

The Veterinary Diagnostic Laboratory at Oregon State University is accepting specimens for Influenza virus detection. Because animals can show brief periods of viral shedding, virus detection by PCR or Virus Isolation techniques may yield negative results if not taken early enough in the acute phase of the disease. In these cases serology is a better test to confirm infection. The PCR test on nasal swabs targets a conserved gene found in all the animal influenza A viruses. If this test is positive, it means the animal is or was recently infected with influenza virus and we were able to detect the viral nucleic acid in the swab. Virus isolation and serology is necessary to determine the viral subtype involved.

Please refer to the following guidelines for proper sample submission for Influenza A Virus testing.

Influenza Virus PCR / Virus Isolation:

Equine: Deep nasal swabs or trans-tracheal washes should be taken early in the acute phase for best results. Use a standard or flocked polyester tipped swab (flocked type are superior) with plastic stick to sample the mucous membranes. Rub membranes well in order to dislodge virus-infected cells. Swabs should then be broken into a tube containing no more than one ml of liquid transport medium. If a transport medium is not available, then a red top vacutainer tube (no gel or additives) containing 0.5 ml (or less) saline is best. Please be aware that standard bacterial culturette swabs containing any type of gel as a transport media are not appropriate for PCR and Virus Isolation testing. The gel in culturette swabs is inhibitory for both PCR and virus isolation techniques. Likewise wooden stick swabs may leach inhibitory compounds into transport media rendering virus isolation and detection techniques ineffective. Samples are set up as received Monday through Friday with an approximate 2 to 5 day turnaround for PCR and 21 days for virus isolation.

Canine: For canine influenza testing, the shedding period of dogs following infection is much shorter than that found in other species. Nasal swabs for CIV PCR should be taken as early in the acute phase as possible and preferably within 3 days of the onset of disease. Nasal swabs taken beyond 5-7 days will almost certainly test negative by PCR and serology is the best diagnostic test for those dogs. Samples are set up as received Monday through Friday with an approximate 2 to 5 day turnaround for PCR and 21 days for virus isolation.

Hemagglutination inhibition (HI) Serology:

Serology results are reported as a titer and a convalescent serum (10-14 days after acute sera) may be required for confirmation of infection. Acute and convalescent sera showing a four-fold antibody increase are considered significant and indicative of recent exposure.

Equine: Hemagglutination-Inhibition serology is available for both Equine Influenza A-1 H7N7 and A-2 H3N8 subtypes. Please submit a minimum of 1.0ml sterile serum collected in a red top or serum separator tube. Sample turnaround is < 1 week.

Canine: Hemagglutination-Inhibition serology is available for the Canine Influenza H3N8 subtype. Please submit a minimum of 0.5 ml sterile serum collected in a red top or serum separator tube. Sample turnaround is < 1 week.

SHIPPING and BILLING

Samples should be shipped to the lab (preferably overnight) with sufficient ice packs to keep them cold during transit. Please include a standard OSU VDL submission form with the sample. The fee for Influenza Virus testing is available on our web page (<http://vetmed.oregonstate.edu/diagnostic>). Submitting parties are responsible for all charges incurred unless previous arrangements are made with Dr. Emilio DeBess, Oregon State Public Health Veterinarian.

Please contact the OSU Veterinary Diagnostic Laboratory at 541-737-3261 or Dr. DeBess at 971-673-1111 if you have questions.