

I. Introduction

The University of Illinois at Chicago is committed to the judicious, humane use of animals in research and teaching. In support of this commitment, the campus is also committed to maintaining full accreditation by the Association for Assessment and Accreditation of Laboratory Animal Care - International (AAALAC). The purpose of this document is to present policy to accomplish these goals.

II. Animal Care Regulatory Authorities

The campus recognizes the following regulatory authorities for the care and use of animals.

A. Association for Assessment and Accreditation of Laboratory Animal Care - International (AAALAC)

AAALAC certifies that an animal care program meets the standards as set forth in the *Guide for the Care and Use of Laboratory Animals*. On site accreditation reviews are conducted at least every three years and include inspection of housing and research facilities, review of animal care standards, and evaluation of institutional programs as they relate to the care and use of animals in research and teaching. Compliance requirements include an annual report detailing any changes in staff, equipment and programs, and an annual usage report for all vertebrate animals.

B. U.S. Department of Agriculture (USDA)

The staff of the animal care (AC) section of the Animal and Plant Health Inspection Service (APHIS) of the USDA is responsible for implementing the regulations and standards promulgated by the Secretary of Agriculture under the mandate of the Animal Welfare Act. The regulations define the institutional responsibility for assuring compliance with the Animal Welfare Act. The standards set minimal requirements for humane handling, housing, space, feeding and watering, sanitation and ventilation, exercise for dogs, psychological well-being of primates and transportation. In addition, the USDA also publishes Animal Welfare policies that further delineate the regulations and standards. Compliance requirements include periodic unannounced inspections by APHIS-AC personnel and an annual report containing: 1) institutional assurances that acceptable standards for animal care and use during experimentation are implemented; 2) the institutional program is in compliance with the regulations and standards; and 3) documentation of the number of animals used including summaries of the exceptions granted for scientific necessity.

C. Office for Laboratory Animal Welfare (OLAW)

OLAW is responsible for the general administration and coordination of NIH policy regarding animal care and use. Public Health Service (PHS) awarding units may not make an award for a project involving animals unless the institution submitting the application or proposal is on the list of institutions that have an acceptable animal welfare assurance letter on file with OLAW, and the responsible institutional officer has provided verification of approval by the Animal Care Committee (see IV of this document). All records that directly relate to applications, proposals, and proposed changes in ongoing research reviewed and approved by the Animal Care Committee must be maintained for at least three years after completion of the research and must be accessible to the OLAW with reasonable notice.

III. Biologic Resources Laboratory (BRL)

The BRL is the unit responsible for implementing the UIC Animal Care Program, and managing animal care facilities in accordance with the *Guide*. The BRL's functions include procurement, care, and maintenance of laboratory animals, and the provision of professional advice to research and teaching staff.

