

## **Title: WILD BOARS (*Sus scrofa*) AS POTENTIAL *Mycobacterium bovis* RESERVOIRS**

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### **Abstract:**

Bovine tuberculosis is an infectious disease caused by *Mycobacterium bovis* which affects cattle, domestic animals and some species of wild animals. In Brazil and Rio Grande do Sul, little is known about the frequency of tuberculosis on wild animal populations, and the possible role of these animals in the disease maintenance in cattle herds, which is a limitation of tuberculosis control and eradication programs. This study aims to evaluate the role of free-living wild boars as *M. bovis* reservoirs in Rio Grande do Sul state. For this, animals hunted with IBAMA authorization at environmental reserve Barba Negra were monitored. Lymph nodes, lung, liver, spleen, kidney and blood samples were collected, as well as variables such as sex, weight, age, geographical location and season of collection. The samples were analyzed by histopathology and polymerase chain reaction (PCR) specific to *M. bovis*. The samples with positive results in these examinations will be submitted to bacterial isolation. So far, 71 animals were hunted, and preliminary results show that 13 wild boars, from the 60 evaluated in histopathology, had microscopical lesions that are compatible with tuberculosis (21.66%). In PCR, 21/71 (29.57%) tested positive for *M. bovis*. The frequency of females was 41.26% and males 58.73%, being classified as weaners, juveniles and adults 58.73%, 14.28% and 26.98% of the animals, respectively. The average weight of the animals was 53.32 kg ± 26.45. The animals were hunted in spring (38.57%), summer (24.28%), autumn (22.85%) and winter (14.28%). The positive results in histopathology or PCR had no correlation to the sex of the animals ( $P>0.05$ ); however, the weaners had higher frequency of positive results in comparison with juveniles (OR=5.4;  $P<0.05$ ). The data from this study may indicate that wild boars could play a role as tuberculosis reservoirs; however, genotyping of wild boar and cattle isolates must be performed. The results may serve as background to improve the existing control programs, as well as to further elucidation on bacterial movement among different animal populations in Rio Grande do Sul state.

**Key-words:** Bovine tuberculosis, histopathology, polymerase chain reaction.

**Patronage:** FAPERGS, CNPq