The University of Chicago
A3523-01
Animal Welfare Assurance

I, Kenneth S. Polonsky, as named Institutional Official for animal care and use at The University of Chicago, 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. 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: All components of the University of Chicago (Colleges, Schools, Centers, etc). All of these components are physically located on the university's campus in Chicago, Illinois. Also covered are the UC facilities at the Howard T. Ricketts Laboratory (HTRL) at the Argonne National Laboratory (Lemont, Illinois), approximately 25 miles from campus. There are no other off-campus satellite facilities and/or other covered components.

B. The following are other institution(s), or branches and components of another institution: None. Not applicable.

II. 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 (sub-award) 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 the PHS Policy are in Appendix A.

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

1. **Name:** George Langan, DVM, DACLAM  
   Attending Veterinarian and Director of the Animal Resources Center  
   Associate Professor, Department of Surgery

   **Qualifications**
   - Degrees: DVM, University of Illinois, 1996  
   - Training or experience in laboratory animal medicine or in the use of the species at the institution: Dr. Langan received his D.V.M. from University of Illinois in 1996 and worked in a small animal practice for one year after graduation. He completed a residency in laboratory animal medicine at the University of Tennessee-Knoxville in 1999. He came to The University of Chicago as a Clinical Veterinarian for Large Animal Clinical Services. He was board certified by the American College of Laboratory Animal Medicine in 2002 and appointed Attending Veterinarian and Director of the Animal Resources Center in 2003.

   **Authority:** Dr. Langan has direct program authority and responsibility for the institution's animal care and use program including access to all animals. He is a voting member of the IACUC and Select Agent IBC. He is an ex officio member of the IBC.

   **Time contributed to program:** Dr. Langan is a full time employee and devotes 100% of his time to supporting the animal care and use program of the institution.

2. **Name:** Marek A. Niekrasz, DVM, DACLAM  
   Clinical Veterinarian, Animal Resources Center  
   Associate Professor, Department of Surgery

   **Qualifications**
   - Degrees: DVM, Agricultural Academy, Wroclaw, Poland, 1981  
   - Training or experience in laboratory animal medicine or in the use of the species at the institution: Dr. Niekrasz received his D.V.M from the Faculty of Veterinary Medicine, Agricultural Academy, Wroclaw, Poland in 1981. He practiced small and large animal veterinary medicine for three years inclusive of serving one year as a military veterinarian in Poland. He immigrated to the USA and during 1986-90 completed his post-doctoral fellowship/residency in laboratory animal medicine and surgery at the University of Oklahoma. He received the Educational Commission for Foreign Veterinary Graduate certificate in 1993. He was appointed Clinical Assistant Professor in the Department of Pathology, University of Oklahoma and divided his time between clinical duties, teaching, and conducting research during 1990-95. He moved to a Clinical Veterinarian position at Northwestern University in Chicago.
1995. He was board certified by the American College of Laboratory Animal Medicine and appointed Assistant Director of Surgery and Large Animals in 2001. In May, 2004, he joined the University of Chicago as a Clinical Veterinarian. He is currently licensed in Illinois and Florida.

**Responsibilities:** Primary clinical duties are in the Large Animal Clinical Services section. He shares teaching, training and additional clinical duties with the other ARC veterinarians and is a voting member of IACUC. Dr. Niekraasz shares in weekend and holiday coverage for emergency veterinary care.

**Time contributed to program:** Dr. Niekraasz is a full time employee and devotes 100% of his time to supporting the animal care and use program of the institution.

3. **Name:** Betty R. Theriault, DVM, DACLAM
   Clinical Veterinarian, Animal Resources Center
   Assistant Professor, Department of Surgery

**Qualifications**
- Degrees: DVM, UC Davis, 1996
- Training or experience in laboratory animal medicine or in the use of the species at the institution: Dr. Theriault graduated from the University of California at Davis School of Veterinary Medicine in 1996. In 1996 - 1997 Dr. Theriault completed a small animal medicine and surgery internship at the University of Pennsylvania School of Veterinary Medicine. Following her internship, Dr. Theriault was recruited to The University of Chicago's Department of Medicine in 1997 as a Research Associate where she held the position of Primary Coordinator for a pharmacologic study in a non-human primate islet cell transplantation model. In 1999, she accepted a position as Associate Veterinarian at Glenview Animal Hospital, in Glenview, Illinois. Dr. Theriault returned to The University of Chicago in March 2005 as a Clinical Veterinarian. In 2010 Dr. Theriault became board certified by the American College of Laboratory Animal Medicine.

**Responsibilities:** Dr. Theriault provides shared veterinary oversight of The University of Chicago's rodent barrier facilities and exotic animal species. In addition, Dr. Theriault provides primary oversight of the health and operation of The University of Chicago's gnotobiotics facilities. Dr. Theriault shares responsibility of overseeing the work and training of the rodent veterinary technician staff and supervisory and husbandry staff. Dr. Theriault is also an alternate voting member on the IACUC for Dr. George Langan, Attending Veterinarian. Dr. Theriault shares in weekend and holiday coverage for emergency veterinary care.

**Time contributed to program:** Dr. Theriault is a full time employee and devotes 100% of her time to supporting the animal care and use program of the institution.

4. **Name:** Lois Anne Zitzow MS, DVM, DACLAM
   Clinical Veterinarian, Animal Resources Center.
   Associate Professor, Department of Surgery

**Qualifications**

*The University of Chicago*
• Degrees: MS, Michigan State University, 1989; DVM, Michigan State University, 1998
• Training or experience in laboratory animal medicine or in the use of the species at the institution: Dr. Zitzow received her Master of Science degree from the University of Michigan's Department of Microbiology and Immunology in 1989 and her DVM from Michigan State University's College of Veterinary Medicine in 1998. She completed her Laboratory Animal Medicine residency training program at Emory University in 2000. While in her residency, she served as a Visiting Scientist at the Centers for Disease Control. Dr. Zitzow spent three and a half years as an Assistant Professor and Clinical Veterinarian at Baylor College of Medicine with the Department of Molecular Physiology and Biophysics where she provided veterinary care, including preventive medicine, clinical diagnoses and treatment, to a wide variety of species. From January 2004 until April 2005 she held the position of BSL3 Animal Program Scientific Coordinator at Southern Research Institute in Birmingham, Alabama where she directed the ABSL3 Animal Program. She also served as Interim Corporate Veterinarian. Dr. Zitzow came to the University of Chicago in 2005. Dr. Zitzow became board certified by the American College of laboratory Animal Medicine in 2005.

Responsibilities: Dr. Zitzow shares clinical responsibilities with the other veterinarians. She is a member of the Institutional Biosafety Committee and the Select Agent Institutional Biosafety Committee. She shares in the veterinary review of ACUPs and is an alternate member of the IACUC (standing in for Dr. Niekrasz in his absence). She also shares teaching responsibilities with the other veterinarians in training programs and academic course teaching.

