



UC DAVIS

VETERINARY MEDICINE
California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

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Holiday Schedule

CAHFS will be closed on **Monday, January 20, 2014** in observance of Martin Luther King Day.

Please contact your laboratory to plan your testing needs accordingly.

Bovine

***Yersinia pseudotuberculosis* enteritis** caused the death of a 7-month-old Corriente heifer following three days of anorexia and diarrhea. Four in a group of 104 had died. The animals had recently been moved to pasture from a feedlot. Numerous 1-5mm foci of necrosis and fibrin in the small intestine had abundant bacteria histologically and the organism was isolated from the feces. *Yersinia* survives well in cold weather and is seen in pastured ruminants in the winter time, often associated with weight loss sometimes without diarrhea. This organism can also cause abortions.

Leptospirosis was diagnosed in two Holstein steers from a feedlot that was experiencing increased incidences of **sudden deaths and liver condemnations**. A freshly dead steer submitted had **icterus, red urine** and a swollen, orange liver. The second steer was autolyzed. Both animals were negative for *Leptospira* by FA but spirochetes were seen in the kidney sections on silver stain.

Coronavirus and coccidia caused **colitis** and **blood** in the rectum of a 2-year-old Angus bull that appeared fine the day before he was found down and then died. The bull appeared pale (anemic) at field necropsy. **Severe coccidiosis** caused **bloody diarrhea** in a 2-month-old Angus calf that died within 24 hours of onset on another premises. The herd had 50 percent mortality in affected calves over six months. **Rotavirus and coronavirus** were the cause of **diarrhea** in two, 2-week-old Angus calves submitted from a 100 pair cow-calf operation where 60 calves had diarrhea and some also had respiratory signs. Nine calves had died.

***Mannheimia haemolytica* and BRSV** caused **high fevers and respiratory signs** in numerous 2-week-old to 2-year-old beef cattle over a three week period on two separate, but related, premises. The animals had been co-mingled in trailers and holding pens shared between the premises. A tracheal wash on a 2-year-old was positive for both agents by culture for *Mannheimia* and by PCR for BRSV.

Acorn-induced nephrosis was the cause of death in a 7-year-old beef cow from a herd of 200 in which several cows had died after being moved two weeks earlier to a pasture with a large number of acorns. Field necropsy revealed perirenal bloody edema and widespread hemorrhages. Large numbers of oxalate crystals were seen in the kidney.

***Pseudomonas aeruginosa* mastitis** was the cause of severe illness and death in four of 22 dairy cows within 48 to 72 hours after they were dry cow treated. All four cows died 1-2 days later. The two cows submitted for necropsy had severe gangrenous mastitis involving two quarters in one cow and three quarters in the other. *Pseudomonas aeruginosa* was isolated from multiple quarters in both cows and the liver of one cow. The cow that was liver culture positive had histological evidence of embolic bacterial pneumonia and hepatic necrosis.

Equine

Bristlegrass (*Setaria pumila*) and **foxtail barley** (*Hordeum jubatum*) was detected in hay fed to two crossbred adult horses with **tongue and oral ulcers**. Penetration of the mucosa by the barbed, sharp awns from these plants was the probable cause of the ulcers.

CAHFS Lab Locations

CAHFS - Davis

University of California
West Health Sciences Drive
Davis, CA 95616
Phone: 530-752-8700
Fax: 530-752-6253
cahfsdavis@cahfs.ucdavis.edu

CAHFS - San Bernardino

105 W. Central Avenue
San Bernardino, CA 92408
Phone: (909) 383-4287
Fax: (909) 884-5980
cahfsanbernardino@cahfs.ucdavis.edu

CAHFS - Tulare

18830 Road 112
Tulare, CA 93274
Phone: (559) 688-7543
Fax: (559) 686-4231
cahfstulare@cahfs.ucdavis.edu

CAHFS—Turlock

1550 Soderquist Road
Turlock, CA 95381
Phone: (209) 634-5837
Fax: (209) 667-4261
cahfsturlock@cahfs.ucdavis.edu

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
www.cahfs.ucdavis.edu

Equine (cont'd)

