



UC DAVIS

VETERINARY MEDICINE

California Animal Health and  
Food Safety Laboratory System

# CAHFS CONNECTION

March 2015

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## Holiday Schedule

CAHFS will be open, but will have only limited services available on **Friday, March 27, 2015** in observance of Cesar Chavez Day.

Please contact your laboratory to plan your testing needs accordingly.

## Bovine

**Interstitial pneumonia** was found in two adult Holstein cows from an approximate 10,000 head dairy with a history of sudden death. Both animals had severe sub-acute to chronic interstitial pneumonia with interlobar emphysema and edema. Microscopically, the pulmonary lesions were suggestive of a viral etiology. The most common infectious agents of bovine pneumonia (Bovine respiratory syncytial virus, Parainfluenza 3 virus, Bovine herpesvirus type 1, *Mycoplasma bovis* and several bacterial agents) were ruled out with conventional and molecular diagnostic tests and the cause of the problem could not be determined.

**Salmonella group D1 (probably *S. Dublin*) septicemia, pneumonia and enteritis** were diagnosed in a previously treated 2-month-old dairy calf that had chronic bronchopneumonia, embolic hepatitis (orange liver), splenitis (swollen spleen) and ileitis. Salmonella group D1 was isolated from all tissues. Salmonella group D1 is a common cause of septicemia and enteritis in 3- to 16-week-old calves.

**Frothy bloat** was diagnosed in three beef herds and suspected in two other herds in 1- to 2-year-old cattle on pastures containing a high proportion of filaree in January and February. Confirmed herds ranged from 25-1600 head. Four cattle died in two days in the smallest herd and 30 died over one month in the largest. Frothy rumen contents were found in all six animals submitted from the three confirmed herds. One herd had also treated 15 head that recovered. Vegetative stages of filaree have high crude protein and low crude fiber values equivalent to clover and which are risk factors contributing to the occurrence of frothy bloat.

## Equine

***Clostridium sordellii* and *Streptococcus equi* ssp. *zoepidemicus*** were isolated from the small intestine of a horse with severe necrotizing **enteritis**. The former was also demonstrated by immunohistochemistry within the intestinal lesions. The most common agents of enteric disease in horses (*Clostridium perfringens* type C, *Clostridium difficile*, Salmonella spp., strongyles, and oleander and metal toxicosis) were ruled out. In this case, it was suspected that the enteritis was caused by *Clostridium sordellii* and *Streptococcus equi* ssp. *zoepidemicus*. However, these microorganisms can be found, albeit rarely, in the intestine of clinically normal horses, and definitive evidence of a role in the pathogenesis of equine enteric disease is lacking.

A **humeral fracture** was found in a 2-year-old Thoroughbred filly. Necropsy revealed a spiral, complete and comminuted fracture of the left humerus, with a severe pre-existing lesion (stress fracture) on the caudo-proximal part of the bone. The great majority of catastrophic fractures of racing horses occur in areas of bone where pre-existing lesions are present. In the case of the classical humeral fractures like the one in this filly, it has been demonstrated that if these pre-existing stress fractures are diagnosed early and the horses are allowed to rest for several months, there is full recovery.

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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](mailto:slhein@ucdavis.edu).

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### Equine (cont'd)

**Right dorsal displacement of the large colon** was diagnosed in a 6-year-old Thoroughbred gelding that died after progressive, intermittent colic. Postmortem examination revealed right dorsal displacement of the large colon, with associated severe congestion, hemorrhage and necrosis of the colon mucosa. This condition involves displacement of the left segments of the large colon to the right of the cecum and it presumably results from tympany (gas distention).

**Enterolithiasis** of the right dorsal colon was diagnosed in a 22-year-old mare with colic, anorexia and inability to defecate. A 10cm diameter enterolith, which weighed 1.4 kg, was firmly lodged at the right dorsal colon/small colon junction, blocking the normal passage of digesta. In addition, the mare had a right head tilt that was more prominent when blind folded. Examination of the thickened right stylohyoid bone and temporohyoid joint revealed changes compatible with **temporohyoid osteoarthropathy**.

### Small Ruminant

**Staphylococcus mastitis** was found in a 2 ½-year-old Saanen goat doe that died suddenly. Postmortem examination revealed severe acute mastitis and septicemia, with *Staphylococcus aureus* isolated from the mammary gland and multiple internal organs. The mastitis probably occurred first and then spread systemically causing the death of the animal.

A **pituitary abscess**, suppurative brain ventriculitis and hydrocephalus caused paresis followed by death in a 9-month-old Suffolk ewe lamb. Gram negative bacteria were seen in the abscess but the cultures were non diagnostic.

### Pig

**Sarcoptic mange**, *Staphylococcus* pustular **dermatitis** and **intestinal parasitism** were found in a 6-month-old, crossbred pig that had died on a small organic farm with 20 pigs. Fifteen pigs had pruritis with alopecia and/or crusty areas and subcutaneous abscesses, affecting up to 90% of the body. The pigs were weak and huddled together. Histologically, diffuse and severe hyperkeratosis with large numbers of mites, consistent with *Sarcoptes* sp, burrowed in the keratin layers. Additionally, numerous cocci were seen in keratin layers and subcorneal pustules. *Staphylococcus hyicus* was isolated from a subcutaneous abscess. Large numbers of ascarids were detected in the small intestine.

**Leptospirosis** was the cause of **abortion** in two sows on a farm with no history of abortion the previous year. Two fetuses were submitted for full abortion workup and both were positive for *Leptospira* by the fluorescent antibody test. Both fetuses had neutrophilic interstitial pneumonia and neutrophilic placentitis.

### Poultry and Other Avian

**Avian pox** lesions were seen on the face of all layer hens submitted from two houses of a commercial egg ranch, with a history of **loss in production** over the past week. No other gross or histological lesions were seen in any of the birds examined, and all the other laboratory tests were negative or non-diagnostic. The pox lesions were considered to be associated with the decrease in production.

**Marek's disease** was the probable underlying factor **predisposing to** a combination of **colibacillosis**, **coccidiosis**, **respiratory cryptosporidiosis** and respiratory and spinal **aspergillosis** responsible for increased mortality in 13-week-old brown pullets. The chickens were from a flock of 22,000 and had clinical signs of being down on legs, respiratory difficulty and increased mortality from baseline of 10 per day to 70 per day. The chickens had been vaccinated for Marek's disease in the hatchery but the cause of vaccine failure could not be determined.