

DIAGNOSTIC CONNECTIONS

Summer 2019
Volume 4, Issue 1
Local. Trusted. Proven.



**Florida Department of
Agriculture and Consumer Services**

FROM THE DIRECTOR

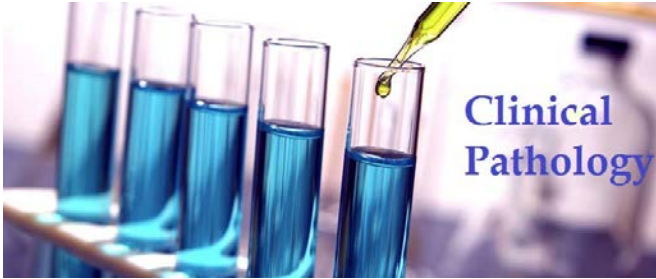
Yugendar “Reddy” Bommineni, DVM, PhD, DACVM, DACPV

We're excited to announce that our new 22,000 sq. ft. diagnostic laboratory building has been completed. A ribbon-cutting was held on October 3, 2019. The facility houses 18,000 sq. ft. of modernized laboratory space suitable for maintaining accreditation standards. Benefits of the new laboratory include open and integrated laboratory space, increased biosafety, and enhanced testing capabilities. We welcome you to visit our lab and thank you for keeping Florida safe by the submission of your samples.



WHAT'S NEW

Bronson Animal Disease Diagnostic Laboratory Brings the IMMULITE 2000XPI Solution to Your Practice to Improve Efficiency in Delivering Patients' Test Results



BADDL is among the leading laboratories in the country to install the IMMULITE 2000XPI immunoassay analyzers from Siemens Healthineers. The IMMULITE will help BADDL meet our continuous goal of improving customer service by reducing turnaround times and providing high-quality results. Initially, we will offer Metabolic (ACTH, Cortisol) and Reproductive Endocrinology (Progesterone, Testosterone, Estradiol), Thyroid Panels (Free T3, Free T4, Total T3, Total T4, TSH, Thyroglobulin), a Therapeutic Drug Monitoring test (Phenobarbital), Insulin and Canine TLI. Each test requires 1 mL of serum except for ACTH which requires plasma or Whole Blood, EDTA.

Stay tuned for more good news. If you have any questions, please contact the Clinical Pathology Section at 321-697-1400.

Test	Fee/sample	Sample Needed	Turnaround Time
ACTH (Baseline)	\$30.00	1 ml of plasma or whole blood in a purple top tube (EDTA) from all species (no primates or avian); shipped frozen overnight from Monday to Thursday. Collect blood and place it in an EDTA blood tube. Centrifuge within 1 hour of collection, remove the plasma and place 1 ml in a plastic tube additive-free. Place the tube in a secondary container with water, freeze the sample in the container filled with water.	1 day
Cortisol	\$25.00	1 ml of serum from all species (no primates or avian) in red top tube; shipped chilled overnight from Monday to Thursday. Collect blood in a red top tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours.	1 day

Test	Fee/sample	Sample Needed	Turnaround Time
Estradiol	\$30.00	1 ml of serum from all species (no primates or avian) in red top tube; shipped chilled overnight from Monday to Thursday. Collect blood in a red top tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours.	1 day
Insulin	\$25.00	1 ml of serum in a red top tube or 1 ml heparinized plasma from all species (no primates or avian); shipped chilled overnight from Monday to Thursday. Collect blood in a red top tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours. For heparinized plasma, collect blood in a heparinized blood tube. Centrifuge within 1 hour of collection, remove the plasma and place 1 ml in an additive-free tube.	1 day
Phenobarbital	\$30.00	1 ml of serum in a red top tube or 1 ml heparinized plasma from all species (no primates or avian); shipped chilled overnight from Monday to Thursday. Collect blood in a red top tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours. For heparinized plasma, collect blood in a heparinized blood tube. Centrifuge within 1 hour of collection, remove the plasma and place 1 ml in an additive-free tube.	1 day

Test	Fee/sample	Sample Needed	Turnaround Time
Progesterone	\$20.00	1 ml of serum from all species (no primates or avian) in red top tube; shipped chilled overnight from Monday to Thursday. Collect blood in a non-additive clot tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours to avoid loss of progesterone.	1 day
Testosterone	\$20.00	1 ml of serum in a red top tube or 1 ml heparinized plasma from all species (no primates or avian); shipped chilled overnight from Monday to Thursday. Collect blood in a red top tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours. For heparinized plasma, collect blood in a heparinized blood tube. Centrifuge within 1 hour of collection, remove the plasma and place 1 ml in an additive-free tube.	1 day

