This project utilizes conventional PCR methods to analyze conserved regions of viral species followed by DNA sequencing to determine specific strain. Currently, 256 samples were screened for coronavirus species with results yielding 0 positives. 172 samples were also screened for paramyxovirus and of these 2 were positive.

Worldwide pandemics are responsible for staggering costs to human morbidity, mortality, and economies. It is understood that much of the process of zoonotic respiratory virus disease requires frequent animal and human contact to amount to spillover. As a result, early surveillance at this human-animal interface in geographic hotspots for emerging infectious diseases is an effective strategy in proactive pandemic preparation.

This study showed relatively low amounts of viral positives in the samples, a good sign that at the moment, the swine farms they were taken from are not at risk for spilling over those specific viruses.

This project plays a role in the long-term One Health goal of developing a sufficient surveillance system to screen and identify novel viruses capable of causing future pandemics. Bioaerosol samples were shown to be effective methods for viral surveillance. Future work will expand on a wider selection of swine farms in North Vietnam.

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