

# OADDL E-News

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## Arsenic Toxicosis in Cattle

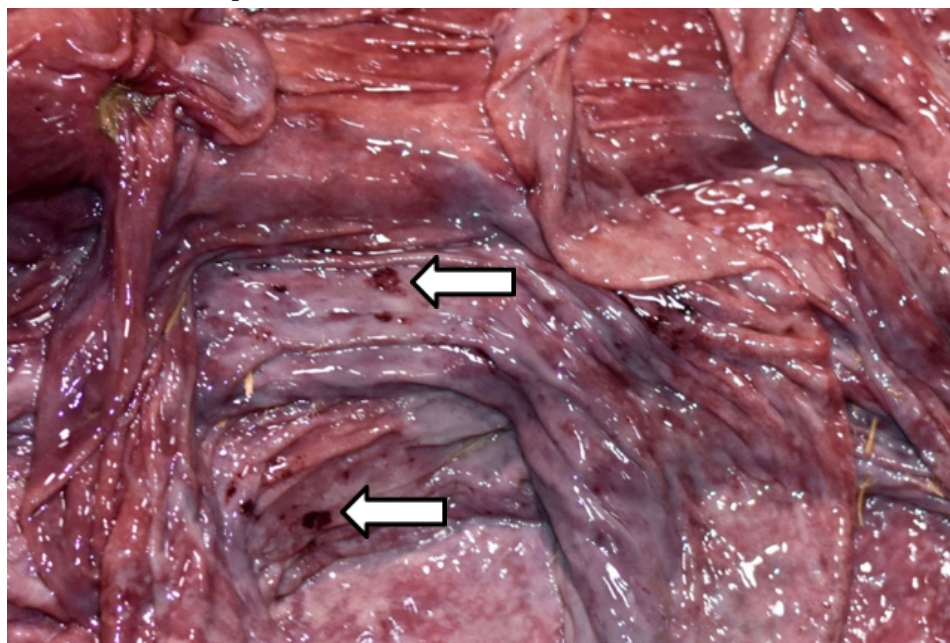
Two cases of arsenic toxicosis in cattle were recently diagnosed at OADDL. Field necropsies were performed in both cases on animals that died unexpectedly. Acute renal tubular necrosis was observed microscopically and toxic levels of arsenic were detected in the liver and kidney. The presumed sources of exposure in these cattle were ashes from a recently burned outbuilding in one pasture and dead plants in the other pasture that were recently sprayed with an herbicide.

Arsenic is a heavy metal that is associated with sporadic deaths in

cattle. Unfortunately, clinical signs in affected cattle may be vague. Diarrhea and ataxia are frequently reported. Necropsy findings in the gastrointestinal tract may mimic infection with BVDV or salmonellosis (Fig A). Click the following link for a recent review: <http://onlinelibrary.wiley.com/doi/10.1111/jvim.12124/epdf>.

For field necropsy cases, the submission of formalin-fixed and fresh kidney, liver, lung and heart is encouraged, along with any lesional tissues such as abomasum.

– Dr. K. Bailey



**Figure A: Reddened abomasal mucosa with several small erosions and shallow ulcers (arrows)**

Photo courtesy of Dr. S. Rostad

## Public Health Alert about Tularemia

On November 17, 2016, the Oklahoma State Department of Health issued an official Oklahoma Health Alert Advisory to human clinicians. The alert stemmed from recent cases of tularemia in wild and domestic rabbits presented to OADDL for necropsy. [See this link to alert/advisory for more details.](#)



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**Healthy Animals — Healthy People**

