

RESEARCH ABSTRACT



SWINE HEALTH

Title: Characterization of the Fetal Immune Response to PRRS - **NPB # 01-059**

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Abstract

Inoculation of 50-day fetuses with attenuated PRRSV (NADC-8:251 passages) that does not typically cause abortion, results in a >100-fold increase in serum IgG three weeks later. This suggested that polyclonal B cell activation could be part of the fetal pathology. Since fetal studies do not allow the same animal to be progressively studied and such studies were criticized because wild-type PRRSV was not used, germfree (GF) isolator piglets became the major focus of the second half of the study.

We show that inoculation of GF or colonized isolator piglets with wild-type PRRSV results in a polyclonal lymphoproliferative disorder characterized by lymph node hypaplasia, >300-fold elevation of IgG levels, apparent circulating immune complexes, autoantibodies to Golgi apparatus and dsDNA and damage to the kidney including deposition of IgG in the glomerulus (10). We speculate the piglets immune system is diverted away from pathways that allow complete viral clearance thus generating carrier animals.

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 This report has not been peer reviewed

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