

## Genetic Diversity of *Mycobacterium tuberculosis* Strains Analysed by Pulsed Field Gel Electrophoresis in Iran

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**Background & Objectives:** In this research about hundred isolates of *Mycobacterium tuberculosis* strain that were gathered in Mycobacteriology Department of Pasteur Institute in 2011 -2012 were studied by comparison of large restriction fragment pattern (LFR) derived from XbaI endonuclease and Pulsed-Field Gel Electrophoresis apparatus to show recent DNA polymorphisms in this isolates.

**Methods:** Isolates were inactivated in 80°C for 20 minutes. 150 µl of bacterial suspension with 150 µl of melted inert agarose and 10 µl lysozyme were purred in special plugs molds. After solidification the plugs were lysed with TE buffer containing 10 mg/ml lysozyme and incubated at 37°C for 16 hours. After washing in several stages we used a ESP buffer. Plugs remain in this solution for 48 hours at 55°C. Then it washed and digested with XbaI endonuclease. Finally the digested DNA were electrophoresed on 1% agarose on CHEF-DR III apparatus.

**Results & Conclusion:** The comparison of DNA bands between *Mycobacterium tuberculosis* strains and standard H37rv revealed two common pulsotype ever known.

**Keywords:** *Mycobacterium tuberculosis*; Genetic Diversity, Iran

