



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

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Holiday Schedule

CAHFS will be open, but will have limited service on **Wednesday, November 11, 2015** in observance of Veteran's Day.

Please contact your laboratory to plan your testing needs accordingly.

CAHFS CONNECTION

October 2015

Bovine

Chronic abscessation of the milk vein resulted in acute disseminated embolic pneumonia and death in a dairy cow following a course of hypocalcemia treatment via the milk vein. *Trueperella pyogenes* and mixed bacterial flora were isolated from the lung and vein abscess.

Bovine viral diarrhea virus (BVDV) infection was diagnosed in tissues from a postpartum Holstein heifer with **diarrhea and anorexia** for three days. The dairy was experiencing a 10% rate of postpartum diarrhea, anorexia and death, mostly in heifers. The BVDV PCR on the spleen was strongly positive and the BVDV immunohistochemistry identified virus associated with vasculitis in multiple organs. Other findings included *Salmonella* group C2 septicemia and copper deficiency.

Malignant catarrhal fever (MCF) virus was identified by PCR in the spleen from a 5-year-old Angus cow with a one week history of lethargy and fever followed by bilateral corneal opacity and sloughing of the nasal planum. Histologic lesions characteristic of MCF were found in the trachea, lung, adrenal, rumen and esophagus.

Astrovirus was the cause of **meningoencephalitis** in a yearling beef steer with signs of shallow breathing in a group of 120 cattle. The steer was the only one affected. This virus has been detected in sporadic cases of encephalitis in adult beef and dairy cattle in California.

Equine

Monensin toxicosis was the cause of **feed refusal, ataxia and weakness** in horses at a riding and boarding facility housing 40 horses. A new batch of pelleted grain resulted in feed refusal by most horses. Four horses that readily ate the feed developed signs of weakness, inability to stand and muscle fasciculations. Two horses died within 48 hours of ingestion, and a third horse was euthanized three days later. Some horses consuming lower levels reportedly developed ataxia and weakness several days later. Horses are 13 times more sensitive to monensin than cattle and the levels found in the feed were three times higher than the maximum recommended level for cattle. Both horses submitted had monensin in their stomach contents and 130-150ppm in the grain from their feed buckets.

Johne's ELISA Test Interpretation Change

The manufacturer of the Johne's ELISA has changed the cutoffs for classifying bovine samples as positive and suspect to increase the sensitivity of the test. The previous cutoffs were Positive ≥ 0.7 , Suspect between 0.6 and 0.7. The new cutoffs are Positive ≥ 0.55 , Suspect between 0.45 and 0.55. Using the new positive cutoff, test sensitivity is estimated at 68.3%, and specificity is estimated at 98.9%. Using the old positive cutoff, sensitivity was estimated at 51.4%, and specificity was estimated at 99.3%.

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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 shein@ucdavis.edu.

We're on the Web
www.cahfs.ucdavis.edu

Pig

Diphacinone was detected in the muscle from a feral pig that made the news due to the blue color of its subcutaneous tissue and fasciae. Liver is the recommended tissue to test for anticoagulants. A blue dye is incorporated into the diphacinone bait formulations which accounts for the blue discoloration of the tissues of the pig. It is recommended that meat from dye colored pigs not be consumed.

Small Ruminant

Mycoplasma sp. was the cause of **mammary gland abscesses** in a 2-year-old dairy goat that developed **myelitis** and pachymeningitis. The animal had been treated with antibiotics for subcutaneous swelling of the head a month earlier. Two weeks later the goat developed rear leg problems progressing to recumbency and was eventually euthanized due to failure to respond to antibiotics. Bacterial cultures of the spinal canal did not grow *Mycoplasma* which was isolated from the mammary gland. It is hypothesized that the *Mycoplasma* in the mammary gland disseminated to cause the subcutaneous swelling and spinal lesions.

Bluetongue virus (BTV) infection caused classic lesions of pulmonary artery hemorrhage and myocardial necrosis in a 10-month-old ram from a group of 25 of which four were sick and two died over a 2-week period. The affected animals were off feed and lame (walked as if on egg shells). The ram submitted had a fever up to 106.9°F prior to death. BTV was detected in the spleen by PCR and the ram was serologically positive to this virus. Late summer and fall is when most cases of Bluetongue virus infection occur in sheep.

Poultry and Other Avian

Chicken Infectious Anemia Virus (CIAV) infection was diagnosed in 15-day-old chicks which were experiencing gangrenous dermatitis and increased mortality of 2% during three days in a flock of 30,000 organically grown chickens. Laboratory and necropsy evaluation of eight live chicks revealed slow clotting time, decreased packed cell volume ranging from 15% to 25%, (normal 35%), severe atrophy of thymus, pale bone marrow and gangrenous dermatitis. CIAV is a gyrovirus which causes anemia and lymphoid atrophy by targeting the pluripotent stem cells of erythroid and myeloid series as well as thrombocytes in 1- to 3-week-old chicks. The disease is controlled by vaccination of breeder chickens so that they can pass on the maternal antibodies to chicks and thus protect them from exposure to the virus in the field.

Parasitic ventriculitis caused by the nematode, *Hadjelia truncata*, was identified in three submitted pigeons that were severely emaciated. This parasite has been previously identified in similar situations in California.

Proventricular dilatation disease (PDD) with encephalitis was diagnosed in a 13-year-old Amazon parrot submitted from an aviary with 15 psittacines. The parrot was depressed, sneezing and had ataxia and torticollis. At necropsy, the proventriculus was dilated and the gizzard wall was thin. Histologic lesions included **encephalitis** and lung congestion. Brain sections were positive for avian borna virus by immunohistochemistry. Parrot bornavirus is the etiological agent of PDD in psittacines and transmission is presumed to be by the fecal-oral route.

Other Mammalian

Carotid arteritis and meningoencephalitis were diagnosed in an adult bull elk that was euthanized due to neurologic clinical signs and wasting. One carotid artery was markedly enlarged, thrombosed and inflamed. Histologically there was chronic pleocellular thrombosing arteritis and neutrophilic meningoencephalitis with abscessation. Gram positive bacteria were identified in the lesions and considered secondary. The presumed initial cause was attributed to infection by the deer arterial worm, *Elaeophora schneideri*. The adult worms reside in the carotid artery and while clinical disease is not reported in deer, in other species including elk, infection is associated with carotid arterial thrombosis. In this case, no parasites were detected in the sections examined.