

Molecular detection of Anaplasmataceae in blood samples from dogs

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Canine vector-borne diseases (CVBDs) have increasingly become a focus of interest in recent years. Ticks are epidemiologically important vectors of numerous bacterial and intracellular protozoan parasites.

The aim of this study was to evaluate the frequency of co-infections of *Babesia* spp. and Anaplasmataceae (*Anaplasma phagocytophilum* and *Candidatus* Neoehrlichia mikurensis) hemopathogens in dogs using molecular techniques.

Babesia-positive blood samples, identified by microscopy, were obtained from a veterinary diagnostic laboratory. Molecular confirmation of *Babesia* and the identification of co-infections in these blood samples were performed by screening all DNA samples using PCR assay. The choice of genetic markers (18S rRNA, 16S rRNA, gro*EL*) and primers was based on literature data and our own preliminary investigations.

The presence of *Babesi*a *canis* DNA was confirmed in all 107 blood samples. As DNA of *A. phagocytophilum* and *Candidatus* Neoehrlichia mikurensis (CNM) was also detected, co-infections of *B. canis* with representatives of the Anaplasmataceae were also recorded.