

Institutional Animal Care and Use Committee Policy on the Reuse of Laboratory Animals

Purpose

The purpose of this policy is to clarify the requirements for reuse of vertebrate animals, including those which have undergone a previous experimental procedure, retired breeding colony animals, and animals used in training and teaching. This policy has been developed to ensure compliance with the Animal Welfare Act and Public Health Service Policy, and to ensure humane care and use of vertebrate animals. The University of Notre Dame IACUC endorses and promotes the ethical use of animals in research and instruction. Fundamental to the ethical use of animals is the application of Refinement, Replacement, and Reduction alternatives as described by Russell and Burch. The Reduction alternative is defined as utilizing means which reduce the number of animals used. This includes, for example, the use of more robust statistical measures, reducing variability, and the appropriate reuse of animals.

Policy

1. Any USDA regulated species reuse must be approved by the IACUC through an amendment with a completed animal transfer form. Copies of the animal transfer form will be attached in the electronic protocol files. Animals may not be used for multiple major survival surgeries across protocols (one surgery in one protocol, and the second in a different protocol) unless:
 - a. The Principle Investigator of the second protocol provides scientific justification for the major surgical procedure in their protocol.
 - b. The use is approved by the IACUC in an amendment.
 - c. An exemption from the USDA is obtained for animals covered by the Animal Welfare Act.
2. USDA regulated animals that have been used for a single simple procedure (e.g. a blood sample or injection of saline or vehicle) may be transferred to another protocol. However, animals that have been used for research or instruction that resulted in severe or chronic pain or that caused significant alterations in the animals' ability to maintain normal physiology, or adequately respond to stressor cannot be transferred to another active protocol. An Animal Transfer Form must be completed by the original PI and submitted to the IACUC via the e-Protocol system as an amendment. The PI that will be acquiring the animals must submit an amendment to his/her active protocol that has been approved for the use of the species to be transferred and within the limit of the number of animals approved. The amendments will be sent to the Attending Veterinarian (AV) for designated review and approval. Once the approval is completed, the Freimann staff will transfer the animal(s) to the appropriate investigator and protocol.
3. USDA non-regulated animals that are experimentally naïve (retired breeders, breeding colony culls, or extra animals from animal shipments) may be transferred to protocols approved for that species without amendments provided the animal numbers are accounted for within the approved animal numbers for that protocol.
4. USDA non-regulated animals that have been used for a single simple procedure (e.g. a blood sample or injection of saline or vehicle) may be transferred to another protocol with consultation with the AV and without amendments provided the animal numbers are accounted for within the approved animal numbers for that protocol.
5. Animals which have already been used on a study, especially when the well-being of the animal(s) has been compromised, should not be reused. Examples include, but are not limited to, studies that may result in

severe or chronic pain or that cause significant alterations in the animals' ability to maintain normal physiology, or adequately respond to stressors.

6. Training protocols will allow a maximum 4 procedures that produce momentary pain or distress per rodent per training session with a maximum of 4 training sessions. These procedures would include:
 - IP, IM, SC, ID or footpad injections with sterile saline
 - Retro-orbital, submandibular, saphenous, or femoral bleeds
 - IV tail vein or retro-orbital injections of sterile salineThe fifth training session should be scheduled as a terminal session to train on one of the following procedures:
 - Cardiac exsanguination
 - Euthanasia
 - Surgical procedures followed by euthanasia
 - Perfusion and/or tissue harvestTraining for manual restraint and using restraint devices may be repeated in multiple training sessions without requiring euthanasia. These procedures limit 4 attempts per animal per training session.
7. Studies allowing the harvest of tissues post-mortem may use animals from other studies provided those animals do not require any additional manipulations, are not considered biohazardous, and with the consent of the Principal Investigator on whose protocol they reside.
8. The Animal Facility will perform the transfer of USDA regulated species once approval of the animal transfer is confirmed. This will include changes to the computer database, individual animal records and the barcoded cage cards.

References:

1. Public Health Service. Policy on Humane Care and Use of Laboratory Animals (US Department of Health and Human Services, Washington, DC, 1986; reprinted 2002).
2. ARENA/OLAW. Institutional Animal Care and Use Committee Guidebook 2nd ed. (National Institutes of Health, Bethesda, MD, 2002).
3. Guide for the Care and Use of Laboratory Animals, NRC, 2011
4. USDA APHIS Animal Care Policy #14, "Major Survival Surgery, Single vs. Multiple Procedures"
5. Silverman, Gerald, One animal, two protocols—an appropriate application of the 3Rs? *Lab Animal*. 2007; 36(3).
6. Brown, P., Gipson, C. Collaborative studies and animal reuse: a word from OLAW and USDA, *Lab Animal*. 2008 Feb; 37(2):63.