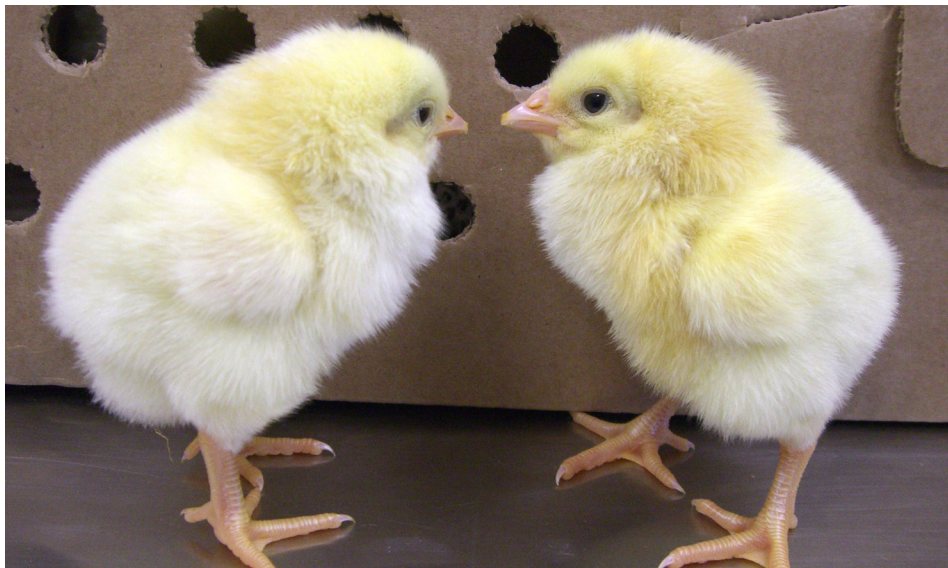
## Protect Your Chickens from Marek's Disease

Marek's disease (MD) was the most common diagnosis in chickens presented to OADDL for necropsy in 2015-2016.

MD is a viral disease that can be prevented by the administration of a single dose of vaccine at the hatchery or to 1-day-old chicks. If you or your clients are ordering chicks soon, we encourage you to purchase vaccinated birds. This will spare the heartache of having birds succumb to MD at 3-6 months of age.

– Dr. K. Bailey

*Photo courtesy of Dr. S. Breeding, University of Arkansas Diagnostic Laboratory*



## Submissions to OADDL for Rabies Testing in 2016

Rabies testing was performed on 71 animals submitted to OADDL in 2016. Of the 71, 3 (4%) were positive by fluorescent antibody (FA) testing at the Oklahoma State Public Health Laboratory in Oklahoma City. [Note: rabies testing is not performed at OADDL, so please contact the Public Health Laboratory directly for cases requiring more rapid testing.]

One horse and 2 skunks were pos-

itive for rabies virus. The horse was a 4-year-old Quarter horse that presented to OADDL for necropsy in August, 2016. The horse was not current on vaccines. The clinical signs included depression, ataxia and circling. Testing at OADDL prior to necropsy revealed the horse to be negative by serum ELISA for West Nile Virus and negative by polymerase chain reaction (PCR) for equine herpesvirus-1 (EHV-1).

– Drs. K. Bailey & V. Windiate

### Rabies Testing in 2016

Animal Species	Number Tested	Number Positive
Bat	3	0
Bovine	12	0
Canine	17	0
Caprine	1	0
Equine	15	1
Feline	13	0
Opossum	1	0
Ovine	2	0
Raccoon	3	0
Skunk	3	2
Squirrel	1	0
<b>TOTALS:</b>	<b>71</b>	<b>3</b>



## NEW Emergency/ After-Hours at OADDL

OADDL currently receives animals for necropsy from

**8:00 AM – 5:00 PM**

each day of the year  
except Thanksgiving  
and Christmas.

Please call 405-744-6623 to  
schedule submissions on  
weekends and holidays.





