1. Record Nr. UNINA9910876800203321 Autore Schumann Wolfgang, Prof. Dr. rer. nat. Titolo Dynamics of the bacterial chromosome: structure and function / / Wolfgang Schumann Pubbl/distr/stampa Weinheim,: Wiley-VCH [Chichester, : John Wiley, distributor], c2006 **ISBN** 1-280-72333-5 9786610723331 3-527-60849-4 3-527-60843-5 Descrizione fisica 1 online resource (450 p.) Disciplina 579.3135 Soggetti **Bacterial genetics** Bacterial genomes Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Dynamics of the Bacterial Chromosome: Contents: Foreword: Bacterial Species and their Abbreviation; Color Plates; 1 Structure of the Bacterial Cell; 1.1 The Cytoplasm Compartment; 1.2 The Cytoplasmic Membrane Compartment: 1.3 The Cell Wall Compartment: 1.4 The Outer Membrane Compartment; 1.5 The Periplasmic Compartment; 1.6 Extracellular Matrices; 1.7 Appendages; 2 Organization of the Bacterial Chromosome; 2.1 Structure of the Chromosomes; 2.2 Principles to Compact the Bacterial Chromosome; 2.2.1 Superhelicity; 2.2.2 Histonelike Proteins in E. coli 2.3 Organization of the Bacterial Chromosome into Genes and Repetitive Sequences2.3.1 Genes; 2.3.2 Repetitive Sequences; 2.4 Large Rearrangements Within the Chromosome; 2.4.1 Duplications; 2.4.2 Deletions; 2.4.3 Inversions; 3 The Bacterial Cell Cycle: Replication of the Chromosome, Partitioning and Cell Division; 3.1 Replication; 3.1.1 Replication of Circular Chromosomes; 3.1.2 Replication of Linear Chromosomes and Plasmids; 3.2 Partitioning (Segregation) of the

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## Sommario/riassunto

This book provides an unique overview on bacterial genetics, bacterial genome projects and gene technology and its applications in biological and biomedical research and medicine. The author guides the reader up the front in research within the different fields of bacterial genetics, based mainly on results received with Escherichia coli and Bacillus subtilis.