

State University of New York at Potsdam Institutional Animal Care and Use Committee Policies and Procedures

Approved November 1, 2009

Introduction

SUNY Potsdam is committed to the humane care and use of animals in all activities related to research and teaching. Thus, the College has established and provides resources for an Animal Care and Use Program that is managed in accordance with the *Guide for the Care and Use of Laboratory Animals* (Guide), viewable at <http://www.nap.edu/readingroom/books/labrats/>, the *Animal Welfare Act*, viewable at http://www.aphis.usda.gov/animal_welfare/awa.shtml Title 9 Code of Federal Regulations Subchapter A, “Animal Welfare”, Parts 1-3 (AWA), viewable at http://www.aphis.usda.gov/animal_welfare/awr.shtml, the *Public Health Service Policy on Humane Care and Use of Laboratory Animals* (PHS Policy), viewable at <http://grants.nih.gov/grants/olaw/references/phspol.htm>, University Policy #0-308, viewable at http://usfweb2.usf.edu/usfgc/gc_pp/genadm/gc308.htm, and the *Institutional Animal Care and Use Committee’s Policies of Animal Care and Use* (IACUC Policies). These written IACUC Policies and all associated relevant documents are reviewed and updated semi-annually by a quorum of the regular members of the IACUC.

Studies of wild animals in or derived from natural settings are conducted in accordance with the *Acceptable Field Methods in Mammalogy, Guidelines for the Capture, Handling, and Care of Mammals* viewable at <http://www.mammalsociety.org>, the *Guidelines for Use of Fishes in Field Research* viewable at <http://www.research.usf.edu/cm/pdf/Guidelines%20for%20the%20Use%20of%20Fishes.pdf>, the *Guidelines for Use of Live Amphibians and Reptiles in Field Research*, http://www.research.usf.edu/cm/pdf/ASIH_HACC_Amphib_Reptile_Guide.pdf and the *Guidelines to the Use of Wild Birds in Research* viewable at <http://www.nmnh.si.edu/BIRDNET/GuideToUse/index.html>. In order to accomplish the objectives inherent in these regulations and principles, SUNY Potsdam established the Institutional Animal Care and Use Committee (IACUC).

The use of animals in all research, classroom, or other activities (with or without internal or external funding), except for those animals whose sole purpose for being on campus is for display or as zoological specimens, must undergo IACUC review and receive written approval prior to initiation. Investigators are required to consult with the SUNY Potsdam veterinarian about the proposed project prior to submitting a completed (*Application for Protocol Review*) to the IACUC for review. The IACUC is authorized to request modifications, approve, withhold approval, or suspend previously approved animal research and teaching projects. In addition to reviewing specific research projects, the IACUC also carries out other federally-mandated functions such as reviewing and

reporting on the overall animal program; inspecting and evaluating all of the animal facilities, at least once every six months; reviewing and investigating concerns involving the care and use of animals at the institution; and making recommendations to the institutional official regarding any aspect of the use and care of animals in teaching and research.

Position Statement

Researchers at SUNY Potsdam share the public's concern about the responsible use of animals in teaching and research. Peer committees and stringent federal guidelines (Public Health Service Policy and Animal Welfare Act) require scientists to explore other means of experimentation before considering animal testing. All research, whether or not supported by Public Health Service (PHS) funds and conducted at SUNY Potsdam, or at another institution as a result of a subgrant or subcontract, must be reviewed by SUNY Potsdam's Institutional Animal Care and Use Committee to ensure that animal use is necessary and that high standards of humane care are observed.

In addition to ensuring the judicious use of animals, the College administration and researchers share the responsibility to safeguard the welfare of all animals utilized in teaching and research at SUNY Potsdam. The College must ensure SUNY Potsdam's animal facilities are in full compliance with the applicable laws and regulations. The use of animals in teaching and research sometimes results in vocal criticism from animal rights groups. While SUNY Potsdam defends the right of free speech, our responsibilities of providing and advancing research to benefit society demand that the College does not capitulate to tactics of intimidation and violence which undermine our democratic traditions and threaten the principle of free scientific inquiry. Therefore, SUNY Potsdam cannot tolerate such acts on College property and will not allow such acts to influence College policy. To the extent necessary, the College will prosecute or discipline those who break the law or SUNY Potsdam regulations. It is essential that the College continue to preserve and protect the right of researchers to pursue knowledge.

The IACUC Program at SUNY Potsdam

Federal law, regulation, and policy require the IACUC to report to the institution's designated institutional officer (IO). At SUNY Potsdam, the Provost and Vice President for Academic Affairs serves as the IO for the Animal Care and Use Committee. The Institutional Official appoints an Institutional Animal Care and Use Committee (IACUC), which is responsible for oversight and evaluation of the animal care and use program, its procedures and facilities to ensure that they are consistent with the recommendations of the Guide, AWA, PHS Policy, and IACUC Policies.

Institutional Animal Care and Use Committee

The IACUC has authority to review, approve, or require modification in order to secure approval, or withhold approval of proposed research or teaching using animals, review the facilities and program for animal care and use, including laboratories outside

of animal facilities where procedures are performed, review and, if warranted, investigate concerns involving the care and use of animals, prepare written reports of its evaluations, make recommendations to the Institutional Official concerning any aspect of the animal care and use program, and suspend any activity involving animals that does not conform to the Guide, AWA, PHS Policy or the IACUC Policies. SUNY Potsdam's IACUC Policies do not cover animals whose sole purpose for being campus is for display or as zoological specimens. These animals are subject to the Display Animal Policy administered by the SUNY Potsdam Health and Safety Officer.

