

DIAGNOSTIC CONNECTIONS

Spring 2019
Volume 3, Issue 2
Local. Trusted. Proven.



**Florida Department of
Agriculture and Consumer Services**

FROM THE DIRECTOR

Yugendar “Reddy” Bommineni, DVM, PhD, DACVM, DACPV

Welcome to the spring edition of the Bronson Animal Disease Diagnostic Laboratory's (BADDL) *Diagnostic Connections*. Contained within this newsletter are tests that we have added to our services and updates to our current test offerings based on feedback from you, our customers. We have also included an interesting pathology case that takes a deep dive into a disease or illness you might not see every day.

We truly appreciate your continued support of the BADDL. To assist us with improving our services, we are conducting our Laboratory User Survey and would appreciate your participation. If you would like to participate, please open the following link in your web browser:

<https://www.quicksurveys.com/s/i2H9Ty>

By taking the survey, you can assist our laboratory system in making improvements for our future. Your opinion is very important to us! We periodically update tests at BADDL to accommodate industry needs and changes in technology. Please visit our website for updates.

<https://www.freshfromflorida.com/Consumer-Resources/Animals/Bronson-Animal-Disease-Diagnostic-Laboratory-BADDL/Lab-Tests-and-Fees>



WHAT'S NEW

BADDL Now Offering Ruminant Pregnancy Testing



BADDL is pleased to announce the addition of Ruminant Pregnancy Testing to our growing list of diagnostic services. The pregnancy testing is offered for cattle, goats, sheep, bison, and water buffalo. Our Enzyme-Linked Immunosorbent Assay (ELISA) test detects early pregnancy-associated glycoproteins (PAGs). PAGs consist of a family of proteins that is expressed in the placenta and circulates in maternal blood. BADDL tests for PAGs in the serum of cattle, goats, and sheep and EDTA plasma of cattle, water buffalo, and bison. The test can be used 60 days or more post-calving in cattle and buffalo. Pregnancy can be detected from 28 days post-breeding in cattle and goats, 35 days in sheep, and 30 days in buffalo. Accurate and timely detection of pregnancy can assist veterinarians and livestock producers in determining reproductive efficiency in ruminants. Identification of open (non-pregnant) females allows for faster rebreeding and provides an economic advantage to the producer. Please refer to our website for more information on sample submissions to BADDL.

Test	Fee/sample	Sample Needed	Turnaround Time
Ruminant Pregnancy Test	1-19 samples: \$4.00/test >20 samples: \$3.00/test	1 ml of serum or EDTA plasma from a bovine or buffalo; 1 ml of serum from a caprine or ovine in a serum separator tube (red top/tiger top) or other sterile container; shipped chilled overnight.	2-3 days Tests run on Tuesday for samples received prior to 12:00 PM Tests run on Friday for samples received by 5:00 PM the day prior



New Small Ruminant Lentivirus Tests Performed at BADDL

Caprine Arthritis and Encephalitis (CAE) and Ovine Progressive Pneumonia (OPP)/maedi-visna are both caused by infection with lentiviruses. CAE virus infection is manifested clinically as polysynovitis-arthritis in adult goats and less commonly as progressive paresis (leukoencephalomyelitis) in kids. Subclinical or clinical interstitial pneumonia, indurative mastitis (“hard udder”), and chronic wasting have also been attributed to infection with this virus. Most CAE virus infections are subclinical. Infection with the CAE virus decreases the lifetime productivity of dairy goats. Ovine Progressive Pneumonia/maedi-visna virus infection causes chronic diseases in sheep. The Progressive Pneumonia virus/maedi (meaning “dyspnea”) virus induces chronic progressive pneumonias that present with similar clinical signs. Visna (meaning “wasting”) is the term used in many parts of the world to refer to the neurologic form of the disease in sheep resulting in unilateral pelvic paresis, which progresses to paralysis.

