

# MODERN APPROACHES TO THE BACTERIOLOGICAL IDENTIFICATION OF MYCOBACTERIA

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## *Abstract*

Currently in Ukraine along with a decreasing tuberculosis morbidity it is observed a growing number of pulmonary diseases, associated with potentially pathogenic non-tuberculosis mycobacteria. A standard phenotype-based biochemical and cultural methods are used for identification of mycobacteria. Those tests are time- and resource-consuming, requiring the use of only solid media.

The aim of the study was an improvement and standardization of methods of differential identification of mycobacteria considering modern phenotypical approaches.

The results led to a development of novel test for identification of mycobacteria — MGIT Tbc ID, which allowed quick identification of *Mycobacterium tuberculosis* and non-tuberculosis complex. The test is highly specific, because it is based on the determination of the protein fraction MPT64, produced by of *Mycobacterium tuberculosis* complex bacterial cells. Current test is more efficient than conventional phenotypic identification tests as it uses a specific protein fraction. The test can be used instead of conventional biochemical tests within tuberculosis laboratories network for verification of tuberculosis diagnosis.

**Key words:** test for the identification of mycobacteria, mycobacterium tuberculosis and non-tuberculosis complex, diagnosis of tuberculosis.

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