



DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

FOR US POSTAL SERVICE DELIVERY:

Office of Laboratory Animal Welfare
Division of Assurances
6700B Rockledge Drive
Suite 2500, MSC 6910
Bethesda, Maryland 20892-6910
Home Page: <http://grants.nih.gov/grants/olaw/olaw.htm>

FOR EXPRESS MAIL:

Office of Laboratory Animal Welfare
Division of Assurances
6700B Rockledge Drive, Suite 2500
Bethesda, Maryland 20817
Telephone: (301) 496-7163

December 12, 2019

Reference: Assurance **D16-00921** (A4732-01)
Approval of Assurance

Ockle Johnson, Ph.D.
Interim Provost and Vice President for Academic Affairs
Keene State College
229 Main Street
Keene, NH 03435

Dear Dr. Johnson,

I am pleased to inform you that the Office of Laboratory Animal Welfare (OLAW) reviewed and approved your institution's Animal Welfare Assurance (Assurance) that was submitted in accordance with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Policy), revised 2015.


Your Assurance, identification number **D16-00921 (A4732-01)**, became effective on **December 12, 2019** and will expire on **September 30, 2023**. Please include the Assurance number on all correspondence to OLAW. A copy of the signed Assurance document is enclosed. The signature page provides verification of approval by OLAW and specifies the period during which your institution's Assurance is effective.

The Assurance is a key document in defining the relationship of your Institution with the PHS. It sets forth the responsibilities and procedures of your Institution regarding the care and use of laboratory animals. Among the important elements of the Assurance, I would especially call your attention to the reporting requirements that are essential for continued compliance with the PHS Policy. Please note that an Annual Report to OLAW is required at least once every 12 months. Annual Reports for the previous calendar year are due by January 31st.

If I may be of any further assistance, please do not hesitate to contact me.

Sincerely,

12/12/2019

 Venita B. Thornton

Signed by: PIV
Venita B. Thornton, DVM, MPH
Senior Assurance Officer
Office of Laboratory Animal Welfare

Enclosure: As stated
cc: IACUC Chair

Keene State College

Animal Welfare Assurance for Domestic Institutions

I, Dr. Ockle Johnson, Interim Provost and VP of Academic Affairs, as named Institutional Official for animal care and use at Keene State College (KSC), provide assurance that this Institution will comply with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Policy).

Applicability of Assurance

This Assurance applies whenever this Institution conducts the following activities: all research, research training, experimentation, biological testing, and related activities involving live vertebrate animals supported by the PHS, NSF, or other agencies and conducted at KSC, in the field, or at another institution as a consequence of the subgranting of a PHS or NSF supported activity. Faculty, staff and students at KSC may conduct research and/or teaching activities using on campus housed lower vertebrates (fish, amphibians and reptiles) and field-based activities involving live vertebrate animals. This Assurance covers only those facilities and components listed below.

- A. The following are branches and components over which this Institution has legal authority, included are those that operate under a different name: Keene State College
- B. The following are other institution(s), or branches and components of another institution: None

Institutional Commitment

- A. This Institution will comply with all applicable provisions of the Animal Welfare Act and other Federal statutes and regulations relating to animals.
- B. This Institution is guided by the "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training."
- C. This Institution acknowledges and accepts responsibility for the care and use of animals involved in activities covered by this Assurance. As partial fulfillment of this responsibility, this Institution will ensure that all individuals involved in the care and use of laboratory animals understand their individual and collective responsibilities for compliance with this Assurance, and other applicable laws and regulations pertaining to animal care and use.
- D. This Institution has established and will maintain a program for activities involving animals according to the *Guide for the Care and Use of Laboratory Animals* (Guide).
- E. This Institution agrees to ensure that all performance sites engaged in activities involving live vertebrate animals under consortium (subaward) or subcontract agreements have an Animal

Welfare Assurance and that the activities have Institutional Animal Care and Use Committee (IACUC) approval.

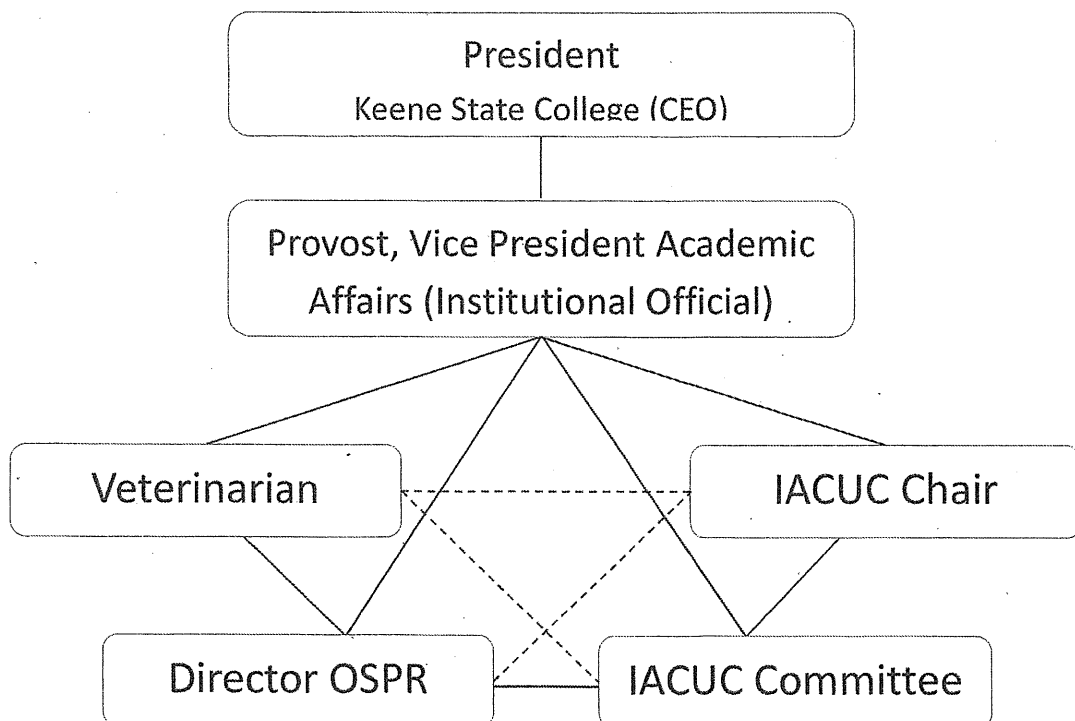
Institutional Program for Animal Care and Use

