UCDAVIS VETERINARY MEDICINE
California Animal Health and Food Safety Laboratory System

CAHFS CONNECTION

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Welcome Dr. Kathy Toohey-Kurth

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Dr. Kathy Toohey-Kurth joined the CAHFS San Bernardino laboratory this past August as a Clinical Diagnostic Microbiologist and the Section Leader of the Milk Quality Program and Supervisor of the Clinical Microbiology Section.

Dr. Kurth earned her Bachelor and Master of Science degrees from the Bacteriology Department at the University of Wisconsin-Madison. She worked as a clinical microbiologist prior to training in molecular virology for her PhD at the University of Minnesota Medical School. Dr Kurth continued her training in molecular virology as a post-doctoral fellow at the NIH Rocky Mountain Laboratory. Subsequently she held a Science Fellowship at National Veterinary Services Laboratory and worked at both Ames and Plum Island. For the past 14 years Dr. Kurth was Virology Section Chief at the Wisconsin Veterinary Diagnostic Laboratory (WVDL) and held a second appointment as a Clinical Professor in the Pathobiological Sciences Department at the UW School of Veterinary Medicine, University of Wisconsin-Madison. At WVDL, Dr. Kurth has applied her clinical and molecular virology expertise to the development and improvement of diagnostic assays for detection of mammalian, avian and aquatic pathogens. She has a specific interest in developing high throughput molecular assays with the goal of improving cost effectiveness while maintaining high quality results. Since 2002, she has been active in the National Animal Health Laboratory Network and participates in the technical working group. This has led to an interest in defining and establishing parameters for molecular assay validation. Dr. Kurth co-chairs the American Association of Veterinary Laboratory Diagnostian's Laboratory Technology Committee and in this position she has led the development of guidelines for performance, validation and interpretation of PCR assays. Dr. Kurth is a very welcome addition to CAHFS, where she is already applying her vast diagnostic expertise to the improvement of diagnostic assays primarily in the Milk Quality laboratory, which provides critical services to California's dairy industry.

Pig

Otitis media due to *Actinobacillus pleuropneumoniae, Trueperella pyogenes* and *Mycoplasma* sp. was the cause of a head tilt in an otherwise healthy 7-month-old Hampshire pig that had a bout of pneumonia that had slowly resolved six weeks earlier. The source of the ear infection was probably an ascending eustachian tube infection at the time of the pneumonia. This pig also had a tooth root abscess leading to osteomyelitis and cellulitis. The lungs had only mild, chronic non-suppurative inflammation at the time of necropsy.

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Bovine

Ruminal acidosis was diagnosed in a 2-year-old pregnant Angus heifer submitted for necropsy. This animal was one of seven, in a herd of 15, that showed lethargy, dyspnea, anorexia and ataxia in hind end for 24 hours. Clinical signs started soon after being fed brewers grains (the fermented solid residue left after the processing of grant to produce beer). Four of the sick animals died and three recovered. Acidosis was diagnosed based on low ruminal content pH and severe microscopic lesions in the rumen.

Dermatophilus congolensis caused crusting dermatitis in 2-year-old Holstein cows within the first 30 days of lactation. Thirty of 150 animals were affected. Skin scrapes from five cows had typical histologic lesions but due to overgrowth of other bacteria, the organism could not be isolated.

Equine

Progressive ethmoid hematoma was diagnosed in a 7-year-old Thoroughbred gelding with history of chronic guttural pouch infection and a mass in the right nasal passage. Post mortem examination revealed a large mass attached to the nasal mucosa cranial to the ethmoid concha and occluding the lumen of the right nasal passage. Microscopically, this mass was compatible with progressive ethmoid hematoma, which is a non-neoplastic growth that is occasionally found in the nasal cavity of horses. These lesions are frequently unilateral, arising from the ethmoturbinate region and can be large enough to reach the nostril.

Small Ruminant

Mycoplasma polyarthritis was the cause of high fever, swollen joints and lameness leading to inability to stand, in a 2-month-old Alpine dairy goat kid. *Mycoplasma* spp. isolated from the milk of a doe in the same herd was typed as *Mycoplasma capricolum*. Signs in the kid began about 18 days prior to death. At necropsy, both carpal, hock and stifle joints were affected and *Mycoplasma* spp. was isolated from all three of the affected joints cultured. The kid was also severely copper deficient.

Poultry and Other Avian

Colibacillosis characterized by anorexia, lethargy, depression and death, was diagnosed in 3-day-old turkey poults from an 18,000-bird flock that experienced 3.5% mortality in three days. Gross and microscopic findings included omphalitis, yolk-sacculitis, air-sacculitis, pericarditis, peri-hepatitis and occasionally meningitis. Although the ultimate cause was *E. coli,* the predisposing factor for this infection was not determined but management issues were suspected.

Tenosynovitis in broiler chickens caused by variants of avian **reovirus** was first diagnosed in California in April 2015, and numerous cases have occurred since. The age of affected chickens ranged from 10 to 47 days. Clinical signs included splayed legs and lack of uniformity which promoted increased culling. Necropsy findings include swollen hock joints due to the presence of an excess of viscous synovial fluid and occasionally increased pericardial fluid. Reovirus has been isolated from tendons and hearts. Molecular characterization of some of the reovirus isolates revealed that they were less than 50% homologous to the vaccine strain.