



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • JUNE, 2018



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UPDATE: Virulent Newcastle disease in California

Following the initial detection of virulent Newcastle disease (vND) through a routine submission to CAHFS which was confirmed by the United States Department of Agriculture (USDA) on May 16, 2018, CAHFS continues working with the California Department of Food and Agriculture (CDFA), USDA and poultry owners to contain and eradicate this foreign animal disease. As of May 25, 2018, cases have been confirmed on six premises in Los Angeles and San Bernardino counties. More information is available at the [APHIS website](#).



Rooster with vND showing signs of depression/lethargy

Virulent Newcastle disease is a very contagious and often fatal disease of many avian species. Infected birds might show a variety of clinical signs including sudden death, respiratory signs such as sneezing and nasal discharge, depression, paralysis and diarrhea. Biosecurity remains the key step to prevent spread of this disease. This includes washing hands and scrubbing boots before and after entering a poultry area, cleaning and disinfecting tires and equipment before moving them on or off the property, and isolating any birds returning from shows for 30 days before placing them with the rest of the flock. In addition

to practicing good biosecurity, all bird owners should report sick birds or unusual bird deaths through **California's Sick Bird Hotline, 866-922-BIRD (2473)**. Additional information on Newcastle disease and biosecurity for backyard flocks can be found on [CDFA's website](#).

CAHFS offers diagnostic services for all avian species. Oropharyngeal swabs and/or sick/dead birds are the preferred samples for diagnosis of Newcastle disease. Please contact any of the four CAHFS laboratories if you need additional information on sample submission.

Our San Bernardino lab is closest to the current outbreak location. If you are planning to submit samples to this location, we ask that you consider the following options to reduce the risk of contamination:

1. Submit your sample(s)/carcass(es) via courier when possible. You may contact the laboratory at 909-383-4287 to request CAHFS' FedEx account number in order to take advantage of our reduced rates. Or, if this is not possible:
2. Call the laboratory (same number as above) before coming so instructions can be given on where to deliver your sample(s)/bird(s).

The other laboratories (Davis, Turlock and Tulare) continue receiving samples and carcasses





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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

18760 Road 112
Tulare, CA 93274
Phone: 559-688-7543
Fax: 559-688-2985
tularecahfs@ucdavis.edu

CAHFS – Turlock

1550 Soderquist Road
Turlock, CA 95381
Phone: 209-634-5837
Fax: 209-667-4261
turlockcahfs@ucdavis.edu

Continued

Bovine

Salmonella group D1 septicemia caused distal rear limb necrosis in a 6-week-old Holstein calf on a calf ranch. The owner noticed the leg was “falling off” due to circumferential skin necrosis immediately above the hind fetlock which led to gangrene and necrosis of the limb. The fetlock joint was an open wound, with friable red-black tissues and superficial environmental contamination. Histologic lesions included bronchopneumonia, pyloric abomasitis, and necrotizing osteomyelitis in PI. *Salmonella* group D1, most likely *S. Dublin*, was isolated from the lung, deep fetlock joint and PI bone swabs. Septicemia by *S. Dublin* is a primary differential in distal limb, tail and ear tip necrosis in cattle, as well as ergotism or constricting wire around leg.

Lead toxicosis caused shaking, trembling and death of a yearling beef steer that had recently been treated for respiratory disease. The liver had 28ppm of lead. No lesions of pneumonia were noted in the tissues submitted and the origin of the lead was not determined.

Equine

Colon rupture secondary to chronic colon smooth muscle hypertrophy resulted in the death of a 15-year-old Quarter horse mare following one day of anorexia, foaming at the mouth, and late onset ataxia, head down, and convulsions just prior to death. The left ventral colon from the rupture site at the sternal flexure to the pelvic flexure was thickened and histologically had marked outer longitudinal smooth muscle hypertrophy. This condition is most commonly reported in the ileum.

Small Ruminant

Frothy bloat caused the death of a yearling Dorper ram that had respiratory distress, bloated abdomen and rumen fluid exuding from the nose and mouth prior to death. Stable frothy foam was found in the distended rumen. The head and neck were congested and the esophagus had a bloat line at the thoracic inlet.

Polioencephalomalacia was diagnosed in a 12-day-old Boer kid that exhibited convulsions, lateral recumbency, dilated pupils, distress and tachycardia for less than 12 hours before death. Brain swelling and fluorescence with UV light were noted at necropsy, and high sodium ion levels were detected in the brain. Sodium toxicosis/water deprivation can cause polioencephalomalacia. The other kids in the group however were not affected.

Pig

Spinal cord fibrocartilaginous emboli caused loss of control of hind legs, constipation and inability to empty the bladder in a 15-year-old Pot Belly pig. At necropsy, the urinary bladder was markedly distended with urine and the colon was filled with dry pelleted contents. The lumbosacral spinal cord had a focal area of myelomalacia, hemorrhage, acute inflammation and the presence of fibrocartilaginous emboli occluding multiple blood vessels. This condition is rare in pigs. The embolism (sudden blocking of a blood vessel) occurs in the spinal cord when intervertebral disc material enters nearby vessels (veins and arteries) and blocks one of the spinal cord vessels. Clinical signs often develop after a minor or even unnoticed “triggering event”, such as trauma. In this case, protrusion and degeneration of some intervertebral discs of the spine were noted during gross examination.

Poultry and Other Avian

Histomoniasis caused increased mortality and sudden death in turkeys on five premises in the past three months. Affected birds ranged from 9.5 to 12.5 weeks in age and one turkey was a year old. All birds had typical pale spots in the liver, and thickened, enlarged and necrotic ceca.

