

OADDL E-News

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Faculty

Director:

Dr. Keith L. Bailey – Pathology

Assistant Director/Quality Manager:

Emily J. Cooper

Microbiology/Molecular Diagnostics:

Dr. Akhilesh Ramachandran

Parasitology:

Dr. Yoko Nagamori

Pathology:

Dr. Melanie A. Breshears

Dr. Anthony A. Confer

Dr. Grant Rezabek

Dr. Jerry Ritchey

Dr. Tim Snider

Serology:

Dr. Grant Rezabek

Graphic Design/Layout:

Clarissa Walton

Orf in Oklahoma Sheep



Two cases of ovine parapoxvirus infection have recently been identified at OADDL. This virus produces a skin disease called Contagious Ecthyma (also known as Orf or Sore mouth).

The disease typically produces lesions at the mucocutaneous junction of lips/mouth (Figure A), but also commonly affects feet, coronary bands, distal limbs (Figure B) and other sites. Serologic surveys suggest widespread exposure of sheep and goats, and many cases resolve in 1-4 weeks.

Secondary bacterial infection of

lesions can be difficult to manage clinically and be disfiguring for potential show animals. This disease is zoonotic and can also produce cutaneous lesions in humans. Lesions affecting mucocutaneous junction sites can mimic reportable foreign animal diseases. Identification of the disease is possible by PCR testing of fresh tissue biopsy samples or by histopathology detection of viral inclusions in formalin-fixed biopsy samples.

– Drs. G. B. Rezabek & M. Tripp



Gavel Passed to Dr. Blood

Dr. Ken Powell (Aviagen, North America), past-chair of OADDL's Board of Advisors, passes the gavel to Dr. Shawn Blood (Beef Strategic Technical Services, Zoetis).



CENTER FOR VETERINARY HEALTH SCIENCES
Healthy Animals — Healthy People



It was great seeing you at the CVHS Fall Conference!

Pictured left to right: Ashley Jarrett, Janisue Jones and Kathy Andrew



International students from the Agricultural Economics department recently toured the OADDL. The students are part of AGE 3810 class, Domestic Agribusiness Tour. The class provides opportunities for students to visit all aspects of ag and food production, processing and marketing. This group of students are all from China and are at OSU as part of an Agribusiness Program with the China Agricultural University. The group was accompanied by instructor, Dr. Derrell Peel and undergraduate program coordinator, Arakssi Arshakian.

Seneca Valley Virus (SVV) Confirmed in an Oklahoma Pig

Infection with Seneca Valley Virus (SVV) was recently diagnosed in an Oklahoma pig with vesicular lesions on the snout. Since 2015, the virus has been detected in swine herds from several Midwestern states.

SVV belongs to the family *Picornaviridae*; other members of this viral family include foot-and-mouth disease (FMD) and swine vesicular disease (SVD).

Clinical signs of SVV infection are vesicles on the snout (Figure A) and coronary bands of the feet (Figure B) that ulcerate. Other reported signs include acute lameness, deep nail bed hemorrhages, anorexia, lethargy and fever.

The lesions of SVV are indistinguishable from FMD or SVD. All cases involving vesicular lesions should promptly be reported to the State Veterinarian for further investigation.

– Dr. K. Bailey

Seneca Valley Virus infection in a grower pig. Note the ruptured vesicles on the snout (A) and at the coronary band of the foot (B). Photos courtesy of Iowa State University, Swine Medicine Education Center.



Feline Trichomoniasis



Photo courtesy of Sattvam

Tritrichomonas sp. was recently detected from the fecal sample of a 6-month-old cat tested at OADDL.

Trichomonads are flagellated pro-

tozoan parasites. Infection in cats occurs by the fecal-oral route and can be subclinical or characterized by chronic relapsing large bowel diarrhea,

hematochezia and fecal incontinence. Cats less than 1 year of age are more commonly affected; however, older cats can also acquire infection. Co-infection with other protozoa such as *Giardia*, *Cryptosporidium* or *Cystoisospora* (coccidia) may also occur. Nitroimidazole antibiotics such as ronidazole have been shown to be effective for treatment.

PCR testing for *Tritrichomonas* sp. infection is available at OADDL. The sample of choice is fresh feces inoculated in transport media such as TF-InPouch (Biomed Diagnostics). Samples must be shipped unrefrigerated at room temperature.

– Dr. A. Ramachandran & Y. Nagamori

Understanding Antimicrobial Susceptibility Testing

At OADDL, antimicrobial susceptibility testing of bacterial isolates is performed either by the Kirby-Bauer (KB) method or by determining the Minimum Inhibitory Concentration (MIC).

Kirby-Bauer (KB) method (disk diffusion method)

Antimicrobial susceptibility is determined based on the inhibition of growth of bacteria on solid agar media in presence of antibiotics of interest.

