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Studies on the pathogenesis of street rabies virus strains associated with insectivorous bats

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Rabies is one of the most important zoonoses that affect the central nervous system of mammals, particularly in the orders Carnivora and Chiroptera. Insectivorous bats are the main reservoirs of Rabies Lyssavirus (RABLV) in various regions of the world. From that decade on, as canine rabies came under control in many municipalities and molecular and antigenic typing was incorporated in surveillance programs, the importance of nonhematophagous bats in the epidemiology of the disease began to be appreciated in these countries. In the present study we analyzed virulence and pathogenesis of RABLV associated with insectivorous bats. For this, after replication of the virus in NA cells, were performed growth kinetics, cell-to-cell spread of RABLV isolates from *Eptesicus* sp and *Myotis* sp. For evaluation of the pathogenesis, RABLV were inoculated by intradermal route in mice and clinical signs observed for 40 days. All parameters were compared with fixed virus (CVS-31). We observed that the insectivorous strain showed higher replication rate, slowly cell-to-cell spread and lesser pathogenicity in mice when compared to the fixed virus. Our results indicate that the insectivorous strain showed lower virulence and pathogenicity compared with the virus fixed, as well as strains associated with other reservoirs (Katz et al., 2016). These results can contribute to a better understanding of the RABLV pathogenesis of isolates from insectivorous bats, which is useful for plan strategies to control rabies.

Reference: Katz IS, Fuoco NL, Chaves LB, Rodrigues AC, Ribeiro OG, Scheffer KC, Asano KM. Delayed progression of rabies transmitted by a vampire bat. *Arch Virol*. 2016 Sep;161(9):2561-6.

Biography

Iana Suly Santos Katz has completed her PhD (2012) in Immunology at University of Sao Paulo, Brazil. She is the Scientific Researcher at the Pasteur Institute, São Paulo, Brazil. She has experience in the area of Immunology and Virology, particularly she is interested in pathogenesis of the rabies.

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