Test	Fee/sample	Sample Needed	Turnaround Time
Small Ruminant Lentivirus cELISA (CAE/ OPP)	\$7.00	1 ml of serum from a caprine or ovine in a serum separator tube (red top/ tiger top) container; shipped chilled overnight.	2-3 days Tests run on Tuesday and Thursday for samples received prior to 12:00 PM



Equine Herpesvirus Testing

BADDL offers a variety of options for Equine Herpesvirus testing. We offer the Equine Herpesvirus Immunofluorescence Assay (EHV-IFA) test on equine samples for titers and Equine Herpesvirus Fluorescent Assay (EHV-FA) on equine tissues. Equine Herpesvirus-1 and Herpesvirus-4 PCR tests are also available on tissue and swab submissions with optional neurological pathotyping. PCR, Polymerase Chain Reaction, testing is a rapid and sensitive analytic method for testing samples. Because the aforementioned tests offer greater sensitivity and have a quicker result turnaround time, BADDL has discontinued the Equine Herpesvirus-1 and Herpesvirus-4 (Rhinoepneumonitis) Virus Neutralization test from the Virology Section.

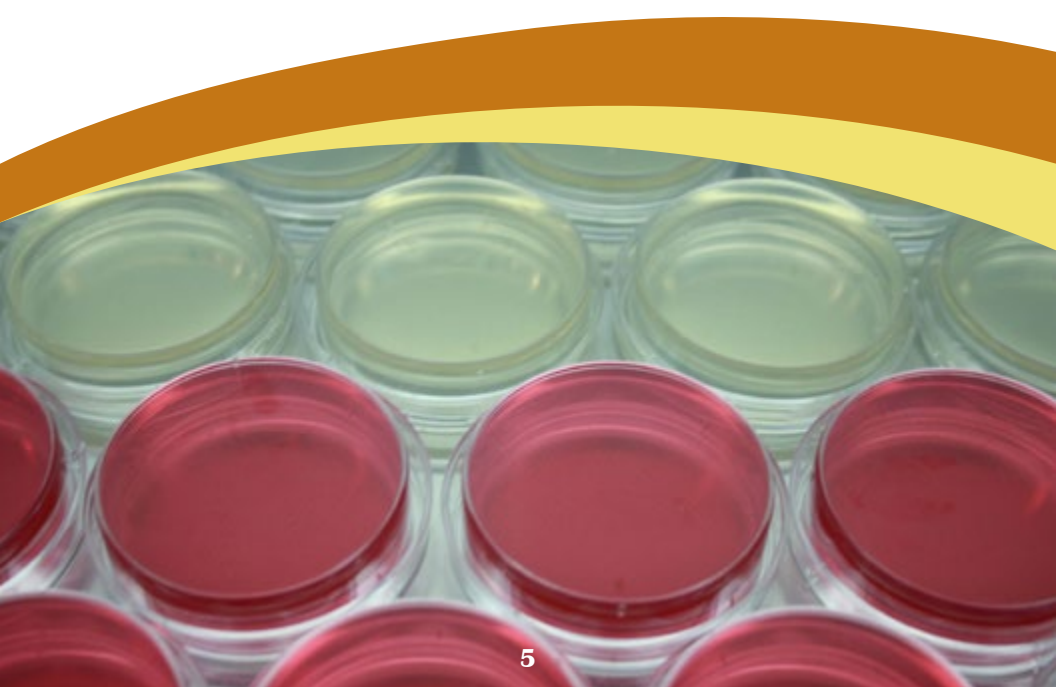
Both Herpesviruses 1 and 4 can produce an acute febrile respiratory disease upon primary infection, characterized by rhinopharyngitis and tracheobronchitis. Outbreaks of respiratory disease are typically observed in foals infected by strains of EHV-4. Mares may abort several weeks to months after clinical or subclinical infection with EHV-1. In some cases, EHV-1 can cause a myeloencephalopathy affecting a horse's neurological system, which may result in death. Our fee schedule for the EHV testing is below.