- A. The lines of authority and responsibility for administering the program and ensuring compliance with the PHS Policy are as follows:

The president (CEO) of the KSC has delegated authority to the provost, vice president for academic affairs (P/VPAA) to serve as the Institutional Official (IO). The IO reports directly to the president. The IO is the official responsible for signing the Assurance and any Assurance amendments and annual reports to the Office of Laboratory Animal Welfare and the U.S. Department of Agriculture.

This institution has established an Institutional Animal Care and Use Committee (IACUC), which is qualified to oversee the institution's animal program, facilities, and procedures. The Chair of the IACUC reports directly to the IO on all matters pertaining to the animal care and use program and works with the Office of Sponsored Projects and Research (OSPR) for ensuring the proper execution of the responsibilities of the Committee. The OSPR is responsible for providing the Institution's administrative support to the committee. The college has an attending veterinarian (AV) who reports directly to the IO and may communicate directly with the OSPR and IACUC. IACUC members may communicate directly with the IO, AV, Chair and OSPR regarding any IACUC related matters.

An organizational chart is provided below.



- B. The qualifications, authority, and percent of time contributed by the veterinarian(s) who will participate in the program are as follows:

Dr. Sue Piscopo, D.V.M., Ph.D. is the Veterinarian who participates in the IACUC. Dr. Piscopo contributes about 2% of her time to the program.

B. S. in Animal Science, University of Vermont, magna cum laude, 1987; D.V.M., North Carolina State University, 1991; Ph.D., Physiology and Toxicology, Internship in Veterinary Medicine, North Carolina State University, 1994; Member of the New Hampshire Veterinary Medical Board with permission to serve as the attending veterinarian for the Keene State College IACUC.

Authority: Dr. Piscopo has *direct* program authority and responsibility for the Institution's animal care and use program including access to all animals.

Time Contributed to Program: Dr. Piscopo serves on a consulting basis on problems of health of the animals and, together with the other members of the Committee, on inspection of the animal housing, research, and teaching facilities at Keene State College. Dr. Piscopo is present at all meetings of the IACUC and is active in setting policy. Approximately two percent (2%) of her time is given to the functions of the IACUC.

We have excellent, long-standing working relations with Dr. Piscopo which permit us to avail ourselves of her services on an "as needed" basis rather than in terms of some fixed percentage of her time. In the event Dr. Piscopo is not available, Dr. Ashton Kane, D.V.M. from Westside Animal Hospital, 670 Park Avenue, Keene, NH 03431 will act in her stead. Dr. Kane graduated from Tufts University School of Veterinary Medicine in 1993.

Emergency contact numbers (home, work, and cell) for all veterinarians, as well as other emergency contact personnel, as conspicuously posted in all animal facilities. The College's Department of Campus Safety also maintains a list of emergency contact personnel which includes the list of all available veterinarians.

- C. The IACUC at this Institution is properly appointed according to PHS Policy IV.A.3.a. and is qualified through the experience and expertise of its members to oversee the Institution's animal care and use program and facilities. The IACUC consists of at least 5 members, and its membership meets the composition requirements of PHS Policy IV.A.3.b. Attached is a list of the chairperson and members of the IACUC and their names, degrees, profession, titles or specialties, and institutional affiliations.
- D. The IACUC will:
- 1) Review at least once every 6 months the Institution's program for humane care and use of animals, using the *Guide* as a basis for evaluation. The IACUC procedures for conducting semiannual program reviews are as follows:

- a. The semiannual program review is conducted at a convened meeting (regular or special). The semiannual program review addresses the following areas of the animal care and use program: Occupational Health and Safety; Veterinary Care Program; PHS Policy/Animal Welfare Assurance; The Guide; and Training Program.
 - b. Each member receives or has received a copy of the *Guide*, the semiannual program and facilities inspection report, IACUC's policies and procedures manual (containing their charges and responsibilities), and KSC's Institutional Animal Care and Use Program Evaluation checklist (modeled after that suggested by the Office of Laboratory Animal Welfare [OLAW]) which reviews all aspects of the animal use program including administration.
 - c. In addition, agenda items for scheduled semiannual IACUC meetings include program review, discussion, and/or recommended revisions to improve the level of care and to insure compliance.
- 2) Inspect at least once every 6 months all of the Institution's animal facilities, including satellite facilities and animal surgical sites, using the *Guide* as a basis for evaluation. The IACUC procedures for conducting semiannual facility inspections are as follows:
- a. At scheduled intervals, at least once every six months, each facility or area will be completely inspected by no less than two (2) voting IACUC members and the results discussed at a convened meeting. All members of the IACUC will be invited to participate in the facilities inspection.
 - b. Included in the facilities inspections are inspections of animal care records and random interviews with investigators holding active animal use protocols and other laboratory staff involved with animal care and utilization.
 - c. Any item not in compliance with the *Guide* will be recorded and submitted to the IO along with recommended corrective actions; major deficiencies will also be reported to OLAW.
 - d. If significant deficiencies are found which threaten animal health, the Attending Veterinarian is to be notified immediately.
 - e. The date(s) of each inspection will be included with the annual Assurance Document update. KSC's semiannual facilities inspection is normally conducted in conjunction with their semiannual program evaluation.
- 3) Prepare reports of the IACUC evaluations according to PHS Policy IV.B.3. and submit the reports to the Institutional Official. The IACUC procedures for developing reports and submitting them to the Institutional Official are as follows:
- a. The Chair prepares a draft report based, in part, upon the facilities inspection subcommittee reports and applicable program review results.
 - b. At a convened meeting, the draft report along with any additional facilities inspection or program review information, is discussed and compiled into a final report.
 - c. All departures from the *Guide* (including those approved by the IACUC) will be identified specifically and the reasons for the departure will be stated. Departures will be reported for each six month period during which an IACUC approved departure is in place.
 - d. Deficiencies identified during the facilities and program reviews are detailed in the report with recommended corrective actions and deadlines for each correction. During a convened meeting, deficiencies are classified as either major, usually those directly

- affecting animal health, or minor in the semiannual report by the IACUC during the convened meeting.
- e. This report, along with any minority opinions and/or recommendations, is signed by a majority of the IACUC to indicate approval and forwarded to the IO.
- 4) Review concerns involving the care and use of animals at the Institution. The IACUC procedures for reviewing concerns are as follows:
 - a. Concern(s) involving the care and use of animals may be submitted to the IO, OSPR, IACUC Chair or any member of the IACUC. Concerns may be raised by faculty members, staff, or students. Several options are available for reporting concerns regarding animal care and use and are outlined in the training. Members of the college community are encouraged to report their concerns through normal lines of communication. They may report their concerns anonymously to the IACUC Chair or through the KSC Campus Safety Silent Witness program at <http://www.keene.edu/campusafety/silentwitnessform.cfm>. This information is prominently posted in the animal housing facilities. The Director of Campus Safety will notify the IACUC Chair in the event a report of concern is filed. Any employee, student, or agent of KSC reporting a concern will be protected against reprisal.
 - b. All such concerns will be presented to the IACUC for review, discussion, and suggested resolution, all of which will be recorded and kept on file. Every concern of which the IACUC is made aware will receive attention and responses will be documented.
 - c. All appropriate parties, including the IO and appropriate (e.g., Federal) oversight agencies, will be made aware, in writing, of the outcome(s).
 - d. Dependent upon the nature of the concern, the manner expressed and by whom, the IACUC or the IO, will respond to those initiating the concern(s).
 - e. Protection from reprisals for individuals reporting such concerns are assured through KSC's policy as required by the AWA.
 - 5) Make written recommendations to KSC's IO regarding any aspect of the Institution's animal program, facilities, or personnel training. The Chair of the IACUC, after consulting with the committee makes written recommendations to the Institutional Official and is responsible for appropriate follow-up, and records will be kept of all aspects thereof.
 - 6) Review and approve, require modifications in (to secure approval), or withhold approval of PHS-supported activities related to the care and use of animals according to PHS Policy IV.C.1-3. The IACUC procedures for protocol review are as follows:
 - a. All personnel proposing to use a live animal in research, training, education, experimentation, biological testing or for related purposes must submit a completed IACUC application form (hereafter referred to as protocol). The form is on the OSPR webpage at <http://www.keene.edu/office/ospr/>. The PI must obtain veterinary consultation by the AV before protocol is submitted to the IACUC. The protocol and attachments are then submitted by the PI to the OSPR. Everyone named on the protocol including students, lab technicians, visiting scholars, and affiliates is required to complete the required training courses and on-line training modules appropriate for the planned work. Everyone named on the protocol must complete all EHS requirements.

