OCCURRENCE OF *Typanosoma cascavelli* IN SAMPLES OF BATS FROM THE ATLANTIC FOREST OF THE STATE OF ESPÍRITO SANTO

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Abstract

The genus *Trypanosoma* is constituted by parasitic protozoans capable of infecting several vertebrate hosts as mammals, fishes and reptiles. The trypanosomatid *Trypanosoma cascavelli* was initially described as a parasite of terrestrial snakes. However, this species has already been found infecting homeothermic animals like marsupials. *T. cascavelli* has two haplogroups, one is associated with marsupial infections and the other with infections of both snakes and marsupials. In spite of these findings, questions about hosts and how this species is capable of infecting poikilothermic and homeothermic animals are yet to be answered. This study had as objective to characterize trypanosomatid samples from bats of an Atlantic Forest area in the Southeast of Brazil. We obtained a total of 110 samples composed of 88 blood clots and 22 hemoculture of 16 bat species in three rural areas of Guarapari municipality. The samples were submitted to DNA extraction and polymerase chain reaction for the marker 18S rDNA for the Trypanosomatidae family. DNA libraries were prepared and sequenced on the MiSeq platform. Bioinformatic analysis was performed to identify the Operational Taxonomic Units (OTUs). A haplotype network was built to verify the *Trypanosoma cascavelli* intra-specific groups encountered. Among the total of bats captured (n = 103), 33 samples were submitted to the metabarcoding sequencing and taxonomic classification. We have identified for the first time in the Chiroptera order, an infection caused by *T. cascavelli* in *Artibeus* sp. and *Phyllostomus* sp. Infections by this species had previously been thought to be exclusive to snakes and marsupials. After the assembly of the haplotype network we verified that our samples corresponded to the *T. cascavelli* group found only in marsupial species. The detection of this specific haplogroup shows us the generalist potential of *Trypanosoma cascavelli*.

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