

Title: Characterization of emerging porcine parvovirus types in the U.S. pig population
– NPB #12-027

Investigator: Tanja Opriessnig, Dr med vet, PhD

Institution: Iowa State University

Date Submitted: February 15, 2014

Scientific Abstract:

A new porcine parvovirus (PPV), provisionally designated as PPV5, was identified in U.S. pigs. PPV5 is most closely related to PPV4 with overall genomic identities of 64.1-67.3%. The amino acid identities between PPV5 and PPV4 were 84.6%-85.1% for ORF1 and 54.0%-54.3% for ORF2. Epidemiologic investigations of PPV4 and PPV5 in U.S. pigs of different ages indicated a slightly higher prevalence for PPV5 (6.6%; 32/483) compared to PPV4 (4.1%; 20/483), with detection of concurrent PPV4 and PPV5 in 15.6% (7/45) of lungs of infected pigs. Virus isolation using established conditions similar to those for classical parvovirus were unsuccessful. Experimental inoculation of pigs revealed a low viremia length and magnitude for PPV4 followed by normal seroconversion. Infection of pigs with PPV5 positive material did not result in a detectable infection.

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 This report has not been peer-reviewed.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 • PO Box 9114 • Des Moines, IA 50306 USA • 800-456-7675 • Fax: 515-223-2646 • pork.org
