



# ANIMAL TRACKS



A newsletter for the Duke research community

March 2006

<http://www.duhs.duke.edu>

## CO<sub>2</sub> Euthanasia

Performing CO<sub>2</sub> euthanasia is a critically important activity for those laboratories using rodents. Performing CO<sub>2</sub> euthanasia humanely is a critically important activity for the university and the animal care program. Performing CO<sub>2</sub> for certain ages of rodents – will not work. Failure to perform CO<sub>2</sub> properly requires a federal report to the NIH. These few facts are some of the most troublesome requirements of any animal care and use program. The guidelines below apply to mice, rats, hamsters, gerbils, guinea pigs, and rabbits:

### A Summary of Guidelines for CO<sub>2</sub> Euthanasia

- **Gestational age 0 to gestational age 14:**
  - Euthanasia of the mother; or
  - Removal of the uterus/fetus
- **Gestational age 15 to birth:**
  - Skillful injection of chemical anesthetics; or
  - Decapitation with surgical scissors; or
  - Cervical dislocation
- **Birth to 14 days of age:**
  - Overdose of chemical anesthetics; or
  - Decapitation; or
  - Cervical dislocation.
- **15 days of age through weaning:**
  - CO<sub>2</sub> euthanasia (with extreme caution); or
  - Overdose of chemical anesthetics; or
  - Decapitation; or
  - Cervical Dislocation.
- **Post weaning through adulthood:**
  - CO<sub>2</sub> euthanasia (with extreme caution); or
  - Overdose of chemical anesthetics; or
  - Decapitation; or
  - Cervical Dislocation.

**Caution:** Animals younger than weaning may not respond to CO<sub>2</sub> as full grown adult do, some are resistant to CO<sub>2</sub> euthanasia for up to 30 days of age. **ALWAYS USE A SECONDARY METHOD OF EUTHANASIA!**

For more information on methods of euthanasia, consult:

- Duke Policy on Euthanasia: [http://vetmed.duhs.duke.edu/policy\\_phs\\_euthanaisa.htm](http://vetmed.duhs.duke.edu/policy_phs_euthanaisa.htm)
- AVMA Panel Report on Euthanasia: [http://www.avma.org/issues/animal\\_welfare/euthanasia.pdf](http://www.avma.org/issues/animal_welfare/euthanasia.pdf)

## Upcoming Events

April 6	SC meeting
April 6	CO2 training
April 10	CO2 training
April 10	New protocol deadline
April 10	SC amendment deadline
April 14	CO2 training
April 20	SC meeting
April 24	CO2 training
April 24	SC meeting deadline
April 27	IACUC meeting
April 28	CO2 training
May 4	SC meeting
May 4	Brown Bag Lunch

SC= Significant change



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## Test Your Knowledge

1. Toe clipping in mice must be performed prior to \_\_\_\_\_ days of age?
  - A. 12
  - B. 21
  - C. 15
  - D. 18
2. Anesthesia must be used performing tail clipping in mice over \_\_\_\_\_ days of age.
  - A. 12
  - B. 20
  - C. 21
  - D. 18
3. Institutional Animal Care and Use (IACUC) meetings are held
  - A. As needed
  - B. Monthly
  - C. Weekly
  - D. Every six months
4. Mice can be identified by using
  - A. Ear tags
  - B. Tattoos
  - C. Micro chips
  - D. All of the above
5. All individuals who have contact with or will be participating in the use of animals are required to complete Animal Handlers Parts I and II training prior to receiving approval on a protocol.  
True  
False
6. Euthanasia via CO<sub>2</sub> must be ensured by a secondary method.  
True  
False
7. CO<sub>2</sub> is an acceptable form of euthanasia for mice aged 0-14 days.  
True  
False
8. A protocol annual review will not be approved until all individuals listed on the protocol have completed CO<sub>2</sub> training.  
True  
False

Answers: 1-A; 2-B; 3-B; 4-D; 5-True; 6-True; 7-False; 8-True

## Post-Approval Monitoring

Post-approval monitoring of Institutional Animal Care and Use (IACUC) protocols is performed to provide assurance to regulatory agencies and to the Duke community that animal experiments are performed in accordance with approved IACUC protocols. The Compliance Liaison serves as the eyes and ears of the IACUC and confirm consistent and accurate performance of the IAUC approved protocols, standard operating procedures (SOPs), and accepted veterinary practices.

