2017 TVMDL Update

Jessie Monday, DVM, MS
Terry Hensley, MS, DVM
December 8, 2017

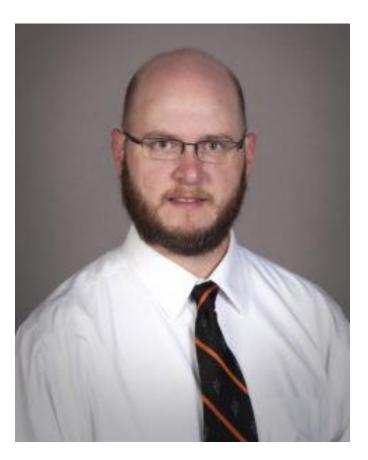


2017 TVMDL Projects

- New Pathologist at Amarillo Lab
- TVMDL 50th year anniversary website
- TVMDL Mobile App
- Website Updates
- Shipping Updates
- Syndromic Panels
- New TVMDL Tests



Will Sims, DVM, MS



- Veterinary Pathologist
- 2007 DVM
- 2011 Anatomic Pathology Residency & MS
- FADD











2017 TVMDL Projects

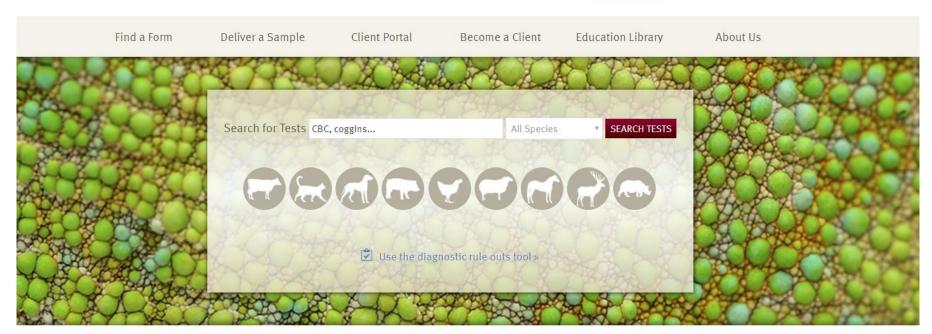
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AgriLife.org/TVMDL50/



50 YEARS

A GRAND OPENING

ANNIVERSARY EVENTS

MUESTONE

THE PEOPLE

PHOTOS & VIDEO

TVMDL 50 years

CELEBRATING



Celebrating 50 Years of Service

- 2017 Educational & Social Events
- Videos & Photos
 - 50 years
 - Lab Look Backs
 - TVMDL Oral Histories
- Milestones
- The People
 - Agency Directors
 - TVMDL Emeriti
 - TVMDL Retirees



TVMDL 50th Anniversary Events

- "Rooted in tradition, building for the future"
- Jan 9, 2017
 - Texas A&M AgriLife Conference 50th Celebration
- April 19, 2017
 - College Station Lab Grand Opening
- 4-H Coloring, Art, & Photography Contest
- William & Catie Sippel Lecture Series



Celebrating 50 Years of Service

- 2017 Educational & Social Events
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TVMDL 50 years

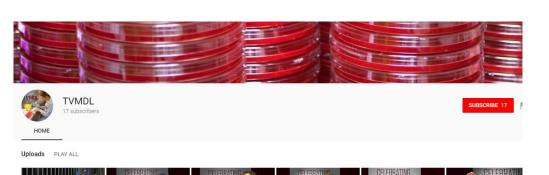
CELEBRATING



More on the TVMDL YouTube Channel & 50 Years Website

TVMDL Oral History - Dr. Blount's First Day at TVMDL

90 views • 2 months ago



TVMDL Oral History - Dr.

Abbitt's Start at TVMDL

48 views • 1 month ago

TVMDL Oral History -

50 views • 1 month ago

Michael Beauvais's Most

TVMDL Oral History - Sonia

67 views • 1 month ago

Lingsweiler's Start at TVMDL

Collecting Trich samples

17 views • 6 days ago

using in-pouch and direct

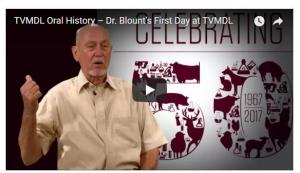
TVMDL Oral History - What

makes Dr. Gilmore most

30 views • 1 week ago

TVMDL Oral History – Dr. Blount's First Day at TVMDL

Photos & Video



Celebrating 50 Years of Service

- 2017 Educational & Social Events
- Videos & Photos
 - 50 years
 - Lab Look Backs
 - TVMDL Oral Histories
- Milestones
- The People



Check out the rest...

