1. Record Nr. UNINA9910373911603321

Titolo	Mycobacterium Tuberculosis: Molecular Infection Biology, Pathogenesis, Diagnostics and New Interventions / / edited by Seyed Ehtesham Hasnain, Nasreen Z. Ehtesham, Sonam Grover
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-329-413-2
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (xxii, 514 pages) : illustrations
Disciplina	616.2
Soggetti	Parasitology Infectious diseases Post-translational modification Immunology Vaccines Infectious Diseases Posttranslational Modification Vaccine Mycobacterium tuberculosis Malalties per micobacteris Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Challenges and Advances in TB drug discovery -- Chapter 2. Biofilms: A Phenotypic mechanism of bacteria conferring tolerance against stress and antibiotics -- Chapter 3. History of TB- Robert Koch and Beyond -- Chapter 4. Clinical Aspects and Principles of Management of Tuberculosis -- Chapter 5. Toxin-Antitoxin (TA) systems in stress survival and pathogenesis -- Chapter 6. Infections with Nontuberculous Mycobacteria: Increased awareness and recent developments -- Chapter 7. Heat Shock Proteins in the Pathogenesis of Mycobacterium tuberculosis -- Chapter 8. Tuberculosis vaccine: past experiences and future prospects -- Chapter 9. TB Diagnostics: Journey from Smear Microscopy to Whole Genome Sequencing -- Chapter 10.

Nucleotide excision repair pathway in mycobacteria -- Chapter 11. Intrinsically disordered regions in PE/PPE protein family of Mycobacterium tuberculosis: Moonlighting function -- Chapter 12. Best Practices in Mycobacterial Research Laboratories -- Chapter 13. Cellular stress responses and immunological regulations during Mycobacterium tuberculosis infection -- Chapter 14. Repurposing of Carbapenems for the treatment of Drug-Resistant Tuberculosis -- Chapter 15. Mesenchymal stem cells: A hidden arsenal for Mtb persistence, resuscitation and reactivation -- Chapter 16. Importance of cell wall-associated Poly--L-glutamine in the biology of pathogenic mycobacteria -- Chapter 17. Breaking the transmission of TB: a roadmap to bridge the gaps in controlling TB in endemic settings -- Chapter 18. Mycobacterial Methyltransferases: Significance in Pathogenesis and Virulence -- Chapter 19. Tuberculosis as an underlying etiological factor for other human respiratory diseases -- Chapter 20. Tuberculosis in New Zealand: Historical Overview to Modern Epidemiology -- Chapter 21. The PE and PPE family proteins of Mycobacterium tuberculosis: What they are upto? -- Chapter 22. Endoplasmic Reticulum stress: Importance in Pathogenesis of Mycobacterium tuberculosis -- Chapter 23. Comparative in silico analyses reveal crucial factors for virulence, antigenicity and evolution in M.tb -- Chapter 24. Host Factors in Tuberculosis -- Chapter 25. Extrapulmonary Tuberculosis -- Chapter 26. Immunotherapeutic potential of Mycobacterium indicus pranii against tuberculosis.

Sommario/riassunto

This book reviews recent advances in the molecular and infection biology, pathology, and molecular epidemiology of Mycobacterium tuberculosis, as well as the identification and validation of novel molecular drug targets for the treatment of this mycobacterial disease. Despite being completely curable, tuberculosis is still one of the leading global causes of death. M. tuberculosis, the causative organism – one of the smartest pathogens known – adopts highly intelligent strategies for survival and pathogenesis. Presenting a wealth of information on the molecular infection biology of M. tuberculosis, as well as nontuberculous mycobacteria (NTM), the book provides an overview of the functional role of the PE/PPE group of proteins, which is exclusive to the genus Mycobacteria, of host-pathogen interactions, and virulence. It also explores the pathogenesis of the infection, pathology, epidemiology, and diagnosis of NTM. Finally it discusses current and novel approaches in vaccine development against tuberculosis, including the role of nanotechnology. With state-of-the-art contributions from experts in the respective domains, this book is an informative resource for practitioners as well as medical postgraduate students and researchers.