

**University of Pennsylvania-Radiology  
Small Animal Imaging Facility Steering Committee  
Standard Operating Procedure**

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**Title:** Humane Euthanasia

**SOP Number:** 3.02 **Revision Number:** 0

**Effective Date:** December 9, 2005 **Page** 1 of 5

**Review Date:** December 8, 2005

**Approval:** \_\_\_\_\_

Co-Director

Co-Director

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**I. Purpose:** The University Laboratory Animal Resources (ULAR) euthanizes laboratory animals when requested by investigators, when required to alleviate pain, which cannot be otherwise alleviated, or when required for diagnostic and other purposes.

**II. Responsibilities and Scope:** It is the responsibility of the investigator to assure that the appropriate information is submitted to ULAR and authorized. Euthanasia is performed according to guidelines established by the American Veterinary Medical Association<sup>1</sup>.

**III. Definitions:**

None

**IV. Procedures:**

**A. Standard Procedure to Request Euthanasia**

1. A completed euthanasia request form (**attachment 2**) must be filled out by the investigator. The complete request form is returned to the appropriate ULAR supervisor.
2. Animals will be euthanized as quickly as possible, but no later than 72 hours after the request has been submitted. In the interim efforts are made to:
  - a. contact other potential users for non-surgicated animals.
  - b. appropriate adopters in the case of dogs, cats and non-human primates or
  - c. permission to return the animal to the original vendor.

3. Euthanasia is effected by one of the following methods, depending on upon the species as follows.

a. Rodents, birds and rabbits less than 3 kg: Carbon Dioxide (CO<sub>2</sub>).

b. Dogs, cats, rabbits in excess of 3 kg are given an overdose of sodium pentobarbital, intravenously or by intracardiac route if the animal is comatose or anesthetized.

c. Sheep, swine and nonhuman primates are euthanized by an overdose of sodium pentobarbital given by the intravenous route, after tranquilization if required in order to safely handle the animals.

4. No animal will be euthanized without a request form. In the case of an emergency, see (B).

5. A fee is charged for all euthanasia performed by the ULAR staff with rodents being the exception.

#### **B. Emergency Procedure for Euthanasia**

1. Any animal appearing to be ill or suffering will be reported to a ULAR veterinarian or the person on after-hours duty.

2. The ULAR veterinarian will evaluate the situation. If euthanasia is deemed necessary, the ULAR veterinarian will call the investigator on whose protocol the animal is being used. If the investigator agrees to euthanasia, the veterinarian will fill out a euthanasia request form, which will include the name of the person giving euthanasia permission, date, and reason for euthanasia.

3. Euthanasia will be carried out immediately by the ULAR veterinarian or a veterinary technician. Euthanasia will not be administered by a veterinary technician without direct instructions from the veterinarian.

4. In cases where an animal seems to be in pain for a prolonged period and the principal investigator or his designee cannot be reached, the ULAR veterinarian may euthanize the animal for humane reasons.

#### **C. Euthanasia of Rodents by ULAR staff**

1. A (CO<sub>2</sub>) unit for humane euthanasia of rodents is available to all

investigators in the Richards, Levy, Stemmler and CRB facilities. The unit is composed of a chamber to which CO<sub>2</sub> is admitted. This method is recommended

by the Panel on Euthanasia of the American Veterinary Medical association<sup>1</sup>, due to the rapid depressant and anesthetic qualities of CO<sub>2</sub>. Carbon dioxide is inexpensive, non-flammable, non-explosive and less toxic than other drugs used for euthanasia.

2. A Euthanasia Request Form is filled out by the investigator and submitted to the appropriate supervisor of the facility.
3. For quick and accurate identification, all animals to be euthanized must be identified by a blue Euthanasia Request Card placed on the cage by the investigator.
4. Rodents will be euthanized within 72 hours of receipt of the Euthanasia Request Form by the ULAR supervisor at no cost to the investigator.
5. The supervisors of each facility where CO<sub>2</sub> cylinders are maintained for euthanasia are responsible for assuring that a supply is always available.

