SUMMARY OF THESIS


TRANSMISSION AND CHARACTERIZATION OF TRYPANOSOMA CRUZI ISOLATES FROM SYLVATIC MAMMALS CAPTURED IN THE STATE OF SÃO PAULO, BRAZIL

The circulation of Trypanosoma cruzi among sylvatic animals was studied in two regions of São Paulo State. These regions have distinct ecological and epidemiological features based on human transmission in areas with and without the domestic presence of triatomines. The studied areas were: Planalto Ocidental Paulista region, country of Araraquara, an old endemic area and Vale do Ribeira and Litoral regions, countries of Eldorado, Iguape and Ilhabela, considered non-endemic areas.

Of the 198 animals examined at total, 16 isolates of trypanosomes were obtained from 11 mammals: 1 Didelphis albiventeris, 5 D. marsupialis, 2 Proechimys iheringi and 3 Philander opossum.

Nine samples out of 16 isolated by xenoculture, 4 by hemoculture and 3 by culture of liver and spleen puncture. Using these 3 methodologies it was possible to select different populations of T. cruzi from the same host.

Using morpho-biological criteria all 16 isolates were classified as T. cruzi. All of had low virulence to rats and mice.

The amplification of kDNA minicircle, by PCR, using P35/36 primers, also confirmed the identification of the isolates as T. cruzi.

The molecular characterization of isolates was based on the amplification, by PCR, of a mini-exon gene intergenic region segment, that defines two major genetic groups: T. cruzi I and T. cruzi II. Out of 9 Didelphis isolates strains, 7 were classified as T. cruzi I and two as T. cruzi II. These findings confirm a preferential transmission of the group T. cruzi I in marsupials of the genus Didelphis. However, the isolates from Proechimys and Philander, all of them coming from Ilhabela county, did not react with either of the molecular markers.

The variability of the isolates was studied by RAPD. By this method, the patterns of the isolates classified as T. cruzi I were distinct from those T. cruzi II. Great similarity was observed among isolates from the same host species and belonging to the same geographic area. These findings suggest the existence of T. cruzi populations more homogeneous features, circulating in same geographic area.

*This thesis is available at the Library of the Instituto de Medicina Tropical de São Paulo