

## SWINE HEALTH

**Title:** Determination of the importance of porcine parvovirus type 2 (PPV2) in porcine circovirus associated disease (PCVAD) outbreaks by elimination of PPV2 through vaccination at weaning – NPB #15-144

**Investigator:** Tanja Opriessnig

**Institution** Iowa State University

**Date:** December 2, 2016

### Scientific Abstract

Despite widespread porcine circovirus type 2 (PCV2) vaccination in the growing pig population, occurrence of porcine circovirus associated disease (PCVAD) can be observed particularly in larger production systems. Further investigations into these apparent vaccine failure cases often indicate the presence of porcine parvovirus type 2 (PPV2). The effect of PPV2 on growing pigs is unknown. The objective of this study is to determine the importance of PPV2 by producing a baculovirus-based subunit vaccine, test the vaccine in pigs, and if successful attempt to eliminate PPV2 in a portion of pigs via vaccination at weaning on one of two PCVAD farms. A PPV2 subunit vaccine was successfully produced in the baculovirus vector. When tested under experimental condition in pigs, vaccinated pigs did not develop detectable antibodies under the study conditions by 42 days post vaccination. Unfortunately, attempts to improve the vaccine by increasing the protein concentration, changing the adjuvant, adjusting the ELISA assay, and outsourcing the PPV2 protein expression were all unsuccessful indicating that an entirely new approach to building a PPV2 vaccine is needed.

---

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 This report has not been peer-reviewed.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](http://pork.org)

---