

## SWINE HEALTH

**Title:** Influenza Vaccination of Pigs in the Presence of Maternally-Derived Antibodies - **NPB #08-050**  
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**revised**

### Scientific Abstract

An alphavirus derived replicon particle (RP) vaccine expressing the cluster IV H3N2 swine influenza virus (SIV) hemagglutinin (HA) gene induced protective immunity against homologous influenza virus challenge. Vaccination of immunologic naive pigs (no maternal antibody to SIV) induced antibodies to the HA protein. In subsequent experimental challenge with a homologous H3N2 strain, the vaccine prevented an increase in temperature, reduced gross and histologic lesions in the lungs, and reduced viral replication. However, pigs with maternal antibody were not protected against challenge when vaccinated with RP vaccines expressing HA alone or in combination with nucleoprotein.

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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 This report has not been peer-reviewed.

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