IDENTIFICATION OF NOVEL ANTIGENS SUITABLE FOR SERODIAGNOSIS OF LEPTOSPIROSIS

Neves FO[1,2], Abreu PAE[1], Vasconcellos SA.[3], de Morais ZM[3], Romero EC[4] and Nascimento ALTO[1,2]

[1] Centro de Biotecnologia, Instituto Butantan, SP, [2]Interunidades em Biotecnologia, Instituto de Ciências Biomédicas, USP, SP, [3]Faculdade de Medicina Veterinária e Zootecnia USP, SP, [4]Divisão de Biologia Médica, Instituto Adolfo Lutz, SP, Brazil.

Leptospirosis is an important re-emerging infectious disease that affects populations worldwide. Caused by pathogenic spirochaetes of the genus *Leptospira*, the disease presents greater incidence in tropical and subtropical regions. Four leptospiral genes were cloned and their correspondent proteins, Lsa24, Lp29, Lp30 and Lp49 expressed in *E. coli*. Recombinant proteins expressed with 6XHIS tag at N-terminal were purified by metal affinity chromatography. Results obtained using Western blotting and ELISA methodologies showed that Lp30, Lp49 and Lp29 were recognized by antibodies present in human serum from a patient in the convalescent phase of the disease; two of them, Lp49 and Lp29, were also reactive with antibodies present in the initial phase, while Lsa24 showed no reactivity in both phases of disease. At present, diagnostic of leptospirosis is performed by MAT (microscopic agglutination test) which presents low sensitivity to detect the disease in its early phase. Although preliminary, our results suggest that proteins Lp49 and Lp29 are good candidates for the diagnostic of the disease in its early stage. Further evaluation of these proteins with larger sera samples will indicate their appropriateness for a diagnostic kit development.

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