UCDAVIS VETERINARY MEDICINE
California Animal Health and Food Safety Laboratory System

CAHFS CONNECTION

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Dr. Ashley Hill appointed as CAHFS Director

Dr. Ashley Hill

We are pleased to announce that the School of Veterinary Medicine has appointed Dr. Ashley Hill as the Director of the California Animal Health & Food Safety Laboratory System (CAHFS), effective October 1, 2021 for a five-year term.

Dr. Hill received her DVM (1998), Master of Preventive Medicine (1999) and PhD (2003) from UC Davis. She is a veterinary epidemiologist and led the CAHFS immunology/ serology section since her appointment with CAHFS in 2011. In addition, Dr. Hill served as Chair of the Preventive Veterinary Medicine Graduate Program from 2013-2018. Dr. Hill previously served as Acting Co-Director in 2016, Associate Director in 2018, and assumed the Co-Director title in 2019 with Drs. Adaska and Crossley. Her unique experience serving in these roles has given her the budgeting and financial management skills, personnel management, planning, and administrative experience essential to lead CAHFS.

We look forward to Dr. Hill's leadership of CAHFS.

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Bovine

Clostridial myositis and myocarditis outbreaks occurred in unvaccinated heifers on three dairies in close proximity over a 3-week period. The first dairy reported 11 deaths of 5- to 9-month-old heifers overnight progressing to a total of approximately 40 deaths over the following days. The second dairy reported 20 deaths in bred heifer pens over three days progressing to about 60 over the following week. The third dairy had two sudden deaths in springer and bred heifers in two days. Five animals submitted for necropsy had multifocal dark, dry and emphysematous myocardial and skeletal muscles in the rear legs, and four of them had similar lesions in the diaphragm. *Clostridium chauvoei* was identified by fluorescent antibody and culture in affected muscle.

Traumatic reticulopericarditis was the cause of death in a 2-year-old beef heifer with a 2-day history of lethargy, mild respiratory signs and unwillingness to stand. The heifer had calved four weeks earlier. Necropsy revealed severe, chronic pericarditis with a wire embedded in a tract within the left atrium and another wire in a tract extending from the reticulum to the pericardial sac. Embolic myocarditis and nephritis were also noted microscopically. *Trueperella pyogenes* and *Streptococcus* sp. were isolated from the pericardial sac, heart, liver and kidney.

Small ruminants

Mycoplasma spp., *Filobacterium rodentium*, and *Mannheimia haemolytica* were the cause of **chronic bacterial tracheitis** in an 8-month-old Dorper ewe that died suddenly. *Filobacterium rodentium* (previously known as cilia-associated respiratory or CAR bacillus) is considered pathogenic in some laboratory animal species, but its significance as a pathogen in livestock is questionable. It has been postulated that this microorganism contributes to the etiology of bighorn sheep respiratory complex disease, possibly in synergy with *Mycoplasma ovipneumoniae*.

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Small ruminants (cont'd)

Enzootic ataxia was diagnosed in three, 4.5-month-old Boer cross goat kids with a history of progressive ascending paresis/paralysis that did not respond to treatment with antibiotics, Ivermectin, BO-Se, and corticosteroids. Microscopically, the spinal cord changes were consistent with copper deficiency, including symmetrical neuroaxonal degeneration. Serum (0.085-0.32ppm, normal 0.8-1.2ppm) and liver (1.3-2.9ppm, normal 25-150ppm) copper concentrations were severely deficient in the three kids. Neonatal copper deficiency can cause enzootic ataxia or swayback in lambs, goat kids, and piglets, characterized by ataxia and gait deficits that progress to recumbency and death. All three goat kids also had evidence of aspiration pneumonia and one had caseous lymphadenitis from which *Corynebacterium pseudotuberculosis* was isolated.

Equine

Equine proliferative enteropathy due to *Lawsonia intracellularis* was the cause of diarrhea, weight loss and hypoproteinemia in a 5-month-old Quarter Horse colt. Other foals on the ranch had diarrhea and one died. Necropsy revealed severe proliferative enteritis with polypoid appearance of the mucosa. Microscopically, adenomatoid proliferation of the intestinal glands, with numerous argyrophilic bacteria in the apical cytoplasm of the enterocytes, was observed. This, coupled with a high load of *L. intracellularis* detected by qPCR in the feces, was confirmatory of proliferative enteropathy. Co-morbidities included selenium deficiency causing myocardial and skeletal muscle necrosis and mineralization, and *Rhodococcus hoagii* (formerly *R. equi*) bacteremia causing embolic pneumonia, hepatitis and mediastinal lymphadenitis.

Pig

Porcine circovirus type-2 systemic disease (PCV2-SD) was the cause of vasculitis and bronchointerstitial pneumonia in a 10-week-old female mixed bred pig with facial swelling, fever and coughing. The animal was in a group of 12 piglets recently treated for greasy pig disease (aka exudative epidermitis) due to *Staphylococcus hyicus*. At necropsy the face was bilaterally swollen with turgid lips and periorbital swelling resulting in ocular closure. The dermis was markedly expanded by edema. The lungs were pink and did not collapse. White linear stripes were present surrounding congested mesenteric vessels resulting in a red and white striped appearance.

Camelids/Cervids

Staphylococcal dermatitis was identified as the cause of a rash of moist dermatitis in coastal black-tail fawns from different locations in California. Large numbers of clustered gram-positive cocci were associated with the necrotic lesion in the skin. *Staphylococcus chromogenes* was isolated in large numbers from one case.

Fish

Pleistophora hyphessobryconis was the cause of abnormal swimming, coelomic distension, and increased mortality in a group of neon tetras (*Paracheirodon innesi*). Microscopically, skeletal muscle degeneration and necrosis was associated with variable numbers of intracellular microsporidian spores. *Pleistophora hyphessobryconis*, the causative agent of "neon tetra disease", is a microsporidium that targets skeletal muscle and has been reported in a number of ornamental fish species.

Other Avian

Capillaria contorta was the cause of proliferative **stomatitis** that lasted for 2 months in a 23-year-old raven. *Capillaria* spp. are thread-like nematodes that can be found in the oral cavity, esophagus and crop of various avian species. Grossly, it can be difficult to distinguish parasitism by *Capillaria* spp. from avian trichomoniasis, avian pox, candidiasis, and vitamin A deficiency.