

INVESTIGATION ON THE FREQUENCY *Leptospira* spp. IN WILD BOARS IN RIO GRANDE DO SUL STATE

Roseli Kuhn¹, Márcia Regina Loiko², Thais Dalla Rosa³, Rogério Oliveira Rodrigues⁴, Angélica Cavalheiro Bertagnolli⁴ Fabiana Quoos Mayer⁴ (orient.).

¹Bolsista ITI/CNPq, Fepagro Saúde Animal – Eldorado do Sul, graduanda em Engenharia de Bioprocessos e Biotecnologia - Universidade Estadual do Rio Grande do Sul (UERGS) (Rua Inconfidentes 395 - Primavera - 93340-140 - Novo Hamburgo - RS); ²Aluna de doutorado, Programa de Pós-graduação em Ciências Veterinárias - Universidade Federal do Rio Grande do Sul (UFRGS) (Rua Paulo Gama 110 - Farroupilha - 91501-970 - Porto Alegre - RS,; ³Técnica em Pesquisa, Fepagro Saúde Animal; ⁴Pesquisador, Instituto de Pesquisas Veterinárias Desidério Finamor – Fundação Estadual de Pesquisa Agropecuária (Fepagro Saúde Animal) (Estrada do Conde - s/n – Sans Souci - 92990-000 - Eldorado do Sul - RS)

Abstract:

Leptospirosis is a zoonotic disease caused by *Leptospira* spp. pathogenic serovars, which infects kidney tubules of contaminated animals. Bacterial transmission in mammals occurs mainly by indirect contact with water or soil contaminated with urine of infected animals. There is a wide range of host animals that are susceptible to disease or can serve as bacteria reservoirs, which impairs disease control and epidemiological understanding. There are reports that wild boars (*Sus scrofa*) have a role in the epidemiological cycle of leptospirosis, acting as bacteria reservoirs; however, this issue is still poorly investigated in Brazil. The objective of this study was to determine the frequency and diversity of *Leptospira* spp. serogroups in wild boars slaughtered with IBAMA authorization in Barba Negra environmental reserve, in the municipality of Barra do Ribeiro, Brazil. For this, blood and kidneys were collected from these animals. Blood samples were centrifuged to obtain serum and subjected to microscopic agglutination technique with 32 different serovars of *Leptospira* spp.. Also, kidney polymerase chain reaction was performed (PCR). To date, 63 samples were evaluated, of which 55 (88.7%) were positive for at least one serogroup of *Leptospira* spp.. There was reactivity with 29 serovars, with 30.16% of the samples reactive to Celledoni and Tarassovi serovars and 57.14% to Norma serovar. The first serovars are frequently found in rodents and pigs, and the serovar Norma is described as a cattle infecting bacterium. In molecular analysis, of 27 evaluated kidneys , 4 (14.8%) tested positive for pathogenic *Leptospira* spp.. The results of this study show a high frequency of leptospirosis in boars in comparison with European studies, which show a prevalence of about 3%. The data indicate that wild boars in the studied area are exposed to *Leptospira* spp. and that these animals may have an epidemiological role in leptospirosis, since there are indication of their contact with domestic cattle and pigs. The findings raise questions relevant to both, domestic and wild animals health.

Key Words: Leptospirosis, boars (*Sus Scrofa*), *Leptospira* spp.

Financial Support: FINEP/SANIMARS, CNPq, FAPERGS