Document Number: ANP037	Title: ISOFLURANE ANESTHESIA	Effective Date: January 01,2005
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### 1.0 OBJECTIVE

1.1 The objective of this Standard Operating Procedure (SOP) is to describe the use of isoflurane as a gas anesthetic at the Molecular Medicine Research Institute (MMRI) Animal Facility (AF).

### 2.0 SCOPE

2.1 This SOP applies to all of the requiring isoflurane as anesthesia. This SOP covers induction, maintenance and recovery of the animals.

### 3.0 POLICY

3.1 It is the policy of MMRI to establish written and approved procedures to assure that the animals are treated in a humane manner according to the Guide for the Care and Use of Laboratory Animals and educating personnel utilizing animals in their research.

### 4.0 RESPONSIBILITY

4.1 It is the responsibility of Manager of Animal Research or designated alternate to implement this SOP and revise it when necessary.

# 5.0 REFERENCES

5.1 Experimental and Surgical Technique in the Rat. Academic Press, 1992.

#### 6.0 PROCEDURE

- 6.1 Turn oxygen supply tank and check all connections for possible oxygen leaks.
- 6.2 Fill the vaporizer with isoflurane up to the top line.
- 6.3 Open the stopcock in the induction chamber tubing line.
- 6.4 Close the stopcock in the nosecone line.
- 6.5 Turn the oxygen flowmeter to one (1) liter per minute (lpm).
- 6.6 Place animal #1 in the induction chamber and secure the lid.
- 6.7 Turn the vaporizer dial to 3.5-4.5%. Animal #1 should begin to fall asleep within 2 minutes.

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- 6.8 When Animal #1 has no response to rocking/jiggling the chamber, push the oxygen flush button for 10 to 15 seconds to evacuate all anesthesia saturated gas from the chamber.
- 6.9 Immediately open the chamber and remove Animal #1.
- 6.10 Open the stopcock in the nosecone line and place Animal #1's nose in the nosecone.
- 6.11 Turn the vaporizer dial to 1.5-2.5%.
- 6.12 Place Animal #2 in the chamber as soon as #1 has been positioned in the nosecone.
- 6.13 When the procedure on #1 is complete, close the stopcock in the nosecone line and place #1 in a recovery unit. That animal will begin to awaken in approximately 2 minutes.
- 6.14 Repeat steps 6.8-6.13 with Animal #2, and all remaining animals, until all procedures have been completed.
- 6.15 Turn off the vaporizer dial.
- 6.16 Turn off the oxygen flowmeter.
- 6.17 Turn off the oxygen at the tank.
- 6.18 Clean and sanitize the chamber and breathing mask.

## Notes:

- 1. When the oxygen flush button is depressed and the nosecone/mask line stopcock is *open*, the resulting oxygen pressure through the nosecone may push the animals nose out of the nosecone. Always close the nosecone line before pushing the oxygen flush button.
- 2. You may place as many animals in the chamber as will fit comfortably. The brief oxygen flush evacuations of the chamber should not awaken already anesthetized animals.
- 3. The chamber is airtight. If the oxygen flowmeter on the machine is turned off, there will be *no* airflow through the chamber. *Never* leave animals in the chamber without an oxygen flow.