Milestones

A lot of things can happen in a half century, and for TVMDL it has been full of achievements, discoveries, and service.

- 1967 The 60th Texas Legislature establishes the Texas Veterinary Medical Diagnostic
 Laboratory (TVMDL) as a separate state agency under the administration of The Texas A&M
 University System. From 1967 to 1995, a rider was attached to this legislation stating that
 TVMDL should give highest priority to diagnostic work involving large animals.
- September 1, 1969 The 18,000-square-foot Texas Veterinary Medical Diagnostic Laboratory
 opens on the Texas A&M University campus in College Station, with Texas A&M College of
 Veterinary Medicine professor William Sippel as the first director. Over the next five decades,
 additions were made to accommodate expanded laboratories and more sophisticated
 equipment.
- 1971 The Experiment Station's Poultry Diagnostic Laboratory at Gonzales is built to replace
 the South Texas Poultry Research Station, founded in 1949.
- 1973-1975 1973–75 The 63rd Texas Legislature establishes the Texas Veterinary Medical Diagnostic Laboratory at Amarillo to address the needs of the young and rapidly growing cattle feedlot industry. The facility opens in 1975.

The People

In reflecting on our first 50 years, it seemed only fitting to recognize the key individuals who have made TVMDL what it is today. Its unique in an organization's history to have this opportunity – that is, to celebrate a milestone with almost all of the key staff who are responsible for our success. In so many organizations, people come and go so quickly these days. It's rare to have so many employees spend the bulk of their professional career with one organization. Read below to learn about the people who've made TVMDL a success for the past 50 years.

Agency Directors

TVMDL Emeriti

TVMDL Retirees



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Free for both Android and iOS

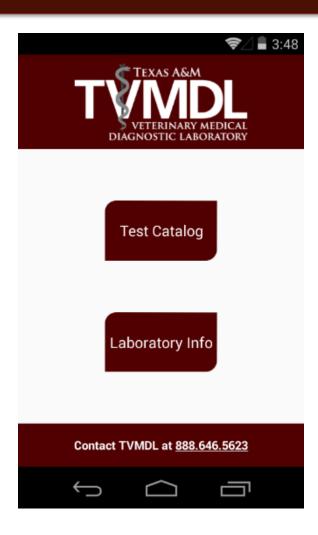






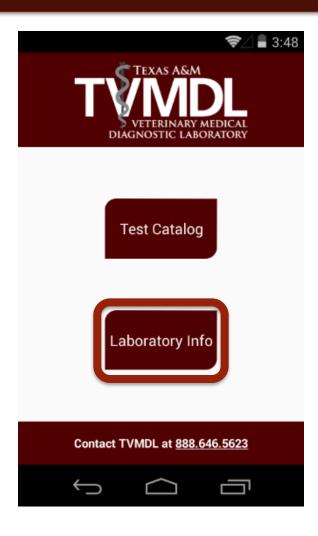






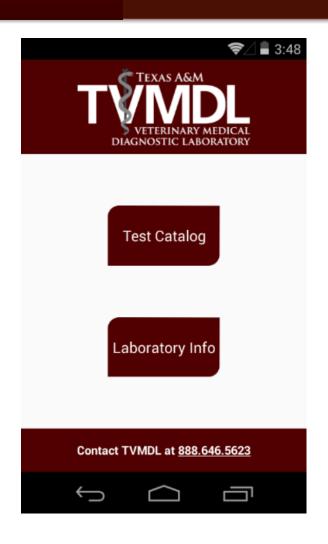










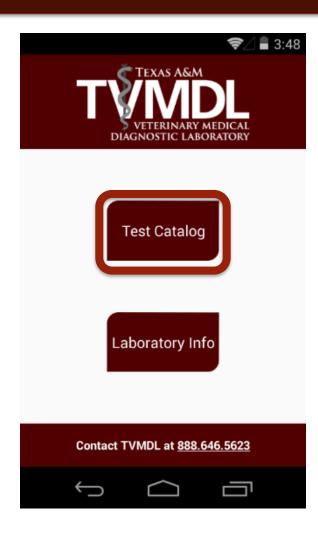


Laboratory Information:

- Link to driving directions
 - All 4 labs
- Contact Information
- Billing & physical addresses
- Hours of operations

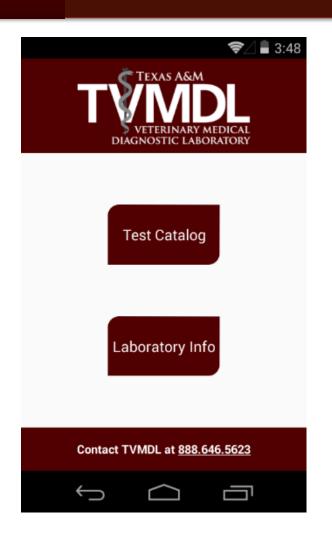


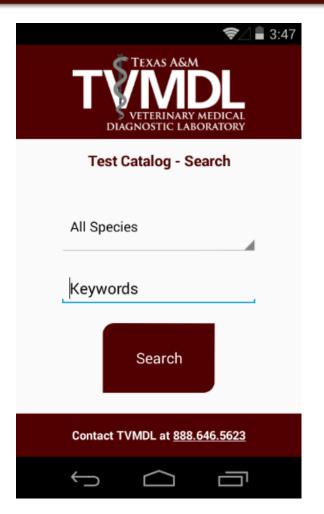


















Test Catalog - Tests

Abortion Culture - Livestock \$10.00
Culture for most common bacterial causes of...

Abortion Screen - Caprine/Ovine \$62.00 Serological test panel to detect antibodies...

Acid Fast Stain \$7.00

This stain is performed to detect acid-fast...

ACTH \$34.00

Adrenocorticotropic hormone is produced by...

Actinobacillus pleuropneumonia... \$15.00

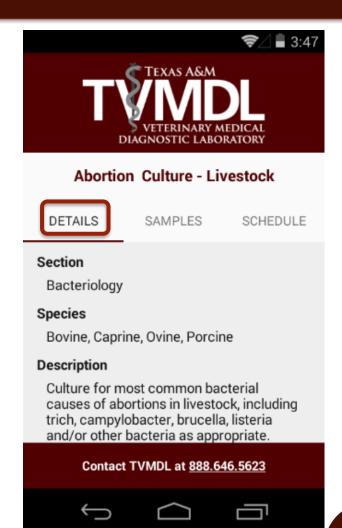
Complement fixation test to identify...

