

# **Syracuse University Animal Care and Use Policy**

## **1. Preamble**

This Policy provides the framework within which vertebrate animals may be used at Syracuse University for teaching and research in a manner that conforms with all federal, state and local laws and regulations; provides approved research and teaching activities; and guards the health and welfare of personnel involved in scholarly activities using animals, animal parts or tissues derived from animals.

## **2. Introduction**

Syracuse University is committed to the judicious and humane use of animals in research and teaching. In support of this commitment the University has sought and obtained full accreditation of its Animal Care and Use Program from the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC). The University is committed to maintaining that accreditation.

## **3. Regulatory Oversight of Animal Care Programs**

The following regulatory authorities have oversight of the Syracuse University Animal Care and Use Program.

### **3.1. Office of Laboratory Animal Welfare (OLAW)**

OLAW is responsible for the general administration and coordination of Federal interagency policy regarding animal use and care in research and teaching. Public Health Service (PHS) awarding units and the National Science Foundation (NSF) may not award a project involving animals unless the institution submitting the application or proposal is listed as an institution with an approved Letter of Assurance on file with OLAW. The responsible Institutional Officer (at SU, the Vice President for Research) must provide verification of protocol approval by the Institutional Animal Care and Use Committee (IACUC) to the funding agency.

The Letter of Assurance details the roles and responsibilities of the IACUC as well as its procedures for protocol review. All records that directly relate to applications, proposals and approved changes to protocols for ongoing research and teaching must be maintained for three years after completion of the activity. The records must be made available to OLAW personnel. Such documents may be replicated by OLAW. Other compliance requirements include annual reports documenting IACUC membership changes and any major programmatic changes.

### **3.2. United States Department of Agriculture (USDA)**

The staff of the Animal and Plant Health Inspection Service (APHIS) of the USDA is charged with enforcing the regulations established by the Secretary of Agriculture under the provisions of the Animal Welfare Act and any subsequent revisions thereof. These regulations set the standards for humane handling, housing, care, and psychological welfare of all the covered species. In addition, these regulations determine the standards for the animal facilities such as space, sanitation and ventilation. Finally, standards for transport of animals and an adequate veterinary care are set forth as well. Compliance requirements include annual reports documenting adequate veterinary care, and periodic unannounced inspections by APHIS personnel.

### **3.3. The New York State Department of Health**

The New York State Public Health Law authorizes the State's commissioner of Health to approve and inspect institutions or laboratories where scientific tests, experiments or investigations are conducted on live animals. Such approval, when granted, is subject to annual renewal.

To conduct experiments without prior approval is an offense. While prima facie, compliance with the Guide for the Care and Use of Laboratory Animals (the Guide) published by the United States Public Health Service will meet state standards. Those standards now include all vertebrates (i.e. mammals, fish, amphibia, birds) under NYS regulatory jurisdiction.

### **3.4. Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC)**

AAALAC accreditation certifies that an animal care program meets the criteria in the Guide and that appropriate training and educational programs have been instituted. AAALAC accreditation is recognized by OLAW as a ‘certification’ of appropriate program management, thus reducing the scope of institutional reporting requirements to that office.

On-site accreditation reviews are conducted at least every three years and include inspection of all research facilities, review of animal care standards, the physical plant used for housing animals and evaluation of institutional programs as they relate to the care of animals in research and teaching. The visits are preceded by the preparation of an exhaustive self-study report detailing any changes in staff, equipment and training programs. In addition, an annual usage report for all vertebrate animals as well as data on invertebrates are required.

### **3.5. The US Environmental Protection Agency, the Occupational Safety and Health Administration Office and other regulatory agencies.**

The EPA, OSHA and other regulatory agencies require institutional compliance with regulations governing safety in the workplace, the management of hazardous materials and the disposal of wastes, all or some of which may apply to the use of animals in research or teaching. The SU Environmental Health and Safety Office is responsible for University policies and practices in those areas.

## **4. General Policy**

### **4.1 Oversight and Responsibilities**

Accountability for the proper conduct of research and/or teaching using vertebrate animal subjects is the collective responsibility of a) the Institutional Animal Care and Use Committee, b) Laboratory Animal Resources, and c) the individual investigator/teacher.

