

Synthetic peptides selected from *Leishmania infantum* hypothetical proteins applied for the serodiagnosis of canine visceral leishmaniasis

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The present work analyzed the potential of synthetic peptides mapped from hypothetical proteins identified by an immunoproteomic approach for the serodiagnosis of canine visceral leishmaniasis (CVL). From 26 identified leishmanial hypothetical proteins, eight were selected; considering that no homologies could be identified between them and others from *Trypanosoma cruzi* and *T. brucei* species. Their sequences were mapped to identify linear B-cell epitopes, and the peptides were synthesized. In this context, seventeen peptides were tested in ELISA for CVL serodiagnosis. In the results, three peptides (PepLi1, PepLi2 and PepLi7) presented the sensitivity and specificity values higher than 75% and 90%, in order to differentiate PCR(+)/sero(-) and symptomatic animals from *T. cruzi*-infected and healthy animals, respectively. When peptides were combined in different mixed formats, high sensitivity values could be observed in the diagnosis of CVL. In addition, high specificity was reached, even when the sera from *T. cruzi*-infected dogs were included in the analysis. The study's findings suggest that these three top peptides, when used in isolation or in combination, can constitute a potential tool for a more sensible and specific CVL serodiagnosis.

Keywords: Serodiagnosis; visceral leishmaniasis; ELISA; synthetic peptides; sensitivity; specificity.

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