**Objectives**: A murine IgG2b monoclonal antibody, named TG11, binding to an extracellular polysaccharide (EPS) antigen secreted by all *Mucorales* fungi has been recently developed and integrated into a competitive format lateral-flow device (TG11-LFD). The objective of this study was to establish the clinical performance of the prototype TG11-LFD test on bronchoalveolar lavage fluids (BAL) for the diagnosis of mucormycosis.

**Materials & Methods:** Thirteen BAL samples from 13 patients with mucormycosis, all of which tested positive for *Mucorales* qPCR (*Mucor/Rhizopus* (n=5), *Lichtheimia* (n=2), *Rhizomucor* (n=5) and *Cunninghamella* (n=1)) were used to assess the perfomance of the TG11-LFD test. We also selected 49 BAL from 25 patients with other invasive fungal infections (IFI) (aspergillosis, *Pneumocystis* infection, candidiasis, and possible IFI) and from 20 patients without IFI, for use as negative controls. The intensities of the LFD test (T) and control (C) lines were recorded as artificial units (a.u.) using a Cube reader, and the diagnostic performance of the LFD was assessed by analyzing the Receiver Operating Characteristics (ROC) curve.

**Results**: The area under the ROC curve was 0.739. Using a threshold value for test positivity of ≤531 a.u., the TG11-LFD test has a sensitivity and specificity of 76.92% and 75.51%, respectively, a positive predictive value (PPV) of 45.45%, and a negative predictive value (NPV) of 92.5%.

**Conclusions**: In this study, the performance of the prototype TG11-LFD test on clinical samples was evaluated for the first time and demonstrated its significant potential for enhancing the rapid (30 min) and user-friendly detection of mucormycosis. Combining antigen detection with qPCR, as successfully applied in the diagnosis of aspergillosis, is likely to yield the most reliable diagnostic approach.