

MOLECULAR DETECTION OF XDR AND MDR *MYCOBACTERIUM TUBERCULOSIS*

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Tuberculosis (TB) is an important public health. *Mycobacterium tuberculosis*, the etiological agent of tuberculosis is responsible for maximum mortality by infection diseases globally. Increasing the transmission of MDR and XDR strains of *Mycobacterium tuberculosis* has created a challenge for effective treatment and disease control. MDR and XDR strains of *Mycobacterium tuberculosis* evaluate and diagnose different types of mutations in the *katG*, *rpoB*, *rrs* and *gyrA* genes. Drug susceptibility testing for Isoniazid, Rifampin, Kanamycin, ethambutol and Streptomycin was performed using the agar proportion method. The regions of *katG*, *rpoB*, *rrs* and *gyrA* genes in the MDR and XDR strains are sequenced by PCR and sequencing results at NCBI, BLAST. There is a relationship between the presence of resistance phenotypes and genetic mutations. Common mutations are found in the studies. The sequencing of specific regions of target genes is useful for detecting MDR and XDR strains and is also valuable for the design of novel diagnostic techniques.

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