

## **KEYNOTE: SUSCEPTIBILITY OF PIGS TO ZAIRE EBOLAVIRUS AND THEIR POTENTIAL AS AN INTERMEDIATE HOST SPECIES.**

WEINGARTL, HANA<sup>1</sup>

CANADIAN FOOD INSPECTION AGENCY.<sup>1</sup>

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Ebolaviruses, family Filoviridae, are one of the examples of re-emerging pathogens in humans and nonhuman primates. Swine was not suspected to be a potential host for these viruses, until detection of Reston ebolavirus in pigs in the Philippines. Subsequently, specific antibodies were found in pig farmers indicating exposure to the virus. This important observation raised the possibility that pigs may be an amplifying species and transmit Ebola virus also to humans. The current study investigated susceptibility of pigs to Zaire ebolavirus, a species commonly emerging in central Africa and far more virulent in humans than the Reston ebolavirus.

Following mucosal exposure, pigs replicated Zaire ebolavirus to high titers (reaching  $10^7$  TCID<sub>50</sub>/ml), mainly in the respiratory tract and developed severe lung pathology, while transient low viremia was detected at 5 dpi. Shedding from the mucosa was detected for up to 14 days post-infection and transmission was confirmed in all naïve pigs cohabiting with inoculated animals. These results confirm the susceptibility of pigs to ebolavirus infection, and identify an unexpected site of virus amplification and shedding linked to transmission of infectious virus.

