THE INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)

ANESTHESIA GUIDELINES – NON-RODENT MAMMALS

1. **Acclimation period and health observation:** A 2-day or greater acclimation period is recommended before major survival surgery or general survival anesthesia. Animals should also receive a pre-anesthetic health observation. This involves reviewing their general appearance, respiration, and activity, and where indicated, their body weight.

2. **Fasting:** Recommended fast durations are overnight for adult dogs, cats, pigs, and macaques. New World primates should be fasted for 4-6 hours and a LARC veterinarian should be consulted for ruminant fasting recommendations. Rabbits are generally not fasted before anesthesia. These times must be adjusted for neonatal animals, debilitated animals, for special procedures and in other special circumstances as approved by the IACUC and LARC veterinarians. Water is generally not withheld.

3. **Administering the Anesthetic**: Adequate depth of anesthesia must be determined prior to the initial incision. An adequate, even depth of anesthesia is maintained by adjusting the vaporizer as necessary or administering supplemental doses of the anesthetic agent. Anesthetic doses must follow the approved protocol, including commitments for intra-operative analgesic drugs. Anesthetized non-rodent mammals must be attended continuously from onset of anesthesia until anesthetic recovery (i.e., the animal can remain in sternal recumbency or sit up unassisted).

4. **Monitoring Anesthesia**: Includes responsiveness to painful stimuli, character of respiration, and skin or mucous membrane color. Depending on the species and the procedure, other monitoring parameters may be indicated, such as heart rate, electrocardiography, blood pressure, body temperature, tissue oxygenation, blood gas levels and expiratory capnography. The surgical team for major survival surgery in non-rodent mammals **must** include at least one dedicated person whose primary duties are to monitor the animal and document anesthesia.

5. **Record keeping:** Individual anesthesia records are maintained for large animals (including rabbits) documenting monitoring at approximately 15 minute intervals. More frequent recording is necessary in some instances, while use of continuous monitoring equipment (such as ECG, pulse oximetry, etc.) may require less frequent written charting. Records should extend from onset of anesthesia through the period of anesthetic recovery, and should document post-operative care and analgesia provided. Longer documentation intervals, which must be approved in your protocol, may be acceptable for anesthetized animals in acute (non-survival) procedures, once the surgical manipulations are completed.

6. **Provide heat:** Preferred methods for providing heat during and after surgery include: circulating warm water blankets, chemical heat packs, and bair huggers. Always place an insulating layer between the animal and the heat source. Monitoring body temperature during and following anesthesia is required for most cases of general anesthesia.

7. **Fluid administration:** Dehydration and volume depletion must be prevented during longer procedures and it is standard veterinary care to provide warm isotonic fluid therapy by intravenous and/or subcutaneous administration.

8. **Stay in the room:** Animals must be continuously attended during recovery from anesthesia. Monitoring data should be documented at 15-30 minute intervals until the animals can remain in sternal recumbency. Endotracheal tubes, when used, must remain in place until the animal has

regained a swallowing reflex. Food and water are not offered until the animal is sufficiently recovered from anesthesia and that it is safe to do so.

9. **For information on specific anesthetics and analgesics** for experimental animals including recommended doses, rout**e**s of administration and conditions for use, refer to the Drug Formulary.

You may consult with the veterinary staff of the Laboratory Animal Resource Center for advice about the suitability **of anesthetic agents by dialing 415-502-8687.**

Updated 5/2011