Test	Fee/sample	Sample Needed	Turnaround Time
Equine Herpesvirus-1 & EHV-4 IFA (Rhinoepneumonitis)	\$15.00	1 ml of serum from an equine in a sterile container; shipped chilled overnight.	1-3 days
Equine Herpesvirus-1 qPCR	\$30.00	Nasal swabs in viral transport medium (preferred), whole blood with EDTA (purple top) or heparin from an equine; shipped chilled overnight. Brain (neurologic cases), fresh or frozen fetal tissue (lung or spleen) in a sterile tube or container; shipped chilled overnight.	1-3 days
Equine Herpesvirus-4 qPCR	\$30.00	Nasal swabs in viral transport medium (preferred), whole blood with EDTA (purple top) or heparin from an equine; shipped chilled overnight. Brain (neurologic cases), fresh or frozen fetal tissue (lung or spleen) in a sterile tube or container; shipped chilled overnight.	1-3 days
Equine Herpesvirus-1 & EHV-4 FA (Rhinoepneumonitis)	\$15.00	Fresh, lung, trachea, brain, aborted foal tissues, placenta, adrenal gland or thyroid gland from an equine in a leakproof container; shipped chilled overnight.	1-3 days

New Bovine Leukosis Virus ELISA Test

BADDL is pleased to announce that we have added Bovine Leukosis Virus ELISA testing. Bovine leukosis is a disease of cattle caused by the Bovine Leukosis Virus (BLV). This virus may be a cause of lymphosarcoma in cattle. Lesions consist visually of lumps and/or tumors. Juvenile lymphosarcoma occurs most often in animals less than six months old. Thymic lymphosarcoma affects cattle 6–24 months old, and cutaneous lymphosarcoma is most common in cattle 1–3 years old. Cattle are infected with BLV through the transfer of blood that contains infected lymphocytes. Viral transmission may occur from an infected animal during common practices such as tattooing, dehorning, rectal palpation, injections, and blood collection. Vectors such as tabanids and other large biting flies also may transmit the virus. Transmission may also occur transplacentally from an infected dam to the fetus, during delivery by contact with infected blood, or postpartum from the dam to the calf through ingestion of infected colostrum. Any material that is blood contaminated or may contain lymphocytes can potentially cause infection. Once infected, cattle develop a lifelong antibody response. Treatment may decrease the clinical signs but is not curable.

Test	Fee/sample	Sample Needed	Turnaround Time
Bovine Leukosis Virus ELISA	\$7.00	1 ml of serum from a bovine in a serum separator tube (red top/tiger top); shipped chilled overnight.	2-3 days Tests run on Monday and Wednesday for samples received prior to 12:00 PM





FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

COMMISSIONER NICOLE "NIKKI" FRIED

Informational Letter for Accredited Veterinarians Program Disease Activities

This letter is to serve as a reminder of the importance of complete and accurate documentation related to all program disease activities. Accredited veterinarians have a responsibility to submit all documentation in accordance with federal requirements and program standard guidelines. Disease test records for program diseases, Brucellosis Vaccination Records, and Official Certificates of Veterinary Inspection are included in these requirements. These activities must be performed by an accredited veterinarian. All program disease activities and certificates issued for livestock and equine species require that the veterinarian is Category II Accredited. For further clarification, official testing includes testing for diseases as part of interstate movement requirements, a show/exhibition/sale, and a herd or individual animal status. Below are some important time lines and requirements.

- Interstate Certificates of Veterinary Inspection (ICVI) for Livestock and Horses – per USDA regulation 9 CFR 86, the ICVI must be forwarded to the state animal health official of the state of origin within seven calendar days from the date the ICVI was issued.
- Accepted electronic versions of the ICVI will automatically be delivered to both the state of origin and the destination without additional submission by an accredited veterinarian.
 - GlobalVetLink (GVL)
 - Veterinary Services Process Streamlining (VSPS)
 - Mobile App - mCVI
- Tuberculosis Test Records – VS 6-22 must be submitted to state/federal animal health officials within seven days of reading. State or federal animal health officials should be notified within 48 hours of reading if any animal has a response or suspect result.
- Electronic submission of most program disease test records is possible, please contact me for additional information.
- Disease testing (*see table below for specific document or testing requirements*) which is considered program testing:
 - Brucellosis
 - Chronic Wasting Disease (CWD)
 - Equine Infectious Anemia (EIA)
 - Pseudorabies (PRV)
 - Bovine Trichomoniasis
 - Tuberculosis (TB)



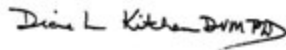
- Scrapie
- Official disease testing requires the tested animal to be officially, individually identified.
- Official individual identification must be recorded on the test record for disease test results to be official.

