New KSVDL Tests

Immunohistochemistry Offerings

• IBA-1 is known as a “panmacrophage marker” that works in most species and will aid in the diagnosis of diseases of histiocytic origin, such as histiocytic sarcoma in dogs.

• Sarcomeric actin is used to stain striated muscle and will aid in the diagnosis of undifferentiated sarcomas and rhabdomyosarcomas in dogs.

• Cytokeratin 19 is currently being used to evaluate its expression in certain tumors of epithelial origin, which may lead to its usefulness as a diagnostic or prognostic marker in certain tumors.

For more information concerning these new IHC tests, please contact Dr. Jamie Henningson at 785-532-4129 or heningsn@vet.k-state.edu.

Equine Respiratory Panel PCR

50% DISCOUNT for further valuation

The Equine Respiratory Panel PCR is a series of combined tests used to help veterinarians diagnose specific equine viral and bacterial respiratory disease agents.

Equine respiratory disease is one of the most common issues that equine veterinarians face.

Targets:

• Equine herpesvirus type 1 (EHV1), wild type
• Equine herpesvirus type 1 mutant, may be associated with neurologic disease, or more severe respiratory symptoms
• Equine herpesvirus type 4
• Equine influenza A virus (EIV) genotype H3N8
• Equine arteritis virus (EAV)
• Equine adenovirus type 1 (EAdV-1)
• Equine adenovirus type 2 (EAdV-2)
• Equine rhinitis A virus (ERAV)
• Equine rhinitis B virus (ERBV)
• Streptococcus equi subsp. equi

Sample: Nasal swab, nasal wash, tracheal wash, pharyngeal swab, pharyngeal wash in viral transport media or in a few drops of saline in sterile tube, or lung tissue shipped on ice for overnight delivery.

Do not use bacterial transport media as it interferes with the PCR reaction.

Estimated Turnaround Time: 1 – 2 days
Discount Cost: $45.00
Coming Soon!!!

Swine Diarrhea PCR Panel For Nursing and Finishing Pigs

Targets:
- Porcine epidemic diarrhea virus
- Porcine delta coronavirus
- Porcine rotavirus groups A, B, and C
- Enterotoxigenic E. coli
- Clostridium perfringens Type A, Type C
- Clostridium difficile
- Lawsonia intracellularis
- Salmonella sp.
- Brachyspira hyodysenteriae
- Brachyspira pilosicoli

Canine Leptospirosis

Canine Leptospirosis is more common than previously realized. In dogs the infection results in varying severity and presentations depending on the infecting serovars, geographical location, and host immune response. Some dogs display mild or no signs of disease, whereas others develop severe illness or death. In Kansas veterinarians should suspect leptospirosis in dogs with signs of renal or hepatic failure, pulmonary hemorrhage, acute febrile illness, or an abortion.

The two tests routinely utilized for the diagnosis of canine leptospirosis are serology by the traditional microscopic agglutination test (MAT), and polymerase chain reaction (PCR) testing (blood or urine). Used in combination, this antigen and antibody test offer the best combination to maximize accuracy.

Using MAT, the optimum confirmation of a diagnosis of leptospirosis is to document a 4-fold rise or higher in the reciprocal titer over a 2-4 week period (e.g., 800 initially and then 3200 two week later).

The PCR identifies the presence of the leptospiral organism in urine or blood and is unaffected by previous vaccinations. Note: the PCR test may be negative if the patient is not bacteremic, not shedding organisms in the urine or is on antimicrobials.

Given that false negative test results may occur with either the MAT or PCR, performing both tests on a patient in which leptospirosis is suspected is recommended and the combination provides the greatest diagnostic accuracy.
Canine Export Testing

With our ever shrinking world, more and more pet owners are choosing to travel and even move their pets overseas. KSVDL has provided export testing for pet owners for over 20 years. We take great pleasure in assisting owners with ensuring their beloved pets can travel with them. We know firsthand the frustrations and time consuming processes that pet owners and veterinarians face trying to navigate the export country’s regulations for animal travel. With the added testing requirements for canine travel, exporting a dog can be very frustrating. Wasted time and money can be avoided with proper planning and research prior to sample collection. The following guidelines will help make your clients’ export experience a success.

