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EFFORTS TOWARDS DEVELOPING AN AFRICAN SWINE FEVER VACCINE

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The African swine fever virus (ASFV) causes high morbidity and mortality in swine of the species *Sus scrofa*, for which there is currently no commercially available vaccine. Recent outbreaks reported in Trans-Caucasus countries, Eastern Europe and China highlight the urgent need to develop effective vaccines against ASFV. We developed an approach based on prime-boost vaccination, combining ASFV antigens encoded by DNA plasmids and recombinant ASFV proteins with the aim to activate both humoral and cellular immunity and tested vaccinated pigs against virulent ASFV challenge. In parallel, gene-deleted ASF viruses to be used as modified live virus vaccines have been developed using CRISP-Cas9 knock-out approaches.

The results of this work will provide insights towards the development of rationally designed, safe, efficacious vaccines for ASF.

Keywords: African swine fever, vaccine, DNA, plasmids, recombinant proteins