

April 11, 2019

DEPARTMENT OF HEALTH & HUMAN SERVICES

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: https://olaw.nih.gov/ PUBLIC HEALTH SERVICE NATIONAL INSTITUTES OF HEALTH

FOR EXPRESS MAIL:

Office of Laboratory Animal Welfare Division of Assurances 6700B Rockledge Drive, Suite 2500 Bethesda, Maryland 20817 <u>Telephone</u>: 301-496-7163

RE: Animal Welfare Assurance Approval D16-00290 (A3460-01)

	Ph.D.
University	of Illinois at Chicago
	CDC1 2
Chicago, IL	60612
Dear Dr.	

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 **D16-00290 (A3460-01)**, became effective on **April 11, 2019** and will expire on **April 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,

Jane J. Na -S Digitally signed by Jane J. Na -S Date: 2019.04.11 16:40:15 -04'00'

Jane J. Na, DVM Veterinary Medical Officer, OLAW National Institutes of Health

Enclosure: As stated

cc: IACUC Chair IACUC Contact

UNIVERSITY OF ILLINOIS AT CHICAGO ASSURANCE # 3460.01 (D16-00290)

ANIMAL WELFARE ASSURANCE in accordance with the PHS Policy for Humane Care and Use of Laboratory Animals

I, Ph.D., as named Institutional Official for Animal Care and Use at The University of Illinois at Chicago (UIC), provide assurance that this Institution will comply with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals, (Policy).

I. 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, HHS, and/or NSF. 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.



B. The following are other Institution(s), or branches and components of another Institution:

None

II. Institutional Commitment

- **A.** This Institution will comply with all applicable provisions of the <u>Animal Welfare Act</u> 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."

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- **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 in accordance with 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."

III. Institutional Program for Animal Care and Use

- A. The lines of authority and responsibility for administering the program and ensuring compliance with this Policy are shown in Figures 1 and 2. The IACUC including Chair, the Attending Veterinarian, and the IACUC office all have direct reporting lines to the Institutional Official. The attending veterinarian is the director of the animal facilities. All veterinary staff, veterinary post-doctoral fellows, and animal care staff report to the attending veterinarian.
- **B.** The qualifications, authority, and percent of time contributed by the veterinarian(s) who will participate in the program are:
 - 1. Animal Medicine (ACLAM). He has 30 years of experience in laboratory animal medicine (ACLAM). He has 30 years of experience in laboratory animal medicine. He functions as the animal care facilities on campus and serves as the attending veterinarian on the Institutional Animal Care and Use Committee with direct programmatic authority over the animal care and use program and direct responsibility to implement the PHS Policy and the recommendations of the Guide and has access to all animals. He is heavily involved in the teaching program of the and serves as the ad hoc member of the Teaching Subcommittee. He is a full time employee and devotes 100% of his time to the Animal Care and Use Program.

2. DVM- is an ACLAM Diplomate. She has 22 years of experience in laboratory animal medicine including a three-year postdoctoral training program. She functions as a clinical staff veterinarian in the standard oversees the management of the nonhuman primate colony. Dress also serves as the Director of Educational Services and coordinates the in-nouse training programs. She is heavily involved in the teaching program of the standard serves as the ad hoc member of the Large/Primate/Exotic Animal Subcommittee. She is a full time employee and devotes 100% of her time to the Animal Care and Use Program.

- 3. DVM, PhD- is an ACLAM Diplomate. She has 20 years of experience in laboratory animal medicine including a three-year postdoctoral training program. She functions as a clinical staff veterinarian in the stand oversees the management of the large animal colony and provides professional support for the experimental surgery service. She is heavily involved in the teaching program of the and serves as the ad hoc member of the Large/Primate/Exotic Animal Subcommittee. She is a full time employee and devotes 100% of her time to the Animal Care and Use Program.
- 4. DVM- is an ACLAM Diplomate. She has 20 years of experience in laboratory animal medicine including a two-year postdoctoral training program. She functions as a clinical staff veterinarian in the and provides veterinary support for the small animal and satellite facilities. She is heavily involved in the teaching program of the staff and serves as the chair of the Facilities Subcommittee. She is a full time employee and devotes 100% of her time to the Animal Care and Use Program.
- 5 DVM- is an ACLAM Diplomate. She has 4 years of experience in laboratory animal medicine including a three-year postdoctoral training program. She functions as a clinical staff veterinarian in the second provides veterinary support for the small animal and satellite facilities. She is heavily involved in the teaching program of the second serves as the chair of the Facilities Subcommittee. She is a full time employee and devotes 100% of her time to the Animal Care and Use Program.
- 6. DVM, is a full-time fellow in the UIC Postdoctoral Training Program in Laboratory Animal Medicine and has 1.5 years of experience related to the UIC training program. She is a graduate of University of Minnesota College of Veterinary Medicine. She devotes 100% of her time to the Animal Care and Use Program.
- 7. Determined DVM, is a full-time fellow in the UIC Postdoctoral Training Program in Laboratory Animal Medicine and has 0.5 years of experience related to the UIC training program. He is a graduate of North Carolina State College of Veterinary Medicine. He devotes 100% of her time to the Animal Care and Use Program.
- 8. Laboratory Animal Medicine and has 1.5 month of experience related to the UIC training program and ~ 6 years of experience as a practicing veterinarian. He received his ECFVG (Educational Commission for Foreign Veterinary Graduates) on 4/28/2009. He passed NAVLE (North American Veterinary Licensing Examination) on 4/15/13. He has been licensed to practice veterinary medicine in Michigan since 2013 and in Illinois since 2015. He devotes 100% of her time to the Animal Care and Use Program.

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. The IACUC at the Institution is referred to as the Animal Care Committee (ACC). Attached is a list of the names, degrees, position titles, specialties and institutional affiliations of the IACUC chairperson and members (Table 1). Also attached is a list of alternative members of the IACUC (Table 2).