The first step in a successful canine export is to research the requirements of the country accepting the dog. Each country may require different testing, vaccinations, micro-chipping, and parasite preventives. The country accepting the dog usually specifies not only the required tests but also the timelines necessary for completion of the tests prior to the animal traveling.

The regulations and requirements should be researched long before the proposed travel date. Unfortunately, these regulations are subject to change at any time during the testing process without notice. We recommend you start this process at the USDA webpage titled “Travel with a Pet” located here: http://1.usa.gov/1BPxtQc

Your local USDA Veterinarian is also a valuable source of information.

Once you have determined the tests needed and the time frame the tests need to be completed by, the next step is to find a laboratory that can complete those tests for you.

KSVDL offers the following export tests for dogs (these are the most common tests needed for export):

- Canine Brucellosis serology – Tube-ME Agglutination http://www.ksvdl.org/laboratories/serology/sample-submission.html#canine
- Ehrlichia canis serology – IFA screen
- Leptospira canicola serology – MAT
- Leishmania infantum serology – IFA screen
- Heartworm testing http://www.ksvdl.org/laboratories/parasitology/sample-submission.html
  - Occult Heartworm (antigen)
  - Knott’s Test (microfilariae)
  - Heartworm Difil Filter Test (microfilariae)

Prior to submitting the samples, please complete
Canine Export Testing | Continued from page 3

the KSVDL Canine Export Submission Form or FAVN Submission Form found at http://www.ksvdl.org/submission-forms.html. We ask that you fill out the form clearly and legibly, checking all information for accuracy. An asterisk on the form denotes critical information needed for export. Omitted information or errors may require a resubmission of the sample and paperwork.

All samples should be labeled with the date the sample was collected and the dog’s microchip number. The tube must be labeled legibly even if it is the only tube in the package. The label must be securely attached to the tube so that it cannot be separated, erased or become illegible in-transit. KSVDL cannot process unlabeled tubes.

Clear, non-hemolyzed serum is required for all serology tests and Occult Heartworm testing. Each test requires 1 ml of serum. The best samples will be obtained from a patient that has fasted overnight. We recommend that the sample be allowed to clot and the serum removed from the clot prior to submission. This allows you to detect any hemolysis. This also prevents the sample from becoming hemolyzed during shipment. Serum separator tubes may be used. If a serum separator tube is used, allow the sample to clot and spin-down the sample prior to submission. It is unnecessary to remove the serum from a serum separator tube.

Whole blood is required for microfilariae testing. We recommend using EDTA (purple top) tube. If sample quantity is not sufficient (for any test) due to leakage, damage, or original volume we will notify the submitting veterinarian.

One additional requirement for most countries is that the dog must be micro-chipped prior to the collection of any samples for export testing.

Careful planning and following these steps will ensure your patient and client are able to move or travel together to their destination country.

New videos from the KSVDL

We have posted new videos on the KSVDL YouTube® channel covering the following topics:

• Bovine Brain Sample Collection
  https://www.youtube.com/watch?v=QiaBMz9XSZo

• Alpaca Handling
  https://www.youtube.com/watch?v=-nk17LAD2mQ

Subscribe to the KSVDL YouTube® channel:
https://www.youtube.com/channel/UCtx-IIIXqjSPAMQYryXaRhA

We have also posted new Continuing Education videos on the KSVDL Website!

These are the presentations from the Continuing Education Conference KSVDL held in November concerned with the new antibiotic regulations facing practicing veterinarians. They may be viewed at no charge.

