



UC DAVIS
VETERINARY MEDICINE
*California Animal Health and
 Food Safety Laboratory System*

CAHFS CONNECTION

June 2013

Inside this issue:

- **Director's Message**
- **Equine** - Equine herpesvirus-1
- **Bovine** - *Clostridium perfringens* type C enterotoxemia
- **Bovine** - Osteoporosis
- **Porcine** - Hepatitis due to vitamin E deficiency
- **Small Ruminant** - Orf virus
- **Rabbits** - *Enterococcus faecalis* caused septicemia
- **Wildlife** - *Leptospira* spp. infection in mountain lion



Holiday Schedule

CAHFS will be closed on **Thursday, July 4, 2013** in observance of Independence Day.

Please contact your laboratory to plan your testing needs accordingly.

Director's Message

This month we will be saying good-bye to four valued members of the CAHFS family.

Dr. Bradd Barr, Veterinary Pathologist located at the Davis laboratory, will be retiring after 28 years of service. Dr. Barr is recognized both nationally and internationally for his expertise in protozoal diseases. His diagnostic acumen and thoroughness are a testament to the many original findings he contributed to the clinical research and diagnostic communities. In particular, his clinical research-related studies in protozoal diseases of the horse, bovine, marine mammals, and birds have been widely used as references; and his collaboration with a number of investigators inside and outside of UC Davis resulted in published manuscripts that provided new information for diagnosticians, protozoologists, and practicing veterinarians.

Dr. Peter Woolcock, Avian Virologist at the Davis laboratory, will be retiring after 22 years of service. He spent most of his CAHFS career at the Fresno laboratory until its closure in 2009 and then relocated to the Davis laboratory. Dr. Woolcock is widely regarded as an authority on viral infections of waterfowl, in particular, duck hepatitis. Trained as a classical virologist, Dr. Woolcock collaborated with colleagues around the world in developing techniques for the isolation and identification of many avian viruses. He was responsible for establishing the virus isolation protocol during the exotic Newcastle disease outbreak in Southern California in 2002-2003, and contributed tirelessly to the successful eradication effort.

After 29+ years of service with CAHFS, **Michelle Villanueva**, Davis-Bacteriology, and **Jim Koobs**, Davis-Histology, will also be retiring. Michelle started her CAHFS career in the Tulare laboratory in 1984. When the Davis laboratory opened in 1988, she became the laboratory manager of the Davis Bacteriology section, a position she maintains today. Jim started his diagnostic career in 1978 at the Petaluma laboratory when the system was managed by the California Department of Food and Agriculture. In 1987 he transferred to the University system and moved to the Davis Histology section in 1988.

I know that each of these individuals has played a major role in the success of CAHFS over these many years. I invite you to join me in saying "thank you", and in wishing each of them a long and joyous retirement.

-Richard Breitmeyer

Equine

Equine herpesvirus-1 (EHV-1) infection was diagnosed in a full term **stillborn foal** submitted from a ranch where eight mares in a group of 50 gave birth to stillborn foals. Fetal lesions consisted of multifocal hepatic and adrenal necrosis, thymitis and interstitial pneumonia. Inclusion bodies characteristic of EHV-1 were seen in affected tissues. EHV-1 was detected in liver and lung by fluorescent antibody test and in those same tissues plus spleen by PCR. The marker for the neuropathogenic variant of EHV-1 (which can also cause abortions) was not detected. EHV-1 is a well-known cause of abortion in mares, in addition to causing respiratory disease in young horses and neurological disease in horses of different ages. Abortion may occur at any time during gestation, but it is most common during the 7th to 11th-month of gestation.

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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.

We're on the Web
www.cahfs.ucdavis.edu

Bovine

***Clostridium perfringens* type C enterotoxemia** resulted in severe **necrotic enteritis** and rapid death in two young beef calves on the same premise over a couple weeks. Both calves had watery, **bloody diarrhea** prior to death which occurred within 24 hours after onset of signs. Beta toxin was detected using the *C. perfringens* ELISA assay on intestinal content from both calves and one also had alpha toxin. Alpha and beta toxin together are classically found with *C. perfringens* type C but several cases in calves have been positive for beta toxin only.

Osteoporosis resulted in multiple fractures of both femurs and humeri in three 2-month-old Holstein dairy calves in a group of 150 shortly after being removed from their hutches. The bones had severe osteopenia and thin cortices due to extensive bone resorption. Serum calcium was low normal and phosphorous was slightly below normal. The lesions were consistent with osteoporosis due to lack of sufficient calcium or a low calcium to phosphorous ratio such as seen when calf grain alone is fed after weaning off milk and exacerbated by muscular atrophy due to disuse in the calf hutches followed by sudden activity when calves run around larger pens.

Porcine

Hepatitis dietetica due to **vitamin E deficiency** caused the **sudden death from liver failure** of a 6-month-old barrow. At necropsy, the liver was severely enlarged with multiple hemorrhagic foci. Vitamin E concentration was markedly low in the liver, while selenium was normal. Deficient levels of either of these two elements, can lead to **hepatitis dietetica** and/or **mulberry heart disease** in pigs. These two degenerative non-infectious conditions can result in sporadic losses, often in young, rapidly growing pigs. Death almost invariably occurs suddenly and is often precipitated by exercise.

Small Ruminant

Orf virus was detected via real-time PCR from an oral swab collected from a 3 year old ewe with mouth and muzzle lesions. Eighteen in a flock of 100 were affected. The disease spread through the flock over 12 days and some animals were beginning to show signs of recovery after 10 days.

Rabbit

***Enterococcus faecalis* caused septicemia** in a group of approximately one week old rabbits that developed acute diarrhea and died within a couple of hours. Lungs were expanded and wet in one of 2 kits submitted for necropsy. The other animal had hemorrhages over the serosa of the heart and intestines. The intestines were dilated with creamy content in one animal and hemorrhagic in the other. Histologically the affected lungs had interstitial pneumonia and the liver had signs of septicemia. A pure culture of *Enterococcus faecalis* was isolated from the lungs and liver of both kits. *Enterococcus faecalis* is known to cause diarrhea in some mammals and has been associated with endocarditis in animals and humans.

Wildlife

***Leptospira* spp. infection** was diagnosed in a wild **mountain lion** that was euthanized following multiple predation events. The animal was submitted by the California Department of Fish and Wildlife as part of a state-wide program **monitoring** the health status of this species. No significant gross findings were observed. Histologically there was mild interstitial nephritis, and *Leptospira* spp. was detected in the kidney using immunohistochemistry. Given the mild nature of the lesions, it is likely that the animal had subclinical disease or was a carrier, possibly shedding the organisms through its urine to the environment, including water sources. Three **anticoagulant rodenticides** were also detected in the liver; however, in the absence of evidence of a bleeding disorder indicates exposure to anticoagulants rather than intoxication and may result from consumption of rodents that were exposed to anticoagulants.