D. The IACUC will:

1. Review at least once every six 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 evaluations are:

The veterinarian with direct programmatic responsibility, who is the attending veterinarian on the IACUC, members of the senior veterinary staff, and at least two members of the IACUC meet and conduct a semi-annual programmatic review of all aspects of the animal care and use program including review of veterinary care, generate a report and forward the report to the IACUC. The Guide is used as the basis of the review and the report and OLAW's template is used in preparation of the report. The aspects of the program that are reviewed include the following: 1) institutional support and resources, 2) interinstitutional collaborations, 3) disaster planning and preparedness, 4) IACUC training, membership, reporting, recordkeeping, animal welfare concerns and continuing oversight, 5) Process of IACUC protocol review including process, humane endpoints, genetically modified organisms, justification of numbers and potential of reduction, nonpharmaceutical grade compounds, surgery- acute, survival, or multiple, food/fluid restrictions, social housing, alternatives for use, refinement, physical restraint with adaptation, genotyping procedures including toe clipping, and field studies, 6) personnel training and expertise, 7) occupational health program, 8) security of facilities and personnel, 9) veterinary care including appropriate support and access, clinical management of disease, health surveillance, health reporting with treatment, intervention, or euthanasia. procurement and transport, surgery including preparation, anesthesia, analgesia and post-operative monitoring, euthanasia methods and training, drug storage and control. The report is reviewed at a convened meeting and approval is via signature. Based upon the report and the findings of the IACUC, an appropriate plan of action, as necessary, is approved. To ensure completion, per the plan. Office of Animal Care and Institutional Biosafety (OACIB) sends letters to the responsible party, requires follow-up from the responsible party by the assigned date of completion, and reports back to the IACUC.

In addition, the IACUC reviews and updates all Policies, Guidelines and Procedural documents on an annual basis or more frequently if required based on programmatic review or changes in the program, to ensure compliance with all pertinent federal regulations and the *Guide*. Inspect at least once every six 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:

All animal facilities and study areas are inspected on a semi-annual basis. At least two members of the IACUC participate in all aspects of the semiannual facilities inspection process. In addition to the IACUC members, representatives from the various facilities, and members of the various subcommittees (small, large/primate, and teaching), may also participate in the inspection process. Following the inspection process, one of the veterinary IACUC members generates a report of the findings. At least two members of the IACUC with input from facilities representatives meet to review the report, and forward the report to the IACUC. The Guide is used as the basis for the inspection and for preparation of the report. A veterinary member of the IACUC presents the report to the IACUC at a convened meeting for review, discussion, and approval via signature. Based upon the report and the findings of the IACUC, an appropriate corrective plan of action, as necessary, is approved. To ensure that the plan of action is completed, OACIB sends letters to the responsible party, conducts a follow-up, and reports back to the IACUC. In addition, on a semi-annual basis, laboratories in which surgical procedures are being conducted are inspected as part of the post-approval monitoring process. A monthly report of the inspected laboratories and the applicable protocols is forwarded to the IACUC at a convened meeting for review and discussion.

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:

All members of the IACUC are provided the opportunity to participate in the facility inspections and programmatic review described above in sections D1 and D2. All members are provided a copy of the facilities inspection and programmatic review reports and checklists at least 3 days prior to a convened meeting. The reports and checklists are approved by signature of a majority of the members of the IACUC at a convened meeting. The reports distinguish significant deficiencies from minor deficiencies and specifically identifies any departures or deviations from the Guide with the rationale for the departure or deviation, PHS Policy, or AWARs or state that there are no departures or deviations and adhere to these regulations. OACIB forwards the approved reports, checklists, and any minority opinions to the Institutional Official, along with a cover letter from the attending veterinarian with direct programmatic responsibility. A table approved by the IACUC as part of the report, which summarizes any program or facility deficiencies, distinguishes each as significant or minor, and a corrective plan of action, including a schedule for correcting each deficiency, is also forwarded to the IO. Members of the IACUC meet with the IO to review and discuss the report.

4. Review concerns involving the care and use of animals at the Institution. The IACUC procedures for reviewing concerns are:

Concerns involving the care and use of animals are reported to the Director of the Chair of the IACUC, the Director of the Office of Animal Care and the Institutional Biosafety, or can be reported to the Institution's Ethic Officer, who will inform the IACUC. Concerns may be reported by phone, email, letter, in person, or through an anonymous link on the Institution's IACUC website. Signs are posted in all animal facilities informing investigators, veterinarians, animal care staff, and personnel with access to animal facilities of this issue. This information is also contained in the Animal Care Policy for the IACUC which is posted online and is covered in initial IACUC training required of all principal investigators and investigative staff. All reports are treated with confidentiality. Persons reporting concerns are keep confidential and are protected by the Illinois Whistleblower Reward and Protection Act and/or State Officials and Employees Ethics Act. Suspected welfare concerns or deviations from UIC policies are investigated by the Director of the and at least one member of the IACUC. Depending on the findings, a report is generated and forwarded to the IACUC for consideration at a convened meeting. Reports forwarded to the IACUC are reviewed and a course of action is determined on a case-by-case basis. Depending upon the circumstances, the course of action may be addressed in a letter from the Chair of the IACUC and copied to the IO or it may be referred to the IO with a recommendation for action. Recommendation of suspension or termination of an active protocol requires a majority vote of the quorum present at a convened meeting. When a recommendation of suspension or termination is referred to the IO, it is with the understanding that the decision of the IACUC is final, not merely a suggested course of action. If as a result of the concern or deviation a protocol for animal use is suspended, terminated, or determined to be a reportable issue of noncompliance the IO will notify, in the form of a letter, the investigator, the investigator's department head, and the appropriate regulatory agencies.

5. Make written recommendations to the Institutional Official, Dr.

egarding any aspect of the Institution's animal program, facilities, or personnel training. The IACUC procedures for making written recommendations to the IO are:

As indicated in item D, 3 of the assurance, the veterinarian with programmatic responsibility forwards through the OACIB a cover letter, a table summarizing deficiencies and corrective actions, the semiannual program and facility reports and any IACUC recommendations to the IO. In addition, members of the IACUC meet with the IO to review and discuss the reports. Recommendations that require immediate consideration between semiannual reviews are generated by the IACUC following deliberation at a convened meeting and forwarded by the Chair of the IACUC, the veterinarian with programmatic responsibility or the Director of the OACIB to the IO.

 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 at IV.C. The IACUC procedures for protocol review and approval are: All protocols involving the use of animals in research, testing or teaching are submitted to the OACIB. Each protocol is assigned a unique number and entered into a database for tracking and recordkeeping. The protocol then undergoes veterinary pre-review which involves at least one member of the veterinary staff reviewing the protocol and assessing the protocol for: completeness of information and conformance with UIC-IACUC Policies and Procedures; the level of potential pain and distress; appropriate use of anesthetics, analgesics and tranquilizers; the appropriateness of the euthanasia method; the proper use of aseptic technique and perioperative care; and the training of those who will be participating in the protocol. Following veterinary pre-review, a comment sheet, which then accompanies the protocol throughout the review process, is completed and the veterinarian contacts or meets with the investigator to inform them of pertinent issues related to the protocol and to inform the investigator of clarifications that should be addressed prior to the protocol being forwarded to the next level of review.

