



## Modern Microbial Genetics, 2nd Edition

Uldis N. Streips (Editor), Ronald E. Yasbin (Editor)

E-Book	978-0-471-46108-1	March 2004		<b>\$200.99</b>
Hardcover	978-0-471-38665-0	February 2002	<i>Out of stock</i>	<b>\$250.50</b>
O-Book	978-0-471-22197-5	June 2002		<b>Available on Wiley Online Library</b>

### DESCRIPTION

In accordance with its predecessor, the completely revised and expanded Second Edition of Modern Microbial Genetics focuses on how bacteria and bacteriophage arrange and rearrange their genetic material through mutation, evolution, and genetic exchange to take optimal advantage of their environment.

The text is divided into three sections: DNA Metabolism, Genetic Response, and Genetic Exchange. The first addresses how DNA replicates, repairs itself, and recombines, as well as how it may be manipulated. The second section is devoted to how microorganisms interact with their environment, including chapters on sporulation and stress shock, and the final section contains the latest information on classic exchange mechanisms such as transformation and conjugation.

Chapters include:

- \* Gene Expression and Its Regulation
- \* Single-Stranded DNA Phages
- \* Genetic Tools for Dissecting Motility and Development of *Myxococcus xanthus*
- \* Molecular Mechanism of Quorum Sensing
- \* Transduction in Gram-Negative Bacteria
- \* Genetic Approaches in Bacteria with No Natural Genetic Systems

The editors also cultivate an attention to global regulatory systems throughout the book, elucidating how certain genes and operons in bacteria, defined as regulons, network and cooperate to suit the needs of the bacterial cell. With clear appreciation for the impact of molecular genomics, this completely revised and updated edition proves that Modern Microbial Genetics remains the benchmark text in its field.

---

## ABOUT THE AUTHOR

**Uldis N. Streips** was born in Riga, Latvia and emigrated with his family to the United States in 1951. He received a BS in Chemistry and Biology from Valparaiso University, Valparaiso IN in 1964 and a Ph.D. in Microbiology from Northwestern University in 1969. He did postdoctorate research at Scripps Clinic and Research Foundation, LaJolla, CA, and the University of Rochester School of Medicine, Rochester NY. He has been on the faculty of the University of Louisville, School of Medicine since 1972. His principal research area is microbial genetics and physiology. He has 65 peer-reviewed publications and books and chapters. He has received 14 teaching awards at the University of Louisville. Streips has mentored 15 Ph.D. and 2 M.S. students. He is a Foreign Member of the Latvian Academy of Sciences and the chief officer of the annual Wind River Conference on Prokaryotic Biology. He has run summer workshops for high school teachers for the last 14 years.

---

To purchase this product, please visit <https://www.wiley.com/en-us/9780471386650>