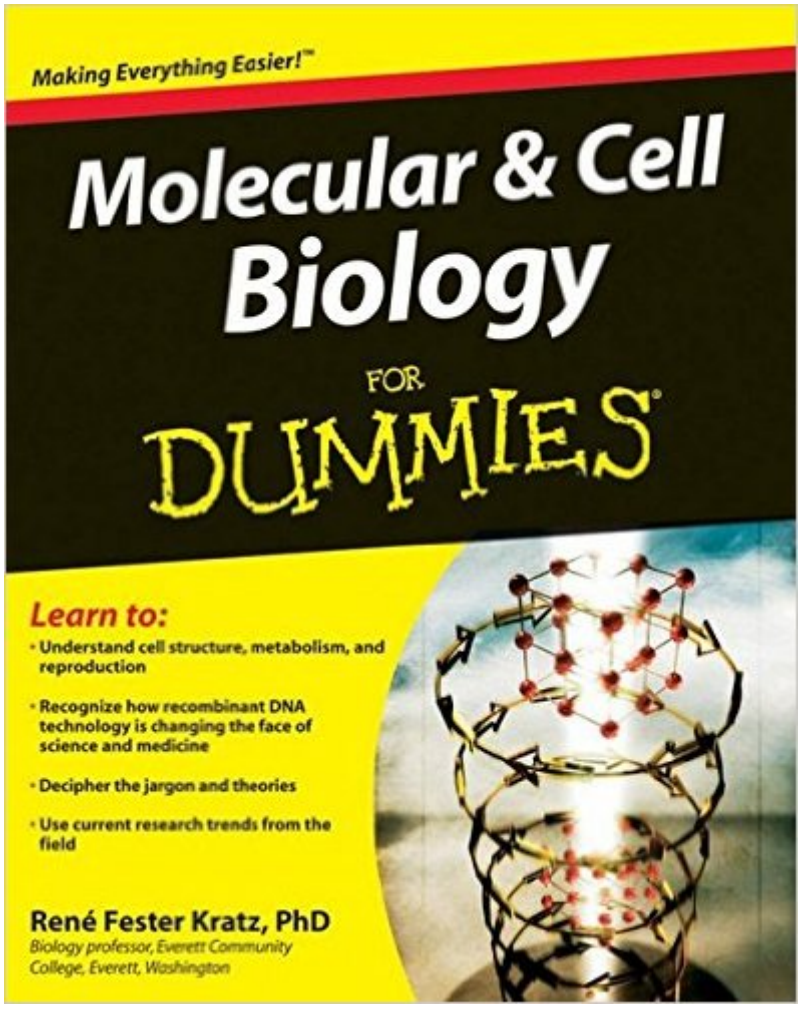
Molecular And Cell Biology For Dummies



Synopsis

Your hands-on study guide to the inner world of the cell Need to get a handle on molecular and cell biology? This easy-to-understand guide explains the structure and function of the cell and how recombinant DNA technology is changing the face of science and medicine. You discover how fundamental principles and concepts relate to everyday life. Plus, you get plenty of study tips to improve your grades and score higher on exams! Explore the world of the cell — take a tour inside the structure and function of cells and see how viruses attack and destroy them Understand the stuff of life (molecules) — get up to speed on the structure of atoms, types of bonds, carbohydrates, proteins, DNA, RNA, and lipids Watch as cells function and reproduce — see how cells communicate, obtain matter and energy, and copy themselves for growth, repair, and reproduction Make sense of genetics — learn how parental cells organize their DNA during sexual reproduction and how scientists can predict inheritance patterns Decode a cell's underlying programming — examine how DNA is read by cells, how it determines the traits of organisms, and how it's regulated by the cell Harness the power of DNA — discover how scientists use molecular biology to explore genomes and solve current world problems Open the book and find: Easy-to-follow explanations of key topics The life of a cell — what it needs to survive and reproduce Why molecules are so vital to cells Rules that govern cell behavior Laws of thermodynamics and cellular work The principles of Mendelian genetics Useful Web sites Important events in the development of DNA technology Ten great ways to improve your biology grade