For protocols that involve no potential pain to animals and/or involve only euthanasia for collection of tissues, the chair or the chair's designee provides a summary report of the protocol, which contains the title, number of animals, overview of project and euthanasia method, to the IACUC for final review and consideration at a convened meeting. The summary report is forwarded to the IACUC four days prior to a convened meeting. Any IACUC member can request that any protocol in the report be reviewed in its entirety by the IACUC. This process is known as *Designated Review/IACUC Approval*.

Subcommittee Review/IACUC Approval is conducted on all protocols that involve pain or distress to animals. This review process is performed by one of three standing subcommittees: Small Animal, Large Animal/Primate, and Teaching. The respective subcommittee reviews the protocol and forwards a summary report of the protocol to the IACUC for final review and consideration at a convened meeting. The summary of the protocol includes the title, investigator name and department, number of animals/species/sex/age, analgesics/anesthetics, euthanasia method, project overview, requested clarifications and a recommendation. The summary report is forwarded to the IACUC four days prior to a convened meeting for final review and approval. Any IACUC member can request that any protocol in the report be reviewed in its entirety at a convened meeting of the full committee. In addition to the report, entire protocols that fall into the following categories are automatically forwarded to the full Committee: 1) protocols in which the subcommittee is not unanimous in its recommendation, 2) protocols that contain procedures requesting exemption/partial exemption from the UIC Environment Enrichment Program for Nonhuman Primates or the UIC Exercise Plan for Dogs, 3) protocols that involve unusual methods of euthanasia (i.e., a non-AVMA approved method such as a size limitation), 4) protocols that involve multiple major operative surgeries, and 5) protocols that involve prolonged discomfort, and/or unalleviated pain. In all cases, the protocol must provide a scientific justification for work proposed in these categories. The chairs of the respective subcommittees are members of the IACUC and attend the convened meeting where they present the respective

subcommittee's reports to the full committee. All other subcommittee members may serve as alternates to the subcommittee chair if required and are listed in table 2 as alternative member

All protocols are reviewed, either via a summary report or in their entirety, by a majority vote of a quorum at a convened monthly meeting of the full committee. Decisions of the IACUC are approval, clarifications needed to secure approval, or approval withheld. If substantive corrections are required, the committee may vote to require revisions to secure approval and whether or not the revisions can be reviewed and approved by designated member review or need to be returned to the IACUC at a convened meeting for review and approval. Designated member reviewer(s) are appointed at the meeting by the IACUC Chair. The method of review is documented in the minutes. If more than one designated member is appointed by the IACUC Chair, all members receive the same copy of the revised protocol, are provided any additional modifications requested and agree to the modifications required to secure approval, review the final copy of the protocol, and must agree unanimously to approve or require further modifications to secure approval. If the designated reviewer(s) do not agree or approve, the revised protocol is forwarded to the IACUC for review at a convened meeting. All members of the committee and all alternative members must have agreed in advance to the written policy that the quorum of members present at a convened meeting may decide by unanimous vote to use designated member review if revisions to secure approval are required following full committee reivew. At any time, any member of the committee may request to see the revised protocol and/or request full committee review of the revised protocol. The method of review is documented in the minutes and in the protocol file.

All records of review and disposition are maintained by the OACIB and investigators are notified of the final disposition of their protocol by this office. The OACIB also notifies the animal facilities and the veterinary staff, which protocols are approved. No work with animals is initiated prior to final approval.

No member of the IACUC may participate in the review or approval of a protocol in which the member has a conflicting interest, except to provide information requested by the IACUC. A conflict of interest is defined as being directly associated with the protocol under review such as Principal Investigator, Coinvestigator or other personnel employed in the laboratory of the Principal Investigator or Co-investigator, or when a member has a personal conflict of interest (i.e., family member, significant other, etc.). Members with conflicts of interest may not contribute to the constitution of the quorum required for review of the protocol in which there is a conflict. Prior to each review, the number of members who are eligible to vote for that review are counted to ensure quorum. Moreover, members of the subcommittees may not participate in the initial review process of a protocol in which the member has a conflicting interest, except to provide information.

In addition to the procedure described above, the IACUC also uses protocols known as umbrella protocols for the following purposes: 1) tracking multiple UIC animal use protocols that are associated with a grant to ensure that all animal

work proposed in the grant is approved by the IACUC, 2) tracking institutional training grants that may provide support for trainees conducting work with vertebrate animals, or 3) tracking subcontracted/outsourced work for animals when a portion or all of the work involving vertebrate animals is subcontracted/outsourced to another institution. For umbrella protocols involving subcontracted/outsourced animal work, investigators are also required to submit a copy of IACUC approval, Animal Welfare Assurance Number for work funded by PHS, and AAALAC status for any work that is subcontracted/outsourced to another institution.

Umbrella protocols are submitted to OACIB and each protocol is assigned a unique number and entered into a database for tracking and recordkeeping. A report including the title, protocol number, investigator name, the purpose of the protocol, a description of the scope of work that is subcontracted, and an overview of the project is provided to the IACUC for determination of designated review. IACUC members have 3 working days to request that the protocol undergo full committee consideration. If full Committee review is not requested by any member within 3 working days and, in addition, a quorum of the full IACUC membership has responded to receipt of the summary report, the protocol is reviewed and approved by the Chair or the Chair's designee. If any member of the Committee requests full Committee review, the protocol in its entirety is reviewed at a convened meeting.

The process described above for all protocols is part of the IACUC policies and procedures and reviewed with each member of the IACUC or alternative member during IACUC training.

Under special circumstances in which a funding agency requires IACUC approval within a very short time period and the protocol is submitted after the required deadline for subcommittee review, a protocol may be reviewed at the full committee meeting without prior subcommittee review. All protocols of this nature are still reviewed by a member of the veterinary staff. All other processes are the same as described above for full committee review.