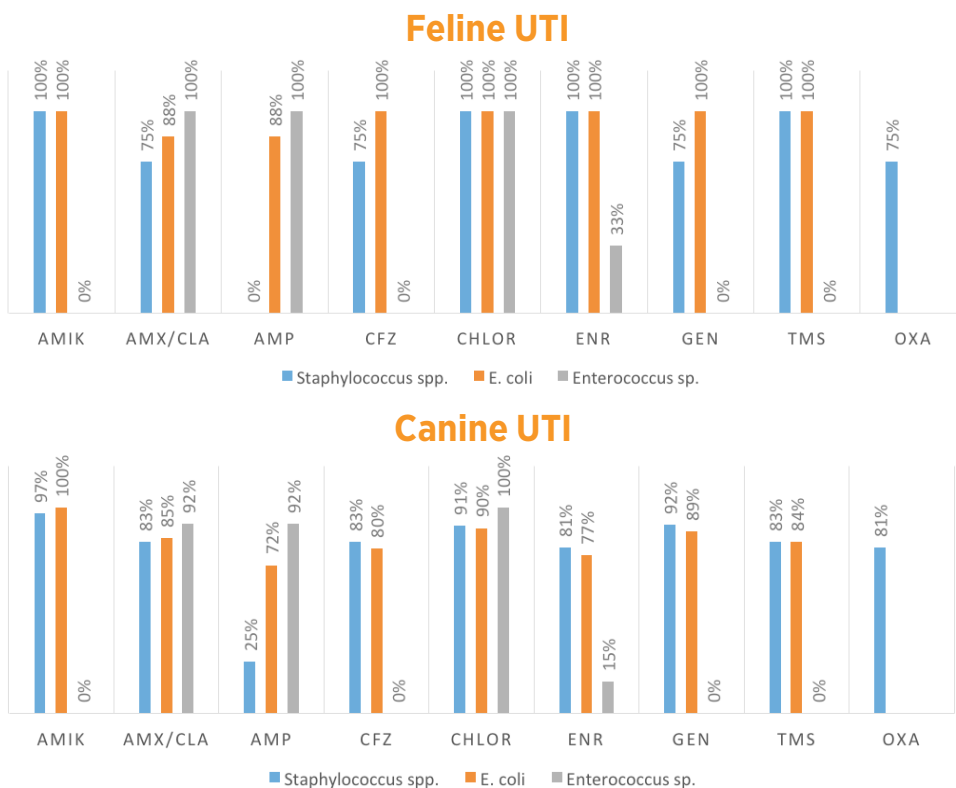
## Bacterial Isolates from Canine/Feline Urinary Tract Infections (UTIs)

Antibiotic susceptibility profile of bacterial isolates obtained from urine samples submitted to OADDL for culture and sensitivity testing during the calendar year 2016 were analyzed.

The most common bacterial species isolated were *E. coli* (from 37% and 32% of culture positive canine and feline samples respectively), *Staphylococcus* spp. (22% canine; 14% feline) and *Enterococcus* spp. (16% canine; 32% feline). Other bacteria including *Proteus* spp., *Klebsiella* spp. and *Enterobacter* spp. were isolated less frequently.

—Drs. A. Ramachandran & T. Gull

**Percent antibiotic susceptibility of bacterial isolates from Canine and Feline Urinary tract infections. (AMIK-Amikacin; AMX/CLA-Amoxycillin/Clavulanic acid; AMP-Ampicillin, CFZ-Cefazolin; ENR-Enrofloxacin; GEN-Gentamicin; TMS-Trimethoprim Sulfamethoxazole; OXA-Oxacillin/2%NaCl.)**



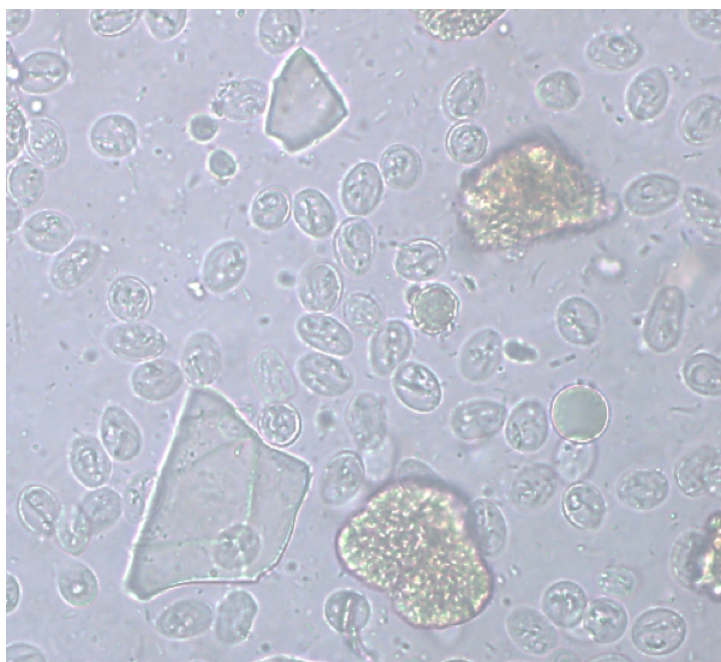
## Diagnosing *Giardia* sp. by Fecal Examination

*Giardia* cysts are best detected by 33% ZnSO<sub>4</sub> centrifugal fecal flotation. Internal structures, such as two to four nuclei, axostyles and median bodies can be easily observed with this technique (Fig A).

