

**Title:** ADHESION ABILITY TO MEDICAL DEVICES AND PHOSPHOLIPASE PRODUCTION BY FILAMENTOUS FUNGI ISOLATED FROM HIV POSITIVE PATIENT SURFACE MYCOSES

**Authors:** Fontes, L.H.R.<sup>1</sup>, Fontes, V.C.<sup>1</sup>, Araújo Jr, R. O.<sup>1</sup>, Borges, K. R. A.<sup>1</sup>, Athaide, O.S.N.<sup>1</sup>, Ferreira, E.O.<sup>1</sup>, Santos, C. I.<sup>1</sup>, França, Y.R.<sup>1</sup>, Pedrozo e Silva, C.M.<sup>2</sup>, Andrade-Monteiro, C.<sup>1</sup>

**Institution** <sup>1</sup>UNICEUMA – Universidade CEUMA (Rua Josué Montello, nº 1, Renascença II São Luís – MA ), <sup>2</sup> UFMA – Universidade Federal do Maranhão (Avenida dos Portugueses, 1966 - Bacanga, São Luís – MA)

**Abstract:**

In recent years it has seen an increased number of fungal infections whose motive is directly linked to the increasing number of patients infected with HIV. Such infections have sparked an increase in morbidity, long periods of stay in hospitals, difficulty of treatment and they can progress even causing the death of those patients. So, the objective of this research was to evaluate the adhesion capacity to medical devices and the production of phospholipase by clinical isolates of filamentous fungi from superficial mycoses of HIV-positive patients. Standard fungal inoculum (1 mL) was added to fragments of needles syringes and bladder probes in the presence of a buffer solution and incubated for 3h at 28 ° C. Later the fragments were washed and adhered conidia counted in a Neubauer chamber. The adhesion rating was made according to the amount of conidia. For evaluation of phospholipase production it was used egg yolk agar and samples were incubated for 7 days. Samples of the genera *Aspergillus*, *Fusarium*, *Penicillium*, *Gliocladium*, *Paecilomyces* and *Trichophyton* were evaluated. All isolates of *Aspergillus*, *Fusarium*, *Penicillium* and *Trichophyton* and 80% of *Paecilomyces* were adherent to needle fragments. Isolates of *Gliocladium* were not adhering to this material. Isolates of *Aspergillus*, *Fusarium*, *Penicillium*, *Paecilomyces* and *Trichophyton* were adhering to urinary catheter fragments and only 50% of *Gliocladium* samples were positive for this adhesion property. Isolates not produced phospholipase. The strong positivity adhesion of these fungi to hospital supplies may be related to their virulence, which can cause serious problems to hospitalized patients especially those immunocompromised. The results draw attention to the care of the handling of catheters or stainless materials, because the misuse of these can contribute to the development of infections.