Under extreme conditions in which quorum cannot be met at a convened meeting via face to face communication, a meeting may be convened using teleconferencing. Extreme conditions may include unanticipated acute illness in which absence of member(s) would result in the loss of the of quorum and alternative member(s) could not participate, extreme weather conditions inhibiting travel to the Institution on the day of the meeting or during periods in which campus is closed due to an emergency situation such as a pandemic. Under conditions such as these, any members present at the Institution would meet face to face at the convened meeting and other members would teleconference for the meeting. As part of the IACUC's disaster plan, a teleconference phone and teleconference number is on reserve for all meetings. Under circumstances in which there would be a prolonged period of emergency, all protocols would be eligible for designated member review. Under these circumstances, protocols with a summary will be distributed to the IACUC members, and members would have 7 working days to determine if the protocol can be reviewed by designated

member review or if full committee review is required. If full committee review is requested, full committee review will take place as outlined above. All meetings held via teleconference will be in compliance with NOT-OD-06-052.

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 according to PHS Policy at IV.C. The IACUC procedures for reviewing proposed significant changes in ongoing research projects are:

The Chair or the Chair's designee, who is a voting member of the IACUC (OACIB Director, OACIB Associate Director, or Attending Veterinarian), conducts an initial assessment of all proposed changes to categorize the requested changes into the following categories: Category 1- administrative review and administrative approval, Category 2- administrative review with veterinary consultation and administrative approval, Category 3- designated member review and designated member approval, and Category 4- full committee review at a convened meeting and approval.

Category 1 is conducted by the Chair or the Chair's designee and approved by the Chair or Chair's designee. The following changes are considered to be category 1 changes and are eligible for category 1 review and approval: protocol title change, change in the Co-investigator, change in other protocol staff, an increase in animal numbers of an approved species of 10% or less in accordance with the IACUC approved significant changes policy. The addition of a funding source may be considered a category 1 change and will be considered on a case-by-case basis.

Category 2 is conducted by the Chair or the Chair's designee in consultation with the veterinary staff and is approved by the Chair or Chair's designee. The following changes are considered category 2 changes and eligible for category 2 review and approval: change in anesthetic/analgesic, sedation or experimental agents, change in euthanasia methods to any method approved or approved with conditions by the AVMA Guidelines for Euthanasia of Animals, change in duration, frequency, type or number of procedures performed, addition of >10% additional animals of an approved species, change in disposition of nonnaïve animals who have not undergone a major operative procedure and other painful procedures, or change in location to another location that is currently part of the animal care program overseen by the IACUC. All changes in this category are reviewed in accordance with IACUC approved significant changes policy by either the attending veterinarian or another veterinarian who is a member of the veterinary staff. Requests of this nature will be considered on a case-by-case basis in consultation with the veterinary staff to determine if they are eligible for administrative approval or will be sent to the ACC for designated member review determination, or for full committee review.

Category 3 review and approval uses a designated member review and designated member approval process. OACIB forwards a summary report of Category 3 changes to all members of the Full Committee on a weekly basis. The report includes the title, protocol number, modification number, investigator

name, project overview, modification overview, and requested clarifications based on initial assessment. Full Committee members have 2 working days to request that a change undergo full committee review and approval. If full Committee review and approval is not requested by any member within 2 working days and, in addition, a quorum of the full ACC membership has responded to receipt of the summary report, the modification can be reviewed and approved by the Chair or the Chair's designee appointed by the chair. If any member of the Committee requests full Committee review and approval, the change in its entirety will be reviewed as outlined below. Review and decisions are as described for designated member review under D6. The following changes are considered Category 3 changes that are eligible for designated review and designated approval: a change in species (this requires a justification of the new species), the addition of any new procedure including those that do not result in greater discomfort or in a greater degree of invasiveness as compared to previously approved procedures, as well as, those that increase the level of pain or distress experienced and/or invasiveness as compared to previously approved procedures, the addition of a surgical procedure or the upgrade of an acute surgical procedure to a survival surgical procedure, request to withhold analgesics, change in or the addition of an organ system, additional restraint of more than two hours, change in study objectives, changes that impact personnel safety, and change in location to another location that is a new care program oversight. All category 3 changes will be considered on a case-by-case basis to determine their eligibility for designated review.

A report of changes approved under category 1, 2, or 3 is provided to the ACC at a convened meeting.

Category 4 review and approval is conducted when a change request is categorized as category 4 or when a member of the ACC requests a change eligible for designated review be reviewed at a convened meeting. This review process is conducted by a quorum of the ACC at a convened meeting. If substantive corrections are required, the committee may vote to require revisions to secure approval and whether or not the revisions can be reviewed and approved by designated member review (DMR) or need to be returned to the full committee for review and approval. The vote for DMR must be unanimous by the guorum present at the meeting. All members of the committee and all alternative members must have agreed in advance to the written policy that the guorum of members present at a convened meeting may decide by unanimous vote to use DMR if revisions to secure approval are required. At any time, any member of the committee may request to see the revised modification and/or request full committee review of the revised modification. The following changes are considered category 4 changes that require review of the change in its entirety at a convened meeting: change in Principal Investigator, requests for an exemption from the UIC Environment Enhancement Program for Primates or the UIC Dog Exercise Plan, disposition of animals that have had a major operative procedure besides euthanasia, methods of euthanasia not classified as acceptable or acceptable with conditions, an upgrade from a single major operative procedure to multiple major operative procedures, the addition of a procedure involving prolonged restraint as defined by UIC Policy, the addition of

a model system that would cause a significant natural or experimental disease or pathologic condition in which an animal would be maintained for a period of time (e.g. tumor models), and the addition of a procedure causing unalleviated pain or distress, and the addition of a fluid or food restriction protocol.

Conflicts of interest and notification of the principal investigator, animal facilities and veterinary staff are managed as described above in section D6 for protocol review and approval.

 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 at IV.C.4. The IACUC procedures for notification of investigators and the Institution of its decisions regarding protocol review are:

Within five days of a convened meeting or within five days of administrative or designated review, the OACIB notifies the principal investigator in writing of the Committee's disposition of a protocol or a proposed significant change to an approved protocol. If the disposition is for other than full approval, the letter details the Committee's concerns so that the investigator can make the appropriate revisions to secure full approval. Only investigators with a fully approved protocol may order and/or initiate work involving the use of animals in research, testing, or teaching. Approved IACUC meeting minutes are available for IO review.