Committee Membership

The IACUC shall consist of at least five members.(the numbers do not add up here?) Membership shall include at least one faculty member who is involved with animal research; at least one licensed veterinarian; at least one non-science faculty member; at least one member of the community who has no affiliation to SUNY Potsdam; the Director of The Research and Sponsored Programs Office (ex-officio member); and the Provost (ex-officio member). Members are appointed by the IO for three-year terms and may be reappointed at the discretion of the IO.

The IACUC Chair

The chair is appointed by and serves at the pleasure of the IO.

Charge of the Committee

The IACUC shall serve as the advocate for the welfare of the animal subjects under study at SUNY Potsdam while representing and protecting the interests of the respective investigators and educators who use animals at the College.

Specifically, the IACUC is responsible for:

- A. the review and approval of the use of animals in scientific and educational activities, the advisement of investigators on the humane treatment and proper care of laboratory animals.
- B. the assurance of compliance with established policies, procedures and regulations, and the review over time of experiments in progress.
- C. the review of qualifications of all personnel involved in the use and care of animals and the provision of educational and training programs.
- D. the review of the availability and conditions of physical facilities and the implementation of a program of periodic facilities inspections.
- E. the review of justifications of anticipated animal suffering and the provision of recommendations pursuant to such review.
- F. promulgation of current rules and regulations and changes thereof.
- G. the development of a communication system to respond to concerns and activities of animal welfare groups.
- H. consultation and advice on animal care and use in the laboratory as requested by investigators.

- I. maintenance of required records as established by NIH/OLAW Policy (V.E.), and the Animal Welfare Act (sections 2.35 & 2.31).
- J. submission of required reports as established by NIH/OLAW Policy (V.F.) and the Animal Welfare Act (section 2.31).

Meetings

The IACUC meeting schedule is viewable on the Potsdam Reporter. The IACUC will meet semi-annually – once in the early fall and once in the early spring specifically to vote on protocols and inspect the facilities. Special meetings may be called as deemed necessary for the performance of IACUC responsibilities. A simple majority of the membership shall constitute a quorum. The Committee reserves the right to go into “executive session” at the request of a voting member of the Committee. In such cases, all non-voting members and visitors, at the discretion of the Chair of the IACUC, may be asked to leave. When additional IACUC meetings are required, reasonable notice is given to the IACUC and public by posting a notice at least 72 hours in advance of the special meeting. IACUC members are required to attend each meeting.

Review Procedures

All SUNY Potsdam faculty, staff, and students are required to have research and teaching activities involving animals reviewed by the IACUC **prior** to the beginning of the activity. The *Application for Protocol Review* should be submitted to the IACUC chair.

SUNY Potsdam’s IACUC recognizes the two types of reviews – designated and full committee. A designated review allows the IACUC to review and approve protocols faster than a full committee review while still maintaining the rigorous guidelines. With a designated review, a protocol is assigned to a committee member only after all IACUC members have received the protocol and have had the opportunity to call for a full IACUC review. That committee member is responsible for approving, approving with modification, or disapproving the protocol.

Designated Reviews

Designated reviews may be recommended to the IACUC chair when, in the chair’s opinion, the main activity of the protocol is non-invasive and may cause the animal(s) in question no or slight discomfort.

Full Committee Reviews

Full committee reviews are conducted by a quorum of IACUC members at regularly scheduled or special meetings.

The Review Process

To begin the review process, applicants must give assurances that all principal investigators and research staff have read and agree to abide by these policies and have gone through or will go through prior to beginning work on the project, IACUC training.

The following steps are involved in the review process:

Step 1: *Pre-Review.* While preparing the protocol, the investigator should consult with the IACUC veterinarian. The IACUC veterinarian will provide applicants, by return e-mail within 7 days, comments and suggestions that may help the IACUC better understand the proposed research involving animals. Applicants may choose to revise their IACUC applications by incorporating changes suggested by veterinarians. Making any addendum, change, or elaboration suggested by the veterinarians does not in any way guarantee or constitute an approval by the IACUC, but should help the IACUC understand better the research plan involving animals.

Step 2: *Submission of the Protocol.* Investigators submit a completed and signed application forms to the IACUC chair. The protocol must be delivered in both an electronic form and as a typed, hard copy. The protocol must be submitted no less than three weeks prior to the scheduled fall or spring meeting.

Step 3: *Initial Review.* Following the receipt of an application form by the IACUC chair, the form will be checked for completeness and then forwarded in electronic form to the IACUC members. If the chair deems that the protocol qualifies for a designated review, she or he will so inform the IACUC members and instruct them to contact the chair within 48 hours if they desire a full committee review. Otherwise, the chair will designate a committee member to review the protocol and report the conclusion (approve, approve with modifications, deny) to the chair within 48 hours. The chair will inform the committee and the investigator immediately of the results. For full committee reviews, each *application* receives an initial review by an IACUC member assigned by the IACUC chair.

Step 4: *Review.* At the fall and spring meetings or special meetings, the IACUC considers new protocols. The investigator may be invited to attend the meeting or may choose to attend to field questions. After questioning, the investigator will be asked to leave the meeting. After verbally presenting the findings regarding the application to a quorum of the IACUC members, the initial reviewing IACUC member proposes a motion to either approve the application, require modifications to secure approval of the application, or disapprove the application. IACUC members listed as participating personnel on the face page of an IACUC application must leave the room during the presentation and discussion of the protocol and are not permitted to participate or vote. After discussion, the motion is seconded, and the full IACUC committee votes. Possible outcomes of the IACUC's review include unqualified approval, approval pending modification(s) and/or clarification(s), table (deferral), or disapproval.

Step 5: Investigator Notification. If a protocol receives unqualified approval, the investigator is provided with a letter indicating approval. In cases where the IACUC requires clarification(s) or modification(s), the investigator is notified by the IACUC chair. In such cases, the approval is issued following receipt of an acceptable response from the investigator. In cases of a tabled or disapproved protocol, the investigator is notified by the IACUC chair and advised as to available options.