Time contributed to program: Dr. Zitzow is a full time employee and devotes 100% of her time to supporting the animal care and use program of the institution.

5. Name: Kerith Luchins, DVM, DACLAM
   Clinical Veterinarian, Animal Resources Center.
   Assistant Professor, Department of Surgery

Qualifications
• Degrees: DVM, University of Illinois, 2008
• Training or experience in laboratory animal medicine or in the use of the species at the institution: Dr. Luchins obtained her veterinary degree from the University of Illinois in 2008. After graduating from veterinary school, Dr. Luchins participated in a companion animal medicine and surgery rotating internship at the Louisiana State University. She then completed a laboratory animal medicine residency program at the Tulane National Primate Research Center. She received her board certification in laboratory animal medicine in 2012 while working as a clinical veterinarian at the Tulane National Primate Research Center. She then served as a senior clinical veterinarian in the Research Animal Resource Center, which serves both Memorial Sloan-Kettering Cancer Center and Weill Cornell Medical College before joining the Animal Resources Center as a clinical veterinarian in 2015.
Responsibilities: Dr. Luchins shares clinical responsibilities with the other veterinarians. She shares in the veterinary review of ACUPs as well as the teaching, training and on-call duties with the other veterinarians.

Time contributed to program: Dr. Luchins is a full time employee and devotes 100% of her time to supporting the animal care and use program of the institution.

6. Name: Allison Ostdiek, DVM, PhD
   Clinical Veterinarian, Animal Resources Center.
   Instructor, Department of Surgery

Qualifications
- Degrees: DVM, University of Illinois, 2010; PhD, University of Missouri, 2014
- Training or experience in laboratory animal medicine or in the use of the species at the institution: Dr. Ostdiek received her D.V.M. from the University of Illinois in 2010. She completed her Laboratory Animal Medicine residency training program at the University of Missouri in 2013. While in her residency she began a PhD in Veterinary Pathobiology with an emphasis in biomedical engineering and earned her degree in 2014. She joined the University of Chicago in January of 2015 as a clinical veterinarian.

Responsibilities: Dr. Ostdiek shares clinical responsibilities in both the large animal and rodent areas. She aids in veterinary review of ACUPs and shares in training responsibilities with the other veterinarians for animal care and investigator staff. She works with the other veterinarians to create and update SOPs for the facilities. She contributes to after hours and holiday coverage for emergency veterinary care.

Time contributed to program: Dr. Ostdiek is a full time employee and devotes 100% of her time to supporting the animal care and use program of the institution.

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 President, as Chief Executive Officer (C.E.O.), has delegated to the Institutional Official the authority to appoint the members of the IACUC. In accordance with the Health Research Extension Act of 1985, this delegation of authority is specific and is in writing. The IACUC consists of at least five members, and its membership meets the composition requirements of PHS Policy IV.A.3.b. Part VIII is a list of the chairperson and members of the IACUC and their initials, degrees, profession, titles or specialties, and institutional affiliations.

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 reviews are as follows:
• The committee convenes a special meeting of the IACUC at least once every six months in order to review the animal care and use program.

• The agenda for this meeting includes the review of the OLAW Program Review Checklist, review of the departures from The Guide previously approved by IACUC, and review of the Psychological Enrichment Program and Dog Exercise/Socialization Program. Additionally, the agenda may include review of current or draft IACUC Guidelines, Policies, and SOPs, or the most recent AAALAC Program Description.

• The committee uses as a basis for conducting the review the Guide, the PHS Policy, and the Code of Federal Regulations (Animal Welfare).

• To facilitate the evaluation, the Committee may use a checklist based on the Sample OLAW Program and Facility Review Checklist from the OLAW website.

• The evaluation includes, but is not necessarily limited to, a review of the following:
  a. Institutional and Individual Responsibilities
  b. IACUC Membership and Functions;
  c. IACUC Member Experience and Training
  d. IACUC Records and Reporting Requirements;
  e. Husbandry and Veterinary Care (all aspects);
  f. Personnel Qualifications (Experience and Training);
  g. Occupational Health and Safety;
  h. Emergency and Disaster Planning.
  i. Security (personal and facility)

• In addition, the IACUC may poll members to identify issues they wish to focus on during this review.

• Any deficiencies discovered by the committee are classified as either significant or minor and a reasonable and specific plan and timetable for correction is determined.

2. 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 as follows:

• The IACUC inspects facilities at least once every six months. Inspection teams consist of a veterinarian and at least two voting IACUC members, one of which may be the veterinarian representative.

• Inspections of areas involving USDA covered species are conducted by two voting members of IACUC.
• The areas inspected may include, holding areas, animal care support areas, storage areas, animal surgery areas, procedure areas, laboratories where animal manipulations are conducted, and equipment used for transporting of the animals.

• Every site where animals are housed (>12 hours) or where surgical manipulations (minor, major, survival, non-survival) are performed are inspected every six months.

• In addition, other rooms to which animals are taken from the University’s centrally managed animals facilities for other purposes (e.g., sacrifice, imaging) are inspected at least every two years.

• The Committee uses a checklist based on the Sample OLAW Program and Facility Review Checklist from the OLAW website.

• Any deficiencies noted are identified minor or major (potentially significant) and reasonable and specific plans and deadlines for correction are assigned by the inspection team. The deficiencies identified by the inspection teams are classified definitely as either minor or significant at a convened meeting of a quorum (e.g., majority) of the IACUC.

• All IACUC members are invited to participate; no member will be involuntarily excluded from participating in any portion of the inspections.

• All deficiencies found during the facility inspections are reviewed at a convened meeting of the IACUC, with the IACUC voting if any should be classified as significant.

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 semiannual report is prepared after the completion of the facility inspections and the program review. The report is developed by a subcommittee, which includes the IACUC Chair and the Attending Veterinarian, of the IACUC after which it is reviewed, revised as warranted, and approved by a convened meeting of the IACUC.

• The report contains a description of the nature and extent of the institution’s adherence to the Guide and the PHS Policy.

• The report includes a summary of the departures from the Guide previously approved by IACUC. The reports will identify specifically any IACUC approved departures from the provisions of the Guide and the PHS Policy, and state the reasons for each departure. If there are no departures the reports will so state.

• Departures are identified and approved during initial protocol review at a convened meeting of a quorum of the IACUC. Approved departures must be
approved as part of a protocol, protocol amendment, or other written document, using either FCR or DMR as delineated below in Section III.D.6 Departures from the PHS Policy and the Guide that were identified, designated and approved by IACUC are included in the semiannual report. The approved departures and their justification are then reviewed at a convened meeting of a quorum of the IACUC at least annually and included in the semiannual report. A list of these departures is maintained in a central database.

- Departures from the provisions of the Guide that are not IACUC approved are considered deficiencies and addressed as such, i.e., the IACUC will develop a reasonable plan and schedule for discontinuing the departure or for having the departure properly reviewed and approved.

