

RESUMO - ENTOMOLOGIA E ACAROLOGIA

MOLECULAR SCREENING OF BACTERIAL AGENTS IN BAT-ASSOCIATED SPINTURNICID MITES (MESOSTIGMATA: SPINTURNICIDAE) FROM BRAZIL

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Bats (Chiroptera) are among the most diverse mammalian groups and play key ecological roles, while also being recognized as potential reservoirs of a wide range of pathogens. The dynamics of pathogen maintenance and transmission in bat populations may be influenced by hematophagous ectoparasites, particularly mites of the family Spinturnicidae, which remain permanently on their hosts and feed on blood throughout all active life stages. This intimate association highlights their potential involvement in the circulation of microorganisms of medical and veterinary importance. Among bacterial agents, genera such as *Rickettsia* (Rickettsiaceae), *Bartonella* (Bartonellaceae), and

members of the family Anaplasmataceae (including *Anaplasma* and *Ehrlichia*) stand out due to their zoonotic relevance. However, the role of spinturnicid mites in the epidemiology of these bacteria remains poorly understood. This study aimed to detect DNA of these bacterial agents in spinturnicid mites associated with bats from different regions of Brazil, using specimens deposited in the Acarological Collection of the Instituto Butantan (IBSP). A total of 196 mite specimens were individually processed, and DNA was extracted using standard protocols. All samples were initially screened using endogenous molecular markers (18S rRNA, 16S rRNA and/or *cox1* genes). Samples with successful amplification ($n = 151$) were subsequently tested by conventional PCR targeting the *gltA* gene for *Rickettsia*, the *nuoG* gene for *Bartonella*, and the 16S rRNA gene for Anaplasmataceae detection. All samples tested negative for *Rickettsia* and Anaplasmataceae agents, with no amplification detected in any of the assays. In contrast, molecular analyses for *Bartonella* revealed two sequences positives, all obtained from specimens collected in the state of Mato Grosso, similar to *Bartonella* spp. detected in Brazilian bats. Although the overall detection rate was low, these findings provide important baseline data and contribute to the understanding of host-parasite-pathogen interactions in bat-associated systems. The absence of detection for some agents may reflect low infection rates or methodological constraints, whereas the detection of *Bartonella* highlights the potential role of these mites as carriers. Further studies including larger sample sizes, broader geographic coverage, and additional molecular approaches are necessary to clarify the role of spinturnicid mites in the maintenance and transmission of bacterial agents in natural environments.

Palavras-chave: bats; spinturnicidae; rickettsia; bartonella; ehrlichia; anaplasma; molecular screening; host-parasite interactions.