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Customer Reviews

This book did just what I had hoped it would do. It took a very complex subject and explained it in as simple terms as possible. I've never had a formal course in biology, but I had watched all the lectures in an MIT Open Courseware course on the subject that had left me confused about a number of things. Of course, this book is not as comprehensive as a full course, but it did clarify a number of things for me. Many of the illustrations are much better than in the textbook that the MIT course was based on. Near the end of the book the author began giving specific study tips -- what things a student needs to be familiar with and what things they need to have down cold. In fact, the last chapter is entitled "Ten Ways to Improve Your Grade." I thought this a little strange, because the introduction does not mention this aspect of the book. It is done unobtrusively, so it shouldn't lessen a non-student's enjoyment of the book. I mention it because it might be a big plus to some prospective readers.

I'm taking a graduate level environmental biology class this summer even though I knew I was a bit short on the prerequisites. I didn't try to convince anyone that the prerequisites were unnecessary, just that I was willing to do whatever was necessary to fill in the gaps. Still, it's been 20 years since I was last a student, and 30 since I'd taken a biology class, so I definitely needed help. I bought a copy of Molecular Cell Biology (Lodish, Molecular Cell Biology) to fill in the molecular biology gaps and then I bought this so I could understand Lodish.So far the combination works quite well. I find that if read this great little book by Dr. Kratz first, I can master a chapter of Lodish in a couple of hours. Without it...well, I'd figure it out but it would take much longer.Dr. Kratz nicely explains the basic functions of cells and their structures, then devotes a chapter to the chemistry that is especially relevant to cell biology, covalent and ionic bonding, redox reactions, pH and polymers. Subsequent chapters cover carbohydrate, protein, DNA and RNA, and lipid synthesis. Cellular communication, metabolism, respiration, and photosynthesis are nicely briefed. I have not read the remaining chapters yet, but they appear to be equally well prepared.It certainly will not replace your molecular biology textbook, but if you are feeling a bit behind on the background knowledge you need to be successful, I think this will fill the bill. Altogether, a nicely done book.

I think this book would be great for someone with a non-science background who wanted to understand molecular and cell biology in a simple way. I however bought the book to serve as a

quick-read adjunct to college level cell and molecular courses, and the book is totally inadequate for this purpose. The book is far too simplistic and surface oriented to be a study guide to undergraduate cell and molecular biology classes.

This book is written by an excellent teacher, with clear explanations. An excellent supplement to a course on this difficult topic. Most texts in this area are highly technical, and this book can help orient the reader and resolve a lot of difficulties. I would love to take the course from the author, who shows enthusiasm and and a great capacity to communicate.

My last brush with molecular biology was in college, 25 years ago... It was fascinating to revisit the subject, along with all the discoveries that have happened in the meantime. The text is clear, as are the illustrations, and it puts in persepective all the amazing things that happen in the cell, as well as in the body: Extrapolating the abundance of information to understand how specialized cells do their work is actually easy - the overview is that good and thorough.

I bought this book to help me study for a test so that I could get into LPN school. I had to either take a biology class or challenge out of it by passing a test before I could even start nursing school. I chose to try to challenge out of the class so that I could start nursing school earlier. There is no way I would have passed the test without this book! I have been out of school for over 15 years and had to learn biology all over again. With the help of this book and a lot of prayer I passed the test and get to go straight into nursing classes this fall! I plan to buy more of these "Dummies" books to help me with my nursing classes!

I have read similar books on this topic, and this one is by far the best. It explains everything very well, and makes biology seem much easier. I believe that anyone can excel in science, if they want to and try hard enough. I would highly recommend this book for students who want to improve their grades in biology.

This nicely illustrated and easy to read guide is comprehensive, though you will need to be willing to expand your vocabulary considerably. I wish it had a glossary!I bought both the paper and the Kindle editions to see if reading would be better with one than the other. It’s definitely better to have the paper edition because it allows you to quickly page back and forth to see illustrations (all are black and white) while reading the text. The illustrations are larger with the paper edition, as well,

and the book is lightweight so not difficult to carry with you on the commuter train. Last but not least, you can pass your paper edition on to another reader, impossible with the Kindle edition unless you want to loan your Kindle to someone for a while. I've learned from my comparison that for books with many illustrations, the hard copy is the way to go.