Test	Fee/sample	Sample Needed	Turnaround Time
Thyroid Panels – TSH +TP1 (TT3, TT4, FT3, FT4, Tg)	\$30.00 (Includes TSH + 1 in panel)	1 ml of serum from all species (no primates or avian) in red top tube; shipped chilled overnight from Monday to Thursday. For Free T4 and Thyroglobulin - 1 ml of serum in red top tube or 1 ml of heparinized plasma in an additive-free tube from all species (no primates or avian); shipped chilled overnight from Monday to Thursday. Collect blood in a red top tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours. For heparinized plasma, collect blood in a heparinized blood tube. Centrifuge within 1 hour of collection, remove the plasma and place 1 ml in an additive-free tube.	1 day
Thyroid Panels – TSH +TP2 (TT3, TT4, FT3, FT4, Tg)	\$35.00 (Includes TSH + 2 in panel)	1 ml of serum from all species (no primates or avian) in red top tube; shipped chilled overnight from Monday to Thursday. For Free T4 and Thyroglobulin - 1 ml of serum in red top tube or 1 ml of heparinized plasma in an additive-free tube from all species (no primates or avian); shipped chilled overnight from Monday to Thursday. Collect blood in a red top tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours. For heparinized plasma, collect blood in a heparinized blood tube. Centrifuge within 1 hour of collection, remove the plasma and place 1 ml in an additive-free tube.	1 day

Test	Fee/sample	Sample Needed	Turnaround Time
Thyroid Panels – TSH +TP3 (TT3, TT4, FT3, FT4, Tg)	\$45.00 (Includes TSH + 3 in panel)	1 ml of serum from all species (no primates or avian) in red top tube; shipped chilled overnight from Monday to Thursday. For Free T4 and Thyroglobulin - 1 ml of serum in red top tube or 1 ml of heparinized plasma in an additive-free tube from all species (no primates or avian); shipped chilled overnight from Monday to Thursday. Collect blood in a red top tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours. For heparinized plasma, collect blood in a heparinized blood tube. Centrifuge within 1 hour of collection, remove the plasma and place 1 ml in an additive-free tube.	1 day
Thyroid Panels – TSH +TP4 (TT3, TT4, FT3, FT4, Tg)	\$55.00 (Includes TSH + 4 in panel)	1 ml of serum from all species (no primates or avian) in red top tube; shipped chilled overnight from Monday to Thursday. For Free T4 and Thyroglobulin - 1 ml of serum in red top tube or 1 ml of heparinized plasma in an additive-free tube from all species (no primates or avian); shipped chilled overnight from Monday to Thursday. Collect blood in a red top tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours. For heparinized plasma, collect blood in a heparinized blood tube. Centrifuge within 1 hour of collection, remove the plasma and place 1 ml in an additive-free tube.	1 day

Test	Fee/sample	Sample Needed	Turnaround Time
Trypsin-like Immunoreactivity (TLI) (canine)	\$30.00	1 ml of serum from a canine in a serum separator tube (red top/tiger top) or other sterile container; shipped chilled overnight from Monday to Thursday. Dogs should fast for at least 6 hours prior to sample collection, preferably overnight. Collect blood in a red top tube to allow clot formation. Centrifuging serum samples before a complete clot forms may result in the presence of fibrin. Ensure complete clot formation prior to centrifugation of samples, usually within the next 4 hours.	1 day



Bluetongue Virus, Bovine Leukosis Virus, and Small Ruminant Lentivirus (CAE/OPP) ELISA Testing

BADDL offers many options of testing for a variety of viral diseases. Bluetongue is a non-contagious, viral disease spread by biting insects. It is usually spread by biting midges (*Culicoides sp.*) but can also be spread by other biting pests such as ticks. It affects domestic and wild ruminants, particularly sheep. Bluetongue causes many different symptoms, including ulcers, sores, painful hooves, lameness, and reproductive problems. Affected animals can have swelling of the tongue (“bluetongue”) which can cause breathing difficulties.

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. Cattle are infected with BLV through the transfer of blood that contains infected lymphocytes. Viral transmission may occur from an infected animal during common management 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.

Caprine Arthritis Encephalitis (CAE) and Ovine Progressive Pneumonia 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. The Ovine Progressive Pneumonia virus infection causes chronic diseases in sheep. These may be observed as dyspnea (difficulty breathing), chronic progressive pneumonia, or in a neurological form that results in unilateral pelvis paresis.