Criteria for Review

All proposed activities are reviewed to ensure that the following federal requirements for granting IACUC approval are met:

- 1. Activities.** All research and teaching activities involving animals must be in accord with USDA Regulations/PHS Policy.
- 2. Pain/Distress.** Projects must avoid/minimize discomfort/distress/pain. If pain/distress is caused, appropriate sedation, analgesia, or anesthesia will be used. The attending veterinarian must be involved in planning. The use of paralytics is prohibited. Animals with chronic/severe unrelievable pain will be painlessly killed.

Pain/Distress Categories

- I. *No pain* – examples: Observational studies of animals in natural settings or tissues provided from other studies (no live animal work).
- II. *Minimal pain or distress* – examples: Routine examination, injections, blood collection, approved methods of euthanasia that produce rapid unconsciousness, post mortem tissue collection.
- III. *Invasive studies performed on anesthetized animals; procedures involving mild discomfort which is short-lived or alleviated through treatment* – examples: Survival surgery with minimal post-procedural discomfort, survival surgery with appropriate post-procedural analgesics, use of Freund's complete adjuvant, acites production in mice, tumor implantation with early endpoints (no ulceration, noninvasive, no impact on general health and well-being).
- IV. *Procedures that inflict unrelieved pain or severe stress on conscious animals* – examples: Toxicity studies, prolonged restraint, aversive conditioning, tumor burdens beyond those stated in III above, death as an experimental endpoint, clinical disease in which the course of the disease must be allowed to progress to a moribund state without intervention.

3. Alternatives

The Principal Investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animal and has provided a **written narrative** description of the **methods** and **sources**, e.g., the Animal Welfare Information Center, used to determine that alternatives were not available.

Consideration of Alternatives

Animal research protocol applications should indicate that alternatives have been thought of and that a review of database searches has been performed. A good faith effort must be made on the part of the researcher to consider the use of alternatives. This is an AWA requirement and is specified in the government principles for use and care of animals in the PHS policy. Alternatives can include non-animal models, procedures that cause less pain or distress, or non-mammalian models. The protocol narrative must include the databases searched, any consultation with experts, and the date of the search, the years covered by the search, and the key words utilized. The animals selected for a procedure should be of an appropriate species and quality and should be the minimum number required to obtain valid results. Methods such as mathematical models, computer simulation, and in vitro biological systems should be considered. <http://grants.nih.gov/grants/olaw/references/PHSPolicyLabAnimals.pdf>
The principal investigator must consider alternatives to any procedure likely to produce pain or distress in an experimental animal, <http://www.nal.usda.gov/awic/legislat/awa.htm>

Rationale/Methods

All proposals must include:

- Identification of the species and the approximate number of animals to be used;
- A rationale for involving animals and for the appropriateness of the species and numbers of animals to be used;
- A complete description of the proposed use of the animals;
- A description of procedures designed to assure that discomfort and pain to animals will be limited to that which is unavoidable;
- A description of any euthanasia method to be used.

Surgery

- Must meet requirements for sterile surgery and pre/post operative care;
- Cannot normally use one animal for several major operative procedures from which it will recover without meeting specified conditions. The reduction in the number of animals needed as a result of performing multiple surgeries on individual animals must be weighed against the possible increase of each animal's experience pain, distress or discomfort.

Surgeries are interrelated components of one project.

- If this action conserves scarce animal resources
- If there are clinical reasons for multiple surgery (animal health related as opposed to research).

Note that cost savings is **not** a scientific justification.

Housing/Health

Animal living conditions must be consistent with standards of housing, feeding, and care directed by veterinarian or scientist with appropriate expertise. Medical care must be provided by a qualified veterinarian. Every animal found to be ill, behaving abnormally, or that is suspected of being ill, should be reported to the veterinarian immediately. The veterinarian will determine whether care is necessary and, if so, what level of care is to be provided.

The *Guide for the Care and Use of Laboratory Animals* states “Proper management of animal facilities is essential to the welfare of animals, validity of research data, and health and safety of the animal care staff”. A good husbandry program provides a system of housing and care that permits animals to grow, mature, reproduce, and maintain good health and minimizes variations that can modify an animal’s response to experimentation. Animal housing must conform to NIH Guide standards and Animal Welfare Act requirements while meeting research needs. Environmental factors can have a profound effect on the health and well-being of animals as well as the outcome of experimental manipulation. Temperature, humidity, air pressure and rate of turnover and noise levels all may affect animal well-being and research results.

Housing

The primary enclosure provides the limits of an animal’s immediate environment. Acceptable enclosures:

1. Allow for the normal physiologic and behavioral needs of the animals;
2. Allow social interaction and development of hierarchies;
3. Make it possible for the animals to remain clean and dry (as consistent with the requirements of the species);
4. Allow adequate ventilation;
5. Allow the animals access to food and water and permit easy filling, refilling, changing, servicing, and cleaning of food and water utensils;
6. Provide a secure environment that does not allow escape of or accidental entrapment of animals or their appendages between opposing surfaces or by structural openings;
7. Are free of sharp edges or projections that could cause injury to the animals;
8. Allow observation of the animals with minimal disturbance of them.

Temperature and Humidity

Environmental temperature and relative humidity can depend on husbandry and housing design and can differ considerably between primary and secondary enclosures. The temperature must be constant and adapted to the species. Animals can tolerate humidity variations more easily than temperature variations. Abrupt change during a short period of time, can cause stress and induce health issues. Relative humidity should also be controlled, but not nearly as narrowly as temperature; the acceptable range of relative humidity is 30 to 70%.

Ventilation

The purposes of ventilation are to supply adequate oxygen; remove thermal loads caused by animal respiration, lights, and equipment; dilute gaseous and particulate contaminants; adjust the moisture content of room air; the animal depends on it for its oxygen provision. That is why in animal facilities the ventilation system provides 100% fresh air. While supplying oxygen to the animal, a ventilation system must also eliminate the CO₂ produced by the animals as well as the ammonia generated by the bacterial degradation of urine, and the allergens and the odors.

Lighting

The intensity and duration of the photoperiod must be adapted to the species and to the needs of the experiment. Rodents, which are mainly nocturnal, benefit from a low level of lighting during the day. The photoperiod is usually 12 hours of light and 12 hours of darkness. The reproduction of many animals is influenced by the photoperiod.

Noise

Animals are sensitive to sudden noise. The noise level in a facility must be kept constant and as low as possible. The animals can hear noise at frequencies inaudible to humans, for instance, noise from the vibration of a blower.

Bedding

Often contact bedding is used for animal housing. The bedding is used to provide a clean, dry and comfortable environment to the animal. It must be replaced on a regular basis to keep the animal dry and clean, and to prevent the build up of ammonia. For some species, or protocols, the bedding may be a source of hazardous biological, chemical or radioactive agents. Appropriate measures for disposal of the bedding must be applied.

Quarantine and Stabilization of Animals

All newly received animals must be allowed a stabilization period of **at least 48 hours** prior to their use. This permits the animals to adapt to their surroundings, resulting in a more stable physiological and behavioral state. Studies indicate that mice have altered immune functions and elevated corticosterone levels for 48 hours following shipment.

Breeding of Animals

Breeding of animals is permitted only in special circumstances, such as when animals are not readily available through normal sources. Any proposed breeding requires specific approval by the IACUC. Breeding of animals, any species, is generally not cost effective in the research environment and requires excessive space. Also young, naive neonatal animals make control of adventitious rodent disease difficult. Control over

genetic purity is another problem. For these reasons, it is best to leave the breeding of animals to the commercial suppliers. If it is necessary to work with fetal or neonatal animals, pregnant animals can be purchased.

Pets

Research animals are not pets and should not be removed from the facilities. Concerns have to do with public perception of an animal removed from a research setting, the fact that these animals have generally been procured with grant monies, liability of the University, and the need to document the disposition of research animals in accordance with federal law.

Conversely, personal pets should not be brought onto campus for treatment, or otherwise. The IACUC does not operate a clinic or provide service for pet animals. In addition, certain pet animals (especially mammals) can harbor and spread infectious diseases to animals within the research facility.

IACUC applications describing teaching or training laboratories must assure the IACUC in writing that they or their designated IACUC-trained staff who are named on the application will continually directly supervise the students attending the laboratory, and that prior to the lab commencing, will discuss with the students the potential risks and hazards associated with their involvement in the laboratory involving animals, and will document this discussion by having all attending students complete a Health and Risk Assessment form which the PI (Principle Investigator) will sign and provide to the IACUC before the lab commences.

Inspection of Animal Facilities

The IACUC reviews the animal care and use program and inspects animal facilities where animals are used at least every 6 months. During these reviews and inspections the Semi-Annual Program and Facility Review Report is completed. Deficiencies identified are classified as either “major” (i.e., those which affect animal welfare), or “minor”, and a schedule by which corrections will be accomplished is assigned. Each semi-annual report is reviewed and signed by IACUC members present for the review (at least the Chair and a vet), includes any dissenting views or opinions, and is submitted to the Institutional Official for review and signature. Each report includes changes made to the program and an itemization of improvements that need to be made to the facilities.

Qualifications for Animal Care Personnel

Personnel must be appropriately trained and qualified and must adhere to acceptable health and safety practices. The Committee’s review process always includes a check for compliance with all applicable IACUC or institutional policies and procedures.

Certifying Adequacy of Personnel Training and Experience

- All personnel must have adequate knowledge and experience to perform their duties of animal care, use, and treatment.
- All personnel must be sufficiently familiar with the AWA, PHS Policy, Guide, and these IACUC Policies, so that their care, treatment and use of animals will be in accordance with these principles.
- All personnel involved in live vertebrate animal use, treatment, or care must be certified by the IACUC as qualified to perform their duties.

Continuing Review, Amendments and Termination of Protocols

Animal research protocols are approved for three-year terms, subject to continuing reviews at least annually.

Continuing Review Process

A letter is sent to the principal investigator two months prior to the anniversary date of the last review indicating that the continuing review is due. The investigator must complete and return a *Continuing Review Summary*, which is then reviewed by at least two IACUC members including the IACUC chair. Upon recommendation of the reviewers, the protocol is either approved outright for a period of time up to an additional year, or a protocol modification is requested and the normal review process resumes.

Three-Year Renewal

At the end of the third year of a protocol, the investigator must resubmit the protocol for IACUC review in order to continue research or teaching activities. A new *Application for Protocol Review* must be submitted; this form undergoes the same review process as any new protocol. The renewal should include all previous modifications or amendments made to the protocol since its original approval.

Modifications or Amendments to Approved Protocols

Modifications to approved protocols must be documented appropriately, and then reviewed, and approved. The method for obtaining approval for a modification or amendment is similar to that for a complete protocol. A letter requesting the modification including an explanation of the rationale for the change and any amended *Application for Protocol Review* pages resulting from this change should be submitted to the IACUC. The IACUC chair, in consultation with the veterinarian, determines if the modification is “minor” or “significant.” Minor modifications may entail such things as small numbers of additional animal subjects, the addition of new personnel, or perhaps changing the route of administration of drug. Minor modifications may be approved administratively by

the IACUC chair and the college veterinarian without full review. A major modification may entail a large change in numbers of animals being used or requested, an increase in invasiveness, a change in species, an increase in pain or discomfort, or a change in the method of euthanasia. Major modifications require review by the full committee. A written description of the significant change in the protocol should be provided to the IACUC. The veterinarian will notify the IACUC of any changes in choice of anesthetics or analgesics and any changes in their dosage.

