

SWINE HEALTH

Title: Development of recombinant vaccinia virus vectored African swine fever vaccines - #15-126

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Scientific Abstract: African swine fever (ASF) is an infectious and economically important disease of domestic pigs that poses a significant threat to worldwide swine industry including the US. Currently, there is no vaccine for ASF. Herein, we used the vaccinia virus as the vector to develop three recombinant vaccinia vectored African swine fever vaccine candidates. Each recombinant virus expresses two important ASFV antigens such as p72+p15, p54+pp62 and p30+CD2-like, and has been shown stably to express each inserted gene. The immunogenicity of recombinant vaccine candidates was evaluated in pigs that were co-infected with 3 recombinant vaccine candidates. The results showed that the ELISA titers against ASFV p15 and p54 were detected in immunized pigs, indicating that the vaccine candidates are immunogenic in pigs. The efficacy of the developed vaccinia vectored ASF vaccine candidates need to be evaluated in pigs that will be challenged with a virulent ASFV. Nevertheless, ASF vaccine candidates have been developed and they can be used as potential vaccines if their efficacy can be demonstrated in pigs.

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 This report has not been peer-reviewed.

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