IV. General Policy

- A.** A committee, the Animal Care Committee (ACC), shall advise the Vice Chancellor for Research in all matters relating to the care and use of animals in research and teaching, and shall assure that all such programs comply with all policies contained within this document. In accordance with the Animal Welfare Act and the Public Health Service Policy, the ACC has the responsibility to terminate activity, if it determines that the activity cannot be brought into compliance with these policies.
- B.** The Director of the BRL is responsible for monitoring animal care and use practices and for providing advice and assistance to investigators in the correction of any deficiencies with respect to conformance with applicable policies, laws, and regulations. The veterinary staff of the BRL will provide medical care to all animals housed in UIC facilities. Protocol created or related conditions are the responsibility of the investigator who in consultation with the veterinary staff should provide the necessary treatment and/or support. Any issue of disagreement between the Director and animal users shall be referred to the Animal Care Committee for review and recommendation.
- C.** Animal care and use shall be conducted with due consideration for the health and comfort of the animals and in conformance with all applicable laws and regulations, including those pertaining to occupational and environmental health and safety.
- D.** The judicious use of animals for research or teaching purposes shall be based on the anticipated significance of the knowledge to be gained as weighed against the effect on the animals.
- E.** Research or teaching involving animals shall be conducted by, or under the immediate supervision of a qualified scientist.
- F.** Research and teaching involving animals shall be conducted using methods that are appropriate for the study. Where relevant, these methods include accepted surgical techniques, aseptic procedure, pre, intra, and post-operative care and pre and post-procedural care, use of pain relieving medications, approved methods of euthanasia, and verification of animal death prior to disposal.
- G.** Research and teaching procedures shall be designed to avoid discomfort, distress and pain. Pain and distress shall be relieved by appropriate use of anesthetics, analgesics or other procedures throughout the experiment, including pre, intra, and post-operative care and pre and post-procedural care, except when it has been specifically determined that use of such drugs or procedures would defeat the purpose of the experiment, and there is not an available alternative.
- H.** The investigator in charge of the research project or teaching activity, or a qualified designee, shall monitor its progress to identify any unanticipated effects on the animals, to implement any modifications necessary to avoid pain or relieve distress, and to reevaluate the desirability of continuing the study if there is reason to believe its continuation may result in unnecessary injury or discomfort to the animals.
- I.** The investigator in charge of the research project or teaching activity is responsible for ensuring that all subordinate personnel have received appropriate training and instruction in the humane care and use of animals before subordinate personnel are involved in animal research.
- J.** The investigator in charge of the research project or teaching activity and all subordinate personnel that are involved in animal research must have completed mandatory ACC Training prior to approval of a research

project or addition of personnel to an already approved research project. Training is available via two options: 1) completion of on line UIC ACC training module or 2) attendance at a UIC ACC Training seminar. Seminars must be arranged per special request and are based on availability. Personnel seeking this option must contact the Office of Animal Care and Institutional Biosafety.

- K.** The investigator in charge of the research project or teaching activity is responsible for completing such reports and requests for information that may be necessary for filing institutional reports required by the various regulatory and accrediting agencies.
- L.** Suspected deviations from the UIC Animal Care Policy should be reported to the Director of the BRL, the Chair of the Animal Care Committee or the Director of the Office of Animal Care and Institutional Biosafety (OACIB). All reports will be treated with confidentiality. The individuals listed above will review suspected deviations. Substantiated findings of deviations will be reported to the ACC and the ACC will take appropriate actions to ensure compliance.

V. Animal Use Protocol

- A.** The investigator in charge of a project that involves vertebrate animals shall prepare a *Protocol for Animal Use* (as described below) if the project:
 - 1. Is conducted in UIC facilities, or
 - 2. Is conducted by UIC students and/or paid personnel*, or
 - 3. Uses funds administered by UIC

The *Protocol for Animal Use* must be approved by the ACC prior to the commencement of the activity.

*Exception: UIC paid personnel collaborating on an animal research project at another institution, which is covered by an approved protocol at “said” institution and in which UIC funds are not used to support the project other than for the purpose of salary (i.e., sabbatical leave).

- B.** A completed *Protocol for Animal Use*, which is supported by a proposal submitted for funding, shall be submitted to the ACC and approved in a time manner consistent with the terms and conditions of the award from the respective funding agency. The *Protocol(s) for Animal Use* must cover all work involving the use of animals that is awarded in the proposal.
- C.** The *Protocol for Animal Use – Form A* shall be completed and approved before starting any research or teaching activity involving animals at the University of Illinois at Chicago. The form will also be used for BRL records. If the activity involves potential pain or distress to animals, including all collection of biological samples, the *Protocol for Animal Use – Form B* shall also be completed and approved. If the activity involves the use of animals for instructional purposes, the *Protocol for Animal Use – Form C* shall also be completed and approved. If the activity involves the production of transgenic/knockout animals, establishment of germline transmission of founder animals, and/or maintenance of an established transgenic/knockout/other species the *Protocol for Animal Use- Appendix 1a, 1b, and/or 1c*, respectively shall be completed and approved. If the activity involves the use of hazardous agents (Form A, item 9a), the *Protocol for Animal Use- Appendix 2* shall be completed and approved. ALL protocols must be accompanied by a completed *Protocol for Animal Use- Appendix 3*. If the protocol involves potential funding from multiple funding proposals, the *Protocol for Animal Use- Appendix 4* shall be completed and approved.
- D.** Proposed changes in a Protocol for Animal Use, i.e., those that directly affect the animals, shall be submitted on Form D to the ACC for review. Approval must be granted prior to the initiation of such changes.
- E.** The *Protocol for Animal Use- Form G* shall be completed when one of the following conditions is applicable: 1) a grant has multiple ACC protocols associated with the grant (e.g. RO1 type with multiple protocols, Center grants, Program Project grants, etc.); 2) a grant involves subcontracts/consortia to other institutions in which the subcontract involves use of live vertebrate animals and UIC is the primary grantee, 3) a training

