Rev. Inst. Med. trop. S. Paulo
47(4):202, July-August, 2005

SUMMARY OF THESIS

MEIRELES, Luciana Regina - **Padronização e aplicações da avidez de anticorpos IgG no diagnóstico laboratorial da toxoplasmose animal**. São Paulo, 2005. (Tese de doutoramento - Instituto de Ciências Biomédicas da Universidade de São Paulo).

STANDARDIZATION AND USES OF IgG ANTIBODIES AVIDITY ASSAYS IN THE LABORATORIAL DIAGNOSIS OF ANIMAL TOXOPLASMOSIS

Toxoplasmosis is a highly prevalent zoonosis in which the risk of transmission and elucidation of epidemic outbreaks depends on the determination of the time of the infection. The parasitological tools that detect the presence of *T. gondii* are time-consuming, with low sensibility, and serology is the most useful and powerful tool in the diagnosis of these infections. Antibody avidity has been used for the determination of the time of *T. gondii* infection in human infections and we devised the standardization of those reactions in animals involved in the transmission of the disease such as: cats (oocysts producers); sheep, cattle and rabbits (tissues cysts harboring animals); or dogs (environmental sentinels). The tests show that the IgG avidity as determined by ELISA, by titers ratio (AVT) presented no interference of antigen concentration in plates, reaction absorbance or titer of the serum, being a general fact in the studied species. Simpler avidity measures in a single sample maintain the discrimination only inside the same mammal species. The maturation of the IgG avidity is proportional to the time of infection, allowing the discrimination between acute and chronic infections, not affecting tissue cysts prevalence. The progress of the infection is slower in felines, but the oocysts excretion occurs only in the acute stage, with low avidity antibodies. During immunizations, the maturation of IgG avidity is faster than in the infection, though it has low antibody titers. However, when the animals are challenged, they present stronger response of high avidity antibodies and higher tissue inflammatory response, with low number of tissue cysts. The IgG avidity is directly related to the proliferation of blood lymphocytes induced by parasite antigens, both in infection or immunization. The evolution of the serum IgG avidity in toxoplasmosis is a general process in mammals, and its measure is proportional to the time of the infection and the efficiency of an immunization, indirectly reflecting in the immunological memory of the host to the agent.

Luciana Regina Meireles
Laboratório de Protozoologia
Inst. Med. Tropical de S. Paulo
Av. Enéas de C. Aguiar, 470
05403-000 - São Paulo/SP, Brasil
lrmeirel@usp.br

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