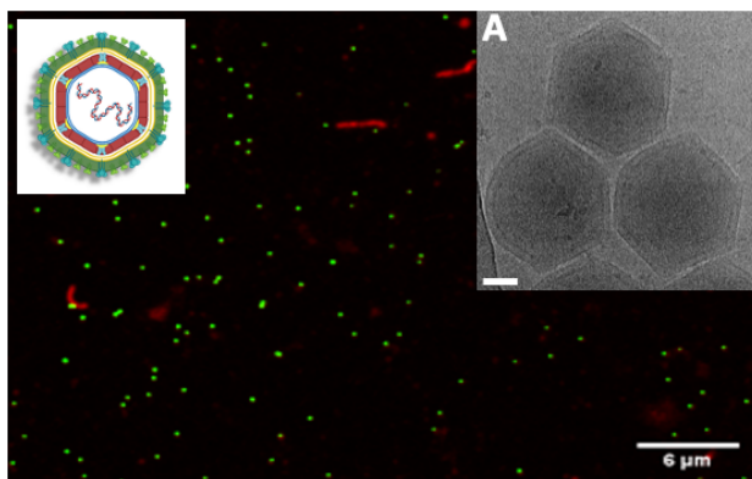




Risk-free in situ non animal (RISNA) surrogate assay for African swine fever virus

A method of using a surrogate virus to confirm inactivation of African Swine Fever Virus (ASFV)

Technology No. 2019-359



IP Status: PCT Application Filed; **Application #:** PCT/US2020/039072

Applications

- Animal feed diagnostic
- Food safety

Key Benefits & Differentiators

- Enables in situ and safe testing of feed for harmful pathogens
- Offers the ability to monitor the presence or absence of viruses through the feed lifecycle
- Helps validate existing, and enables development of new, processing techniques

Overview

Animal feed and feed ingredients can become contaminated with pathogens, some of which are deadly viruses such as the African swine fever virus (ASFV). Consumption of such contaminated food leads to severe disease outbreaks and large scale death of livestock. For instance, consumption of ASFV-contaminated feed leads to hemorrhagic fever with high mortality rates in domestic pigs. Survival of viruses in feed ingredients is a potential route of transmission in livestock.

Researchers at the University of Minnesota have developed an assay for detecting the presence of an ASFV-like megavirus (surrogate) in, for example, animal feed and animal feed ingredients. This method involves inoculating the animal feed with the newly isolated surrogate virus as a proxy for ASFV. After subjecting the animal feed to the typical treatment, storage and shipping procedures, the feed is tested for the presence of the surrogate virus. The ability to validate sterilization procedures in situ and in a risk-free manner is attractive to a very large market. As the characteristics, quantity, placement of the surrogate virus can be controlled, this method can be used to fine tune or develop new feed treatment processes that are more effective. Additionally, point of care testing for the surrogate virus before feeding the livestock could help alleviate anxiety among the farmers. Lastly, the same approach can be used to ensure safety of movement of animals and animal products during an outbreak.

Phase of Development

TRL: 3-4

Surrogate virus has been isolated and a testing assay is developed.

Desired Partnerships

This technology is now available for:

- License
- Sponsored research
- Co-development

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Researchers

- [Declan Schroeder, PhD](#), Associate Professor, Department of Veterinary Population Medicine

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