

SWINE HEALTH

Title: Evaluation of a macrophage attenuated isolate of PRRSV as a vaccine for porcine reproductive and respiratory syndrome virus – **NPB #98-036**

Investigator: David A. Benfield

Institution: South Dakota State University

Co-Investigator: Raymond R.R. Rowland

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Abstract: Porcine reproductive and respiratory syndrome virus (PRRSV) continues to be a major economic frustration to the swine industry. Despite well-intended management protocols designed to eliminate the virus from herds, many herds either revert to an active disease status or the virus persists in pigs for extended periods of time. Several of these management protocols involve the use of commercial modified-live virus vaccines. These vaccines in combination with certain management protocols are beneficial, when used judiciously by veterinarians and pork producers. However, these vaccines are not without risk and cannot be used in pregnant animals. In an effort to derive a safer vaccine, we produced macrophage-attenuated isolates of PRRSV, that are less virulent than commercial vaccines. In this study we tested two such isolates, P136 in gnotobiotic pigs and pregnant gilts and P83 in conventional pigs. These isolates produce either no disease or mild clinical signs in pigs and pregnant gilts. Pigs inoculated with these two isolates also have fewer lesions than pigs exposed to either virulent PRRSV or commercial modified-live vaccines. However, the P136 isolate may be too attenuated for use as a vaccine candidate as it does not produce an antibody response.

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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/>