Contact TVMDL at 888.646.5623



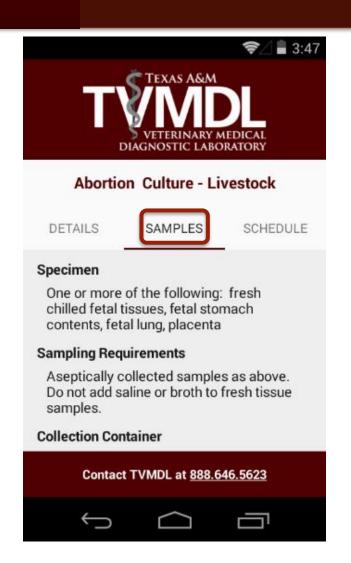


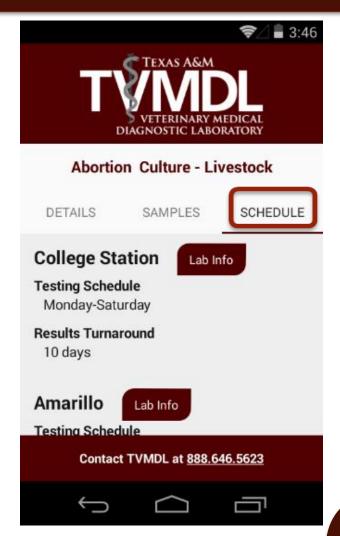










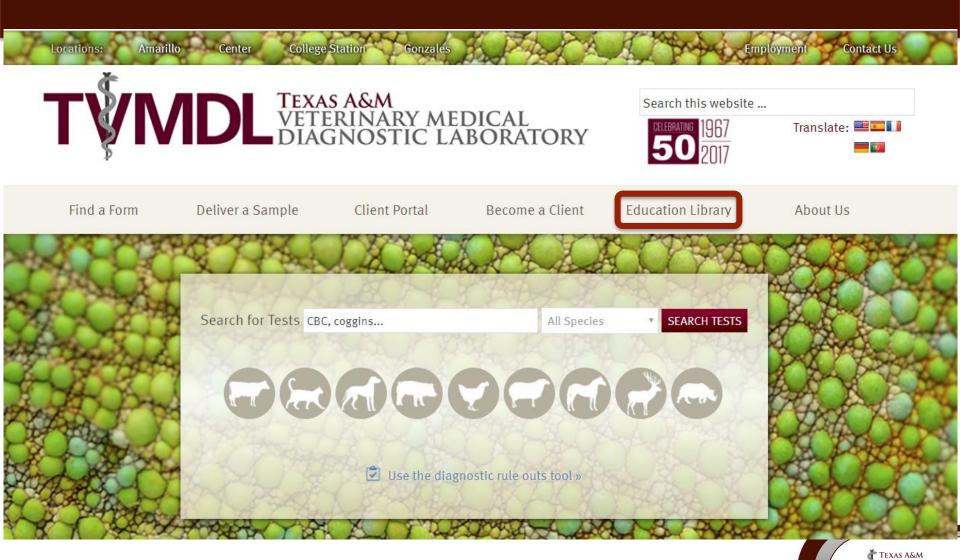




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Find a Form Deliver a Sample Client Portal Become a Client Education Library About Us

Search for Tests CBC, coggins...

All Species

SEARCH TESTS

Education Library Education Library: Porcine Education Library: Bovine Education Library: Canine Education Library: Exotics & Pocket Pets Education Library: Cervids Education Library: Equine Education Library: Feline Education Library: Avian/Poultry Education Library: Caprine/Ovine

Education Library

Download TVMDL's advice on diagnostic services for free. Select a species from the icons to view all related content.





General TVMDL Information

- Introduction to TVMDL (video)
- TVMDL at a glance
- TVMDL brochure
- · Client information packet
- Providing diagnostics to the international community





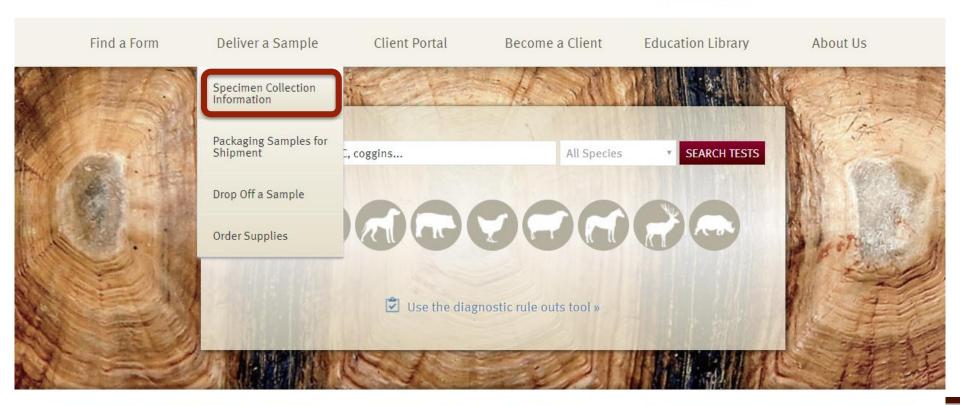
Education Library

- Promotional material removed
- Reference material updated
- Information filed under test section and/or species
 - General, Drug Testing, Bacteriology, Clinical Pathology, Histopathology & Necropsy, Molecular Diagnostics, Toxicology, Packaging & Shipping
 - Bovine, Feline, Canine, Porcine, Avian/Poultry,
 Caprine/Ovine, Equine, Cervids, Exotics & Pocket Pets
- More material on the way...