#### **4.1.1. The Institutional Animal Care and Use Committee (IACUC)**

In fulfillment of the terms and conditions delineated in the University's Letter of Assurance filed with OLAW, the institution maintains a committee, the Institutional Animal Care and Use Committee (IACUC), which advises the Institutional Officer (Vice President for Research) on all matters relating to the care and use of animals in research and teaching. This committee assures that all such activities comply with the policies contained within this Letter of Assurance and all applicable federal, state and local regulations. As an agent of the institution, the IACUC has the authority to terminate any activity involving animals if it determines that the activity does not comply with University Policy and all applicable regulations.

Membership of the SU IACUC is as prescribed by law. It includes a non-affiliated public member, a non-scientific member, a DVM with program authority, a Chair and at least one practicing scientist.

The IACUC is charged with the responsibility of review and approval of all research and teaching activities involving animals at Syracuse University. In addition, the IACUC is also responsible for all research and teaching activities using animals by SU personnel outside of SU owned facilities. In exercise of its responsibilities, the IACUC will make every effort to ensure that the activity proposed (outlined in detail within the protocol) is in conformance with all applicable regulatory guidelines. The IACUC is accountable not only to Syracuse University but to OLAW as well.

#### **4.1.2. Laboratory Animal Resources (LAR)**

Laboratory Animal Resources (LAR), within the Office of Regulatory Compliance, is responsible for the implementation of the Syracuse University Animal Care Program. LAR staff manages the SU animal care facilities consonant with the standards laid out in the Institute of Laboratory Animal Resources *Guide for the Care and Use of Laboratory Animals* ("The Guide", National Research Council, 1996). In addition, LAR insures compliance with all applicable federal, state, local and AAALAC recommendations and regulations.

LAR's primary function is the humane care and maintenance of the laboratory animals and the facilities in which they are housed. Additional responsibilities include animal procurement approvals and maintaining all records and documents necessary to assure compliance with all federal, state and local regulations. LAR regularly consults with the University's attending veterinarian relating to issues of animal health, anesthesia, surgical procedures, etc. LAR provides professional advice and training to faculty, staff and students.

The Director of Regulatory Compliance is responsible for monitoring animal use and care practices. The director provides advice and assistance to the Principal Investigator (hereinafter referred to as the PI) in protocol preparation, animal handling, surgical procedures, as well as compliance with the various regulatory agencies.

The Attending Veterinarian provides oversight of routine care for all animals housed in LAR facilities. Experimentally caused conditions or spontaneous illnesses will be treated appropriately, with all related costs charged to the PI. In some cases, upon the Veterinarian's recommendation, the animal is euthanized after consultation with the PI. In addition, the veterinarian oversees any newly proposed surgical procedure. In case of emergency, the LAR staff is authorized to consult with the veterinarian and take action as the veterinarian deems appropriate.

Any issue in which there is disagreement among concerned parties shall be referred to the Institutional Animal Care and Use Committee for review.

#### **4.1.3. The PI, Staff and Students**

No person, whether faculty, staff or student, may undertake any activity (research or teaching) using live vertebrate animals without the written approval of the IACUC.

No person, whether faculty, staff or student, may acquire animals for use in research or teaching, unless the species and numbers have been approved by the IACUC in its

protocol review. If additional animals are needed, an approved, written justification is required.

No person, whether faculty, staff or student, may directly participate in activities involving the handling and use (including data collection) of live vertebrate animals without training certification. The training includes humane care and use of animals, the ethics of animal use in research and teaching, and the regulations governing such use, as provided by the IACUC and LAR (basic training).

Research or teaching involving animals shall be conducted by, or under the immediate supervision of, a qualified PI. It is the responsibility of the PI to certify, in writing, that all personnel working on the project or teaching the class have been appropriately trained in the related techniques and procedures. Also, it is responsibility of the PI to certify, in writing, that all involved personnel have received the basic training by completion of the SU web based training course.

No cadaveric animal parts or dead whole animals, whether from commercial or other sources (e.g. slaughterhouses) shall be brought into SU research or teaching facilities without the written approval of the IACUC.

No animal, or cadaveric parts thereof, used in research or teaching, may be transferred to any other institution or entity without the written approval of the IACUC.

PI's employed by Syracuse University may not conduct research using animals at or through another institution absent protocol approval by the SU IACUC and the IACUC at the other institution.

