

Cell Physiology

SOURCE BOOK

EDITED BY Nicholas Sperelakis

This introduction to cell physiology and cell biophysics offers advanced undergraduates and graduate students in physiology and biophysics a clear description of the functional aspects of cells and their integration with each other. Its coverage bridges the gap between more classical medical physiology textbooks and texts in cell and molecular biology.

Major topics covered include

- Molecular structure and properties of membranes
- Transport of ions and nonelectrolytes
- Regulation of ion channels
- Membrane excitability
- Sensory transduction mechanisms
- Synaptic transmission
- Membrane receptors and intracellular messengers
- Excitation-secretion coupling
- Excitation-contraction coupling
- Contraction of muscles, cilia, and flagellae
- Photosynthesis and bioluminescence
- Secretory biology

Coverage of each topic is comprehensive, beginning in a very elementary fashion and ending in a sophisticated and quantitative treatise.



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