

IACUC Update

Institutional Animal Care and Use Committee
The University of Texas at Austin

June 2013

Volume 6, Issue 10

Revised IACUC Guidelines

The primary source document for appropriate euthanasia practices is the *AVMA Guidelines for the Euthanasia of Animals*, which was revised earlier this year. There were a number of changes made that might affect aspects of your research. Consequently, the IACUC has updated the following guidelines:

- Guidelines for the Humane Euthanasia of Laboratory Animals
- Guidelines for the Use of Carbon Dioxide for Rodent Euthanasia
- Guidelines for the Use of Cervical Dislocation for Rodent Euthanasia

There have been extensive changes to these guidelines, particularly in the use of carbon dioxide (CO₂) euthanasia.

Attached to this newsletter is an expanded discussion on the recently revised recommendations for CO₂ euthanasia of rodents in biomedical facilities.



Welcome our new IACUC Program Coordinator, Felicia Ponce!

The Office of Research Support is pleased to welcome Felicia Ponce as the new IACUC Program Coordinator! Felicia has over 15 years of experience working with multiple animal species and holds the Certified Professional IACUC Administrator (CPIA), Certified Manager of Animal Resources (CMAR) and Registered Laboratory Animal Technologist (RLATG) credentials.

Felicia started in the biomedical world at the Southwest National Primate Research Center and relocated to Texas from Albuquerque, New Mexico where she was the IACUC Coordinator/Training Coordinator for a Respiratory Research Institute. Slowly, but surely, she is starting to acclimate to the Texas weather.

Please contact the Office of Research Support with any questions, comments, or concerns.
voice: (512) 471-8871 | web: <http://www.utexas.edu/IACUC> | email: IACUC@austin.utexas.edu

HealthPoint Forms Have Been Updated. Which Form Needs to be Completed?

We get this question frequently and our answer is - it depends! *HealthPoint* recently has streamlined and updated all of the health assessment forms.

All personnel are required to submit the "**Health Assessment Questionnaire**" at the time of *initial* enrollment. Once enrolled, you do not need to resubmit this form.

If you work with low-risk species such as rodents (not wild-caught), lizards, fish, etc., an "**Update Health Assessment Questionnaire**" is required every three years.

If you work with high-risk species such as bats, wild (or wild-caught) rodents, macaques, etc., an "**Update Health Assessment Questionnaire**" is required annually.

Please discontinue using any previous version of the *HealthPoint* forms and only use the ones available on their website. For more information, please see:

<http://www.utexas.edu/research/rsc/iacuc/training.html>

eProtocol Tip of the Month

I checked the status of my protocol in eProtocol and under Meeting Date it says "DMR." What does this mean?

The IACUC has determined that the protocol can be reviewed via the Designated Member Review (DMR) process. With DMR, the IACUC Chair assigns one (or more) member(s) to review the protocol on behalf of the IACUC. The DMR(s) have the authority to approve the protocol, request clarifications/changes, or refer the protocol to Full Committee Review.

The next IACUC Full Committee Review (FCR) is **August 12, 2013**.

The submission deadline for review at this FCR is **July 19, 2013**.

Animal Welfare Assurance
A4107-01

AAALAC Accredited Since
October 29, 2001

Update on the recently revised recommendations for CO₂ euthanasia of rodents in U.S. biomedical facilities.

What has changed?

The primary source document for appropriate euthanasia practices is the *American Veterinary Medical Association Guidelines for the Euthanasia of Animals (AVMA Guidelines)*, last updated in 2013. There were a number of changes made that might affect aspects of research at The University of Texas at Austin, including the use of carbon dioxide (CO₂) euthanasia. Because exposure to high concentrations of CO₂ gas has been determined to be aversive to rodents, the *AVMA Guidelines* conclude that the most humane approach to using the gas is to slowly expose the animals to an increasing concentration of CO₂. The gas has a sedative effect that will occur at a lower concentration, so the animals are unconscious and unaware of the eventual high concentrations needed to cause death. In short, a “slow-flow” method is now prescribed, as opposed to immersing the animals into a pre-filled chamber.

What does this mean for the equipment used?

The *AVMA Guidelines* call for a slow fill rate accurately metered to replace 10-30% of the chamber volume per minute. This requires that the flow from the compressed cylinder goes through not only a pressure regulator but also a flowmeter or other precise flow control. The recommended solution is to replace the existing CO₂ pressure regulator with one that includes an integral medical gas CO₂ flowmeter that is adjustable from 0-12 liters per minute. Such units are available for ~\$200. See below for vendor information. In some situations it may be possible to retrofit a CO₂ flowmeter onto an existing tank regulator, but this is a less user-friendly option because the operators of the equipment will need to assure that the adjustable regulator is always dialed in to the appropriate gas pressure for the flowmeter (e.g. 50 PSI). A 0-12 liter/min medical CO₂ flowmeter on its own will cost ~\$60, but additional parts and labor will be required to complete the assembly if a retrofit is attempted.

What does this mean for the techniques used?

Proper slow fill technique will require the individuals performing euthanasia to match the flow rate to the volume of the chamber being used for euthanasia. The most humane circumstances for euthanasia would be to use animals own cage as the chamber, with the following rates calculated based on cage volumes and the 10-30% per minute range of the recommended gas inflow:

- Standard mouse shoebox cage = 1.5 liters per minute
- Large mouse cage = 4 liters per minute
- Standard rat cage = 5 liters per minute

Use of nonstandard cages or other types of chambers will require the research lab to measure the volume of their chamber and to calculate the appropriate gas flow.

Please contact the Office of Research Support with any questions, comments, or concerns.
voice: (512) 471-8871 | web: <http://www.utexas.edu/iacuc> | email: IACUC@austin.utexas.edu

The University of Texas at Austin
Institutional Animal Care and Use Committee

The IACUC guidelines for CO₂ euthanasia have been revised to provide more information regarding the specific methods used for euthanasia. This briefing document is primarily meant to give users notice that flowmeters will need to be installed on all CO₂ gas sources used for rodent euthanasia. **Flowmeters should be in place prior to the next round of IACUC semi-annual campus inspections, which will occur in late September/early October (2013) this fall.**

SUGGESTED EQUIPMENT SOURCE:

VWR International has a campus-wide purchasing agreement that combines competitive pricing with ease of purchasing for UT departments. Their catalog number 89012-426 is an all-in-one CO₂ regulator and flowmeter, which fits the large H-tanks commonly used as a CO₂ source. For retrofit purposes, their catalog number 89012-414 is a 0-12 l/min CO₂ flowmeter that could be attached (with proper fittings and tubing) to compatible existing regulators that can provide 50psi gas flow.