REPORTING MISSING or ESCAPED ANIMALS

Even under the most controlled circumstances, adverse events may occur. When an animal escapes the holding cage, it is important that measures to capture the animal are engaged. It is not acceptable to consider it ‘returned to the wild’ or ‘free to roam the building.’ The goals of recapture are to: a) prevent an injury to an animal unaccustomed to the out-of-doors; b) to prevent a transgenic animal from passing their modified genes to other animals; and c) to prevent the spread of potential pathogens (if the animal is infectious).

According to Duke animal care program polices, all personnel who work with animals must be trained in handling, restraint, and capture of animals. The responsibility for ensuring appropriate training of the research staff lies with the PI (for PI managed spaces) and with DLAR (for DLAR managed spaces).

Select considerations for recapturing animals include:
- A rodent which has escaped should not be handled by hand. Use a hard container (e.g., a cup or empty cage) when capturing animals.
- Animals found in a trap or on the floor must be placed in a clean cage with food and water.
- A label using the word “compromised” must be affixed to the cage. This denotes that the animals may not be healthy and should be handled as if infected.
- A DLAR veterinarian must be notified immediately after the animal is captured.
- If the responsible PI can be determined, they will be notified immediately.
- If you suspect an animal is missing, check the room mortality log to see if an animal has died and the carcass removed for refrigerated storage.
- If you cannot determine that an animal is missing, or you know it is missing and cannot find the remains, then contact the DLAR supervisor.

It is especially important to notify DLAR management if the missing animal is a transgenic animal, KO/KI, or an animal with recombinant DNA. According to NIH policy, loss of these animals may require notification of the NIH Office of Laboratory Animal Welfare.

NOTIFICATION OF HAZARDOUS WORK IN ANIMAL CARE AREAS

When animal research involves the use of hazardous agents (i.e. infectious agents, particularly hazardous chemicals, radiologicals, etc.), federal law requires workers be notified of the potential risks and methods to manage those risks in the workplace. Timely posting of warning signage on doorways and individual cages is an important activity. For work performed in DLAR managed facilities, DLAR requires investigators notify DLAR management by written communication, preferably e-mail, at least two business days prior to the use of hazardous agents in animals. When notifying DLAR, the following should be included:

⇒ Hazardous agent to be used
⇒ Proposed building and room number
⇒ Species in which the agent will be used
⇒ Contact information for the PI
⇒ SOP approved by OESO for the safe handling of the agents and the associated animals.

Prior to working with the hazardous agent, you must assure hazardous agent signage is properly affixed. Standing Operating Procedures (SOPs) are prepared as part of the IACUC/OESO review and approval process. These SOPs should be located in proximity to the animal activity for access of those with animal acquired disease risk. In the case of DLAR managed areas, SOPs are reviewed by DLAR management and staff prior to initiating the activity. For PI managed areas, the IACUC & OESO expect PIs and laboratory staff to review SOP practices prior to initiating any hazardous agent work.

To review the complete policy, please refer to the animal program website at: [http://vetmed.duhs.duke.edu/documents/iacuc/pdf/policy_on_notification_of_hazardous_work_in_animal_care_areas.pdf](http://vetmed.duhs.duke.edu/documents/iacuc/pdf/policy_on_notification_of_hazardous_work_in_animal_care_areas.pdf)

Upcoming Dates & Deadlines

- March 22, 2010 Amendment Deadline
- March 25, 2010 New Protocol Meeting
- April 1, 2010 Amendment Meeting
- April 5, 2010 Amendment Deadline
- April 5, 2010 New Protocol Deadline

Deadlines are 5 PM on the date listed!
ANIMAL USE FAQs

Q: Why does the IACUC require me to assess pain and distress before the experiment is performed?

A: The federal agencies require the IACUC review animal protocols to ensure that pain and distress are minimized in laboratory animals. The IACUC must assure that the principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal and has provided a written narrative description of the methods and sources used to determine that alternatives were not available.

The NRC Guide for the Care & Use of Laboratory Animals states that the IACUC should ensure the protocol addresses: “appropriate sedation, analgesia, and anesthesia; criteria for timely intervention, removal of animals from study, or euthanasia if painful or stressful outcomes are anticipated; and details of post-procedural care.”

The protocol must provide adequate information for the IACUC to assess the potential animal pain and/ or distress resulting from the study and the effectiveness of the pain and distress relieving agents proposed for use. Criteria for re-dosing the animal should also be established.

Q: My Annual Progress Report asked for the numbers of animals I used, but when I submitted my report, I was advised that the DLAR Granite numbers differed from mine. Why? And how can I correct these discrepancies?

