The ULAM business office along with the UCUCA office is very excited about the implementation of the paperless eResearch Animal Management (eRAM) system component coming in the spring of 2012. This will be part of the same eRAM system that you are currently using for protocol application and management. The overall goal of eRAM is to streamline the animal management process by creating a completely integrated system that will link protocol development and maintenance with animal ordering, animal transfers and non-vendor acquisitions. Listed below are the current paper animal management forms that will be completed and sent electronically in the eRAM system:

- Animal Ordering Form
- Animal Procurement & Disposition Forms: 8225-A, 8225-C, and 8225-D Forms
- Authorized to Charge/Change Form
- Rodent Import Form

This additional Animal Management component will allow investigators, authorized staff, departments, and units to better manage their protocol and animal data, as well as to improve intercommunication. In the future we will be adding per diem census and invoicing to further enhance the integration of animal research data. This implementation will allow customers to have access to invoices as well as cage counts/census data. Ordering of breeding sheets and barcode stickers will also be included in future implementations.

ACCESS

Since this is an implemented enhancement to the current eRAM system there will be no need for any additional login or passwords. We will be simply adding functionality to your existing eRAM access.

More information regarding the eRAM Animal Management System including changes in the current process of administering standing orders will be provided in the next few weeks. Please keep an eye out for additional communications which will include implementation dates, presentation dates, training and other pertinent information. These additional communications will come in the form of e-mails, flyers and posters.

If you have any questions or concerns please contact the ULAM Business Office at 764-0277 or ULAM-eRAM@umich.edu.
By Robert Dysko, DVM, DACLAM  
Professor and ULAM Interim Director

As stated via a similar letter sent in early November 2011, The Unit for Laboratory Animal Medicine (ULAM) is implementing a campus-wide eradication effort against mouse and rat fur mites. Beginning March 1, 2012, all mice and rats on campus will begin an eight-week course of ivermectin-compounded feed to eradicate the fur mites. We have repeated the details below, with a few changes – these changes are highlighted in bold font.

We have identified fur mite infections on animals that are clinically and non-clinically affected. Our efforts to control these infestations have been challenged by diagnostic and treatment limitations, as well as by the ubiquity of these mites across campus.

Establishing colonies of fur mite-free research animals is necessary for two main reasons: (1) to prevent animal suffering due to clinical disease and (2) to minimize the impact of non-protocol variation on research. Clinical signs associated with fur mite infections can range from inapparent to severe. Some of these signs include hyperkeratosis, erythema, and ulcerative dermatitis. Additionally, chronic inflammatory stimulation caused by fur mites can manifest as alterations of the immune system affecting the spleen and lymph nodes, immunoglobulin levels, and cytokines. Other health concerns associated with fur mite infection include depressed reproductive performance, behavioral changes, weight loss, and in extreme cases wasting syndrome eventually leading to premature death.1, 3

At the University of Michigan, we strive to maintain a healthy population of animals that are free of pathogens known to confound research results. In this vein, ULAM is obligated, according to the Guide for the Care and Use of Laboratory Animals, to “minimiz(e) nonprotocol sources of variation associated with disease and inapparent infection,” and to prevent the “adverse effects that infectious agents may have on other animals or protocols in a facility.”2

To effectively establish a fur mite-free campus, we concluded that full eradication is mandatory. We investigated all available options and determined that the most effective one is an eight-week course of ivermectin treatment; this treatment has the lowest cost and impact on research.4, 5, 6 ULAM will provide standard rodent diets specially-compounded with ivermectin and dyed for identification. ULAM will also provide ivermectin-compounded water for animals that are on study-related diets. Other treatment options may be available, but selection of an alternative treatment will require further discussion with the faculty veterinarian in your area. Hopefully you have already done this; if not please call 764-0277 and the ULAM receptionist will refer you to the appropriate faculty veterinarian based on the building in which your animal colony is located.

Ivermectin is an avermectin parasiticide commonly used in domestic animals that has proven efficacy against fur mites and other parasites of mice and rats. Side effects are rare; some of the adverse effects of ivermectin treatment include transient dose-dependent increases in pup mortality and neurologic toxicity. We will minimize these effects by compounding the feed at an established and safe level.5 However, animals with a compromised blood brain barrier, such as p-glycoprotein deficient animals or animals that have experienced intracerebral surgery, are especially susceptible to ivermectin neurotoxicity. If you have any concerns about ivermectin toxicity because you use a susceptible or potentially susceptible strain/colony of animals, please contact your faculty veterinarian directly.

