

Cell and Molecular Biology

Rapid advances in biology have had a major impact on our society. From the production of new drugs, to revolutionary advances in our understanding of how cells work, the areas of cell and molecular biology have contributed to our lives in a number of ways. Training in these areas is essential for careers in medicine, pharmacology, biochemistry, virology, immunology, developmental biology, and in a number of the high-tech industries. From agriculture to the space program, fundamental information from these areas has had enormous impact on the changes that have occurred in our generation. Cell and molecular biology is an interdisciplinary field of science that deals with the fields of chemistry, structure and biology as it seeks to understand life and cellular processes at the molecular level. Cell biology is the study of the properties and functions of cells. The cell is the basic unit of life for all living things and learning about the composition of the cell as well as the way they replicate and interact with their environment helps scientist better understand the tissues, organs and organisms that they come together to create. Molecular biology is the study of living things at the level of the molecules which control them and make them up. While traditional biology concentrated on studying whole living organisms and how they interact within populations (a "top down" approach), molecular biology strives to understand living things by examining the components that make them up (a "bottom up" approach). Both approaches to biology are equally valid, although improvements to technology have permitted scientists to concentrate more on the molecules of life in recent years.

The book contains eight chapters. From the laboratory to the real world, cell and molecular biology has a far-ranging impact upon everything from the environment to health and medical issues. Cell and molecular biology enables researchers to study the minute world of microbes and cells. Further on in the book, we touch upon more complex subjects such as: DNA and RNA; protein structures; and movement along cellular pathways.

The Book comes with a companion DVD for rich learning experience, which includes:

1. E-Book with further reading and learning links.
2. Interactive E-lecture of each chapter. E-lectures are expressive, informational, entertaining and persuasive, it uses the tool of self-exploration, which makes it easy to learn and understand each topic in detail. It is very informative as concrete details are provided and also entertaining, as graphics and other visuals are provided to make the learning process more interactive.
3. Video Lecture of each chapter, which explains each topic in detail with examples, animations, images and text and makes it easy to understand the topics in easier, simpler and better way.
4. Huge Database of Interactive Assessments for each chapter, which is also printable.
5. Further reading and learning links for each topic.
6. Glossary and Notes for each chapter to understand each chapter with to the point information.
7. The DVD also includes a printable workbook, which walks through with a various sets of questions and choices and assists in completing the curriculum. The workbook covers; Learning Objectives, Essential Concepts, Matching Definitions, Study Problem, Questions, Fill in the Blanks and Answers.
8. Review Questions for each chapter are also given in the DVD, which are also printable.

The DVD is also a useful tool for teachers to teach with digital resources in classroom and do a great job of illustrating skills and techniques that are otherwise difficult to explain.

