

RABIES VIRUS AND ANTIBODY RESEARCH IN BATS FROM NORTHWESTERN SÃO PAULO STATE

(PESQUISA DO VÍRUS DA RAIVA E DE ANTICORPOS EM MORCEGOS DO NOROESTE DO ESTADO DE SÃO PAULO)

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Twenty-six species of bats have already been described in Araçatuba, northwestern São Paulo, including the vampires *Desmodus rotundus* (E. Geoffroy, 1810) and *Diaemus youngi* (Jentink, 1893). Cases of rabies in bats have been recorded in this region, predominantly in urban areas since 1998. In the period from 1998 to 2007, 4,035 samples were examined for rabies, with 50 positive cases (1.2%) in nine different non-hematophagous species belonging to the families *Molossidae*, *Vespertilionidae* and *Phyllostomidae*. The objective of this study was to investigate the presence of both rabies virus in bats of various species and antibodies in vampire bats in Araçatuba. A total of 1,307 brain samples from bats were sent to the Laboratory for Rabies and 125 serum samples of vampire bats from four shelters in the region were examined from January 2008 to July 2012. The virus presence was determined by direct immunofluorescence (DIF) and mouse inoculation (ICC) while neutralizing antibodies were determined by the simplified microneutralization (SFIMT) in BHK21 cells. Rabies virus was detected in 22 (1.97%) out of 1,117 non-hematophagous bats and in none of the 190 vampire bats examined. Only 7% (9/125) of vampire bats had antibody titers above 0.5UI/ml, 65% (81/125) had low titers (0.10 to 0.5UI/ml) and 28% (35/125) were negative. The positivity rate observed was 2.25% which is above the average rate of 1.3% recorded previously in this region. The high percentage of vampire bats with neutralizing antibodies to rabies virus indicates a recent exposure to the virus which confirms that surveillance measures must be in place to avoid an increase in disease incidence.

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