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Holiday Schedule

In observance of President's Day, CAHFS will be closed on **Monday, February 15, 2016.**

Please contact your laboratory to plan your testing needs accordingly as some test set ups will be changed or reduced.

Welcome to CAHFS...

Please welcome our newest faculty member, Dr. Jennine Ochoa, who joined the CAHFS-Tulare Laboratory on January 19, 2016. Dr. Ochoa received her DVM from UC Davis in 2010 and recently completed a combined PhD/Pathology residency program at Washington State University.



Dr. Jennine Ochoa

She has extensive experience in a diagnostic laboratory environment as a pathologist. Her focus is in avian pathology, particularly poultry, but also includes all livestock species.

Bovine

Infectious bovine rhinotracheitis (IBR) virus caused **conjunctivitis** in 5% of a group of 200, 8-month-old Holstein heifers that had red conjunctiva including the third eyelid, mucoid ocular discharge, cloudy cornea, and mucopurulent nasal discharge. All five eye swabs submitted for PCR were positive for IBR. *Trueperella pyogenes* and *Moraxella bovoculi* were detected in two swabs each from four of the seven submitted for culture.

Epizootic bovine abortion/foothill abortion (EBA) and **Bovine viral diarrhea virus (BVDv)** concurrent infection were diagnosed in a newborn male Black Angus calf that had gross and microscopic lesions consistent with EBA in several organs, including lymph nodes, thymus, spleen and liver. EBA infection was confirmed serologically. The calf was positive for BVDv by fluorescent antibody and PCR on kidney, lung and spleen.

Mycotic navel infection resulted in severe necrotizing hepatitis in a 3-day-old beef calf. The umbilical vein and liver had numerous irregularly branching non-septate fungi associated with vascular thrombosis, inflammation and necrosis.

Small ruminants

Ovarian carcinoma was diagnosed in a dwarf doe goat that died following a chronic illness. Significant gross lesions were extensive thick, nodular peritoneal adhesions that were attached to the right ovary. Histopathology revealed ovarian adenocarcinoma with widespread dissemination to the peritoneum.

Interstitial pneumonia was the cause of acute onset of respiratory distress and death in a juvenile llama. Necropsy revealed lung lesions which histologically had diffuse interstitial fibrosis and proliferation of type 2 pneumocytes. The cause was not determined and no infectious etiology was identified. The pulmonary lesions described are similar to those of acute respiratory distress syndrome.

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Your feedback is always welcome. To provide comments or to get additional information on any of the covered topics or services, please contact Sharon Hein at shlein@ucdavis.edu.

We're on the Web
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Small ruminants (cont'd)

Polyserositis and septicemia due to *Streptococcus equi ssp zooepidemicus* caused the death of one of three alpacas that died suddenly over a 2-week period on the same property. The 6-year-old female submitted was found dead in the morning after being observed apparently healthy the night before. Necropsy revealed polyserositis and septicemia. *Streptococcus zooepidemicus* in pure culture was isolated from serosal effusions and several organs. This disease is known as "alpaca fever". *S. zooepidemicus* is considered a commensal organism of alpacas in South America, but not in North America. This microorganism may be carried by clinically normal horses in the nasopharynx and it has been suggested, although not proven, that horses may act of reservoirs for the alpaca disease.

Equine

Vasculitis and rhabdomyolysis, presumptively due to *Streptococcus equi*, resulted in edema of all four limbs in a 10-year-old pregnant Thoroughbred mare. The animal presented with limb edema and progressive difficulty walking for a 10-day period, until it became recumbent and was euthanized. The mare was on pasture with a group of mares, some of which had developed submandibular lymphadenopathy (strangles) and fever beginning five weeks earlier. Necropsy revealed extensive hemorrhage and necrosis with patchy vasculitis in the epaxial and rear leg muscles, and subcutaneous edema and hemorrhage in all four limbs, thorax and ventral abdomen.

Pig

Haemophilus parasuis (Glasser's disease) and **Porcine reproductive and respiratory virus (PRRSV)** co-infection was responsible for the death of a 30 lb. pig. The pig was purchased at an auction three days prior to onset of heavy breathing and vomiting of yellow bile followed by death. Grossly there was severe fibrinous pleuritis and pericarditis, and diffuse rubbery, dark red lungs. Histologically, suppurative meningitis and lymphohistiocytic interstitial pneumonia was observed. *Haemophilus parasuis* was isolated from the lung, and PRRSV was detected by PCR from the spleen.

Porcine Circovirus 2 (PCV-2) systemic infection was identified in a litter of 25-day-old pigs. The entire litter was affected with cough, mild diarrhea, lethargy and death. Two pigs submitted for necropsy had meningoencephalitis, hepatitis, glomerulonephritis, vasculitis of the mesenteric vessels and lymphoid depletion. Cytoplasmic botryoid inclusion bodies typical of PCV-2 were seen in macrophages within the lymphoid tissues, and PCV-2 immunohistochemistry was positive.

Poultry and Other Avian

Lead exposure was identified in aged hens submitted for necropsy. Routine lead analysis of the liver revealed a low level (2.5 ppm) in one hen and a high potentially toxic lead level (41 ppm) in another hen from a different premises.

Infectious laryngotracheitis (ILT) associated with vaccination in a flock of 8-week-old layer pullets caused increased mortality and "wet" eyes. The flock had been vaccinated for ILT in the drinking water at 6 weeks of age. At necropsy the birds had "almond" shaped eyes with a clear secretion, and reddened conjunctiva, larynx and trachea. Histopathology revealed inflammation, hemorrhage and syncytial cells containing intranuclear inclusion bodies in the conjunctiva, larynx and trachea, which are diagnostic lesions of ILT. PCR was also positive for ILT.

Wet pox and fowl cholera were diagnosed in 2-year-old turkey breeders with a history of lethargy and swollen eyes. At necropsy examination, the birds had unilateral accumulation of exudate in eyes, and yellowish, raised, diphtheritic plaques in the oropharyngeal cavity, esophagus, and crop. Histopathology revealed classic lesions of pox including eosinophilic intracytoplasmic inclusions in epithelial cells of the tongue, epiglottis, esophagus, and crop. *Pasteurella multocida*, the cause of fowl cholera, was isolated from the eyes and larynx.