

Labstrack – July 2011

***Mycobacterium tuberculosis* (MTB) - Susceptibility Testing Update**

To Health Care Providers

The Clinical Laboratory Standards Institute (CLSI) has recently issued an updated and revised standard, document M24-A2, for susceptibility testing of mycobacteria.

- New recommendation: All MTB isolates determined to be mono-resistant to isoniazid (INH) at the critical concentration of 0.1 mg/L, should also be tested against second-line drugs, if treatment may include a fluoroquinolone.

Currently, all first isolates obtained from new cases of tuberculosis are tested against the four first-line drugs, isoniazid (INH), rifampin (RIF), ethambutol (EMB) and pyrazinamide (PZA). Isolates that are mono-resistant to INH are also tested against high level INH (0.4mg/L). Any isolate which demonstrates resistance to RIF or to any two first-line drugs is also tested against the full second-line drug panel (see Table 1 below).

In accordance with the updated CLSI M24-A2 standards, the following additions to susceptibility testing of MTB isolates will be implemented, as of July 15th, 2011:

- All TB isolates determined to be mono-resistant to INH at 0.1 mg/L will be tested against high level INH and in addition will be tested against
 - Ofloxacin
 - Moxifloxacin
- Any TB isolate determined to be resistant to EMB at 5.0 mg/L will also be tested against EMB at 7.5 mg/L (high-level).

Please consult with the Medical Microbiologist, TB and Mycobacteriology at 416-235-5712 if additional/other drug susceptibility testing may be required.

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(Continued)

Table 1: Second-line drug MTB susceptibility testing panel

Drug Name	Critical Concentration mg/L
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

For further information:

- Medical Microbiologist, Dr Jamieson at **416-235-5841**
- TB and Mycobacteriology Laboratory, PHL Toronto **416-235-6040**
- Public Health Ontario (PHO) Customer Service Centre toll free at **1-877-604-4567** or **416-235-6556**
- For the PHO Specimen Collection Guide and previous Lababstracts, refer to <http://www.oahpp.ca/publichealthlaboratories.php>
- To subscribe to future PHO Lababstracts, please e-mail lababstracts@oahpp.ca

Please note: Public Health Ontario is the new operating name for the Ontario Agency for Health Protection and Promotion.