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Did You Know??

Camel's milk, which is widely drunk in Arab countries, has 10 times more iron than cow's milk.

The total combined weight of the worlds ant population is heavier than the weight of the human population.

- - - taken from "General Interesting Facts" -
www.berro.com

Notes From the Director

We have some new faces at the Diagnostic Center as these people join us in fulltime employment. They are as follows: Dan Riskowski, Histology lab; Tina Boilesen, Bacteriology lab; Mary Piccolo, Front Office; and Paige Smercina, Necropsy. We look forward to working with these individuals and welcome them to our staff!

D. Scott McVey
DVM, PhD, DACVM
Director, Veterinary Diagnostic Center

OPENING

At the Nebraska VDC, we currently have openings for residents and graduate students interested in laboratory diagnostic medicine (pathology and microbiology). We enjoy a strong food animal case load, as well as a solid diversity of other types of cases. These programs of study would lead to board certification and advanced degrees in the fields of choice. If you would like to learn more about these opportunities, please call, inquire by email or visit with any of the VDC faculty.

"UNL is an equal opportunity employer."

New Parasitologist Joins Teaching Staff

Dr. Roberto Cortinas received a D.V.M. from Colorado State University and a PhD from the University of Illinois at Urbana-Champaign where he studied the establishment of the blacklegged tick ("deer tick") along the Illinois River. In 2005, he began working at the University of Minnesota Parasitology Laboratory as a Post-Doctoral Associate and Senior Scientist. His responsibilities were based in the diagnostic and service-related operation of the laboratory, as well as in teaching veterinary parasitology. Dr. Cortinas plans to conduct research in parasitology and vector ecology, particularly in issues of emerging animal and human disease. ***Dr. Cortinas would like to solicit parasitology specimens to be used in teaching laboratories. Please feel free to call Dr. Cortinas at 402-472-6502 if you can contribute samples or if you have questions.***

Parvovirus Infections in the Multiple Pet Household

A recent call to practitioners from a multiple-pet household raised the question regarding cross species transmission of parvovirus. The owners were concerned about the pet ferrets contacting puppies recovering from a parvoviral infection. Parvovirus represents a family of viruses each with a specific host preference. A 1987 American Journal of Veterinary Research paper by Parrish, Leathers, Pearson and Gorham demonstrated molecular differences among most parvoviral species isolates. Feline and raccoon parvoviral isolates were nearly identical. Canine parvovirus and mink enteritis virus could easily be distinguished. Feline panleukopenia virus, raccoon parvovirus and mink enteritis viruses replicated to high titers in mink, but only the mink virus caused clinical disease. Feline and raccoon viruses replicated, but caused no lesions or disease in ferrets.

Canine parvovirus does not appear to be a risk for ferrets, and while feline panleukopenia can replicate in ferrets, it is unlikely to cause disease. Ferrets are susceptible to Aleutian disease virus which is reported in ferrets and mink and is associated with immune-mediated neurologic disease symptoms.

---contributed by Dr. David Steffen, DVM, PhD, ACVP

News From the Bacteriology Lab

Antimicrobial Sensitivity Testing (AST)

The bacteriology section of the VDC is now using new methods for routine antimicrobial sensitivity testing. We are testing bacteria by the broth dilution method using the TREK@ Sensititre plate system. The Sensititre system provides the only fully customizable system that is semi-automated and designed to cover most diagnostic testing needs in the veterinary laboratory. More than 240 antimicrobials, including 40 veterinary specific antimicrobials, are available for susceptibility testing of bacteria, ensuring accurate first time results. Sensititre remains the system of choice for global surveillance programs, including NARMS (National Antimicrobial Resistance Monitoring System), coordinated via FDA-CVM, USDA, CDC.

The advantages provided to our clients include rapid turn around and true MIC data and interpretation based on the Clinical and Laboratory Standards Institute's guidelines. Also, we will provide data for a very broad set of antimicrobials (broader than typically available through Kirby-Bauer testing). The test panels are custom designed for equine, food animal, companion animal, urinary tract infection and avian needs and clinical drug availability. In addition, we will have the ability to customize epidemiological investigations for clinics or herds. We will be happy to provide a sample of the drug spectra that we will be using in the testing.