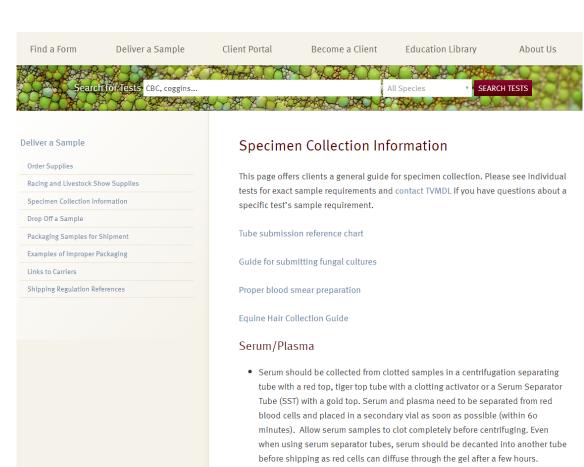












Specimen Information:

- Serum/Plasma
- Whole Blood
- Urine
- Slides
- Fluids/Aspirates
- Swabs
- Fecal Samples
- Feed/Forage
- Fixed Tissue
- Hair
- Necropsy











Use the diagnostic rule outs tool »



Weimaraner puppy diagnosed with Chagas disease



TVMDL adds Tritrichomonas foetus (Tfoe) Direct qPCR test to test catalog



TVMDL updates herd level dairy metabolic profiles



After Hours and Emergencies

After Hours Sample Drop-off
After Hours Necropsy
STAT Testing

Testing Information

TVMDL Fee Schedule
Disease Alerts
Analytical Chemistry Drug Testing & Toxicology

Education Library

2017 New Client Packet Blood Tube Reference Chart 2017 Fumonisin Facts





Become a Client

Sign up for TVMDL news

Email

SIGN UP

Deliver a Sample

Latest News

Find a Form

Weimaraner puppy diagnosed with Chagas disease

December 5, 2017

TVMDL adds Tritrichomonas foetus (Tfoe) Direct qPCR test to test catalog

November 30, 2017

TVMDL updates herd level dairy metabolic profiles

November 29, 2017

Spanish Galgo rescued from Spain, diagnosed with Leishmania

November 15, 2017

TVMDL's Amarillo facility to host seminar on

December 8

November 14, 2017

Akey awarded 2017 APHIS Administrator's

Weimaraner puppy diagnosed with Chagas disease

December 5, 2017 by Mallory Mobly



Client Portal

With over 800,000 tests run annually, TVMDL encounters many challenging cases. Our case study series will highlight these interesting cases to increase awareness among veterinary and diagnostic communities. Chagas disease was diagnosed via blood ... [Read more...]

Education Library

About Us

Filed Under: Case Study, News

Tagged With: canine, Chagas, college station, disease, TVMDL, veterinary, Weimaraner puppy

TVMDL adds Tritrichomonas foetus (Tfoe) Direct qPCR test to test catalog

November 30, 2017 by Mallory Mobly



Effective November 1, the Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL) began accepting samples for the new Tritrichomonas foetus (Tfoe) Direct qPCR test. The Tfoe Direct qPCR test has increased sensitivity which aids in the ... [Read more...]



TVMDL on Facebook



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Shipping SVA

- Southeast Vocational Alliance (SVA)
- Non-profit, private freight & logistics organization
- Shipping coordination services
 - Customer service
 - Wider array of shipping options
 - Lower shipping prices



Login —	
Enter your user credentials below	
Client Id	
(max 6 characters)	
User Name	
(max 50 characters)	
Password	
(min 8 characters) Forgot your	password?
Reset Login	
Any Problems? Contact our support department - operations@svalogistics	.com







Education Library

About Us

Become a Client

Order Supplies

Client Portal

TVMDL provides clients with supply shipping containers that comply with all requirements for shipping Category B biological substances for a nominal fee (order below). If used as designed, this packaging will comply with all requirements.

While TVMDL has no affiliation with the following companies, we are happy to provide a few links for sources of products used to ship diagnostic samples. This is not a complete list, but may serve as a starting point.

