

MARCIN WŁODARCZYK, WIESŁAWA RUDNICKA, MAGDALENA DRUSZCZYŃSKA

Department of Immunology and Infectious Biology, Institute of Microbiology, Biotechnology and Immunology, The Faculty of Biology and Environmental Protection, University of Lodz, Banacha 12/16, 90-237 Łódź, E-mail: martini.w@wp.pl

TUBERCULOSIS – THE FORGOTTEN DISEASE WORTH TO REMEMBER

Summary

Tuberculosis (TB) remains a serious epidemiological problem throughout the world. More than 130 years of hard work of scientists around the world has not delivered fully protective vaccine for TB, fast and reliable methods for diagnosing and effective treatment of tuberculosis caused by multi-drug resistant *Mycobacterium tuberculosis* (MDR-TB), isolated recently with an increasing incidence. MDR- TB are Gram-positive, aerobic bacilli with the unique bacterial cell wall, which is built not only of peptidoglycan and polysaccharides, but also of unusual glycolipids and lipids, including long-chain mycolic acids, which are potential modulators of the human immune system. Diagnosis of tuberculosis is based on the culture of mycobacteria on bacteriological media, alongside which are carried out: bacterioscopy of sputum, radiographic assessment of changes in the chest, tuberculin skin test, or molecular test (AMPLICOR *Mycobacterium tuberculosis* Xpert MTB/RIF), and tests with mycobacteriophages (FastPlaque and ReporterPhage). The important epidemiological issue are dormant (latent) mycobacterial infections, which can be detected by interferon- γ release assays (QuantiFERON®-TB Gold Plus and T-SPOT.TB). Despite considerable progress we are still lacking high-speed, reliable and low-cost diagnostic tests for tuberculosis.

Key words: BCG, diagnosis, interferon- γ release assays, TB, tuberculosis