

### New and Key Features:

- Includes the most up-to-date content and developments within molecular biology.
- Chapters on cutting-edge topics are contributed by leading experts in the field:
  - *Recombination* by Hannah Klein, PhD, NYU Medical Center
  - *Transposons and Other Mobile Elements* by Joseph Peters, PhD, Cornell University
- Provides a balanced approach, including relevant historical, experimental, and medical/clinical content as it applies to the field of molecular biology.
- Maintains a student-friendly writing style and “discovery approach.”
- Incorporates a completely new full-color art program.
- An Instructor's ToolKit CD-ROM and web-based instructor's resources include a PowerPoint® Image Bank, PowerPoint Lecture Outline Slides, a Test Bank, and Instructor's Manual.



Jones and Bartlett Publishers  
40 Tall Pine Drive  
Sudbury, MA 01776  
978-443-5000  
info@jbpub.com  
www.jbpub.com

### THIRD EDITION

# Molecular Biology

## Genes to Proteins

Burton E. Tropp

The *Third Edition* of *Molecular Biology: Genes to Proteins* is a comprehensive guide through the basic molecular processes and genetic phenomena of both prokaryotic and eukaryotic cells. Designed for undergraduate and first year graduate students, this multipurpose text has been completely updated to incorporate the important advances made in the field of molecular biology since the last edition. The revision maintains the original structure-function approach evident in past editions of David Freifelder's classic text. The text is organized into six sections with the topics strategically arranged to provide students with an accessible overview of molecular biology before moving on to more in-depth topics.

**Sections 1 and 2, Protein Structure and Function and Nucleic Acids and Nucleoproteins**, provide fundamental information on the biochemical basis of molecular biology.

**Section 3, Genetics and Virology**, presents the information required to understand the biological basis of molecular biology.

**Section 4, DNA Metabolism**, explores DNA replication, repair, and recombination in bacteria, eukaryotes, and archaea.

**Section 5, RNA Synthesis and Processing**, examines mechanisms that bacteria, eukaryotes, and archaea use to synthesize RNA, regulate RNA synthesis, and process transcripts to form mature RNA molecules.

**Section 6, Protein Synthesis** describes the structure and function of the protein synthetic machinery in bacteria, eukaryotes, and archaea.

ISBN 978-0-7637-5963-6



9 0000



9 780763 759636