

SWINE HEALTH

Title: Susceptibility Of Selected Non-Swine Species To Infection With PRRS Virus - **NPB #97-1974**

Investigator: Wills, RW

Institution: Department of Veterinary and Biomedical Sciences, University of Nebraska-Lincoln

Co-Investigators: Osorio, FA; Doster, AR

Date Received: 10/11/1999

Abstract

The objective of this research was to assess the capacity of several animal species, commonly found in or near swine facilities, to serve as hosts of porcine reproductive and respiratory syndrome virus (PRRSV). Dogs, cats, skunks, raccoons, opossums, rats, mice, house sparrows, and starlings were inoculated with PRRSV. Serum samples from the mammals and fecal samples from the birds were collected every three or four days for assay by virus isolation and reverse transcriptase-polymerase chain reaction (RT-PCR) to test for evidence of PRRSV. Tonsil and lymph nodes samples were collected for assay by virus isolation at postmortem from the dogs, cats, skunks, raccoons, and opossums following euthanasia on day 21 PI.

Virus isolation results were negative for serum samples and postmortem tissue samples from dogs, cats, skunks, raccoons, and opossums. Virus isolation results were also negative for serum samples from rats and mice and fecal samples from the house sparrows and starlings. Feces collected from one cage of sparrows were positive by RT-PCR on day 3 PI but negative on other days. Serum samples from one opossum and one raccoon on day 3 PI and another opossum on day 14 PI were RT-PCR positive. Proving that PRRSV can replicate and infect these two species would likely require a more sustained level of detection of PRRSV RNA in serial samples of each animal over a longer period of time. In summary, although the results do not eliminate the possibility that animals other than swine are capable of transmitting PRRSV, they do not support the hypothesis that the animals tested in this experiment are likely hosts or reservoirs of PRRSV.

These research results were submitted in fulfillment of checkoff funded research projects. This report is published directly as submitted by the project's principal investigator. This report has not been peer reviewed

For more information contact:

National Pork Board, P.O. Box 9114, Des Moines, Iowa USA

800-456-7675, Fax: 515-223-2646, E-Mail: porkboard@porkboard.org, Web: <http://www.porkboard.org/>