Continued on Page 3...
Once the campus-wide treatment is complete, we will adjust our quarantine and surveillance methods accordingly to prevent re-establishment of fur mite infestation.

If you have any questions, comments, or concerns regarding our eradication plan, please contact your faculty veterinarian. **At the present time the ULAM veterinary and animal care staffs are making the final arrangements for the ivermectin treatment as well as any alternative treatments. If you do not contact your faculty veterinarian, this will be interpreted as consent to treat your animals with ivermectin.**

**REFERENCES**


Choosing an appropriate number of animals is an important part of any research project. A proper sample size is essential in order to obtain statistically valid results. To this end, one important goal of the University Committee on Use and Care of Animals' (UCUCA) review of animal use protocols is to ensure that a sufficient but not excessive number of animals are being proposed. As animals are used they are deducted from the authorized number on the protocol.

Another central responsibility of the UCUCA is to ensure that investigators do not procure, breed, or use animals in excess of the number approved on the animal use protocol. Needless to say, all animal numbers are estimations and things can and do change. Procedures fail, unexpected events occur, and new research directions emerge. With the eRAM system, it is always possible to amend a protocol to deal with such eventualities or with data that are more variable than had been anticipated, thus requiring additional animals per group.

Remember, all animals manipulated or born under a protocol are considered used. Manipulation, for UCUCA’s purpose, includes, but is not limited to: breeding, anesthetization, restraint (e.g., placement in stanchion), food and/or water restriction, administration of substances, and behavioral testing. Even if an animal does not undergo all activities described on the protocol (e.g., undergoes anesthesia but does not undergo experimental surgery due to a discovered illness), any level of manipulation requires that animal be deducted from the total number of animals authorized for use on the protocol.

The eRAM system allows investigators and their lab managers to review their animal numbers easily by navigating to your protocol workspace and clicking on the “Animal Numbers” tab. Assuring that your animal numbers do not go negative is an important responsibility and can only be achieved as a partnership between the UCUCA and investigators. Over the next several months, we will be working hard to improve communication regarding animal number balances and make tracking your animal numbers easier.

If you have any questions about your animal numbers or any other areas of animal research compliance, feel free to contact the UCUCA Office at 763-8028 or ucuca.office@umich.edu.
Quick Notes

**SHORTCODES IN ERAM**

With the upcoming spring eResearch expansion of the electronic Animal Management System (eRAM), the shortcode accounts you are using to handle your animal management transactions will be uploaded into eRAM. Shortcodes will then be accessible through your protocol workspace. In the upcoming weeks the ULAM business office will be reviewing your shortcode information and contacting investigators/account managers as needed. If you have any questions please e-mail Ulam-eRAM@umich.edu.

**MLEARNING INCOMPATIBLE WITH MAC COMPUTERS**

Please be aware that due to a recent Java update, users cannot access MLearning on a Mac. If you need to take ULAM/UCUCA training courses, you must do so using a PC. This problem is not caused by internal UM programs or systems such as eRAM and therefore the ITS and MSIS departments will not be able to provide a fix. This is an external issue within Java and Apple.

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**New Or Updated Policies And Guidelines**

The following policies and guidelines have been added or updated and are available for download from the UCUCA website www.ucuca.umich.edu:

**POLICIES**
- UCUCA Policy on Use of “Fee-For-Service” Protocols and Centers
- UCUCA Statement on Social Housing of Non-Human Primates
- UCUCA Statement on Confirmation of Euthanasia via Rigor Mortis
- Step By Step Euthanizing Instructions

**GUIDELINES**
- Tumor Monitoring Guidelines
- End-Stage Illness Scoring System
- Animal Transport Standard Operating Procedure

**FORMS**
- Instructions for Creating Requests for Exceptions (including modified form)

**OCCUPATIONAL HEALTH & SAFETY**
- Procedures to Reduce Human Exposure to ORF and Q-Fever
- Animal Containment of Rodent and Avian Species Administered a Hazardous Substance (plus appendices)