Termination of IACUC Protocols

It is the responsibility of the investigator to notify the IACUC when a project is completed. Completed, withdrawn, or terminated projects are closed immediately upon notification. All animal use on a specified protocol is stopped. No further purchase of animals can be made under the specified protocol number. All closed projects are filed in the Research and Sponsored Programs office for a three-year period from date of closure.

Reporting Deficiencies in Animal Care or Treatment

Reporting concerns, deficiencies, or observations made regarding the adequacy or appropriateness of the facilities, program, policies, or procedures contributes to the oversight, development, and improvement of the program for animal care and use, and contributes to the resolution of the concern or deficiency. Deficiencies in animal care, use, recordkeeping, or treatment, and adverse events in animal care or use must be reported, and can be reported directly to the IACUC Chairperson. This reporting-feedback mechanism of observations made regarding the practices of animal care and use within these laboratories, contributes an important oversight, and assists in the continuous development of the animal program. Such reports, suggestions, complaints, or compliments are made with protection of the reporting individual from any discrimination or reprisal. All reports of alleged animal welfare concern, deficiency, or noncompliance are forwarded to the IACUC. The subject Principal Investigator is informed of the allegation in writing by the IACUC Chairperson and may be asked to respond in writing and/or invited to meet with the IACUC to respond to questions regarding the alleged deficiency. The IACUC deliberates regarding the reported alleged deficiency at its next regularly scheduled meeting, or the IACUC Chairperson can call an emergency quorum to discuss the issue in advance of a regular meeting if deemed necessary. The IACUC Chairperson can choose to invite involved personnel to the meeting to whom questions can be directed. The IACUC reports the findings of its deliberations to the PI and the Institutional Official.

Non-Compliance with IACUC Policies

Should evidence of non-compliance with IACUC policies come to light, such as proceeding with a research agenda without IACUC approval, changing protocols without IACUC approval, deficiencies in animal care, use, recordkeeping, or treatment, or adverse events in animal care or use, the Institutional Official, at the request of the

IACUC Chairperson, may issue a Cease and Desist Order to end the inappropriate activity. The IACUC Chairperson can call an emergency quorum to discuss the issue in advance of a regular meeting if deemed necessary. The IACUC Chairperson can choose to invite involved personnel to the meeting to whom questions can be directed. The IACUC reports the findings of its deliberations to the PI and the Institutional Official. Any serious or continuing non-compliance with *PHS Policy*, any serious deviation from the provisions of the *Guide*, and any suspension of any activity by the IACUC is communicated by the Office of Sponsored Programs via telephone to the Office of Laboratory Animal Welfare (OLAW) in a timely manner. After IACUC review, institutional resolution, and reporting to the Institutional Official, the Institutional Official submits a formal report describing the circumstances and actions taken to OLAW and other relevant agencies.

Suspension of Animal Use Privileges

The IACUC may suspend an activity that it previously approved if it determines that the activity is not being conducted in accordance with the AWA, the Guide, or these IACUC Policies or when the activity does not match the description of the activity originally approved by the IACUC. The IACUC may suspend an activity only after review of the matter at a convened meeting of a quorum of the IACUC and with a suspension vote of a majority of the quorum present. If the IACUC suspends an activity involving animals, the PI will be informed in writing of the suspension, its conditions, and the expectations of the IACUC which need to be met before additional activities involving animals resume. If the IACUC suspends an activity involving animals, the Institutional Official, in consultation with the IACUC, shall review the reasons for the suspension, take appropriate corrective action, and report that action with a full explanation to USDA/APHIS and PHS/OLAW, AAALAC, and the federal and/or major agency funding that activity.

Procured Animals

All live animals used in research, teaching, or testing at SUNY Potsdam, or at other college-affiliated institutions, or by College faculty at other sites other than studies of wild animals in natural settings, must be procured from reliable sources and housed and cared for within animal facilities approved by IACUC. Use of animals euthanatized for other purposes or derived from other sources (i.e., slaughterhouse, biological supply houses, or road kill) reduces the overall number of animals used in research and teaching, and is encouraged by the IACUC. Animals may not be euthanatized for the sole purpose of deriving animal parts, and no protocol-specific ante mortem manipulations may be part of the protocol. Animals not described in an IACUC-approved *application* are not permitted within College's animal facilities, or College research, teaching, or diagnostic laboratories.

Relationships with Other Institutions

If activities involving animals are to be conducted at another institution by College personnel, or supported by College funds, that institution must provide the IACUC with a letter on official letterhead that indicates they are anticipating the presence of the research protocol, and when applicable, that they have an assurance on file with the PHS, and that their IACUC has approved the proposed animal use. In order to ensure clear definition and understanding of the planned collaboration, whenever the collaborating institution has agreed to perform a significant portion of the animal use aspects of a research grant or contract awarded to the College, the College's IACUC portion of the animal use aspects of a research grant or contract awarded to the College, the College's IACUC should be provided with written evidence that the collaborating institution's IACUC has approved the activity. These documents must be received from the collaborating institution prior to initiating any work. In addition, the IACUC must be informed of any issues raised by the collaborating institution's IACUC during their inspection of the activity, program, or facility while hosting the research activity.

