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生物化学基本要点

BASIC CONCEPTS

IN

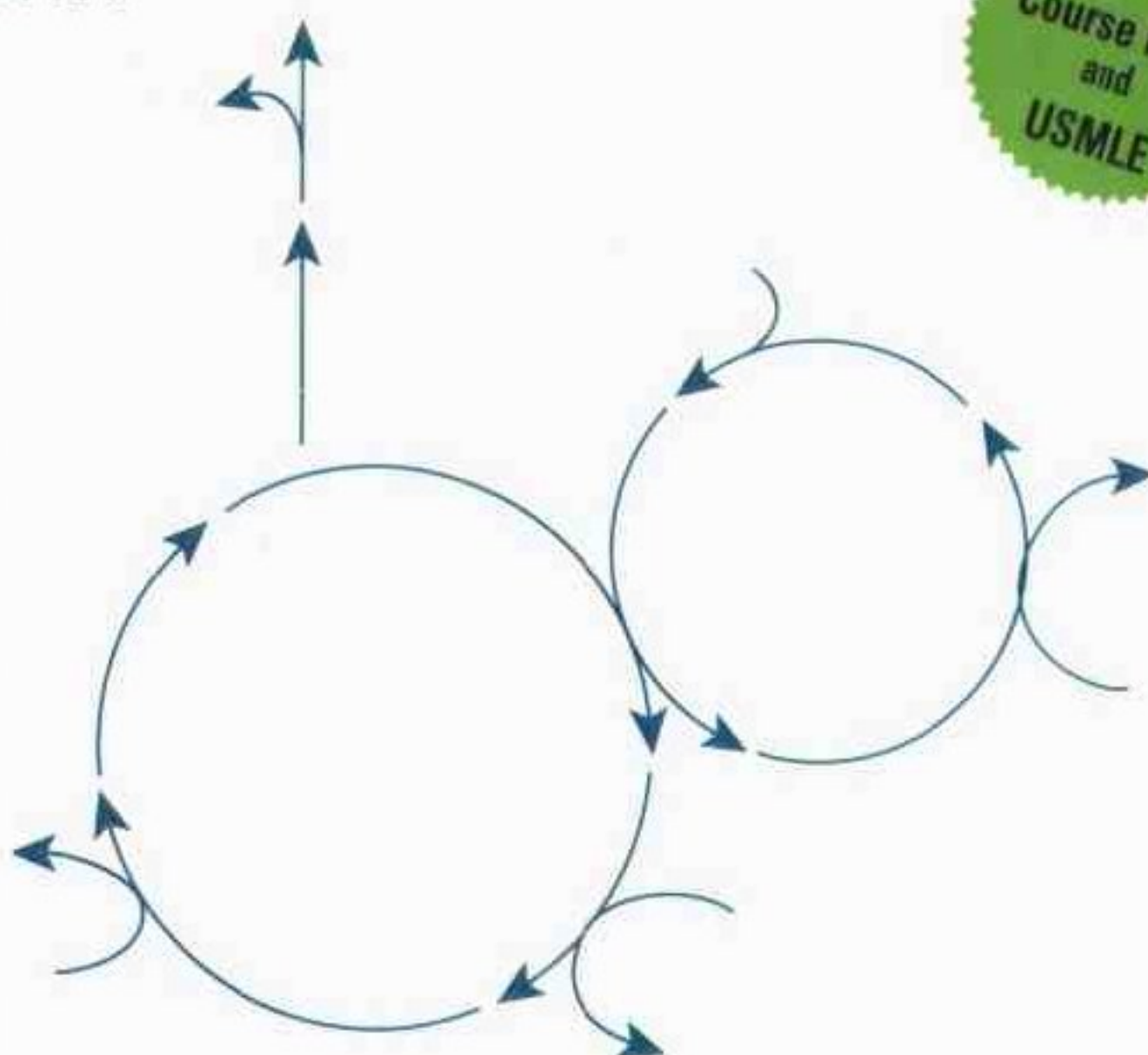
Biochemistry

A STUDENT'S SURVIVAL GUIDE

第2版

Hiram F. Gilbert

Great for
Course Prep
and
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BASIC CONCEPTS
IN
Biochemistry
A STUDENT'S SURVIVAL GUIDE *Second Edition*
Hiram F. Gilbert

Do you find biochemistry daunting?