We offer the Bluetongue cELISA, Bluetongue Virus qPCR, and Bluetongue/Epizootic Hemorrhagic Disease Multiplex qPCR on bovine, caprine, cervid, alpaca, or ovine specimens. The PCR tests can be performed on tissue and whole blood (purple top tube) sample submissions. PCR, polymerase chain reaction, testing is a rapid and sensitive analytic method for testing samples. The ELISA testing is performed on serum samples (red top tubes). We offer BLV ELISA on bovine serum samples and the Small Ruminant Lentivirus (SRLV) cELISA on caprine and ovine serum samples.

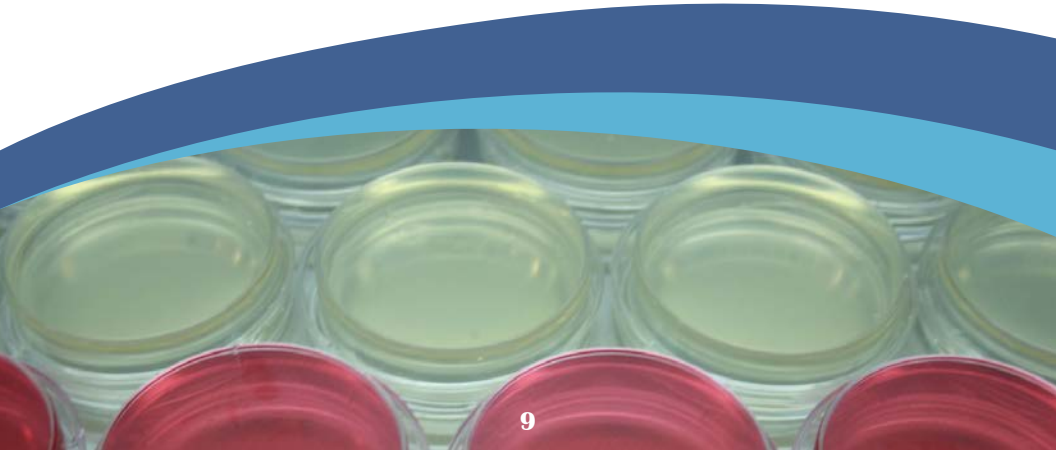
We will be discontinuing the following Agar Gel Immunodiffusion (AGID) tests at BADDL: Bovine Leukemia Virus, Bluetongue Virus, Caprine Arthritis Encephalitis Virus, and Ovine Progressive Pneumonia. Our vendor who supplied the required materials to perform these AGID tests is no longer in business; however, we do offer testing for the detection of antibodies to these pathogens by the Enzyme-Linked Immunosorbent Assay (ELISA) for the same test fee as the AGID. Moreover, ELISA is more sensitive than AGID.

For more information on sample collection, submission, cost, and turnaround time, please visit the laboratory web page at www.FDACS.gov/BADDL. If you have any questions, please call us at (321)-697-1400. We hope to serve you in the future.

Test	Fee/sample	Sample Needed	Turnaround Time
Bluetongue cELISA	\$7.00	1 ml of serum from a bovine, caprine, cervid, or ovine in a serum separator tube (red top/tiger top) or other sterile tube; shipped chilled overnight.	3-5 days Tests run on Wednesday for samples received prior to 12:00 PM
Bluetongue Virus qPCR	\$25.00	Spleen or whole blood in EDTA (purple top) from a bovine, caprine, cervid, alpaca, or ovine; shipped chilled overnight.	1-3 days
Bluetongue Virus PCR/ Epizootic Hemorrhagic Disease Multiplex qPCR	\$30.00	Spleen or whole blood in EDTA (purple top) from a bovine, caprine, cervid, or ovine; shipped chilled overnight.	1-3 days
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
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); shipped chilled overnight.	2-3 days Tests run on Tuesday and Thursday for samples received prior to 12:00 PM

New Laboratory Building

BADDL is excited to announce our new diagnostic laboratory building. The 22,000 sq. ft. facility houses 18,000 sq. ft. of modernized laboratory space suitable for maintaining accreditation standards. BADDL is the only animal disease diagnostic laboratory in the state of Florida that is fully accredited by the American Association of Veterinary Laboratory Diagnosticians (AAVLD). Benefits of the new laboratory include open and integrated laboratory space, increased biosafety, and enhanced testing capabilities. In addition, the movement of the Shipping and Receiving Section to a central location in the new laboratory will allow for greater efficiency in movement of samples. Thank you to all our industry partners! This project could not have been accomplished without your ardent support. Photos supplied by RS&H Architect and Engineering firm.



