



INSTITUTIONAL ANIMAL CARE  
AND USE COMMITTEE

## **IACUC POLICY # 8** **POLICY ON EUTHANASIA OF LABORATORY ANIMALS**

The term euthanasia is derived from the Greek terms *eu* meaning good and *thanatos* meaning death. A “good death” would be one that occurs without pain or distress. For the purpose of this policy, euthanasia is the act of inducing humane death in an animal. The Institutional Animal Care and Use Committee (IACUC) uses the 2000 Report of the AVMA Panel on Euthanasia (Report)<sup>1</sup> as its guide in reviewing methods of euthanasia in Animal Use Proposals.

Euthanasia techniques should result in rapid unconsciousness followed by cardiac or respiratory arrest and ultimate loss of brain function. In addition, the technique should minimize any stress and anxiety experienced by the animal prior to unconsciousness. Stress may be minimized by technical proficiency and humane handling of the animals to be euthanized.

### **IACUC Policy**

**If the animal use requires the euthanasia of the animals, the method of euthanasia must be included in the Animal Use Proposal form.**

**Personnel performing euthanasia procedures must be adequately trained in the specific method to be used.**

**Deviations from the recommendations of the Report must be fully justified in the proposal.**

**Animals subjected to physical methods of euthanasia, e.g., decapitation or cervical dislocation, should be anesthetized or tranquilized prior to euthanasia. Physical methods without prior anesthesia or tranquilization must be scientifically justified in the proposal.**

### **Acceptable Methods:**

**Inhalant Anesthetics:** Euthanasia by overdose of inhalant anesthetics is acceptable for small laboratory animals. In order of preference, halothane, enflurane, isoflurane, methoxyflurane and ether are acceptable for euthanasia of small animals (<7 kg).

**Carbon Dioxide:** Carbon dioxide is acceptable for euthanasia of small laboratory animals. Compressed CO<sub>2</sub> gas in cylinders is the only recommended source of carbon dioxide because the inflow to the chamber can be regulated precisely.

**Barbituric Acid Derivatives:** Barbiturates (sodium pentobarbital, euthanasia solutions containing pentobarbital) may be used for euthanasia. Intravenous injection of barbiturate is the preferred method for euthanasia of dogs, cats, rabbits and pigs. Intraperitoneal injection may be used in situations where this approach would cause less distress than intravenous injection, but must be justified in the Animal Use Proposal.

**Potassium chloride:** Potassium chloride may be used intravenously to stop the heart in deeply anesthetized animals. It may be used only in combination with existing deep anesthesia.

**Cervical Dislocation:** Cervical dislocation may be used to euthanize birds, mice, and immature rats (<200 grams). Animals should be anesthetized or tranquilized prior to euthanasia whenever possible. \* Cervical dislocation without anesthesia will be approved only when scientifically justified by the user and approved by the IACUC.

**Decapitation:** This technique may be used to euthanize rodents. Animals should be anesthetized or tranquilized prior to decapitation (exception: neonatal rats and mice up to 4 days old may be euthanized without prior anesthesia). Decapitation without anesthesia will be approved only when scientifically justified by the user and approved by the IACUC. The use of plastic cones to restrain animals appears to reduce distress from handling, minimizes the chance of injury to personnel, and improves positioning of the animal in the guillotine.

<sup>1</sup>Reference: 2000 Report of the AVMA Panel on Euthanasia. Jour. Am. Vet. Med. Assn. 218(2):669-696. March 1, 2001.