

前言

当我们看到一个临近毕业的学生还在如饥似渴地阅读 Instant Notes in Biochemistry 第二版时,我想这也许正标志着该书的成功! 尽管我们强烈建议学生不要拖到这么晚才复习,然而这个事情本身恰恰证明,一本用简易方式关注最基本的生物化学信息简明版书籍的价值。

我们要清楚,这不是一本能够取代像生物化学教科书那种包含所有的、高度细致的并且向读者介绍前沿科学的书籍。本书的编写目的是使读者更直接发现问题的核心,抓住核心信息,并且易于消化。对于主修生物化学专业的学生,可以把它看作是对内容详尽的生物化学教科书的补充;而对于将生物化学作为可选或选修模块的学生来说,它提供了一种了解主要事实和概念的快捷方式,并因此而受到欢迎。

尽管本书定位于支持一、二年级的低年级学生,但是,如前所述,即使临毕业前遇到困难,它也可以为学生们提供帮助! 感谢读者和相关专业人员提供给我们的意见和建议,第三版尽量吸纳了这些反馈。我们修订了一些谬误、缺失和意义不明之处。当然我们可能仍然存在一些纰漏,还需要您的指正。修订版体现出自上一版后生物化学领域的许多新方向,但同时也保留了该学科的核心内容。本书还包括了细胞结构和映像、蛋白质组学、微阵列技术、信号转导等诸多方面的扩展内容。与前几版一样,我们谨慎的选取了那些笔者认为对学生更好理解该学科和临考前快速复习最有帮助的信息。这本书不仅能使人抓住学科内涵,而且可作为难以确定问题的简便查询资源。我们期望并且相信:本书一如既往地会对广大读者有所裨益。

ready source of concise information. We hope and believe that you will find it as useful as our students told us they found the earlier editions.	本书可作为生物化学简明版书籍,为您提供生物化学领域的核心信息。我们希望并相信,您会发现本书对您有所帮助,正如我们的学生告诉我们的,他们从以前的版本中受益匪浅。
AND related topics such as:	以及与以下主题相关:
Highlights	重点
Key words	关键词
Key concepts	关键概念
Key facts	关键事实
Key figures	关键图表
Key tables	关键表格
Key equations	关键方程
Key definitions	关键定义
Key abbreviations	关键缩写
Key references	关键参考文献
Key questions	关键问题
Key answers	关键答案
Key problems	关键问题
Key solutions	关键解决方案
Key experiments	关键实验
Key results	关键结果
Key conclusions	关键结论
Key discussions	关键讨论
Key summaries	关键摘要
Key reviews	关键评论
Key critiques	关键批判
Key evaluations	关键评价
Key assessments	关键评估
Key analyses	关键分析
Key syntheses	关键综合
Key applications	关键应用
Key implications	关键意义
Key consequences	关键后果
Key outcomes	关键结果
Key impacts	关键影响
Key effects	关键效果
Key reactions	关键反应
Key processes	关键过程
Key mechanisms	关键机制
Key pathways	关键途径
Key networks	关键网络
Key systems	关键系统
Key models	关键模型
Key theories	关键理论
Key hypotheses	关键假设
Key principles	关键原理
Key laws	关键定律
Key rules	关键规则
Key guidelines	关键指南
Key standards	关键标准
Key protocols	关键协议
Key procedures	关键程序
Key methods	关键方法
Key techniques	关键技术
Key tools	关键工具
Key equipment	关键设备
Key materials	关键材料
Key reagents	关键试剂
Key solvents	关键溶剂
Key buffers	关键缓冲液
Key salts	关键盐类
Key acids	关键酸类
Key bases	关键碱类
Key enzymes	关键酶类
Key proteins	关键蛋白质
Key lipids	关键脂质
Key carbohydrates	关键碳水化合物
Key nucleic acids	关键核酸
Key vitamins	关键维生素
Key minerals	关键矿物质
Key trace elements	关键微量元素
Key hormones	关键激素
Key neurotransmitters	关键神经递质
Key cytokines	关键细胞因子
Key growth factors	关键生长因子
Key signaling molecules	关键信号分子
Key receptors	关键受体
Key channels	关键通道
Key transporters	关键转运蛋白
Key pumps	关键泵
Key ion exchangers	关键离子交换器
Key membrane proteins	关键膜蛋白
Key cytoskeletal proteins	关键细胞骨架蛋白
Key nuclear proteins	关键核蛋白
Key mitochondrial proteins	关键线粒体蛋白
Key chloroplast proteins	关键叶绿体蛋白
Key vacuolar proteins	关键液泡蛋白
Key lysosomal proteins	关键溶酶体蛋白
Key peroxisomal proteins	关键过氧化物酶体蛋白
Key Golgi proteins	关键高尔基体蛋白
Key endoplasmic reticulum proteins	关键内质网蛋白
Key plasma membrane proteins	关键质膜蛋白
Key cell surface proteins	关键细胞表面蛋白
Key extracellular matrix proteins	关键细胞外基质蛋白
Key basement membrane proteins	关键基底膜蛋白
Key interstitial proteins	关键间质蛋白
Key blood proteins	关键血液蛋白
Key plasma proteins	关键血浆蛋白
Key serum proteins	关键血清蛋白
Key urine proteins	关键尿液蛋白
Key sweat proteins	关键汗液蛋白
Key saliva proteins	关键唾液蛋白
Key tears proteins	关键眼泪蛋白
Key milk proteins	关键乳汁蛋白
Key egg proteins	关键鸡蛋蛋白
Key sperm proteins	关键精子蛋白
Key oocyte proteins	关键卵母细胞蛋白
Key zygote proteins	关键受精卵蛋白
Key embryo proteins	关键胚胎蛋白
Key fetus proteins	关键胎儿蛋白
Key neonate proteins	关键新生儿蛋白
Key infant proteins	关键婴儿蛋白
Key child proteins	关键儿童蛋白
Key adolescent proteins	关键青少年蛋白
Key adult proteins	关键成人蛋白
Key elderly proteins	关键老年人蛋白
Key geriatric proteins	关键老年病蛋白
Key senile proteins	关键衰老蛋白
Key degenerative proteins	关键退行性蛋白
Key neoplastic proteins	关键肿瘤蛋白
Key metastatic proteins	关键转移性蛋白
Key invasive proteins	关键侵袭性蛋白
Key proliferative proteins	关键增殖性蛋白
Key apoptotic proteins	关键凋亡性蛋白
Key necrotic proteins	关键坏死性蛋白
Key autolytic proteins	关键自溶性蛋白
Key autophagic proteins	关键自噬性蛋白
Key autophagosome proteins	关键自噬体蛋白
Key autophagolysosome proteins	关键自噬溶酶体蛋白
Key autophagosome membrane proteins	关键自噬体膜蛋白
Key autophagosome lumen proteins	关键自噬体腔蛋白
Key autophagosome membrane receptors	关键自噬体膜受体
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PREFACE