Effect of RNA^{later}[™]/ RNA Stabilizing Buffer on the Infectivity of Zika Virus



P. Karki, R. Powell, L. Zhou, A. Yan,
Y. Bommineni, S. Mohan
Bronson Animal Disease Diagnostic Laboratory
Kissimmee, FL

Material and methods:

Preparation of the Inoculum

- RNA^{later}[™] was obtained from Sigma Aldrich.
- Live Zika virus (PRVABC59) was obtained from Biodefense and Emerging Infectious Research Resources' Repository (BEI Resources).
- A total of ten inoculums was prepared by mixing serial dilutions of the live Zika virus (10^{-1} to 10^{-10}) to 0.5ml of the RNA^{later}[™] and known negative mosquito homogenates (Table 1).
- The samples were homogenized and centrifuged and supernatant was used as inoculum.

Virus Isolation by Adsorption Method

- Vero C1008 ATCC: CRL-1586 (Vero 76, clone E6, Vero E6) cell line was used for virus isolation.
- The supernatants were inoculated on the cell lines.
- The ZIKV positive control without RNA^{later}[™] was included, was comprised of the Vero cell line inoculated with the undiluted standard Zika virus.
- CPE (cytopathic effect) was observed in positive control but was not observed for the experimental samples with RNA^{later}[™].
- Real-time PCR was done on passages 1 and 4 cell culture fluid.
- Zika virus was detected only in samples 1 and 2 of the first passage (Table 1).

Introduction

- Zika virus (ZIKV) is an arthropod-borne flavivirus primarily transmitted by an Aedes (Stegomyia) mosquito bite. Surveillance data has demonstrated that ZIKV can be detected in mosquitoes weeks before there is a significant risk to human health.
- Bronson Animal Disease Diagnostic Laboratory (BADDL) tested mosquito samples from 35 counties in Florida between May to December 2016 to detect the presence of ZIKV RNA via Real-time PCR.
- Out of 6,094 mosquito pools, ZIKV RNA was detected in eight pools of Aedes aegypti received from Miami-Dade County (Ref. 1).
- An attempt was made to grow the virus from two positive mosquito pools of ZIKV samples using Vero 76, a clone of the E6 cell line. The virus was not able to propagate. One of the many reasons for failure of propagation of the virus could be the RNA^{later}[™] used to preserve/transport the mosquito samples.
- In this study, tests were run to determine the effect of RNA^{later}[™] on the infectivity or virulence of the Zika virus.
- RNA^{later}[™] is a nontoxic tissue storage reagent that rapidly permeates tissue to stabilize and protect cellular RNA *in situ* in unfrozen specimens.

Effect of RNAlater™/ RNA Stabilizing Buffer on the Infectivity of Zika Virus



P. Karki, R. Powell, L. Zhou, A. Yan,
Y. Bommineni, S. Mohan
Bronson Animal Disease Diagnostic Laboratory
Kissimmee, FL

TABLE 1: Virus Isolation and PCR Results

Sample	Sample Details	Passage 1	Passage 2	Passage 3	Passage 4	PCR Result
Poe Control	Zika virus from BEI resource	CPE	CPE	CPE	CPE	
1	10 ¹ Zika + RNAlater™ + MH	Toxicity	No CPE	No CPE	No CPE	Ct 34.53 at first passage
2	10 ² Zika + RNAlater™ + MH	Toxicity	No CPE	No CPE	No CPE	Ct 37.88 at first passage
3	10 ³ Zika + RNAlater™ + MH	Toxicity	No CPE	No CPE	No CPE	Not detected
4	10 ⁴ Zika + RNAlater™ + MH	Toxicity	No CPE	No CPE	No CPE	Not detected
5	10 ⁵ Zika + RNAlater™ + MH	Toxicity	No CPE	No CPE	No CPE	Not detected
6	10 ⁶ Zika + RNAlater™ + MH	Toxicity	No CPE	No CPE	No CPE	Not detected
7	10 ⁷ Zika + RNAlater™ + MH	Toxicity	No CPE	No CPE	No CPE	Not detected
8	10 ⁸ Zika + RNAlater™ + MH	Toxicity	No CPE	No CPE	No CPE	Not detected
9	10 ⁹ Zika + RNAlater™ + MH	Toxicity	No CPE	No CPE	No CPE	Not detected
10	10 ¹⁰ Zika + RNAlater™ + MH	Toxicity	No CPE	No CPE	No CPE	Not detected

MH: Mosquito Homogenate

Results and Conclusion

In the first passage, cytotoxicity was observed and on the consecutive four passages, "No cytopathic effect" was observed. The cell culture fluid from the first and fourth passages was tested via Zika RT-PCR. On the RT-PCR, the ZIKV RNA was detected only on the flasks at the first passage with lower dilutions.

