

# Illinois Department of Agriculture Animal Disease Laboratory Laboratory Notes

February 1, 2014

## Meet the Staff

Gregory Fritz is the laboratory supervisor for the virology, serology, and molecular biology sections of the laboratory. Greg has been with the laboratory since January of 1979 and is currently the longest serving employee of the laboratory. Greg has a Bachelor of Arts degree in Environmental Science from Northland College in Ashland, Wisconsin. He has been instrumental in bringing polymerase chain-reaction (PCR) testing to the laboratory. Greg has been married to Deb Fritz for 35 years. Deb is a registered nurse who is currently working to open and supervise a new day training facility in Abingdon, IL for the Knowledge, Caring, Creativity, Dedication, and Development organization and the developmentally disabled citizens it serves. They have two grown children Stephanie and Kyle. Greg has two grandchildren, Andy and Izzy. They keep him busy with their many activities and acting as chauffer. Greg enjoys gardening and cruising the Caribbean as time and money permit.



## New tests

Canine brucellosis- A card test for canine brucellosis has become available once again and is now offered by the laboratory. It is, unfortunately, an expensive test for us to purchase and will cost \$35.00 per sample. If an animal is seropositive, confirmatory tests, such as bacterial culture, should be done.

*Tritrichomonas foetus*- We are anticipating bringing a polymerase chain-reaction (PCR) test for *T foetus* on line beginning in March. The sample for the test will be the same sample as the current microscopic examination test - an In-Pouch™ TF specimen pouch inoculated with preputial or vaginal washings from cattle. Some states are satisfied with a single negative PCR test for importing an animal, but still require three negative In-Pouch™ TF samples for microscopic examination. Thus the PCR test can save you from having to sample the animal two more times. Each state must be consulted for their specific entry requirements. The test will cost \$35.00. The microscopic examination test will still be offered upon request.

## New Form on Website

There is a new form on our website to allow veterinarians and practices to order forms, tags, certificates, and tuberculin by email. Go to [agr.state.il.us](http://agr.state.il.us) and select Animal Health and Welfare from the dropdown list on the left side of the screen and then select Animal Laboratory Services. The fillable form, the Laboratory Commodity Order Form, along with a fillable submission form and serology form, is near the middle of the page. The form can be filled out on line and submitted to the laboratory by email.

Be aware that numbered items (tags or certificates) and tuberculin must be assigned to an individual licensed accredited veterinarian rather than just to a practice.

## Fee Schedule

There has been, or soon will be, a change in the published fee schedule posted on our website. Because of ever increasing costs we have had to raise prices on a few tests. The vast majority of fees remain unchanged. Tests with increased fees are:

Test name	Old	New
Fungal culture	\$10	\$15
Listeria culture	\$10	\$15
Salmonella enrichment	\$10	\$15
Carcass disposal fee	\$0.30 /#	\$0.50 /#
Rabies FA test	\$15	\$25

## Shipping Fees

Along with our testing supplies, on January 1, 2014, we had an increase in shipping costs that must be passed on. There will be a concomitant increase in shipping charges for materials sent out from the lab.

## Porcine Epidemic Diarrhea Update

Porcine epidemic diarrhea (PED) continues to be diagnosed in Illinois samples. As of 12/21/13, about 40 cases have been identified from Illinois. PED is caused by a coronavirus very similar to transmissible gastroenteritis virus (TGEv), and the clinical presentation is indistinguishable from TGE (diarrhea and vomiting in all classes of pigs, with death loss in newborns). As previously reported, if TGE tests (IHC, FA) are negative, samples will be forwarded for PED PCR. TGE-positive cases are not PED; the tests do not cross-react. Clinical management is similar to TGE.

## Laboratory Notes

### Fair Season

It's not too early to begin reminding clients of serologic testing requirements for fairs and other exhibitions. In-state certificates of veterinary inspection and associated blood tests are good for 90 days.

Expected laboratory turn-around time for serology during fair season will be FOUR working days. If shorter turn-around times are required, submissions will be subject to additional charges.

### Cases from the Lab

A 68-pound pit bull-type mixed breed dog was submitted for necropsy with a history of a short period of inappetence. The dog was thin. While opening the abdominal cavity, thick, fetid, bloody fluid was released. The abdomen contained about one liter of this fluid. The intestines were red with fibrin strands on the surface. The greater curvature of the stomach was red with paint brush-type hemorrhage. While dissecting the intestinal mass, a rent was found in the jejunum associated with a large flat object that looked like a dark brown razor clam. The object turned out to be a large seed of unknown origin. Later, when discussing the case with the owner, the seed was identified as a mango seed. The owner said the dog loved them. A good example of getting a complete history – after the fact.

### Lead toxicosis

Spring generally brings a few calves under 300 pounds with a vague history of CNS signs and no demonstrable lesions. A primary rule out in these cases is lead toxicosis. If positive, we can generally demonstrate lead

in organs or whole blood, but timely suspicion will allow you to identify old batteries several days sooner than the lab results arrive and can prevent other losses. Assurance from producers that there are no batteries around is common, but they should be strongly encouraged to look again.

### Abortion submissions

The lab receives a number of aborted calf submissions each spring and fall to test for infectious causes of abortion. Here are a few helpful observations:

- Fetuses that are completely fresh, that is, without evidence of autolysis, are most likely stillbirths and are unlikely to have an infectious condition. Calves with swollen heads and tongues usually represent dystocia.
- One of the last things to happen developmentally before birth in a bovine fetus is eruption of the incisors. If the incisors are erupted, the calf is at or near term.
- Placenta, that is, a cotyledon, is often valuable and sometimes the only location a lesion can be found. If placenta is available, please include cotyledons in fresh and fixed samples.
- Fresh tissues to be submitted include lung, liver, kidney, and placenta.
- Fixed tissues to be submitted include brain, lung, heart, liver, kidney, placenta, and an ear notch.
- Submitting ocular fluid (aqueous humor) for nitrate/nitrite analysis is of potential value; however, putrefactive bacteria can produce endogenous nitrate and nitrite that mimic the findings in nitrate toxicosis.

Illness in the dam and other adults, abortion within 1-2 weeks of the onset of toxicosis, and elevated levels of nitrates in feed are required for a definitive diagnosis of nitrate-induced abortion.

- Counseling your client that abortion workups are done to rule out of infectious conditions, and will not produce an absolute determination the of cause (which are myriad), will go a long way toward avoiding disappointment from a negative workup.

### Laboratory Calendar

Please be aware that, along with all other state agencies, the diagnostic laboratory is closed on the following days.

New Year's Day  
Martin Luther King Day  
Lincoln's Birthday  
President's Day  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
General Election Day  
Veteran's Day  
Thanksgiving and the day after  
Christmas Day

As always, submissions can be left at the lab on holidays by placing them in the night depository on the north east side of the building, which has outside access to the walk-in cooler. This night depository door is always available should you or a client desire to deliver submissions after hours, on weekends, or on holidays.

### Questions and Guidance

Laboratory personnel are always happy to provide guidance on sample collection, preparation, and submission. Don't hesitate to call (309 344-2451) for information or advice.