Hazardous Substances

Approval of the IACUC application involving hazardous materials is contingent on a pre-performance meeting involving the PI and relevant staff that represents the applicant's laboratory, the IACUC, and the Health and Safety Officer. This pre-performance meeting is required in order to ensure that all involved personnel are aware of the precautions, containment practices, facilities, protective devices, disposal and decontamination procedures, and other necessary safety procedures that must be followed to protect personnel, and prevent accidental animal exposure to the hazardous material. The IACUC may also require a pre-performance meeting whenever an applicant PI proposes infrequently used species or techniques, or proposes surgical or teaching procedures involving anesthetized mammals. This pre-performance meeting may take place before or after IACUC approval of the protocol at the discretion of the IACUC, but must occur before initiation of the IACUC approved activity, and ensures that appropriate personnel, equipment, supplies, recordkeeping, and practices of animal care and use have been identified and will be employed. Material Safety Data Sheets, available through the Health and Safety Officer, must be reviewed by the user and filed in their departmental file.

Transportation, Relocation, or Reassignment of Animals

All transportation of animals, including intra-institutional transportation, should occur only when essential since any transit time introduces risks of exposure to environmental extremes, crowding, infectious agents, and possible zoonoses, which can affect animal and public welfare, and the consistency of results.

Animal Identification and Medical Records

Adequate animal care includes adequate animal medical record keeping. Although veterinary and animal care staff may make contributions to research protocols involving animals, the PI and associated research staff named on an IACUC-approved protocol serve as the primary attending clinicians of all animals housed on behalf of that protocol. As such, research staff are responsible for providing adequate clinical oversight of the animals, for anticipating and alleviating animal pain or discomfort whenever possible, and for maintaining complete animal medical records, with entries made in sufficient detail and at intervals specified by these IACUC Policies.

Animals must be identified on cage cards and should include the date of arrival, source, and physical findings, including species, sex, weight or age, and should include any identifying features, and/or permanent markings. Additionally, records must be kept that summarize an impression of overall condition, food and water intake.

Studies of Wild Animals In or From Natural Settings

The IACUC acknowledges that the federal government, including the National Science Foundation (NSF) requires its grantees to comply with the *Guide* and the *PHS Policy*. The *Guide* and *PHS Policy* charge the IACUC with oversight of the experimental procedures, and methods of handling, care, and use of free-living wild vertebrate animals. These activities must comply with the *U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training* as outlined in Appendix D of the *Guide*.

Studies of wild animals in natural settings (referred to herein as “field studies”) contribute to the conservation and well being of wild animals. Efforts to protect indigenous animal species often are dependent on an ability to learn which species are present, the nature of their habitat, distribution, ecology, anatomy, physiology, and reproduction. The College affirms that the respectful use and treatment of all animals is both an ethical and scientific necessity.

The IACUC recognizes that free-living wild vertebrate animals comprise a considerable range of diversity represented by over 20,000 species of fishes, over 8,000 species of amphibians and reptiles, and over 9,000 species of birds, with varied and often poorly known behavioral, physiological and ecological characteristics.

The IACUC recognizes that field studies often involve many species, some of which may be unanticipated or even unknown to science before the onset of the study.

The IACUC recognizes that it is not always possible to predict at the initiation of field studies all potential observation or collection opportunities, the number of animals to be encountered, the species to be encountered, or the effects of research procedures.

The IACUC recognizes that no concise or specific compendium of approved methods for field research encompassing all species, settings, and methods is available, practical, or even desirable.

The IACUC recognizes that there is considerable variability among taxa of wild vertebrates in terms of their basic needs and how they should be handled, and that the PI is often an authority on the biology of the species under study, and the techniques appropriate for the conduct of the proposed study.

The IACUC recognizes that the number of specimens required for a field investigation will vary greatly, depending upon the questions being explored, that field studies require larger samples than laboratory studies because field have less control over biotic and abiotic conditions that produce variation than laboratory studies, and that a relatively large number of specimens may actually represent only a very small percentage of the population.

The IACUC recognizes that state and federal wildlife agencies review applications for permits for their scientific merit and their potential impact on native populations, and issue permits that authorize the taking of specified numbers of individuals, the taxa and methods allowed, the period of study, and often other restrictions designed to minimize the likelihood that an investigation will have deleterious effects.

The IACUC recognizes that pain perception by many species of vertebrate animals may not be uniform over the various portions of their bodies, and that broad extrapolation of pain perception across taxonomic lines may not be appropriate.

The IACUC recognizes that the collection of live animals and their preparation as museum specimens is necessary for research and teaching activities in systematic zoology. Each animal collected should serve as a source of information on many levels (e.g., behavior, morphology, genetics), to assure the maximum utility of each animal and to minimize the need for duplicate collecting. Formalin fixation of dead specimens is acceptable; however killing unanaesthetized specimens by immersion in a formalin solution is unacceptable.

IACUC membership includes a biologist who can provide the IACUC with an understanding of the nature and impact of the proposed field investigation, the housing and care of the species to be studied, and the risks associated with maintaining wild vertebrates in captivity. XXIII.15. The PI must assure the IACUC that their field study and laboratory use of wild animals will be in accordance with the *Acceptable Field Methods in Mammalogy, Guidelines for the Capture, Handling, and Care of Mammals* viewable at <http://www.mammalsociety.org/committees/comanimalcareuse/98acucguidelines.PDF>, the *Guidelines for Use of Fishes in Field Research* viewable at <http://www.research.usf.edu/cm/pdf/Guidelines%20for%20the%20Use%20of%20Fishes.pdf>, the *Guidelines for Use of Live Amphibians and Reptiles in Field Research* viewable

at http://www.research.usf.edu/cm/pdf/ASIH_HACC_Amphib_Reptile_Guide.pdf , and the *Guidelines to the Use of Wild Birds in Research* viewable at http://www.research.usf.edu/cm/pdf/Wild_Bird_Guidelines.pdf, DEA regulations, IACUC Policies, PHS policy, AWA, and Guide.

