Institutional Animal Care and Use Committee
UNIVERSITY OF GEORGIA

Policy on Surgery in Research and Instruction Animals

The mitigation of pain and distress in animals being used in research and instruction is a moral obligation, and agrees with the 3 Rs' Refinement principle. The use of appropriate surgical methods to mitigate pain and distress is required unless an exception, with scientific justification, is approved by the IACUC. This policy serves to ensure the humane use of animals and adherence to animal welfare principles outlined by the USDA Animal Welfare Act Regulations and the Public Health Service Policy. Additionally, it increases the probability of a successful surgical outcome.

According to the USDA Animal Welfare Act Regulations and the Public Health Service Policy, surgery is categorized into distinct types; survival vs. non-survival (terminal) and major vs. minor. Regulatory requirements vary somewhat depending on these categories; however, unless otherwise specified, all parts of this policy apply to all types of surgery.

Definitions:

Surgery: Involves an incision and exposure of a tissue for an operative method or the operative manipulation of physiological or physical parameters to create a model of a clinical disease process or condition and/or treatment of a disease or condition

Survival surgery: Surgery from which the animal recovers from anesthesia

Non-survival/terminal surgery: The animal is euthanized without recovering from anesthesia

Major surgery: The penetration of a body cavity (abdomen, chest, coelom, calvarium) or joint, with anything larger than a needle; or a surgery that results in the permanent impairment of physical or physiological function

Minor surgery: A surgery that is not a major surgery

Surgical procedures **must** be planned in advance, in consultation with a laboratory animal veterinarian (during AUP review, or before AUP submission). This includes a discussing of the proposed procedure, identifying/procuring required equipment and assigning responsibilities to personnel.

Personnel performing surgery in animals **must** be appropriately trained and competent to perform the procedure. Competency should be determined by direct observation by experienced research or veterinary personnel.

Survival surgery on animals **must** be completed in dedicated surgical suites (USDA covered species) or procedure rooms or laboratory areas specifically partitioned for this purpose (rodents and non-

mammals). These locations **must** be disinfected prior to each use and kept clean between uses. Non-survival surgery **must** occur in an uncluttered, clean area.

Personnel performing survival surgery on animals **must** use aseptic (sterile) technique to minimize the potential for post-operative infection. Aseptic technique is recommended for non-survival surgery of extended duration to minimize the impact of bacterial contamination on data collection.

For survival surgery, all instruments and surgical drapes, and any items to be implanted **must** be sterilized before surgery. For a session of multiple surgeries (e.g., rodent surgeries) instruments must be sterilized before the first surgery. For a session of multiple surgeries, instruments should also be sterilized between animals, or, the tips of the instruments should be sterilized between animals when using the "tips only" surgical method. For non-survival surgery, the instruments, at minimum, should be clean.

Incisions **must** be closed using materials/techniques appropriate for the species and procedure. For skin incision closure, these materials should be removed in a timely fashion once skin healing is complete.

Surgery **must** be documented, either in the animal's individual Clinical Health Record, or, for rodents and non-mammals, on a group record.

Animals should be monitored at least once per day, and more frequently if circumstances warrant it, until the animal is fully healed from the surgical procedure, generally when closure materials are removed. Daily monitoring **must** be documented for review, such as by IACUC for all animals and by URAR staff for animals under URAR purview.

Non-survival surgery requires that the animal is euthanized without regaining consciousness.

Specific guidance and recommendations are available in the document, "Guidance on Surgery in Research and Instruction Animals," and from the URAR veterinarians.