



## Inside this issue:

- New Tulare laboratory dedicated
- Bovine
  - Monensin intoxication
- Equine
  - Equine protozoal myeloencephalitis
  - Choledocholithiasis
- Small Ruminant
  - Lentivirus infection
- Pig
  - Proliferative enterocolitis
- Poultry/Other Avian
  - Botulism (chickens)

## Holiday Schedule:

CAHFS will be open, but will have limited service on **Friday, November 11, 2016** in observance of Veteran's Day.

CAHFS will be closed on **Thursday, November 24, 2016** in observance of Thanksgiving and will be open from 8 am to 12 noon on **Friday, November 25, 2016** as it is a University of California holiday.

Please contact your laboratory to plan your testing needs accordingly.

## CAHFS' NEW TULARE LABORATORY DEDICATED

The Alex A. Ardans Tulare Branch of the California Animal Health and Food Safety Laboratory System (CAHFS) was dedicated in honor of Dr. Alex Ardans, former CAHFS director (1987-2008) on Friday, October 28, 2016. The new state-of-the-art laboratory is slated to open in 2017.

The rain did not dampen the enthusiasm of those that attended the ceremony. Among the speakers were Karen Ross, Secretary, California Department of Food and Agriculture, who stated "California is proud to be home to the largest and most diverse agriculture in the world," and added that "As we dedicate this new laboratory in Tulare we are reminded that skilled scientists with state-of-the-art diagnostic equipment are truly at the front line, working with farmers, ranchers and veterinarians to protect the safety and security of our nation's food supply." Other speakers included Kenneth Burtis, UC Davis Interim Provost, Michael Lairmore, Dean, School of Veterinary Medicine; Annette Jones, State Veterinarian, California Department of Food and Agriculture; Gregg Cutler, poultry practitioner and CAHFS Board member; and John Adaska, CAHFS Tulare Branch Chief. All the speakers highlighted the importance



*Alex A. Ardans*



*Alex A. Ardans Tulare Branch Laboratory*

of this new laboratory and gave testimony to the invaluable work Dr. Ardans did during his career, not only for UC Davis but for the people of California and the global diagnostic community.

Dr. Ardans' vision created one of the top diagnostic programs in the world. One prime example of the great achievements of CAHFS under Dr. Ardans' leadership is the outstanding support given to animal agriculture and regulatory agencies during natural disease outbreaks such as exotic Newcastle disease, bovine tuberculosis and avian influenza. He also played a pivotal role in the development of the race horse postmortem program and the equine drug testing laboratory at CAHFS.

We at CAHFS are proud to have worked with Dr. Ardans. In the words of John Adaska, Dr. Ardans was "a giant of veterinary diagnostics" and his legacy will live forever.





## 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

*Continued*

## Bovine

**Monensin intoxication** was diagnosed in a 6-month-old female Jersey calf with a history of sudden death. The animal was one of 15 calves that died over a weekend after a recent change in ration to a new mineral mix which contained monensin. Necropsy revealed mild pulmonary edema and bronchopneumonia. Histopathology identified myocardial necrosis. The mineral mix was found to have 2.5 times more monensin than indicated in the label and exceeded the recommended dose.

## Equine

**Equine protozoal myeloencephalitis (EPM)** was diagnosed in a 4-year-old Thoroughbred mare that was submitted for necropsy with a history of progressive paresis and atrophy of lumbar muscles. The thoracolumbar spinal cord presented multiple areas of hemorrhage and necrosis with intralesional protozoa that were identified as *Sarcocystis neurona*, the etiological agent of EPM, by immunohistochemistry.

**Cholelithiasis (stones in the common bile duct)** was diagnosed in a Lusitano gelding that was euthanized after presenting acute hepatic encephalopathy, following 6 months of elevated liver enzymes and intermittent fever. On necropsy the liver was large, firm, diffusely yellow-green and had dilated intrahepatic bile ducts surrounded by fibrosis and filled with thick light green bile. Two large and hard choleliths were present in the common bile duct. Microscopically, the liver presented bridging portal fibrosis, cholestasis and hepatitis, while Alzheimer's type II astrocytes consistent with hepatic encephalopathy were seen in the brain. Choleliths are not commonly seen in horses.

## Small Ruminant

**Lentivirus infection** was diagnosed in an ewe from a rehabilitation facility. The

ewe had bronchopneumonia from which *Pasteurella multocida* and *Corynebacterium pseudotuberculosis* were isolated, and necrotizing encephalitis. The latter was associated with caprine arthritis encephalitis (CAE) lentivirus, as demonstrated by immunohistochemistry. In sheep, lentivirus typically causes respiratory disease, but encephalitis has also been reported.

## Pig

**Proliferative enterocolitis** was found in a 6-month-old Yorkshire pig that died after a 4-day history of black/red diarrhea and anorexia. The small and large intestines were thickened, with corrugated mucosa and there was a large blood clot core in the lumen. Histopathology revealed necrotizing, hemorrhagic and proliferative enterocolitis, with intracellular bacteria suggestive of *Lawsonia spp.* (demonstrated by silver stain in the apical cytoplasm of enterocytes).

## Poultry and Other Avian

**Botulism** was diagnosed in a flock of backyard chickens. Fourteen out of 16 backyard chickens were found dead or recumbent and barely able to move ("crawling" according to owner). No significant gross or microscopic lesions were seen in birds submitted for necropsy. *Clostridium botulinum* toxin type A was detected in the liver of one chicken, confirming a diagnosis of type A botulism. Botulinum toxin is the most lethal bacterial toxin known. Humans and many other animal species are susceptible to botulism. In this case compost was the likely source of botulinum toxins.