The PI assures the IACUC in their *Application* that the taxa chosen are well suited to answer the research questions posed. The PI must make an effort to understand the population status of the taxa to be studied prior to their capture or removal, and ensure that the number of animals used or removed from the wild will be the minimum necessary for accomplishing the goals of the study. The PI must ensure that procedures will avoid or minimize distress to the animals consistent with sound research design. Procedures that cause more than momentary or slight distress to the animals must be performed with appropriate sedation, analgesia, or anesthesia, except when scientifically justified by the PI in writing and approved by the IACUC.

Methods of euthanasia must be consistent with the methods recommended by the American Society of Mammalogists, American Society of Ichthyologists and Herpetologists, American Fisheries Society, American Institute of Fisheries Research Biologists, Herpetologists' League, Society for the Study of Amphibians and Reptiles, Ornithological Council, and the AVMA Guidelines on Euthanasia – June 2007. The PI must have knowledge of all regulations pertaining to the animals under study, have obtained all permits necessary for carrying out the proposed studies prior to their initiation, and submit copies of all permits to the IACUC when reporting episodes of wild animal use. The PI must ensure that studies conducted outside of the United States will also be in accordance with all wildlife regulations of the country in which the research will be performed. Animals of endangered or threatened taxa must not be removed from the wild, nor imported or exported except in compliance with applicable regulations. All wild animals are potentially hazardous to research staff, either from traumatic injury, infectious disease, venoms, or poisons. Staff working in the field should maintain current tetanus immunization status, and those working with carnivores or bats should maintain current rabies immunization status. The PI should maintain records of the staff's immunizations. The PI must ensure that the design of the field study does not compromise the health and safety of other animals in the area, or the staff working in the field.

The PI and associated research staff must be familiar with the animals to be studied and their response to disturbance, sensitivity to capture and restraint, and requirements for captive maintenance to the extent that these factors are known or applicable to the study.

The PI and associated staff must have adequate experience, training, and knowledge regarding the housing, feeding, and care requirements of the animals to be studied, to the extent that these factors are known or applicable to the study, and the PI must direct such activities in the field. The living conditions of animals held at field sites must be appropriate for the involved animals, and contribute to their health and well-being.

The IACUC acknowledges that although field studies in their simplest form consists of direct observation of free-ranging animals under natural conditions, the objectives of most field studies mandate that individual animals be captured one or more times. Capture techniques that have minimal impact on the animal, and are environmentally benevolent should be used whenever possible. Whenever feasible, the potential for return to the natural environment must be incorporated into the sampling design. Acceptable capture techniques that have more than a minimal impact on fish include gill netting, electrofishing, the use of ichthyocides, and the use of hooks or spears; on amphibians and reptiles include trapping and netting; on birds include netting and trapping; and on mammals include trapping, netting, and capture darts which deliver an immobilizing drug. Capture devices such as nets and traps must be checked frequently to prevent animal injuries or mortality.

Restraint procedures of wild animals, including confinement, physical restrictions, or drug-induced immobilization must be those that cause the least amount of restraint necessary, that can be accomplished in the shortest period of time, that reduce or eliminate contact between the handler and the animal, and that minimize hazards to personnel, whenever possible within the constraints of study design.

The IACUC acknowledges that the marking of wild animals is a basic method of many field studies, which provides a way of determining the movements, abundance, and population dynamics of wild animals. PIs must carefully consider the nature and duration of restraint required by the marking technique, the amount of tissue affected, whether distress is momentary or prolonged, whether the animal after marking will be at greater than normal risk, whether the animal's desirability as a mate is reduced, and whether the risk of infection or abscess formation is minimal. Acceptable marking techniques of fish include fin-clipping, freeze branding, electrocauterization, tagging, radiotelemetry, or radioisotopes; of amphibians and reptiles include scale clipping, banding, tagging, shell marking, radiotelemetry, tattooing, electrocauterization, branding, or radioisotopes; of birds include banding, dyes, collars, tagging, radiotelemetry; of mammals include tagging, banding, radiotelemetry, tattooing, spot-shaving, radioisotopes, or freeze branding. The PI must consider the potential for pain and discomfort associated with each of these techniques, and whether they should be preceded by a general or local anesthetic, and/or followed by a topical antiseptic. Maintenance of wild animals in their natural setting must incorporate, as far as possible, those aspects of the natural habitat deemed important to the survival and well-being of the animals. Adequacy of maintenance must be judged by monitoring factors such as appearance, activity level, general behavior, rate of growth, change in body weight, breeding success, and rate of survival. Nutritionally balanced diets must be provided, or natural foods should be duplicated as closely as possible. Natural light, ventilation, temperature, and humidity conditions should be provided, unless these are factors under investigation.

Methods used for sampling tissues or specimens from wild animals should be designed to obtain the maximal amount of scientific data, with the least amount of animal handling, restraint, and distress, involving a minimum number of animals. Methods that

cause more than slight or momentary pain or discomfort require the use of appropriate anesthetics and/or analgesics. Aseptic sampling techniques and surgical procedures must be utilized.

PIs must consider whether antimicrobial drugs should be administered following sampling or surgical procedures. The applicant PI is referred to IACUC Policy regarding appropriate aseptic surgical techniques.

Whenever wild-caught animals are brought into a laboratory, they must be maintained under conditions that comply with the *Guide*, unless the purpose of the study requires the simulation of the natural setting, or when the wild animals housed in the laboratory require conditions other than those prescribed by the *Guide*. In such instances, the design of enclosures and methods of care must accommodate salient features of the animal's ecology, morphology, physiology, and behavior. PIs should consider whether newly captured animals that are brought to the laboratory be quarantined from resident animals for a period of at least 30 days.

Whenever practical and ecologically appropriate, as soon as possible after capture, upon completion of the study wild-caught animals should be released at the site of the original capture, if their ability to survive has not been impaired, if they can be expected to function normally, when conditions are conducive to their survival, and when their release is not likely to spread pathogens, unless laws or regulations prohibit release, or release may be detrimental to the well being of the existing native animals. All live animal activities conducted by College faculty, students, or staff, or supported by College funds, must be proposed to, and approved by the IACUC prior to the initiation of that activity, regardless of where it will be performed.