- b. Applications are assigned an IACUC number and logged into the OSPR database. Modifications and continuing review applications are linked to the relevant protocol and logged into the database.
- c. The application will be given a preliminary review. The OSPR confirms that applications are complete, verifies completion of appropriate educational modules and completion of appropriate training for each named member of the research team. Final IACUC approval will be withheld until these requirements are satisfied. During this process the PI may be asked to make administrative revisions. After the protocol has undergone administrative evaluation and, administrative revisions have been made, if necessary, the protocol is distributed to the IACUC according to the IACUC review process described below.
- d. All protocols at KSC are subject to full committee review. Full review of all protocols takes place at convened meetings of the IACUC with a quorum present. IACUC members are notified in writing through email correspondence of all the agenda items for the meeting and are sent protocols and supporting documentation for review at the same time as the agenda is sent, if possible. Researchers are invited to attend the full committee meeting at a specified time to discuss their protocol application, answer questions, and respond to any concerns.
- e. A member of the IACUC may not participate in the IACUC review or approval of an animal use protocol in which the member has direct or perceived conflict of interest except to provide information requested by the IACUC. A member of the IACUC who has a conflicting interest is recused from the meeting before deliberation on actions begin, is absent for the vote, and does not contribute to the quorum. The PI may also request that a member be excluded from the review of the protocol, provided there is evidence to substantiate the claim that a conflict of interest exists. In such cases, the IACUC, minus the member in question, will determine whether there is a conflict of interest according to the IACUC's Conflicts of Interest Policy. In the event of the recusal of an IACUC member quorum will be maintained for the full committee review.
- f. Each protocol is discussed at the full committee meeting. If the PI attended the meeting to answer questions, he/she is asked to leave after the IACUC asks for any clarifications. Any questions that the committee might raise that were not resolved by the PI are recorded and these are forwarded to the PI as a concerns memo. The items in the concerns memo must be addressed before an approval may be secured. A motion is made and seconded to determine the outcome of the review by the IACUC members present. A simple majority vote of the quorum present determines the committee's decision to approve, require modifications to secure approval, table, or withhold approval. Dissenting views are recorded in the minutes. Possible outcomes of the IACUC full board review are:
 - i. Approved- IACUC Chair issues a written approval memo. The signed and dated PI Assurance page must be on file before the work may begin.
 - ii. Requires Modifications to Secure Approval- indicates that the IACUC needs additional modification(s) to the protocol. This decision means the full committee has determined that the revised protocol needs non-substantive modifications and final approval can be secured when the IACUC modifications have addressed the committee's concerns. The IACUC conducts FCR procedures for the review of required modifications (see Part III.6.g). When substantive information is lacking

from a protocol, the committee may have questions requiring a response from the PI. If all revisions have been made and reviewed by the full committee, then the IACUC Chair issues a written final approval memo. The signed and dated PI Assurance page must be on file before the work may begin.

- iii. Tabled, Requires Significant Revisions- indicates that the IACUC has determined that the protocol is missing substantive information necessary to make a decision or a potential serious animal welfare concern has been identified. The PI is notified by the Chair in the form of a memo or phone call and advised as to his/her options. For a protocol with Tabled-Requires Significant Revisions, the PI is provided with a written outline of the problems or concerns to use as a guide for resubmission to the IACUC.
 - iv. Disapproved- indicates that there are significant concerns and the IACUC cannot approve the research as proposed in the protocol. An explanation and recommendations will be provided in writing to the PI.
 - g. All protocol approvals finalized after an IACUC meeting are reported on the agenda for the following meeting so that any member may raise questions about an approval if necessary. Animals may not be ordered until the protocol has received final approval and the PI has received an Approval Memo from the IACUC.
 - h. If a PI wishes to appeal an IACUC decision, it must be done in writing to the IACUC Chair, who will bring it to the next scheduled meeting for review. The PI will be informed in writing of the outcome within five working days of the IACUC meeting at which it was reviewed. The IACUC decision regarding an appeal is final. The IO is not authorized to overturn IACUC decisions.
- 7) Review and approve, require modifications in (to secure approval), or withhold approval of proposed significant changes regarding the use of animals in ongoing activities as set forth in the PHS Policy IV.C. The IACUC procedures for reviewing proposed significant changes in ongoing research projects are as follows:

Proposed modifications must be submitted to the IACUC. Investigators are informed in writing that requested modifications may not be implemented until they have been approved by the IACUC. Significant modifications are subject to FCR as described in Part III.D.6. Minor modifications may be approved by the IACUC, IACUC Chair, or AV, or designee in OSPR according to the chart below. Investigators are informed of the decision in writing by the IACUC Chair or OSPR. The IACUC minutes contain notification of all actions approved as "Minor" or "Significant" modifications.

Proposed Modification	Significant Modification	Minor Modification
	IACUC FCR	Chair or AV
Number of animals used	Any addition to approved number of animals	
Study objectives	Any change(s) to study objectives	

Personnel	Change of PI	Change of personnel other than PI- training, OHSP, and all IACUC required qualifications of personnel added are verified
Funding Sources		Grant congruency verified
Change in species, addition of new species, or change in strain	Any change or addition in species or strain	
Duration, frequency, or number of procedures performed on an animal	Any change in the duration, frequency/ number of procedures performed on animal(s) or change of procedures that result in greater discomfort or greater degree of invasiveness	
Anesthetics, analgesics	Any change of anesthetic agent(s) or the use or withholding of analgesics	
Type of surgery	Change from non-survival to survival surgery or change from survival to non-survival surgery	
Route of administration of approved test article or agent	Change in route of administration	
Euthanasia method	Change in euthanasia method	
Test articles or agents (e.g., diet components; antigens; pharmaceuticals)	Change in test articles or agents	

- 8) Notify investigators and the Institution in writing of its decision to approve or withhold approval of those activities related to the care and use of animals, or of modifications required to secure IACUC approval according to PHS Policy IV.C.4. The IACUC procedures to notify investigators and the Institution of its decisions regarding protocol review are as follows:

When a determination is made by the IACUC regarding a protocol, the Chair prepares a letter that is sent to the PI, OSPR, and IO on behalf of the IACUC. When circumstances warrant, the Chair, or AV may contact the PI to discuss a determination; this is more likely with a determination to table or disapprove. A record of such actions is made in the next IACUC meeting's agenda, which is distributed to all IACUC members.

