TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER (TTUHSC)  
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)  
POLICY [# 5]  

CERVICAL DISLOCATION or DECAPITATION OF ANIMALS

The recommendations of the AVMA Guidelines on Euthanasia (2007) serve as the standard for acceptable methods on euthanasia.

**Euthanasia by Cervical Dislocation:**

The IACUC only allows cervical dislocation in mice and rats (under 200g body weight) after proper training and demonstration of proficiency to the PI as part of an IACUC-approved protocol. In most cases, the IACUC requires anesthesia or sedation prior to cervical dislocation and non-use must be justified and approved.

In heavier rats and rabbits, the greater muscle mass in the cervical region makes manual cervical dislocation physically more difficult. Therefore, cervical dislocation will not be performed on rats greater than 200g or rabbits greater than 1kg body weight.

It is the PI’s responsibility to determine that all personnel have been trained to perform the technique of manual cervical dislocation, and to monitor that personnel consistently apply it humanely and effectively.

**Euthanasia by Decapitation:**

The IACUC generally discourages the practice of euthanasia by decapitation, but recognizes that for some studies this method may be necessary. Decapitation must be performed by trained personnel, in a safe manner, and using sharp instruments.

The PI is responsible for confirming that equipment used to perform decapitation is maintained in good working order and is serviced on a regular basis to retain blade sharpness. 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 for decapitation.

It is also the PI’s responsibility to determine that all personnel have been trained to perform the technique of decapitation, and to monitor that personnel consistently apply it humanely and effectively.

**Rodents:** Euthanasia by decapitation should normally be performed while under general anesthesia and may be used in research settings only when its use is required by the experimental design and is approved by the IACUC. Although it has been demonstrated that electrical activity in the rodent brain persists for 13 to 14 seconds following decapitation [1], more recent studies indicate that this activity does not infer the ability to perceive pain, and conclude that loss of consciousness develops rapidly [2]. Therefore, decapitation of rodents and small rabbits (<1 kg) is conditionally acceptable if performed correctly by trained personnel.
Amphibians, Fish and Reptiles: The central nervous system of amphibians, fish, and reptiles is tolerant to hypoxic and hypotensive conditions [3]. Therefore, decapitation of these species should be performed under anesthesia and must be followed immediately by pithing.

REFERENCES:

