

Title: Targeted development of neutralizing monoclonal antibodies against PRRSV minor glycoproteins **NPB # 17-151**

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Scientific Abstract

The minor glycoproteins of porcine reproductive and respiratory syndrome virus (PRRSV) are responsible for interacting with the host cell receptor. Because these proteins are essential for the virus to infect cells, we were interested in generating neutralizing monoclonal antibodies against these proteins to further explore potentially protective epitopes in PRRSV proteins. Subtractive immunization, or tolerization, was used to direct immune responses against the minor glycoproteins. With the generation of a PRRSV-1 infectious clone containing the minor glycoproteins of a PRRSV-2 infectious clone, we were able to use a cyclophosphamide treatment to direct antibody formation against ORF2-4 of a PRRSV-2 strain, FL12, in mice, and generate a hybridoma cell line that produces neutralizing antibodies against the PRRSV-2 strain FL12.

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 This report has not been peer-reviewed.

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