PIs are responsible for assuring that all research or teaching activity, or a qualified designee, shall monitor the progress of that activity to identify any unanticipated effects on the animals. In addition, the PI shall seek to amend the IACUC approved protocol in order to implement any modifications necessary to avoid pain and/or relieve distress to

the animal. This allows the IACUC to evaluate the desirability of continuing the study as approved, approving the amendments or recommending discontinuation.

The PI of an IACUC approved protocol is responsible for assuring that he/she and all others are fully apprised of the SU Standard Operating Procedures (SOPs) outlined in the LAR Manual. Additionally, the PI assures that the Manual is easily accessible to all lab personnel or individuals conducting the class. The PI also assures that all health and safety policies and procedures are followed, including compliance with University policies for the management of all wastes produced.

#### **4.2. Research or Teaching using Animal Subjects**

- 4.2.1. The use of animals for research and/or teaching shall be justified by weighing the anticipated significance of the knowledge to be gained versus the availability of alternatives to using animal subjects and the effects of the proposed treatment on the animal subjects.
- 4.2.2. Animals used in research and teaching are to be treated with due consideration for their health and welfare, and in conformance with the procedures delineated in the IACUC approved protocol. Proposed changes in those procedures must be reviewed by the IACUC (significant changes) or by its Chair (minor changes) who will, as appropriate, seek the advice of the veterinarian.
- 4.2.3. Research or teaching using animals shall be conducted using methods appropriate for each specific activity. Where relevant, these methods include accepted surgical techniques, aseptic procedures, post-operative and post-procedural care, use of analgesics and methods of euthanasia (approved by the American Veterinary Medicine Association).
- 4.2.4. All procedures, whether used in research or teaching, shall be designed to avoid any unnecessary pain, injury, or distress to the animals. Any unavoidable pain

and distress shall be relieved by the appropriate use of anesthetics, analgesics or other procedures throughout the experiment. The only exception occurs when it has been specifically determined, to the satisfaction of the IACUC, that the use of such drugs or procedures would defeat the purposes of the experiment, and that there is no appropriate alternative.

- 4.2.5. The numbers of animals to be used in any research activity shall be the minimum to obtain an appropriate, or statistically valid result. The numbers of animals to be used in teaching should be the minimum needed to meet the goals of the educational activity.

### **4.3. Animal Use Protocols**

- 4.3.1. The PI in charge of a project involving vertebrate animals shall prepare a protocol for IACUC review. All protocols must be approved by the IACUC before commencement of the activity. 'Pilot studies' involving vertebrate animals must also be approved in advance.
- 4.3.2. Protocols for animal studies incorporated in funding proposals (grant applications) to any external or institutional agency must be submitted to the IACUC for approval. The NIH has changed the PHS Policy on Humane Care and Use of Laboratory Animals to permit institutions with PHS Animal Assurances to submit verification of IACUC approval for competing applications subsequent to peer review but prior to reward.
- 4.3.3. If the PI wishes to make any changes to an approved protocol, a 'request for amendment' form must be submitted to the IACUC for review and approved prior to the change.

- 4.3.4. Protocols should be submitted for review by the IACUC using the appropriate forms. Forms may be procured from the Office of Regulatory Compliance or online at <http://osp.syr.edu/IACUC.htm>

#### **4.4. Animal Procurement**

No animals used either for research or teaching may be procured without LAR and IACUC approval. Syracuse University is required by Federal and State regulations to “track” all animal use from acquisition to disposal.

- 4.4.1. Vertebrates currently covered by USDA regulations may only be purchased from approved sources. LAR maintains a list of USDA licensed suppliers approved by the attending veterinarian.
- 4.4.2. Exotics and vertebrates (e.g. fish, amphibia, reptiles and birds) not currently covered by USDA regulations, must be acquired from approved sources: e.g. collectors licensed by the US Fish and Wildlife Service, or LAR/IACUC approved vendors.
- 4.4.3. IACUC/LAR approval is required before species (usually fish) readily available from local vendors are purchased and brought into SU facilities.
- 4.4.4. Given the risk of transmission of zoonotic and other diseases, cadaveric material must be obtained from reliable sources: e.g. USDA inspected slaughterhouses, other institutions with accredited Animal Care and Use Programs or from USDA inspected commercial suppliers. The proposed source of such material must be specified on the appropriate IACUC protocol form, and approved, before any such purchase or acquisition is made.
- 4.4.5. Under no circumstances whatsoever may any locally trapped live animals or ‘road kill’ cadaveric material be introduced into SU research or teaching facilities.