- The reports will distinguish significant deficiencies from minor deficiencies. If program or facility deficiencies are noted, the reports will contain a reasonable and specific plan and schedule for correcting each deficiency.

- The report includes other recommendations the committee may decide to make.

- The AAALAC accreditation status is described for the program in the report.

- The final semiannual report is signed by a majority of the voting members of the IACUC and is submitted to the Institutional Official, the Dean, Division of the Biological Sciences, in a timely manner, for review. Minority IACUC views (if any) regarding the Semiannual Report, are included in the report. If there are no minority reviews the report will so state.

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

- The IACUC has a Policy on Reporting Animal Welfare Concerns and has approved IACUC Procedures for Dealing with Possible Non-Compliance.

- Notices located in the animal facilities and posted on the institution’s website advising individuals how and where to report animal welfare concerns and stating that any individual who, in good faith, reports an animal welfare concern will be protected against reprisals.

- Reports of possible noncompliance or other concerns may be made to the ARC veterinarians, members of the IACUC, the IACUC staff or to the Dean, BSD.

- They may be made anonymously and can be reported either verbally, in writing, or electronically,

- The identity of the person making the report is kept confidential.

- The University assures that there are no negative effects on the career of an individual who, in good faith, makes such a report.
- Any reported animal welfare concerns are reported immediately to the IACUC Chair and to the Attending Veterinarian.

- The Attending Veterinarian ensures animal welfare issues are addressed.

- The IACUC Chair may then initiate an initial investigation, call a special meeting of the IACUC, or provide details at the next regularly scheduled IACUC meeting.

- The details are reviewed by the IACUC where a number of actions may be taken by the committee in response to the issue.

- Actions can include a request for further information, require re-training, more institutional oversight of the work or suspension of the protocol.

- All associated IACUC actions are recorded in the IACUC meeting minutes.

- The Committee will report such actions, in writing, to the IO and, as warranted, to OLAW, if supported by the PHS, following guidelines for reporting provided by OLAW. Reports to the IO may be either via meeting minutes, semiannual report of IACUC evaluations, or separate document. Reports to OLAW will be in writing and through the IO. Preliminary reports to both the IO and OLAW may be made verbally.

5. Make written recommendations to the Institutional Official regarding any aspect of the institution's animal program, facilities, or personnel training. The procedures for making recommendations to the Institutional Official are as follows:

- Recommendations to the Institutional Official are discussed at a convened meeting of the IACUC.

- The Committee's recommendations, if approved, are either included within the Semiannual Report or in a separate letter. These documents are reviewed by the Committee, revised as appropriate, and then submitted to the IO.

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:

Submission and Pre-review

- Protocols to use live animals in research or teaching activities are submitted to the IACUC Office as an email attachment using the Animal Care and Use Procedures form (ACUP).

- Protocols involving only the use of tissue or preserved vertebrates of USDA covered species and custom antibody ordering are also submitted using this same form.
- Protocols to use live animals in research or teaching are pre-reviewed by IACUC staff and an Animal Resources Center veterinarian prior to Designated Member Review (DMR) or Full Committee Review (FCR).

- Initial review is conducted by the IACUC staff and designated ARC veterinarians. The ARC veterinarian identifies issues and questions which must be addressed prior to IACUC review. During veterinary review the ARC veterinarian determines whether a protocol contains any of the following elements which generally require FCR:
  
  a. Multiple major survival surgeries.
  b. Departures/Exemptions/Variances to standards (other than husbandry/caging).
  c. Pain/Distress Category E (significant unrelieved pain/distress).
  d. Non routine food/water restriction.
  e. Potential for significant post-procedural or intra-procedural complications.
  f. Veterinary reviewer has issues/concerns with the protocol.

- Protocols which do not include any elements listed above are placed on a list categorized as potentially eligible for DMR, rather than FCR.

**Formal IACUC Reviews (DMR and FCR)**

- No member may participate in the IACUC review or approval of a protocol in which the member has a conflicting interest (e.g., is personally involved in the project) except to provide information requested by the IACUC; nor may a member who has a conflicting interest contribute to the constitution of a quorum.

- During DMR, if the committee member has a conflict, the IACUC chair assigns the protocol to another committee member for review. If the chair has a conflict, the vice-chair or attending veterinarian serves as the secondary reviewer.

- The IACUC may invite consultants to assist in reviewing complex issues. Consultants may not approve or withhold approval of an activity or vote with the IACUC unless they are also members of the IACUC.

- Any use of telecommunications will be in accordance with NIH Notice NOT-OD-06-052 of March 24th, 2006, entitled Guidance on Use of Telecommunications for IACUC Meetings under the PHS Policy on Humane Care and Use of Laboratory Animals.

- Prior to the review, each IACUC member will be provided with a list of proposed activities/projects to be reviewed and written descriptions of activities/projects (protocols) that involve the care and use of animals shall be provided or available to all IACUC members, and any member of the IACUC may obtain, upon request, full committee review (FCR) of those protocols.

**Designated-Member Review (DMR)**
• A summary of the protocols that have been determined by the reviewing veterinarian to be potentially eligible for DMR is emailed to the IACUC membership by the IACUC office.

• The complete protocols are also posted electronically for review by the IACUC members. Members are asked to indicate whether they concur with allowing each protocol to be reviewed and approved using DMR or if any must be reviewed by FCR.

• Committee members are requested to indicate their concurrence to use DMR by email within two working days. A majority of members must respond with all respondents concurring to allow DMR for review of the protocols by DMR to proceed.

• IACUC members may request FCR for any reason.

• If FCR is not requested, at least one member of the IACUC, designated by the chairperson and qualified to conduct the review, may be assigned to review those protocols and have the authority to approve, require modifications in (to secure approval) or request FCR of those protocols.

• If no member requests FCR, the protocol is forwarded for DMR.

• DMR is generally performed by one voting member of IACUC (who is qualified and appointed by the IACUC chair) and by the IACUC chair.

• During DMR the IACUC Chair and the IACUC member determines if the protocol can be approved as written, modifications are required in order to secure approval, or if the protocol needs to be reviewed by FCR.

• If there are required modifications to secure approval identified during DMR the PI is informed by a letter and they must be addressed by the PI.

• After all required modifications are made, a final revised protocol, i.e., an identical document with all required modifications included, is submitted to all designated reviewers for review and approval.

• If multiple designated reviewers are used their decisions to approve must be unanimous; if not, the protocol will be referred for FCR.

• The protocol is approved during DMR after the IACUC Member and the IACUC Chair have determined that the PI has satisfactorily modified the protocol.

• If the PI fails to satisfactorily modify the protocol to secure approval, the protocol is reviewed by FCR.

• Following completion of DMR, protocols are either approved or sent to FCR.

• The IACUC is informed at its next meeting of all protocols approved by DMR.
Full-Committee Review (FCR)

- If FCR is requested, approval of those protocols may be granted only after review at a convened meeting of a quorum of the IACUC and with the approval vote of a majority of the quorum present.

