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MOLECULAR AND HISTOPATHOLOGICAL INVESTIGATION OF *MYCOBACTERIUM* SPP. in *Pontoporia blainvillei*, *Sotalia guianensis*, *Arctocephalus australis* and *Arctocephalus tropicalis* of the Brazilian coast

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Among the marine mammals occurring in Brazil, stands out the franciscana (*Pontoporia blainvillei*), classified as critically endangered, the Guiana dolphin (*Sotalia guianensis*), listed as vulnerable, the South American fur seal (*Arctocephalus australis*) and the subantarctic fur seal (*Arctocephalus tropicalis*), both with deficient data on their national conservation status according to the Chico Mendes Institute for Biodiversity Conservation (ICMBio). Bacterial infections, some of them with zoonotic potential, are among the main causes of morbidity and mortality in marine mammals. Mycobacteriosis, an illness caused by species of the genus *Mycobacterium* spp. in especial *M. marinum* and *M. pinnipedi* in marine mammals, is considered a emerging disease, however its knowledge is scarce in Brazil. The objective of this work was to investigate the occurrence of *Mycobacterium* spp, and the corresponding pathological aspects.. in samples of cetaceans and pinnipeds kept at the marine mammal tissues bank of the Laboratory of Wildlife Comparative Pathology (LAPCOM - USP) through a molecular investigation in selected tissues (lungs, pulmonary, mediastinal, cervical, mesenteric and prescapular lymph nodes), and subsequent histopathological study with Hematoxylin and Eosin (HE) and Zielh Neelsen (ZN) stains for characterization of lesions in suspected cases. Samples of 43 stranded or bycatch individuals (30 *P. blanvillei*, 10 *S. guianensis*, 2 *A. australis* and 1 *A. tropicalis*) were analyzed. From the animals tested, 11/43 (25%) (five *S. guianensis* and six *P. blainvillei*) were suspected in PCR; 9/11 (82%) with the *primers* INS (strains belonging to the *M. tuberculosis* complex) and 2/11 (18%) with the TB *primers* (genus *Mycobacterium* spp.), but *Mycobacterium* spp. was not confirmed in the sequencing. In the suspicious cases, 5/11 (45%) and 3/11 (27%) presented macro and microscopic lesions compatible with *Mycobacterium* spp., respectively, but were negative in ZN staining. Although *Mycobacterium* spp. was not confirmed in the present research, this does not exclude the possibility that marine mammals in Brazil be susceptible to infection by this agent. The possibility of infections, especially of bacterial origin, could be underdiagnosed due to the lack of systematic screening exists. Considering the relevance for human, animal and environmental health, the surveillance of zoonotic pathogens in all stranded marine mammals along the Brazilian coast is highly encouraged, including appropriate sampling and culture.

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