

**Date:** April 30, 2012

**To:** Transplant Programs and Transplant Physicians, Infectious Diseases Physicians, Critical Care Physicians, and Laboratory Directors and Managers

**From:** Provincial Laboratory for Public Health (ProvLab)

**Re:** Galactomannan antigen reporting and the diagnosis of invasive aspergillosis

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**Key Messages:**

The galactomannan (GM) antigen assay is an important aid in the diagnosis of invasive aspergillosis. The GM index (GMI) value of a positive result, particularly for bronchoscopy specimens, is predictive of the likelihood of disease.

As of May 1<sup>st</sup>, 2012, GMI will be reported for all positive GM results.

**Why this is important:**

Invasive aspergillosis is associated with significant morbidity and mortality in immunocompromised populations, including haematology, solid organ transplantation, and critical care patients.

Diagnosis of invasive aspergillosis is often difficult and requires a combination of clinical, radiological, histopathological, and microbiological investigations.

The GM assay is an enzyme immunoassay (EIA) that detects *Aspergillus* cell wall antigen in clinical specimens. Serum and bronchoscopy specimens are appropriate for testing and a **GMI  $\geq 0.5$  is reported as positive**. Due to the non-sterile nature of bronchoscopy specimens and fungal colonization, a clear GMI cut-off value that correlates unambiguously with invasive disease cannot be defined. However, the likelihood of clinical disease increases considerably as GMI values exceed 1.0.

Detection of *Aspergillus* using conventional culture methods is suboptimal from respiratory specimens and not possible from blood specimens. GM antigen testing, as clinically appropriate, in patients at risk of disease is an effective approach to improve the diagnosis of invasive aspergillosis.

**Inquiries and requests for testing may be directed to:**

- Dr. Jeff Fuller, Program Leader, Medical Mycology, AHS/ProvLab at [jeff.fuller@albertahealthservices.ca](mailto:jeff.fuller@albertahealthservices.ca) or by phone at 780-407-2767.
- Edmonton Site – Phone: 780-407-7121 (ask for Microbiologist-on-Call)
- Calgary Site – Phone: 403-944-1200 (ask for Microbiologist-on-Call)

For specimen collection information, please refer to the ProvLab Guide to Services at: <http://www.provlab.ab.ca/guide-to-services.pdf> or <http://www.albertahealthservices.ca/3217.asp>

This bulletin has been reviewed and approved by Dr. Greg Tyrrell, Acting Medical Director of ProvLab