

Diagnostic Insights

www.ksvdl.org



KANSAS STATE VETERINARY DIAGNOSTIC LABORATORY

Accredited by the American Association of Veterinary Laboratory Diagnosticians

March 2012

Personnel Profile—Rhonda Coffman

Rhonda Coffman has recently joined the KSVDL as the Diagnostic Lab Office (DLO) Supervisor.



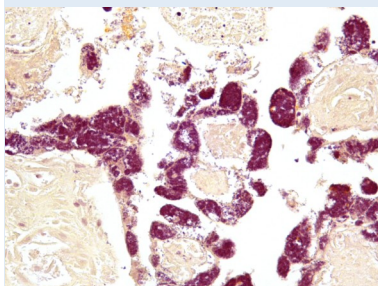
She graduated from Kansas State University in 1984 with a Bachelor of Science in Animal Science & Industry. Over the course of the last 25 years she was part owner and manager of many businesses, including Neill-Coffman Farms, Inc., and Coffman Real Estate Investments.

In 2007 Rhonda accepted a position with Ottawa University as a Records Assistant to the Registrar

for the University-wide Administration. She also earned her Master's degree in Human Resource Administration in 2009 from Ottawa University.

As the DLO supervisor, Rhonda will assist Dr. Gary Anderson in efforts to assure continued efficiency, monitor quality assurance, supervise office staff, and prioritize KSVDL client-care while addressing diverse and growing diagnostic needs.

Canine Brucellosis—Dr. Kelli Almes



An aborted canine fetus was recently presented to the KSVDL for a necropsy and abortion workup.

The kennel had a recent history of females aborting 2-3 weeks prior to their whelping date.

The fetus and placenta were grossly normal and moderately autolyzed. Histopathology revealed a myriad of gram negative (photograph) bacterial organisms within trophoblasts as well as multifocal necrosis within the placenta and liver.

Bacterial cultures of the lung and liver yielded a small number of bacterial colonies morphologically consistent with *Brucella canis*. These colonies were PCR positive for *B. canis*.

Brucella canis is a zoonotic organism and is still an important disease in canine breeding facilities. It can be transmitted through mating, skin wounds, oronasal contact, or ingestion.

B. canis is a reportable disease in the state of Kansas.

Testing for this disease is not easy and a single negative test, regardless which test you choose, is not sufficient to call a dog negative. Tests available at the KSVDL are blood culture, card agglutination*, and PCR. If you have any questions about testing, please visit our website at www.ksvdl.org or call us at 1-866-512-5650.

*** Due to a manufacturing shortage of test kits for canine brucella serology testing, we will be forwarding all samples to NVSL. The cost for this testing will be \$25.00 which will include shipping. Due to this change, canine brucella testing results may be delayed up to 10 days. This will not affect other canine export testing.**

If you have any questions feel free to contact Dr. Kelli Almes at 785-532-5650 or kalmes@vet.k-state.edu.

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March 2012

Bovine Trichomoniasis Working Group

Dr. Bill Brown, Kansas State Veterinarian & Livestock Commissioner, has formed a Trichomoniasis Working Group to discuss and plan the appropriate steps for the veterinarian education and state regulations necessary to control this disease.

The members of this group include commercial and purebred beef-producers, a livestock sale-barn owner, KSU-CVM veterinarians, state veterinarians and private practitioners.

The first meeting was held on February 2nd at the KSVDL. The program included a review of the disease, a summary of Trich regulations in surrounding states, and an update on the number of positive herds and questionnaire results from positive Kansas cow-calf herds.

New Bovine (Neonatal) Enteric Disease Panel

This panel tests for Rota, Corona, E. Coli 99, and Crypto.

The appropriate sample to submit is approximately 2g of feces.

Rectal swabs many times do not contain enough feces to complete the test.

Help us help you:

- E-mail and Fax: Please make sure we have your correct email and fax information.
- Make sure you are using the current KSVDL forms: go to www.ksvdl.org for the latest version
- Make sure all required fields are filled in the submission form—this helps speed up the process!!