Please review the above referenced documents if applicable to your research. It is the PI’s responsibility to ensure that the most recent version of applicable guidelines and policies are followed and that all staff members working with animals are also apprised of these regulations. Please don’t hesitate to contact the UCUCA office at 763-8028 or ucuca.office@umich.edu if you have any questions about the updated policies and guidelines.
The use of animals for research and teaching at the University of Michigan is a privilege, and with that privilege comes responsibility. As a principal investigator (PI), you are responsible for ensuring that all work performed under a UCUCA-approved protocol remains compliant. During a busy day, it is easy for distractions to allow errors to happen. It is often too easy for laboratory staff and scientists who are in a hurry to make mistakes. However, it is in your best interest as PI to make sure that you and all your laboratory staff are operating within the confines of your UCUCA-approved protocol and the policies and guidelines set forth by the Unit for Laboratory Animal Medicine (ULAM) and UCUCA.

Conducting any animal work not covered by an approved UCUCA protocol or failure to adhere to ULAM or UCUCA policies and guidelines can result in protocol non-compliance. Such non-compliance can result in temporary revocation of privileges to work with animals for some of your staff or, in extreme cases, suspension of approval for one or more of the PI’s protocols. In addition, the non-compliance may be reported to your department chair or dean, the Office of Laboratory Animal Welfare (OLAW; a division of NIH), and external funding sources. In addition, PHS (Public Health Service) Policy requires that in cases of serious non-compliance any costs associated with that non-compliance must be removed from the NIH grant. This can include costs related to animals, supplies, and personnel effort.

The animal use protocol is not only a concise description of an animal research project. It is also a contractual agreement between the Principal Investigator and the UCUCA that ensures that animals receive the highest standard of care within both the contexts of research and daily care. If you have any questions regarding UCUCA or ULAM policies, SOPs, and guidelines, please contact the UCUCA office at 763-8028 or ucuca.office@umich.edu.
Before working with any animal, please ensure that you have the right cage and the right animal by checking the cage card and/or tag on that animal. Make sure that the principal investigator and protocol number are both correct, and also ensure that the protocol expiration date is current. This will ensure that you do not use another investigator’s animals by mistake, and that your protocol remains in compliance. If you see a cage card that looks like it has incorrect information, or a cage that is mislabeled, please notify your husbandry supervisor as soon as possible, or if you have questions you can also contact the UCUCA office at 763-8028 or ucuca.office@umich.edu.

Reminder: Check Your Cage Cards

Do you have questions, comments, corrections, or suggestions about The Backbone? Is there a topic you would like to see covered in a future issue? We want to hear from you! Email us at ucuca.office@umich.edu or call 763-8028 and tell us about it!

Got Feedback?

PIs and laboratory staff are encouraged to attend the hands-on training course for creating applications and amendments in eRAM.

eRAM Training

To sign up for a class or to download Quick Reference Cards, click here: www.umich.edu/~eresinfo/eram/training.html.

PIs and laboratory staff are encouraged to attend the hands-on training course for creating applications and amendments in eRAM.

Snail Mail

University of Michigan
UCUCA
300 North Ingalls
971 NIB
Ann Arbor, MI 48109-5498

Contact A ULAM Vet

Monday-Friday, 8am-5pm: Call ULAM (764-0277)
After hours, weekends, and holidays: Call DPS (763-1131)

Contact the ITS Help Desk

Phone: 764-4357, option 3
Email: 4help@umich.edu

Animal Concern Hotline

Animal Concern Hotline Number:
(734) 763-8028

Animal Concern Online Submission Form:
www.ucuca.umich.edu/complaint.htm

IF YOU SEE ANYTHING THAT TROUBLES YOU, PLEASE DO NOT HESITATE TO CONTACT US!

eRAM Technical Support

Get A Backbone!

The Backbone is no longer available on paper. It is distributed via email and published on the UCUCA website. As always, back issues are available on the website. To download an issue, go to: www.ucuca.umich.edu/backbone.

If you see anything that troubles you, please do not hesitate to contact us!

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300 North Ingalls
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Do you have new personnel in your lab? Make sure to add them to your protocol if they will be using animals; EVEN IF THEY ARE TEMPORARY OR SUMMER PERSONNEL! Anyone who uses animals at any time under a UCUCA-approved protocol MUST be listed on that protocol before using animals.

Also, if there are personnel who no longer work in your lab, they should be removed from your protocol.

Personnel Changes In Your Lab?