

1. Record Nr.	UNINA9911019996203321
Titolo	Modern microbial genetics [[electronic resource] /] / edited by Uldis N. Streips, Ronald E. Yasbin
Pubbl/distr/stampa	New York ; ; Chichester, : Wiley-Liss, c2002
ISBN	1-280-54181-4 9786610541812 0-471-46108-3 0-471-22197-X
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (672 p.)
Altri autori (Persone)	StreipsUldis N. <1942-> YasbinRonald E
Disciplina	576/.139 579.135 579/.135
Soggetti	Microbial genetics Biology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Previous ed.: New York ; Chichester : Wiley-Liss, 1991.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents; Preface; Preface to the First Edition; Introduction; Contributors; Section 1: DNA METABOLISM; CHAPTER 1. Prokaryotic DNA Replication; CHAPTER 2. DNA Repair Mechanisms and Mutagenesis; CHAPTER 3. Gene Expression and Its Regulation; CHAPTER 4. Bacteriophage Genetics; CHAPTER 5. Bacteriophage and Its Relatives; CHAPTER 6. Single-Stranded DNA Phages; CHAPTER 7. Restriction-Modification Systems; CHAPTER 8. Recombination; CHAPTER 9. Molecular Applications; Section 2: GENETIC RESPONSE CHAPTER 10. Genetics of Quorum Sensing Circuitry in Pseudomonas aeruginosa: Implications for Control of Pathogenesis, Biofilm Formation, and Antibiotic/Biocide ResistanceCHAPTER 11. Endospore Formation in Bacillus subtilis: An Example of Cell Differentiation by a Bacterium; CHAPTER 12. Stress Shock; CHAPTER 13. Genetic Tools for Dissecting Motility and Development of Myxococcus xanthus; CHAPTER 14. Agrobacterium Genetics; CHAPTER 15. Two-Component Regulation; CHAPTER 16. Molecular Mechanisms of Quorum Sensing; Section 3:

## GENETIC EXCHANGE

CHAPTER 17. Bacterial Transposons-An Increasingly Diverse Group of Elements  
CHAPTER 18. Transformation; CHAPTER 19. Conjugation;  
CHAPTER 20. The Subcellular Entities a.k.a. Plasmids; CHAPTER 21. Transduction in Gram-Negative Bacteria; CHAPTER 22. Genetic Approaches in Bacteria with No Natural Genetic Systems; Index; A; B; C; D; E; F; G; H; I; J; K; L; M; N; O; P; Q; R; S; T; U; V; W; X; Y; Z

---

### Sommario/riassunto

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

---