Berkeley Animal Care News

May 2014
Volume 3
Issue 2

Animal Care and Use Committee (ACUC)
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INSIDE THIS ISSUE

RESOURCES

1 Animal Care and Use Committee (ACUC)

2 Office for Animal Care and Use (OACU)

www.acuc.berkeley.edu/

3 Office for Laboratory Animal Care (OLAC)

/www.olac.berkeley.edu/

Chair's Message

As the Spring semester comes to an end, there are several animal care updates we'd like to bring to your attention.

The USDA conducted its annual site visit in March. As is standard practice, in addition to visiting our animal facilities, the two inspectors reviewed select Animal Use Protocols involving the use of species covered by Animal Welfare Act Regulations. They paid particular attention to procedure descriptions and justification of animal numbers. We were issued a citation for a protocol that did not provide an adequate justification for the number of animals to be used. While the protocol in question has already been revised and re-approved by the ACUC, this incident underscores how seriously the USDA views justifications of animal numbers. Moving forward, the ACUC and OACU staff will continue to work closely with investigators to insure that protocols clearly describe the sequence and number of procedures performed on a single animal, and provide a sound rational and justification for the number of animals proposed for use.

Planning continues for the Mouse Barrier Facility, despite construction delays. The facility will encompass three of the ten suites on the sixth floor of LSA and will allow exclusion of specific strains of microbes in mice. Construction is expected to start in the summer of 2014.

The Li Ka Shing (LKS) animal facility is home to several new small animal imaging components. These new facilities centralize new and existing equipment in one location and provide cross-departmental access to state-of-art imaging modalities. Additional details, including a list of equipment and personnel contact information is outlined on page 3.

Kind regards,

Bill Sha
ACUC Chair

Eileen Lacey
ACUC vice Chair

INSIDE THIS ISSUE

RESOURCES

1 Animal Care and Use Committee (ACUC)

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USDA Site Inspection

The United States Department of Agriculture (USDA) conducted its annual unannounced inspection of UC Berkeley's animal program in March. The inspection team cited UCB for a violation of Section 2.31 of the Animal Welfare Regulations, which refers to the ACUC's responsibility to insure that protocols contain sufficient justification for the animal species and numbers to be used, specifically "…a rational for involving animals, and for the appropriateness of the species and numbers of animals to be used." As a result of this citation, the ACUC will be even more diligent when reviewing the rationales given for animal use.

Justification of Animal Numbers

Federal regulations and the *Guide for the Care and Use of Laboratory Animals* require that PIs provide justification for the total number of animals proposed for use in research and teaching. The ACUC is charged with evaluating the number of animals *and* the justification for that number. This justification is essential in allowing the ACUC to determine whether the numbers are sufficient to answer the scientific questions and goals proposed, yet represent the minimum number of animals that can be used.

Adequate justification of the proposed number of animals is closely scrutinized by USDA inspectors and site visitors from the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International. Inadequate justification can lead to citations during USDA inspections (as happened recently) and to mandatory findings (an equivalent deficiency) during AAALAC visits.

To assist PIs in providing adequate justifications of animal numbers and ACUC reviewers in evaluating those justifications, the ACUC has developed the following resources:

- Attachment A of the UC Berkeley Animal Use Protocol, which asks very specific and detailed questions intended to prompt PIs to provide suitable information.
- The ACUC Guidelines on Justification of Animal Numbers provide further clarification, references and resources that can be used when completing Attachment A.

Additional guidance is available from the Office of Animal Care and Use (OACU) staff at 642-3884 or acuc@berkeley.edu.

INSIDE THIS ISSUE

RESOURCES

1 Animal Care and Use Committee (ACUC)

2 Office for Animal Care and Use (OACU)

www.acuc.berkeley.edu/

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LKS Small Animal Imaging Facilities

Final preparations are underway in the Li Ka Shing (LKS) Animal Facility for a shared-use small animal imaging facility that centralizes resources from the following:

The College of Natural Resources Biological Imaging Facility (BIC), http://microscopy.berkeley.edu/
Dr. Steven Ruzin, PhD, Director, ruzin@berkeley.edu
Dr. Denise Schichnes PhD, Staff Scientist, schichne@berkeley.edu

The California Institute for Quantitative Biosciences (QB3), http://qb3.berkeley.edu/qb3/index.cfm,
Dr. Michael Wendland, PhD, Director, mwendland@berkeley.edu
Dr. Patrick Goodwill, PhD, Research Associate

