



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • APRIL, 2017



Inside this issue:

- **Bovine**
 - Bronchopneumonia in beef steers
 - Splenic rupture from lymphoma
- **Equine**
 - Enterolithiasis
 - Hemangiosarcoma -mule
- **Pig**
 - Splenomegaly rupture from leukemia
- **Camelid**
 - Gastric ulcers
- **Small Ruminants**
 - Late-term abortions - sheep
 - Toxoplasma gondii* - goat
- **Poultry & Other Avian**
 - Ascariasis - pigeon
 - Infectious coryza - chicken

Events

Spring has sprung and with spring comes UC Davis' annual Picnic Day, Saturday, April 22, 2017. This year our Equine Pharmacology lab will be providing equine treadmill demonstrations. There will be strict visitor capacity and registration is on a first come, first served basis. You may register the morning of Picnic Day at the Information Tent located at the entrance to the Small Animal Clinic of the hospital. Demonstrations will be given every half hour from 10 am-2 pm (last demo at 1:30 pm).

Picnic Day information

Pregnancy Test for Cattle and Small Ruminants now Offered

CAHFS is now offering serologic testing for pregnancy. The IDEXX ELISA detects early pregnancy-associated glycoproteins in serum of cattle, sheep, and goats. The test can be used in cattle and goats from 28 days post-breeding, and in sheep from 35 days post-breeding. Test performance was evaluated in goats and found that diagnostic sensitivity was 89% for animals bred 28-30 days earlier, and 97% for animals bred more than 30 days earlier. The diagnostic specificity in goats was 97%. The manufacturer reports Se/Sp of 99%/94% in cattle, and 98%/100% in sheep. The in-state fee for this test is \$7.30. Please call the Davis laboratory at 530-752-8700 if you have any questions.



Bovine

Bronchopneumonia caused several deaths in a group of 3-month-old beef steers under treatment for pneumonia. A submitted steer had bilateral bronchopneumonia with lung abscesses and pleural fibrosis. The pathogens identified included Bovine Respiratory Syncytial Virus, *Mycoplasma bovis*, *Bibersteinia trehalosi* and *Trueperella pyogenes*.

Splenic rupture from lymphoma was found in a 14-month-old Holstein heifer reported "sick" for approximately one week before being found dead. Death was due to massive internal bleeding from the spleen rupture but lymphoma affecting the lymph nodes, spleen, liver, heart, abomasum, uterus and one ovary was the underlying disease that lead to clinical signs and rupture.

Equine

Enterolithiasis resulted in rupture of the small colon in a 15-year-old Quarter horse. Abundant intestinal contents and a round, smooth, rock-solid, fist-size, 550 gram enterolith were found free in the abdominal cavity. Five similarly sized and shaped enteroliths were found impacted in the right dorsal colon, immediately before the transition to the small colon, where the colonic lumen significantly narrows.

Hemangiosarcoma was identified in a 27-year-old female mule with history of depression, circling and ataxia. Large amounts of clotted blood were

detected in the abdominal cavity, coupled with numerous 0.5 to 1.8 cm diameter red to black, firm nodules in the retroperitoneal connective tissue (origin of the abdominal hemorrhage), heart, lung and brain. These masses were composed of endothelial cells, which supports the diagnosis of hemangiosarcoma. These tumors are infrequent in horses, representing approximately 3% of all tumors in equids older than 20 years. The prognosis is very poor.

Pig

Splenic rupture due to leukemia-induced splenomegaly was the cause of death in a 3-month-old Hampshire pig that was found dead 10 days after being purchased.

Continued





UCDAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

Lab Locations:

CAHFS – Davis

University of California
620 West Health Sciences Dr.
Davis, CA 95616
Phone: 530-752-8700
Fax: 530-752-6253
daviscahfs@ucdavis.edu

CAHFS – San Bernardino

105 W. Central Ave.
San Bernardino, CA 92408
Phone: 909-383-4287
Fax: 909-884-5980
sanbernardinocahfs@ucdavis.edu

CAHFS – Tulare

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

CAHFS – Turlock

1550 N. Soderquist Road
Turlock, CA 95380
Phone: 209-634-5837
Fax: 209-667-4261
turlockcahfs@ucdavis.edu

Continued

The pig had been off feed for one day prior to death. At necropsy, an approximately one liter blood clot was attached to the rupture in the uniformly and markedly enlarged and friable spleen.

Camelid

Gastric ulcers were the cause of chronic weight loss in a 6-year-old female Alpaca. On post-mortem examination, the alpaca had numerous irregular, well demarcated ulcers in the gastric compartments 1 and 2; some ulcers were covered with a yellow pseudomembrane. In addition, a few ulcers were identified in the oral cavity and esophagus. Histopathology of these lesions revealed large colonies of gram negative pleomorphic bacteria deep in the ulcerated mucosa and submucosa. *Fusobacterium necrophorum* was isolated from these lesions. Viral causes (BVDv, BTV, EHDv, MCFV) were ruled out. *F. necrophorum* has been previously identified in ulcerative lesions in the oral cavity, esophagus and gastric compartments in alpacas submitted to CAHFS, and in all cases, other causes of ulcers were ruled out. This leaves *F. necrophorum* as the likely cause of the lesions, although a role as secondary invader cannot be completely ruled out.

Small ruminants

Late-term abortions occurred in two age groups of **ewes** on a single property. An aborted fetus submitted from the older ewe group had placentitis, fetal pneumonia and conjunctivitis from which *Mannheimia haemolytica* was isolated. An abortion from a yearling ewe group had similar lesions, but *Chlamydia* spp. was identified in the placenta by immunohistochemistry. In a separate sheep flock with late-term abortions, several submitted fetuses had hepatitis, pneumonia and gastroenteritis; *Campylobacter fetus* subspecies *fetus* was isolated from all the samples.

Toxoplasma gondii abortion was detected by immunohistochemistry in a meat-type goat herd experiencing multiple third trimester abortions. The placentas of three fetuses submitted had numerous scattered, 2 to 3 mm, white cotyledonary foci, while the intercotyledonary placenta was grossly unremarkable. All cotyledons had severe histologic lesions of multifocal necrosis with mineralization. Immunohistochemistry stain for *Toxoplasma gondii* was positive. Fetal lesions were minimal and consisted of focal encephalitis in one of the three fetuses.

Poultry and Other Avian

Ascariasis was found in one adult and one juvenile racing pigeon submitted from a flock of approximately 20 birds with history of weight loss of approximately 2-week-duration. On gross examination both birds were thin and the small intestines were markedly dilated and impacted by numerous ascarids (roundworms). The owner had not treated the flock for parasites in over a year and treatment resolved the weight loss issue.

Infectious coryza was diagnosed in six, 38-day-old, organic broiler chickens with a clinical history of increased mortality, respiratory signs, including swollen head, wattles, and infraorbital sinuses, “almond-shape” eyes, and ocular and nostril mucoid secretions. At necropsy the birds had large accumulation of a cloudy exudate in sinuses, trachea, and turbinates and yellow exudate in the subcutis of the face and wattles. One bird also had severe abdominal airsacculitis. *Avibacterium paragallinarum*, the etiological agent of infectious coryza, was isolated from infraorbital sinuses, and identified by PCR.

