



UC DAVIS

VETERINARY MEDICINE

California Animal Health and Food Safety Laboratory System

# CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • MARCH 2018



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## Holiday Schedule

CAHFS will be open, but will have limited services available on **Friday, March 30, 2018** in observance of Cesar Chavez Day.

## Tulare Lab Update

The day we have been waiting for has finally arrived. The Tulare laboratory will be moving into its new facility this month. To accommodate the move, the laboratory will be closed March 22-25, 2018. We will reopen for business in the new laboratory, located at 18760 Road 112, Tulare, CA 93274, on Monday, March 26, 2018. For emergency cases only during the closure, call 559-799-5995. If you have any questions, please call the laboratory at 559-688-7543.



## Equine

**Equine degenerative myeloencephalopathy (EDM)** was diagnosed in a 5-month-old Friesian filly with a short history of leg spasms and progressive paresis and stiffness of back legs moving to front legs. No gross lesions were identified in the brain and spinal cord. Histologically, lesions compatible with EDM were found in the brain, medulla and thoracolumbar spinal cord. Vitamin E was not detected in liver. EDM has been associated with low levels of Vitamin E in horses.

## Bovine

**Pine needle abortion syndrome** occurs in cattle that ingest needles from pine, spruce, cypress and juniper trees that contain isocupressic acid. The presumptive diagnosis is based on history of exposure, late-term abortions, retained placentas and ruling out infectious causes of abortion. In select cases, an external research lab has provided analysis of fetal fluids to identify the specific toxic metabolites of the isocupressic acid found in the needles. This confirms exposure and was recently used to confirm pine needle abortion on submissions from two large abortion outbreaks in beef cattle in northern California and southern Oregon, respectively.

**Fungal abomasitis** was the primary cause of death in two, 22- to 24-day-old Jersey dairy calves. Both calves had been treated with antibiotics, a predisposing factor for fungal abomasitis. The calves also had coronaviral colitis and cryptosporidiosis. In addition, one of them had *E. coli* septicemia and the other had embolic fungal pneumonia.

## Small ruminants

*Trueperella pyogenes* caused several third trimester **abortions** in a sheep dairy and in a small goat herd. Fetal neutrophilic bronchopneumonia was seen and *T. pyogenes* was isolated from multiple sites. This infection is considered opportunistic and a sporadic cause of abortion in cattle and small ruminants.

*Mycoplasma sp. septicemia* was the cause for sudden recumbency and death in a 2-week-old goat kid. Splenomegaly, fibrinous polyserositis and polyarthritis was observed, and *Mycoplasma sp.* was isolated from all sites.

## Pig

*Trueperella abortusis* was the cause of severe placentitis and near term abortion in animal on a 45 sow farm. The sow developed purulent vaginal discharge and despite treatment she aborted three weeks later. *T. abortusis* was isolated

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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

18830 Road 112  
Tulare, CA 93274  
Phone: 559-688-7543  
Fax: 559-686-4231  
tularecahfs@ucdavis.edu

### CAHFS – Turlock

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

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from lung, liver and stomach contents of two out of three fetuses, and from placenta. *Enterococcus* sp. was isolated from the third fetus. All three piglets had aspiration pneumonia and one had also mild hepatitis. *T. abortus* has been recently identified as an emerging cause of abortion in pigs.

### Poultry and Other Avian

Acute septicemia due to *Erysipelothrix rhusiopathiae* infection (turkey erysipelas) acute septicemia was diagnosed in 14-week-old organic turkey toms experiencing increased mortality of up to 25 birds per day, in a flock of 2,000 birds. The affected turkeys had purple discoloration of the skin on the head, and darkened lungs, with exudate covering air sacs and visceral organs. Histopathology revealed pneumonia, lymphocyte depletion in the spleen, enteritis and liver necrosis. *E. rhusiopathiae* was isolated from the liver lesion. Turkey erysipelas can occur by ingestion of contaminated feed or water, or by inoculation through breaks in the skin or mucous membranes.

Many cases of primary **Infectious Bronchitis Virus (IBV)** infection complicated by colibacillosis were diagnosed in broiler chickens ranging in age from 31 to 42-days. The number of chickens in each flock ranged from 23,500 to 25,000 and the clinical history consisted of respiratory signs, leg issues and increased mortality. Necropsy findings in chickens included airsacculitis, pericarditis, pleuritis and occasionally pneumonia, perihepatitis and synovitis. *E. coli* was isolated from the lesions and IBV was isolated from the cecal tonsils. The viral isolate was sequenced and typed as Cal 99. IBV is a coronavirus that causes respiratory disease in young chickens predisposing them to secondary colibacillosis that results in increased morbidity and mortality and condemnations at the processing plant. There is no vaccine available to control IBV Cal 99.

**Dilated Cardiomyopathy** was the cause of death in a 10-year-old female Indian Ringneck parakeet which died suddenly. The bird had severe ascites, and liver and lung fibrosis; the three lesions were considered to be secondary to heart failure. In addition, the bird also had atherosclerosis of major vessels and urate deposits in the kidneys, both of which were considered incidental findings.

### SB27 Requirements

California legislation SB27, implemented January 1, 2018, requires use of antimicrobial therapy, particularly those drugs that are important in human medicine, to be on the order of a licensed veterinarian. Minimum inhibitory concentration (MIC) antimicrobial testing currently used at CAHFS provides veterinarians with targeted information regarding antibiotics approved for specific animal species and conditions, allowing them to make medically valid decisions about treatment regimens and judicious use. Clinical predictions of susceptible, intermediate, and resistant are provided when available in addition to extrapolations made from other animal or human interpretations. More complete information is available on [CAHFS' web site](#).

