The emergent importance of rabies in wild animals in Brazil demonstrates the necessity of continuous epidemiological surveillance in these animal species aiming the development of better strategies for the prevention and control of the disease. The use of blood serum samples from several wild species captured in a native Rainforest area in the North coast of Sao Paulo State, Brazil, was an excellent opportunity for the research of rabies virus circulation among wildlife in the region, and also to compare different techniques for antibodies detection. In this study we used the "Rapid Fluorescent Focus Inhibition Test – RFFIT, the Simplified Fluorescent Inhibition Microtest – SFIMT and the Enzime Linked Immunosorbbent Assay – ELISA techniques for the detection of rabies virus-specific antibodies in terrestrial wild mammals. Out of 139 samples, 15 (10.8%) presented positive titers for RFFIT ("gold standard" for detection of rabies virus neutralizing antibodies), 50 (35.9%) positive titers for SFIMT and oz (1.4%) positive titers for ELISA. When comparing RFFIT and SFIMT, 100 (72%) samples presented concordant results when considering positive and negative titers. These results are an evidence of rabies virus circulation between the wild animal species (mainly opossums, capuchin-monkey and coati) in the studied area, even when considering the low concordance between RFFIT and SFIMT. The discordant results between ELISA and RFFIT or ELISA and SFIMT, (99.3%), can be due to the fact that the ELISA kit used was developed for vaccinated foxes, and when considering the Brazilian fauna, which present a great species variety without the use of oral vaccination, the efficacy of the technique could be affected. This result indicates the importance of continuous research regarding a better knowledge of the role presented by wild animals in rabies circulation and transmission in Brazil. Epidemiologic studies in different regions of the Country could provide a valuable information regarding the prevention and control of the disease, and also aiming the standardization and validation of the different diagnostic serologic techniques, especially considering the great and unique variety of animals present in our Country. Acknowledgments: Gaia Consultoria Ambiental, Fundação de Amparo a Pesquisa do Estado de São Paulo (FAPESP) and Coordenacao de Aperfeiçoamento de Pessoal de Nivel Superior (CAPES)

Bats represent approximately one-third of the Brazilian mammal fauna and the Rabies virus has been isolated from 41 of the 167 species of bats present in the country. A Rabies virus independent species-specific variant was detected in 16 insectivorous bats Histiotus velatus in the Southeast of Brazil from 1995 to 2009. The antigenic characterization was made by monoclonal antibodies panel from Centers for Disease Control and Prevention (CDC – Atlanta, USA) and the genetic characterization was performed by sequencing of carboxi-terminal portion of nucleoprotein followed by Maximum Likelihood (ML) genetic analysis with GARLi software. The antigenic characterization made in 12 of these samples showed a unique profile previously described only for the insectivorous bats Histiotus velatus (positive reactivity only with MAb C12 from the utilized panel). The entire 16 samples positive to rabies virus were genetically characterized and they were segregated in the independent monophyletic cluster supported by high bootstrap values. These sequences showed a minimal average intrinsic distance whiting group (1.3%) but they presented low similarity when compared to other lineages circulating in bats and other wild animal lineages from Brazil and worldwide with a range of 8.8% to 25.4%. The antigenic site of the nucleoprotein at residue 377 to 379 (based on PV strain) analysis showed a residue TEV (Thr-Glu-Val) like a some insectivorous bats and different to vampire bats lineage, marmoset lineage and terrestrial cycle related samples. The PV strain shows the amino acids residues TDV (Thr-Asp-Val), D. rotundus isolates show AET (Aila-Glu-Thr) and Marmoset lineage show the amino acids residues TEA (Thr-Glu-Ala). This antigenic variant and genetic lineage has been identified in a large area covering various kilometers and different biomes for at least 14 years between the states of Minas Gerais and Sao Paulo exclusively in this bat species. Surprisingly the system documentation not describe this antigenic variant and genetic lineage found before in other bat species and the Histiotus velatus bat species never ever found before with a different antigenic variant and genetic lineage. The fact of this lineage has been isolated only in this species besides long temporal and geographically distal to each other, associated with phylogenetic results and previously antigenic data suggest strongly that this rabies virus lineage is associated to Histiotus velatus.