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oligomer; Formation of the pore complex; Ring versus arc oligomers; The CDCs and bacterial pathogenesis; The membrane attack complex/perforin (MACPF) proteins; Summary and futureperspectives - CDCs andMACPF proteins; References
Chapter 4. Bacterial Enterotoxins as Immunomodulators and Vaccine AdjuvantsIntroduction; Cholera toxin: the prototype for ADP-ribosylating holotoxin adjuvants; LT: a more complex family of holotoxin adjuvants; Are ADP-ribosylating toxins in general good adjuvants?; Taking toxin adjuvant immunomodulation one step further; Concluding remarks; References; Chapter 5. Mobile Genetic Elements as Carriers for Bacterial Virulence Genes; Core and adaptive genome; The mobile bacterial genome; Mobile genetic elements and their role in virulence; Why MGEs encode exotoxins and other virulence factors? Role of SOS inductionBacteriophage-encoding toxins and other virulence factors; Plasmids encoding toxins; Pathogenicity islands encoding toxins; Open questions; Web resources; References; Chapter 6. The Staphylococcal Superantigen-like Toxins; Introduction; The SSLs - an introduction; Genetics of the ssls; Molecular biology of the SSLs; SSL-related S. aureus immune evasion molecules; Mechanisms of immune evasion mediated by SSLs; Novel SSL-associated applications; Concluding remarks; References; Chapter 7. Botulinum Neurotoxins as Therapeutics; Introduction
Mechanistic basis of BoNTs as therapeutics

Sommario/riassunto

Toxins are virulence determinants that play an important role in microbial pathogenicity and/or evasion of the host immune response. This makes them ideal targets for the development of novel antimicrobial strategies. The potential applications of toxin research extend beyond simply combating microbial pathogens, and include use as novel anti-cancer drugs and other front-line medicines and as tools in neurobiology. In the field of cellular biology, toxins have become invaluable as tools for the manipulation and investigation of fundamental cellular and physiological processes. Research in this