

Title: Isolation and phenotypic characterization of pathogenic fungi of the genus *Candida* from the oral cavity of immunocompromised patients

Authors: CAVALCANTE, J.P.¹, BROETTO, L.¹, MORAIS, T.M.L.², FERREIRA, S.M.S.², LANDELL, M.F.¹.

Institutions: ¹Universidade Federal de Alagoas - UFAL; ²Centro Universitário CESMAC

Abstract

Immunosuppressed and / or immunocompromised patients tend to be more susceptible to infections caused by pathogens. However, microorganisms that forming part of human endogenous microbiota in some cases may also cause pathogeny such as candidiasis. Candidiasis is a type of mycosis cause by yeasts in the *Candida* genus, which has the ability to colonize the most diverse parts of the human body and the *Candida albicans* species is the main etiologic agent. The main aim of this research was the isolation and phenotypic characterization of pathogenic fungi of the *Candida* genus from the oral cavity of patients infected by HIV treated at the University Hospital Prof. Alberto Antunes - HUPAA / UFAL. Samples were collected using sterile swabs, stored in test tubes with distilled water, subsequently seeded in Petri dishes with selective medium CHROMagar and incubated at 22-25°C for five days to isolate and to perform the presumptive identification. The isolates were subjected to two enzymatic tests: protease, using a culture medium containing bovine albumin and test phospholipase production, we used culture medium with egg yolk as substrate. In both tests, the isolates were inoculated into petri dish and incubated for seven days at 37°C and evaluated by calculating the enzyme activity (Pz). The presumptive identifications are being confirmed by molecular methods. Fourty-nine isolates of *Candida* yeasts from 60 samples collected were obtained. Through the presumptive identification was possible to identify 51% of the isolates as *C. albicans*, 33% as *C. krusei* and / or *C. tropicallis* and 16% as *C. dubliniensis*. Approximately 31% of the isolates were positive for phospholipase. Protease production was also assess and 35% of the isolates were positive, 19% *C. albicans*, 10% *C. krusei* and / or *C. tropicallis* and 6% *C. dubliniensis*. *C. albicans* was the most prevalent species, but other species such as *C. krusei* and / or *C. tropicallis* and *C. dubliniensis* were also found. Our results reinforce the importance of correct identification because misidentifications occur frequently and can influence the patient care.

Keywords: *Candida* spp., virulence factors, Immunocompromised

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