Our goal is to monitor all active protocols on at least a yearly basis. In general, these monitoring sessions will be scheduled in advance, but unscheduled visits may also occur. Unscheduled visits may be performed due to convenience (in the right place at the right time) or 'for cause.'

During the post-approval monitoring visit, the compliance liaison will compare the procedures conducted in the laboratory with those listed in the approved protocol. Any discrepancy will be noted and conveyed to the PI via email report.



The compliance liaison will refer to the DUIACUC post-approval monitoring guidelines during the visit. These guidelines include areas such as:

- ⇒ Protocol and personnel
- ⇒ Study procedures
- ⇒ Anesthesia
- ⇒ Surgery
- ⇒ Post-surgical care
- ⇒ Euthanasia
- ⇒ General record keeping
- ⇒ Laboratory

The compliance liaisons report all compliant and non-compliant issues to the IACUC on a monthly basis. A report is given indicating the number of protocols monitored within the past month, the number of protocols with no compliance issues (Attaboy/Attagirl), the number of protocols that were identified to contain non-compliant activities, and a listing of the non-compliant issues identified.

If you have questions regarding this policy, please refer to our website at [http://vetmed.duhs.duke.edu/documents/iacuc/pdf/policy\\_on\\_compliance\\_monitoring.pdf](http://vetmed.duhs.duke.edu/documents/iacuc/pdf/policy_on_compliance_monitoring.pdf)

# Q & A Corner

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**QUESTION:** Do I need a protocol for experiments that only involves tissues?

**ANSWER:** This question can be a little tricky:

You **DO** need a protocol if:

1. You are collecting tissues from a live animal, or
2. An animal was euthanized so you could obtain tissue, or
3. You are administering any agent to the animal prior to euthanasia, or
4. You have a collaborator sending you tissues / fluids that will be injected into Duke animals.

You **DO NOT** need a protocol, if:

1. You are using tissues after the original investigator has euthanized the animal for the purposes of the original protocol, or
2. You are obtaining tissues from a meat processing plant or grocery store. or
3. A collaborating at another institution is sending you tissues to evaluate (which will not be injected into any animals).

If you *do not* need a protocol, you should still advise Duke OESO of your tissue / fluid use to assure safety issues are resolved. The OAWA requests an email of the non-protocol use of animals – in case we need to contact you.

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**QUESTION:** Do I need a protocol for antibodies I am purchasing from a company?

**ANSWER:** This question also has specific caveats that must be considered:

You **DO NOT** need a protocol if you are purchasing an ‘off-the-shelf’ antibody commonly available from the vendor for any researchers.

You **DO** need a protocol if you are having a custom antibody produced by a third party which is not routinely available (e.g. you are providing a specific antigen for antibody production).

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**QUESTION:** Do I need a protocol if DLAR is producing the antibody for me?

**ANSWER:** While DLAR has an antibody producing protocol, that document only has the process approved, and does not identify the antigen or the numbers of animals required. You will need a protocol to approve the antigen and the numbers of animals required **BEFORE** DLAR can produce the antibody you need.



**QUESTION:** I would like to transfer animals from the housing facility to my laboratory. Can I use my personal vehicle for this purpose?

**ANSWER:** Transportation in non-DLAR vehicles must have prior approval. This includes inclusion of the transportation activity in the protocol (or as an amendment to the protocol) and IACUC inspection. After initial inspection, the vehicle must be inspected every six months by two members of the IACUC. General criteria for an approved vehicle includes:

- ◆ Adequate heating and cooling to maintain general minimum comfort
- ◆ Protection from direct sun
- ◆ Protection from public view
- ◆ Method to contain waste (i.e. plastic sheet under the cage)
- ◆ Method to discourage allergens
- ◆ Method to secure the cage inside the vehicle (i.e. bungee cords)

To arrange an inspection of your personal vehicle for animal transportation purposes call the Office of Animal Welfare Assurance at 919-668-6720 or email [iacuc@duke.edu](mailto:iacuc@duke.edu).

To view the Duke policy on animal transport in non-patient care areas, visit our website at [http://vetmed.duhs.duke.edu/documents/iacuc/pdf/policy\\_on\\_animal\\_transport\\_around\\_campus.pdf](http://vetmed.duhs.duke.edu/documents/iacuc/pdf/policy_on_animal_transport_around_campus.pdf)

Do you have a question relating to some aspect of the animal care program at Duke? Please send your questions for future columns to [sonia.doss@duke.edu](mailto:sonia.doss@duke.edu)

**Visit the Duke Animal Care and Use Program website at**

**<http://vetmed.duhs.duke.edu/>**