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## Holiday Schedule

In observance of Martin Luther King day, CAHFS will be closed on Monday, January 19, 2015

Please contact your laboratory to plan your testing needs accordingly.

## Bovine

**Pyelonephritis and cystitis** due to *Corynebacterium cystitidis* was diagnosed in a pregnant beef cow with vague respiratory signs prior to death. At necropsy, there was bilateral kidney enlargement with purulent exudate expanding the pelvis, medullary necrosis and thinning of the cortex. The ureters and bladder contained purulent exudate. Cultures of the kidneys and one ureter yielded pure growth of *C. cystitidis*, a member of the *Corynebacterium renale* group that is associated with ascending urinary tract infection in cows.

**Epizootic bovine abortion** aka Foothill abortion (EBA) and **selenium deficiency** were diagnosed in a northern California beef herd experiencing increased late-term abortions. The first fetus submitted had EBA based on typical thymus, lymph node and systemic histologic lesions. The second fetus had multifocal **myocardial necrosis and mineralization** without evidence of an infectious disease. The liver of the second fetus had a low selenium level suggestive of selenium deficiency induced cardiomyopathy. EBA was also diagnosed from a late-term aborted Angus fetus in southern California; the disease had not previously been reported in herds south of the Central Valley.

*Campylobacter fetus* ssp. *venerealis* caused the **abortion** of a 6-month gestation Holstein fetus with lesions of bronchopneumonia and abomasitis. The dairy was experiencing a high rate of open cows at pregnancy reconfirmation and abortions in multiple pens. The organism was isolated from lung and abomasum of the fetus and from uterine exudate from a second cow that was open at pregnancy reconfirm.

## Equine

**Severe liver disease** was detected in tissues submitted from two horses on the same premises that were euthanized after a brief clinical course of lethargy. The horses were being fed alfalfa hay. Liver lesions consisted of severe bridging and dissecting fibrosis with marked megalocytosis. These changes were considered to be compatible with a toxic etiology, presumably a **pyrrolizidine alkaloid** containing plant.

**Nasal ethmoidal adenocarcinoma** with extension into the left olfactory lobe and rostral cerebrum was the cause of progressive **neurologic disease** over a 2-month period in a 15-year-old Thoroughbred gelding. The horse initially exhibited left eye blindness followed two months later by depression, reluctance to move, decreased awareness of surroundings, difficulty turning (especially to the right), weakness with tail sway test and drooping left eyelid.

## Small ruminants

**Abomasal bloat** and **perforating abomasal ulcer** caused the death of a 2-month-old crossbred goat kid on a dairy where eight kids in a group of 100 kids fed free-choice powdered milk in a milk bar, had died with bloat. Large numbers of *Sarcina* sp., a bacterial marker of abomasal bloat in ruminants, were seen in the abomasum and diaphragm. The ulcer was several days old and probably perforated due to the distention of the abomasum. The kid died within hours of onset of the bloat and intubation of the rumen failed to relieve the gas distension.

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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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## Small Ruminant (continued)

**Severe abomasal parasitism** with *Haemonchus* and *Teladorsagia* resulted in anemia and low protein causing bottle jaw, anorexia, lethargy and diarrhea in multiple adult ewes on two premises. Two affected ewes were submitted 18 days apart from one premises that had used the same wormer multiple times in the two-weeks leading up to the death of the second ewe submitted. Both ewes from this premises also had severe copper deficiency. The other premises with *Haemonchus* and *Teladorsagia* reported six sick and four dead ewes over a 2-month period. *Nematodirus* and *Trichuris* eggs were also found in the feces.

## Pig

***Haemophilus parasuis*** caused pneumonia, pleuritis and pericarditis in 3-week-old pigs on a ranch experiencing a 15% incidence of chronic cough in nursery pigs. Co-infection with *Bordetella bronchiseptica* was found in the lung of one of the two *H. parasuis* infected pigs. PRRS virus testing was negative.

## Poultry and Other Avian

**Fowl cholera** due to *Pasteurella multocida* caused the deaths of **chickens** and wild **waterfowl** in multiple locations. *P. multocida* was the cause of cellulitis of the head and conjunctivitis in a backyard chicken, and pneumonia and airsacculitis in 40- to 60-week-old layer hens. *P. multocida* septicemia was found in wild water fowl including: i) a tundra swan and snow goose submitted from a wetland in Glenn county reporting 13 deaths, and ii) all three coots submitted from a reservoir in Siskiyou county where about 200 coots, grebes and ducks were dead.

**Scoliosis causing spinal cord compression** was diagnosed in a 5-day-old **turkey** poult that was unable to stand and was lying on its back. At necropsy, the scoliosis was most prominent in the cervical and thoracic spine. Histopathology revealed severe focal degenerative myelopathy due to compression by the vertebrae. Scoliosis is a sporadic occurrence in various species of birds, the cause of which is not known.

**Zinc phosphide toxicosis** caused the sudden death of nine **Canada geese** in San Luis Obispo county. Strychnine or zinc phosphide toxicoses were suspected because these poisons had been used in the area. On necropsy exam, two birds submitted had a sour, "rotten fish" smell and contained few metallic black-dark grey fragments in the gizzard. Toxicologic analysis detected phosphine, the toxic principle of zinc phosphide, in the stomach contents of both birds. Zinc phosphide is most often used for control of gophers, prairie dogs and moles, but is highly toxic to all animal species, causing respiratory distress and usually acute death. Typical findings are the "rotten fish" odor of poisoned animals, and black, metallic pellets or powder form of zinc phosphide in the stomach. Strychnine was not detected in any of the birds.

## Other Mammalian

**Epizootic Hemorrhagic Disease virus (EHD)** infection was identified as the cause for lethargy in a wild **black tailed fawn** that was euthanized and submitted for necropsy. The fawn had proliferative and necrotizing mucosal lesions involving the tongue, pharynx, epiglottis and esophagus. PCR was used to identify EHD virus and to rule out other causes.

Desmethylbromethalin, the active metabolite of the non-anticoagulant rodenticide **bromethalin**, was found in the tissues of two striped **skunks**, and was considered the cause of the **neurological signs** seen in these animals. The skunks were observed to be wobbly ("drunk-like") and unable to move their rear legs. Bromethalin causes brain edema and inhibition of neural transmission.

**Oleander toxicosis** caused the death of one of 11 recently acquired Yak yearlings exhibiting respiratory signs prior to death. Necropsy findings included lung edema and extensive heart hemorrhage. Histologic examination revealed acute **myocardial necrosis** with neutrophilic myocarditis, suggestive of toxicity. The urine contained oleandrin, the toxic compound of oleander.