# PATHONOSTICS



# **MucorGenius**

Multiplex real-time PCR assay for the detection of the clinical most prevalent *Mucorales* species

- Direct detection in BAL samples and biopsy samples
- Results within 3.5 hours
- Detection of *Rhizopus* spp., *Mucor* spp., *Rhizomucor*, *Lichtheimia* spp., *Cunninghamella* spp.
- High diagnostic value resulting in adapted patient management and in therapeutic decisions
- Can be used in parallel with the AsperGenius<sup>®</sup> PCR kit (same protocol)
- Research Use Only (RUO)

Mucormycosis is a rare invasive fungal infection with exceedingly high mortality and few therapeutic options. The disease is caused by *Mucorales*, which is a large group of species within the order of zygomycetes.

# Overview

*Mucorales* are widespread in the environment and generally affect severely compromised individuals. Persons at risk include patients with organ transplants, hematologic malignancies, diabetes mellitus, renal failure. *Mucorales* can also infect people with normal immunity who underwent subcutaneous traumatic inoculation.

Invasive mucormycosis can result in rhino-orbitalcerebral, pulmonary, gastrointestinal, cutaneous, widely disseminated, and miscellaneous infection. The hallmark of disease is tissue necrosis resulting from angioinvasion and subsequent thrombosis; black, necrotic eschars are common in affected tissues. In many cases, the disease progresses rapidly and may result in death unless underlying risk factors are corrected and appropriate antifungal therapy and surgical excision are initiated.



The most prevalent etiological agents of mucormycosis closely associated with disease in humans are *Rhizopus oryzae, Mucor racemosus, Rhizomucor pusillis, Lichtheimia corymbifera* and *Cunninghamella. bertholletiae* Of all the agents of mucormycosis, the single most frequently identified pathogen is *Rhizopus oryzae,* which is responsible for up to 70% of all cases.

The incidence of mucormycosis is unknown and probably underestimated because diagnosis is difficult, and most cases in which a diagnosis is proven histologically or microbiologically are underreported.

The MucorGenius multiplex PCR assay is suitable for real-time PCR instruments using melting curve analysis and has been verified on the LightCycler 480 II (Roche) and the Rotor-Gene Q (Qiagen).

# Products

#### MucorGenius Species multiplex (PN-700)

- 25 reactions
- Detection of *Mucorales* Species

#### Targets

- Pan-Mucorales
  - Rhizopus spp.
  - Mucor spp.
  - Lichtheimia spp.
  - Cunninghamella spp.
  - Rhizomucor spp.
- Internal Control (IC)

#### Samples

- Bronchoalveolar lavage (BAL)
- Biopsy samples, paraffin embedded

# Quality

- Verified on fungal cultures
- Verified on clinical samples

# Features and benefits

- Direct detection on clinical samples
- Identification of the most common etiological agents of mucormycosis
- Detection within 2.5 hours after nucleic acid extraction
- Internal Control (IC) included
- Positive control included



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