As part of Florida's surveillance program, the Florida Department of Agriculture and Consumer Services (FDACS) has supplemented some program testing to maintain a state status for program diseases. We recognize that accurate documentation and inclusion of official ID (rather than just management ID) requires additional time, but it is essential to the national animal health programs. Animal traceability is a core component of national animal health and surveillance and is requires official ID and an accurate physical location. Moving forward, Bronson Animal Disease Diagnostic Laboratory will be notifying veterinarians that beginning January 1, 2019, all Brucellosis and Pseudorabies testing submitted without official individual identification will be charged for testing. The charge for Brucellosis testing will be \$5.00/sample and the charge for Pseudorabies testing will be \$10.00/sample.

You may have received this informational letter in conjunction with a specific violation notification. Your first violation notice is for your information. Additional violations may result in accreditation action in addition to charges for testing after January 1, 2019.

Please feel free to contact me if you have any questions regarding this letter or need resources regarding options for electronic document submission. Thank you for your efforts to assist Florida in disease surveillance.

Sincerely,



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State Epidemiologist
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DISEASE	SUBMISSION FORM	Link or electronic options or Comments/Requirements
Brucellosis Testing	VS 4-33	https://www.aphis.usda.gov/library/forms/pdf/VS_4_33.pdf
Brucellosis Vaccination Record	VS 4-26	https://www.aphis.usda.gov/library/forms/pdf/VS_4_26.pdf or bulk submission on excel template, contact Cattle Programs Office
Chronic Wasting Disease (CWD)	FDACS 09212	Requires submitter to submit entire head for tissue collection at lab or for submitter to be a Cervidae CWD Certified Collector (trained by FDACS, USDA or FWC).
Equine Infectious Anemia (EIA)	VS 10-11	Electronic options with digital photos – Veterinary Services Process Streamlining (VSPS) or GlobalVetLink (GVL)
Pseudorabies (PRV)	FDACS 09212	http://forms.freshfromflorida.com/09212.pdf
Bovine Trichomoniasis	FDACS 09212	http://forms.freshfromflorida.com/09212.pdf
Tuberculosis (TB) Testing	VS 6-22	No fillable PDF – For bulk submission on an Excel template, contact the Cattle Programs Office. Completed test charts (VS 6-22) should be forwarded to: FDACS, DAI Cattle Programs Office 2232 NE Jacksonville Road Ocala, Florida 34470 CattleForms@FreshFromFlorida.com
Scrapie	FDACS09212	Must be an USDA-approved Scrapie Veterinarian



PATHOLOGY CORNER

Infectious Laryngotracheitis in a Chicken

Performed by: Jennifer Dill-Okubo, DVM, PhD, ACVP and Mamoon Rashid, DVM, MSc, MS, CPM

History:

Sick backyard flocks, coughing up blood and struggling to breathe. Chickens with respiratory illness. Sneezing/wheezing. Both eyes swollen closed.

Necropsy:

On gross examination, there was a marked necrotizing conjunctivitis and bloody mucoid casts in the trachea. Bilateral caseous (cheesy looking) plugs were observed in the eyes with moderate swelling of the nasal sinuses.



Fig 1. Diseased Eye. The eyes contain cheesy, pus-like material (caseous inflammation) with red swollen conjunctiva.

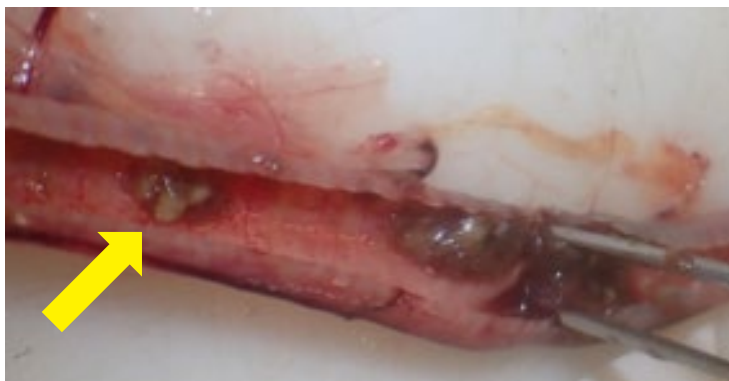


Fig 2. Diseased Trachea. Cut trachea displaying hemorrhage and inflammation within the trachea.