 Conduct continuing review of each previously approved, ongoing activity covered by this Policy at appropriate intervals as determined by the IACUC, including a complete review once every 3 years according to PHS Policy at IV.C. 1 - 5. The IACUC procedures for conducting continuing review are:

The OACIB sends investigators with an approved protocol, an annual renewal request. The request form asks the investigator to review their animal care and use protocol and indicate the following: 1) whether they request to continue the protocol or terminate the protocol, 2) determine if work was initiated during last year, 3) verify work was conducted in accordance with approval, 4) determine if the experiments are providing useful data and will continue as originally proposed, 5) determine if any changes in the protocol are being proposed, and 6) whether any unexpected animal welfare concerns have arisen. Any changes proposed at the time of annual renewal are reviewed and approved as indicated above in D,7. Any issues related to animal welfare and data acquisition are reviewed by the Committee at a convened meeting and may require the submission and approval of a modification or a new protocol. Annual renewals are reviewed at a convened meeting within the same month of initial review and approval. Decisions are as described in D,6. In addition, laboratories in which nonsurgical activities are conducted are reviewed as part of a random audit program and laboratories in which surgical procedures are being conducted are reviewed on a semi-annual basis. A monthly report of the reviewed protocols and laboratories is forwarded to the IACUC at a convened meeting for review and discussion.

Every three years, each investigator with an approved protocol receives a notice of expiration/termination with an expiration form indicating that the protocol in question will be resubmitted, terminated by the investigator, or is now covered by a new approved animal care protocol with the number provided. All protocols are automatically terminated on the three-year anniversary date. All resubmissions are reviewed as a new protocol via the process described under D6.

10. Be authorized to suspend an activity involving animals set forth in the PHS Policy at IV.C.6. The IACUC procedures for suspending an ongoing activity are:

In accordance with the Animal Welfare Act, PHS Policy and UIC Policy, the IACUC has the responsibility to suspend or terminate an activity, if it determines that the activity cannot be brought into compliance. For the specifics regarding procedures for suspending or terminating an activity, see D,4.

E. The risk-based occupational health and safety program for personnel working in laboratory animal facilities and personnel who have frequent contact with animals is as follows:

Oversight responsibility for occupational health and risk assessment is a combined effort on the part the IACUC, the Director of the and the health care staff of the University Health Service (UHS), and when appropriate, the Institutional Biosafety Committee (IBC) and representatives from Environmental Health and Safety Office (EHSO). The IACUC ultimately approves and oversees the use of hazards in animals. Protocol forms have a specific section that identifies the use of various hazards including biological, chemical, and radiological. When required, appropriate approvals from the IBC and radiation safety officer are obtained and documented. When chemical hazards are identified, an MSDS sheet is provided. The protocol also describes the safety procedures for the handling of the specific agent, animals, and waste, and personal protective equipment used. Standard practices have been developed for many agents that are used and common across many protocols. For novel agents or uses, current practices are evaluated to determine if they are appropriate or if new practices or procedures need to be developed. This is done both during veterinary prereview, as well as, during IACUC review. New practices and procedures are developed for handling a new hazard, when required. This is in done in collaboration with the veterinary staff, the IACUC, the IBC, UHS, EHSO, the investigative group using the agent, and in some instances with recognized experts in the field, such as representatives from the CDC.

The IACUC has a policy entitled *Occupational Health Program for Individuals with Animal Contact.* For research personnel, entry into the program is tied to building access or in the case of field studies to protocol approval. The program and requirements of the program are based on an occupational risk assessment, specific project risks, and individual health status. The program is overseen by the University Health Service and the risk categories and requirements were developed by the occupational health physicians. Enrollment in the Occupational Health and Safety Program is a two-step process involving facility/animal work orientation and occupational health assessment by UHS. Both steps must be completed to be

enrolled and gain access to animal facilities and to have contact with animals. For field studies, enrollment and assessment is conducted by UHS, which notifies the IACUC of completion prior to protocol approval or addition of an individual to the project post-approval. At the time of orientation, each individual is provided a detailed brochure of the program including instructions on where to obtain care during business hours and after hours in the case of bites, scratches, illness or injury. All individuals seeking access to animal facilities undergo a facility orientation which includes the following occupational and personal protection and hygiene topics: 1) training on zoonotic diseases, 2) occupational health issues related to working with animals such as allergies, scratches, bites, etc., 3) personal protective equipment such as gloves, gowns, masks, and eye protection that is required for room entry or contact with animals, 4) policy on not eating or drinking in animal use areas (housing, support, or procedural spaces), 5) location and access to eye wash stations, bathrooms, and sinks, 6) good personal hygiene practices, 7) waste disposal procedures, and 8) considerations to be discussed with health professionals such as general health status, immunization status, compromised immune status or pregnancy. In addition, training includes a discussion of immediate first aid, the reporting of the incident on an accident report, and reporting to UHS or the UIC Emergency Department for treatment. Following orientation, individuals undergo an occupational health assessment with one of the physicians from University Health Services. The assessment includes a risk analysis based on animal species and type of research performed. All individuals must complete a medical history and are advised to maintain current tetanus immunization status. Frequency of reevaluation is based on animal species, specific research risks, and individual health status. All individuals are also given a brochure which describes the program and topics described above.

All veterinarians, veterinary technicians, and animal care staff undergo a preemployment and annual health assessment. Immunization status for tetanus, measles, and hepatitis B is assessed and updated as needed. QuantiFERON testing is conducted at least on an annually for TB. Baseline blood samples are also banked and medical clearance for respirator fit testing is conducted. Orientation training as described above is also provided. All investigative staff working with nonhuman primates also undergo annual health assessments, QuantiFERON testing, measles titer, and serum banking.

In addition, to the orientation topics referenced above primate users also undergo training on Herpes B Virus, the potential routes of exposure and transmission, clinical symptoms, the potential fatal consequences, and the protocol to follow if there is a potential exposure incident such as a bite or scratch. The protocol includes information on immediate first aid, reporting an exposure, and the collection of samples for serology and virology. The protocol is posted in areas in which nonhuman primates are used and UHS and emergency room personnel have been educated as to the protocol. Animal care personnel and investigators are also given a wallet card to carry that identifies them as personnel with potential exposure to Herpes B Virus, and lists the clinical symptoms and an emergency contact number of the National B Virus Resource Center. Users are also informed of other potential zoonotic diseases that can be transmitted between nonhuman primates and humans including TB and its symptoms and pathogens that can cause diarrhea such as

Shigella, *Salmonella*, and *Campylobacter*, and *Entamoeba histolytica*. Investigators are informed that animals may not display symptoms, but still be capable of transmitting pathogens to humans.

Visitors, students and administrative staff who do not require direct contact with animals are categorized as low risk. Individuals in this category must be accompanied in animal facilities by an appropriately trained individual, i.e. someone authorized to work in the facility and approved to work with the animals.

