INFECTION SPECIFITY OF *ICHTHYOPHTHIRIUS MULTIFILIIS* IN PIRANHAS (*COLOSSOMA MACROPOMUM*)

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Ichthyophthirius multifiliis is obligate parasite that infects the epithelia of skin and gills. *I. multifiliis* is one of the most common protozoan pathogens of freshwater fishes and at least one species of amphibian (Gleeson, 1999). The parasite is commonly distributed, occurring in tropical, subtropical temperate regions, and extending north to the Arctic Circle (Elsayed *et al.*, 2006). It causes severe epizootics among different fish species in aquaria, hatcheries, and ponds, as well as in wild fish populations (Thilakaratne *et al.*, 2003; Kim *et al.*, 2002). It has significant economical loses, because fish mortality of *I. multifiliis* infection could reach up to 100%.

Two outbreaks of *I. multifiliis* infection were detected in different fish farms in august 2013. Infection was registered in both population of 3 months old rainbow trout (*Oncorhynchus mykiss*) and piranhas (*Colossoma macropomum*). Mortality of the piranhas was 100 %, but rainbow trout mortality - 80%. Elsayed *et al.*, (2006) noted that outbreak of *I. multifiliis* infection depends on stress factors impacting on the fish. Five fishes form each species were investigated. Gross pathology was observed and skin, gill and viscera tissue samples were taken for histopathological examination. Samples were fixed in formalin 10%, dehydrate, embed in paraffin, stained with hematoxylin and eosin and tested under 50, 100, 200, 400 microscope magnifications.

All fish of both species has swollen of the gills and it was covered with thick mucus. Many *I. multifiliis* were detected in histological samples in gill epithelium of primary and secondary lamellae, as well as some epithelial cells necrosis with macrophage infiltration. Heavy damages of gills were detected on histological slides, which entailed to massive fish mortality. Typical white spots characteristic of *I. multifiliis* appeared only on rainbow trouts' skin. It was 1.0-1.5 mm blister-like skin lesions along the body and fins. Most protozoa were observed histologically adjacent to the basement membrane of the epithelial layer and in some case the surrounding tissue did not show any evidence of damage, but in other case activation of club cells at the surface of epidermis and hemorrhage in the dermal layer was detected. Macroscopical and microscopical lesions of piranhas` skin were not observed.

I. multifiliis was located in rainbow trouts' superficial skin layer and gill epithelium, but piranhas were infected only in gills. Epidermis has no significant difference in histological structure between the rainbow trout and piranhas. Yet it is not clear what factors impact to localization of I. *multifiliis* infection in skin or in gills.

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