



ADDL NEWS

Animal Disease Diagnostic Laboratory

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New Lab Information Management System Enhances Communication

The Division of Animal Industry Animal Disease Diagnostic Laboratory introduced AgTraq

as a state-of-the-art laboratory information management system and regulatory

disease software program on Jan. 1, 2009. Many practitioners have benefited from this user-friendly, web-based system. AgTraq results can be accessed online 24/7 or via e-mail. For practices that prefer faxes, results are also available through Efax, an internet-based fax program.

The ADDL would like to establish an AgTraq account for all practices. The ADDL offers a wide selection of validated molecular DNA/RNA diagnostic tests with a rapid turn around time and a reasonable cost. The lab offers necropsies on all

animal species including exotics, dogs and cats. The ADDL is the only lab in Ohio accredited by the American Association of Laboratory Diagnosticians. It is also the only lab authorized by the USDA

to test for emerging diseases such as H1N1 in small animals and swine. A complete list of test offerings is available on the internet at www.agri.ohio.gov/addl.

For more information about the new AgTraq program, contact Dr. Stephen Dodaro at 614-728-6220 or dodaro@agri.ohio.gov.

If you would like to know more about the ADDL diagnostic services please contact either Dr. Tony Forshey, State Veterinarian, or Dr. Beverly Byrum, Laboratory Director, at 614-728-6220.



Message From the Laboratory Director

Ohio's Animal Disease Diagnostic Laboratory has had a very busy summer. In July, the Ohio Department of Agriculture announced that tests performed by the ADDL and confirmed by the National Veterinary Services Laboratory were positive for bovine tuberculosis in a Paulding County dairy herd. The herd was depopulated, and the division field staff is conducting extensive trace-in and trace-out investigations to determine if other livestock may be affected.

The ADDL has recently increased *Salmonella enteritidis* testing on environmental and egg samples in association with the new FDA Egg Rule. The lab has provided

testing for the Ohio Egg Quality Assurance Program since 1997 and is currently conducting method validation for a rapid screen test. These results will be shared with FDA as a potential new protocol for all labs involved in this program testing.

The ADDL has also been busy preparing for an on-site audit by the American Association of Veterinary Laboratory Diagnosticians. The ADDL has been accredited as a full service, all-species laboratory since 1998. AAVLD Accreditation provides assurance that the ADDL meet the highest quality standards in veterinary diagnostic medicine.

The ADDL is proud of our professional staff members and employees. We are dedicated to continuing to provide the highest quality diagnostic services available. Please feel free to provide suggestions and comments to our e-mail at addl@agri.ohio.gov. Have a great fall.



Dr. Beverly Byrum, DVM, Ph.D., is the Lab Director of the ADDL.

Diagnostic Panels for Livestock Available at the ADDL

The ADDL has organized tests as panel packages for various livestock species, including cattle, sheep and goats (small ruminants), swine and horses. There are panels to investigate the pathogenic agents that commonly cause abortion, enteric conditions (both juveniles and adults) and respiratory disease in these species. Pathogens in the panels can serve as a differential



State-of-the-Art Facility: *The ADDL's Necropsy Lab is dedicated to providing quick and accurate disease diagnostics.*

diagnosis list and tests can be done altogether as a comprehensive investigation (recommended), or tests from the panels can, of course, be selected individually.

Test methods include combinations of standard tests (e.g., immunofluorescence [F.A. tests], virus isolation, various bacterial culture procedures as well as antimicrobial susceptibility testing [using MIC method] and histopathology of pertinent tissues) as well as more recent technology including polymerase chain reaction (PCR).

Tests associated with these panels can be located on the ADDL website at www.agri.ohio.gov/addl. Click on the hyperlink Diagnostic Panels under Lab Services on the left column of information. Specific

**DIAGNOSTIC PANELS,
CONTINUED ON PAGE 3.**

New Diagnostic Tests Available

ADDL Diagnostic Panels	
Panels Available	Species
Abortion	Bovine
Enteric Disease - Juvenile Animal	Equine
Enteric Disease - Mature Animal	Porcine
Respiratory Disease	Small Ruminant (sheep, goats)

Meet the Pathologists



Dr. Jeff Hayes, head of the ADDL Pathology Section, has been with the ADDL for more than 26 years. Dr. Hayes served as a veterinary pathologist for the USDA at Plum Island in 2002-2003 and continues as an instructor for the Foreign Animal Disease courses offered several times a year at the Plum Island Animal Disease Center. He is also adjunct faculty with The Ohio State University College of Veterinary Medicine. His DVM and MS degrees were earned at the OSU College of Veterinary Medicine.

Dr. Dave Newman joined the ADDL as a veterinary pathologist in August 2007. His DVM degree was earned at the University of Florida. He completed a residency in veterinary pathology at the University of Kentucky Livestock Disease Diagnostic Center in July 2007. Previous experience includes mixed-animal practitioner in a North Central Florida mixed practice from 1993 to 2000.



Dr. Alex Hamberg is the newest addition to our team of pathologists at the ADDL, starting in November 2009. Dr. Hamberg obtained his veterinary degree from the University of Pennsylvania School of Veterinary Medicine in 2003. After a short time as a small-animal practitioner, Dr. Hamberg completed his pathology residency and earned a Ph.D. in Veterinary Biosciences at the Ohio State University.