The following is the current list of the equipment and capabilities:

Equipment	Application	Contact
Bruker Biospec 70/16 7T MRI scanning system	Rodent imaging	Michael Wendland
GE eXplore Locus CT scanner system	Rodent imaging	Michael Wendland
EchoMRI-100V whole body magnetic resonance analyzer	For determination of lean, fat, free water and total body water of mice up to 100g	Michael Wendland
Spectrum In Vivo Imaging System (IVIS) bioluminescence/fluorescence scanner	Image small animals in vivo for fluorescent protein or luciferase expression.	Steven Ruzin Denise Schichnes
Irradiator	Irradiation of rodents, cells	Michael Wendland

Please contact the Office for Laboratory Animal Care (OLAC) at 642-9232 for additional information and updates, including imaging recourses in other OLAC animal facilities.

INSIDE THIS ISSUE

RESOURCES

1 Animal Care and Use Committee (ACUC)

2 Office for Animal Care and Use (OACU)

www.acuc.berkeley.edu/

3 Office for Laboratory Animal Care (OLAC)

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New OLAC Animal Facility Orientation

The Office for Laboratory Animal Care (OLAC) and the Office of Environmental Health & Safety (EH&S) are expanding the animal facility orientation/basic safety training course now required for working in the Northwest Animal Facility (NAF) to include all OLAC animal facilities. The two-hour course will be team-taught by an OLAC facility representative and an EH&S staff member. Effective June 1, 2014, completion of the course is required for access to any OLAC animal facility. The course includes:

- Basic safety protocols
- Hazardous materials safety
- Emergency procedures
- Safe practices
- Facility-specific resources and requirements

Registration will be available soon through the UC Learning Center via the Blu Portal. UC Laboratory Safety Fundamentals, EHS 101, and the CITI Basic Course are prerequisites for taking the facilities orientation course. For more information, please contact OLAC at 642-9232.

OLAW Updates "What Investigators Need to Know About the Use of Animals"

Read "What Investigators Need to Know About the Use of Animals" in the current issue of ILAR Journal, Volume 54(3). In this article, the Office for Laboratory Animal Welfare (OLAW) at NIH reviews expectations and requirements for investigators when using animals in research. The article covers investigator responsibilities, starting from the early stages of project planning and continuing through the process of applying for funding as well as post-award verification of animal approval. You will also find information on the requirements of the PHS Policy, the role of the IACUC, and other useful resources. Download the article (PDF) at:

http://grants.nih.gov/grants/olaw/references/ilar_2014_54.pdf.

INSIDE THIS ISSUE

RESOURCES

1 Animal Care and Use Committee (ACUC)

2 Office for Animal Care and Use (OACU)

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3 Office for Laboratory Animal Care (OLAC)

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New CITI On-line Training Modules Available

The Collaborative Institutional Training Initiative (CITI), the program that provides ACUC's on-line animal care and use training, has two new modules available to UC Berkeley researchers:

Wildlife Research: The course is intended for persons who study wildlife in the field or in captivity, and for those who oversee or review protocols for wildlife research. It covers the following topics: types of field studies, methods of animal capture, principles and methods of restraint, animal marking, animal transportation and housing, maintenance of wildlife in captivity, translocation and release, animal surgery, blood sample collection, recognition and management of pain, and euthanasia.

Working with Zebrafish (*Danio rerio*) in Research Settings: This course discusses the regulatory mandates, humane standards, and husbandry pertinent to common uses of zebrafish in research. The course also provides detailed information about the biological and behavioral features of zebrafish. It is intended for individuals handling zebrafish for research purposes as well as those who must write an animal use protocol, and is a natural complement to the **Working with Fish in Research Settings** course.

In addition to the required "Basic Course for Investigators, Staff and Students" (Working with the IACUC), CITI offers many species-specific optional courses, including:

- Aseptic Surgery
- Biomedical Responsible Conduct of Research
- Post-Procedure Care of Mice and Rats: Minimizing Pain and Distress
- Working with Amphibians in Research Settings
- Working with Fish in Research Settings
- Working with Gerbils in Research Settings
- Working with Guinea Pigs in Research Settings
- Working with Hamsters in Research Settings
- Working with Mice in Research
- Working with Non-human Primates in Research Settings
- Working with Rabbits in Research Settings
- Working with Rats in Research Settings

Please visit the ACUC training web site for more information: http://www.acuc.berkeley.edu/training.html, or contact OACU at acuc@berkeley.edu.