**D. Euthanasia of Rodents by Investigators: Operation of the CO<sub>2</sub> chamber**

1. Turn the round valve counterclockwise. This will discharge the CO<sub>2</sub> into the chamber. Continue for one (1) minute.
2. Quickly place the animal cage containing the animal inside the chamber.
3. Close and lock the chamber to ensure retention of the CO<sub>2</sub> and rapid asphyxiation of the animals.
4. Observe respiration of the animals. When the last animal has stopped breathing, turn the round valve clockwise until closed and no pressure shows on either gauge. Keep the chamber closed for one (1) minute longer.
5. Open the chamber and check animals to make sure they are dead. Observe the chest for movement and palpate the chest to check for heartbeat. Wait one (1) more minute to confirm that all animals are dead.
6. Remove cage from the chamber and dispose of dead rodents in the appropriate cold box within the animal facility.
7. If the investigator or their staff observes a low pressure reading on the CO<sub>2</sub> cylinder indicating a reduced supply, please inform the supervisor of the facility.

**V. Directions:** Not Applicable

**VI. Safety Considerations:** Not Applicable

**VII. References:**

1. 2000 Report of the American Veterinary Medical Association (AVMA) Panel on Euthanasia," JAVMA 2001; 218(5), 677-678.

**VIII. Attachments:**

~~1. Euthanasia Request Card~~

1. Euthanasia Request Form

**X. Document History:**

**Version**

**Number Effective Date Author Reason**

1 December 9, 2005 LR Cheatham New Policy

SOP # 3.02 Humane Euthanasia

**UNIVERSITY LABORATORY ANIMAL RESOURCES  
UNIVERSITY OF PENNSYLVANIA  
EUTHANSIA REQUEST FORM**

**Principal Investigator:** \_\_\_\_\_

**Requested by:** \_\_\_\_\_

**Department:** \_\_\_\_\_

**Phone Number/E-Mail Address:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Species:** \_\_\_\_\_

**Facility and Room Number:** \_\_\_\_\_

**Number of Cages:** \_\_\_\_\_ **And/or Number of Cages:** \_\_\_\_\_

**Please select from the following ULAR Technical Services:**

**Euthanize Immediately.**

**Animals in good health or non-surgicated: Euthanize within 48 hours for rodent species and within 7 days for non-rodent species.**

**Necropsy requested: Submit form to ULAR Clinical Services.**

**Save animals for investigator in carcass coolers up to 48 hours, except for VHUP animals (no holding period).**

**Animal not wanted by investigator, please dispose of appropriately.**

\*\*\*\*\*

~~Return the completed Euthanasia Request Forms to the ULAR Facility Supervisor or to ULAR Clinical Services for necropsy requests. In front of the existing cage cards (Please do not remove cage cards), place Euthanasia Request cards in all cage card holders housing animals to be euthanized.~~

\*\*\*\*\*

**ULAR Technical Services performed by (Full Name):** \_\_\_\_\_

**ULAR Technical Service Charges:** \_\_\_\_\_

**Date:** \_\_\_\_\_

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UNIVERSITY LABORATORY ANIMAL RESOURCES  
UNIVERSITY OF PENNSYLVANIA

EUTHANASIA REQUEST FORM

DO NOT REMOVE CAGE CARDS FROM CAGES.

Principal Investigator: \_\_\_\_\_ Requested by: \_\_\_\_\_

Facility and Room Number: \_\_\_\_\_

Phone Number/E-Mail Address: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Species: \_\_\_\_\_

Number of Animals: \_\_\_\_\_ And/or Number of Cages: \_\_\_\_\_

Cage Card Number(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(If you need more space, please use the back of this form)

Please select from the following ULAR Technical Services:

\_\_\_\_\_ **Euthanize Immediately.** Animals in good health or non-surgicated: Euthanize within 24-72 hours for rodent species. If the animal(s) are sick, do not use this form, contact the vet and/or vet tech. \*\*

\_\_\_\_\_ Save deceased animals for investigator in carcass coolers up to 48 hours, except for VHUP animals (no holding period).

\*\* If Necropsy Services are of interest, investigators must arrange directly for this service with the ULAR Facility veterinarian; it is preferable for veterinary staff to take possession of the animal prior to euthanasia.

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Return the completed Euthanasia Request Forms to the ULAR Facility Supervisor or to ULAR Clinical Services for necropsy requests. To contact clinical services, please call 215-573-9952.

Place a Euthanize Request card on all cage card holders, in front of the cage card, housing animals to be euthanized. DO NOT REMOVE CAGE CARDS FROM CAGES.

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ULAR Technical Services performed by (Full Name): \_\_\_\_\_

ULAR Technical Services Charges: \_\_\_\_\_

Date: \_\_\_\_\_