

Abstract

Charles University in Prague

Faculty of Pharmacy in Hradec Králové

Department of Biological and Medical Sciences

Student: Barbora Danková

Supervisor of diploma thesis: RNDr. Ivana Němečková, Ph.D.

Specialized Supervisor: Prof. Anabela Cordeiro da Silva

Title of diploma thesis: Optimization of *Leishmania* antigen formulations for the diagnosis of canine leishmaniasis

Leishmaniasis is a vector-borne disease caused by a protozoan parasite of the genus *Leishmania* and is prevalent in 98 countries worldwide.

Reliable and accurate tests are necessary for laboratory diagnosis of *Leishmania* infection because of the wide spectrum of clinical characteristics and symptoms and high rate of asymptomatic infections that may occur. Serological diagnosis of canine leishmaniasis (CanL), especially enzyme-linked immunosorbent assay (ELISA), proved to be a useful tool.

Data obtained from ELISA assay for the detection of antibodies against selected recombinant A, B, C, D, E and F proteins were evaluated in infected canine sera from Portugal and Brazil. This work presents the best formulation of recombinant proteins for serological diagnosis. We found that antigen C showed high level of sensitivity and specificity in recognition of positive and asymptomatic sera infected with CanL.

Key words: canine leishmaniasis, reservoir, diagnosis, ELISA.