Record Nr. UNINA9910741183103321 Iron Acquisition by the Genus Mycobacterium: History, Mechanisms, **Titolo** Role of Siderocalin, Anti-Tuberculosis Drug Development / / edited by B. Rowe Byers Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa **ISBN** 3-319-00303-8 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (96 p.) SpringerBriefs in Biometals, , 2212-9901 Collana Disciplina 572.517 Soggetti Microbiology **Proteins** Inorganic chemistry Bioorganic chemistry Infectious diseases **Protein-Ligand Interactions** Inorganic Chemistry **Bioorganic Chemistry** Infectious Diseases Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto A History of Iron Metabolism in the Mycobacteria -- Mycobacterial Iron Uptake Mechanisms -- Siderocalin Combats Mycobacterial Infections --Design of Anti-TB Drugs Using the Iron Uptake Platform. Iron Acquisition by the Genus Mycobacterium summarizes the early Sommario/riassunto evidence for the necessity of iron in mycobacteria and the discovery of the mycobacterial siderophores mycobactin, carboxymycobactin, and exochelin. The structural characterization of the mycobacterial siderophores is described. The genes so far identified as essential for iron acquisition and maintenance of an infection by pathogenic mycobacteria are discussed. The potential role of siderocalin in iron gathering by M. tuberculosis is featured. Because new drugs for M. tuberculosis are needed, this brief also emphasizes the design of

antibiotics that interfere with siderophore biosynthesis and the use of

siderophore analogs and/or conjugates.