A: DLAR manages the animal program’s numbers database with a system called ‘Granite.’ When the IACUC approves a protocol, say with 200 aardvarks, the OAWA will enter the approval into Granite, and the PI can begin ordering aardvarks. Every aardvark ordered will subtract from the total number of aardvarks approved by the IACUC. If the PI also breeds aardvarks on campus, then they should provide DLAR a use report on some frequency (OAWA recommends quarterly). These breeder numbers will also be subtracted from the total numbers approved. PIs may also wish to confirm with DLAR (contact Stephen Pomeroy or Peggy Moore) the numbers in the Granite system prior to submitting the Annual Progress Report. Why? Because the OAWA must file several reports each year, and these reports are based upon DLAR Granite numbers—keeping these accurate, or at least close, is in the best interest of the protocol.

REVIEW OF GRANTS & CONTRACTS SUBMITTED TO THE PHS

From the Institutional Animal Care and Use Committee Guidebook**

In order to approve a protocol that involves the use of animals, the IACUC must review the proposed care and use of animals and determine that federal criteria have been met.

PHS requires that the project be conducted in accordance with the PHS Policy, the AWA, the Guide, the institution’s Assurance, and all other applicable federal statutes and regulations related to animals. The project should also comply with all institutional policies.

Most IACUCs (including the Duke IACUC) require use of a standardized protocol application form to assist the investigator in providing the information necessary to ensure compliance. While there is no explicit requirement for the IACUC to do a side-by-side comparison of the information contained in the IACUC protocol review form and the information submitted to PHS, it is imperative that the protocol that the IACUC approves is consistent with the information submitted to PHS. Institutions should devise a mechanism to verify that consistency.

If the IACUC requires changes to the protocol that are not reflected in the grant application, then the PHS funding component must be notified in the follow-up certification of IACUC approval. Institutions are required to provide PHS with the date of IACUC approval.

There is no provision for providing a contingent approval date; the date provided must signify full approval by the IACUC. If an institution has a PHS Assurance, then in most cases the PHS allows a 60-day grace period following the receipt deadline date during which the investigator may secure IACUC approval; otherwise, the application cannot be peer reviewed.

If the IACUC review occurs subsequent to the grant submission, then a letter verifying IACUC approval, and stating any modifications required by the IACUC, must be submitted to the funding agency. This grace period is nonexistent for some non-federally funded projects and investigators are required to submit evidence of IACUC approval coincident with the grant or contract submission.

** You can view the entire text of this publication online at http://grants.nih.gov/grants/olaw/GuideBook.pdf
FOOD FOR THOUGHT: A VIABLE ALTERNATIVE TO THE GAVAGE METHOD

By H. B. Moak, M. Robinson, R. J. Kastenmayer, and W. R. Elkins, DHHS/NIH/NIAID/DIR Comparative Medicine Branch, Bethesda, MD

While the esophageal gavage method is a commonly accepted procedure to orally administer medication, it has several disadvantages: it requires a specialized needle, must be performed by a trained professional, risks perforation of the esophagus, and potentially induces stress. In seeking to identify an alternative delivery method in accordance with the 3 Rs, we tried administering medication using a highly palatable food.

To establish a readily consumed substance, we conducted an initial study evaluating the palatability of fruit juice, pureed meat, milk products, peanut butter, and cornstarch. Of the preliminary offerings, cream, margarine, and sweetened condensed milk (SCM) proved highly palatable. To identify the most palatable substance, we offered cream, margarine, and SCM in randomized trials to 4- to 8-wk old females from three commonly used laboratory strains of mice (BALB/C, C57BL/6, and Swiss Webster). Nine mice per strain were weighed and placed in individual cages with no bedding or water. Following an acclimation period of 15 min, a weigh boat containing 0.5 ml of cream, margarine, or SCM was placed in the cage, and the mice were observed for 30 min. Once the feeding period was terminated, any remaining food was weighed and consumption data recorded.

Using ANOVA analysis, cream was shown to be preferentially consumed (P < 0.05) over SCM and margarine. When we presented the mice with all three substances simultaneously, cream proved to be the unconditional favorite. However, with increased familiarity with the weigh boats and food options, the mice displayed progressive willingness to consume all three substances.

Weight remained a significant confounding factor in our consumption data. On average, a mouse consumed 0.12 g/g body weight (P = 0.0009). Ultimately, this experiment suggests that a feasible alternative to oral gavage exists. In conjunction with the 3 Rs, our proposed method terminates the need for the gavage needle and eliminates the resulting stress. However, it is unclear if oral medications can be successfully administered in a highly palatable substance; it is also unknown whether combining a medication with food impacts the drug’s metabolism or stability. Future studies are needed to evaluate taste responsiveness of an ordinarily palatable substrate combined with medication and the compatibility of the drug with the substrate of choice.

Also, the addition of water may increase the consumption of offered food. In contrast with the direct deposit mechanism of the gavage needle, this process does not guarantee absolute consumption. This study was completed in the early morning; we suspect that if medication is presented before the ordinary feed or if the mice are placed on a timed eating schedule, they would more readily consume the offered substances. It is essential that future studies scrutinize the practicality of delivering medication in such a method; however, the implications of a dosing alternative remain vast.

Acknowledgements: This research was supported by the Intramural Research Program of the NIH, NIAID.