Conflict of Interest

No member of the IACUC may participate in the review, discussion, or vote of a project or activity in which he/she has a conflicting interest. The IACUC member will be requested to leave the room prior to the discussion, review, and vote of the project and cannot be counted toward the quorum. The excused member can be recalled to provide information that is requested by the IACUC.

The IACUC Chairperson will ask IACUC members at the beginning of each meeting if any have a conflicting interest in the business to be conducted that day. In addition, the IACUC administrative support staff will provide the IACUC Chairperson with a list of IACUC members who are identified as participants in projects/activities being reviewed or discussed during the convened meeting. The IACUC Chairperson will ask all members with conflicting interests to leave at the appropriate time during the proceedings.

Public Records

SUNY Potsdam's IACUC is concerned about the environment. Therefore, it has in place a paper reduction policy. The IACUC will conserve paper whenever possible and will rely instead on electronic communications. The College well understand the federal requirement for record keeping and will maintain paper records whenever it is necessary. Meeting minutes will serve as the official source of protocol votes and of other IACUC activities.

University research records are subject to both federal and state laws. Requests for information under the federal Freedom of Information Act (FOIA) should be made to the Research and Sponsored Programs Office.

Collaborations

When research involving animals will take place at collaborating site(s) or other performance site(s) that have their own IACUC, the SUNY Potsdam Principal Investigator should provide this information in a cover letter that accompanies the application. In these cases, the protocol and IACUC approval from the collaborating site(s) will be acceptable, provided all supporting correspondence is also provided.

Training and Education for Investigators and Staff

Federal regulations require institutions to ensure that individuals caring for or using animals for research or educational purposes are qualified to do so. Personnel caring for animals shall be appropriately trained. Training of individuals is provided as needed in several ways. Investigators (including faculty and students), technical personnel, and trainees who perform animal anesthesia, surgery, or other experimental manipulations must be qualified through training or experience to accomplish these tasks in a humane and scientifically acceptable manner and as applicable to the specific species and procedures to be used.

Any person using animals in a research or teaching project, IACUC members and animal care staff are required to participate in an on-line education module, accessed through the Collaborative Institutional Training Initiative (CITI).

This education program consists of several modules. The two basic modules are:

Working with the IACUC – the basic course required for investigators and research staff who plan to use laboratory animals or plan to supervise such work at SUNY Potsdam. Investigators and research staff are also required to choose appropriate species-specific module.

Essentials for IACUC Members - This module is designed for new IACUC or current IACUC members.

Other modules are available and may be required dependent on the type of research being done. Researchers will be told if other modules will be required.

A completion certification will be provided to each participant and is valid for 3 years; opportunities for continuing education will be provided on an annual basis.

Informal or “On-The-Job” Training

Individuals using animals for the first time or employing unfamiliar techniques are provided on the job training these procedures by the faculty in charge of the animal facility and by the Veterinarian on a regular basis during his/her regular visits.

Occupational Health Program

The occupational health and safety program for personnel involved in the care and use of laboratory animal is based on risk assessment and includes all personnel involved in the care and/or use of laboratory animals.

The most common risks present while working in the animal facilities include:

1. Animal bites and scratches
2. Animal allergens from saliva, urine, blood, dander or fur
3. Zoonotic diseases, i.e. Salmonellosis, Yersinia enterocolitica The minimum procedures required, as applicable, to minimize those risks include:
 1. Training on proper animal handling techniques;
 2. Following posted personal protective clothing and equipment requirements;
 3. Washing hands after handling animals or related equipment
 4. Using disposable supplies whenever possible;
 5. Sanitizing lab work areas after animal work.

The health program for personnel who work in the animal facilities is as follows:

1. All animal care employees of Potsdam College are encouraged to undergo a complete physical examination at the time of employment. Including history of any animal allergies. Animal care employees are encouraged to receive a follow up physical examination by a physician on an annual basis. Animal care employees are encouraged to inform their personal physician that they work with animals. A copy of physical examination form shall be provided to SUNY Potsdam upon request.
2. The Principal Investigator shall provide staff with a list of the immunizations to be considered in relation to the type of research being done. All animal care employee's are encouraged to maintain a current tetanus immunization with a booster every ten years. Staff working with the display animals are encouraged to receive a Hep B immunization. The PI is responsible for maintaining records of the staff's immunizations and the record will be provided to SUNY Potsdam upon request.
2. Principal Investigators shall provide all employees with training concerning the appropriate procedures for serious and life-threatening emergencies. Where

- applicable, investigators are expected to maintain a risk assessment form indicating their responsibilities of obtaining pertinent training and in adhering to correct procedures in handling biohazardous substances (e.g., radioisotopes, chemical agents, infectious agents).
3. Principal Investigators shall provide all employees with information regarding hazards to health, such as zoonoses and allergies that may be caused by contact with animals.
 4. Principal Investigators shall provide all employees with protective equipment, where appropriate, when working in the animal facilities at SUNY Potsdam. Protective equipment may include cloth overalls, disposable coveralls, disposable gowns, plastic gowns, rubber gloves, heat insulated gloves, sterile gloves, rubber boots, foot covers, surgical masks, respirators, face shields, ear protectors, and hats, as appropriate to the circumstance.
 5. Supervisors/Principal Investigators shall annually maintain a personnel risk assessment report and the record will be provided to SUNY Potsdam upon request.
 6. Any injuries occurring on the job will be reported immediately to the next highest supervisor. When a faculty, staff, or paid student employee has incurred a work-related injury, the injured person is to be referred directly to the University Police (315 267-2222).