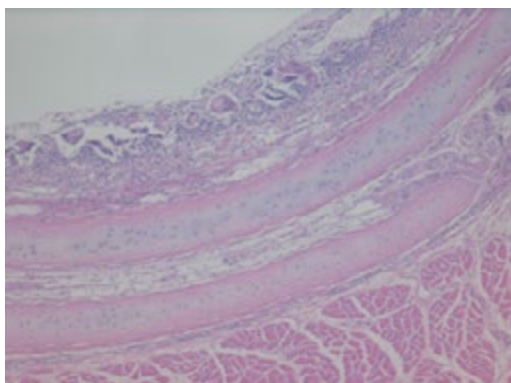


Fig 3. Diseased Trachea. Tracheitis, acute, fibrinous and necrotizing, severe with epithelial viral syncytial cells and intranuclear viral inclusion bodies. Hematoxylin & Eosin (H&E). Magnifying Power: 20X.

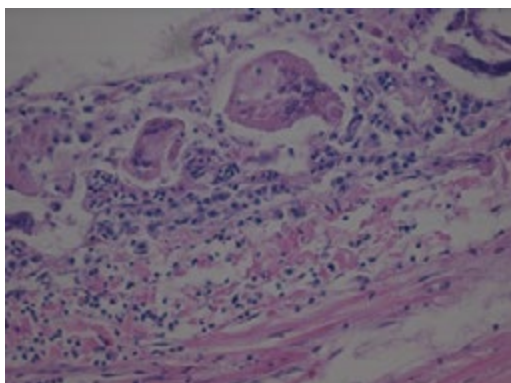


Fig 4. Diseased Trachea. Tracheitis, acute, fibrinous and necrotizing, severe with epithelial viral syncytial cells and intranuclear viral inclusion bodies. Hematoxylin & Eosin (H&E). Magnifying Power: 40X.

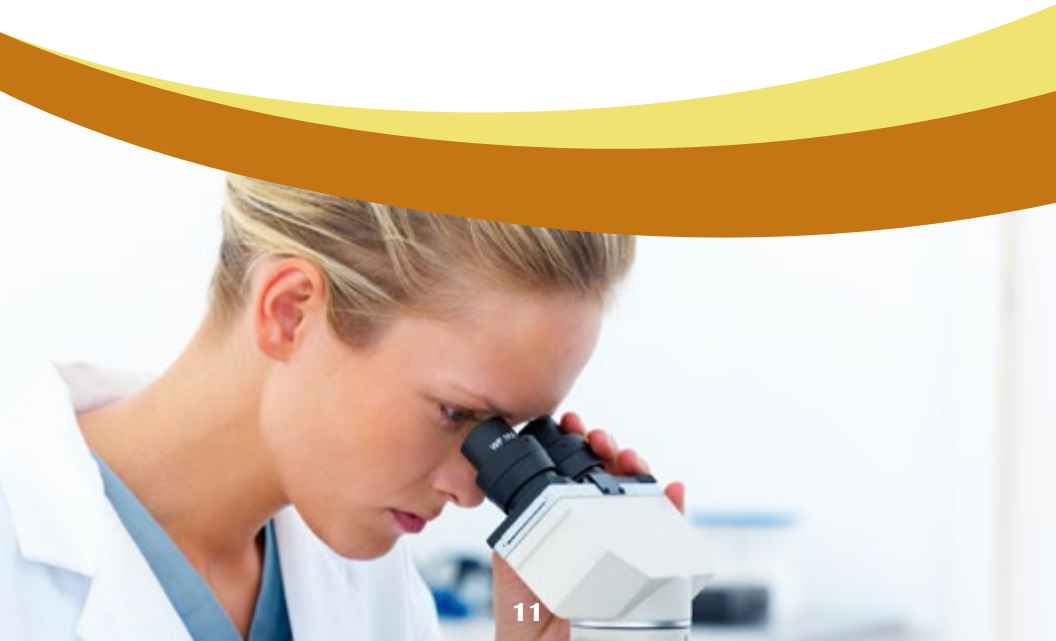
Ancillary testing was performed and the findings were:

In all cases, tracheal swabs were positive on Infectious Laryngotracheitis Virus qPCR, a recent addition to BADDL’s testing panel. One chicken was positive for *Mycoplasma synoviae* on qPCR. Another bird had low numbers of the parasite *Eimeria*.

