



UNIVERSITY ANIMAL CARE COMMITTEE

Policy on Humane Killing of Animals Used in Science

Experimental animals are humanely killed when study endpoints have been met and disposition has been approved by the University Animal Care Committee (UACC) in the Animal Use Protocol (AUP).

Whenever an animal is humanely killed, it must be done with the upmost respect and in a way that ensures death is as painless and free of distress as possible. The common definition of euthanasia is *a painless death*, and while complete absence of pain or stress cannot be guaranteed in the context of animals used in science, humane killing refers to doing what is humanly possible to minimize pain and distress, given the circumstances under which it is performed. The most important criteria for acceptance of a method of humane killing is that it has a rapid initial depressive action on the central nervous system to ensure immediate insensitivity to pain, and that steps are taken to minimise distress. In short, humane killing should result in rapid loss of consciousness, followed by respiratory and cardiac arrest and ultimate loss of all brain function.

Personnel responsible for humanely killing animals must be trained so that they can execute the appropriate and approved methods both effectively, humanely and with demonstrated competency; are able to recognize signs of pain and distress in relevant species; and recognize and confirm unconsciousness, and death.

The UACC is responsible for the approval of the method of humane killing for any study involving the use of animals. All Animal Use Protocols involving humane killing must include a description of the methods to be used. The UACC will consider the method(s) on a case-by-case basis according to appropriateness in a given situation, taking the scientific literature and scientific goals of the research into account, and in consultation with the University Veterinarian, researcher and animal care staff as appropriate.

The recognised methods of humane killing are listed as either *acceptable* or *conditionally acceptable* based on the *CCAC Guidelines on: euthanasia of animals used in science* (2010). The use of conditionally acceptable methods may be acceptable by the UACC in certain circumstances where there is a greater potential for operator error or safety hazards, they might not consistently produce humane death, or they are not well documented in the scientific literature.

Table 1: Acceptable Methods of Humane Killing:

Classification and Common Name	Acceptable Methods
Class <i>Amphibia</i> (Amphibians) Frog, Toad	Immersion or injection of buffered tricaine methane sulfonate

Table 2: Conditionally Acceptable Methods of Humane Killing:

Species	Conditionally Acceptable Methods
Fish	Concussion (emergency killing for other species)
Birds	CO2 Cervical dislocation without prior sedation Decapitation without prior sedation Thoracic compression (in suitably sized birds)

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