

## **Title : Seroprevalence of *Leptospira* in dogs in Grenada, West Indies**

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### **Abstract:**

*Leptospira* bacteria infect numerous species of animals and cause serious disease in both dogs and humans. Leptospirosis is caused by many different serovars and canine vaccine protection is serovar-specific. The objective of this study was to determine the seroprevalence and serovars of *Leptospira* in dogs on the island of Grenada, West Indies. Serum samples from 105 dogs and were evaluated by the microscopic agglutination test (MAT) and by an Enzyme-Linked Immunosorbent Assay (ELISA) method adapted for canine Immunoglobulin M (IgM). Sera from 20 dogs were positive by MAT (19.1%) and 64 were positive by ELISA (61.0%). All MAT-positive sera were also ELISA-positive. Percent seropositive did not differ significantly by age, sex or health score of dog or among the 6 parishes of Grenada. Fourteen of the MAT-positive samples had antibodies to multiple *Leptospira* serovars. All but one of the identified serovars were from the Icterohaemorrhagiae serogroup and included in decreasing order of frequency *copenhagen*, *mankarso* and *icterohaemorrhagiae* RGA. One dog was identified with antibodies to serogroup Pyrogenes serovar *pyrogenes*. Identification of the *Leptospira* serovars responsible for canine exposure in Grenada will facilitate appropriate recommendations for canine vaccination on the island.

**Key Words:** Leptospirosis, *Leptospira*, canine, seroprevalence, Grenada.