

**Title: ISOLATION OF *Cryptococcus* spp. IN DRY DROPPINGS OF CAPTIVE BIRDS IN PARNAÍBA, PIAUÍ, BRAZIL**

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**Abstract** Cryptococcosis is a systemic fungal infection that often affect humans and animals. It is acquired by inhalation of viable propagules from the environment, and the most common clinical manifestation of cryptococcosis is meningoencephalitis. At present, *Cryptococcus neoformans* and *Cryptococcus gattii* are considered pathogenic, although some non-*neoformans* species as *Cryptococcus laurentii* and *Cryptococcus albidus* have occasionally been described infecting immunocompromised hosts. This study aimed to isolate and perform biochemical tests on *Cryptococcus* spp. recovered from dried faeces of captive birds. From January 2015 to May 2015, a total of 80 dry samples from captive *Columbine*, *Psittacine* and *Passerine* birds were collected from two pet shops and three houses located in different districts of Parnaíba, Piauí, Brazil. Dried faeces were picked up from the birds cages using swabs and put into tubes containing 10 ml of sterile saline solution with 0.4 g l<sup>-1</sup> of chloramphenicol. Next, 100 uL of the supernatant was inoculated into niger seed (*Guizotia abyssinica*) agar plates. Each sample was spread on two plates, incubated at 35°C and daily examined for 10 days to identify smooth, beige to dark brown colonies suggestive of *Cryptococcus* spp. Then, colonies were streaked on Sabouraud agar for 48 h at 35 °C and identified by India ink test, urease and nitrate and carbon assimilation assays. A total of 12 (15%) isolates of *Cryptococcus* spp. were obtained from the 80 examined samples. Among these, two (16%) were *C. neoformans*, and 10 (83.3%) were *C. non-neoformans*. According to the bird species, *Cryptococcus* spp. isolates were recovered as follows: 5 (41.7%) from *Columbia livia*; 2 (16.6%) from *Melopsittacus undulates*, 2 (16.6%) from *Chloebia* spp.; 1(8.3%) from *Serinus* spp.; 1 (8.3%) from *Ocyphaps lophotes* and 1 (8.3%) from *Jeunes* spp. All isolates presented capsules and urease production, but only the *C. neoformans* produced melanin on niger seed agar. The other species isolated showed a cream-colour on this medium. *C. neoformans* presented positive assimilation tests for dextrose, galactose, maltose, sucrose, raffinose, rhamnose, dulcitol, inositol, mannitol, xylose and peptone. The low ability in isolation of *C. neoformans* can be attributed to the hygiene care with the cages. Additionally, the *Cryptococcus non-neoformans* isolated from dry faeces of captive birds could be potential pathogens in humans.

**Key-words:** *C. neoformans*; *Cryptococcus* spp; captive birds.

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