- 4.4.6 Under no circumstances whatsoever may any animal acquired for research or teaching under SU IAUC approved protocols be transferred to any third party without IACUC approval.
- 4.4.7 If animals for research or teaching are to be obtained from SU breeding colonies, no use or transfer of animals to another investigator may take place without an IACUC approved protocol

#### **4.5 Housing, Care and Handling of Animals**

- 4.5.1. The housing and care of animals used at Syracuse University for either teaching or research shall be in compliance with federal, state. And local regulations and in conformance with *the Guide* for those species covered therein. For those species not covered, the “best possible practice will” be followed.
- 4.5.2. Animals shall not be deprived of food or water for longer than is specified by the IACUC for the safe induction of anesthesia. Also, animals shall not be severely restrained for extended periods, subject to painful or obnoxious stimuli or otherwise subjected to significant stress. Exceptions to this policy may be granted only by the IACUC, who shall require detailed justification.
- 4.5.3. Species covered by the current USDA and NY state regulations (primates, dogs, cats, rabbits, gerbils, rats, mice, etc.) will be housed only in the LAR accredited) facilities. Animals removed to other areas (research/teaching) must be returned to the LAR housing facility within 12 hours unless permission for an extended period has been granted by the IACUC. Animals removed from the LAR facilities to research or teaching laboratories must be transported in approved containers with precautions to avoid injury and/or thermal shock.
- 4.5.4. Vertebrates, other than those covered by the current USDA regulations, may be housed in individual laboratories and classrooms with IACUC approval.

However, such approval requires that the facilities be regularly inspected by the attending veterinarian, and the other regulatory entities. The care and maintenance of fish, amphibia and reptiles housed outside LAR facilities must meet the standards set forth by the attending veterinarian and the IACUC. The care and maintenance is the responsibility of the PI. The IACUC reserves the right to take appropriate action should such care and maintenance fall below acceptable standards.

4.5.5. Any illness, injury or abnormal behavior in animals held outside LAR facilities for approved periods must be promptly reported to the LAR staff. It is the responsibility of the PI to monitor the condition of animals held permanently outside the LAR housing facilities and to take appropriate action in the event of illness, injury, abnormal behavior or death.

4.5.6. Animal carcasses, and parts thereof, including all materials used in procedures involving animals, must be disposed of in compliance with the policies and procedures developed by the SU Environmental Health Office.

#### **4.6 Anesthesia, Analgesia and Euthanasia**

4.6.1. If a researcher or teaching procedure is likely to cause greater discomfort than that which is involved in the induction of anesthesia, the animal shall be first rendered incapable of pain perception and maintained in that condition until the procedure is completed. The only exceptions to this policy, after justification and IACUC approval, will be in those cases where analgesia or anesthesia would confound the experiment and the necessary data cannot be obtained by any other procedure. If IACUC approval is granted, it is contingent upon the close personal supervision by the PI, the Attending Veterinarian and the LAR staff.

4.6.1 Post procedural care of animals shall include the use of anesthesia or analgesia to minimize discomfort, distress and careful monitoring utilizing several parameters.

- 4.6.2 No animal shall be the subject of multiple experimental procedures unless scientifically justified and approved by the IACUC.
- 4.6.3 Euthanasia must be performed by the PI or a fully qualified designee in accordance with the most appropriate method approved by the American Veterinary Medicine Association Panel on Euthanasia. The method must be specified in the protocol, and approved by the IACUC.

#### **4.7 Surgery**

PIs or their assistants performing any surgical procedures (defined as invasive procedures involving more than a needle penetration of the dermis or cannulation of a superficial blood vessel), on any animal must conform to the requirements for such surgeries as recommended in *the Guide* and use appropriate sterile or aseptic techniques in approved facilities.

#### **4.8 Records**

- 4.8.1 PI's must maintain complete and accurate records for each animal subject, covering all procedures and outcomes.
- 4.8.2 LAR shall also maintain all pertinent records as recommended by *the Guide*.

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