- Protocols not deemed eligible for DMR are reviewed by FCR

- FCR is conducted at a convened meeting of the IACUC in which a quorum of members (i.e., eligible majority of voting members) is in attendance. Once approved, all protocols are approved for up to three years.

- The agenda for the meeting and the protocols on the agenda are provided electronically to all members in advance of the meeting.

- Each protocol is normally assigned a Primary and Secondary Reviewer, who typically summarizes the protocol and indicate the issues that they feel need to be addressed by the PI.

- The discussion of the protocol is then opened to the rest of the convened members.

- Following review and discussion by the convened members of the committee, a motion is made, typically by the Primary Reviewer, to Approve, Require Modification to Secure Approval, to Defer (i.e., not approved, major modifications are required to secure approval that must be reviewed at a convened meeting of the committee), or to Reject (approval withheld). A protocol that has been rejected will not be re-reviewed by the IACUC and must be re-submitted by the PI and undergo the entire review process.

- A majority of the voting members of a properly convened quorum must vote to approve for the motion to be approved.

- The possible outcomes of FCR are as follows:
  a. Approval;
  b. Require modifications (to secure approval);
  c. Defer (require major modifications (to secure approval) that must be reviewed using FCR), and
  d. Withhold Approval

- **Review of Required Modifications Subsequent to FCR.** When the IACUC requires modifications (to secure approval), of a protocol, such modifications are reviewed as follows:
  a. FCR or DMR following all applicable procedures as delineated in the PHS Policy and elsewhere in Part III.D.6 of this Assurance.
or

b. DMR if approved unanimously by all members at the meeting at which the required modifications are developed/delineated _AND_ if all IACUC members have previously agreed in writing (e.g., documented a policy) that the quorum of members present at a convened meeting may decide by unanimous decision to use DMR subsequent to FCR when modification is needed to secure approval. However, any member of the IACUC may, at any time, request to see the revised protocol and/or request FCR of the protocol.

Minor modifications of an administrative nature, i.e., typographical or grammatical errors, required signatures, etc. may be confirmed by IACUC administrative/support personnel.

- There are no other alternate process or procedures for special or expedited review.

- Protocols involving only tissues (USDA Covered Species only) from a vendor, slaughter house, or NHP tissues from another University of Chicago PI are generally reviewed and approved by an ARC Veterinarian and IACUC Chair.

- In order to approve proposed protocols or proposed significant changes in ongoing protocols, the IACUC will conduct a review [by FCR or DMR] of those components related to the care and use of animals and determine that the proposed protocols are in accordance with the PHS Policy. In making this determination, the IACUC will confirm that the protocol will be conducted in accordance with the Animal Welfare Act insofar as it applies to the activity, and that the protocol is consistent with the Guide unless acceptable justification for a departure is presented. Further, the IACUC shall determine that the protocol conforms to the institution's PHS Assurance and meets the following requirements:

  a. Procedures with animals will avoid or minimize discomfort, distress, and pain to the animals, consistent with sound research design.

  b. Procedures that may cause more than momentary or slight pain or distress to the animals will be performed with appropriate sedation, analgesia, or anesthesia, unless the procedure is justified for scientific reasons in writing by the investigator.

  c. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly killed at the end of the procedure or, if appropriate, during the procedure.

  d. The living conditions of animals will be appropriate for their species and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by a veterinarian or other scientist trained and experienced in the proper care, handling, and use of the species being maintained or studied.
e. Medical care for animals will be available and provided as necessary by a qualified veterinarian.

f. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures.

g. Methods of euthanasia used will be consistent with the current American Veterinary Medical Association (AVMA) Guidelines for the Euthanasia of Animals unless a deviation is justified for scientific reasons in writing by the investigator.

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 IV.C. The IACUC procedures for reviewing proposed significant changes in ongoing research projects are as follows:

- Other than the specific exceptions delineated in OLAW Guidance, Notice NOT-OD-14-126, August 26, 2014 and as delineated below and in IACUC approved policies, review and approval of significant changes will be handled in the same manner as new protocols. See Part III.D.6. above.

- Examples of changes considered to be significant include, but are not limited to, changes:
  a. in the objectives of a study
  b. from non-survival to survival surgery;
  c. resulting in greater discomfort or in a greater degree of invasiveness;
  d. in the species used
  e. in Principal Investigator;
  f. that impact personnel safety
  g. in anesthetic agent(s) or the use or withholding of analgesics;
  h. in the method of euthanasia;
  i. in the duration, frequency, or number of procedures performed on an animal
  j. in approximate number of animals used

- Review and approval of items a. – f. must be by FCR or DMR. See Part III.D.6. above.

- Review and approval of items g. – i. may also be handled administratively in consultation with a University of Chicago veterinarian who is authorized by the IACUC and as described in an IACUC approved written policy (or policies) that is compliant with OLAW Guidance, Notice NOT-OD-14-126, August 26, 2014. Such policies will include specific evaluation criteria, e.g., published drug formularies, AVMA Guidelines for the Euthanasia of Animals, allowable blood draw data/charts, etc. Such policies will also address possible negative impacts on animal welfare.

- Review and approval of item j may also be handled administratively, but without requiring additional veterinary consultation, as described in IACUC approved written
policies that are compliant with OLAW Guidance, Notice NOT-OD-14-126, August 26, 2014. Such policies will address the rational for the original number of animals used, approved study objectives, the rational for the additional animals, and possible negative impacts on animal welfare.

- All such aforementioned policies related to administrative review will be adopted by formal action by the IACUC using FCR or DMR.

- All authorizations of individuals by the IACUC to handle changes administratively will be specific (by name or positional title and change(s) authorized to handle) and in writing.

- All such aforementioned policies and authorization of individuals related to administrative review may be approved for a maximum of 36 months only. That is, all such policies expire no later than the three-year anniversary of the IACUC approval.

- If the IACUC wishes to continue the procedures/policies and/or authorizations beyond the expiration date, prior to expiration of the policy, the existing or a new policy must be reviewed and adopted by formal action by the IACUC using FCR or DMR.

- All approved changes will be documented in the associated protocol file.

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:

- Principal Investigators are notified either by e-mail or letter from the IACUC Chairperson or his/her delegate.

- If the IACUC’s decision is to require modifications to secure approval, the required modifications are delineated in the written notification.

- If the IACUC’s decision is to withhold approval, it will include in its written notification a statement of the reasons for its decision and give the investigator an opportunity to respond in person or in writing.

- The Institutional Official has access to our secure website where the meeting minutes are posted.

