

patients had serological evidence of *Leptospira* infection, indicating that leptospirosis may be misdiagnosed as dengue. The predominance of Icterohaemorrhagiae serogroup suggests that the Norway rat (*Rattus norvegicus*) was the probable animal reservoir. However, further investigations are needed to confirm this hypothesis. **CEP:** Comitê de Ética em Pesquisa of the Faculdade de Medicina de Botucatu, registro nº 5411. **Funding:** Fapesp.

31. LEPTOSPIROSIS: SEROPREVALENCIA EN POBLACIONES DE EQUINOS Y REFERENTES HUMANOS EN URUGUAY

Leptospirose: soroprevalência em equinos e em referentes humanos no Uruguai

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Introducción: La leptospirosis equina se cree poco común por ser habitualmente subclínica, pero estudios recientes sugieren que es una infección extendida geográficamente, con diversos perfiles de incidencia y serovares infectantes. Por su elevado nivel poblacional y su empleo en múltiples tareas, corresponde considerar a los equinos como potencial fuente de infección humana. En Uruguay, hasta el momento, no hay registros de leptospirosis en equinos. Esta enfermedad se asocia principalmente con el reservorio bovino, pero determinados equinos comparten espacios con bovinos y con otros animales de producción en establecimientos ganaderos, y en establecimientos de cría existen abundantes roedores atraídos por el alimento y forraje. **Objetivos:** Determinar la prevalencia de infección en poblaciones nacionales de equinos, y su frecuencia en los trabajadores referentes. Determinar aquellos serogrupos más frecuentemente reactivos por MAT. **Metodología:** De abril de 2017 a agosto de 2018 se obtuvieron 258 sueros equinos de 28 establecimientos (ganaderos 79, haras 52, studs 51, Ejército 76). Se obtuvieron también 84 sueros de

trabajadores. En los equinos, se realizó MAT con este panel de serovares: Castellonis, Canicola, Icterohaemorrhagiae, Grippotyphosa, Pomona, Wolffii, Hardjo, Tarassovi, Hardjobovis. En los trabajadores, se utilizó un panel más amplio. En equinos, se consideró positivo un título ≥ 100 ; en trabajadores ≥ 400 o seroconversión. Se aplicaron cuestionarios recogiendo información sobre equinos, trabajadores, condiciones de trabajo, ambientales y del entorno. **Resultados:** Se observó una seroprevalencia total de un 37,7%: Icterohaemorrhagiae (26,8%), Sejroe (15,2%), Ballum (5,4%) y otros serogrupos (4,3%). Los mayores valores se observaron en equinos del ejército (47,8%), pero no hubo diferencias significativas en seroprevalencia por tipo de establecimiento. Sólo se observó reactividad en dos trabajadores de establecimientos ganaderos, con títulos ≤ 200 , sin sintomatología asociada. **Conclusión:** Se prevé avanzar en diagnósticos de enfermedad, en aislamiento de cepas infectantes, e inclusión en los paneles MAT de cepas circulantes en Uruguay para mejorar su sensibilidad. **Financiamiento:** Programa VUSP 2017, CSIC, UdelaR.

32. LOCALIZATION OF LEPTOSPIRA INTERROGANS SURFACE PROTEINS BY IMMUNOFLUORESCENCE

Localização de proteínas superficiais de *Leptospira interrogans* por imunofluorescência

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Introduction: Leptospirosis is a neglected zoonosis with a worldwide distribution caused by pathogenic spirochetes belonging to the *Leptospira* genus. Vaccines are the most efficient prophylactic measure for infectious diseases. However, the current vaccine against leptospirosis has numerous disadvantages, such as short-term protection and serovar-related specificity, and, in Brazil, it is only available for animals. Thus, there is a need to develop a new vaccine that can overcome these problems and that can be used in humans. Hence, the discovery of new proteins that are exposed on the bacterial surface, which are promising antigens for a new vaccine, could overcome the shortcomings of bacterin vaccines. **Objective:** The objective was to adapt an immunofluorescence

technique for determining the cellular localization of proteins to *Leptospira* spp. **Methods:** Four recombinant proteins, previously predicted by reverse and structural vaccinology as surface proteins, as well as three flagellar proteins, were produced. From these, it was produced polyclonal antibodies, which were used in the localization of leptospiral proteins. Leptospire were subjected to immunofluorescence analysis with methanol, immunofluorescence in agarose beads and surface immunofluorescence. **Results:** The immunofluorescence in agarose beads confirmed the localization of LigB, LipL32 and LcpA as surface exposed proteins; and the surface immunofluorescence erroneously identified the location of FcpA, a bacterial flagellar component, as a surface protein. **Conclusion:** The approach based on the encapsulation of leptospire in agarose microdroplets, although needing further improvement, provided promising results for determining the cellular localization of proteins in *L. interrogans*. **CEEA/UFPEL:** n° 4336-2015. **Funding:** Capes, CNPq.

33. MARSUPIALS AS MAINTENANCE HOSTS OF PATHOGENIC LEPTOSPIRES IN PARANAÍBA RIVER'S VALLEY, GOIÁS AND MINAS GERAIS STATES, BRAZIL

Marsupiais como hospedeiros de manutenção de leptospiros patogênicas no Vale do Rio Paranaíba, estados de Goiás e Minas Gerais, Brasil

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Introduction: Small non-flying mammals hold the largest number of species within the Mammalia class in Brazil. Mainly rodents and marsupials, important

reservoirs hosts of pathogenic serovars of leptospire, represent this group of animals. **Objective:** The aim of this study was to identify the frequency of wild marsupial carriers of pathogenic leptospiras in three different areas of the Paranaíba river's valley, Brazil.

Methods: Two campaigns were carried out to capture marsupials, one at the end of the rainy season and another at the end of the drought. Eight traps of the Tomahawk, and 116 traps of the Sherman types were used, baited with banana slices covered with peanut flour. PCR assays were performed to detect the lipL32 gene in renal tissue of marsupials captured in three distinct areas along the Paranaíba river's valley: Low Paranaíba (Ipiaçu/MG, 18.7770833S; 49.8978889W); Middle Paranaíba (Goianira/GO, 18,1630556S; 48,1354722W); and High Paranaíba (Guimarânia/MG, 18.8101944S, 46.6755278W). It was applied the non-parametric chi-square association test to verify the significance of the association of the factors studied. The procedures performed were authorized by CEUA-UFU under protocol number 151/16. **Results:** Thirty-nine specimens belonging to the Marsupialia order were captured, and of these, 14 (35.89%) presented the lipL32 gene in their renal tissues at the PCR. The Middle Paranaíba area had a higher frequency of renal carriers (9/14) than Alto Paranaíba (3/17) and Lower Paranaíba (2/8), with p = 0.0086. **Conclusion:** Marsupials presented as pathogenic leptospire maintainers in the Paranaíba river's valley. The Middle Paranaíba's area was characterized as the one of greater challenge to the marsupials by pathogenic leptospire. **CEUA:** 151/16 **Funding:** Fapemig, mostly in own resources.

34. MOLECULAR COMPARISON OF FOUR VIRULENCE-RELATED GENES IN LEPTOSPIRAL STRAINS OF ICTEROHAEMORRHAGIAE SEROGROUP

Comparação molecular de quatro genes relacionados à virulência nas estirpes leptospirais do sorogrupo Icterohaemorrhagiae

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