

Molecular diagnostic of Equine Leishmaniasis in South, Brazil

Escobar, T.A.¹, Zuravski, L.¹, Cantele, L.², Döwich, G.², Duarte, C.², Piccoli, J.C.E.¹,
Lubeck, I.², Manfredini, V.¹

¹ Grupo de Estudo em Estresse Oxidativo (GESTOX), Laboratório de Hematologia e Citologia Clínica, Universidade Federal do Pampa, Uruguaiana, RS, Brazil; ² Grupo de Estudo e de atendimento clínico cirúrgico de grandes animais (EQUIPAMPA), Curso de Medicina Veterinária, Universidade Federal do Pampa, Uruguaiana, RS, Brazil.

Introduction: Leishmaniasis is a parasitic infectious disease caused by protozoa genus *Leishmania* and transmitted by the sandfly vector. Characterized as neglected tropical disease, affects several species of mammals, and dogs are main reservoir in urban areas. Horses can also be infected especially when they are in contact with reservoirs or vectors. In Uruguaiana's city, has a significant number of horses used in the tensile loads and transport, with constant movement within the city. These animals live in precarious conditions, subjected to overwork and underfed. **Objective:** In view of these factors added to the current epidemiological situation of leishmaniasis in the city, the present study aim to identify the presence of *Leishmania* in whole blood horses the municipality of Uruguaiana-RS. **Material and Methods:** For the experiment, blood samples from 50 horses were analysed by Polymerase Chain Reaction (PCR). Promega ® kit was employed for DNA isolation from peripheral blood samples. Amplifications of a 700 bp DNA fragment was carried out with LITSV and L5.8SR primers. PCR products were visualized under UV light after electrophoresis in a 1.8% agarose gel stained with ethidium bromide. Samples that yielded a 700 bp product were considered positive. Positive and negative controls were included in reaction. **Results and Discussion:** Thirteen samples (26%) were positive for *Leishmania* DNA. This experiment by molecular technique indicated the possibility of *Leishmania*'s presence in peripheral blood samples in horses at Uruguaiana city. **Conclusions:** This was the first report of infection in equine species in South-west region of the Rio Grande do Sul, Brazil. It's essential to carry out studies to determine the clinical and laboratory findings from knowledge that the equine leishmaniasis can mainly affect animals in endemic regions and in contact with canine reservoirs.

Keywords: Horses, Parasitic Disease, Infection