

Clean Resources

Smart Agriculture and Food

FUNDING DETAILS

Developing continuous porcine macrophage cell line for the production of African Swine Fever Virus

African Swine Fever Virus (ASFV) is a serious threat to the US\$150-billion global pig industry. Introduction of ASFV into Canada may cause an estimated economic loss of US\$24 billion. Canada ranks third in the world pork exports. Pork shipments account for approximately 30 per cent of Canada’s total livestock product shipments and generate revenues of C\$30 billion. ASFV could therefore cause direct economic losses and affect food security, jobs and trade. Developing preventive measures for controlling the introduction and spread of ASFV in Canada will mitigate risks to producers and maintain international confidence in Canadian pork. This project aims to develop continuous porcine cell lines to expedite research on virus-host interactions and commercialization of a potential live attenuated ASFV vaccine, and to identify antiviral compounds that effectively control ASFV replication.



RECIPIENT:

VIDO-InterVac

University of Saskatchewan

PI: Dr. Suresh Tikoo



PARTNERS:

N/A



TOTAL BUDGET:

\$470,000



AI FUNDING:

\$470,000



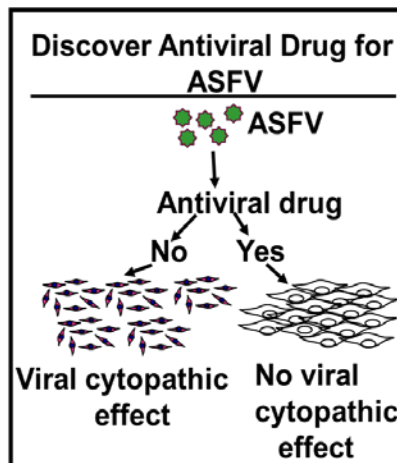
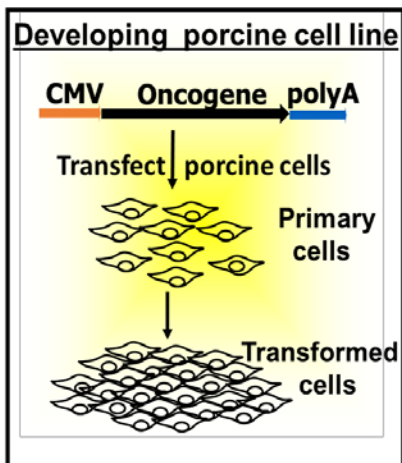
PROJECT DATES:

March 2020 – August 2023



PROJECT TRL:

**Start: 2
End: 4**



APPLICATION

Unavailability of a continuous porcine cell line for efficient replication of ASFV has hampered the commercial production of potential live attenuated ASFV vaccine. This project will help in producing potential live attenuated ASFV vaccine at low cost. The project will also help in identifying therapeutics, which could be used to inhibit ASFV replication in infected pigs. This will help in saving hog producers from big economic losses due to pig mortalities.



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PROJECT GOALS

- Develop a porcine cell line for commercial production of ASFV vaccines and evaluation of virus-host interactions.
- Develop therapeutics to control ASFV infections with different strains.

BENEFITS TO ALBERTA

- Introduction of ASFV into Canada may cause direct economic loss estimated at US\$24 billion US. The loss may not only cause direct heavy economic losses, but also affect food security and jobs. Thus, availability of low-cost vaccines or antivirals will lead to saving hog producers from big economic losses due to pig mortalities in Canada, including Alberta which has about 200 hog producers producing three million hogs per year.
- The vaccine will also help to reduce the losses in other parts of the world including Asia, Eastern Europe and Russia.



**2 Students
Trained**



1 Patent



2 Project Jobs

CURRENT STATUS

March 2021

There has been restricted access to the laboratory due to the pandemic. The team has obtained its ethics approval for use of animals and biohazard permit, and has imported the ASFV.