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 three years according to PHS Policy IV.C.1.-5. The IACUC procedures for conducting continuing reviews are as follows:
• Post-approval Monitoring:

a. During the semiannual facility inspections of the centralized animal facilities and the laboratories IACUC members speak with PIs and their staff and ask them what animal procedures they perform. Inspection team members have information with them at that time which indicates the general procedures that the protocols are approved for (i.e., sacrifice/tissue harvest, survival surgery, non-survival surgery, or other survival procedures), the list of anesthetics/analgescics they are approved to use and the euthanasia methods listed in the approved protocols. The full copy of the protocol is also reviewed if needed.

b. During the semiannual facility inspection of the animal housing facilities the IACUC inspection team observes the animals in their cages. If they have any concerns (e.g., tumor size, presence of ulceration, general health status, etc.) they will review the protocol after the inspection and contact the PI to confirm the approved protocol is being adhered to.

c. The IACUC inspects experimental/medical records during the year outside of the semiannual facility inspections. These inspections are typically conducted by the Director of Regulatory Compliance for Laboratory Programs and the Attending Veterinarian. The records that are selected for review are typically for the labs that had a records keeping orientation session, for protocols involving pain/distress category E, survival surgery or ones that have a scoring and monitoring system for early removal.

d. On a select basis, PIs performing survival surgery are requested to demonstrate that they are able to competently conduct aseptic survival surgery. All lab members performing survival surgery are requested to be present during these demonstrations.

e. ARC veterinarians and veterinary technicians observe the animals and the animal procedures during their rounds and as they go about their daily work activities in the animal facilities.

f. The IACUC may request veterinarians to oversee animal procedures or request investigators to provide reports related to monitoring the health of the animals used in a particular IACUC protocol.

• USDA Regulated Species – Protocols are reviewed by an ARC Veterinarians and the IACUC Chair at least once every 12 months.

• Non-USDA Regulated Species – Principal Investigators are informed via email two months prior to anniversary date of original protocol approval to complete a survey in our web-based IACUC database. This survey asks them if they wish to continue the protocol and, if so, then asks them to verify the staff listed on the ACUP, the number of animals they have bred over the past 12 months (if breeding is approved), asks the PI to verify that they have informed the people listed on the protocol that if they have become pregnant or their health status has changed that...
they should consider re-submitting their Health Questionnaire to Occupational Medicine, and asks them to report any unexpected morbidity. This survey is reviewed and approved by the IACUC office staff. Reports of unexpected morbidity are reviewed at the next IACUC meeting as determined by the Attending Veterinarian and IACUC Chair.

- The IACUC is provided a list at each monthly meeting of the annual reviews that were conducted the previous month.

- Protocols are approved for a maximum of 36 months. That is, all protocols expire no later than the three-year anniversary of the initial IACUC approval.

- Prior to the three year expiration of the protocol, the PI is informed that if activities will continue beyond the expiration date, prior to expiration of the original or preceding protocol a new protocol must be submitted, reviewed, and approved as described in Paragraph III.D.6. above.

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:

- The IACUC may suspend an activity that it previously approved if it determines that the activity is not being conducted in accordance with applicable provisions of the Animal Welfare Act, the Guide, the institution's Assurance, or IV.C.1.a.-g. of the PHS Policy.

- The IACUC can suspend an approved protocol following review at a convened meeting of a quorum of the IACUC and with a vote to suspend by a majority of the quorum present.

- If the IACUC suspends an activity involving animals, or any other institutional intervention results in the temporary or permanent suspension of an activity due to noncompliance with the Policy, Animal Welfare Act, the Guide, or the institution's Assurance, the Institutional Official, in consultation with the IACUC, will review the reasons for the suspension and take appropriate corrective action, and report that action with a full explanation, in writing, to OLAW. Preliminary reports may be made verbally.

Funding agencies are notified as appropriate. Suspensions of activities involving USDA-covered species are also reported to APHIS/USDA.

The investigator is informed in writing, and all animals on census for this protocol are either euthanized or transferred over to an approved animal protocol.

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:

1. Administration/management.
• The IACUC is responsible for the overall management of the Occupational Health and Safety Program for Personnel involved in the care and/or use of laboratory animals.

2. Scope.

• The program covers all personnel involved in animal care and/or use. All individuals who come into the presence of animals including caretakers, researchers, and students are required to participate in The University of Chicago’s Occupational Health and Safety Program.

• All medical center and BSD employees are asked if they work with animals or human patients. If they work with animals, University of Chicago Occupational Medicine (UCOM) evaluates their risk based on their exposure to animals.

• In addition to these requirements, all individuals who are listed on an IACUC protocol or request animal facility access are enrolled in The University of Chicago’s Occupational Health and Safety Program for animal users.

3. Health Histories and Evaluations.

• Animal users listed on an ACUP and those requiring access to the animal facilities must complete the Occupational Medicine Health Questionnaire for animal users, located on the IACUC or the ARC web site. The Health Questionnaire includes health history of the individual and questions related to the work they will perform related to animal use. This questionnaire is completed and signed by the animal user. The Health Questionnaire is submitted to and reviewed by the UCOM health professionals. Individuals are not placed onto an ACUP or given facility access until the medical clearance is given by UCOM.

• Based on UCOM’s evaluation, animal users may be given medical clearance without further actions, or UCOM may determine that additional medical evaluation (e.g., immunization or testing) is necessary. Examples of possible procedures include physical exam, pulmonary function test, TB skin test, Rubeola immunizations, and allergy screening.

• UCOM will issue a Medical Clearance Form upon completion of these evaluations and/or immunizations. Animal users may receive, as an employee benefit, immunizations to tetanus, rabies, measles, hepatitis B, and hepatitis A at UCOM.

• The Occupational Medicine Health Questionnaire is repeated for all ARC employees yearly due to their higher risk due to frequent animal contact. All other animal users are instructed to update their Occupational Medicine Health Questionnaire whenever they experience a change in health status or begin working with a new species or hazardous agent.
• Principal Investigators are asked to confirm the need for a new Occupational Medicine Health Questionnaire with their staff during completion of each annual survey.


• The use of hazardous materials in animal research is identified in the ACUP. Investigators describe the manipulation of the animal during or after exposure to the material and the protection of personnel. The material is described with its effect and recommended method of disposal. Hazard specific forms and protocols are reviewed and approved as part of the ACUP review process.

• Hazardous chemicals are reviewed by EH&S and appropriate protective measures determined for use of the hazard. Radiation Hazards are reviewed by the Office of Radiation Safety and appropriate protective measures prescribed by that office. Biological Hazards are reviewed by the Institutional Biosafety Committee and the Biosafety Office. Appropriate protective measures are determined after their review. IACUC protocols with associated hazardous agents are not approved until the corresponding safety review has been completed.

• A representative(s) from EH&S inspects all laboratories and laboratory support areas within the animal facilities. They identify and secure resolution to hazards found during the inspection.

• A representative of the Office of Biosafety inspects investigator laboratories to confirm compliance with BL2 standards for all IBC submission utilizing any RG2 agents and other materials managed at BSL2, if not previously inspected. All laboratories working with BL3 agents are inspected by a representative of the Office of Biosafety prior to work with the agent and are re-inspected annually.

• Radiation Safety inspects animal rooms used for studies involving radioactive isotopes before, during and after use to assure they remain free of radioactive contamination. Radiation Safety also oversees use and access to any irradiators used in the animal facilities.

