

worldwide distribution. In livestock, *Leptospira interrogans* serogroup Sejroe serovar Hardjo remain the major cause of reproductive diseases. The publication of whole genome sequence of the first Brazilian clinical isolate classified as *Leptospira interrogans* serogroup Sejroe serovar Hardjo str. Norma enable now to evaluate genomic features and evolution of this serovar and serogroup. **Objective:** To compare the Brazilian isolate within reference strains classified in *L. interrogans* and *L. borgpetersenii* species and isolated in distinct geographic regions in world. **Methods:** It was selected a total of 10 *Leptospira* spp. strains including reference genomes from distinct serovars classified in *L. interrogans* and *L. borgpetersenii* available in public databases (NCBI). For synteny analysis it was selected reference leptospira strains and historically correlated with whole genome sequences available. It was applied MAUVE and Patric softwares associated with Blast P, Blast N, Clusta W associated with Interpro and Gene ontology analysis. **Results:** The obtained results confirmed the occurrence of potential genomic recombination in *L. interrogans* serovar Hardjo str. Norma encompass 40Kb located upstream of rfb locus. Most of the genes in this region are associated to sugar enzymes associated with carbohydrates and lipids biosynthesis and metabolism. In comparative analysis, the present results also identified identical genomic structure among *L. interrogans* and *L. borgpetersenii* serovars Hardjo, including high amino acid identities and sequence coverages. Furthermore, identification of IS₃-family protein in *L. interrogans* serovar Hardjo, str. Norma associated with rfb locus position suggests a mechanism of recombination associated with the acquisition of this new region. **Conclusion:** The results suggest a new genetic recombination site in *L. interrogans* serovar Hardjo str. Norma, which may contribute to depict taxonomy classification of *Leptospira* spp. especially to serogroup and serovar classification. **Funding:** CNPq, Fapemig.

19. HIGH FREQUENCY OF GENITAL CARRIERS OF LEPTOSPIRA SP. IN SHEEP SLAUGHTERED IN THE SEMI-ARID REGION OF NORTHEASTERN BRAZIL

Alta frequência de portadores genitais de *Leptospira* sp. em ovelhas abatidas na região semiárida do nordeste brasileiro

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Introduction: Although some leptospirosis investigations performed in sheep have indicated their genital tract colonization, further studies are necessary to clarify the whole role of genital carriers in this species.

Objective: evaluate the colonization of pathogenic leptospire in the genital and urinary tract of slaughtered sheep. **Methods:** Fifty-seven adult, female woolless sheep destined for slaughter were used. Kidney (n = 57), bladder (n = 57), ovary (n = 34), uterine tube (n = 44), and uterus (n = 33) samples were collected for molecular detection of *Leptospira* sp. DNA, and blood samples (n = 57) for serological testing. The molecular tests were performed by polymerase chain reaction (PCR), and the serological ones by microscopic agglutination test (MAT). Samples with amplifying DNA were subjected to genetic sequencing. **Results:** Leptospiral DNA was found in the tissues of 44 (77.2%) sheep, whereas only nine animals were positive on both PCR and MAT, there was slight agreement between PCR and MAT techniques (k = 0.0268; p = 0.684). In 61 (54.9%) genital tract and in five (4.4%) urinary tract samples, the leptospiral DNA was detected, with significant difference (p < 0.001). The genes of one sample from the uterine tube and another from the bladder were sequenced and demonstrated 99% similarity

to *Leptospira interrogans*. Anti-*Leptospira* antibodies were detected in 11 (19,3%) of the tested animals. **Conclusion:** The results reinforce the importance of the genital tract as an extra-renal site of colonization, suggesting the possibility of venereal transmission in sheep. **CEUA:** 58/2012. **Funding:** CNPq, Capes.

20. HIGH FREQUENCY OF SEROREACTIVITY AGAINST SEROGROUP TARASSOVI IN THE TRIÂNGULO MINEIRO REGION, MINAS GERAIS STATE, BRAZIL

Alta frequência de sororreatividade contra o sorogruppo Tarassovi na região do Triângulo Mineiro, estado de Minas Gerais, Brasil

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Introduction: Leptospirosis is an important zoonosis that affects wild and domestic animals, mainly cattle. The serogroup Sejroe is the most frequent in cattle and is associated with reproductive alterations, causing economic losses to milk and meat production. However, the occurrence of serogroup Tarassovi reactivity in cattle is not enough investigated. Until now reactivity to this serovar was mainly found in wild and domesticated swine. Thus, due to the possibility of close contact between cattle and wild animal. species, serological investigations must be performed to clarify this assumption. **Objective:** To evaluate the frequency of seroreactivity in cattle against serogroup Tarassovi in the Triângulo Mineiro region of Minas Gerais State, Brazil. **Methods:** A total of 398 samples of bovine blood serum was evaluated by Microscopic Soarogglutination (MAT) technique using the screening (t_{1:100} dilution) and titration (titres of 200 to 3,200) procedures against the serogroups Australis, Autumnalis, Batavie, Canicola, Ballum, Icterohaemorrhagiae, Cynopteri, Djasiman, Sejroe, Grippotyphosa, Hebdomadis, Javanica, Panama, Pomona, Shermani e Tarassovi. **Results:** Forty eight percent of evaluated samples 191/398 (48.0%) were seroreactive to serogroup Tarassovi, and 116/398(29.1%) of these animals presented titres between 200 and 3,200.

But, serogroup Sejroe remained as the most frequent (78.1% – 311/398). These results could be crossed reactions between Sejroe and Tarassovi serogroups, that could be clarified by the comparison of the titers presented by both serovars. **Conclusion:** Serological reactions against Sejroe and Tarassovi serogroup were present in cattle herds of the Triângulo Mineiro region, state of Minas Gerais, Brazil, of leptospirosis in animal species. **CEUA:** 018/16. **Funding:** Fundação de Amparo à Pesquisa de Minas Gerias (Fapemig).

21. HIGH NUMBER OF LEPTOSPIRAL CARRIERS AMONG ASYMPTOMATIC DOGS IN THE MUNICIPALITY OF SÃO GONÇALO, METROPOLITAN REGION OF RIO DE JANEIRO, BRAZIL

Alto número de portadores leptospirais entre cães assintomáticos no município de São Gonçalo, região metropolitana do Rio de Janeiro, Brasil

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Introduction: The dog's role as leptospire carriers has been increasingly studied, because there is strong evidence that asymptomatic dogs can be chronic carriers and can act as a source of infection for human beings, causing a public health problem. **Objective:** To evaluate the role of asymptomatic dogs as *Leptospira carriers* in an endemic area of Brazil. **Methods:** It was studied 131 male dogs without apparent symptoms of leptospirosis or any other infectious diseases. The selected group was composed only with male dogs, because of the practicability for the catheter urine collection. The animals were carefully selected after clinical care at SOS Focinhos Veterinary Hospital, located in the municipality of São Gonçalo, metropolitan region of Rio de Janeiro, Brazil. The dogs had not been vaccinated against leptospirosis in the last 12 months. Blood and urine collected from them were submitted to the following tests a) serum, ALT (alanine aminotransferase), urea, creatinina and a CBC (complete blood count) and MATwith a panel including eight serovars representing seven serogroups; b) urine polymerase chain reactions (PCR). **Results:** A total of