

Standard Operating Procedure Use of Pooled Nonhuman Primates

Purpose:

To establish standardized management procedures covering those situations in which an individual nonhuman primate is utilized in multiple IACUC-approved animal use protocols, while ensuring the health and welfare of the animals

Responsible parties:

1. Principal Investigators
2. Research staff and students
3. Animal Care staff (animal technicians, veterinarians, supervisory staff)

Introduction:

Responsible animal research embraces the three “R’s”: replacement, reduction, and refinement. Replacement alternatives are methods that (1) use organisms with limited sentience or (2) use other non-animal methods. Reduction alternatives allow (1) comparable amounts of data to be obtained from fewer animals or (2) more information to be obtained from a given number of animals. Refinement alternatives are methods that (1) eliminate or minimize pain and distress or (2) enhance animal well-being. The aim of this SOP is to cover the use of a pool of nonhuman primates (NHPs) that are (1) used simultaneously by several investigators during one sedation or (2) used by multiple investigators on different non-invasive (e.g., imaging) procedures within the same time period, all of which have been described in protocols reviewed and approved by the IACUC. The shared use of these animals contributes to the understanding of normal and pathological processes (e.g., of the eye and visual development). The shared use of these animals also provides a reduction technique to decrease overall animal numbers needed (e.g., for vision research).

General Guidelines.

1. Veterinary clearance can be given if an animal needs to be sedated more than once in a given week.
2. Daily health checks, eating, and drinking of each NHP are monitored and determined to be normal.
3. Documentation is made in the animal health record for each procedure, including sedation/anesthesia/analgesia agents, protocol number, and adverse effects, if any.

4. ACO may request to schedule clinical procedures in conjunction with investigator sedations (such as physical exams and/or tuberculin skin testing), as this also reduces the total number of sedations per animal.

Procedure:

- When a sedation/anesthesia is planned by either the investigators or ACO advance preparation/scheduling by all parties is necessary.
- An ACO work order for fasting the individual animal must be submitted the day prior to the planned procedure by the investigator(s).
- ACO staff will clear all food from the NHP cage the day prior to the procedure unless other arrangements are made.
- Controlled substances (e.g., ketamine or ketamine cocktails) are only to be handled by authorized personnel.
 - The bottle of ketamine used for preparing the ketamine/xylazine cocktail for the initial sedation travels with the NHP for dosing by the other labs in multi-lab sedations.
 - The ketamine must be in the possession of an authorized user at all times.
 - If any ketamine remains after the day's procedures, it is secured in the safe.
- Animals under sedation for extended procedures are monitored continuously using direct observation, pulse oximetry, heart rate, and body temperature. All parameters are noted in the research record for each animal.
- All animals recovering from sedation are observed until able to maintain an upright sitting position and to move around without falling asleep.
 - Reversal agents, such as atipamezole, can be used to shorten the post-procedural recovery period.
 - It is the primary responsibility of the investigative staff to do post-procedural monitoring.
- It is the responsibility of the investigators to provide the ACO veterinary staff with the total amount of anesthesia cocktail administered and the approximate length of the anesthetic episode such that the information can be placed in the animal health record. This is done using anesthesia labels with the following info: protocol number, date, start and end time for each lab, total volume of cocktail and final recovery time (if applicable). Upon implementation of a comprehensive electronic medical records system, it is anticipated that this information will be communicated through this system by the investigator or his/her designee.
- Each investigator is responsible for tracking the use of animals assigned to his/her protocol, as well as any other approved protocols with which these animals may be associated. In addition, each investigator is responsible for reporting the use of the animals on their annual protocol renewal.