Animal Care Matters

An IACUC and ARF Newsletter

Winter 2006

From the IACUC Administrator

Elizabeth Thames

On 9 November 2005, the National Institutes of Health (NIH) Office of Extramural Research issued a Request for Information (RFI) on standards for the care and use of laboratory animals. The purpose of this request was to determine whether NIH should update the 1996 edition of the *Guide for the Care and Use of Laboratory Animals (Guide)*.

Why is this important to you and USC? Any changes made to the *Guide,* must also be made in our Animal Care Program. This could mean many costly modifications for the Animal Facility and you. ARF will keep you up-to-date on any changes that might affect the facility.

Originally published in1963, the *Guide* has been revised several times; the most recent version was released in 1996.

All domestic institutions receiving NIH grants and conducting research on live, vertebrate animals must adhere to the Public Health Service *Policy on Humane Care and Use of Laboratory Animals* (PHS *Policy*). PHS *Policy* requires that institutions use the *Guide* as the basis for developing their animal care and use programs. In addition, the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC International) evaluates animal care and use programs for compliance with the standards set forth in the *Guide*.

NIH is soliciting new information related to four chapters in the 1996 *Guide*: institutional policies and responsibilities; animal environment , housing, and management; veterinary medical care; and physical plant. Specifically, they request new scientific information on the following topics:

- "The macro– and micro environment of animal facilities;
- " Housing of laboratory animals, including space, temperature and humidity, ventilation, acoustics, and illumination;
- "Structural and social environment of animals;
- "Husbandry, sanitation and pest control;
- "Disease and disease manifestations in laboratory animals;
- "Population management of genetically modified animals;
- "Physical plant standards; and
- "The topics listed in Appendix A, Selected Bibliography of the 1996 *Guide."*

INSIDE THIS ISSUE:

Procedure for Ordering Animals

All animals are ordered through the Animal Resources Facility (ARF) office. Animal order forms can be obtained from the ARF office. All forms must be complete. The information given must be accurate (current AUP numbers, fund numbers, etc.). All orders should be received by the ARF office before 2pm on Thursdays. If you have any questions about ordering animals, please contact Charlotte Joyner at 777-8106 or email her at cpjoyner@ gwm.sc.edu

From the IACUC Chair

Ken Walsh, Ph.D.

The IACUC has approved updated AUP forms (research proposals, breeding and amendments). It is necessary for us to periodically update the forms to comply with changes in federal regulations. The IACUC will accept AUPs written on the old form for a limited time. The updated version has ET/2006 in the bottom right corner of the page. All of the current forms are on the ARF web site (http://uscm.med.sc.edu/ARF/index.htm) under the "Forms" icon. If you have a problem with one of the forms, please contact Elizabeth Thames at elthames@gwm.sc.edu.

In addition the IACUC is asking that all new personnel be added to your proposal via an amendment. Please do not wait until your Annual Review is due to let ARF know there are new individuals in your lab. Regulations require that every person working with animals must be properly trained before they can work with animals.

Training is accomplished by one of three methods.

1. On-line training: This is mandatory for everyone using animals.
2. Hands-on training: Contact Pam Rudd (phone # 777-4992 or email prudd@gwm.sc.edu) to set up a class. The general class covers everything from how to hold a mouse, rat, etc. to injections. If a more advance technique is required, training will be arranged on an individual basis.
3. PI lab based training: If you train someone how to perform a specialized technique, make sure to include that information on your AUP or Annual update.

Some numbers that might be of some use to you are:

- USC's PHS/NIH Assurance No. A3049-01
- Continued AAALAC accreditation since 1984
  -last accreditation- November 5, 2003
- USDA Registration No. 56-R-003

Rederivation

What would you do if your entire colony of mice became infected with a nasty bug? Unfortunately there are not many options. One option is to completely start over from the beginning. This could be a very long and tedious process depending on the availability of the strain of mouse being used. Of course if your animals were transgenic mice and you were the only person who had a breeding colony and there were no frozen embryos stored away, then this would not be a very good option. A version of the "start over" is called the "burnout". This process involves eliminating everything except a few breeding cages. These cages are then quarantined, medically treated (if possible) and monitored frequently. The pups produced are fostered to "clean" parents. This process could take up to six months or longer to produce a clean colony. The quickest way to salvage a colony is to rederive the line. Both Harlan and Charles River Laboratories offer rederivation services.

Harlan

Harlan will receive and acclimate a breeding nucleus of the mouse or rat model to be rederived. Depending on the availability of the research model from the donating institution, the colony nucleus is used directly for rederivation using embryo transfer or hysterectomy procedures or expanded for development of a production colony.

