

Título: Occurrence of *Mycoplasma haemofelis* and *Candidatus Mycoplasma haemominutum* in Domestic Cats at the Metropolitan Area of Belém, Pará, Brazil

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Resumo

Feline Infectious Anemia (FIA) is an infectious disease of domestic and wild cats caused by the bacterial species *Mycoplasma haemofelis*, *Candidatus Mycoplasma haemominutum* and *Candidatus Mycoplasma turicensis*. Clinically, the majority of infected cats have anorexia, weakness, depression, paleness of the mucous and in cases of acute infection, splenomegaly. Scientific reports of prevalence of FIA in Brazil have been performed, however in the Brazilian northern there is a lack of occurrences and prevalence studies of this infection. Since these microorganisms have worldwide distribution, this study aimed to evaluate the prevalence of *Mycoplasma haemofelis* / *Candidatus Mycoplasma haemominutum* in domestic cats at the metropolitan area of Belém, Pará. Blood samples were collected from 57 adult domestic cats, undefined breed, derived from animal shelters or from the Veterinary Hospital of the Federal Rural University of Amazonia (UFRA). Genomic DNA was obtained using the standard protocol of phenol-chloroform. Mycoplasma detection was performed by the amplification of 16S rRNA gene followed by sequencing and BLAST analysis. Of the 57 animals tested, 11 (19.29%) samples were positive for mycoplasma, of which 63.63% were positive for *Mycoplasma haemofelis* and 36.36% for *Candidatus M. haemominutum*. The highest prevalence of *Mycoplasma haemofelis* in Belém is an alarming factor because this species is the most pathogenic than the other ones. Thus, some cats can develop a fatal anemia due to the low globular volumes. Phylogenetic tree obtained using the 16S rRNA sequences grouped *M. haemofelis* e *Candidatus M. haemominutum* in distinct clades with high bootstrap support. This study confirms the occurrence of these microorganisms in Belém and emphasizes the importance of more research projects about this disease, given the high prevalence of *M. haemofelis* which has already been related to infections in immunocompromised humans at Brazil.

Keywords: *Mycoplasma haemofelis*; *Candidatus Mycoplasma haemominutum*; Molecular Diagnosis.