



UC DAVIS

VETERINARY MEDICINE
California Animal Health and
Food Safety Laboratory System

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Holiday Schedule

CAHFS will be open with limited services on **Monday, November 11, 2013**, in observance of Veteran's Day,

CAHFS will be closed on **Thursday, November 28, 2013** in observance of Thanksgiving Day, but will be open on **Friday, November 29, 2013** with limited services.

Please contact your laboratory to plan your testing needs accordingly.

CAHFS CONNECTION

November 2013

Bovine

Bovine herpes virus 4 (BHV-4) and Bovine viral diarrhea virus (BVDv) were detected in uterine exudate from a group of 2-year-old Holstein heifers that developed severe **endometritis** within the first two weeks of freshening. Some animals became severely ill and died. PCR on uterine exudate identified BVD virus in five of six animals and BHV-4 in four of six. On another dairy with a similar history, Bovine herpes virus 1 (IBR) and BHV-4 were detected by PCR in uterine exudate. Viral agents may contribute to damage of the uterine mucosa which enhances bacterial co-infection. CAHFS currently has the capabilities to test uterine exudate by PCR for these viral agents.

Clostridium septicum was the cause of left ventricle **myocarditis** and diffuse fibrinous **epicarditis** in a 2-year-old Holstein heifer that died 5 days post-calving. The heifer exhibited signs of colic (kicking at abdomen, frequently getting up and down), staggering and ataxia prior to death. *C. septicum* was isolated from the heart lesion.

Equine

Roundworm (*Parascaris equorum*) intestinal impaction with over 500 worms resulted in small intestine **rupture** in a juvenile colt. The colt was found recumbent with colic and abnormal lung sounds and died from peritonitis secondary to the perforation. In addition, the horse presented with lung lesions that may have been from ascarid larval migration.

Sheep

Bluetongue virus (BTV) was diagnosed by PCR on EDTA blood or spleen from domestic sheep in two flocks, and captive Bighorn sheep on unrelated premises in September. Affected animals ranged from 6 months to 12 years old. Signs included one or more of the following: **fever, respiratory distress**, foaming at the mouth, edema, weakness, neurologic signs and death. Heart necrosis, pulmonary edema and heart failure was found in both Bighorn sheep. Captive non-native antelope on the premise with Bighorn sheep had diarrhea, illness and death due to co-infections with **Epizootic hemorrhagic disease (EHD)** and BTV virus. **Selenium deficiency** and ***Bibersteinia trehalosi* pneumonia** were also found in a 6-month-old domestic ram lamb.

USDA/APHIS releases report evaluating Q Fever factors

The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) has released a report that evaluates factors that could cause epidemic coxiellosis (known commonly as Q Fever) among domesticated goats. The June 2013, 104-page report, *Evaluation of Factors that Would Initiate or Propagate Epidemic Coxiellosis in the U.S. Domesticated Goat Population*, may be accessed by clicking here.

CAHFS offers serology testing for Coxiella (Q fever) antibodies in serum and immunohistochemistry testing for the agent in placenta from goats, sheep and cattle.

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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 slhein@ucdavis.edu.

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

Goat

Avocado leaf poisoning was diagnosed in a 9-month-old Boer goat from a group of 30 in which five were sick and two died, and in a yearling mixed breed goat from an unrelated premise where five out of 45 goats were sick and one died. The affected animals on one premise had seizures, depression and reluctance to walk and the second premise reported bradycardia (60-70bpm), rumen atony, and decreased jaw and tail tone. Both goats had **myocardial necrosis** and avocado leaves, the most toxic part of the plant, were detected in the rumen contents.

Pig

Whipworms (*Trichuris suis*) and *Salmonella* infection resulted in severe typhlocolitis and death in a 3-month-old pig from a group of 12 pigs exhibiting diarrhea and/or sudden death four weeks after purchase. Three pigs had died. The spiral colon and cecum were filled with dark red fluid and fibrin, and numerous whipworms were attached to the mucosa. *Salmonella* group B was isolated from the colon and *Trichuris* eggs were detected on fecal flotation.

Poultry and Other Avian

Hepatic amyloidosis was the cause of **ruptured livers** and bleed out in three, 70-week-old chicken layer hens. The livers had a waxy appearance on necropsy and amyloid was confirmed on histopathology.

Fowl cholera due to *Pasteurella multocida* was diagnosed in an 18-week-old chukar partridge flock that exhibited 5 to 7 percent mortality for three consecutive days. At necropsy, there was mild splenomegaly with multiple pale foci and very subtle hepatitis. Histopathology revealed large numbers of intravascular bacteria in the liver, kidney, and spleen. *Pasteurella multocida* was isolated from spleen and liver.

***Sarcocystis falcatula* infection** was diagnosed in an 8-year-old female rainbow lorikeet (*Trichoglossus haematodus*) that died suddenly. Microscopic examination and immunohistochemistry of the tissues revealed *Sarcocystis falcatula* in the thigh and pectoral muscles and lung in areas of pneumonia. *S. falcatula* is the most prevalent species of *Sarcocystis* that affects birds, which function as intermediate hosts. Opossums are the definitive hosts and shed sporocysts in feces. Sporocysts ingested by birds release sporozoites in the intestine, which invade the tissues and may cause disease and mortality.

Other Mammalian

***Francisella tularensis* (tularemia) caused septicemia** in a wild beaver. The California Department of Fish and Wildlife submitted a beaver from El Dorado county where another beaver was also found dead recently. The beaver had necrotic hepatitis and peritonitis which was positive for *Francisella tularensis* by immunohistochemistry. The subspecies (type B) of tularemia found in beavers is less virulent for humans and rabbits than type A. Type A causes die-offs in wild rabbits. The organism is usually transmitted by ticks and deer flies.

Toxicology

Ivermectin toxicosis was diagnosed by testing serum of a one-year-old Maltese **dog** with acute onset of **blindness**. It was also diagnosed by testing brains from two **snakes** and one mouse from a zoo where the snakes had been fed mice shortly after the mice ate feed with 100 times the labeled concentration of ivermectin. Eighty percent of the mice died within 12 hours.



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