5. Procedures in Place to Alleviate Hazards and Minimize Risks.

• Hazards and risks are alleviated through various methods including: engineering methods or controls, institutional policies, training (e.g., regarding: allergies, zoonoses, specific chemical and physical hazards, etc.), use of personal protective equipment, and personal hygiene requirements

• The Animal Resources Center utilizes an extensive system of Standard Operating Procedures (SOP) and documentation to manage the centralized animal facilities.

• These SOPs describe the requirements for personal protective equipment, husbandry and any special precautions for working with the animals.
- In addition, the University of Chicago animal facilities are designed and operated to minimize exposure to hazards while working with animals.

- Unless exempted for special reasons, rodents are maintained in individually ventilated cages and manipulations occur within a biological safety cabinet. When this is not possible, appropriate personnel protective equipment is modified to protect the employee from hazards identified during the risk assessment.

- Biological hazard studies are conducted in special rooms or facilities to contain the agents and protect employees. No special facilities or rooms are designated for radioisotope or chemical hazard studies unless specifically required. When needed, an animal housing room is designated for this special use and the appropriate precautions dictated by the reviewing safety office/committee.

- General safety training is required depending on job category. This training may include: Information about physical hazards in the workplace, back and ergonomic safety, fire safety, blood-borne pathogen safety, respiratory protection, personal protective equipment, transporting hazardous materials and Safety Data Sheets.

- Minimum requirements for all individuals using biohazardous materials on an approved animal protocol include: Completion of an on-line orientation on Occupational Health and Safety practices in the use of animals and completion of a tour/practicum of the Biosafety Facility or HTNL for those individuals requiring access.

- All staff working with human blood or blood products must complete annual blood borne pathogen training.

- Select Agents: Individuals working with Select Agents requires specific initial and annual training on biosafety, security, and incident response which is provided via classroom training under the direction of the Select Agent Responsible Official (Institutional Biosafety Officer) and the Alternate Responsible Official (Assistant Biosafety Officer).

- The University of Chicago Occupational Health and Safety Module, which must be reviewed by all investigative and ARC staff, describes the Occupational Health and Safety Program and contains information about zoonoses, other hazards, and post-exposure policies. Review of this training module includes a quiz and must be completed every three years.

- All new animal users attend a General Orientation, which includes information on subjects such as working with hazardous materials and occupational health and safety requirements. The ARC Newsletter provides occasional reminders about health and safety issues and related policies. All personnel working with nonhuman primates must complete a non-human primate orientation which includes information on zoonosis from this species i.e. Herpes B virus. Refresher training on Herpes B virus prevention occurs annually for individuals working with macaque monkeys.
• We instruct all staff to wash their hands thoroughly after working with any animals. Sinks and/or alcohol foam dispensers are available in all facilities for hand washing.

• Each facility has designated changing and showering locations. Animal care personnel are required to change into dedicated work uniforms, including shoes, prior to working in the animal facilities. When staff members leave the ARC facilities during the workday, they are required to wear lab coats over their uniforms, or change into their street clothes before leaving the animal facilities.

• Within all of The University of Chicago animal facilities, eating and drinking are only allowed in break rooms.

• Animal care and cage wash staff are provided with scrub suits, work shoes and lab coats. The receiving dock staff and ARC facility maintenance staff is provided with work uniforms and shoes. Scrub suits and lab coats are provided to the veterinary technicians and veterinarians. All uniforms and clothing are laundered on site. For individuals not wearing dedicated uniform, PPE is provided at entrance to the animal rooms or facility. This PPE may include: hair cover, face mask or respirator, disposable lab coat or Tyvek suits, shoe covers, Tyvek sleeves, goggles or face masks, and gloves. The PPE varies based on the requirements of the room and facility.

• At a minimum, laboratory coats and gloves are required in all animal facilities for personnel who will enter rooms housing animals. This garb is removed prior to exiting the facilities.

6. Immunizations.

• Immunization recommendations are determined based on consultation with the Occupational Medicine physician after completion of the risk assessment.

7. Precautions taken during pregnancy, illness or decreased immunocompetence.

• Personnel are advised during training that if they are planning to become pregnant, are pregnant, are ill, or have impaired immunocompetence that they should consult a health care professional/physician regarding such conditions and how they might pertain to their working with laboratory animals. If warranted, any work restrictions and/or accommodations are coordinated among the individual, his/her health care professional, human resources, etc.

8. Provisions for personnel who are not involved in animal care and/or use but nevertheless need to enter areas when animals are housed or used.

• Personnel who have only occasional access to the animal facilities but are not animal users (facility services, physical plant employees, University of Chicago Police) are instructed to read the health warning signs posted on the entrance to the animal facilities. These signs indicate the presence and nature of hazards of animal
exposure and how to handle concerns about those hazards. In addition, an ARC veterinarian conducts periodic orientation sessions with construction and physical plant personnel to orient them to the ARC and possible hazards present in the animal facilities.

- Visitors are accompanied by a representative of the ARC and are instructed to read the health warning signs posted at the facility entrance. They also complete a visitor authorization form which must be reviewed and approved by an ARC veterinarian.

- Visiting Scientists are individuals who are not affiliated with the University of Chicago who will work with animals as part of an approved ongoing research activity but for a short duration. These individuals review health warning information or complete the Occupational Health and Safety information module depending on the AAALAC status and occupational health and safety training at their home institution. Visiting Scientists are escorted at all times by an approved member of the research lab in which they will work.

9. Availability and procedures for treatment of bites, scratches, illness or injury.

- Post-exposure policies vary with the exposure. Animal bites, scratches, or other injuries sustained in working with animals are promptly reported to the ARC veterinarians, who comply with local and state regulations for handling such incidents: victims are referred to the University of Chicago Office of Occupational Medicine (UCOM), which coordinates treatment with Infectious Diseases Section if necessary.

- The non-human primate exposure policy follows CDC recommendations. It requires immediate cleansing of the wound using materials in the non-human primate exposure kits, which are located within the animal facility, and subsequent treatment prescribed by the UCOM.

- Bite/wound kits are available in locations where primates or primate equipment is used or non-human primates housed. These kits have been prepared under the direction of UCOM and the Infectious Diseases Section of the Department of Medicine and include material for cleaning the wound and directions (SOP) for evaluation of the person by UCOM or the Infectious Disease Section.

10. Procedures/program for reporting and tracking injuries and illnesses.

- All work related injuries and illnesses reported and tracked using US OHSA forms 300, 300a, 301 as applicable.

11. Other Pertinent Information Regarding the OH&S Program.

- Tuberculosis evaluations of investigators using non-human primates are confirmed during annual reviews of Animal Care and Use Protocols. All ARC staff working with NHPs also are required to have Tuberculosis evaluations annually.
• All personnel working with nonhuman primates must complete a non-human primate orientation which includes information on zoonosis from this species i.e. Herpes B virus.

