RESUMO - PROTOZOÁRIOS E AGENTES TRANSMITIDOS POR VETORES DE IMPORTÂNCIA EM SAÚDE

MORPHOLOGICAL, MOLECULAR AND PHYLOGENETIC STUDY OF PARASITES IN THE BLOOD AND TISSUES OF SMALL WILD MAMMALS IN THE ATLANTIC FOREST AND PANTANAL BIOMES OF PARANÁ STATE

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This project explores small wild mammals of the orders Rodentia and Didelphimorphia in the Atlantic Forest and Pantanal biomes near Guaíra,

Paraná, as potential reservoirs for zoonotic pathogens that impact human and animal health. These include bacteria from the Anaplasmataceae and Mycoplasmataceae families and protozoa from the Apicomplexa phylum. Few studies in Brazil link wildlife pathogens with ecological factors, especially in border areas. The study aims to detect, genetically characterize, and morphologically analyze these pathogens in small mammals and correlate environmental (e.g., vegetation type, location) and biological factors (e.g., species, sex) with parasite presence. Fieldwork will occur across two ecologically distinct sites—one in the Atlantic Forest (Dense Ombrophilous Forest) and another in the Pantanal on the Paraná River near Paraguay—using Tomahawk® and Sherman® traps. Captured animals will be humanely euthanized for sample collection following biosafety protocols, and morphological identification will occur at LABPMR/IOC-FIOCRUZ. Liver tissue, blood on filter paper, and blood smears will be collected. Direct diagnosis will involve light microscopy of Giemsa-stained smears, and DNA will be extracted using the DNeasy Blood and Tissue kit. PCR will be performed with specific primers for Piroplasmida, Plasmodium, and Sarcocystidae, as well as 16S rRNA and other genes for Anaplasmataceae and Mycoplasmataceae. PCR products will be sequenced, and sequences analyzed with MEGA X and GenBank for phylogenetic characterization. Evolutionary distances will measure pathogen genetic diversity. Infection frequency will be analyzed with generalized linear models, considering independent variables such as host species, sex, location, vegetation type, and season. Expected results include a broad characterization of blood and tissue parasites, with higher prevalence in more disturbed areas. This study will provide essential data for eco-epidemiological surveillance of zoonoses, improving understanding of transmission cycles and supporting public health policies.

Palavras-chave: rodents; marsupials; anaplasmataceae; mycoplasmataceae and apicomplexa.