grant in which the use of live vertebrate animals is proposed (e.g., T32 type awards) and the description of specific projects is covered under other ACC protocols; or 4) a travel/conference grants in which the use of live vertebrate animals is proposed (e.g. Fogerty type fellowships), UIC is the primary grantee, and work will be conducted at a non-UIC site.

VI. Animal Procurement

- A.** The UIC Animal Care Program is committed to ensuring that the health status of animals procured for use in research, testing and teaching at UIC is consistent with veterinary, industry and UIC colony/species standards.
- B.** Animals used in research, testing or teaching must be procured through the BRL. Animals must be procured under the approved protocol in which they will be used or under a holding protocol.
- C.** It is recommended that animals be procured from the list of commercial sources approved by the Director of the BRL. Requests to procure animals from commercial sources not on the approved source list and/or from noncommercial sources will be evaluated on a case-by-case basis by the Director and/or veterinary staff of the BRL to determine the health status of the animals and potential risk to UIC animal colonies.
- D.** The procurement of animals from nonapproved sources may result in additional costs related to extended quarantine periods and/or in the case of mice rederivation. The additional costs associated with procuring animals from these sources is the responsibility of the investigator.
- E.** The Director of the BRL reserves the right to disapprove the procurement of animals from any sources for health status and regulatory compliance reasons.

VII. Housing, Care and Handling of Animals

- A.** Campus practices in the housing and care of animals shall conform to the Institute of Laboratory Resources' *Guide for the Care and Use of Laboratory Animals*, those sections of the *NIH Guide for Grants and Contracts* concerning laboratory animal welfare, and the standards established to implement the Animal Welfare Act.
- B.** Animals purchased with monies administered through UIC shall be housed only in facilities that meet AAALAC standards for accreditation. No satellite facility shall be developed or maintained without the approval of the ACC. Animals removed to teaching facilities or research laboratories must be returned to an accredited animal facility within 24 hours. Laboratories in which animals are maintained for more than 12 hours are defined as "study areas", must be approved on an ACC protocol, and are subject to bi-annual inspection by representatives of the ACC.
- C.** Animals moved from approved animal facilities to laboratories or special procedural areas shall be transported in appropriate covered containers that conceal the animals from view and prevent injury to the animal.
- D.** Animals used for teaching or research are the property of the University of Illinois at Chicago. No animal, unfixed animal carcass or part thereof, which has been or is intended for the purpose of research or teaching shall be removed from or brought onto university property without the approval of the Director of the BRL.
- E.** Animal illness or abnormal behavior shall be reported promptly to a BRL staff veterinarian.
- F.** The disposal of animal carcasses shall be conducted in accordance with guidelines developed by the Director of the BRL.

