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<b>Revision by: (numbered accordingly)</b>	<i>**</i>	<i>**</i>
<b>Distribution</b>	<i>all</i>	

## EP-4: Rodent Decapitation Guidelines

**PURPOSE:** This document provides guidelines for decapitation of rodent species used in research.

**BACKGROUND:** Decapitation may be used to euthanize rodents in research settings. It can provide a means to recover tissues and bodily fluids that are chemically uncontaminated, and also a way of obtaining anatomically undamaged brain tissue for study. Guillotines designed to accomplish decapitation of adult rodents are commercially available. Guillotines are not commercially available for neonatal rodents, but sharp blades (e.g. scissors, scalpel blades) may be used for this purpose.

**GUIDELINES:** Decapitation is an acceptable method of euthanasia in anesthetized or conscious animals, as long as the procedure is performed correctly under the following conditions:

### Proper Training:

- The procedure must be described and approved as a method of euthanasia in the ACUC protocol.
- The Principal Investigator (PI) must ensure that all personnel performing decapitation are trained and proficient.
- Personnel performing decapitation must be properly trained and are monitored for competence. Prior to performing the procedure in unanesthetized or live animals, they should be trained on anesthetized or dead animals to demonstrate proficiency.
- There are inherent dangers to using guillotines, and personnel should be aware of the dangers and take precautions to prevent personal injury.

### Equipment Maintenance:

- Equipment used for decapitation must be in good working condition:
  - Guillotines and dedicated scissors must be kept clean, rust-free, sharp, and move freely/without resistance. If they become unserviceable, blades or scissors should be discarded in a sharps container.
  - Before utilizing for decapitation, test sharpness of blades and scissors by performing a test cut of something disposable (sponge, paper, etc.). Do not use dull blades for decapitation.

- If razor or scalpel blades are used, they should be new and sharp. They should be discarded in a sharps container after usage sessions.
- For guillotines, maintenance must be regularly performed and recorded in some manner (e.g. sharpening or changing out blades, oiling, etc.), to ensure that they remain sharp and in good working condition.
  - Guillotines and their maintenance records may be reviewed as part of ACUC semi-annual inspections.
  - Requirements for maintenance records include date of last maintenance and what maintenance task was performed.
  - Contact Research Animal Resources if you require guidance for sharpening blades.
  - Maintenance records could be kept as a paper log, or could be as simple as a label on the guillotine that lists the dates of maintenance
    - Note that frequency of sharpening depends on frequency of unit use and species euthanized.

**Proper Procedures:**

- If decapitation is performed in conscious animals, the use of plastic cones to restrain animals (e.g. DecapiCone) appears to reduce distress from handling, minimizes chance of injury to personnel, and improves animal positioning. It is recommended but not required.
- The decapitation procedure should be performed in an area that is separate from other rodents.
- Blades should be cleaned after usage sessions (e.g. guillotine, scissors), or discarded in a sharps container (e.g. scalpel or razor blade).

**REFERENCES:**

AVMA Guidelines for the Euthanasia of Animals: 2020 Edition.

<https://www.avma.org/sites/default/files/2020-02/Guidelines-on-Euthanasia-2020.pdf>

I acknowledge that I have read and understand the JHU Animal Care and Use Program document “**Rodent Decapitation Guidelines**” and I will follow this procedure. I agree to bring any deviations in this procedure to the attention of my supervisor/GPS Working Group.

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Name (Print) \_\_\_\_\_ Date

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Signature