Investigators who work with BSL-3 agents or BSL-2 agents requiring immunization are categorized as high risk. Prior to initiation of such projects an agent specific medical surveillance program must be developed by UHS and approved by the IBC. In addition, biosafety manuals and standard operating procedures must be approved by the IBC. Immunizations, health assessments and training are performed at a frequency determined by UHS and the IBC and will be project/agent specific. Additionally, annual training of an animal care and investigative staff that work in the BSL-2 or chemical hazard suites is conducted by the staff veterinary staff. veterinary staff. Annual training of all animal care and investigative staff working with BSL-3 agents and animals is conducted on an annual basis by the veterinary staff and representatives from EHSO. Training includes signs and symptoms, accident procedures, personnel protective equipment, entry/exit procedures, waste disposal, and decontamination procedures. Agents identified as BSL-2, BSL-3, or chemical hazards may only be used in specific designated facilities and access is only granted after appropriate training and approval of the IACUC, and where applicable the IBC, UHS, and EHSO. Protocols involving select agents must also complete all additional select agent requirements prior to initiation.

Training on zoonotic diseases and occupational health issues is also included in the animal care/technician training programs, the formal course work required of graduate students using animals in research, GC 470 and GC 471, and in regular editions of the Bulletin. See section G.

- **F.** The total gross number of square feet in each animal facility (including each satellite facility), the species of animals housed therein and the average daily inventory of animals, by species, in each facility is provided in the attached Facility and Species Inventory Table 3.
- **G.** The training or instruction available to scientists, animal technicians, and other personnel involved in animal care, treatment, or use is:
 - 1. **Technician Training** The staff of the the term has been supporting a formal AALAS certification training program for UIC staff and staff from other institutions in the Chicago Metropolitan area for the past 45 years. These classes involve training at the Assistant Technician, Technician, and Technologist level. As a result of this training program, several members of the UIC Animal Care staff are currently certified at the ALAT level, LAT level or the Technologist level. As part of all new employees' orientation, they are given training on animal research, testing and teaching including replacement, reduction, and refinement (3Rs). During the probationary period, new employees receive training through reading

assignments, presentations, demonstrations, and performance evaluations. New employees must read the provide echnician Handbook, standard operating procedures (SOPs), and facility policies. Completion of the required reading material is documented in the employee's training record. New staff receive a general presentation on the research environment, which includes a description of biomedical research, humane care and use of animals, the 3Rs, contact information for discussing animal welfare concerns, an overview of safe work practices, and an overview of occupational health concerns. All new employees enter the AALAS training program upon completion of their probationary period and promotion within the animals care series is, in part, based upon training course performance. In addition, regularly scheduled continuing education programs are in place to review standard operating procedures and other pertinent issues.

2. Post-Doctoral Training - The UIC Training Program in Laboratory Animal Medicine currently has slots for 3 post-doctoral fellows. As part of this program the department has bi-weekly seminars and bi-monthly grand rounds on various aspects of laboratory animal medicine and science. The seminar program is a recognized graduate course GC473: Seminars in Comparative Medicine and is open to the general faculty and staff of the Institution, who also serve as the speakers on topics related to animal models and experimental techniques. The is also a study center for the C.L. Davis Foundation and sponsors an annual

spring conference in conjunction with this organization. The post-doctoral fellows are assigned special projects, which help increase educational support programs available to the faculty. All post-doctoral trainees also enroll in GC470 and complete investigator training requirements.

- 3. Graduate Courses The offers three graduate courses: GC470 - Essentials for Animal Research, GC471 - Experimental Animal Techniques, and GC473 - Seminars in Comparative Medicine. GC470 is a 1 semester hour lecture course which covers regulations and policies governing the use of animals including reduction, replacement and refinement, animal husbandry as a non-experimental variable, principles of anesthesia and euthanasia, model selection, adjunctive methodology, ethics of animal experimentation, and the processes involved in submitting and obtaining an approved animal protocol including topics covered under investigator training listed below. GC470 is required for all students who will use animals in their thesis or dissertation research. GC471 is a 2 semester hour lecture/laboratory series, which covers the biology, husbandry and diseases of the commonly used laboratory animals, laboratory animal anesthesiology and aseptic surgical technique. These courses are designed in such a way that each section/lecture can serve as a stand-alone training module. The laboratory sessions are structured for use as workshops in areas such as anesthesiology, sutures and instruments and aseptic techniques. GC473 is a 2-hour course, which covers topics in laboratory animal medicine and science, in experimental techniques and in animal model development and use.
- 4. **IACUC Investigator Training** The IACUC has implemented a mandatory training program on regulatory compliance and UIC Policies and Procedures

related to the care and use of animals in research, testing and teaching, as well as, species-specific training. Training modules cover reduction, replacement, and refinement, justification of the number of animals used appropriate to the study goals including statistical justification with power analysis when appropriate and/or justification based on in vitro endpoint analysis with description as to how the number of animals requested was determined to minimize the number of animals requested to obtain valid results how to order animals, guarantine and re-derivation procedures, basic husbandry and housing concepts, managing breeding colonies, basic biological features, common health concerns, step-bystep descriptions of handling, restraint, animal identification, injection, and blood collection techniques, anesthesia and analgesia, survival surgery and postoperative monitoring, humane endpoints, and euthanasia. The program is administered by the Director of the OACIB. The training modules are available through the OACIB website. The principal investigator and all personnel who will perform procedures on animals are required to complete this training prior to approval of a Protocol for Animal Use by the IACUC or prior to the addition of new personnel to an approved protocol. In addition, at the time of orientation to the animal facilities and/or when a new protocol and/or procedure is proposed, the IACUC and the veterinary staff access the need for additional training and this is provided by the veterinary staff and/or experienced investigators.