KSVDL Specializations

DIRECTOR

DR. GARY ANDERSON
785-532-4454

BACTERIOLOGY

DR. BRIAN LUBBERS
785-532-4012

COMPANION ANIMAL OUTREACH

DR. BILL FORTNEY
785-532-4605

CLINICAL PATHOLOGY

DR. LISA POHLMAN
785-532-4882

COMPARATIVE HEMATOLOGY

DR. GORDON ANDREWS
785-532-4459

FIELD INVESTIGATIONS

DR. GREGG HANZLICEK
785-532-4853

HISTOPATHOLOGY

DR. BRAD DEBEY
785-532-4461

IMMUNOLOGY

DR. MELINDA WILKERSON
785-532-4818

MOLECULAR DIAGNOSTICS

DR. RICHARD OBERST
785-532-4411

PARASITOLOGY

DR. PATRICIA PAYNE
785-532-4604

RABIES

DR. CATHLEEN HANLON
785-532-4200

RECEIVING & NECROPSY

DR. KELLI ALMES
785-532-3995

SEROLOGY

DR. RICHARD HESSE
785-532-4457

TOXICOLOGY

DR. DEON van der MERWE
785-532-4333

VIROLOGY

DR. RICHARD HESSE
785-532-4457

We're on the web @ www.ksvdl.org



Positive Bovine *Tritrichomonas* Kansas Counties: 2011-2012

Source: Kansas Department of Agriculture—Division of Animal Health

The map below highlights the positive Kansas Trich counties for 2011 and 2012. There were 17 counties identified with at least one positive Trich herd in 2011 (counties in purple). In 2012, two counties have had positive herds identified (counties in gray).

Below is a summary of the answers provided to questionnaires asked of the owners of each 2011 positive herd:

The age range of positive bulls was 1.5 years (n =1) to 10 years (n =1) with 4 year and older bulls constituting 85% of the positives.

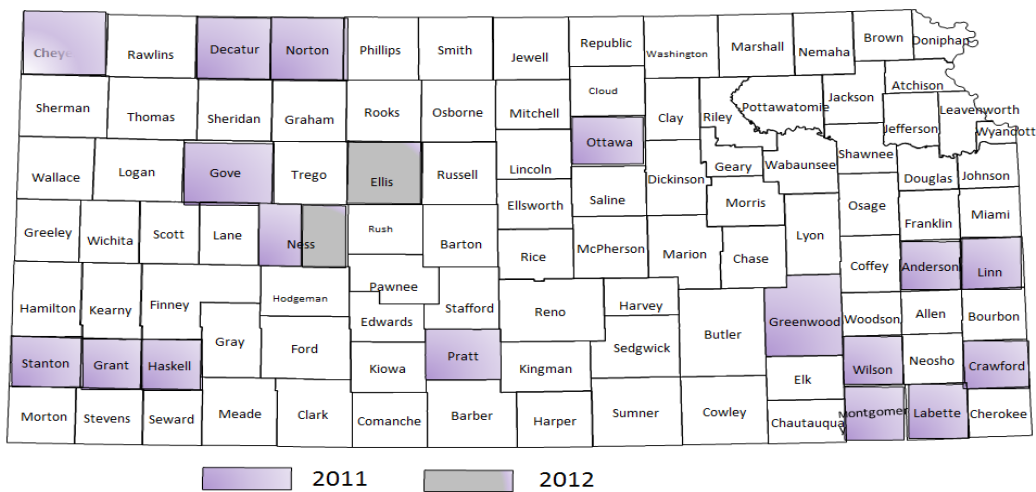
The number of positive bulls within the infected group ranged from 12% (3/25) to 72% (13/18).

The percentage of open females reported in the infected group ranged from 2% to 45% ,(median 16.5%).

Of the producers who brought in bulls in 2011, two reported purchasing bulls from salebarns, and the rest reported purchasing bulls through private treaty, only.

Forty four percent of the producers who added outside bulls to their herd last year reported adding non-virgin bulls.

2011-2012



KSVDL Now Offering Pooled Bovine *Tritrichomonas foetus* Testing

The KSVDL recently completed a study to investigate the feasibility of pooling samples for Trich PCR analysis. The results of the study indicate that testing samples in groups of up to 5 is accurate and repeatable.

This option will still require that practitioners place the smegma sample of each bull in a separate Trich InPouch™ TF. The laboratory will incubate and pool the samples for testing. It is important that the samples NOT be shipped on ice and that they are sent to reach the KSVDL within 72 hours of collection.

Pools of up to 5 samples will be charged at \$10.50 per sample (\$52.50 for a pool of 5).

Individual Trich PCR will be \$21.00.

