

**A NOVEL PROTEIN OF *LEPTOSPIRA INTERROGANS* THAT REACTED WITH  
SERUM OF LEPTOSPIROSIS SPECIMEN**

Atzingen MV<sup>1,2</sup>, Abreu PAE<sup>1</sup>, Barbosa AS<sup>1</sup>, Romero EC<sup>3</sup>, Morais ZM<sup>4</sup>,  
Vasconcellos SA<sup>4</sup> and Nascimento ALTO<sup>1,2</sup>

<sup>1</sup>Centro de Biotecnologia, Instituto Butantan, São Paulo, Brazil; <sup>2</sup>Doutorado Interunidades em Biotecnologia, Instituto de Ciências Biomédicas, USP, São Paulo, Brazil; <sup>3</sup>Instituto Adolfo Lutz, São Paulo, Brazil; <sup>4</sup>Faculdade de Medicina Veterinária e Zootecnia de São Paulo, Brazil. e-mail:

m.atzingen@butantan.gov.br.

The whole-genome sequences of *L. interrogans* serovar Copenhageni (Nascimento et al., 2004) and the bioinformatics tools allow us to look for novel antigens suitable for improved vaccines and diagnostic reagents against leptospirosis. Here we focus on three genes that encode for probable lipoproteins, LIC10368, LIC10494 and LIC11207, predicted to be exported to membrane. The genes were amplified by PCR from six predominant pathogenic serovars in Brazil. These genes were conserved among some pathogenic leptospires but absent in the non-pathogenic *L. biflexa*, which may suggest their involvement in virulence. The chosen genes were cloned into pDEST17<sup>TM</sup>, an *E. coli* vector, and the recombinant proteins were expressed in fusion with 6xHis-tag at N-terminus that allow protein purification by metal-affinity chromatography. Recombinant proteins were evaluated by western blotting using serum from human patients diagnosed with leptospirosis. This serum showed reactivity especially with the recombinant protein encoded by LIC10494, suggesting that it might be useful for diagnosis of the disease and/or a potential vaccine candidate. Evaluation of the immunoprotection of this antigen in animal model is currently underway. Supported by: FAPESP, CNPq and Fundação Butantan