

SUB-ÁREA: (3) Leptospirose em Animais Silvestres

**Investigation of *Leptospira* spp. exposure in Amazonian manatees (*Trichechus inunguis*) in the mid-Solimões river region, Brazilian Amazon**

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The Amazon is the largest rainforest in the world and in the past decades human population has exponentially increased in this region, enhancing environmental degradation and contact between humans, wildlife, and domestic animals. High prevalence of leptospirosis was reported for humans, domestic animals, and wildlife in the Amazon. Although leptospirosis has been described in marine mammals, very few studies have been conducted on the occurrence of the disease in Amazonian aquatic mammals. The present study aimed at investigating the exposure to *Leptospira* spp. in Amazonian manatees (*Trichechus inunguis*) free-ranging or undergoing *in-situ* rehabilitation in the mid-Solimões river region, Brazilian Amazon. Serum samples were tested by microscopic agglutination test. A total of 63% of sera were reactive to *Leptospira* spp. and serovar Patoc was considered the infecting serovar in all positive samples. Titers were generally low, indicating chronic exposure. It was possible to study the curve of antibody titers through time on four manatees undergoing rehabilitation and active infection was suggested for three animals. Increased serum titers were reported in samples collected during the dry season, when Amazonian manatees tend to migrate and concentrate in lakes and main river channels. This study represents only the third report of *Leptospira* spp. exposure in Amazonian manatees and the first report in free-ranging animals. Our results, in addition to previous reports, suggest the occurrence of serovar Patoc in the Amazonian environment, with serological exposure of humans, domestic and wild animals, for at least 10 years. The Amazonian manatee is listed as Vulnerable by the IUCN based on a suspected population decline of at least 30% within the next three generations. Knowledge of the infectious agents that may affect those animals is of relevance to species conservation. Furthermore, aquatic mammals can act as sentinels of environmental health by indicating the presence of pathogens, including zoonotic agents, in the environment. Our results reinforce the importance of ongoing studies for the detection of infectious agents that can affect the health of aquatic mammals, humans, and the Amazonian environment. Further research is needed for molecular confirmation of serovar Patoc in Amazonian manatees and to better understand its clinical relevance.

**Palavras-chave:** Leptospirosis, Serovar Patoc, Serology, Sirenia, Zoonosis

**Agências de Fomento:** Conselho Nacional de Pesquisas - CNPq, Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - CAPES, Universidade Federal de Uberlândia, Instituto Biológico de São Paulo, Instituto de Desenvolvimento Sustentável Mamirauá