- 9) Conduct continuing review of each previously approved, ongoing activity covered by PHS Policy at appropriate intervals as determined by the IACUC, including a complete review at least once every 3 years according to PHS Policy IV.C.1.-5. The IACUC procedures for conducting continuing reviews are as follows:
 - a. Animal research and teaching protocols are approved for a three-year term regardless of the length of the project. After three years, if the project is to continue, the investigator must submit a new Animal Use Protocol Review Form for IACUC review in order to continue research activities. Check the "renewal" category on the form submitted. A "renewal" protocol undergoes the same FCR as described in Part III.D.6 as any other new protocol and it must incorporate all previous modifications or amendments made to the original protocol. Information should be submitted on the most recent form found on the OSPR website.
 - b. IACUC review of all animal use protocols must be conducted at least annually in accordance with the Animal Welfare Regulations. Investigators must submit the Annual Protocol Review & Continuation Form for IACUC review before the approval anniversary date at the end of the first and second year. If there are no significant changes to the protocol, the IACUC Chair or AV may approve the annual review and it is reported on the agenda for the next full IACUC meeting. The information provided on the form is reviewed for approval. Without IACUC approval for protocol continuation at the end of the first and second year, approval lapses and animals may no longer be used or ordered for the project.
 - c. Review of ongoing activities occurs as part of the semi-annual inspection.
 - d. The OSPR Director sends out reminders and Annual Protocol Review & Continuation Forms to PIs approximately three month in advance of the due date. This means the annual review form must be received by the IACUC Chair at least one month before the protocol expiration date in order to allow sufficient time to review the information, process the continuation, and avoid any interruptions to the project.

- 10) Be authorized to suspend an activity involving animals according to PHS Policy IV.C.6. The IACUC procedures for suspending an ongoing activity are as follows:
 - a. The IACUC may suspend an activity only after review of the matter at a convened meeting of the IACUC, and with the affirmative vote of a majority of the quorum present. If the IACUC suspends an activity, the Committee shall document the action, describing the reasons for the IACUC's action. In such an event, the IACUC Chair will promptly notify the investigator in writing of the Committee's decision to suspend approval of any given activity related to the care and use of animals. The IACUC Chair will have the additional responsibility of notifying, in writing, the AV, IO, OSPR appropriate oversight agencies, and include the reasons for the suspension, any applicable corrective action(s) and any further action(s) anticipated.
 - b. Investigators will have fifteen (15) business days from receipt of the suspension or termination statement to submit a written appeal to the IACUC. The appeal will not act to stay the decision to suspend or terminate the activity. If no appeal is made, the decision will stand as final. The IO or his/her designee, in consultation with the IACUC, will take the following actions: review the reasons for suspension; take appropriate remedial action and; report the corrective action to any sponsor funding that activity.

- c. A full committee review will be held within fifteen (15) business days of all appeal requests. The investigator will have the opportunity to meet with the committee and individuals with expertise on the subject or outside consultants may be called to aid in the appeal decision. The committee will issue a final decision within fifteen business days.
 - d. A written report will be presented to the IO within one week of such a meeting, and a copy of this report will be forwarded to OLAW. The IO will forward a full explanation of the incident and resulting action to OLAW, other funding agencies and the USDA as required.
 - e. The AV has the authority to immediately halt an ongoing activity that does not follow the *Guide*, Animal Welfare Act, PHS policy, New Hampshire State law, KSC policies, or requirements of funding agency. The AV sits as a voting member of the IACUC. The AV is additionally charged to make her own unannounced inspections of our facilities, husbandry procedures and other animal-related activities. The AV has the authority to immediately halt an ongoing activity that she deems unacceptable based on animal welfare considerations. In the event that the AV exercises this separate authority to halt any given activity, she will immediately notify the Investigator via a written notification of the halt. The AV will also notify all of the following individuals: the investigator, the IACUC Chair; the IACUC, the IO, and the OSPR Director and will follow up with a written report within 24 hours. The AV is to seek follow-up confirmation that the halt has been specifically noted by each of the university personnel listed above.
 - f. The IACUC Chair will convene a meeting of the full IACUC membership within 7 business days of any such halt by the AV. At this meeting, the IACUC membership will review the matter, hearing from all concerned parties, and then determine whether the animal-use protocol in question will be permitted to resume or if IACUC suspension is warranted. The IACUC will vote to permit activity to resume or for suspension of the activity only after review of the matter at a convened meeting and with the affirmative vote of a majority of the quorum present. The IACUC shall document the action taken, describing the reasons for the IACUC's action.
 - g. The IACUC Chair will promptly notify the investigator in writing of the Committee's decision. A written report will be presented to the IO within one week of such a meeting, and a copy of this report will be forwarded to OLAW. The IO will forward a full explanation of the incident and resulting action to OLAW, other funding agencies and the USDA as required.
- E. The risk-based occupational health and safety program for personnel in laboratory animal facilities and personnel who have frequent contact with animals is as follows:
- a. The Occupational Health Program policy is established and reviewed by EHS, Health Services, and IACUC, with input from the Principal Investigator. The program is overseen by EHS staff. Specifically, the KSC Environmental Health and Safety Manager and EHS Chief Medical Officer (Nurse Practitioner) attend both IACUC SAR and AR to review the program.
 - b. Risk assessment and management is overseen by the EHS and IACUC and defines substantial animal exposure, establishes category guidelines.
 - c. A medical health and risk assessment form that meets federal, state and local HIPPA regulations is completed by all personnel working in laboratory animal facilities or as key