VIII. Anesthesia, Analgesia and Euthanasia

- A.** When research or teaching procedures are likely to cause greater discomfort or distress than that attending anesthesia, a member of the veterinary staff should be consulted regarding the plans and procedures for rendering the animal incapable of perceiving pain and maintaining the condition throughout the procedure. The only exception to this policy should be those cases where the anesthetization would defeat the purpose of the experiment and data cannot be obtained by other humane procedures. Such procedures shall be scientifically justified, approved by the ACC, and closely supervised by the veterinary staff.
- B.** Neuromuscular blocking drugs (NMBDs) are considered anesthetic adjuncts used to paralyze skeletal muscle. These agents should only be used while an animal is under general anesthesia. After administering a NMBD it is difficult to evaluate an animal's anesthetic depth because reflex activity is eliminated. Methods and procedures regarding the use of NMBDs and anesthetic monitoring must be fully described in the Protocol for Animal Use.
- C.** Pre and Post-procedural care shall include the use of anesthetics or analgesics as required to minimize discomfort and the consequences of any disability resulting from the experiment or teaching procedure, in accordance with acceptable practices in laboratory animal medicine.
- D.** If it is necessary to kill an experimental animal, the investigator in charge of the research or teaching procedure, or a qualified designee, shall use those methods that are recommended by the American Veterinary Medical Association Guidelines on Euthanasia or as approved by the ACC.

IX. Surgery

- A.** Investigators or instructors performing any surgical procedure on an animal shall conform to the requirements stated in the *Guide for the Care and Use of Laboratory Animals* and the Animal Welfare Act. Major operative procedures on nonrodent mammalian species shall be conducted only in dedicated areas of the BRL/COMRB animal facilities intended for that purpose and shall be maintained and operated to insure cleanliness and directed and staffed by trained personnel. Non-major operative procedures and surgical procedures on rodents and nonmammalian species do not require a dedicated facility, but should be performed in a dedicated space in a laboratory appropriately managed to minimize contamination from other activities in the room during surgery.
- B.** All survival surgery should be performed using aseptic procedures, including surgical gloves, sterilized instruments and aseptic technique. Masks are required for major operative procedures in nonrodent mammalian species. For nonsurvival surgical procedures aseptic technique is not required; however at a minimum, the surgical site should be clipped, the surgeon should wear gloves and the instruments and surrounding areas should be clean.
- C.** Multiple major operative survival surgical procedures may be permitted only with prior approval of the ACC. Major operative survival surgery is defined as any surgical intervention that penetrates and exposes a body cavity or has the potential for producing a permanent handicap in an animal that is expected to recover. Cost alone is not an adequate justification for performing more than one survival surgery on an animal.

X. Additional Policies, Guidelines, Plans and Procedures

From time to time the ACC develops policies, guidelines, plans and/or procedures relative to specific techniques or types of research. Listed below are the current additional policies, guidelines, plans and procedures established by the ACC. All are available via the OACIB web site (www.research.uic.edu). Prior to implementation of any new policies, guidelines, plans and/or procedures, written notice will be sent to all investigators with approved or

submitted Animal Use protocols. Copies of new information can be obtained from the ACC office, the BRL or via the OACIB Web Page.

Policies

- Occupational Health Program for Personnel Caring for/or Using Laboratory Animals
- Major Multiple Surgical Procedures
- Euthanasia Policy and Procedures
- Expired Medical Materials
- The Use of Non-Pharmaceutical Grade Compounds
- Protocol/Grant Submission Policy
- Use of Wire-Bottom Caging for Rodents

Guidelines

- Modification of Existing Animal Use Protocols
- The Use of Inhalation Anesthetics for Laboratory Animals
- Tumor Growth in Animals
- Humane Experimental Endpoints
- Survival Surgery in Rodents and Lower Vertebrates
- The Use of Urethane as an Anesthetic for Laboratory Animals
- Polyclonal Antibody Production Guidelines
- Monoclonal Antibody/Ascites Tumor Production Guidelines
- Euthanasia of Small Laboratory Animals Using Carbon Dioxide
- Collection of Biological Samples for DNA Analysis Using Tail Snips
- Retro Orbital Bleeding of Rodents
- Food and Fluid Regulation
- Physical Restraint
- Definitions of Pain, Distress and Alternatives

Plans

- Environmental Enhancement Plan for Nonhuman Primates
- Dog Exercise Plan

Procedures

- Animal Use Protocol Review Process
- Animal Use Protocol Instructions- Detailed
- UIC Animal Users Manual (<http://www.brl.uic.edu>)