- InfeKta
- Therapak
- EXAKT-PAK
- Casing Scientific

Supply Order Form

Order supplies from... *

- College Station
- Amarillo

Name *



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Syndromic Panels

- Important clinical syndromes by species
- Easy ordering
- Core tests for efficient, economical initial testing
- Some clinical presentations, regions, situations will require additional testing
- Selection of secondary testing based on results of initial testing (if needed)
- Veterinary diagnosticians available to help
- Please review sample requirements before ordering

Online Test Catalog

Find a Form Deliver a Sample Client Portal Become a Client Education Library About Us

Search for Tests panel

Canine SEARCH TESTS

Results 1-25 of 34 for "panel" in canine.

An accession fee of \$6.00 is applied to each accession/case, not each specimen. Turnaround times are estimates in business days and apply to individual tests. Actual reporting of test results depends on the full battery of tests requested, day of the week/time of day samples arrive at the testing laboratory, and the quantity/quality of samples submitted.

The tests and fee schedules are provided for use by TVMDL clients, including veterinarians and animal owners. Fees charged to animal owners by veterinarians may exceed test prices shown herein, reflecting the time, expertise, and expense necessary to collect the sample, ship it in an appropriate manner, interpret results, and provide treatment advice.

Name ↑	Description	Species	Price	
Canine Vaccine Panel	ELISA test to detect antibodies to both Parvo and Distemper viruses. This assay is utilized for screening for vaccination status. Specimen: 1.0 mL serum	Canine	\$16.00	Close
Name	Canine Vaccine Panel			
Section	Virology			
Specimen	1.0 mL serum			
Sampling Requirements	None if serum is separated. Cold pack otherwise.			
Collection Container	Plastic or glass tube			
Packing Instructions	Label all samples. For multiple samples, number the tubes consecutively in order using a permaner names/numbers with submittal form.	it marker. Include a lis	t of sample	



Canine Syndromic Panels

- Canine Vaccine Panel (\$16)
 - Parvovirus & Distemper virus ELISA
- Distemper/Parvovirus Titer Panel (\$35)
 - Hemagglutination inhibition antibody detection
- Canine Respiratory Disease qPCR Panel (\$60)
 - Bordetella bronchiseptica, canine adenovirus 2, canine distemper virus, canine herpesvirus 1, canine influenza (includes subtypes H3N8 and H3N2), canine respiratory coronavirus, and canine parainfluenzavirus



Feline Syndromic Panels

- Sick Cat Panel (\$51)
 - Feline immunodeficiency virus & feline coronavirus
 (FIP) antibodies, feline leukemia virus antigen
- Feline Titer Panel (\$40)
 - Panleukopenia, feline calicivirus, feline herpesvirus
- Feline Upper Respiratory qPCR Panel (\$60)
 - Bordetella bronchiseptica, Feline herpesvirus, Feline calicivirus, influenza A, Chlamydophila spp., & Mycoplasma spp.



Online Test Catalog

Find a Form

Deliver a Sample

Client Portal

Become a Client

Education Library

About Us

Search for Tests panel

M.E. (\$1465 # 18) \$1(0)(4)

Bovine

SEARCH TESTS

Results 1-25 of 80 for "panel."

An accession fee of \$6.00 is applied to each accession/case, not each specimen. Turnaround times are estimates in business days and apply to individual tests. Actual reporting of test results depends on the full battery of tests requested, day of the week/time of day samples arrive at the testing laboratory, and the quantity/quality of samples submitted.

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Name ↑	Description	Species	Price	
Bovine Abortion Panel: Fetal Tissues	TVMDL compiled diagnostic panels to assist clients in efficient diagnostic	Bovine	\$212	Details
	testing for bovine abortion with fetal tissues. The client still has the ability to			
	add or delete tests as desired. Tests included in this panel: bacterial abortion			
	culture, histopathology, bovine herpesvirus 1 PCR, bovine viral diarrhea virus			
	PCR, Leptospira spp. PCR, Neospora caninum PCR, and []			
	Specimen: Fetus or fresh chilled liver, kidney, abomasal contents, skeletal muscle, spleen, lung, brain, heart, and placenta (if available). 10 g of fresh liver is needed for Liver toxicology testing. Submitting placenta will improve the chances of diagnosing an infectious cause of abortion. Tissue specimens fixed in 10% neutral buffered formalin before shipment will improve histopathology results.			
Bovine Sudden Death Tissue Panel	TVMDL compiled diagnostic panels to assist clients in efficient diagnostic testing for bovine sudden death. Other tests may need to be added to the	Bovine	\$203	Details