It is important to note that the positive control without RNAlater™ flasks exhibited CPE; whereas, the sample flasks did not. This leads to many questions:

- Was the titer of virus not enough to infect the cells?
- Did diluting the virus contribute to decreasing the titer of the virus?
- Did the RNAlater™ affect the infectivity of the virus?

In addition, in January 2016, the CDC team collected the mosquito samples from Miami Beach adjacent to a site where Zika cases were detected. The samples were frozen and shipped on dry ice to their laboratory. The CDC team was successful in isolating the positive ZIKV from one out of seven pools collected. (Ref. 2)

Our study and results from CDC field trials lead us to believe that there could be a chance that RNAlater™ might have affected the infectivity of the Zika virus.

It was concluded that more study needs to be done on the effect of RNAlater™ on the Zika virus. It was recommended to spike the dead mosquitoes with the Zika virus, incubate with RNAlater™ to mimic the actual Zika virus mosquito samples, and later try an isolation on the sample.

References

- S.D. Mohan, A. Sylla, H. Donohue, A. Rogers, L. Zhou, P. Karki, A. Yan, B. Zale, A. Winslow, M. Short, L. Conti, Y. Bommineni. Zika virus detection by Multiplex rRT-PCR in mosquito samples, Miami-Dade County, Florida, USA. Presentation at 2018 AAVLD annual conference at Kansas City.
- Mutebi J. P., Hughes H. R., Burkhalter K. L., Kothera L., Vasquez C., and Kenney J. L. (2018). Zika virus MB15-23 in mosquitoes, Miami-Dade County, Florida, USA. Emerg Infect Dis 24(4): 809-810.





PATHOLOGY CORNER

Infectious Johne's Disease or Bovine Paratuberculosis in a Bull

Necropsy Performed and Coordinated by: Mamoon Rashid, DVM, MSc, MS, CPM

Histopathology Performed by: Jennifer Dill-Okubo, DVM, PhD, Diplomate ACVP

History:

Last 4 months, went downhill.

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 1a. Diseased Bull. Emaciated with marked muscle loss.



Fig 1b. Diseased Bull. Emaciated with marked muscle loss.



Fig 1c. Diseased Bull. Emaciated with marked muscle loss.



Fig 2. Diseased Bull. Signs of diarrhea.



Fig 3. Diseased Muscle. Intermuscular serous atrophy of fat.



Fig 4. Diseased Lungs. Serofibrinous pleuropneumonia with serous atrophy of thoracic fat.



Fig 5. Diseased Lung. Marbling effect of lung on cut surface. Histologically, the lungs have a multifocal to coalescing, fibrinonecrotizing bronchointerstitial pneumonia with marked bacteria.



Fig 6. Diseased Intestine. White foci on intestinal serosa (outer surface of the intestine).



Fig 7. Diseased abomasum. Necrotic and inflamed abomasal folds (forestomach).

Microscopic Examination:

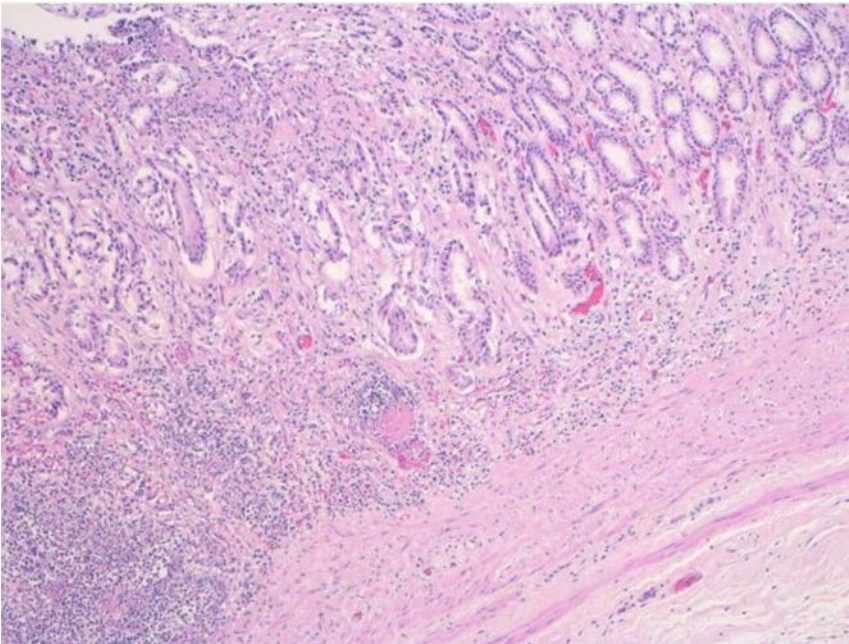


Fig 8. Diseased Intestine. Enteritis, granulomatous, diffuse, marked, with villus atrophy, edema. Hematoxylin & Eosin (H&E).

