

## **SUB-ÁREA: Leptospirose em Animais Silvestres**

### **Detection of *Leptospira* spp. in Bats (Chiroptera, Mammalia) from urban regions of Brazil**

Juliana Maria Nunes Batista<sup>a</sup>, Israel Barbosa Guedes<sup>a</sup>, Natália Carrillo Gaeta<sup>a</sup>, Beatriz Gagete Veríssimo de Mello<sup>b</sup>, João Eduardo Cavalcanti Brito<sup>b</sup>, Ricardo Augusto Dias<sup>b</sup>, Emmanuel Messias Vilar<sup>c</sup>, Felipe Rodrigues Jorge<sup>d</sup>, Marcos Bryan Heinemann<sup>a</sup>

<sup>a</sup> Laboratório de Zoonoses Bacterianas, Departamento de Medicina Veterinária Preventiva e Saúde Animal (VPS), Universidade de São Paulo, São Paulo/SP.

<sup>b</sup> Laboratório de Epidemiologia e Bioestatística, Departamento de Medicina Veterinária Preventiva e Saúde Animal (VPS), Universidade de São Paulo, São Paulo/SP.

<sup>c</sup> Laboratório de Mamíferos, Departamento de Sistemática e Ecologia, Universidade Federal da Paraíba (CCEN/DSE), João Pessoa/PB.

<sup>d</sup> Universidade Estadual do Ceará (UECE), Sobral/CE.

Bats have a wide range of biological functions to maintain the balance of the ecosystem. However, they are considered potential reservoirs of clinically significant and resistant pathogens, making epidemiological surveillance necessary in the One Health context. This research aimed to determine the presence of *Leptospira* spp. and the serological characterization of *Leptospira* spp. in bats of different urban and rural areas of São Paulo, João Pessoa, Recife, Potiretama, and Tauá, Brazil. Bats of several species, ages, sex, and food habits (insectivorous, hematophagous and frugivorous) were captured using mist nets according to availability in natural and artificial shelters and forest fragments. Bats were captured in urban and rural areas of São Paulo /SP, João Pessoa/PB, Recife/PE, Potiretama (CE) and Tauá (CE), Brazil. Total DNA was extracted from the kidneys of 142 bats (*Desmodus rotundus*, *Artibeus planirostris*, *Phyllostomus discolor*, *Myotis* cf. *nigricans*, *Artibeus fimbriatus*, *A. lituratus*, *Platyrrhinus lineatus*) and urine of 2 bats (*Artibeus planirostris*). The presence of pathogenic *Leptospira* spp. was evaluated by PCR amplification of the lipL32 gene. In addition, antibodies against 24 reference and autochthonous serovars isolated in Brazil were evaluated in 10 non-pregnant/lactating females and male bats (*Artibeus lituratus*, *Artibeus fimbriatus*) by a microscopic agglutination test (MAT). *Leptospira* spp. was detected in kidneys of 1.39% (02/144) of bats (*Artibeus planirostris*), and no animals were reagent in the MAT test. These preliminary results show a low frequency of *Leptospira* spp. in bats from different Brazilian urban and rural areas. The presence of clinically priority pathogens in wildlife highlights the urgent need for epidemiological surveillance in the One Health context.

**Keywords:** Chiropteran, Leptospirosis; One Health; Bacterial zoonosis

**Funding agency:** Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP) Processo nº 2020/14401-0, 2020/15008-0 e 2019/19702-1.