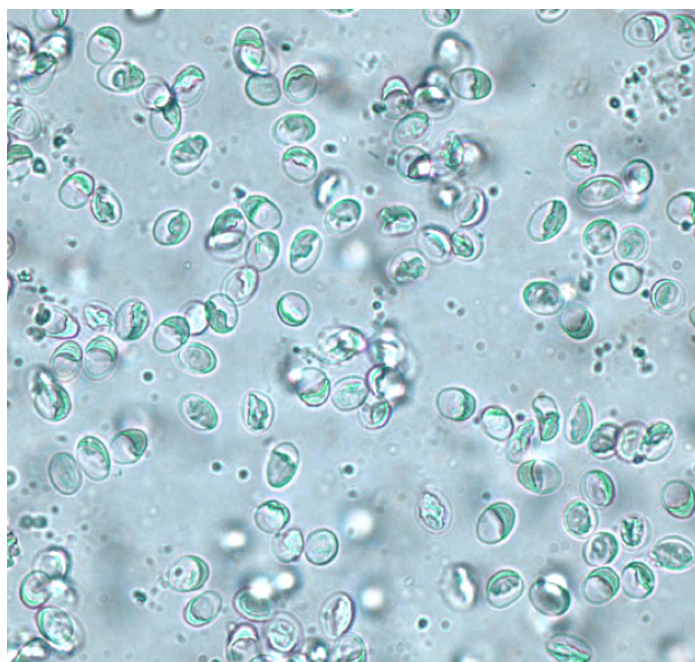
When you use high specific gravity solutions, such as sugar and salt for your fecal examination, *Giardia* cysts rapidly become distorted by osmotic

damage (Fig B). With time, more cysts become vacuolated and make them more difficult to diagnose.

—Dr. Y. Nagamori



**Figure A: Internal structures of *Giardia* cysts clearly visible with use of 33% ZnSO<sub>4</sub> centrifugal fecal flotation.**



**Figure B: Distorted *Giardia* cysts recovered by centrifugal flotation with Sheather's sugar solution.**

## Director's Note

As we enter 2017, I suspect that I am one of many people who are very happy to see 2016 in the rearview mirror. Let's face it, 2016 was a brutal year for higher education (and OADDL, by default) in Oklahoma.

The biggest challenge at OADDL in 2017 will be adapting to the new economic landscape. The boxer Mike Tyson is credited with saying that everyone has a plan until they get punched in the mouth. Well, we were punched. Now, on to plan B or even plan C.

The new environment forces us to be leaner. In addition to fewer faculty and staff, you will notice that we can no longer offer 24/7/365 emergency service. Our new emergency hours are 8:00 AM to 5:00 PM each day. Some low-volume tests have also been retired, and others will likely fall by the wayside this year.

What can you do to help? One of the biggest ways is to continue to support the lab as a valued patron. With competition in the private sector for high-profit testing, OADDL is left with many tests that are performed at a financial wash or loss. That approach is simply not sustainable.

Another way to help is to be our advocate when you visit with your state representative. OADDL is Oklahoma's only accredited lab and we work closely with you and ODAFF on the front line to maintain healthy animals in the state every day. The team at OADDL is committed to going the extra mile for you.

On behalf of our team, we wish you a healthy and prosperous 2017!

– Dr. K. Bailey



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OVMA

# Annual Convention



January 26-28, 2017  
NORMAN, OK

Learn more at:  
[okvma.org](http://okvma.org)

*Come see us  
at booth #76!*

## Ashley (Jarrett) Bickell promoted to Histology Laboratory Manager

Ashley joined OADDL in 2011 as a student worker in the Necropsy section. After earning a Bachelor's degree in Animal Science at Oklahoma State University in 2013, she began working full time as a Sr. Laboratory Technician in the Histology section.

Ashley is originally from Taos, New Mexico and completed an Associate's degree in Agriculture at Oklahoma Panhandle State University before relocating to Stillwater. She is currently a candidate for a Master's of Science in Equine Orthopedics at the University of Edinburgh, Royal (Dick) College of Veterinary Studies.

Ashley shows Paint and Quarter Horses in Non-Pro NRHA Reining events and has a small breeding program that produces a few foals each year. She enjoys photography, garden-



ing, cooking, and endurance cycling with husband, Brian. Together, they have two cats (Ted and Lectra), a Queensland Heeler (Chado) and 8 horses.

## Ideas/Suggestions for Future Content

We want to hear from you. Send us your ideas and suggestions to [oaddl@okstate.edu](mailto:oaddl@okstate.edu).

## Contact Us

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