

Title: Babassu Black yeast flora and Chromoblastomycosis

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Abstract:

Black yeasts are Ascomycetes and all members of the group are obligatorily melanized and colonize the most diverse niches. A significant portion of the black yeast species and their filamentous relatives(?) are regularly encountered as causative agents of human mycoses. Chromoblastomycosis is a chronic, progressive cutaneous and subcutaneous fungal infection characterized by presence of muriform cells inside the tissues, which represent the invasive form of the fungus. Considerate a traumatic infection which starts after the implantation of fungal elements of etiologic agents. *Fonsecaea pedrosoi* is the main etiological agent in Brazil, and the Maranhão state region is considered an endemic area of the disease. Thus, this work aims to determine the presence of Chromoblastomycosis etiological agents on babassu (*Orbignya phalerata*) coconuts. Six samples of babassu coconut were collected in São Luís, Maranhão state. For the isolation of black yeast the selective Oil flotation method was used. Molecular identification of the isolates was performed by sequencing the ITS region and the sequences obtained were compared with the CBS (Fungal Biodiversity Centre) database. A total of 106 isolates of black fungi was obtained using the selective method. The ITS sequence data of the isolates were attributed to the genus *Cladophialophora*, *Exophiala*, *Rhinocladiella* and *Veronaea*. Based on the isolation results we could see that Black yeast species isolated are not related with species founded in clinical data and we also discovered the ecological niche of *Cladophialophora mycetomatis*, thus far only known from a single subcutaneous infection. Among these isolates, there were two species of clinical interest: *Exophiala spinifera* and *Veronaea botryosa*, however until now in Brazil were not reported any clinical case caused for

these species. Both species have been reported causing infections in human hosts, however *Veronaea botryosa* has been repeatedly encountered in human infections worldwide and cause severe disseminated infections in patients without known underlying immune disorders. From these results, it was observed that the Oil Flotation technique used was specified for environmental isolation of black yeast and enables to elucidate aspects of the ecology of these microorganisms.

Key works: Babassu, chromoblastomycosis, black yeast, *Cladophialophora mycetomatis*

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