

## Seroprevalence of *Leptospira* in *Rattus norvegicus* in Grenada, West Indies

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**Objective:** To determine the seroprevalence of *Leptospira* and the serovars responsible for *Leptospira* exposure in rats in Grenada in order to assess rats as a reservoir host for human infection.

**Design and Methods:** *Rattus norvegicus* rodents were collected representing each of the six parishes on the island of Grenada. Serum from 237 rats was tested by the microscopic agglutination test (MAT) and an Immunoglobulin G (IgG) Enzyme-Linked Immunosorbent Assay (ELISA). Seroprevalence rates among parishes were compared using a chi-squared test of homogeneity.

**Results:** Of the 237 serum samples tested, 64 were positive by either MAT or ELISA for an overall seroprevalence of 27%. The ELISA identified 24.5 % (57/233) of the rats positive at a titer of  $\geq 1:160$ . The MAT identified 7.1% (13/183) of the rats positive at a titer of  $\geq 1:100$ . Six of the 13 MAT positive samples had antibodies to multiple serovars. The serovars identified by the MAT with the greatest frequency were from the Icterohaemorrhagiae serogroup. Two rats had antibodies for serogroup Cynopteri, the first time this serogroup has been identified on Grenada.

**Conclusions:** Our results for *Leptospira* exposure in rats in Grenada support *R. norvegicus* as an important reservoir host for *Leptospira*, particularly those from the Icterohaemorrhagiae serogroup. Because this serogroup is the primary serogroup responsible for documented human exposure in Grenada, exposed rats represent a public health threat.