• Individuals handling non-anesthetized non-human primates are required to wear appropriate PPE, such as a Tyvek® suit or fully buttoned long sleeve lab coat, surgical mask, booties or facility specific shoes, headband type face shield, cap, latex gloves covered by Kevlar gloves and armguards.

• All personnel working with primates must have an annual tuberculosis evaluation and must attend a Non-human Primate Orientation and a Bite/scratch training session prior to working with primates. Annual refresher training is also required. The nonhuman primate exposure policy follows CDC recommendations.

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 Part X., the 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:

1. IACUC Member Training

• New IACUC members are required to attend an orientation session given by the Attending Veterinarian and the Director of Regulatory Compliance of Laboratory Programs. This session is designed to provide an overview on relevant legislation, regulations, guidelines, and policies, the processes of animal protocol review and any special IACUC concerns or sensitivities.

• During this session, which is typically conducted after the new member has attended one convened meeting of the IACUC, new members receive a packet of reference materials which typically includes:

  a. National Research Council (NRC) “Guide for the Care and Use of Laboratory Animals” (Current Edition)
  b. Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals
  c. The University of Chicago Policy and Procedures Manual for the Care and Use of Animals in Research and Teaching
  d. A summary of the USDA regulations and USDA animal care policies
  e. The IACUC Guidebook
  f. The ILAR Humane Endpoints for Animals used in Biomedical Research and Testing
  g. The AVMA Guidelines on Euthanasia (Current Edition)
  h. The University of Chicago OLAW Assurance

• New members also attend an additional training session before the Semi-Annual Program Review and Semi-Annual Facility Inspections. This session explains the
regulatory basis and purpose of the Program Review and the facility inspections, the location of the animal facilities, and the process by which the IACUC conducts these reviews and inspections.

- New members typically attend at least two convened meetings of the IACUC prior to acting as primary or secondary reviewers on protocols. One-on-one training with another IACUC member is also offered and encouraged prior to reviewing protocols independently.

- Continuing Education
  a. IACUC members are encouraged to attend an IACUC 101 conference and subsequent IACUC training conferences.
  b. Members are also encouraged to view the on-line training tutorials “Working with the IACUC” and “Essentials for IACUC Members” available from the AAALAS Learning Library.
  c. Members are invited to view OLAW sponsored webinars.
  d. Training topics on IACUC policies/guidelines and government regulations/guidelines are discussed at convened meetings when time permits.

2. Training for those using and caring for animals

- All personnel involved in animal care and/or use are aware of this Assurance and its contents during training.

- The IACUC verifies that personnel involved in animal care and/or use have adequate training and are qualified to perform their duties based on the mandatory training for being on the IACUC protocol and through indication of the number of years of experience with the species and procedures to be performed.

- The training includes training or instruction on research or testing methods that minimize the numbers of animals required to obtain valid results and limit animal pain or distress as well as other requirements delineated in 9 CFR, Part 2, Subpart C, Section 2.32(c). Specifically, as applicable, training and instruction of personnel includes guidance in at least the following areas:

  1. Humane methods of animal maintenance and experimentation, including:
     a. The basic needs of each species of animal;
     b. Proper handling and care for the various species of animals used by the facility;
     c. Proper pre-procedural and post-procedural care of animals; and
     d. Aseptic surgical methods and procedures;

  2. The concept, availability, and use of research or testing methods that limit the use of animals or minimize animal distress;

  3. Proper use of anesthetics, analgesics, and tranquilizers for any species of animals used by the facility;
4. Methods whereby deficiencies in animal care and treatment are reported, including deficiencies in animal care and treatment reported by any employee of the facility. No facility employee, Committee member, or laboratory personnel shall be discriminated against or be subject to any reprisal for reporting violations of any regulation or standards under the Act;

5. Utilization of services (e.g., National Agricultural Library, National Library of Medicine) available to provide information:
   a. On appropriate methods of animal care and use;
   b. On alternatives to the use of live animals in research;
   c. That could prevent unintended and unnecessary duplication of research involving animals; and
   d. Regarding the intent and requirements of the Animal Welfare Act and USDA-APHIS Regulations

- **Required to review the IACUC Policy and Procedure Manual** – This manual includes a general description ARC, IACUC and animal based regulations. All IACUCs policies and procedures are described in this manual and investigative staff is to review the manual as part of ACUP approval.

- **General Orientation to Animal Use** – provides an orientation to IACUC, animal regulations, ACUP approval process, and whistleblower policy. Information is also presented about the Animal Resources Center, specifically what services are available, how to get access, how to order animals. Information on occupational health concerns and other safety committee approvals that may be needed with animal work are presented. The orientation is designed to present the basic information required by the Guide. This is a live seminar typically given weekly by an ARC veterinarian.

- **Occupational Health and Safety Module and quiz** – This on-line AALAS Learning Library course discusses how to enroll in the occupational health and safety program and discusses animal related occupational health concerns such as bites/scratches, Herpes B virus, allergens, zoonosis, waste anesthetic gases and working with hazardous materials. This tutorial requires passage of a quiz at the end.

- **Occupational Health and Safety Questionnaire** – A health questionnaire complete and then reviewed by the University of Chicago Occupational Medicine office. They clear employees for animal work and report this back to the IACUC office.

- **Aseptic Surgery Module** – (rodent surgeries only) This is an on-line AALAS Learning Library course on Aseptic Techniques for Rodent Survival Surgery. It covers how to prepare the surgical area, instruments and animals for survival surgery.

- **Rodent Euthanasia** – This AALAS Learning Library on-line tutorial discusses the appropriate methods for rodent euthanasia with emphasis on the use of CO₂
euthanasia. A video demonstration of the proper technique for CO₂ euthanasia is included. Completion of a quiz is required at the end of the training.

- **Non-human primate Orientation** – This seminar is conducted by an ARC veterinarian and provides an orientation to how to work safely with non-human primates. Part I of the orientation involves viewing the NIH video "Working Safely with Nonhuman Primates". Part II involves a discussion of the appropriate PPE to use when working with these animals, non-human primate behaviors, primate specific zoonosis and possible routes of exposure. Part III involves a hands-on demonstration in the facility of the PPE for working with nonhuman primates and how to respond if a Herpes B virus exposure occurs.

- **Herpes B Virus and Bite Scratch Refresher Training** – This annual refresher training is provided by seminar conducted by an ARC veterinarian. It covers how to respond to a bite or scratch from an animal and specifically what to do in the event of an exposure to a non-human primate.

- **Non-human primate Tissue handling Orientation** – Anyone who is working with non-human primate tissues (not live animals) is required to take this orientation course given by an ARC veterinarian. It includes information on how to safely handle these tissues to prevent zoonotic disease transmission and how to respond to an exposure.