We will retain the capability to perform K-B tests for extended spectrum antibiotic testing, some fastidious organisms, anaerobe testing and *Campylobacter* spp. testing. However, we will use the Sensititre system as our routine test for antimicrobial sensitivity.

The disadvantage of this system will be increased costs – individual tests will cost \$18.00. The price will be effective late in the fall of 2008 and will be announced. However, please contact the bacteriology laboratory to discuss strategies to minimize costs of AST tests and the need for testing in some cases.

—contributed by D. Scott McVey, DVM, PhD, DACVM
Faculty Supervisor, Bacteriology

"Dogs come when they're called; cats take a message and get back to you later." ~ Mary Bly

VIROLOGY UPDATES

The lab has diagnosed two horses this summer with acute WNV infection. These animals tested positive in the IgM capture ELISA. Neither horse was vaccinated.

We have also identified approximately 50 wild birds which tested positive for avian influenza by the matrix (general) PCR assay. None of these birds tested positive by the H5 or H7 PCR assay.

NEW TESTS OFFERED:

Equine herpesvirus type 1 (rhino) serum neutralization test.

Equine viral arteritis (EVA) serum neutralization test.

Both of these tests require 0.5-1ml of serum as a sample and will be performed on Tuesdays and Thursdays. Results will be available on Fridays and Mondays. Cost for both tests is \$6/sample. Performing these tests here in our lab will decrease turn-around time and cost for our clients.

- - contributed by Judi Galeota, Supervisor
Virology Laboratory

TOXICOLOGY NEWS

We are in the final stages of validating an new analytical method for sulfate in distillers grain (DG). This method will supplement existing methods that determine total sulfur, which includes all forms of sulfur in the specimen, sulfate and non-sulfate. Results using the new method will help confirm excessive sulfate exposure from DGs by detecting only sulfate.

If the new method passes all of the validation requirements, we will add it to the analytical services provided by the VDC Toxicology Laboratory. For more information contact Dr. Michael Carlson, 402-472-8459, mcarlson3@unl.edu."

- contributed by Mike Carlson, MS,
PhD,

Supervisor, Toxicology Laboratory

MEET OUR EMPLOYEES



Jamie Bauman

Jamie Bauman is a Research Technologist III in the Microbiology lab at the VDC. Jamie has worked at the Diagnostic Center for the past 2 years. Jamie received her BS in Animal Science. Her hobbies include Husker sports, riding horses, outdoor activities and movies. Jamie is from Martell, Nebraska.



Mavis Seelmeyer

Mavis Seelmeyer is an Administrative Support Associate in the Front Office of the Diagnostic Center. Mavis has been employed at the VDC for 20 years. Mavis and her husband Jim have 2 children and 2 grandchildren. Mavis is a member of the bell choir at her church and also serves as a substitute organist. Her hobbies include spending time with her grandchildren, gardening, sewing, music and reading. Mavis grew up on a farm near Cook, Nebraska and now resides in Lincoln.

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The Nebraska Veterinary Diagnostic Center is accredited by the American Association of Veterinary Laboratory Diagnosticians

All regulatory testing for export is done in compliance with the code of federal regulations and technicians performing the test have been tested annually by the USDA through the National Veterinary Services Laboratories check-testing program. Additional assays within the lab regarding toxicology, microbiology and parasitology are assessed annually by check testing through the Veterinary Laboratory Association. Positive and negative control samples are included in all serologic and toxicologic testing protocols that require them.

Ancillary testing is reviewed by a single case coordinator who assures that test results are in agreement and any unusual test results are investigated to ensure that standard operating procedures are followed and that results can be replicated. Standard operating procedures are on file in each of the laboratories and available for inspection. A copy of our Quality Manual is available upon request.

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