Dr. Craig Sarver has been a veterinary diagnostician in the Pathology Section since July 1989. His DVM and MS degrees were obtained from the Ohio State University College of Veterinary Medicine. Dr. Sarver has a special interest in avian pathology and studied the pathogenesis of *Riemerella anatipestifer* in ducks for his Master's thesis.

DIAGNOSTIC PANELS, CONTINUED FROM PAGE 2.

panels are then listed in the right column, and clicking the hyperlink for each panel reveals the test methods, pathogens of interest, preferred specimens and cost. Note that for enteric and respiratory conditions, samples for both clinical and necropsy situations are listed.

The fees for the listed panels pertain only to tests listed on the color charts; the cost of necropsy at ADDL (currently \$70) is not included. Also, please note that effective March 1, 2010, the cost of serologic testing for abortion investigations is separate and distinct from the fees associated with testing of fetuses and placental tissue. As a reminder, including placental tissue — particularly the allantochorion — is often critical to establishing a definitive diagnosis for abortion cases in all species.

Contact the ADDL at 614-728-6220 if you have any questions.



Ohio Necropsy News

Goat with Enteritis

A three and a half year-old Boer doe was diagnosed with enterotoxemia associated with *Clostridium perfringens* type D. Clinical signs included the inability to rise, lateral recumbency and kicking at the ground. Necropsy followed by histopathology revealed necrotizing enteritis. Acute tubular necrosis with hemorrhage was noted in the kidneys and mild edema was noted in the cerebrum. Heavy growth of *Clostridium perfringens* was isolated from the small intestines by anaerobic culture, and the isolate was genotyped as type D by PCR. Additional findings included detection of many strongyle type ova and a few coccidial oocysts and *Moniezia* eggs in intestinal contents.

Calf Fetus with Infectious Bovine Rhinotracheitis and Leptospirosis

A Holstein fetus with associated placenta was diagnosed with both IBR and leptospirosis infections. Typical lesions of hepatic and renal necrosis, as well as necrotizing splenitis, lymphadenitis and enteritis were noted histopathologically in fetal tissues. Intranuclear inclusions typical of IBR were identified in the liver and lymph nodes; viral antigen was demonstrated by immunofluorescence and

OHIO NECROPSY NEWS, CONTINUED ON PAGE 4.

Animal Disease Diagnostic Laboratory Staff



Tony Forshey,
DVM
Chief/State Veterinarian



Alex Hamberg,
DVM, Ph.D.
Veterinary Pathologist



Beverly Byrum,
DVM, Ph.D.
Laboratory Director



Craig Sarver
DVM, MS
Veterinary Diagnostician



Jeffrey Hayes,
DVM, MS
Pathology Section Head



Brian Kessler,
BS
Serology/Central
Receiving Section Head



Yan Zhang,
DVM, Ph.D. ACVM
Virology/Avian
Section Head



Linda Barber,
BS
Health and Safety
Supervisor



Jing Cui,
DVM, MS
Bacteriology Section Head



Mohammed Amin
Quality Assurance
Manager



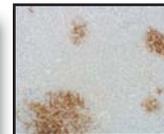
David Newman,
DVM, MS
Veterinary Pathologist



Stephen Dodaro
DVM, MCP
Assistant State Veterinarian

OHIO NECROPSY NEWS,
CONTINUED FROM PAGE 3.

immunohistochemistry and IBR virus was isolated by cell culture. Infection with leptospirosis was also diagnosed, based upon detection of leptospiral nucleic acid in chilled placenta tissue by PCR. This was confirmed by demonstration of leptospiral antigen within formalin-fixed, paraffin-embedded placenta tissue using immunohistochemistry.



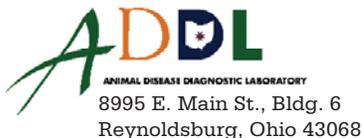
Bovine Abortion Associated with IBR and Leptospirosis

Figure 1 (left) shows intranuclear inclusion typical of IBR virus infection in fetal

adrenal cortex. A small focus of necrotic cells is present above the nucleus containing the inclusion. Figure 2 (above) shows immunoreactivity for IBR virus antigen in fetal adrenal gland cortex by IHC.



Ohio Department of Agriculture



P 614.728.6220 F 614.728.6310

www.agri.ohio.gov/addl

Hours of Service:

8 a.m. to 5 p.m. Monday - Friday

Closed for the following 2010 holidays:

- Columbus Day - Oct. 11
- Veterans Day - Nov. 11
- Thanksgiving Day - Nov. 25 (open Nov. 26)
- Christmas Day (observed) - Dec. 24
- New Years Day (observed) - Dec. 31

The mission of the Ohio Department of Agriculture's Animal Disease Diagnostic Laboratory is to provide expedient and high-caliber veterinary diagnostic service as well as credible, reliable disease surveillance information to Ohio's veterinary practitioners and in support of Ohio's livestock and poultry industries.



Ted Strickland, Governor Lee Fisher, Lt. Governor
Robert J. Boggs, Director

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