

Morphology and molecular analyzes of *Henneguya* cf. *chydadea*, a parasite of *Astyanax lacustris* from of Mato Grosso do Sul state, Brazil

Tiago Milanin¹, Amanda M. Ribeiro²; Márcia R. M. Silva³; Luiz Eduardo R. Tavares⁴; Kassia Roberta H. Capodifoglio⁵; Antônio A. M. Maia⁶

^{1,3,5,6} FZEA/USP - SP - Brazil (tmilanin@gmail.com)

² UFSCAR - SP - Brazil

⁴UFMS- MS - Brazil

Fish farming in Brazil is one of the fastest growing productive activities, however the fish are hosts of a great diversity of parasites little know, myxosporeans are cnidaria parasites of vertebrates (primarily fish, but also amphibians, reptiles, birds and mammals) and invertebrates (annelids). Among myxosporeans, species of the genus *Myxobolus* Bütschli, 1882 and *Henneguya* Thelohan, 1892, are most commonly found infecting fish. *Henneguya chydadea* Barassa et al. 2003 has been described, based on morphological and histopathological analysis, infecting lambari (*Astyanax lacustris*, Lütken 1875, syn: *Astyanax altiparanae*, Garutti and Britski, 2000) from Brazilian fish farm in São Paulo state. The parasite was identified as an important pathogen of these farmed fish species. In *A. lacustris* the parasite was described causing deformed in the gill lamellae, compressed the capillaries, and causing retraction of the neighboring lamellae. This work, show additional data on morphological analyzes through light microscopy and molecular (partial sequencing of the 18S rDNA) of *Henneguya* cf. *chydadea*. The fish utilized in this study were obtained from one fish farm from the state of Mato Grosso do Sul in Brazil. For this study 32 *A. lacustris* specimens were examined from which three of them (9.4%) presented infection in the branchial filament by myxosporean. Spores was mature (n = 25) and elongated (total length 18.4-19.2 µm; spore length 9.5-11.6 µm; spore width 2.7-4.6 µm; thickness 2.9-4.4 µm; caudal appendix length 9.5-10 µm). Two polar capsules elongated and of equal size (length 5.5-6.5 µm, width 1.4- 1.9 µm). Molecular analyses of 18S rDNA of *Henneguya* cf. *chydadea* produced 1500nt. The blast research was done and the parasite shows 85% similarity with *Myxobolus pantanalis* (KF296349) and 89% similarity with *Myxobolus filamentum* (KJ849240) and *Myxobolus oliveirai* (HM754633). These three species of *Myxobolus* are parasites of Characiformes fish.

Post doctoral student supported by FAPESP scholarship (Proc. n° 2015/18807-3 – T. Milanin)