- 5. IACUC Member Training The OACIB provides training to all new IACUC members (full and subcommittee members). Each member attends a formal power point training session given by the Director of the OACIB. Training includes the following: 1) an overview of the regulatory requirements of the PHS Policy and the Animal Welfare Act, 2) a review of the Guide and the issues that are important to the IACUC including reduction, replacement, and refinement, 3) a description of the role and responsibilities of the IACUC, 4) a description of the requirements for semi-annual programmatic review and facilities inspections and the processes involved in these reviews, 5) a description of the protocol review process, the workflow and the issues that need to be reviewed during the process such as appropriate justification of the use of animals and number of animals used, review of alternatives, appropriate and adequate description of the work, anesthesia, analgesia, euthanasia, and humane endpoints, and 6) an overview of the UIC animal research program. For nonscientific members, training also includes a general discussion of the role of animals in research and science. Each member is given a training manual, which includes the slide presentation and information on the PHS policy, AWA, UIC policies and guidelines, IACUC guidebook and other important IACUC sites. IACUC members are provided PDF copies of PHS Policy, AWA Regulations and Standards, Guide, IACUC Guidebook, and the UIC Assurance. Whenever possible, members of the IACUC also attend IACUC 101, IACUC Advanced, or other similar training sessions. In addition, the Director of the OACIB and the attending veterinarian attend PRIMR meetings on an annual basis. At convened meetings, the attending veterinarian and/or the Director of OACIB update the IACUC members as to any new issues, policies, or regulations that arise related to IACUC.
- 6. Newsletters The publishes a bimonthly newsletter. The Bulletin is in

its 28th year of publication and is distributed to all active account holders, department heads and other interested parties. This newsletter keeps the investigators and their staff informed on a variety of topics concerning the care and use of laboratory animals and the programs and policies of the University of Illinois at Chicago.

- 7. ACC and Guidance Documents The UIC ACC and Documents are available to all departments and investigators in electronic format. The documents cover such topics as surgery, aseptic technique, anesthesia and euthanasia, humane endpoint criteria, 3 Rs, and methods to minimize pain and distress.
- 8. Seminars and Training Sessions- The staff of the presents seminars in Departments or to interested user groups on the UIC Animal Care Program and/or subjects of special interest concerning the care and use of laboratory animals such as euthanasia techniques, breeding colonies, etc.
- 9. Protocol Review All protocols submitted to the IACUC are assigned to a member of the veterinary staff for pre-review and evaluation with the Principal Investigator (PI). During this process techniques to be used are evaluated and when necessary, training is arranged for the PI and his/her staff. This training may consist of using available educational material on file in the and/or demonstrations by members of the UIC faculty and staff who have expertise with a specific procedure or technique.
- 10. Electronic Resources- the second and the OACIB maintain web pages. On the respective web pages are the UIC Protocols for Animal Use and supporting UIC IACUC and supporting bolicies, guidelines, and procedures. In addition, links to additional online resources are provided on both sites.
- 11. Facility Orientation- See Section E above.
- 12. Educational Resources The maintains a library with an extensive collection of materials related to laboratory animal medicine and science and experimental animal techniques. The library also contains a collection of over 14,000 Kodachromes in the form of study sets that are commercially available, as well as a variety of study sets produced at UIC and the C.L. Davis collection of slides and videos. In addition, several videotapes for training purposes and the equipment for viewing these self-study tapes are maintained in the additional techniques.

IV. 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 six months and will be re-evaluated by the IACUC at least once every six months according to PHS Policy IV.B.1-2. Reports have been and will continue to be prepared in accord with the 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 *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 One (1)—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.

V. Recordkeeping Requirements

A. This Institution will maintain for at least three years:

- 1. A copy of this Assurance and any modifications thereto, 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 given or withheld.
- 4. Records of semiannual IACUC reports and recommendations (including minority views) as forwarded to the Institutional Official
- 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 three 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.

VI. Reporting Requirements

- A. This Institution's annual reporting period is January 1-December 31. The IACUC, through the IO, will report in writing to OLAW annually by the January 31st following the end of the reporting period the following:
 - 1. Any change in the accreditation status of the Institution (e.g., if 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 changes in IACUC membership. If there are no changes to report, this Institution will provide OLAW with written notification that there are no changes.
- 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 Officia
- 5. Any minority views filed by members of the IACUC.
- **B.** The IACUC, through the IO, will provide the OLAW promptly 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 IACAC.
- C. Reports filed under VI.A. and VI.B. above shall include any minority views filed by members of the IACUC.

VII. Institutional Endorsement and PHS Approval

A. Authorized Institutional Official

Name	PhD
Title	
Address	University of Illinois at Chicago Chicago, IL 60612
Phone	
Fax	
Email	1

Acting officially in an authorized capacity on behalf of this Institution and with the understanding of the Institution's responsibilities under this Assurance, I assure the humane care and use of the specified above.

Signature

B. PHS Approving Official

Name	Jane J. Na, DVM	
Title	Veterinary Medical Officer	
Address	Office of Laboratory Animal Welfare National Institutes of Health 6700B Rockledge Drive Suite 2500, MSC 6910 Bethesda, MD USA 20892	
Phone	301-496-7163	
Fax	301-451-5672	
Email	olawdoa@mail.nih.gov	

Signature	Jane J. Na -S Digitally signed by Jane J. Na -S Date: 2019.04.11 16:39:37	Date	April 11, 2019
Assurance I	Number: D16-00290 (A3460-01)	1	
Effective Date	April 11, 2019	Expiration Date	April 30, 2023

VIII. Membership of the IACUC

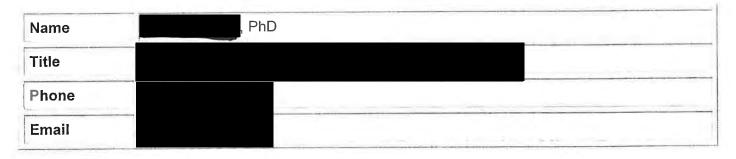
		Table 1		
Mer	nbership of the Institu	itional Animal (Care and Use Committee	
Assurance Number: 00290)	: A3460.01 (D16-	Date: as of December 2018		
Chairperson Name, Title, and Degree/Credentials	Business A	ddress, Phone	, Fax, and Email of Chairperson	
Name:	Address: Office of the Vice Chancellor for Research			
Title : Associate Professor of Psychiatry	Chicago, Illinois 6061			
Degree/Credential : PhD	Phone:	Fax:	Email:	
Name of Member/Code*	Degree/Credentials	Position Title & Institutional Affiliation	PHS Policy Membership Requirements	
5	High School Diploma	Retired- Former Assistant to the Provost	Nonscientist	
28 ¹	DVM		Attending Veterinarian	
35	PhD		Scientist	
42	DVM	Clinical	Scientist	

Name of Member/Code*	Degree/Credentials	Position Title & Institutional Affiliation	PHS Policy Membership Requirements	
43	BS		Scientist	
59	MA	Non- affiliated- Retired HS science teacher	Non-affiliated	
73	DVSc, PhD	Professor of Pathology	Scientist	