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IACUC Semiannual Site Visits (Spring 2010)

The remaining IACUC semiannual site visit schedule for Spring 2010 is:

- March 18: CARL; Eye Center; DURF; Independence Park
- April 1: CCIF
- April 8: Foster St.; Bio Sci; FEL; French Science
- April 15: Duke North/South; CIEMAS
- April 19: GHRB
- April 29: Vivarium; MSRB2
- May 6: MSRB, Lemur Center, Ecotox

Continued on this page ... next Column
NCABR PRESENTS 2010 IACUC CONFERENCE

On May 20-21, the North Carolina Association for Biomedical Research is presenting its 2010 IACUC Conference, in Research Triangle Park, N.C. The conference is recommended for persons serving on IACUC’s or interested in learning more about how an IAUC oversees animal care and use.

The Thursday, May 20, session - "IACUC Fundamentals" - will include panel discussions on various components of IACUC review responsibilities, an instructive mock protocol review and updates from USDA, OLAW and AAALAC International.

The Friday, May 21, session - "IACUC In Depth" - will include a keynote presentation on the role of animals in stem cell research and regenerative medicine and 8 breakout sessions on a range of topics, including: training programs for IACUC member and animal users, effective management of USDA inspections and AAALAC site visits, and IACUC issues unique to smaller facilities.

For a complete overview of the conference, including links to the detailed agenda and registration form, please visit NCABR’s website at: http://hosting-source.bronto.com/526/public/emails/email_iacuc-conference_2010-05.html

**JUST A REMINDER**

THE ANNUAL REFRESHER TRAINING FOR PIs AND RESEARCH STAFF SHOULD BE COMPLETED BY MARCH 31, 2010. AT THIS TIME ALL TRAINING WILL BE COMPELED THROUGH THE ON LINE VERSION AT THE OESO WEBSITE (www.safety.duke.edu)

Course Title: Animal Handlers 3—Annual Refresher Training

IF YOU HAVE NOT COMPLETED THIS TRAINING AND NEED ASSISTANCE PLEASE CONTACT BILL WADE @ 668.6722 OR W.WADE@DUKE.EDU

ONCE COMPLETED YOU WILL RECEIVE AN AUTOMATIC ANNUAL REMINDER FROM THE OESO TRAINING WEB SITE.

PROTOCOL REPORTING ISSUES

LISTING TERMINAL PROCEDURES AND EUTHANASIA: According to federal policy, any procedure wherein an animal MAY (or the potential exists) experience pain/distress must be managed by anesthesia, analgesia, or euthanasia. These kinds of procedures do not generally make us think of listing these as a ‘non-surgical procedure’ but, they are. These sorts of procedures should be identified in the ‘non-surgical procedure’ section of the protocol.

The IACUC has had several situations recently where procedure performed in laboratory spaces were not sufficiently identified, and this has resulted in unintended non-compliances. To prevent this from occurring in your laboratory, you should list locations where anesthesia, analgesia, and euthanasia occur! Sections of the protocol template where reporting should occur are section C1 (Procedure Location) and Section M (Non-surgical procedures). Anesthesia, analgesia, or euthanasia performed in a Vivarium does not have to be specifically identified on the protocol, but if these procedures are performed in the laboratory, then they should be listed on the protocol.

REPORTING NEONATES ON THE ANNUAL PROGRESS REPORT: The use of neonates is always a difficult accounting question. The federal policies on neonatal accounting continue to adjust. At present, the NIH expects accounting for all animals, neonates or adults, whether experimented or not. It is fairly simple when you use a neonate in an experiment (it is an experimental animal and will be reported as such); but if the neonate was not used (either it was the wrong genotype or it was simply not used) it is not so clear. The Annual Progress Report has been modified to capture (as best we can) this information. If you are using neonates, then complete the table at the top of page two AND answer the question below the table ‘Were animals born (e.g. mammals: birth; aquatic/avian: no yolk sac) that were NOT used for research, testing, teaching, or breeding?’ Select the correct option:

A: There were no animals born on this protocol since approval.
B: All animals born were used in an IACUC approved experimental project since protocol approval.
C: Animals were born but were euthanized prior to weaning. The total was:
D: Animals were born but where euthanized prior to experimentation: The total was:
Duke ACUP’s Brown Bag Seminar

Monday, March 22\textsuperscript{th}, 2010
Noon – 1 p.m.
Hock Plaza Auditorium

Traci Reddick, MS, RLATG
Jesse Degraff, BS, RLATG
Clay Rouse, DVM

Will be presenting:

\textbf{DLAR Rodent Genetic Services}

DLAR staff will discuss Rodent Genetic, Breeding, Technical and Surgical services available through this program and how they can assist researchers in maintaining colony integrity.

The session will be held in the \textbf{Hock Plaza} Auditorium, \textbf{Room 001}, located on the ground floor.

\textbf{Refreshments will be provided}

Please plan on arriving prior to noon in order to get refreshments, sign in, and be seated.

\textbf{This session will count for 1 CEU of AALAS In-house Training Credit}