Subject: Use of Guillotines

BACKGROUND

PHS Policy on Humane Care and Use of Laboratory Animals requires IACUCs to use the recommendations of the AVMA Guidelines for the Euthanasia of Animals: 2013 Edition which states: “This method is acceptable with conditions if performed correctly, and it may be used in research settings when its use is required by the experimental design and approved by the IACUC. Decapitation is justified for studies where undamaged and uncontaminated brain tissue is required. The equipment used to perform decapitation must be maintained in good working order and serviced on a regular basis to ensure sharpness of blades. 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.” “Those responsible for the use of this method must ensure that personnel who perform decapitation have been properly trained to do so and are monitored for competence.” (p. 39)

IACUC Policy

The Institutional Animal Care and Use Committee (IACUC) requires that individuals using guillotines are well versed in the correct use and maintenance of guillotines in order to assure proper function and humane euthanasia. The guillotine action should be smooth with no perceptible binding or resistance, and the blade must be rust-free, sharp, and decapitate with minimal force. The IACUC recommends the following technique to assess the sharpness of a guillotine: a guillotine is sharp enough if it will cut a thick rubber band, without dragging it between the blades and sticking. Alternatively, Razor Edge Systems, Inc. sells a razor edge tester that can be used to “feel” any flaws in the cutting edge.

Responsibilities

1. Principal Investigator (PI) is responsible for ensuring that anyone using a guillotine is properly trained and the training dates noted in a log.

2. The use of a restrainer is required unless the individual using a guillotine has extensive experience that has been described in the approved protocol application.

3. Personnel using a guillotine must make sure that it is free of rust, operates smoothly, and is clean prior to use; problems must be reported to the PI. Guillotines should also be periodically lubricated. The guillotine must be checked for sharpness before each use; guillotines that fail must be professional sharpened before they can be used on live animals.

4. After use, the entire guillotine must be rinsed with water and scrubbed to remove gross contamination. The unit should then be thoroughly disinfected (e.g. with Accel TB). A final 70% alcohol rinse will assure evaporation and reduce the need to hand-dry equipment. Guillotines should also be periodically lubricated.

5. The frequency of guillotine sharpening will depend on the animal species involved and volume of use, however, a minimum of every 12 months is recommended. The responsibility for sharpening the guillotine rests with the PI. Contact information for a suggested sharpening source can be provided by the IACUC office.

6. All laboratories using a guillotine must maintain a log to record dates of use and sharpening.

A Guillotine Usage and Maintenance Log can be downloaded from the IACUC website.