Rev. Inst. Med. trop. S. Paulo
46(4):198, July-August, 2004

SUMMARY OF THESIS*

GOTO, Hiro - **Imunidade inata e imunopatogenia nas leishmanioses experimentais.** São Paulo, 2004. (Tese de Livre Docência - Faculdade de Medicina da Universidade de São Paulo).

INNATE IMMUNITY AND IMMUNOPATHOGENESIS IN EXPERIMENTAL LEISHMANIASIS

The thesis is a compilation of data from studies developed during last fifteen years approximately and others ongoing in the field of innate immunity and immunopathology in visceral leishmaniasis. Unique and front line data were obtained in different projects in the area of non specific elements that led us to following conclusions: a) complement *in vivo* is an important factor for evasion of the parasite of viscerotropic strain in a study that still maintains its originality; b) evaluation of the role of NK cells is complex due to the close connection to the complement system; c) polymorphonuclear neutrophils *in vivo* seemingly do not have decisive role in the evolution of visceral leishmaniasis; d) insulin-like growth factor (IGF)-I is a growth promoting factor for *Leishmania* and it has an important contribution in leishmaniasis, (pioneer studies developed by us), and deserves careful further studies on interaction with macrophages and with components of specific immune response. Immunosuppression was studied in visceral leishmaniasis in hamsters that was *Leishmania* antigen-specific, and apparently was due to overstimulation of lymphocytes rather than annergy or apoptosis. Further, macrophages were apparently protected from apoptosis by *Leishmania* infection favouring the parasite survival, data only known in *in vitro* experiments before our observation. During infection in hamsters, in the latter phases, amastigotes undergo apoptosis, again another original *in vivo* observation. Studying pathology and immunopathogenesis of lesions present in visceral leishmaniasis, contradicting the current view, we suggested an alternative mechanism with participation of immunoglobulins, T lymphocytes and adhesion molecules.

Hiro Goto
hgoto@usp.br

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