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Biochemistry

第2版

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北京大学医学出版社

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生物化学基本要点

BASIC CONCEPTS

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Biochemistry

影印出版说明

“医学生复习指南丛书”是美国医学生所用的基础医学阅读参考书系列之一，也是参加“美国医生执照考试”（United States Medical Licensing Examination, USMLE）考前复习的主要参考书。由《生理学基本要点》、《生物化学基本要点》、《免疫学基本要点》、《药理学基本要点》、《病理学基本要点》、《医学遗传学基本要点》、《细胞生物学与组织学基本要点》、《胚胎学基本要点》、《神经科学基本要点》等组成。

本丛书内容主要为基础医学各核心课程中的基本概念及重点内容，涵盖了“美国医生执照考试”（USMLE）的主要考点内容，并用容易理解与掌握的方式对各个学科的难点内容进行了讲解。在编写方式上，作者用简明易懂的文字和大量的图表进行解释，便于学生掌握学科的重点内容，可使学生用最少的时间对学科的内容有一个完整的概念与基本了解。在取材上经过作者的精心取舍，注重知识的系统性和相关知识的联系，加强了临床应用必需的内容，因而在内容的深度和广度上比较适合医学本科教育的需要，也符合医学基础服务于临床的宗旨。例如：“细胞生物学与组织学基础教程”中不仅讲述了从细胞膜至细胞核的基本知识，还介绍了各种组织和各个器官的结构和功能；“医学遗传学基础教程”从遗传学的基础概念联系到大量的临床遗传性疾病；“胚胎学基础教程”讲述了许多先天性畸形的发生机制和危险因素……这样的编排不仅使医学基础知识紧扣临床实际，还会增强学生运用知识的能力。当然，在相互联系中更能巩固所学知识的记忆。

本丛书写作文字流畅，可读性强；条理清晰，方便查阅。对于中国的医学生来说，使用本丛书不仅能使他们掌握各学科的专业基础知识和基本概念，同时，在学习过程中，还能学到更加地道的英语表达方式，提高其专业外语水平。本丛书可作为医学基础课双语教学的英语教学参考书，也是参加美国“医生执照考试”（USMLE）的中国医学生和医生考前复习的必备参考书。

• P R E F A C E •

Since the first edition of this series, we have witnessed the birth of “molecular medicine,” using biochemistry, cell biology, and genetics to diagnose and treat disease. Consequently, the basic sciences are becoming more important to the practice of medicine. This puts a new pressure on the student—to understand the basis of molecular medicine and the molecular sciences. I still think that it’s easier to remember things that you understand, things that make sense. That’s the idea behind the Basic Concepts series and that’s why I have been so pleased with the expansion of the Basic Concepts series beyond Biochemistry.

The revisions in the second edition include two new chapters, “Membranes and Membrane Proteins” and “Signal Transduction Pathways.” These topics are related to the explosion of new information about cell signaling and signal transduction pathways. In addition, I’ve added some tables of information that I think will be helpful in seeing the big picture (and remembering some of the more important details). As before, the major topics and things to remember are set off in boxes so that if you already know everything in the box, you can skip the rest of the section.

• • • • •

• P R O L O G U E •

Basic Concepts in Biochemistry: A Student's Survival Guide is not a conventional book: It is not a review book or a textbook or a problem book. It is a book that offers help in two different ways—help in understanding the concepts of biochemistry and help in organizing your attack on the subject and minimizing the subject's attack on you.

This book presents what are often viewed as the more difficult concepts in an introductory biochemistry course and describes them in enough detail and in simple enough language to make them understandable. We surveyed first- and second-year medical students at a national student meeting asking them to list, in order, the parts of biochemistry they found most difficult to understand. The winner (or loser), by far, was integration of metabolism. Metabolic control, pH, and enzyme kinetics ran closely behind, with notable mention given to molecular biology and proteins.

Biochemistry texts and biochemistry professors are burdened with the task of presenting facts, and the enormity of this task can get in the way of explaining concepts. Since I don't feel burdened by that necessity, I've only outlined most of the facts and concentrated on concepts. My rationale is that concepts are considerably easier to remember than facts and that concepts, if appropriately mastered, can minimize the amount of material that has to be memorized—you can just figure everything out when required. In *Basic Concepts in Biochemistry*, central concepts are developed in a stepwise fashion. The simplest concepts provide a review of what might have been forgotten, and the more complex concepts present what might not have been realized.

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BASIC CONCEPTS

IN

Biochemistry

• C O N T E N T S •

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