Section G - RNA synthesis and processing

G1 Transcription in prokaryotes

It was perhaps a mark of how successful the second edition of *Instant Notes in Biochemistry* was that we recall seeing a final year student avidly reading it even as he waited to have his viva with the External Examiner. Although we would strongly recommend to any student not to leave revision to such a very late stage, this experience alone proved the value of a concise book that focused on essential biochemical information in an easily accessible format!

Let us be clear. This is not a book to replace the superb all-embracing and highly detailed Biochemistry textbooks that take the reader to the cutting edge of this science. Rather, its goal is to allow the reader to cut to the heart of the matter, to see what the core information is and readily to assimilate it. For mainstream Biochemistry students, it may be seen as complementary to the large detailed textbooks, whereas for students taking Biochemistry as an optional or elective module, it should be welcome as a fast way to become acquainted with the main facts and concepts.

This book is aimed at supporting students primarily in the first and second years of their degree, although, as we recount above, it can also serve as a welcome friend when faced with certain adverse situations even in the final year! The third edition has taken on board all of the many comments and advice that we have gratefully received from readers and academic colleagues alike, and we have corrected a number of errors, omissions and ambiguities. No doubt we have still missed a few; do let us know of any that you spot. This revision has necessarily reflected the many new directions that Biochemistry has taken since the last edition, whilst also preserving coverage of the core of the subject. The book now also includes expanded coverage of cell structure and imaging, proteomics, microarrays, signal transduction, etc. As with earlier editions, we have been careful to include only the information that we believe is essential for good student understanding of the subject – and for rapid revision when exams appear on the horizon. Do use the book not only to get to grips with the subject but also as a ready source of elusive information. We hope and believe that you will find it as useful as past students told us they found the earlier editions.

David Hames
Nigel Hooper

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