If a pooled sample is found to be positive, each individual sample within the pooled sample will be analyzed for \$21.00 per sample.

Contact Dr. Gregg Hanzlicek at 785-532-4853 or gahanz@vet.k-state.edu for more information about testing options.

Maximizing the Diagnostic Potential of Skin Biopsies—Dr. Gordon Andrews

For dermatological cases, properly obtained and interpreted skin biopsies can be the cornerstone of establishing a definitive diagnosis, or a differential diagnosis list that can be refined by additional diagnostic testing. To be successful, this requires effort by both the submitter and pathologist. The following guidelines are suggested to insure that your pathologist has appropriate biopsies to examine and clinical information to interpret the biopsies and put the histological lesions into context to establish a diagnosis.

When feasible; withhold the patient from drugs, particularly steroids, prior to obtaining biopsies.

Steroids are anti-inflammatory and can alter the histologic lesions and nature of the inflammatory cell infiltrate.

DO NOT prep the biopsy sites.

The pathologist needs to see the crust, scale, or exudate on the skin surface. Crust, scale or exudate on the surface may be the only change in some skin diseases, or may be part of a combination of lesions in other diseases. Etiological agents such as mites, yeast or bacteria may be in the surface crust. Pustules and vesicles are fragile and easily ruptured by prepping the skin.

Always use sharp dissection to obtain biopsies.

Skin punch biopsy instruments are preferred. They are inexpensive, easy to use and take uniform clean tissue samples. They come in sizes from 2 – 8 mm diameter. Use the largest punch practical for the anatomic site. 8 mm is recommended for general use. Smaller biopsies may be needed for sensitive areas such as the nose, around the eyes, and feet. Small biopsy sites can be left open to heal. Larger sites can be closed with a single suture.

If lesions have discrete borders, use a scalpel to take an elliptical biopsy with the long axis of the ellipse perpendicular to the edge of the biopsy. Label this biopsy as lesion border. Color differences that are grossly obvious can disappear when the tissue is fixed.

Never use laser or electrocautery to obtain skin biopsies.

These instruments burn tissue. Small skin biopsies can be completely burned and rendered useless for histopathology.

Handle tissues gently.

Crush artifact alters microscopic anatomy and destroys cellular detail.

Take multiple biopsies.

Multiple biopsies increase the probability of obtaining an accurate diagnosis. The diagnosis is seldom present in a single biopsy. Obtain biopsy samples from lesions that have differing gross appearances. Multiple biopsies may provide additional information about secondary problems like superficial pyoderma in addition to an immune mediated skin disease. In some cases (particularly diseases characterized by alopecia) a biopsy of clinically normal appearing skin can be helpful for comparison. Diagnostic microscopic lesions can be present in clinically normal appearing skin. Label this biopsy as normal appearing skin.

Put the tissues in formalin as soon as possible.

Desiccated tissue has altered staining characteristics and histologic appearance.

Identify the anatomical location of each biopsy.

Label each biopsy. Submitting the individual biopsies in tissue cassettes is ideal if you have them. These can be obtained from the diagnostic laboratory. Another method is to place the tissue in a gauze pouch and secure the pouch with string or suture.

Consider performing additional diagnostic procedures at the same time.

Perform a deep skin scrape to check for mites. Skin cytology can be performed by scraping or imprinting. Stain the slide and examine it yourself. Send an air dried unstained slide to the lab for a clinical pathologist to examine. It is essential to ship this slide in a separate mailing container from the formalin fixed tissue. Formalin vapors from even sealed formalin containers fix the cells on the cytology slide and render the slide useless for cytologic examination. Ship the slide in a box to protect from breakage. DO NOT use cardboard slide mailers in an envelope. The slide will arrive broken. Obtain a fresh tissue biopsy for bacterial or fungal culture if you suspect infectious agents.

Document gross lesions.

Today, digital cameras, computers, and web access are ubiquitous. Keep a digital camera in your exam room. Print the photos and send with the biopsy submission. Keep a set in the patient's medical record. If your records are completely electronic, keep the digital files in the medical record. Alternatively, e-mail digital images to us: receiving@vet.k-state.edu Indicate you are submitting biopsies to go with the photos. Identify the patient and owner and we will get the photos into the case file. Use your smart phone to take photos and e-mail us with the same device.

Fill out the submission form completely.