• Anaplasmosis Update, Part 1
• Anaplasmosis Update, Part 2
• Bluetongue and Epizootic Hemorrhagic Disease, Part 1
• Bluetongue and Epizootic Hemorrhagic Disease, Part 2

These videos, and more, can be found at: http://www.ksvdl.org/resources/
Biopsy Sample Packaging Guidelines

By Dr. Kelli Almes & Dr. Jen Lehr

Biopsy samples are one of the most commonly submitted diagnostic samples at KSVDL. They are also a sample that can easily leak on their way to the laboratory. Properly packaging samples that contain a large amount of liquid, like biopsies, is essential. Parcel carriers are not required to deliver wet, leaking packages and these may be disposed of by the carrier without notification to KSVDL or the sender.

Ensuring your sample’s safe arrival is a priority to KSVDL.

If you are using our biopsy mailers you have all of the needed materials for proper packaging. These materials are provided free of charge for clients using our histopathology service.

Each mailer is designed to return one biopsy and contains the following:

• A 4-ounce jar prefilled with formalin. These jars are specifically designed with screw top lids designed for formalin transportation.

• Absorbent material that is able to contain the included amount of formalin in the event of a leak.

• A Ziploc biohazard bag provides a second layer of packaging to contain the formalin jar and absorbent material. Enclosing your submission form in the outer pocket of this bag will also protect it in case of a leak.

• A cardboard box provides the rigid outer layer.

• As a final barrier, we provide you with a UPS Laboratory-Pak, a heavy duty plastic envelope, which seals your packaged sample inside.

• Each Laboratory-Pak comes with a UPS label attached for return of your sample which you can track in transit back to KSVDL.

Occasionally there are biopsy samples, which are too large to fit into the provided jar. These large samples should not be placed into a container that is too small.

The proper amount of formalin is needed to ensure proper fixation. In these cases you can submit the tissue fresh or delay submission until the sample has fixed at your clinic. To send the biopsy as a fresh tissue sample, chill the sample in the refrigerator. Double bag the sample in a tightly sealed Ziploc or Whirl-pak bag, and then ship the sample with cold packs for overnight delivery. These samples will be placed in formalin upon arrival at KSVDL. Submitting the fresh tissue will delay results on an average of 1-2 days.

A second option is to fix the biopsy at your clinic in a large container of formalin and then ship the sample to KSVDL. This can be a good way to save on shipping costs. Remember to provide 10 parts of formalin to 1 part of tissue during fixation. After the tissue is fixed remove it from the formalin and place it in a Ziploc bag with a paper towel soaked in formalin. The sample should be double or tripled bagged to prevent leaks, and as described above you will need absorbent material with an additional layer such as paper towels in a Ziploc. All samples should then be shipped in a rigid outer container.

Following these guidelines for packaging should ensure your sample arrives in good condition.

For more information or to order biopsy mailers please contact Client Care at 866-512-5650 or clientcare@vet.ksu.edu.
Bovine Nitrate Sampling

By Dr. Jen Lehr & Dr. Deon Van Der Merwe

Recently, KSVDL has received a large number of bovine samples that were unsuitable for nitrate testing. In the past, submission of the entire globe had been recommended. However, the longer the fluid stays within the eye the more likely hemolysis will occur. This is enhanced by the rigors the sample undergoes while being shipped to the laboratory.

KSDVL recommends that samples for nitrate testing be collected in the field, and that the entire globe not be submitted.

Aqueous humor (ocular fluid) is an excellent sample to collect in suspected cases of nitrate toxicosis. Nitrate levels in ocular fluid are relatively stable postmortem.

Samples of ocular fluid are easily collected at necropsy with a sterile needle and syringe.

Sampling procedure:

1. Begin by ensuring the surface of the eye is free from mud and other debris.
   A 16-18 gauge 1-inch needle and 3-12 cc syringe is used, depending on the size of the animal.
2. Enter the anterior chamber through the cornea.
3. Gently aspirate 1-2cc of ocular fluid.
4. After collection, the fluid should be placed in a sterile red-top tube.
5. The sample should be shipped on an ice pack.