personnel in an animal use protocol. The assessment is designed to identify personnel with allergies, pregnancy, immunocompromised status, or other pre-existing conditions and determine tetanus vaccine history and other vaccination history when necessary. When completed the confidential form is submitted by the applicant to the KSC EHS Chief Medical Officer (Nurse Practitioner) for review. The Chief Medical Officer will determine if the applicant is medically cleared for the assignment proposed, i.e., those who answer "no" to all health history questions and have the required vaccination(s), or if the applicant is required to schedule a physical exam with a licensed healthcare provider, i.e., those who answer yes to one or more health history questions or do not have the required vaccination(s). All personnel are expected to be immunized for tetanus. If a physical exam and/or vaccination is/are required, after the exam and/or vaccination, the healthcare provider will complete a written medical opinion, stating whether the examinee has any limitations or is restricted from participation in the proposed protocol and/or that the required vaccination(s) have been given. The Chief Medical officer notifies the applicant directly of their status and any necessary course of action (physical exam, vaccination). The Chief Medical Officer reports of the status of each applicant (cleared; not cleared, pending evaluation; or not cleared) to the IACUC Chair and the PI. No medical history information is reported to the IACUC Chair or PI. The Chief Medical Officer reports any change in the status of an applicant based on completion of any required actions to both the applicant, IACUC Chair, and PI.

- d. Risk education includes annual training updates for program participants. Training is available as needed for new projects and personnel. Training is reviewed by IACUC and conducted by EHS staff.
- e. Training is required for all personnel involved in laboratory animal use projects include: those involved in direct animal care; those having contact with viable animal tissues, fluids or wastes; and others who may have ancillary contact. A record of participation in training is kept by EHS. If a participant chooses to not participate (declines), a "Declined to Participate" record is logged. Such individuals will not be able to participate or to be collaterally associated with programs involving the care and use of animals including exposure to viable animal tissues or body fluids in either testing or waste handling.
- f. Participation in training shall occur before participant's exposure to animals, animal fluids and/or wastes. Projects involving laboratory animals will be reminded annually to review training for continuing personnel and requirements for new personnel. The IACUC review process will confirm program participation by investigators, staff, and ancillary personnel. Non-compliant individuals will be required to receive training immediately.
- g. Training topics will include but are not limited to: program function and coverage descriptions; personal hygiene; personal protective equipment, important zoonoses of laboratory animals; allergies, pregnancy, and immunocompetence; animal bites, scratches, and injury; important vaccination; and sources for additional information.
- h. Standard first aid and antiseptic practices are employed for minor abrasions, lacerations, etc. Additional health care for animal care and use personnel is provided through KSC Health Services, community EMT service and community hospital.
- i. Occupational health provisions include the reporting of injuries. Injury incident reports will include: date of incident, time of incident, type of injury, on-site treatment, referral for additional treatment – place and time. Injuries that may result in exposure to

potential concomitant infection – such as tetanus, Hepatitis B, Rabies – must seek immediate medical (physician) attention.


- j. Personal protective equipment such as laboratory coats, gloves and masks is available for all animal care workers. Eye protection and face shields are provided for working with acids or other hazardous chemicals or biological agents that may splash.
 - k. Appropriate personnel from the EHS will also review protocols, as necessary, if hazardous agents (e.g., radioactive materials) are involved. As required, all necessary training and follow-up will be provided by EHS staff.
- F. The total gross number of square feet in each animal facility (including each satellite facility), the species of animals housed there and the average daily inventory of animals, by species, in each facility is provided in the attached Facility and Species Inventory table.
- G. The training or instruction available to scientists, animal technicians, and other personnel involved in animal care, treatment, or use is as follows:
- a. KSC has mandatory education in the ethical principles and guidelines for the use of animals in research. The educational requirement applies to all KSC researchers and key personnel involved in research using animals, whether the research is funded or unfunded. IACUC members and OSPR staff are also required to complete the training. KSC offers the Collaborative Institutional Training Initiative (CITI) Laboratory Animal Welfare Courses to fulfill the College's Laboratory Animal Welfare education requirement.
 - b. In order to be able to conduct research involving use of laboratory animals, all personnel must have: current successful completion of CITI training certification (or equivalent); demonstrated proficiency in the handling and care of laboratory animals.
 - c. Education is based upon individual need and species used including: proper use of anesthetics, tranquilizers and pain relieving drugs and euthanasia; state and federal regulations, principles, policies and laws related to animal use and welfare; public interest issues including humane treatment of animals and the ethics of animal use in research and education; institutional and individual responsibilities in animal use including the function of the IACUC; how and to whom animal care deficiencies and concerns can and should be reported; research and testing methods that minimize the number of animals required to obtain valid results and limit animal pain or distress, and resources available for reducing the number of animals used.
 - d. The IACUC evaluates all research protocols for the potential to cause pain or distress and to ensure steps are taken to enhance animal well-being. Each painful event should have literature search results included in this section of the protocol application. Regulations mandate that a description of how the lack of alternative methods was verified for each potentially painful/distressing procedure. The alternatives search must be in the form of a narrative description and use two databases. Alternatives that demonstrate less painful/invasive procedures should be described. Search terms should include the name of the painful procedure together with words such as 'pain' 'distress' and 'alternatives'. Literature search documentation must include the following information: date the search was conducted; procedure in question; date range of the search; library databases searched; keywords used to search. The IACUC must be able to assess whether the search topics were appropriate and whether the search was

sufficiently thorough. Various databases are available depending on the type of research proposed, KSC requires at least two library database be searched. Databases available include: Altweb (<http://altweb.jhsph.edu/>); AGRICOLA (<http://agricola.nal.usda.gov/>); PubMed/Medline (<http://www.ncbi.nlm.nih.gov/pubmed/>); Cambridge Scientific (<http://www.csa.com/factsheets/objectsclust-agr-set-c.php>); TOXNET: (<http://toxnet.nlm.nih.gov/>)

