

Welcome to the IACUC Newsletter

Welcome to the second edition of the IACUC newsletter. The animal care and use program at UMKC has undergone major changes over the past decade which have resulted in the development of a first rate program. We continue to strive to make improvements where needed. One area that needs improvement is the line of communication between the IACUC and the animal user community. In an effort to improve communication we are publishing a quarterly newsletter with the goal of informing the animal user community on upcoming events, changes in policies, animal facility news, protocol changes, educational opportunities, safety information, and any other relevant information related to animal research. We hope you find this newsletter informative and useful. We look forward to your feedback and any suggestions you may have on how to make the newsletter better serve you.

Self-regulating entity that, according to US federal law, must be established by institutions that use laboratory animals for research or instructional purposes to oversee and evaluate all aspects of the institutions animal care and use program.

IACUC by the American Association for Laboratory Animal Science (AALAS)

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QUARTERLY TECH TALKS

Mark Johnson, Ph.D.

Professor and Department Chair



A special thank you to Dr. Mark Johnson for his presentation to the LARC and Sponsored Programs staff regarding his research with osteoporosis, a high bone mass (HBM) trait, and the bone loading research he conducts in the LARC. We greatly appreciated his time.

The LARC in conjunction with the Research Compliance office would like to continue these presentations on a quarterly basis to better inform the LARC staff in particular, but ORS as a whole, as to the importance of their involvement in the research being conducted at the LARC. The goal of these presentations is to generate greater ownership and understanding of the roles each person plays in the development, conduct and ultimate success of our researchers.

If you would be interested and willing to participate please contact Chris Winders at 816-235-5370 or windersc@umkc.edu.

New Resources:

Do you need assistance with a database search? The UMKC library offers help—

[http://
libguides.library.umkc.edu/
alternatives](http://libguides.library.umkc.edu/alternatives).

This guide will help researchers complete the literature search needed to fulfill the regulations of finding alternatives to using animals in scientific research and ensuring there is no duplication of research efforts

IACUC meetings are open access with advance notice. If you are interested in attending an IACUC meeting contact Ryan Haggerty haggertyr@umkc.edu or Jodi Troup troupej@umkc.edu for time, date and location.

Compliance Question and Answer



When reducing numbers might increase pain

Neuropathic pain, or pain that arises from disorders of the nervous system, is a challenge to treat. One of the more common research techniques used to induce neuropathic pain is known as the chronic constriction injury model¹. The model involves placing a series of loosely tied sutures around the sciatic nerve of a rat. Within about a week after surgery this results in signs of pain in the rat's affected leg, such as licking or biting of the leg, avoiding use of the leg, and limping if the leg is used at all.

Dr. John Foxworthy studies the mechanisms of action of drugs that were used or proposed to be used to treat neuropathic pain. For an upcoming study he proposed using the chronic constriction model on twenty rats that would also receive a drug that was believed to modulate calcium ion conductance. Another twenty rats would be treated with the same drug and undergo the same surgical manipulation but without any constriction of the sciatic nerve. One additional group of five rats would only be treated with the drug. During the IACUC review of Foxworthy's protocol one of the reviewers questioned the need for one of the study groups, suggesting that the surgical procedure without the nerve constriction could be performed on the same rat's other hind limb. That way the number of animals to be used would be significantly reduced, and one leg would serve as a control for the other leg. Foxworthy replied that he would rather use the extra twenty rats, thereby causing less pain to more animals rather than more pain to fewer animals. He also said that even without constricting the sciatic nerve of the contralateral leg, a second surgery on the same animal would confuse the interpretation of his findings.

Do you agree with the opinion of Foxworthy or the IACUC reviewer? Assuming a sample size of $n = 20$ is appropriate for each of the two surgical groups, do you believe that $n = 5$ is an appropriate number of animals for the non-surgical control group?

¹Bennett, G.J. & Xie, Y.K. A peripheral mononeuropathy in rat that produces disorders of pain sensation like those seen in man. *Pain* 33, 87-107 (1988).

A word from OLAW

In response to the questions posed in this scenario, the Office of Laboratory Animal Welfare (OLAW) offers the following clarification and guidance: The key issues raised in the scenario are: 1) whether the experimental design is consistent with the strategic aims of the research; 2) concerns for animal welfare in considering two of the three "Rs", reduction versus refinement; and 3) if the statistical power of the animal numbers in the control group is appropriate for the study. Although an IACUC's primary focus is on animal welfare, often it must include consideration of the soundness of the research design in its review of protocols. The *Guide* states that "While the responsibility for scientific merit review normally lies outside the IACUC, the committee members should evaluate scientific elements of the protocol as they relate to the welfare and use of the animals"¹. If a rationale for the experimental design is unclear to the IACUC then the committee should request further clarification from the investigator. Minimizing the number of animals is a worthwhile consideration, but it must allow for valid results and be balanced by the discomfort, distress and pain experienced by each individual animal². The *Guide* states that "reduction involves strategies for obtaining comparable levels of information from the use of fewer animals or for maximizing the information obtained from a given number of animals (without increasing pain or distress) so that in the long run fewer animals are needed to acquire the same scientific information" and that the goals of refinement versus reduction "should be balanced on a case by case basis"¹. Whenever an IACUC is faced with complex issues, including the statistical justification for control and experimental groups, it should consider using consultants to provide expert counsel³.

1. Institute for Laboratory Animal Research. *Guide for the Care and Use of Laboratory Animals* 8th edn. (National Academies Press, Washington, DC, 2011).

2. Interagency Research Animal Committee. *U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research and Training*. (Office of Science and Technology Policy, Federal Register, Washington, DC, 1985).

3. Public Health Service. *Policy on Humane Care and Use of Laboratory Animals* (US Department of Health and Human Services, Washington, DC, 1986);



The IACUC eProtocol Application Submission System is reaching the end of the development phase. Testing in the beta phase has begun with the first investigator submission coming soon. We will continue with requests being sent out to investigators to enter trial protocols to test the system.

The LARC Animal Resource Management System is set to launch concurrent with the eProtocol IACUC system and is currently being mirrored in the beta testing phase.

Additional information about both systems can be found at <http://www.keyusa.com/>.

New Faces

Please welcome
Ryan Haggerty,
Research
Compliance
Specialist.



Ryan is a graduate of the University of Kansas School of Education, holding both undergraduate and graduate degrees in the K-12 teaching space. He enjoys being connected to the field of animal research because of the number of positive outcomes on human health that originate from it. He is also passionate about doing everything he can to help make sure PI's are compliant and that animals are well taken care of during the research. In his spare time he enjoys mountain biking and playing the drums.

Ryan may be reached at
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816 235-5929

Please also welcome 3 new LARC Animal Technicians. Please take the time to introduce yourself to them.

- Jordan Smith, Lab Animal Technician
- Timothy Agnew, Lab Animal Technician
- Erin Winter, Lab Animal Technician

Contact Us

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Visit us on the web at

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