

Title: Identification of Protective Antigens of African Swine Fever Virus – NPB #13-102

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Scientific Abstract:

African swine fever (ASF) is an emerging disease threat for the swine industry worldwide. No ASF vaccine is available and progress is hindered by lack of knowledge concerning the extent of ASFV strain diversity and the viral antigens responsible for protection in the pig. Available data from vaccination/challenge experiments in pigs indicate ASF protective immunity maybe hemadsorption inhibition (HAI) serotype-specific. Recently, we have shown that two ASFV proteins, CD2v (EP402R) and C-type lectin (EP153R), are necessary and sufficient for mediating HAI serologic specificity (Malogolovkin et al., 2014). Here using ASFV inter-serotypic chimeric and/or gene-deleted viruses and vaccination/challenge experiments in pigs we demonstrate that CD2v and C-type lectin proteins are necessary for homologous protective immunity. These viral proteins represent significant protective antigens for ASFV that should be targeted in vaccine design and development.

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 This report has not been peer-reviewed.

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