

August 2010

## ***Tuberculosis (TB) and Mycobacteriology Laboratory Update***

To health care providers:

### **Second-line Drug Susceptibility Testing of *M. tuberculosis***

Effective October 1, 2010, the Ontario Agency for Health Protection and Promotion (OAHPP) public health laboratories (PHL) will use a non-radiometric broth based system (MGIT/960 Becton Dickinson, Baltimore, MD) to perform second line drug (SLD) testing on strains of *M. tuberculosis*.

This method will allow us to test for newer drugs in addition to those currently tested in the SLD panel:

<b>Drug Name</b>	<b>Critical Concentration mg/ml</b>
Amikacin	1.0
Capreomycin	2.5
Ethionamide	5.0
Kanamycin	2.5
Linezolid	1.0
Moxifloxacin	0.25
Ofloxacin	2.0
PAS	4.0
Rifabutin	0.5
Streptomycin	1.0

SLD is performed on strains of *M. tuberculosis* that are resistant to Rifampin or to any two of the first-line therapy TB drugs (Isoniazid, Rifampin, Ethambutol, Pyrazinamide). Currently, the PHL performs SLD using the radiometric, broth based method (BACTEC 460, Becton Dickinson, Baltimore, MD). This technology is being discontinued by the manufacturer.

A comprehensive external validation study for SLD testing using the MGIT/960 non-radiometric broth based system was performed to determine the critical test concentrations in this system, by three Canadian provincial mycobacteriology laboratories (Alberta ProVLab, Edmonton; LSPQ, Montreal and PHL-Toronto), and the National Reference Centre for Mycobacteriology (National Microbiology Laboratory, Public Health Agency of Canada).

## ***Tuberculosis (TB) and Mycobacteriology Laboratory Update*** (Continued)

### **For further information: Please contact:**

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- OAHPP Laboratory Helpline **1-800-640-7221**
- For the OAHPP Specimen Collection Guide and previous Lababstracts refer to <http://www.oahpp.ca/publichealthlaboratories.php>
- For the Genotyping request form and general requisition refer to <http://www.oahpp.ca/resources/laboratory-materials.html>