

Investigation of infection by paramyxoviruses in native chelonians from Western region of Brazil

Darold GM¹; Silva GCP¹; Lunardi M^{1*}

**¹ Laboratório de Microbiologia Veterinária, Universidade de Cuiabá (UNIC),
Cuiabá/MT**

***michelelunardi@gmail.com**

Tortoises are reptiles belonging to the genus *Chelonoidis*, of the family Testudinidae, the second largest family in number of species of the order Testudines. There is limited information on the viral diversity in these animals and identification of RNA viruses associated with tortoises is scarce. Infection of paramyxoviruses classified in the genus *Ferlavirus* have been regularly described in squamates, and there are only a few reports of ferlavirus infections in chelonians that have been associated with dermatitis and pneumonia. Thus, the aim of this study was to investigate, through reverse transcription followed by semi-nested PCR (RT-snPCR), the fecal shedding of paramyxoviruses by Red-footed tortoise (*Chelonoidis carbonarius*) and Yellow-footed tortoise (*Chelonoidis denticulata*) representatives that were rescued by the Environmental Police of Mato Grosso State and admitted at the Teaching Veterinary Hospital of the University of Cuiabá. In this study, 64 terrestrial tortoises were evaluated, 28 of which were Red-footed tortoises and 36 Yellow-footed tortoises. Cloacal swab samples were collected from these tortoises and stored at -80 °C until sample processing. Viral RNA was purified from the samples by using the QIAamp cador Pathogen Mini Kit and the RT-snPCR assays were performed using degenerate primers that amplify a partial fragment of the paramyxoviral RNA polymerase (L gene). In this investigation, the excretion of paramyxoviral RNA through feces was not verified in the 64 terrestrial tortoises evaluated, and the partial genomic fragment, corresponding to the region of L gene, was not amplified by RT-snPCR. In conclusion, fecal excretion of paramyxoviral RNA was not detected in chelonians sampled from Mato Grosso State, although the strategy of RT-snPCR selected in this study has been largely applied for allowing the amplification of the most conserved paramyxoviral gene (gene L) in diverse representatives classified in the *Paramyxoviridae* family. Several species of chelonians can be infected with ferlaviruses and the importance of these viruses as pathogens and the potential of tortoises to transmit these viruses to other reptiles remains to be studied.

Keywords: Testudinidae; *Chelonoidis*; reptiles; *Ferlavirus*; Brazil

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