Oleander toxicosis and **selenium deficiency** were the cause of severe **myocarditis and myocardial necrosis** in an adult Quarter horse gelding. The horse had been lethargic for three days and developed tachycardia progressing to arrhythmia and was euthanized. Oleandrin was detected in the liver. A concurrent cholangiohepatitis of undetermined cause was identified and was the cause of jaundice seen at necropsy. A pasture mate developed acute staggering, fell through a fence and died but was not tested. Yard clippings with oleander were found in the pasture.

Small Ruminants

Caprine arthritis and encephalitis virus (CAEV) caused chronic **arthritis** in one knee (carpus) and both stifle joints in a down goat. CAEV was confirmed by immunohistochemistry on synovium and serology. The goat had intermittent **diarrhea** which was probably due to the **coccidiosis and copper deficiency** also found.

Corynebacterium pseudotuberculosis caused embolic **pneumonia, meningitis, myocarditis** and ear infection in a 4-year-old Friesian ram that died two days after he was observed to have a **droopy ear and head tilt**. Pus was found in the ear at necropsy. The organism was isolated from the lung, brain and ear.

Wildlife

Anticoagulant rodenticide (AR) toxicosis was the cause of **hemothorax and hemoabdomen** leading to death of an adult female gray fox from Santa Barbara County where this and four other foxes were observed with neurologic signs. The neurologic signs were due to **Canine distemper virus (CDV)** encephalitis. Three ARs were detected in the liver: brodifacoum, bromdiolone and diphacinone. Two gray foxes in poor nutritional condition and with neurologic signs from different locations in Marin County had the same three ARs detected in the liver with the addition of difenacoum in one and warfarin in the other; there was no evidence of a bleeding disorder indicating exposure but not toxicosis. Both foxes had **CDV** and **Listeria monocytogenes septicemia**. One fox had ocular and nasal discharge and pulmonary congestion while the other had epistaxis and pneumonia. Foxes are likely to be exposed to AR through the ingestion of AR-exposed or intoxicated small rodent prey. It is also possible that direct ingestion of AR baits occurs. For a diagnosis of AR toxicosis in any species, in addition to detection of AR, it is critical to have evidence of a concurrent bleeding disorder unrelated to another identifiable cause such as trauma.

Avian

Oleander toxicity caused **sudden death** in three of four **swans** on one premises. The one male bird submitted had acute **myocardial necrosis** typical of oleander toxicity.

Aerosol toxicoses were diagnosed in two unrelated cases. In one case, two **American kestrels** died within 30 minutes of each other after showing **respiratory signs** minutes prior to death. Both birds were housed in a room where an oven was used immediately prior to the onset of their respiratory signs. The oven had been repaired weeks earlier for a gas leak. Both birds had red, wet lungs on gross examination and no other gross or microscopic findings. The second case involved seven of seven indoor **parakeets** that died in a 24-hour period. The lungs of the two birds submitted were dark red and wet and histologically there was marked pulmonary congestion, hemorrhage and edema. The owner regularly used teflon-coated cooking pans. Polytetrafluoroethylene (PTFE) gas, the cause of **teflon toxicosis**, is released when non-stick surfaces are heated above 360°C, a temperature that can be attained when teflon-coated pans boil dry or food burns. PTFE sources include non-stick cookware, drip pans, irons, ironing board covers, self-cleaning ovens, the heating elements of some reverse-cycle heat pumps and heat lamps. The bird respiratory system is extremely sensitive to aerosol toxins. Some avian inhaled toxins include PTFE, smoke, burned foods, spray paint and carbon monoxide. In the past, canaries were used in coal mines as sentinels for gas leaks, particularly carbon monoxide due to their exquisite sensitivity to gases.