

Bacterial Genetics and Genomics

Our understanding of bacterial genetics has progressed as the genomics field has advanced. Genetics and genomics complement and influence each other; they are inseparable. Under the novel insights from genetics and genomics, once-believed borders in biology start to fade; biological knowledge of the bacterial world is being viewed under a new light, and concepts are being redefined. Species are difficult to delimit, and relationships within and between groups of bacteria—the whole concept of a tree of life—is hotly debated when dealing with bacteria. The DNA within bacterial cells contains a variety of features and signals that influence the diversity of the microbial world. This text assumes readers have some knowledge of genetics and microbiology but acknowledges that it can be varied. Therefore, the book includes all of the information that readers need to know in order to understand its advanced material.

KEY FEATURES:

- Genetics, genomics, and bioinformatics integrated in one place.
- Full-color illustrations explain concepts and mechanisms throughout and are available to instructors for download.
- A section dedicated to the application of genetics and genomics techniques, including a chapter devoted to laboratory techniques, which includes useful tips and recommendations for protocols, in addition to troubleshooting and alternative strategies.
- Bulleted key points summarize each chapter.
- Each chapter contains extensive self-study questions related to the text and several discussion topics for study groups to explore the topics further.

RELATED TITLES:

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T. A. Brown. *Genomes 4*, 4th Edition (ISBN 978-0-8153-4508-4)



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