

## COMPARISON OF *LEPTOSPIRA INTERROGANS* PROTEIN EXPRESSION PROFILE DURING ANIMAL INFECTION AND *IN VITRO* CULTIVATION BY PROTEOMICS

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*Leptospira interrogans* is the causal agent of leptospirosis, a worldwide zoonosis of human and veterinary concern. It is known that: (i) pathogenic *Leptospira* species adapt to different environments during disease transmission and infection and (ii) protein constituents of *Leptospira* recovered from infected animal tissue differ from that of *Leptospira in vitro* cultivated. Proteins that are expressed during animal infection might be involved in pathogenesis and therefore, are potential vaccine candidates against leptospirosis. Based on these facts, we set out to analyze the differential expression between culture-attenuated and hamster-derived strains of *L. interrogans* serovar Pomona by proteomics. Kidney and liver-derived leptospires were obtained from infected hamster while attenuated leptospires were obtained from *in vitro* cultivation. Total protein extracts were separated by two-dimensional gel electrophoresis; the spots were processed and the resulting peptides analyzed by MALDI-TOF mass spectrometry. We identified several proteins (191 spots) comprising 66 different proteins belonging to distinct functional categories and some of them only present in infected tissues. In addition, we could confirm the expression of several novel hypothetical proteins. Further analyses are being performed in order to identify more proteins and confirm the differentially expressed ones. Supported by FAPESP, CNPq, Fundação Butantan.