These cases are most consistent with Infectious Laryngotracheitis (ILT) outbreaks, where the causative agent is Gallid Herpesvirus type 1 (GaHV-1). This is an acute, highly contagious disease of chickens characterized by respiratory distress, coughing, and expectoration of bloody and mucoid exudate that is spread via aerosolization of respiratory secretions. There is usually high morbidity or sickness (90-100%) in all age groups and variable mortality or death (10-70%) depending upon the pathogenicity of the strain. Recovered birds may become inapparent carriers and harbor virus in the upper respiratory epithelium for months, creating an endemic condition within flocks. There is a vaccine that should be used annually to protect birds.

ILT is a reportable animal disease within the state of Florida. To find out more information about reportable animal diseases, please visit our website: www.freshfromflorida.com/Consumer-Resources/Animals/Animal-Disease-Information/Reportable-Animal-Diseases.

Test	Fee/sample	Sample Needed	Turnaround Time
Infectious Laryngotracheitis Virus (ILT) qPCR	\$25.00	Tracheal or oropharyngeal swabs in 3 ml of viral transport medium (VTM) for pools of up to 5 birds or 5.5 ml of VTM for pools of up to 11 birds; shipped chilled overnight. Use synthetic swabs with a plastic handle. Avoid cotton or calcium alginate swabs or swabs with wooden handles.	1-3 days Tests run on Tuesday and Friday.



BADDL COMMUNITY OUTREACH

BADDL at the 3rd National Goat Conference

BADDL had a display booth within the exhibition hall of the 3rd National Goat Conference held in Montgomery and Tuskegee, AL. The theme of the conference was “Building Towards a Sustainable Future via a Healthy and Profitable Goat Industry.” Goat meat and dairy producers were the majority of attendees, followed by researchers and veterinarians. BADDL showcased the newest tests available for small ruminant producers and veterinarians. One of the most popular tests asked about at the conference was the Ruminant Pregnancy Test. Producers were happy to hear about affordable alternatives for testing and shipping of samples. Dr. Pamela Hunter gave a presentation on “Infectious Diseases of Goats” during two of the general sessions at the conference and Dr. McKenzie-Alfred represented the Department at the Division’s display booth by educating participants on BADDL’s services.

BADDL Booth at World’s Largest Veterinary Conference

The BADDL hosted a booth at the Veterinary Medicine Expo (VMX, formerly known as the North American Veterinary Conference (NAVC)) from January 19 to 23, 2019. Nearly 18,000 veterinary professionals, speakers, moderators, exhibitors, partners, sponsors, students and families attended the VMX. This year, over 7,000 veterinarians learned about BADDL and what is offered in terms of testing and services.



BADDL EVENTS



61st American Association of Veterinary Laboratory Diagnosticians' (AAVLD) Abstracts

Three abstracts were accepted for presentation by Dr. Shipra Mohan and Dr. Gizela Maldonado. Dr. Maldonado's poster abstract was entitled "Eastern Equine Encephalitis in Florida Emus." Dr. Mohan's poster abstract was entitled "Zika Virus Detection by Multiplex rRT-PCR in Mosquito Samples, Miami-Dade County, Florida." Dr. Mohan's abstract for oral presentation was entitled "Methicillin-Resistant *Staphylococcus pseudintermedius*: A Zoonotic Disease?" These were presented at the AAVLD Conference, October 18 to 22, 2018.

