

European Respiratory Society Annual Congress 2012

Abstract Number: 1160

Publication Number: P1412

Abstract Group: 10.2. Tuberculosis

Keyword 1: MDR-TB **Keyword 2:** Tuberculosis - diagnosis **Keyword 3:** No keyword

Title: Resazurin microtitre assay (REMA) plate – A simple, rapid and inexpensive method for detection of drug resistance in Mycobacterium tuberculosis

Mr. Siddharth 8158 Kunte siku.18@gmail.com , Prof. Dr Alaka 8159 Karmarkar alakakarmarkar@gmail.com MD , Dr. Sujata 8180 Dharmashale sujutadharmashale@rediffmail.com MD and Dr. Swarupa 8181 Hatolkar mhswarupa@yahoo.co.in . ¹ Department of Microbiology, B. J. Medical College, Pune, Maharashtra, India, 411001 .

Body: OBJECTIVES: Comparison of REMA Plate method with the Standard Proportion Method using L-J medium as approved by Revised National Tuberculosis Control Programme (RNTCP) for Drug Sensitivity Testing(DST). METHODS: 26 isolated strains of M. tuberculosis obtained from suspected patients were subjected to DST by 2 methods viz. REMA Plate and Proportion Method for the first line antitubercular drugs INH, RIF, STR and ETM. REMA plate method was performed in 7H9-S medium containing Middlebrook broth and supplements in 96 well microtiter plates. The results of REMA were obtained on days 7, 10 and 14 using resazurin. Any strain having an MIC equal or above the tentative breakpoint concentration was considered resistant. RESULTS: The sensitivity of REMA for the respective drugs was found to be 94.4%, 93.75%, 93.3% and 66.6%. The specificity of REMA for the respective drugs was found to be 100%, 100%, 45.5% and 35.3%. The cost of REMA Plate method came out to be half of that required for Proportion Method. CONCLUSIONS: REMA can be considered as one of the most rapid and inexpensive method to find out drug resistance to INH and RIF and hence aid in the diagnosis of MDR-TB. ETM and STR, two drugs known to be difficult to test showed a low specificity.