

Becker, W.M., Kleinsmith, L.J., Hardin, J.: **The World of the Cell.** (Fifth Edition). - Benjamin Cummings, San Francisco 2003. 857 pp. USD 114.00. ISBN 0-8053-4852-2.

The past several decades have seen an explosive growth in our understanding of the properties and functions of cells. Modern cell biology is an interdisciplinary field of science so the present-day cell biologist must be adequately educated in cytology, biochemistry and genetics to understand of what a cell is and what it can do.

The "World of the Cell" represents contemporary textbook of cell biology that includes the principles of all three above-mentioned branch of science. The authors – famous professors at U.S. universities with long teaching experience – introduce the fundamental principles that guide cellular organisation and function. The purpose of this textbook was to describe the essential processes and methodology of cell and molecular biology as lucidly as possible. The text is really easy to read and understand so it is proper also for undergraduate students of cell biology. Comparing to previous editions major innovations are in the art-work, including new and redesigned figures to communicate concepts more effectively, and in more frequent and effective use of colour pictures. The text of all chapters was significantly updated to reflect recent progress in rapidly advancing fields of molecular and cell biology.

The first seven chapters provide overview of cell components from molecules and macromolecules to membranes and organelles. Transports across membranes

and signal transduction mechanisms are introduced in following three chapters. The single chapter is assigned to cell junctions and adhesion. Energy metabolism in the cell is described in chapters 13 to 15. Cellular information, cell cycle and gene expression are the main topics of chapters 17 to 21. Last two chapters emphasise the importance of cytoskeleton and cellular movement.

Throughout the text, the authors explain not only what is known about the cell but also how this have been discovered. The descriptions of experimental techniques, new findings, and critical evaluation of scientific evidences help to understand of key concepts of cell biology. Inclusion of Glossary containing more than 1500 terms and alphabetical Guides to Techniques and Methods is also very useful for readers. Supplementary material (Guide to Microscopy, Solutions Manual, CD-ROM containing animation, free access to web site "The Cell Place") facilitate learning of cell biology.

In conclusion, the textbook represents enormously useful source of information about modern cell biology for undergraduate and postgraduate students. The World of the Cell can be also attractive for researchers in related fields of science. Excellent illustrations, schemes and photographs could serve as a valuable source of inspiration for preparation of lectures and seminars.

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