Animal Disease Diagnostic Laboratory Advisory Group

The Animal Disease Diagnostic Laboratory Advisory Group held its first meeting on September 20, 2018. The Advisory Group was formed as a subcommittee of the Animal Industry Technical Council (AITC) and is made up of 25 members with this purpose: "Providing guidance to Florida's animal disease diagnostic laboratory(ies) to implement innovative diagnostics and prioritize resources to better serve and protect Florida's agricultural industries, by safeguarding animal and human health." The Advisory Group includes veterinarians, producers, and others and will meet quarterly in conjunction with the AITC.

BADDL Participated in a NAHLN Tabletop Exercise

BADDL, led by Dr. Karen McKenzie-Alfred, participated in a tabletop exercise sponsored by the National Animal Health Laboratory Network's (NAHLN) Exercises and Drills Working Group. The exercise was designed to test NAHLN laboratory response if the virulent Newcastle Disease (ND) is introduced into Florida. Over the three-day period, team members, including Dr. Reddy Bommineni, Dr. Shipra Mohan, Dr. Lijuan Zhou, Dr. Gizela Maldonado, Dr. Jennifer Dill-Okubo, Dr. Luis Arzeno, Danielle Peters, Alex Nemethy, Victor Alzona, and Christina Rodgers, responded to injects detailing the outbreak of velogenic Newcastle Disease that was traced back to a Florida backyard flock. Scenarios within the exercise included what should be done if an overwhelming number of samples is received or if staffing issues arise during the middle of an outbreak. Afterwards, a "hotwash" discussion was conducted among all of the NAHLN labs that participated to better prepare for future, potential animal disease outbreaks.

Bronson Animal Disease Diagnostic Laboratory

Laboratory Sample Shipping Service

To enhance the convenience of our lab testing services, BADDL is pleased to announce the utilization of the United Parcel Service (UPS) and Federal Express (FedEx) as couriers to offer a Laboratory Sample Shipping Service. This service will provide a more affordable and reliable way to ship samples to the laboratory in as little as one day. You can now purchase discounted, prepaid and pre-addressed UPS Ground, UPS Next Day Air, and FedEx Priority Overnight shipping labels online. Over the past two years that we have offered this service, BADDL clients have collectively saved over \$31,000 in shipping fees. There is no initial charge to utilize the service. The cost of shipping will be invoiced to your account when we receive your package.

To take advantage of this affordable service:

1. Visit www.FreshFromFlorida.com/BADDL.
2. Create Shipping Label.
3. The cost of shipping will be charged to your invoice. Shipping samples outside of the approved weight will incur additional charges.

Please call the Bronson Animal Disease Diagnostic Laboratory at (321) 697-1400 for additional information.

FedEx Priority Overnight Shipping Labels:

Packages <10 lbs., within FL	\$15.00*
Packages 11-20 lbs., within FL	\$25.00*
Packages 21-40 lbs., within FL	\$35.00*

UPS Ground Shipping Labels \$7.00

Packages weighing less than 40 lbs., within Florida, east of the Apalachicola River, will be delivered within one business day. Confirm the delivery date at your UPS Drop Off Location or visit www.ups.com and select the "Shipping" tab.

UPS Next Day Air Shipping Labels:

Packages 20 lbs. or less, within FL	\$15.00*
Packages 10 lbs. or less within AL, GA, NC and SC	\$20.00*
Packages 10 lbs. or less from other 43 contiguous states	\$30.00*

***Packages that require Saturday delivery will be charged an additional fee of \$20.00.**



REMINDERS

The following dates are upcoming office closures for the Bronson Animal Disease Diagnostic Laboratory:

Thursday, July 4
Independence Day



SERVICE AWARDS

In recognition of 5 years of service and dedication:

Dr. Joanna Hyland, Diagnostic Veterinarian Manager, Histopathology Section Head
Alexander Nemethy, Biological Scientist III, Bacteriology Section



