

## ENVIRONMENTAL ISOLATION OF *Cryptococcus* spp. IN CURITIBA METROPOLITAN REGION-PARANÁ

Herkert, P.F.<sup>1</sup>, Bombassaro, A.<sup>1</sup>, Gomes, R.R.<sup>1</sup>, Pinheiro, R.L.<sup>2</sup>, Muro, M.D.<sup>2</sup>, Vicente, V.A.<sup>3</sup>, Queiroz-Telles, F.<sup>4</sup>

<sup>1</sup>Post graduate program in Microbiology, Parasitology and Pathology-UFPR, Brazil, <sup>2</sup>Hospital of Clinics-UFPR, Brazil, <sup>3</sup>Fellowship from CNPq, Brasília, Brazil, <sup>4</sup>Comunitarian Health Department-Hospital of Clinics-UFPR (Curitiba-PR)

### Abstract:

Cryptococcosis is a systemic fungal infection caused by encapsulated yeast *Cryptococcus* spp., the infection is acquired by inhalation of infective propagules present in the environment. The genus *Cryptococcus* are widely distributed in environment, it may be found in soil, pigeon excreta, dust, water, air and decaying wood. Some species are important in medical mycology as *C. neoformans* and *C. gattii*. This study aims to identify the environmental sources of *Cryptococcus* in Curitiba metropolitan region of Paraná state. Samples from bird droppings, decaying wood, hollows and bark of living trees and soil were collected and transported in plastic bags at room temperature. The samples were suspended in saline (with chloramphenicol 400mg/L), shaken for 5 minutes and allowed to settle for 30 minutes. From this suspension, 100uL were plated on Niger seed agar, then incubated at 25°C for 5 days. Moist, shiny, dark brown and cream colonies were selected and transferred to Sabouraud agar and CGB agar and incubated at 25°C for 7 days to proceed the identification. Micromorphological identification was performed by Gram staining and molecular identification was performed by sequencing the ITS regions of the rDNA. A set of 298 environmental samples were collected in urban or rural area of Lapa, Contenda, Antônio Olinto, Araucária, Morretes, Almirante Tamandaré, Alvorada do Sul and Curitiba, all cities located Paraná State. We isolated 5 (1,7%) *Cryptococcus* spp., according to ITS sequencing we obtained 1 isolate of *C. laurentii* from soil and 2 isolates from tree bark, 1 isolate of *C. diffluens* and 1 isolate of *Cryptococcus* sp. were obtained from bird droppings and tree bark respectively. *C. laurentii* was the specie more frequently isolated in this work. The species *C. neoformans* and *C. gattii* are the main causative agent of human cryptococcosis, but they were not isolated from environmental samples yet.

**Key-words:** *Cryptococcus* sp., environmental isolation, cryptococcosis

**Financial support:** Capes and CNPq