Institutional Animal Care and Use Committee (IACUC)

Policy on Use of CO2 as a Euthanasia Agent for Laboratory Rodents*

Date of IACUC Review and Approval: June 16, 2014

[Note: these procedures may not be suitable for neonatal** (<2 weeks of age) rodents.]

I. Guidelines:

- **ONLY** use compressed CO₂ from a cylinder affixed with a flowmeter regulator. (All other sources of CO₂ are prohibited.)
- Avoid overcrowding or mixing of unfamiliar or incompatible rodents.
- **NEVER** pre-fill the euthanasia chamber with CO₂ prior to placing rodent(s) in the chamber. ALWAYS empty & clean the chamber with dilute chlorhexidine between uses to remove residual CO₂ (reusing the same chamber without cleaning it will result in a pre-fill situation).
- To ensure that conscious rodents are exposed to an appropriate level of CO₂, the flow rate must be set as follows:
  - **1L/min when using the small chamber or a split mouse cage.**
  - **3L/min when using the large chamber or a solid mouse or rat cage.**
- Monitor for adverse reactions. Contact the veterinary staff of Animal Care if the procedure appears to produce excessive agitation or other complications.
- Leave the rodent(s) in the moderate CO₂ environment of the chamber for at least 1 minute following the cessation of breathing. Then, immediately use a secondary physical method to ensure the rodent will not recover, such as opening the chest cavity, exsanguination, cervical dislocation, or decapitation.

*Consult the veterinary staff of Animal Care prior to using CO₂ for species other than rodents and for assistance with neonatal rodent euthanasia.