PROMOTIONS

Alexandra Divine - Laboratory Technician IV, Serology Section

OUTSTANDING/INNOVATIVE EMPLOYEE AWARD

Gloria Wood - Biological Scientist I, Clinical Pathology/Parasitology

CUSTOMER SERVICE AWARD

Shipping & Receiving Section

Ellen Dalal

Alexandra Divine

Christopher Feeney

Dr. Karen McKenzie-Alfred

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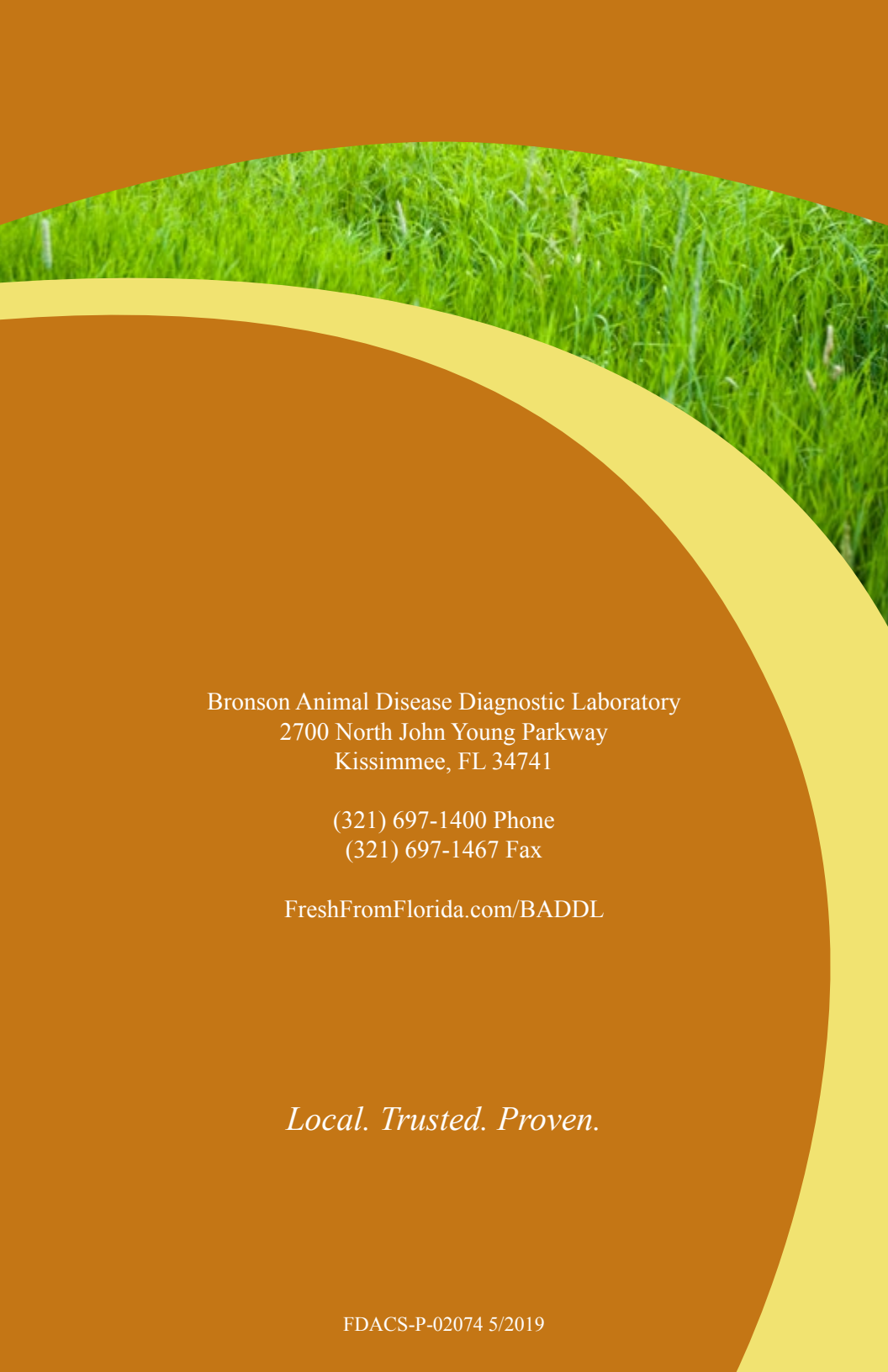
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Any news or information you'd like to see here?
Please contact the newsletter editor, Dr. Karen McKenzie-Alfred at:

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