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MOLECULAR DETECTION OF *ANAPLASMA PHAGOCYTOPHILUM* IN WILD BOAR (*SUS SCROFA*) FROM SIBIU COUNTY - PRELIMINARY RESULTS

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Anaplasma spp. are tick-borne Gram-negative bacteria, with a distinctive cell wall structure, which have the capacity to infect both humans and animals. The obligate intracellular parasite *Anaplasma* spp. is the causative agent of tick-borne fever in ruminants, equine and canine granulocytic anaplasmosis, and granulocytic anaplasmosis in humans. The aim of this study was to investigate the occurrence rate of *Anaplasma* spp. in hunted wild boars from Sibiu County. A total of 64 blood samples were collected and subject to polymerase chain reaction (PCR) analysis. The DNA was extracted using the QIAGEN DNeasy Blood & Tissue Kit, and then amplified for *Anaplasma* spp., using the TaqMan MGB Ana_spp_16S_P assay. Out of 64 examined samples, five were positive for *Anaplasma* spp., indicating a prevalence rate of 7.81%. The findings of this study indicate that a comprehensive understanding of the reservoir host's role in the examined region requires an expanded evaluation of *Anaplasma* spp. prevalence within wild boar populations.

• Introduction

Swine anaplasmosis is an infectious disease caused by bacteria of the genus *Anaplasma*. The most common species involved is *Anaplasma phagocytophilum*. This bacteria is transmitted by ticks that feed on the blood of infected animals such as pigs. Once the tick has sucked infected blood, it can pass the bacteria to another healthy animal during another feeding. Symptoms of anaplasmosis in pigs include fever, loss of appetite, lethargy, eye inflammation and weight loss. In severe cases, the disease can lead to death.

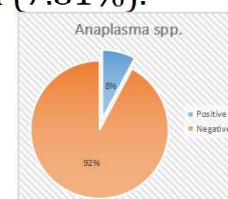
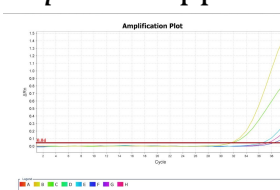
• Material and method

Blood samples from wild boars was stored in EDTA vacuettes at -18 degrees Celsius until DNA extraction. The DNA was extracted using the QIAGEN DNeasy Blood & Tissue Kit, and then amplified for *Anaplasma* spp., Real-time RT-PCR was performed on RNA samples from naturally and experimentally infected and uninfected pigs with gene-specific primers using the TaqMan MGB Ana_spp_16S_P assay kit according to the manufacturer's recommendation.



• Results and discussions

Five samples out of 64 were positive for *Anaplasma* spp. infection (7.81%).



In 870 blood samples from Transylvania, Kiss et al. found that the prevalence rate of *A. phagocytophilum* infection was 4.48% between 2007 and 2012.

• Conclusions

This study shows that there is a need for a more detailed look at tick-borne diseases in wild boar and their spread in the wildlife, as this study is a preliminary study of a complex area under consideration.