## WORLD ONE HEALTH CONGRESS

We recognize that the health of animals and people are interconnected. Research and development in veterinary medicine can help inform and even accelerate innovation in human medicine. Likewise, insights in human medicine can inform innovation in animal health. We call this interdependence One Health.

Zoetis is pleased to be a partner in the 6<sup>th</sup> <u>World</u> <u>One Health Congress</u> program and present timely topics relevant to human and animal health.





## **CORONAVIRUSES IN ANIMALS**

Zoetis and other animal health companies have developed vaccines and diagnostics to mitigate the impact of multiple Coronaviruses of veterinary importance.

Based on our experience with veterinary Coronaviruses, we have begun to develop diagnostics, vaccines, and therapeutics to be prepared to respond to SARS-CoV-2, the virus that causes COVID-19, in animals if necessary. Specific to diagnostic applications:

## • We developed a Real-Time Reverse Transcriptase (RT)-PCR assay to detect SARS-CoV-2 RNA in animals.

- Can be used on any animal species; canines and felines were used for development.
- The assay has limit of detection, specificity, and sensitivity comparable to the US CDC human SARS-CoV-2 assay.
- Our test was used to ID the first true positive SARS-CoV-2 infected canine in the USA.
- We also developed a **lateral flow assay** (LFA) to detect antibodies to SARS-CoV-2 Spike protein in dogs and cats.
  - The test requires just one drop (25 µL) of serum, plasma, or whole blood and delivers a qualitative result in 10 minutes with no specialized expertise or equipment required.
  - 100% sensitive in immunized or naturally infected dogs (n=20) and 95.4% specific (n=615).
  - **100% sensitive** in immunized cats (n=28) and **93.7% specific** (n=716). No samples from naturally infected cats were available for testing.

## **REDUCING THE NEED FOR ANTIBIOTICS**

- Aquaculture is helping meet the world's increasing demand for animal protein; however, AMR and sustainability issues are important One Health considerations.
  - Vaccination and good regulation are key success factors in Atlantic salmon production, enabling Norway to produce over 1.2 million tons of salmon each year with minimal antibiotic usage and Chilean salmon producers to reduce antibiotic usage by 40% since 2015.
  - In contrast, vaccination of warm water aquaculture species is very limited.
    Collaborative effort from fish farmers, regulators, academia and animal health companies are required to achieve mass adoption of vaccination.
- Poultry growers are moving rapidly to reduced antibiotic use through increased vaccination. In studies, use of the Poulvac E. coli vaccine reduced the need for antibiotics by 16% and shortened the duration of treatment by 4 days.

To learn more about our approach to One Health solutions, visit <u>Zoetis.com/Innovation</u>

ZOETIS CENTER FOR TRANSBOUNDARY AND EMERGING DISEASES