- e. All animal users are encouraged to seek continuing education throughout their employment at the KSC. Training opportunities, when offered, (e.g., offerings by PRIM&R, AAALAS, etc.) are made available by the OSPR. Documentation of all individuals trained for animal use is maintained with the IACUC records at the OSPR.
- f. Upon appointment to the committee, IACUC members are provided with an orientation, background materials, resources and training. Members are provided with a copy of the PHS Policy, the *Guide*, the Arena/OLAW IACUC Guidebook, and a copy of the KSC Animal Welfare Assurance. Training opportunities, when offered, (e.g., offerings by PRIM&R, AAALAS, etc.) are made available by the College OSPR.

Institutional Program Evaluation and Accreditation

All of this Institution's programs and facilities (including satellite facilities) for activities involving animals have been evaluated by the IACUC within the past 6 months and will be reevaluated by the IACUC at least once every 6 months according to PHS Policy IV.B.1.-2. Reports have been and will continue to be prepared according to PHS Policy IV.B.3. All IACUC semiannual reports will include a description of the nature and extent of this Institution's adherence to the PHS Policy and the *Guide*. Any departures from the *Guide* will be identified specifically and reasons for each departure will be stated. Reports will distinguish significant deficiencies from minor deficiencies. Where program or facility deficiencies are noted, reports will contain a reasonable and specific plan and schedule for correcting each deficiency. Semiannual reports of the IACUC's evaluations will be submitted to the Institutional Official. Semiannual reports of IACUC evaluations will be maintained by this Institution and made available to the OLAW upon request.

This Institution is Category 2 — not accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC) . As noted above, reports of the IACUC's semiannual evaluations (program reviews and facility inspections) will be made available upon request.

Recordkeeping Requirements


- A. This Institution will maintain for at least 3 years:
 1. A copy of this Assurance and any modifications made to it, as approved by the PHS
 2. Minutes of IACUC meetings, including records of attendance, activities of the committee, and committee deliberations
 3. Records of applications, proposals, and proposed significant changes in the care and use of animals and whether IACUC approval was granted or withheld
 4. Records of semiannual IACUC reports and recommendations (including minority views) as forwarded to the Institutional Official, Dr. Ockle Johnson
 5. Records of accrediting body determinations

- B. This Institution will maintain records that relate directly to applications, proposals, and proposed changes in ongoing activities reviewed and approved by the IACUC for the duration of the activity and for an additional 3 years after completion of the activity.
- C. All records shall be accessible for inspection and copying by authorized OLAW or other PHS representatives at reasonable times and in a reasonable manner.

Reporting Requirements

- A. The Institutional reporting period is the calendar year (January 1 – December 31). The IACUC, through the Institutional Official, will submit an annual report to OLAW by January 31 of each year. The annual report will include:
 - 1. Any change in the accreditation status of the Institution (e.g., if the Institution obtains accreditation by AAALAC or AAALAC accreditation is revoked)
 - 2. Any change in the description of the Institution's program for animal care and use as described in this Assurance
 - 3. Any change in the IACUC membership
 - 4. Notification of the dates that the IACUC conducted its semiannual evaluations of the Institution's program and facilities (including satellite facilities) and submitted the evaluations to the Institutional Official, Dr. Ockle Johnson
 - 5. Any minority views filed by members of the IACUC
- B. The IACUC, through the Institutional Official, will promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to:
 - 1. Any serious or continuing noncompliance with the PHS Policy
 - 2. Any serious deviations from the provisions of the *Guide*
 - 3. Any suspension of an activity by the IACUC
- C. Reports filed under VI.A. and VI.B. above should include any minority views filed by members of the IACUC.

Institutional Endorsement and PHS Approval

A. Authorized Institutional Official	
Name: Dr. Ockle Johnson	
Title: Interim Provost, Vice President for Academic Affairs	
Name of Institution: Keene State College	
Address: 229 Main Street, Keene, NH, 03435	
Phone: 603-358-2112	Fax: 603-358-2009
E-mail: ojohnson@keene.edu	
Acting officially in an authorized capacity on behalf of this Institution and with an understanding of the Institution's responsibilities under this Assurance, I assure the humane care and use of animals as specified above.	
Signature: 	Date: 12/10/19

B. PHS Approving Official (to be completed by OLAW)	
Venita B. Thornton, DVM, MPH	
Senior Assurance Officer Office of Laboratory Animal Welfare (OLAW) National Institutes of Health 6700B Rockledge Drive Suite 2500 - MSC 6910 Bethesda, Maryland 20892 Email: thorntov@od.nih.gov Phone: (301) 451-4208 Fax: (301) 480-3421	Venita B. Thornton -S Digitally signed by Venita B. Thornton -S Date: 2019.12.12 12:36:32 -05'00'
Signature:	Date: December 12, 2019
Assurance Number: D16-00921 (A4732-01)	
Effective Date: December 12, 2019	Expiration Date: September 30, 2023