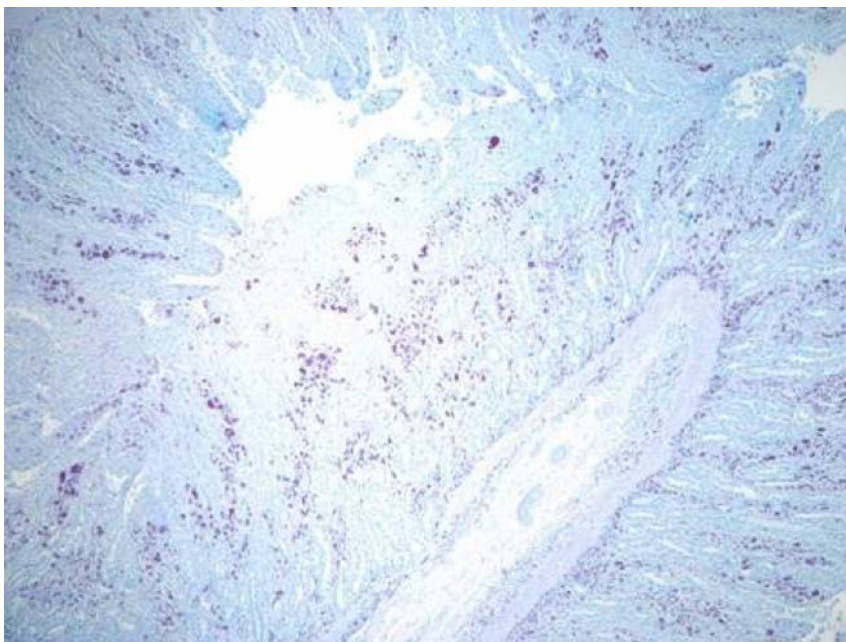


Fig 9. Diseased Intestine. Enteritis, granulomatous, diffuse, marked, with villus atrophy, edema, and myriad intrahistiocytic acid-fast bacilli. Acid-Fast Stain.

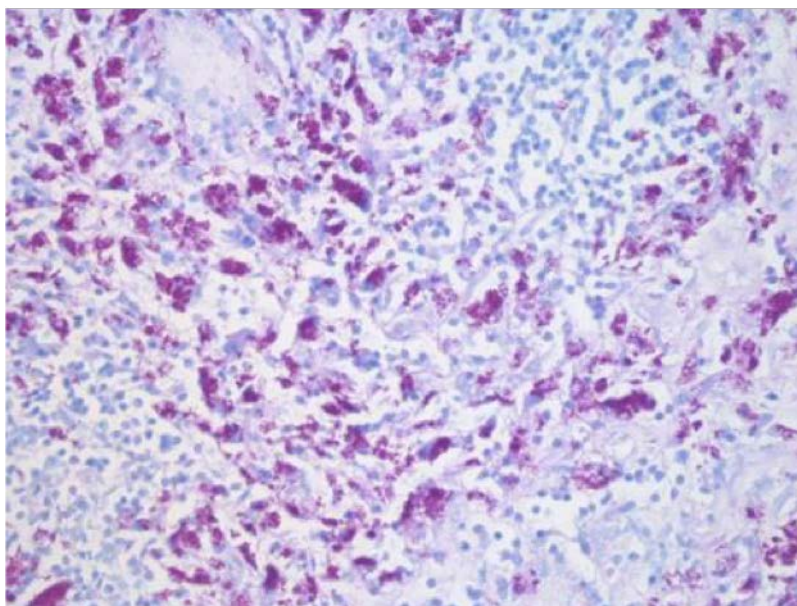


Fig 10: Diseased Lymph Node. Lymph node: Atrophy and medullary edema with numerous macrophages and myriad acid-fast bacilli. Acid-Fast Stain.

Ancillary testing was performed and the findings were:

Bacteriology/Mycology Examination:

Heavy growth of *Trueperella pyogenes* and *Bibersteinia trehalosi* culture from lung tissues. No *Mycoplasma spp.* isolated.

Molecular Biology Examination:

Fecal specimen tested positive (Ct 20.40, ref <29) for *mycobacterium subspecies paratuberculosis* by qPCR.

