, this textbook does not discuss

recombinant DNA and technical issues related to molecular biology. We will leave those contents in the separate book of Molecular Biology.

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Wei Ding

Hongti Jia

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