- Bovine Abortion Serology
 - Basic (\$18)
 - Lepto titers (5 serovars), Neospora caninum ELISA,
 Brucella abortus card test
 - Comprehensive (\$44)
 - Basic tests + Histophilus somni agglutination test, IBR VN, BVD VN (1A, 1B, 2)



- Bovine Abortion Panel: Fetal Tissues (\$212)
 - Bacterial abortion culture
 - Histopathology
 - Bovine herpesvirus 1 qPCR
 - Bovine viral diarrhea virus qPCR
 - Leptospira spp. qPCR
 - Neospora caninum qPCR
 - Liver Vitamin A quantification



- Bovine Sudden Death Tissue Panel (\$203)
 - Histopathology
 - Livestock (anerobic and aerobic) culture
 - Anaplasma marginale PCR
 - Histiotoxic Clostridium FA
 - Rumen content microscopic analysis
 - Qualitative nitrates
- Veterinary Diagnosticians, Toxicologist, & Pathologists available for consultation
 - Additional 1° or 2° testing based on clinical presentation and history



- Bovine Neurologic Disease Tissue Panel (\$197.50)
 - Histopathology
 - Livestock (anerobic and aerobic) culture
 - Kidney Lead
 - Bovine Herpesvirus-1 qPCR
 - McMasters EPG
 - Vitamin A&E quantification
 - Qualitative nitrates
- Please send us brains!
- Indicate if Rabies is suspected



- Bovine Adult Diarrhea/Weight Loss Panel (\$109.50)
 - Fecal culture
 - Salmonella serovar typing at NVSL if isolated
 - Qualitative fecal flotation
 - Bovine diarrhea qPCR multiplex
 - Bovine coronavirus, bovine rotavirus A, & cryptosporidium
 - Johne's Disease fecal qPCR
 - BVD antigen capture ELISA (ACE)
 - Bovine leukemia (BLV) ELISA



- Calf Diarrhea Fecal Panels (≤60 days)
 - Basic Calf Diarrhea Panel (\$35)
 - bovine coronavirus, bovine rotavirus A, & cryptosporidium qPCR
 - Comprehensive Calf Diarrhea Panel (\$119)
 - Basic Panel (qPCR)
 - Salmonella PCR
 - Fecal culture
 - Salmonella serovar typing at NVSL if isolated
 - E. coli PCR for toxin and virulence gene identification if isolated
- Antibiotic susceptibility testing and/or C.perfringens typing PCR can be added for an additional cost

Bovine Biosecurity Serology Panel (\$109)

- Bovine leukemia virus (BLV)
 ELISA
- Johne's Disease ELISA
- Anaplasma marginale cELISA
- Mycoplasma bovis ELISA
- Lepto titers (5 serovars)
- Histophilus somni titers
- Mannheimia haemolytica titers

- Infectious bovine rhinotracheitis (IBR) VN
- Parainfluenza 3 (PI-3) VN
- Bovine respiratory syncytial virus (BRSV) VN
- Bovine viral diarrhea (BVD) 1a
 VN
- Bovine coronavirus VN
- BVD antigen capture ELISA



- Bovine B4 Export Panel (\$45)
 - Bovine viral diarrhea virus (BVDV) qPCR
 - Bovine leukemia virus (BLV) qPCR
 - Bovine herpesvirus-1 (IBR/BHV-1) qPCR
 - Bluetongue virus (BTV) qPCR



Bovine BRD Serology

- Basic (\$42)
 - Histophilus somni, Mannheimia haemolytica, infectious bovine rhinotracheitis virus, parainfluenza 3, bovine respiratory syncytial virus, bovine viral diarrhea 1a
- Comprehensive (\$58.50)
 - Basic tests + Mycoplasma bovis ELISA, bovine coronavirus VN



Other BRD tests:

- BRD Viral qPCR Multiplex (\$45)
 - BVD, BPI-3, BHV-1, BRSV

Coming soon...