Membership of the IACUC

Date: December 10, 2019			
Name of Institution: Keene State College			
Assurance Number: A4732-01			
IACUC Chairperson			
Name*: Dr. Scott J. Strong			
Title*: Associate Professor		Degree/Credentials*: Ph.D. (Biology)	
Address*: (street, city, state, zip code)			
229 Main Street, Keene, NH, 03435			
E-mail*: strong@keene.edu			
Phone*: 603-358-2093		Fax*: 603-358-2897	
IACUC Roster			
Name of Member/ Code**	Degree/ Credentials	Position Title***	PHS Policy Membership Requirements****
Dr. Susan Piscopo	Ph.D./DVM	Adjunct Faculty	V
Dr. Doug Smith	Ph. D. (Biology)	Clinical Faculty	S
Dr. Allyson Mount	Ph.D. (Philosophy)	Associate Professor	NS
Mr. H. Mike Metell	BA (Psychology)	Retired- Engineering Management & Supervision at Vermont Yankee/Entergy	NA

* This information is mandatory.
 ** Names of members, other than the chairperson and veterinarian, may be represented by a number or symbol in this submission to OLAW. Sufficient information to determine that all appointees are appropriately qualified must be provided and the identity of each member must

be readily ascertainable by the institution and available to authorized OLAW or other PHS representatives upon request.

*** List specific position titles for all members, including nonaffiliated (e.g., banker, teacher, volunteer fireman; not "community member" or "retired").

**** PHS Policy Membership Requirements:

Veterinarian veterinarian with training or experience in laboratory animal science and medicine or in the use of the species at the institution, who has direct or delegated program authority and responsibility for activities involving animals at the institution.

Scientist practicing scientist experienced in research involving animals.

Nonscientist member whose primary concerns are in a nonscientific area (e.g., ethicist, lawyer, member of the clergy).

Nonaffiliated individual who is not affiliated with the institution in any way other than as a member of the IACUC, and is not a member of the immediate family of a person who is affiliated with the institution. This member is expected to represent general community interests in the proper care and use of animals and should not be a laboratory animal user. A consulting veterinarian may not be considered nonaffiliated.

Other Key Contacts (optional)

If there are other individuals within the Institution who may be contacted regarding this Assurance, please provide information below.

Contact #1	
Name: Audrey J. Arsenault	
Title: Interim Director, Office of Sponsored Projects and Research	
Phone: 603-358-2046	E-mail: aarsenault@keene.edu
Contact #2	
Name:	
Title:	
Phone:	E-mail:

Facility and Species Inventory

Date: December 10, 2019			
Name of Institution: Keene State College			
Assurance Number: A4732-01			
Laboratory, Unit, or Building*	Gross Square Feet [include service areas]	Species Housed [use common names, e.g., mouse, rat, rhesus, baboon, zebrafish, African clawed frog]	Approximate Average Daily Inventory
Science Center 313b	100 (10 x 10)	African clawed frog	24 (12male, 12 female)

*Institutions may identify animal areas (buildings/rooms) by a number or symbol in this submission to OLAW. However, the name and location must be provided to OLAW upon request.



KSC IACUC Semiannual Evaluation of Animal Care and Use Program and Inspection of Facilities

To: Dr. Ockle Johnson, Interim Provost and VP of Academic Affairs, Institutional Officer
From: Dr. Scott J. Strong, IACUC Chair
Date: November 14, 2019

This semiannual report summarizes the of the Institutional Animal Care and Use Committee's (IACUC) results of its most recent program review and facility inspection, as required by the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals, Section IV.B.1.-3., the *Guide for the Care and Use of Laboratory Animals (Guide)*, and the Animal Welfare Act regulations, as applicable. Submission of semiannual reports to the Institutional Official is a condition of this institution's Animal Welfare Assurance with the NIH Office of Laboratory Animal Welfare (OLAW).

Since the last review, no changes have occurred in the institution's program for animal care and use (PHS Policy IV.A.1.a.-i.).

I. Description of the Nature and Extent of the Institution's Adherence to the PHS Policy, the *Guide*, and the AWA

Departures from PHS Policy, the Guide, and the AWA.

- A. There were no departures during this reporting period.
 B. The following departures have been reviewed and approved by the IACUC.

II. Deficiencies in the Institution's Animal Care and Use Program

Departures from PHS Policy, the Guide, and the AWA.

- A. There were no deficiencies in the program during this reporting period.
 B. The following deficiencies have been identified.

III. Deficiencies in the Institution's Animal Facility

- A. There were no deficiencies in the program during this reporting period.
 B. The following deficiencies have been identified.

The IACUC inspected the animal facilities (Putnam SCIC 313b) on October 21st, 2019 using the *Guide* as applicable.

IV. Minority Views

- A. No minority views were submitted or expressed.
 B. The following minority views were expressed.

V. Signatures

Dr. Scott J Strong (C)

Scott J. Strong

Dr. Susan Piscopo (AV)

Susan Piscopo

Dr. Doug Smith (S)

Doug E Smith

Dr. Allyson Mount (NS)

Allyson Mount

Mr. H. Mike Metell (NA)

H. Michael Metell