1 Identity of Attending Veterinarian

		Table 2		
Alter	mative Membership of	f the Institutional Animal Ca	re and Use Committee	
Assurance Number: A3460.01 (D16-00290)		Date: as of March 2019		
Name of Member/Code	Degree/Credentials	Position Title & Institutional Affiliation or Specialty/PHS Role	Substituting For	
19	DVM	Clinical Veterinarian/Scientist	28 or 43	
24	PhD	Professor of Biological Sciences/Scientist	74	
56	BS	Non-affiliated Scientist- Toxicology Specialist/Scientist	43	
61	PhD	Research Associate Professor in Psychiatry/Scientist	35	
63	DVM, PhD	Clinical Veterinarian/Scientist	43	
68	PhD	Associate Professor in Psychology/Scientist	74	
71	BS	Senior Research Specialist and Study Director, Pharmacology/Scientist	43	
77	DVM	Clinical Veterinarian/Scientist	35 or 42	
79	PhD	Instructor in Medicine/Gastroenterology and Hepatology/Scientist	35	

IX. Other Key Contacts



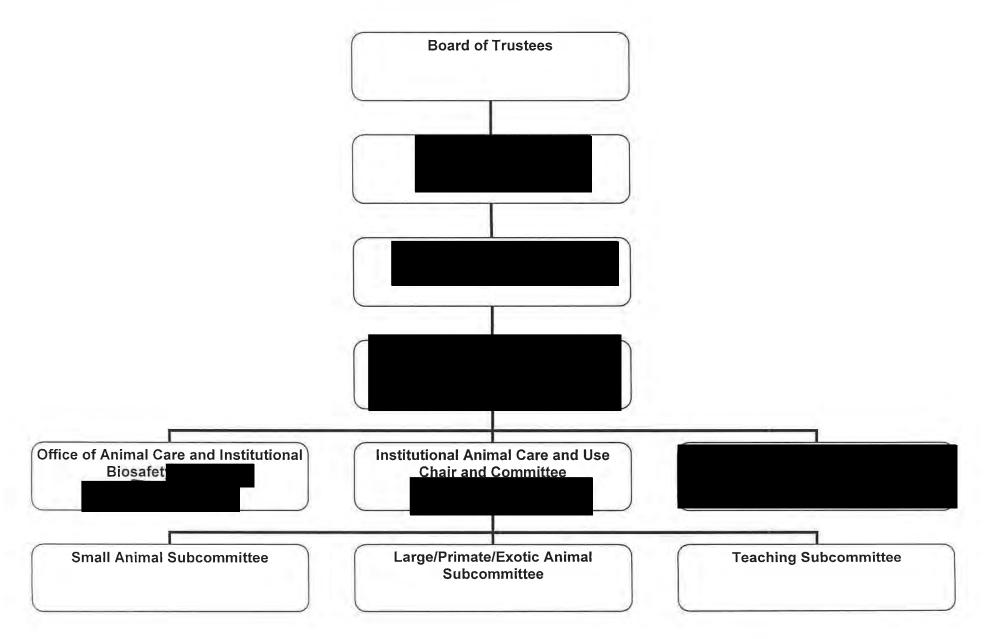
X. Facility and Species Inventory

<i>¥ W</i>	Та	ble 3			
Facility and Species Inventory					
Assurance Number: Date: as of March 2019					
Laboratory, Unit, or Building	Gross Square Feet	Species Housed	Approximate Average Daily Inventory		
	110,000	Mouse Rat Guinea Pig Rabbit Dog Swine Frogs Turtle Non-human primates (NHP) Fish	29,000 350 150 30 50 5 15 30 120 1400		
	2045	NHP	<5		
	5524	Mouse Rat	1100 120		
	7902	Mouse Rat	41 202		
	1576	Mouse Rat	0 0		
e a	163	Rat	12		
	211	Rat	30		
	600	Mice	200		
	76	Mice	<4		
	3630	Mouse Rat	3300 50 7		

Laboratory, Unit, or Building	Gross Square Feet	Species Housed	Approximate Average Daily Inventory
	504	Fish	2000
· · · · ·	273	Rat	20
	5824	Mouse Rat Mole Rat Fish Salamanders	850 30 300 <5 <4

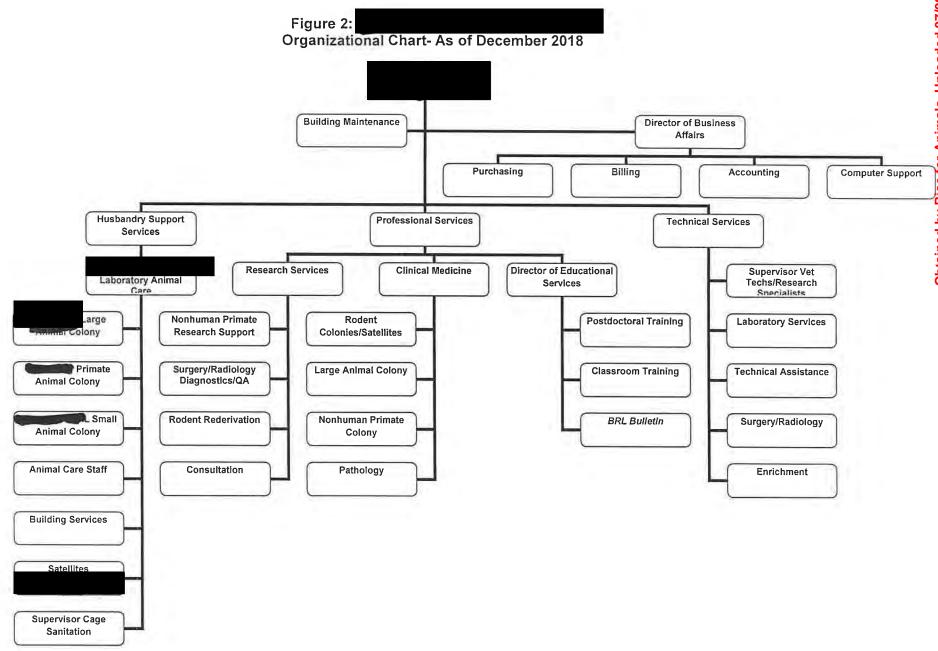
* Facility is current inactive due to construction.

FIGURE 1: UNIVERSITY OF ILLINOIS AT CHICAGO As of December 2018



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