Paratuberculosis, also known as Johne’s disease, is a chronic, progressive enteric disease of ruminants caused by infection with *Mycobacterium paratuberculosis*. Cattle become infected with *M. paratuberculosis* as calves but often do not develop clinical signs until 2 to 5 years of age. The clinical disease is characterized by chronic or intermittent diarrhea, emaciation, and death. Although animals with clinical disease are often culled from the herd, animals with subclinical paratuberculosis may cause economic losses because of mortality, reduced milk production (dairy cows), and poor reproductive performance.

Johne’s Tests Available at BADDL

Test	Fee/sample	Sample Needed	Turnaround Time
Johne’s Disease ELISA	\$6.00	1 ml of serum from a bovine, caprine, or ovine in a serum separator tube (red top/tiger top) or other sterile tube; shipped chilled overnight. The IDEXX MAP Ab Test kit is a USDA-approved Johne’s ELISA kit for the detection of antibodies to <i>Mycobacterium avium</i> ssp. <i>paratuberculosis</i> in bovine serum, milk, or plasma. This test is to be used as an initial screening method for the testing of small ruminants.	3-5 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.
Johne’s Disease (<i>Mycobacterium avium</i> subspecies <i>paratuberculosis</i>) qPCR	\$20.00 Individual \$30.00 Pooled	1 gm of feces from a bovine, caprine, or ovine in a sterile container; shipped chilled overnight. 1 gm of feces for up to 5 animals each in a separate sterile container; shipped chilled overnight. 1) Large groups of samples can be combined into groups of 5 for a discounted price. This pooling will only be done at BADDL. 2) Submit samples individually.	2-4 days

BADDL, Florida’s AAVLD Accredited Laboratory

By: *Dr. Luis Arzeno, Danielle Peters, and Alexander Nemathy*



The purpose of the American Association of Veterinary Laboratory Diagnosticians’ (AAVLD) accreditation program is to accredit public veterinary diagnostic laboratories in North America relative to technical and operational competence. The objectives of such an accreditation program are to provide a mechanism to promote adequate training of specialists in diagnostic veterinary medicine, to encourage hiring of dedicated diagnosticians, and to assist laboratories to meet or exceed the standards of the World Organization for Animal Health (Office International des Epizooties) (OIE), consistent with ISO 17025 standards. BADDL is an AAVLD accredited, all-species, full-service laboratory system that provides state-of-the-art diagnostic laboratory services to the various animal industries and populations of the state of Florida. Providing these services ensures the early detection of monitored diseases and the emergence of new disease threats to the various animal industries in Florida. Being accredited by AAVLD increases customer satisfaction because of the customer-focused Quality Management System (QMS).

As the only AAVLD certified laboratory in the state of Florida, clients can be confident in BADDL’s commitment to quality, reliability and consistency of service.



BADDL COMMUNITY OUTREACH

BADDL at the Florida Veterinary Medical Association (FVMA) Annual Conference

Dr. Bommineni and Christopher Feeney represented BADDL with a display booth within the exhibition hall of the 90th Annual Florida Veterinary Medical Association Conference held in Tampa, Florida. Florida veterinarians made up the majority of attendees. The exhibition hall allowed veterinarians to discover the latest in veterinary technology. Having the booth helped to educate participants on the services offered at BADDL and kept them cognizant of the importance of identifying and reporting reportable animal diseases. We had the opportunity to discuss our newest tests available, such as the hormone panels available with the IMMULITE.

BADDL EVENTS

Florida Department of Agriculture and Consumer Services' (FDACS) Annual Forum

Two abstracts were accepted for presentation at the FDACS Forum by BADDL's Dr. Shipra Mohan and Prithvi Karki. On May 8, 2019, Dr. Mohan gave an oral presentation entitled "Methicillin-Resistant *Staphylococcus pseudintermedius*: A Zoonotic Disease – One Health Approach" and Prithvi Karki provided a poster presentation on "The effect of RNA later on the Infectivity of Zika Virus."