- BRD Bacterial qPCR Multiplex
 - M.bovis, M.haemolytica, P.multocida, H.somni, T.pyogenes
- BRD Comprehensive qPCR Panel
 - Viral + Bacterial qPCR multiplexes
- Bovine BRD Tissue Panel



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BVD Pooled Ear Notch PCR

- 3mm ear notches, labelled individually
- Fresh and dry (no transport media)
 - Ship on cold packs, overnight
 - 12 oz plastic tubes available from TVMDL
- qPCR on pools (up to 24 animals/pool)
 - Complimentary confirmatory individual antigen capture ELISA on positive pools
- \$30 for first 2 to 10 samples
 - \$2.50 for each additional animal



Bovine Clinical Pathology Profiles

- Ruminant Chemistry Profile (\$15)
 - Now includes Glutamate Dehydrogenase (GLDH)
 - Used to diagnose liver disorders & assess severity of damage to hepatocytes, correlates with SDH
- Ruminant Electrolyte & Macromineral Profile (\$5.50)
 - Calcium, Phosphorus, Magnesium, Sodium, Potassium, Chloride
- Ruminant Energy Profile (\$8.50)
 - Beta-hydroxybutyrate, NEFA, blood glucose
- Bovine Liver Profile (\$5.50)
 - GGT, AST, GLDH, NEFA, Cholesterol, NEFA: Cholesterol, total bilirubin, triglycerides

Bovine Herd Metabolic Profiles

- Herd level diagnostics
- Minimum of 8 animals per profile
- Clinically normal representatives of the group
- Mean calculation spreadsheets generated for profiles with 10+ animals
 - Include reference means
- Heifers and cows should be profiled separately
- Separated by stage of production



Bovine Herd Metabolic Profiles

- Transitional (\$12/animal)
 - Calcium, Phosphorus, Magnesium, Albumin, BUN,
 Glucose, Cholesterol, Sodium, Potassium, Chloride,
 Non-esterified Fatty Acids, NEFA: Cholesterol, Beta-hydroxybutyrate
- Lactating (\$10/animal)
 - Transitional profile without NEFA & NEFA: Cholesterol
- <u>Dry</u> (\$10/animal)
 - Transitional profile without Beta-hydroxybutyrate

Direct Smegma Trich PCR

- You tube video (4:32)
- TVMDL Channel Nov 30, 2017



Collecting Trich samples using in-pouch and direct PCR methods



Equine Diarrhea Fecal Panels

- <u>Foal to 4 months</u> (\$139)
 - Fecal culture
 - Antimicrobial susceptibility testing
 - Salmonella qPCR
 - Clostridium difficile toxin A&B ELISA
 - Clostridium perfringens toxin ID PCR
 - EM for Equine rotavirus/coronavirus



Equine Diarrhea Fecal Panels

- Weanling to yearling (\$151)
 - Fecal culture
 - Antimicrobial susceptibility testing
 - Salmonella qPCR
 - Clostridium difficile toxin A&B ELISA
 - Clostridium perfringens toxin ID PCR
 - Lawsonia intracellularis PCR
 - McMaster's EPG



Equine Diarrhea Fecal Panels

- Adult (\$151)
 - Fecal culture
 - Antimicrobial susceptibility testing
 - Salmonella qPCR
 - Clostridium difficile toxin A&B ELISA
 - Clostridium perfringens toxin ID PCR
 - EM for Equine coronavirus
 - McMaster's EPG



Future TVMDL Projects

- Update App
 - Educational Library
 - Retrieve test results
- Continue Educational Library resources
- Continue Syndromic Panel development
- Syndromic Testing Recommendations
- Syndromic and General Necropsy Guidelines
- LIMS Update
- TVMDL Amarillo moving to Canyon, TX



Questions and Suggestions

- Contact a TVMDL Veterinary Diagnostician
 - College Station: 888-646-5623 or 979-845-3414
 - Amarillo: 888-646-5624 or 806-353-7478
- Write request for diagnostician to call you on submission form
- Or email any questions or suggestions to jessie.monday@tvmdl.tamu.edu thensley@tvmdl.tamu.edu



Questions?



Terry Hensley MS, DVM Equine/Wildlife



Cheryl Maguire, DVM Companion Animals



Guy Sheppard, DVM Livestock Species Management



Jessie Monday, DVM, MS Food & Fiber Species Internal Medicine

