

Editorial

Multi Drug Resistant Tuberculosis (MDR-TB) and Drug Susceptibility Test (DST)

The spread of multiple drug resistant strains of *Mycobacterium tuberculosis* has become a major public health concern in both developed and developing countries. Factors contributing to outbreak and continued spread of multi-drug resistant tuberculosis (MDR-TB) include non efficient implementation of DOTS strategy, insurgence of HIV/AIDS, poor adherence to DOTS treatment and laboratory delays in identification and susceptibility testing of *Mycobacterium tuberculosis* isolates.

Commitment to TB Control seen in recent years, including new legislation updating the TB strategy, and the nationwide implementation of TB control activities, including management of MDR-TB cases and upgrading of diagnostic services indicates positive momentum, but efforts need to be accelerated to impact what appears to be a growing epidemic of drug resistant TB.

The accurate drug susceptibility test method is very important to determine the exact susceptibility of *M. tuberculosis*. Many methods of drug susceptibility testing of *Mycobacterium tuberculosis* such as proportion method, absolute concentration method and the resistance ratio method are used globally but the main disadvantage of these methods are dependent on culture and henceforth time consuming. In this issue of the journal, Acharya S *et al* provide evidence that both proportion and resistance ratio method which is equally good for determining drug susceptibility of *Mycobacterium Tuberculosis*. DST for first line anti-TB drugs has been thoroughly studied and consensus reached on appropriate methodologies. However, it is widely acknowledged that newer, rapid phenotypic and genotypic DST methods hold considerable promise for the rapid diagnosis of MDR-TB as well as opportunities for scaling up surveillance of resistance.

Optimal management of drug resistant TB requires both mycobacterial and clinical laboratory services. Inadequate laboratory capacity now presents one of the greatest obstacles to achieving the targets set out in the STOP TB Global Plan. All SAARC countries also identify laboratory capacity as their primary bottle neck. A country or region can control and prevent drug resistant TB only, if infectious patients are detected and cured without delay. Ready access to microscopy for Acid Fast Bacilli, culture and DST free of charge to the patient are essential elements of political commitment to control drug resistance TB.

The Supranational Reference Laboratory Network (SRLN) plays a critical role in capacity strengthening of laboratories world wide and provides the backbone for surveillance activities. STAC has initiated its efforts to upgrade its reference laboratory to serve as Supranational Reference laboratory for the region for supporting member countries. Good laboratory infrastructure for *Mycobacterium tuberculosis* culture and drug sensitivity testing is a pre-requisite for initiation of DOTS PLUS Projects.