Following these procedures should ensure a suitable sample is obtained for nitrate testing.
KSVDL Personnel Activities

Publications


Activities

- Dr. Jennifer Lehr and KSUCVM students helped check in animals at the Alpaca Owners Association National Show and Auction in Grand Island, Nebraska.

- Dr. Brian Lubbers presented the title "Veterinary Feed Directives" at the Suther Feeds Advisory Board Meeting in Manhattan, Kansas.

- Dr. Lubbers presented to the Kansas Farm Bureau – Commodities conference “Changes in Antimicrobial Use: Where are we? Where are we headed?” in Manhattan, Kansas.

- Drs. William Fortney and Gregg Hanzlicek presented information summarizing a recent Trich research project, BVD testing, bovine nitrate sampling at the SW District KVMA meeting in Garden City, Kansas.

- Dr. Lubbers attended the National Institute for Animal Agriculture Antibiotics Council and presented the “2014 NIAA Antibiotics Symposium Summary,” in Indianapolis, Indiana.

- Dr. Hanzlicek presented “Anaplasmosis: Disease and Control” at the Reno County Cattlemen’s Annual meeting in Hutchinson, Kansas.

- Dr. Hanzlicek presented “Bovine Neonatal Scours: Prevention and Treatment” at the Kansas State Research and Extension Calving Schools in Manhattan and Dighton, Kansas.

- KSVDL had a booth at the Kansas State University Animal Science and Industry Cattlemen’s Day in Manhattan, Kansas.

- Dr. Hanzlicek conducted several BRANDS™ Beef Nutrition wet labs with KSU-CVM students.

Upcoming Activities

- Dr. Brian Lubbers will be presenting “Using Custom Susceptibility Plates to Solve Unique AST Challenges” at The Learning Edge – 2015 Clinical Microbiology Discovery Days, Sponsored by: Thermo-Fisher, Overland Park, Kansas.

- Dr. Gregg Hanzlicek will be presenting at the K-State Animal Science and Industry Physiology-Animal Breeding Seminar, “Field Disease Investigations: The Process Required to Optimize a Positive Outcome.”

Recent KSVDL Field Investigations

- Diarrhea and respiratory issues on a replacement rearing facility

- Poor reproductive performance in a commercial dairy
Developing, Delivering Accurate, Innovative Diagnostic Services

The mission of the Kansas State Veterinary Diagnostic Laboratory (KSVDL) is to develop and deliver accurate, innovative, and timely diagnostic and consultative services to the veterinary and animal health community while providing support for teaching, training and research programs.

Continuing Education

www.vet.k-state.edu/education/continuing/

March 29, 2015

32nd Annual Frank W Jordan Seminar
Dermatology
Dr. Darren Berger, DVM DACVD
Assistant Professor
Lloyd Veterinary Medical Center
Iowa State University
Frick Auditorium, Mosier Hall, K-State
Manhattan, Kansas

For more information, call the Continuing Education Office at 785-532-4528 or follow the link: www.vet.k-state.edu/education/continuing/conferences/FWJ15/registration-info.html

April 24, 2015

Student Chapter of American Association of Bovine Practitioners
Spring Beef Conference
Stanley Stout Center
Manhattan, Kansas

For more information call the Continuing Education Office at 785-532-4528.

June 6-9, 2015

77th Annual Conference for Veterinarians
Hilton Garden Inn and Conference
Manhattan, Kansas

For more information call the Continuing Education Office at 785-532-4528.

Test Results and Schedules

Laboratory results available On-Line All The Time!

KSVDL hours:
Memorial Day: Closed Monday, May 25
Independence Day: Closed, Saturday, July 4
Labor Day: Closed; Monday, September 7

To receive this newsletter by e-mail, contact: ksvdloutreach@vet.k-state.edu.