

Bacterial Genetics and Genomics

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CRC Press
Taylor & Francis Group

A GARLAND SCIENCE BOOK

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Chapter 20 Infectious Diseases

The study of bacterial pathogen genes has led to new drugs to control infectious diseases

Genomics can aid in the search for new antibiotics

Some old drugs are getting a new lease of life due to greater depth of understanding

Bacterial genomics has led to the development of new vaccines

Reverse vaccinology is providing leads for several bacterial diseases

New drugs are being developed that will contain the virulence of bacteria

Monoclonal antibody therapy is useful for a variety of human diseases, including infectious diseases

Sequencing changes our understanding of the virulence factors that are important

Gene sequencing and genome sequencing improves the resolution of epidemiology of bacterial infectious diseases

Genome sequencing can improve infection control for surgical site infections

Horizontal gene transfer between pathogens revealed by sequencing shows worrying trends in evolution

Genome sequencing is improving our understanding of infections that could impact transplant recovery

Putting discoveries into practice

Key points

Terms, questions, and discussions

Key terms

Self-study questions

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Bacteriophages have been studied for just over 100 years

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