Approximately three weeks after rederivation, offspring are weaned from the recipient or foster female. The recipient and/ or foster female and sentinels are submitted for health evaluation using one or a combination of the available health testing profiles. Tissue samples of rederived offspring may be sent to the client or another laboratory for genotyping. If the health report confirms a successful rederivation, and genotyping results meet the client's requirements, the offspring are delivered to the client.

Cost

Species	Method	Price per Stock/ Strain
Mouse	Embryo Transfer or Hysterectomy	$3,800.00
Rat	Hysterectomy	$4,500.00

Rederivation… continued from page 2

Charles River Laboratories (CRL)

CRL offer a choice of rederivation services– Standard Rederivation and Rapid Rederivation. Standard Rederivation offers verification of post re-derived health status, while Rapid Rederivation offers a significantly reduced price and timeline.

Standard Rederivation

Animal Requirements
- 2 proven breeder males (less than 6 months of age)
- At least 10-15 females (3-4 weeks of age)

Procedure
- Upon arrival, all aniamls will be transferred into the biosecurity of a flexible film or semi-rigid isolator
- Males will be bred with superovualted females for collection of preimplantation stage embryos
- Embryos will be transferred to recipient females who then carry and deliver the rederived offspring
- 4 embryo transfers will be performed
- All recipient females used for rederivation efforts are reared

Health Monitoring
- Comprehensive Health Monitoring (serology, bacteriology, pathology, and parasitology) and Helicobacter PCR will be performed on each cage housing recipient females

Deliverable
- Following rederivation, Charles River will return to you a minimum of 3 rederived breeding pairs
- Pre-rederived colony will be terminated when the health status of the rederived colony is confirmed
- Charles River cannot guarantee the zygosity of the rederived offspring

Timeline
- 1 week to acclimate and set up matings
- 2 weeks of embryo collections and transfers
- 3 weeks gestation
- 3 weeks weaning
- 2 weeks to receive approved health reports

Total time is approximately 11 weeks

Cost

Mouse	$5780.00 Price/line
Rat	$6700.00 Price/line

Rapid Rederivation

Animal Requirements
- 2 proven breeder males (less than 6 months of age)
- 3-week-old females in quantities and at times requested by Charles River

Procedure
- Upon arrival, all animals will be transferred into the biosecurity of a flexible film or semi-rigid isolator
- Males will be bred with superovulated females for collection of preimplantation stage embryos
- Recipient mothers will be maintained in a sterile isolator for 2 weeks post embryo transfer
- 3-4 embryo transfers will be performed
- All recipient females used for rederivation efforts are reared

Health Monitoring
- Health monitoring will not be performed on embryo transfer recipients
- Charles River cannot guarantee the health status of the rederived litters

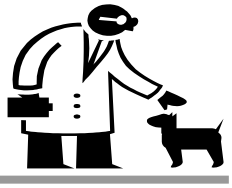
Deliverable
- Following rederivation, Charles River will return to you at least 2 visibly pregnant females
- The rederivation is considered complete when the recipient females leave Charles River
- Pre-rederived colony will be terminated 7 days following the shipment of pregnant females
- Charles River cannot guarantee the zygosity of the rederived offspring

Timeline
- 1 week to acclimate and set up matings
- 1 weeks of embryo collections and transfers
- 1 week post surgery recovery of embryo transfer recipients and to coordinate shipping arrangements
- 1 week to ship visibly pregnant (10-14 days gestation) females

Total time is approximately 4 weeks

Cost

Mouse	$1800.00 Price/line
Rat	$4000.00 Price/line



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Campus Mail

ANIMAL CARE MATTERS

An IACUC and ARF Newsletter

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We're on the Web !!
http://uscm.med.sc.edu/ARF/index.htm

Animal Care Matters is published four times a year by the Institutional Animal Care and Use Committee (IACUC) and Animal Resource Facilities (ARF) of the University of South Carolina (USC).

The IACUC is an institutional body appointed by the USC President to oversee the program for the humane care and use of all vertebrate animals used for research, teaching, and training. Any investigator who intends to use laboratory animals must submit an Animal Use Proposal (AUP) to the IACUC for its review and approval.

The ARF provides care and maintenance of all animals used by investigators. Preventive care is provided through vendor animal health evaluations, quarantine programs, and sentinel animal diagnostics. Special care and services can be provided upon request.

Comments and submissions for **Animal Care Matters** are welcome and should be directed to Elizabeth Thames, IACUC Administrator, at 777-8106 or elthames@gwm.sc.edu.

IACUC Meetings 2006

Meeting Date	AUP Deadline
Jan 5	Dec 19
Feb 2	Jan 23
Mar 2	Feb 20
Apr 6	Mar 27
May 4	Apr 24
Jun 1	May 22
Jul 6	Jun 26
Aug 3	Jul 24
Sep 7	Aug 21
Oct 5	Sep 25
Nov 2	Oct 23
Dec 7	Nov 20

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