

## SWINE HEALTH

**Title:** Subunit Vaccines to Prevent and Control PRRS Viral Infections  
**NPB #97-1979**

**Investigator:** Anuradha Subramanian

**Institution:** University of Minnesota, St. Paul, MN 55108

**Co-Investigator:** James E. Collins

**Date Received:** 1/20/1999

### **Abstract:**

We have chosen the well-characterized North American Prototype Strain of PRRSV, VR-2332 for our studies. We have completed the construction of the mWAP-transgene and we have successfully produced 17 mice, which carry the mWAP-ORF5 transgene. Most female founders have been outbred with wild type mice and we have collected milk samples for further analysis. Our data show that the mWAP-ORF5 gene was stable integrated into the genome at a frequency of 10% and transmitted to the offsprings at a frequency of 50%. However, analysis of the milk samples collected from transgenic mice during lactation failed to show a positive response with polyclonal PRRSV antiserum. But mRNA isolated from the mammary gland biopsies during lactation indicated the accumulation of the ORF5 message in the mammary tissue. Our analysis was further complicated by the unavailability of PRRSV antiserum with good IFA titers and good SVN activity. Thus I have not been able to proceed with the remainder of project objectives. In order to address the problem scientifically, I have obtained support from other sources to continue this investigation. We are currently seeking to make GST-ORF5 fusion protein that will be used to generate PRRSV-ORF5 specific serum. I will make every attempt to share results with the NPPC staff and I am very grateful for their support of this project.

*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 This report has not been peer reviewed*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, P.O. Box 9114, Des Moines, Iowa USA**

800-456-7675, **Fax:** 515-223-2646, **E-Mail:** [porkboard@porkboard.org](mailto:porkboard@porkboard.org), **Web:** <http://www.porkboard.org/>