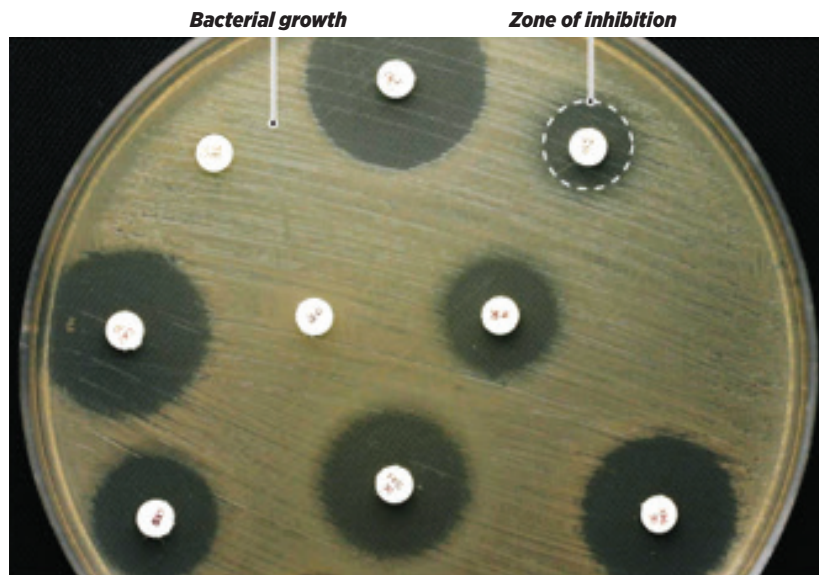
The degree of antibiotic susceptibility correlates to the diameter of the zone of inhibition and interpreted as sensitive, intermediate, or resistant based on the standards established for individual antibiotics and bacterial types. The KB method is flexible and allows testing against customized panels of antibiotics.

Minimum Inhibitory Concentration (MIC)

MIC is defined as the lowest concentra-

tion of an antibiotic that inhibits growth of a bacterial isolate. Antibiotic sensitivity expressed in terms of the MIC gives **quantitative data** not obtainable with the Kirby-Bauer method. These quantitative results are useful in predicting the tissue, blood or urine levels of antibiotics that must be attained to assure inhibition or killing.

– Dr. A. Ramachandran



Director's Note

Autumn is the time of the year when we marvel at the beautiful fall colors and begin making preparations for winter. For cattle producers, the preparations include reviewing vaccination protocols, feed supplement programs and testing hay for nitrates. In our last issue of this newsletter, we shared data from the 2015-2016 calving season. The factors above were commonly identified in cases of reproductive failure in cattle.

This issue of the newsletter highlights two diseases that are associated with mucocutaneous and foot lesions. Please remember to contact our state veterinarian, Dr. Rod Hall (ODAFF) whenever you suspect vesicular lesions in farm animals.

Many of you have undoubtedly noticed that we have a new software system for reporting results. We migrated to the new software system in September. Even though the transition was reasonably smooth, we ask for your patience as we continue to iron out a few minor wrinkles. The new system will allow you to access results remotely any time of the day. Instructions on how to access the client portal will be available soon.

I want to thank everyone who visited our vendor booth at Fall Conference and invite you to see us at the upcoming OVMA meeting in January. Rest assured that we work tirelessly to make you proud of your diagnostic laboratory.

We wish you all a safe holiday season and a prosperous 2017!

— Dr. K. Bailey



Presented by:
OVMA

Annual Convention

CELEBRATING
102
YEARS

January 26-28, 2017
NORMAN, OK

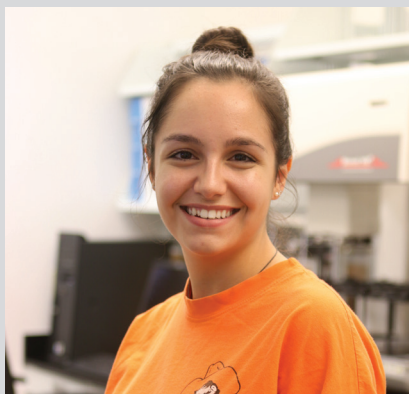
Learn more at:
okvma.org

Getting to Know Us

Dustin Pettit is originally from Bethany, OK. He received his BS in Animal Science-Production from Oklahoma State University in 2007. Dustin has been working at OADDL since the middle of August. In his free time, he enjoys spending time with his family and attending OSU sporting events.



Brittanie Peake is originally from Oklahoma City. She received her BS in Animal Science from Oklahoma State University in 2015. She worked in the ANTECH Diagnostics lab in the Boren Veterinary Medical Hospital for three years. She recently got married in March to her high school sweetheart. In her free time, Brittanie enjoys reading, drawing, watching sports, and playing with her two cats, Giselle and Scout, and German Shepherd/Blue Heeler mix, Angel.



Ideas/Suggestions for Future Content

We want to hear from you. Send us your ideas and suggestions to oaddl@okstate.edu.

Contact Us

Oklahoma Animal Disease
Diagnostic Laboratory

Ph: 405-744-6623

Fax: 405-744-8612

www.cvhs.okstate.edu/oaddl

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