



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • SEPTEMBER, 2017



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Changes to Antimicrobial Susceptibility Testing coming to CAHFS

CAHFS will soon be implementing Minimum Inhibitory Concentration (MIC) methods that will allow us to provide both quantitative data and additional interpretations for drugs available for use in animals. This testing will be performed in our Davis location. CAHFS adheres to the Clinical Laboratory Standards Institute (CLSI) guidelines for the most updated interpretations of susceptible (S), intermediate (I), and resistant (R) for bacteria. These interpretations incorporate information on the clinical response to treatment, as some drugs previously defined as effective based on susceptibility testing have failed during therapy.



As a first step towards implementation of this new process, CAHFS will be shifting all susceptibility testing to Davis, effective immediately. The transition may result in a temporary delay of 1-2 days to receive susceptibility reports, but staff will make every effort to minimize the impact to clients as we transition to our new processes. As always, if you have any questions or concerns regarding your test results, please contact your Case Coordinator. We thank you for your patience and look forward to meeting your current and future testing needs.

Equine

West Nile virus (WNV) infection was diagnosed in two horses in southern California. The first case was an adult Quarter horse mare that had a 3-day history of recumbence and proprioceptive deficits. No significant gross lesions were noted in any organs. Histologically, lymphoplasmacytic poliomyelitis was identified in the distal cervical, thoracic and lumbar segments of the spinal cord. The second case was a 3-year-old Quarter horse stallion that had a 3-day history of progressive paresis. Gross lesions included hemorrhage in the spinal canal and congestion of the spinal cord. West Nile virus was confirmed by PCR in both cases. These the cases were somewhat unusual as both had a history of vaccination.

Horses are considered dead end hosts for WNV which means that the virus is not contagious from horse to horse or horse to humans.

Salmonella group B enteritis was diagnosed in an 8-day-old Quarter horse colt that had diarrhea and depression for five days prior to death. Microscopic examination confirmed enterocolitis, and Salmonella group B was isolated from the intestine.

Continued





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TEST LISTS AVAILABLE

Lists of “**Frequently Requested Tests**” by species are available on CAHFS’ web site. Go to the **FAQ** on the **Lab Tests & Fees** page and select the first question “How do I find the tests that CAHFS offers and how much they costs?”

Bovine

Acute bovine pulmonary emphysema and edema (ABPEE), also known as fog fever, was the cause of death in a 1-year-old, fully vaccinated beef heifer that died suddenly. The herd was transferred from the foothills, onto a new irrigated pasture less than a week prior. ABPEE is caused by the consumption of lush pasture that is high in L-tryptophan, which is converted in the rumen to 3-methylindole, a substance that is toxic to the cells lining lung alveoli. Grossly, the affected lungs are heavy and exhibit variable degrees of edema and emphysema. Clinically, animals may present with sudden onset of severe respiratory distress or are found dead. In this case, the management was altered to allow for a more gradual transition to the new pasture, and hopefully prevent any additional cases of ABPEE.

Pig

Whipworms (*Trichuris spp.*) caused bloody diarrhea and anorexia of 4-days-duration prior to death in a 3-month-old high school farm pig. Four of seven in the group were affected and two had died. The wall of cecum and colon of the pig submitted for necropsy was thickened and contained abundant red-tinged fluid, and fibrin attached to the mucosa. Microscopically, numerous whipworms were seen attached to the mucosa. Because fecal float was negative, it was assumed that the worms were larval stages. Whipworms are a common problem in project pigs as eggs can survive for years in the dirt.

Small Ruminant

Cervical vertebrae fracture caused the acute death of an otherwise healthy 5-month-old mixed breed lamb. This animal and 11 other lambs were housed in a dry lot during the day and put into a barn overnight. The lamb was found dead in the morning. On postmortem examination, there was a severe fracture of vertebral body of C2 with complete separation from dens. The overlying spinal cord was transected.

Poultry and Other Avian

Reassortant very virulent infectious bursal disease (vvIBD) was diagnosed in two separate backyard chicken submissions in Southern California; the flocks were located 20 miles apart. One case was a 7-week-old chick from a flock of 40, that had ruffled feathers and labored breathing before it was euthanized. The second submission consisted of three 8-week-old chicks; two of them died spontaneously and the third was euthanized. On gross examination, all four birds had enlargement of the bursa of Fabricius, pallor of the lungs and liver, and marbling of the spleen. Microscopically, there was severe lymphoid necrosis and depletion in the bursa, spleen and mucosal-associated lymphoid tissue, and heterophilic bursitis. PCR and sequencing identified a genetic reassortant infectious bursal disease (IBD) virus with vvIBDV segment A and a serotype 2 segment B. Serotype 2 IBDV strains are usually found in turkeys. IBD, also known as Gumboro disease, is a highly contagious viral infection of chickens due to infection with IBD virus. Infection can result in high mortality or prolonged immunosuppression.

Trichomonas spp. infection of the crop and esophagus, and **bacterial pneumonia** caused the death of 15 budgerigars over a period of two months in a flock of 30 birds housed in an outdoor aviary of a rural area. Clinical signs included respiratory dyspnea and difficulty in swallowing. Large numbers of wild doves in the area and dusty conditions around the aviary might have been the source of *Trichomonas* spp. and bacteria, respectively.

