



Veterinary Diagnostic
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WE ARE ON THE WEB!
www.vetmed.illinois.edu/vdl/

VETERINARY DIAGNOSTIC LABORATORY

Featured in this issue: Director's Message, Featured Faculty, *Mycoplasma (Haemoplasma) spp.* PCR

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Director's Message

Veterinary Diagnostic Laboratory (VDL) clients may elect to receive e-mail notification when the VDL receives a case. E-mail notification is sent out daily and includes the case number, the name of the diagnostician assigned to the case, along with owner and animal information. E-mail notification does not apply to cases for which results are returned the same day as receipt, such as clinical pathology. Clients do not have to be registered WEBVAD users to receive this service, although upon registration WEBVAD users will be automatically setup to receive the e-mail notification. Are you registered for WEBVAD? Log on to www.vetmed.illinois.edu/webvad for registration information.

Walter E. Hoffmann, DVM, PhD, Interim Director

Featured Faculty

The VDL is very fortunate to have on faculty Dr. Anne Barger, clinical associate professor and section head of clinical pathology. Dr. Barger received her DVM at Illinois, after which she completed a residency at North Carolina State and a brief period of employment with Antech. She is certified by the American College of Veterinary Pathologists (ACVP). During her six years on faculty, she has received the Dr. Gordon & Mrs. Helen Kruger Teaching Excellence Award, and twice received the Carl Norden-Pfizer Teacher Award and the Chicago Veterinary Medical Association Outstanding Instructor Award. She has also been the recipient of the Dr. Gordon and Mrs. Helen Kruger Service Excellence Award and this year received the Dr. Gordon and Mrs. Helen Kruger All Around Excellence Award for her efforts in teaching, service, and clinical research.

Dr. Barger handles a majority of the teaching duties in clinical pathology, handles approximately half of the cytology service duties, oversees the operation of the clinical pathology laboratory, serves as the clinical pathology residency training program coordinator, and still finds time to be involved in collaborative research and serve on the ACVP Examination Committee. Dr. Barger very much enjoys and understands the importance of providing consultation and quality, as well as timely service, to the practicing veterinarian. She has expanded the cytology service dramatically since her arrival and actively seeks interaction with the practicing veterinarian. Please feel free to call her with your questions or comments at 217-333-5342.

Mycoplasma (Haemoplasma) spp. PCR: Dr. Amy MacNeill/Therese Eggett

Mycoplasma haemofelis and *Mycoplasma haemominutum* (formerly *Haemobartonella felis*) are epicellular parasites of feline erythrocytes. *Mycoplasma haemominutum* looks similar to *Mycoplasma haemofelis* on a peripheral blood smear, but is smaller and less pathogenic than *Mycoplasma haemofelis*. The organisms are likely transmitted by direct blood exchange and blood-sucking arthropods, although they also can be transmitted from queens to kittens in the absence of any insects. Tissue macrophages phagocytize infected erythrocytes, which leads to severe anemia and death in up to one third of cats acutely infected with *Mycoplasma haemofelis*. Cats that survive the initial parasitemia remain chronically infected and can become carriers of the disease. Approximately 10% of cats infected with *Mycoplasma haemofelis* and 90% infected with *Mycoplasma haemominutum* never have clinical signs of infection, but still act as carriers. There is an increased risk of mycoplasmosis in cats that are positive for FeLV or FIV.

Blood mycoplasmosis (haemobartonellosis) has traditionally been diagnosed by identifying the organisms on the erythrocytes in a peripheral blood smear. Cyclical disappearance of the organisms from the blood can occur in two hours or less and microscopic detection in peripheral blood is extremely unlikely until the next parasitemia occurs. Collecting blood during a febrile episode improves the chances of identifying the organism.

The VDL offers a PCR assay that is able to detect *Mycoplasma haemofelis* and *Mycoplasma haemominutum* even when the organisms cannot be observed in the peripheral blood. The minimum sample needed for the PCR assay is 0.5 mL of blood in EDTA (purple top) or citrate tubes shipped overnight. The test is highly sensitive and specific for mycoplasmosis and can be used to detect carrier cats that do not have clinical signs of disease. The PCR assay is particularly recommended in cases with clinical signs of mycoplasmosis when the organism can not be definitively identified by examination of a peripheral blood smear.

Whole blood from a cat that has been treated with doxycycline or an equivalent drug may be tested by PCR within the first week after treatment. After one week of treatment, it is not likely that the organism will be detected. Fresh blood may be tested again six weeks after treatment has ended.

Other haemoplasma PCR assays offered by the VDL are *Mycoplasma haemocanis*, *Candidatus Mycoplasma haemolamae* and *Mycoplasma suis* (formerly *Eperythrozoon suis*).