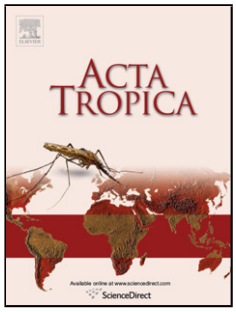

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First detection of *Leishmania* spp. DNA in Brazilian bats captured strictly in urban areas

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Highlights

►

1. we analyzed 488 bats captured in urban area for the presence of *Leishmania* ssp. kDNA.

2. 23.9% of the bats were positive for the presence of *Leishmania* spp. kDNA.

3. we detected *L. infantum* and *L. amazonensis* kDNA in *Desmodus rotundus* bat.

4. Bats may be a potential reservoir of *Leishmania* species in the urban scenario.

Abstract

Leishmania spp. is a protozoan that maintains its life cycle in domestic and wild animals and it may include bats, a population that has increased in urban environments. This study aimed to investigate the presence of *Leishmania* spp. in bats captured strictly in urban areas that are endemic for visceral leishmaniasis. The spleen and skin samples of 488 bats from 21 endemic cities in northwestern São Paulo State, Brazil, were tested for the presence of *Leishmania* kDNA using real-time PCR. Differentiation from *Trypanosoma* spp. was achieved by amplifying a DNA fragment of the ribosomal RNA gene. The presence of *Leishmania* spp. kDNA was verified in 23.9% of bats and *Trypanosoma* spp. DNA was identified in 3.9%. *Leishmania* species differentiation revealed the presence of *L. amazonensis* in 78.3% of the bats; *L. infantum* in 17.4%, and 1 sample (4.3%) showed a mix pattern of *L. infantum* and *L. amazonensis*. We also detected, for the first time, *L. infantum* and *L. amazonensis* DNA in *Desmodus rotundus*, the hematophagous bat. The presence of *Leishmania* spp. DNA in bats strictly from urban