similarly. In challenge assays, the majority of hamsters immunized with the flagellins and LigAC survived the lethal challenge. However, they were not protected against kidney colonization. Control animals vaccinated with PBS died with symptoms of leptospirosis and hamsters immunized with commercial vaccine survived after challenge. ELISA demonstrated that with exception of FlaB5, all flagellins were recognized by sera from infected hamsters, sera from hamsters immunized with the commercial vaccine and with recombinant flagellin pool. **Conclusions:** These results indicate that in spite of leptospiral flagellins to be immunogenic and able to activate the TLR-5, none succeeded in preventing renal colonization. **CEUA:** 2151/2011. **Funding:** Fapesp.

15. EVALUATION OF PRESENCE OF A PUTATIVE MULTIDRUG EFFLUX PUMP GENE (*NORM*) IN *LEPTOSPIRA* SPP. STRAINS FROM BOVINE ORIGIN

Avaliação da presença de um gene de multidrogas putativo de bomba de efluxo (norM) em estirpes de *Leptospira* spp. de origem bovina

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Introduction: Leptospirosis in livestock is associated with large economic losses. In order to minimize these losses, different control strategies have been applied, including antibiotic therapy. Besides, failure of antibiotic therapy may be related to reduced susceptibility and the presence of genes associated with antimicrobial resistance. **Objective:** To evaluate the presence of a putative multidrug efflux pump gene in *Leptospira* spp. strains from bovine origin with susceptibility profile previously described. **Methods:** Twenty-five strains of *Leptospira* spp. were studied. DNA was obtained using Wizard SV Genomic DNA Purification System® (Promega) and PCR was performed with GoTaq® DNA Polymerase (Promega) for putative *nor*M gene encoding a multidrug efflux. The PCR products of partial region of the gene were purified using Wizard SV Gel and PCR Clean-up System (Promega) and sequenced using Big Dye terminator v3.1 kit (Applied Biosystems) in the ABI 3730XL Genetic Analyzer (Life Technologies, Carlsbad, CA, USA) on the RPT01A DNA sequencing platform (Laboratório de Genômica Funcional e Bioinformática, IOC/FIOCRUZ) to confirm the studied target. **Results:** Twenty-four strains showed a positive result for the presence of the target gene. One strain that had a negative result belongs to a saprophytic specie (*L. meyeri*). Analysis of the nucleotide sequences demonstrated that the amplified region belongs to the gene studied. **Conclusion:** The presence of a putative multidrug efflux pump gene present in other microorganisms may also influence antimicrobial susceptibility in *Leptospira* spp. More refined studies focusing the molecular structure and function are necessary to elucidate this putative multidrug efflux pump. **CEUA:** Not applicable. **Funding:** Capes (Finance code 001), Faperj.

16. EXPRESSÃO DIFERENCIAL DA PROTEÍNA DE MEMBRANA EXTERNA OMPL36 EM BIOFILME DE *LEPTOSPIRA*

Differential expression of external membrane protein ompl36 in *Leptospira* biofilm

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Introdução: A leptospirose é uma zoonose negligenciada causada por bactérias patogênicas do gênero *Leptospira*. A doença afeta mais de um milhão de pessoas por ano em todo o mundo. As leptospiras formam biofilmes caracterizados por comunidades microbianas envoltas por uma matriz de exopolimérica. As proteínas de membrana externa (OMPs) bacterianas podem participar da adesão celular em biofilmes. **Objetivo:** Avaliar a expressão diferencial da proteína de membrana externa OmpL36 em biofilmes de *Leptospira biflexa*. **Métodos:** *Leptospira biflexa* serovar Patoc (saprófita) foi cultivada em meio EMJH a 29ºC por 48 h (tempo correspondente à formação do biofilme maduro). Os biofilmes foram cultivados sem agitação e células planctônicas sob agitação. Após a lise celular, foi realizado o *western blot* com os extratos proteicos totais usando anticorpos específicos anti-OmpL36,