You should treat this case as a referral to a histopathologist. Fill out the submission form yourself. The more information your pathologist has, the more helpful they can be. Pertinent clinical information should include lesion distribution and gross char-

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Maximizing the Diagnostic Potential of Skin Biopsies, cont.

acteristics (photos help greatly for this), duration and progression of lesions, presence of pruritis or pain, response or lack of response to therapy, specific drugs used, dose and duration of therapy if known, results of ancillary tests: (CBC, Chem panel, Endocrine testing, Cytology, Skin scrape), signs of systemic illness or other medical conditions (pancreatitis, liver disease, neoplasia, etc).

Dermatological conditions are among the most frequent presentations to companion animal practitioners. The skin is the largest organ of the body and is the easiest organ from which to obtain biopsy samples. Gross lesions are visible to the unaided eye without any specialized equipment and are easily documented by photography. Every veterinary practitioner has the ability to obtain high quality skin biopsies and provide a good clinical history so that the practitioner/pathologist team can establish as accurate a diagnosis as possible.

Bovine Submission Form

KSVDL is introducing a new submission form for use with all bovine testing.

Follow this link to the new form:
www.ksvdl.org/pdf/Bovine_Submission_Form.pdf

The screenshot shows the Bovine Submission Form with the following sections:

- CLIENT:** Includes fields for Veterinarian, Clinic or Company, Address, City, State, Zip, Phone, Fax, and Email.
- OWNER/PRODUCER:** Includes fields for Owner Name, Business/Premier, Address, City, State, Zip, Phone, Fax, and Email.
- SEND RESULTS:** Options for Fax, Email, Online, and Also Send Results to Owner.
- SPECIMENS SUBMITTED:** Checkboxes for Fluid (Milk, Whole Blood, Serum, Whole Body), Fixed Tissue(s), and Fresh Tissue(s).
- NECROPSY & DISPOSAL:** Includes Date of Death, Animal was euthanized, and various testing options like Aerobic Susceptibility, Fungal Culture, Mycoplasma Culture, etc.
- BACTERIOLOGY:** Includes Digestion suspected, Aerobic Culture, Aerobic Susceptibility, and various culture types.
- PARASITOLOGY:** Includes Cryptosporidium/Isoet, Fecal/Floar, and various serology/virology tests.
- HISTOPATHOLOGY:** Includes Routine, Extended, and Panels (Bacterial Abortion, Enteric Disease, Respiratory PCR).
- MOLECULAR DIAGNOSTICS (PCR):** Includes BVD (various strains), IBR, and various other PCR tests.
- OTHER:** Includes Counter Record, Counter, Sample Condition, and other miscellaneous options.

To find the form on the KSVDL website: go to www.ksvdl.org; then click on the drop-down menu “Submission Forms” in the upper right-hand corner, and select “Bovine Submission Form”.

If you have any questions or comments concerning the submission form, please call 866-512-5650.

Routine vs. Extended Histopathology Reports

In an effort to become more efficient, we are now offering the option to order histopathology reports in a routine or extended format. The differences in the two reports are as follows:

- Routine report includes a diagnosis and comments only.**
- Extended report includes diagnosis, comments, and a detailed histopathologic description.**

Unless noted, a “Routine Report” will be the default report. As of now, the Bovine Submission Form is the only form available with this option selection available. Soon, all forms will have this feature. *Until then, when submitting on any other form, please feel free to notate that you would prefer an “Extended Report”.*

All dermatopathology cases will automatically receive extended reports due to the nature of the examination. Unless noted on the submission form all other biopsies will be reported in the routine format. The extended report option carries an additional charge of \$8.00, which is subject to change.



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.

1800 Denison Avenue
Manhattan KS 66506

Phone: 785-532-5650
Toll Free: 866-512-5650

We're on the web!
www.ksvdl.org

Continuing Education

April 29, 2012

Frank W. Jordan Seminar – “The Science Behind Alternative Medicine in Animal Health”

June 4-6, 2012

74th Annual Conference for Veterinarians & KVMA Trade Show

Test Results & Schedules

Laboratory results may be accessed online 24 hours a day, 7 days a week!!

To set up an account go to:

www.ksvdl.org

KSVDL will be closed on the following days:

May 28, 2012

July 4, 2012

September 3, 2012

TO RECEIVE THIS NEWSLETTER BY E-MAIL, CONTACT: DlabOffice@vet.k-state.edu