Presentation Abstract

Presentation: 048P - Comparison of a novel point-of-care diagnostic, PCRun, with real time Leptospira PCR for detection of Leptospira antigen in canine samples

Location: Grand Ballroom Salon III, Poster Board: 48P

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Abstract: Infection with *Leptospira* is a worldwide zoonotic problem, with reservoirs of infection including both domestic and wild animals. Transmission of the organism is due to contact with infected urine and contaminated environments. Many of the clinical signs associated with Leptospirosis are non-specific, emphasizing the need for accurate and appropriate diagnostic testing to enable proper treatment and the prevention of infection of susceptible animals and people. There are currently several different types of tests to detect *Leptospira*, each with limitations. The limitations include low sensitivity and/or specificity, dependence on amount of *Leptospira*, slow growth, test cross-reactivity, appropriate collection time of samples, trained staff to perform and interpret tests, test costs, availability, etc. The current study evaluated a new technology for early *Leptospira* antigen detection, the PCRun Canine Pathogenic *Leptospira* Molecular Detection Kit (PCRun). This test was compared to *Leptospira* real time PCR as performed by the Wisconsin Veterinary Diagnostic Laboratory (WVDL). This new technology (PCRun), provided by Biogal, was designed to be a point-of-care diagnostic, eliminating the need for complex equipment and highly trained staff and shortening result turnaround time while maintaining high levels of test sensitivity and specificity. The canine samples used in testing were prepared laboratory aliquots that were designed to mimic situations in the field (e.g. different sample types and concentrations, various anticoagulants, multiple *Leptospira* serovars, etc.). This study showed a high level of sensitivity and specificity and excellent correlations between the test methods for most blood and urine samples. The PCRun had the advantage of not being negatively affected by the presence of heparin as an anticoagulant. Neither the real time PCR nor the PCRun detected non-pathogenic *Leptospira*.