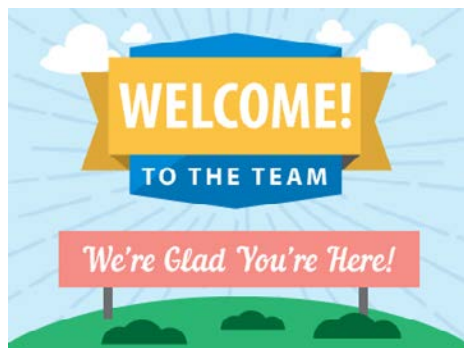
REMINDERS

The following dates are upcoming office closures for BADDL:

Monday, November 11
Veterans Day

Thursday, November 28
Thanksgiving Day

Friday, November 29
Friday, After Thanksgiving



NEW HIRES

Elizabeth Mathews - Laboratory Technician I, Receiving
Destini Pitts - Laboratory Technician I, Receiving



PROMOTIONS

Ellen Dalal - Laboratory Technician IV, Clinical Pathology/Parasitology

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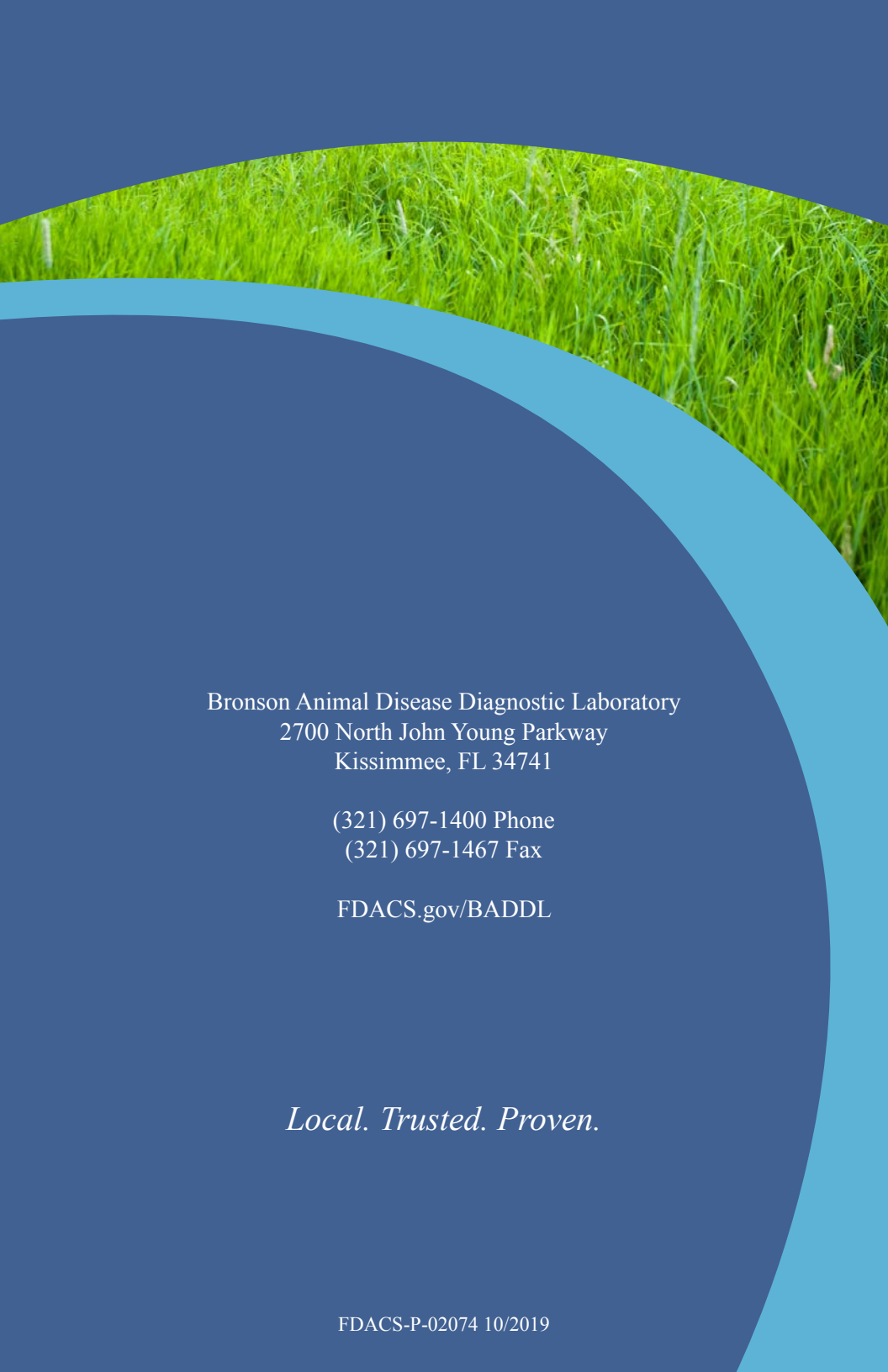
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Any news or information you'd like to see here?
Please contact the newsletter editor, Dr. Karen McKenzie-Alfred at:
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