



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • JULY, 2017



New California *T. foetus* Regulations and Impacts on Testing

The California Department of Food & Agriculture's Animal Health Branch proposed changes related to animal disease traceability also included the trichomonosis program. These changes, which were approved and became effective April 1, 2017, are available to view on [CDFA's web site](#).

In order to provide official *T. foetus* test results, CAHFS requires individual identification such as silverbrite or RFID numbers. Providing the Trichomonosis approved eartag number is optional.

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Horse

Halicephalobiasis was diagnosed in two unrelated horses in Southern California in the last month. The first case was an 18-year-old Gypsy Vanner mare with a clinical history of three days of progressive neurologic signs including ataxia and head pressing on day 1, to recumbency and dog paddling on day 3, when the mare was euthanized. No gross lesions were detected at necropsy; however histopathologic examination of brain and spinal cord revealed multifocal granulomatous meningoencephalitis and neuritis of cranial and spinal nerves, with abundant intralesional nematodes and eggs. The second case was an Arabian mare with a history of chronic, severe hematuria, deterioration and euthanasia. Field necropsy revealed the presence of large, firm, off-white nodular masses in both kidneys, and scattered small firm to gritty nodules in the lungs. Histologically the kidney masses were exuberant granulation tissue and inflammation with large numbers of intralesional nematodes, larvae and eggs. The lung nodules were smaller granulomas with nematodes. Based on the rhabditid nematode morphology, the tissues involved, and the nature of the inflammatory response, a presumptive diagnosis of *Halicephalobus gingivalis* infection was made in both cases. *H. gingivalis* is a free-living (rhabditid) nematode of soil, decaying organic matter and horse manure, and a facultative parasite primarily of horses and rarely of humans. Little is known about the life cycle and method of transmission; however the portal of entry appears to be penetration of mucous membranes (particularly oro-

pharyngeal) and skin wounds, with subsequent spread to other organs. Only female nematodes, larvae and eggs have been detected in tissues, and nematode reproduction in the host is believed to be asexual. Sexual reproduction appears to occur during the free-living part of the life cycle. In horses, the organs and tissues most commonly affected are meninges, brain, spinal cord, central or spinal nerves, kidney, mandibular bone and maxillary bone and sinuses, gingiva, eye, and prepuce, with less frequent reports of involvement of adrenal gland, lung, mammary gland and testicle.

Bovine

Encephalitis was diagnosed in a 15-month-old Brown Swiss heifer that was circling, falling and been recumbent for one day. No gross lesions were found, but histologically there was severe encephalitis suggestive of listeriosis.



Holiday Calendar

CAHFS will be closed on **Tuesday, July 4, 2017** in observance of Independence Day.



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Continued

Salmonella group D1 septicemia was diagnosed in two, 4-month-old Holstein heifers from a pen of calves experiencing diarrhea, bloating and pneumonia. Both heifers had similar gross changes consisting of lung congestion, enlarged livers, spleens and mesenteric lymph nodes, cholecystitis, and pseudomembranous enteritis. Histologically there were disseminated lesions of embolic pneumonia, hepatitis, cholecystitis, splenitis, lymphadenitis and enterocolitis. Cultures of multiple organs and the intestines yielded *Salmonella* group D1, usually *S. dublin* in calves, consistent with systemic and enteric Salmonellosis.

Pig

Streptococcus suis polyserositis and septicemia resulted in a 1.2% mortality overnight in a weaner pig population with no apparent clinical signs. On gross examination pigs had meningitis, peritonitis, and interstitial pneumonia with fibrinous pleuritis. Histopathology also revealed hepatitis and splenitis. *Streptococcus suis* was isolated from the lungs, liver, brain, and thoracic and abdominal fluid. Outbreaks usually occur after an asymptomatic carrier of a highly virulent *S. suis* strain is comingled with naïve weaned pigs. The disease is typically seen in weaned and growing pigs, although sporadic disease does occur in adults.

Small Ruminant

Myelitis due to infection with Caprine Arthritis Encephalitis virus (CAEv) was diagnosed in a 2-month-old goat kid with a history of hind limb paralysis but a good appetite. On postmortem examination the brain and spinal cord were normal with the exception of mild edema in the lumbar cord. On sectioning, several grey tinged areas were noted in the caudal spinal cord. Histologically the goat had severe multifocal myelitis involving the caudal one-third to one-half of the spinal cord. Immunohistochemical staining for CAEv was positive in areas with lesions.

Clostridium perfringens type D enterotoxemia was diagnosed in a 2-year-old goat that died after exhibiting frothy fluid in the mouth and bloody stools. At necropsy the lungs were markedly edematous, the large colon contained dark red bloody content and the mesenteric lymph nodes were swollen. Histologic changes were non-diagnostic. However, the presence of *Clostridium perfringens* epsilon toxin in the colonic content confirmed a diagnosis of *C. perfringens* type D enterotoxemia (overeating disease).

Poultry and Other Avian

Staphylococcus aureus was isolated from hock joint infections in 35-week-old broiler roosters in a flock of 10,000 hens and roosters. Clinical signs of two weeks duration included limping, unable to access feed and water and increased morbidity. Necropsy of six birds revealed mild to severely swollen hock joints and occasional foot pads which contained cloudy exudate mixed with flecks of fibrin.

Myocarditis due to Reovirus was diagnosed in 19-day-old turkey poults with a history of diarrhea, litter eating and increased mortality. There were 24,000 birds in the flock and the mortality was 70 birds per day (normal level of 20 per day) and the morbidity was 33%. Necropsy revealed many birds with dilated right hearts with pale myocardium and enteritis. Reovirus was isolated from the hearts. This Reovirus virus is not related to the Reovirus which has been causing tenosynovitis in broiler chickens.

