

Título: IDENTIFICATION OF *Cryptococcus gattii* AND *Cryptococcus neoformans* FROM PIGEON EXCRETA BY CHEMOTYPING IN MACEIO, ALAGOAS, BRAZIL

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Resumo:

Criptococcosis is a fungal infection that can cause a life-threatening meningoencephalitis manifested as headache, fever, visual problems and altered mental state which is caused mainly by the pathogenic yeasts *Cryptococcus neoformans* and *Cryptococcus gattii*. They can be found in environmental sources, such as desiccated pigeon excreta and decomposing wood of trunk hollow of living trees and differs from each other mainly by a contrasting epidemiological profile, once *Cryptococcus neoformans* affects mostly immunosuppressed patients and *C. gattii* occurs in immunocompetent people. Our purpose was to evaluate the presence of *Cryptococcus gattii* and *C. neoformans* associated to pigeon excreta by chemotype technique using L-canavanine glycine bromothymol blue agar (CGB) medium which has been reportedly used to differentiate both species. The excreta were obtained through scraping from 8 different localities of the city with a high flow of people and presence of pigeons and immediately sent to the Mycology Laboratory (LabMicol/ICBS/UFAL) for analysis. Each sample was macerated and suspended in saline solution with chloramphenicol (0.2g/L), vortexed for 5 minutes and left to stand for at least 30 minutes. A total of 0.1mL of the supernatant was cultured in triplicate Petri dishes containing Sabouraud agar medium with chloramphenicol and kept at 30°C for up to 7 days with daily observation. Six out of 24 samples (25%) were *Cryptococcus* spp. Identification of the genus was performed based on melanin synthesis (phenoloxidase activity) on bird seed agar and assessed for capsule production on China ink preparation, urease production on urea agar medium and ability to grow at 37 °C. *Cryptococcus gattii* was the less frequent, present in 17% (1/6) of the analyzed yeasts, whereas *Cryptococcus neoformans* was the most frequent, representing 83% (5/6) of the yeasts isolated. *Cryptococcus gattii* induced a blue color change of the medium, indicating the assimilation of glycine, while *C. neoformans* failed to cause a color change. Considering that *C. gattii* presents a reduced susceptibility to fungal agents, it is important for a clinical Microbiology laboratory to accurately differentiate both species. This is the first report of *C. gattii* from pigeon excreta in the city of Maceio, Alagoas, Brazil.

Palavras-chaves: Chemotyping, *Cryptococcus gattii*, *Cryptococcus neoformans*

Agência Fomento: FAPEAL, CNPq, MS