TITLE: Phenotypic and genotypic identification of *Cryptococcus* spp. carried by wild birds

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Cryptococcosis is a serious and fatal systemic mycosis resulting from the inhalation of yeast propagules from *Cryptococcus neoformans* / *Cryptococcus gattii* complexes. *C.neoformans* affects mainly immunocompromised individuals, while *C.gattii* apparently immunocompetent individuals. Urban birds and plant debris are the main sources of contamination species, however, the role of wild birds as vectors of the disease is poorly elucidated. Other species such as *C.laurentii*, *C.uniguttulatos* and *C.albidus* may eventually cause disease. The aim of the study was to investigate whether wild birds might play a role in the epidemiology of cryptococcosis as possible carriers of the etiological agents. We isolated and characterized species and phenotypes of *Cryptococcus* in wild bird cloacal samples. Were collected cloacal sample of 163 birds distributed in five cities of the state of São Paulo (Mairinque, Rio Claro, São Carlos, Capital of São Paulo and São Sebastião) from February/2018 to April/2019. The birds were captured with mist net and the cloacal sample collection was performed with wet swab in saline plus streptomycin and penicillin. Cloacal samples were seeded on modified Dicloran Rose Bengal agar and Niger Seed agar. The colonies with encapsulate cells were submitted to biochemical tests for presumptive identification of genus and species, which were confirmed through the DNA sequencing of the *ITS* 1 and *ITS* 4 regions. Among the 163 cloacal samples, 24 of them had presumptive identification for the genus *Cryptococcus*. Until now, 8 of these isolates have been sequenced and confirmed, with *C.albidus* (50%), *C.laurentii* (25%), *C.flavescens* (12.5%) and *C.liquefaciens*(12.5%). Although these species are considered saprophytic and are not frequently associated with neurocryptococcosis. Reports in the literature indicate that *C.albidus* and *C.laurentii* infections correspond to 80% of cases of cryptococcosis, non-*C.neoformans* and non- *C.gattii*. There are also reports of skin lesion, both in humans and animals, caused by these species, which might indicate the zoonotic relation by these agents. In this way, study the ecoepidemiology of these agents, becomes necessary and useful with regard to public health. This study with wild birds is inedited in the Brazilian territory. We concluded that finding these species in cloacal samples of wild birds indicates that these animals might play an important role in the dispersion of yeasts of the genus *Cryptococcus.*

Key- Words: Cryptococcus, wild birds, vectors of diseases; reservoirs of diseases

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