



**UC DAVIS**

**VETERINARY MEDICINE**

California Animal Health and  
Food Safety Laboratory System

# CAHFS CONNECTION

May 2013

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### Holiday Schedule

CAHFS will be closed on **Monday, May 27, 2013** in observance of Memorial Day.

Please contact your laboratory to plan your testing needs accordingly.

## Bovine

**Oleander toxicosis** was the cause of death in two steers and a cow over a 4-day period in a small 20 head beef herd on pasture. The third animal to die was submitted to CAHFS for necropsy. The remaining cattle in the herd were depressed, **lethargic and anorexic with watery to bloody diarrhea**. Gross findings in the submitted steer consisted of pulmonary congestion and edema, serosanguinous pericardial effusion and epicardial hemorrhage especially involving the atria. Histologically, the most significant lesion was multifocal, neutrophilic, necrotizing and **hemorrhagic myocarditis**. Because of the compatible clinical signs and pathologic changes, a test for oleander, the toxic principle of oleander, was performed on the rumen content with a strong positive result. The pasture did not contain oleander plants but “grass clippings” had been discarded in the pasture and were the presumed source. Very small quantities of oleander can be lethal to cattle. The remaining cattle appeared to slowly recover over the following week.

**Vulvovaginitis** associated with **Parapoxvirus and Bovine herpesvirus-4** occurred in a group of predominantly first calf heifers. After calving, affected heifers developed vaginal mucosal pinpoint pustules which often ruptured and formed small targetoid ulcers that in some area coalesced into large slow healing ulcers. Biopsies of these ulcers identified Parapoxvirus type lesions, including some cells with eosinophilic intracytoplasmic inclusions. PCR testing and virus isolation on vaginal swabs and biopsy material identified a Parapoxvirus and Bovine herpesvirus-4.

## Equine

**Cardiac tamponade** occurred in a 2-year-old Thoroughbred filly that was found dead in the stall without any previous signs of disease. The pericardial sac was markedly distended with abundant, mostly clotted, blood and the heart was contracted and pale. Examination of the major heart blood vessels revealed a **rupture of the pulmonary artery** probably secondary to a dissecting aneurysm. Arterial rupture and secondary cardiac tamponade is occasionally seen in Thoroughbred horses dying suddenly without any clinical signs. However, most of the ruptures are in the aorta making this an atypical case of cardiac tamponade due to rupture of the pulmonary artery. The cause and pathogenesis of spontaneous arterial rupture in horses is unknown.

***Hypochaeris radicata*** (hairy cat’s ear) was the most common plant found among several bags of pasture plants submitted from a premise where an adult horse had developed **stringhalt** that was resolving. This plant has been associated with stringhalt in horses in California in the past and the toxic principle is unknown.



**Contagious equine metritis (CEM) testing offered at CAHFS Davis laboratory**  
Effective May 1, 2013 the California Animal Health & Food Safety Laboratory at Davis will be conducting CEM testing. The submission form can be found on our website at [http://www.cahfs.ucdavis.edu/submission\\_forms/index.cfm](http://www.cahfs.ucdavis.edu/submission_forms/index.cfm)  
As a regulatory test, specific requirements for collection and submission must be met. Samples are accepted for testing at the Davis laboratory Monday through Friday only.

## CAHFS Lab Locations

### CAHFS - Davis

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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](mailto:shein@ucdavis.edu).

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[www.cahfs.ucdavis.edu](http://www.cahfs.ucdavis.edu)

## Porcine

**Spirochetal pododermatitis** was identified in portions of the claws from a Duroc pig which were submitted for histopathology and culture. The hog was raised in a house with wallow and had developed hoof rot of the right hind foot five months previously which spread to the other hind foot and one forefoot. After two rounds of treatment with systemic and topical antibiotics leading to improvement followed by recurrence when the treatment ended, biopsies were taken and submitted. Histopathology showed severe necrotizing, neutrophilic pododermatitis with massive numbers of spirochetes demonstrated by special stains. Mud and wet conditions soften the foot tissue and favor invasion by spirochetes in cattle with footwart syndrome suggesting a similar mechanism in this pig.

## Small Ruminant

**Uterine (caruncle) amyloidosis** has been recently recognized and detected in several **multiparous**, pregnant **goats** with histories of late term **abortions** or in-utero fetal death. The abnormal amyloid protein is present only in the uterine caruncles of the does. All of the goats necropsied with these uterine deposits have no infectious diseases that might cause abortion or affect the doe. Lesions found in the dead fetuses suggest that fetal death is due to a lack of sufficient placental blood supply which is probably due to the amyloid protein deposits in the uterine caruncles, creating a physical barrier between at the maternal-fetal blood interface. This is a newly recognized syndrome and much still needs to be studied. The condition has been found in several herds. Researchers at UC Davis are currently working to better characterize the nature of the amyloid. Though on occasion an intact placentome containing uterine caruncle tissue from an affected doe has been diagnostic, most cases have required sacrificing the does after abortion to examine the uterine caruncles as amyloid is not present in the aborted fetuses or the placental cotyledons.

## Other Mammalian

**Malignant Catarrhal Fever by Ovine Herpesvirus-2 (OvH2 MCF)** was diagnosed in a yearling bull bison that died following a 1-week history of abnormal **high stepping gait and excessive aggressive behavior**. This animal was part of a larger group of bison comingled with other ruminant species including sheep. Histopathology lesions included mild **arteritis** in multiple tissues, mild interstitial pneumonia and mild cholangiohepatitis. OvH2 was detected in the spleen by PCR. Bison are highly sensitive to OvH2 MCF infection and in this case the level detected by PCR was very low in the tissue which is not unusual for bison infections. EDTA blood samples tested from several additional bison were negative. Sheep are the natural reservoir host for OvH2 MCF (sheep associated MCF) and infection in this bison likely occurred from exposure to the comingled sheep. In previous bison outbreaks, multifocal urinary bladder hemorrhage and ulcerative enterocolitis have been seen at necropsy.

## Avian

**Pigeon Paramyxovirus-1 infection** was diagnosed in a group of six squabs. The history indicated an increased mortality and 15-20 percent of birds exhibited **twisted necks, head tremors, lethargy**, and greenish diarrhea, which had been going on for two weeks in the flock. At necropsy, some birds had petechial hemorrhages and diffuse white spots on the pancreas. Histologically, pancreatitis and nephritis were the most striking lesions. Serological results by the inhibition hemoagglutination test and PCR tests on both oropharyngeal and cloacal swabs were positive for Avian paramyxovirus-1.

**Fowl cholera due to *Pasteurella multocida*** was diagnosed in two Ruddy ducks and one Shoveler duck submitted from a county park where 100 dead birds had been found. Fowl cholera also caused droopy birds and eventual death in free ranging backyard laying **chickens**.

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**CAHFS is no longer offering the Fluorescent polarization assay (FPA) for Brucellosis.** This test is required for goat export to Canada. Samples for testing can be sent to the University of Wyoming veterinary diagnostic laboratory and Idaho Department of Agriculture laboratory.

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