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2 Mobile genetic elements and pathogenicity islands encoding bacterial toxins
Introduction: The genome structure of prokaryotes; Protein toxins encoded by mobile genetic elements; Protein toxins encoded by plasmids; Gram-negative bacteria; Gram-positive bacteria; Protein toxins encoded by bacteriophages; Gram-negative bacteria; Gram-positive bacteria; Protein toxin genes and other mobile genetic elements; Toxins encoded by PAIs; PAIs; PAI-encoded toxins; Enterobacteria; Other Gram-negative bacteria; The bacterial T6SS; Gram-positive bacteria; Instability of PAIs; Conclusion
Evolution of new pathogenic variants caused by PAIs and mobile genetic elements
HGT and the evolution of toxin families;
Acknowledgments; References;
3 News and views on protein secretion systems; Introduction; Most historical secretion types; Type I secretion system; Type II secretion system; Type III secretion system; Type IV secretion system: a protein and DNA transport machine; Type V secretion system: free or surface-bound?; Type VI secretion system: weapon for bacterial warfare; How far can we go with secretion types?; Type VII secretion system
Extracellular appendages and secretion types
The type IX secretion system; What about other secretion concepts?; Bacteriocins, colicins, pyocins, contact-dependent inhibition; Cell surface lipoproteins; OM Vesicles; What about Gram-positive bacteria, then?; Closing remarks; References;
II. Intracellularly Alive Bacterial Protein Toxins;
4 Diphtheria toxin; Introduction; Diphtheria toxin: from pathology to crystal structure; Symptoms, treatment, prophylaxis, and epidemiology of diphtheria; History of DT research; Regulation of DT production; The structure of DT; The mechanism of action of DT
The main steps of cell intoxication

Sommario/riassunto

The Comprehensive Sourcebook of Bacterial Protein Toxins 4th Edition, contains chapters written by internationally known and well-respected specialists. This book contains chapters devoted to individual toxins, as well as chapters that consider the different applications of these toxins. Considerable progress has been made in understanding the structure, function, interaction and trafficking into cells, as well as mechanism of action of toxins. Bacterial toxins are involved in the pathogenesis of many bacteria, some of which are responsible for severe diseases in human and animals, but can al