- Prior to being given access to centrally managed facilities:
  
  a. **Barrier Facility Tutorial** - (barrier users only) this on-line tutorial provides information on how to work in a rodent barrier facility at U of C. It covers information related to barrier policies and procedures, PPE, barrier equipment and caging, sentinel animals, and ARC procedures on care and monitoring of animals.

  b. **Facility Specific Tour and Orientation** – This orientation is given in each specific facility by the facility supervisor. It involves a tour and training regarding entry requirements for the facility, procedures for working in the animal and procedure rooms, the location of the places such as morgues and spill kits, and a description of the various paperwork and documentation used in the facility.

  c. **Carlson Surgical Clinic Orientation** – This orientation covers how to work and schedule surgeries in the clinic, proper attire and procedures for the Clinic and the different uses for the surgical rooms in the Clinic

**IV. Institutional Program Evaluation and Accreditation**

A. 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 reevaluated 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 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.

B. This Institution is Category 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 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. Kenneth S. Polonsky, Dean, Division of the Biological Sciences.

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. 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. Kenneth S. Polonsky, Dean, Division of the Biological Sciences.

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.
### VII. Institutional Endorsement and PHS Approval

#### A. Authorized Institutional Official

<table>
<thead>
<tr>
<th>Name: Kenneth S. Polonsky, M.D.</th>
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<tbody>
<tr>
<td>Title: Dean, Division of the Biological Sciences</td>
</tr>
<tr>
<td>Name of Institution: The University of Chicago</td>
</tr>
<tr>
<td>Address: (street, city, state, country, postal code)</td>
</tr>
<tr>
<td>5841 South Maryland Avenue, MC 1000</td>
</tr>
<tr>
<td>Chicago, IL, 60637</td>
</tr>
<tr>
<td>Phone: (773) 702-3004</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:polonsky@bsd.uchicago.edu">polonsky@bsd.uchicago.edu</a></td>
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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.

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#### B. PHS Approving Official *(to be completed by OLAW)*

| Eileen M. Morgan-Director, Division of Assurances |
| Office of Laboratory Animal Welfare |
| National Institutes of Health |
| 6705 Rockledge Drive |
| RKL1-Suite 360-MSC 7982 |
| Bethesda, MD 20892-7982 |

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<td>Date: 7-9-15</td>
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| Assurance Number: A3520-01 |
| Effective Date: 7/9/15 | Expiration Date: 7/31/19 |
### VIII. Membership of the IACUC

**Date:** July 2015  
**Name of Institution:** The University of Chicago  
**Assurance Number:** A3523-01

#### IACUC Chairperson

- **Name:** Catherine Reardon-Alulis  
- **Title:** Research Associate (Professor)  
- **Degree/Credentials:** Ph.D.  
- **Address:**  
  University Research Administration  
  Institutional Animal Care and Use Committee  
  6030 South Ellis Avenue, Rm 190  
  Chicago, IL 60637  
  **E-mail:** iacuc@uchicago.edu  
  **Phone:** 773-834-4765  
  **Fax:** 773-702-2142

#### IACUC Roster

<table>
<thead>
<tr>
<th>Name of Member/Code</th>
<th>Degree/Credentials</th>
<th>Position Title***</th>
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<tbody>
<tr>
<td>BR</td>
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<td>Administrator</td>
<td>Scientist</td>
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<tr>
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<td>Associate Professor</td>
<td>Scientist</td>
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<tr>
<td>George Langan</td>
<td>D.V.M.</td>
<td>Associate Professor, Attending Veterinarian</td>
<td>Veterinarian</td>
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<tr>
<td>PM</td>
<td>MILS</td>
<td>Librarian</td>
<td>Nonscientist and Non-affiliated Member</td>
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<tr>
<td>MN</td>
<td>D.V.M.</td>
<td>Associate Professor</td>
<td>Veterinarian</td>
</tr>
<tr>
<td>BP</td>
<td>M.A.</td>
<td>Administrator</td>
<td>Member</td>
</tr>
<tr>
<td>ST</td>
<td>M.S.</td>
<td>Research Specialist</td>
<td>Scientist</td>
</tr>
<tr>
<td>MW</td>
<td>Ph.D.</td>
<td>Professor</td>
<td>Scientist</td>
</tr>
<tr>
<td>MZ</td>
<td>M.S.</td>
<td>Research Technician</td>
<td>Scientist</td>
</tr>
<tr>
<td>TG</td>
<td>Ph.D.</td>
<td>Associate Professor</td>
<td>Alternate Scientist</td>
</tr>
<tr>
<td>BT</td>
<td>D.V.M.</td>
<td>Assistant Professor</td>
<td>Alternate for George Langan</td>
</tr>
<tr>
<td>LZ</td>
<td>D.V.M.</td>
<td>Associate Professor</td>
<td>Alternate for MN</td>
</tr>
<tr>
<td>JK</td>
<td>Ph.D.</td>
<td>Assistant Dean, Biosafety Officer</td>
<td>Non-Voting Member</td>
</tr>
<tr>
<td>ML</td>
<td>B.S.</td>
<td>Administrator</td>
<td>Non-Voting Member</td>
</tr>
</tbody>
</table>
* 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.

[Note: all members must be appointed by the CEO (or individual with specific written delegation to appoint members) and must be voting members. Non-voting members and alternate members must be so identified.]

IX. Other Key Contacts (optional)

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

<table>
<thead>
<tr>
<th>Contact #1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: George Langan, DVM</td>
</tr>
<tr>
<td>Title: Director, Animal Resources Center</td>
</tr>
<tr>
<td>Phone: 773-834-4375</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: William Pugh</td>
</tr>
<tr>
<td>Title: Director, Regulatory Compliance for Laboratory Programs</td>
</tr>
<tr>
<td>Phone: 773-834-4765</td>
</tr>
</tbody>
</table>
X. Facility and Species Inventory

<table>
<thead>
<tr>
<th>Laboratory, Unit, or Building</th>
<th>Gross Square Feet [include service areas]</th>
<th>Species Housed [use common names, e.g., mouse, rat, rhesus, baboon, zebrafish, African clawed frog]</th>
<th>Approximate Average Daily Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Center</td>
<td>79,652</td>
<td>Mouse 13280, Rat 239, Rabbit 3, Guinea Pig &lt;1, Pigs 6, Dogs 6, Ferret &lt;1, Rhesus Macaque 39, Marmoset 4, Zebrasfish &lt;1, Zebrafinch 300, African Clawed Frogs 40</td>
<td></td>
</tr>
<tr>
<td>Biological Sciences Learning Center</td>
<td>1926</td>
<td>Mouse 1400, Mouse 300, Rat 20, Siberian Hamsters 500, Zebrafinch 200</td>
<td></td>
</tr>
<tr>
<td>Biopsychological Sciences Building</td>
<td>9653</td>
<td>Zebrafish 5850, Zebrafinch and Starlings 250, Fish (Appendix B) 95</td>
<td></td>
</tr>
<tr>
<td>Culver/Anatomy</td>
<td>3419</td>
<td>Guinea Pig 5, Mouse 30, Rat 4</td>
<td></td>
</tr>
<tr>
<td>Howard T. Ricketts Laboratory</td>
<td>11,913</td>
<td>Mouse 19350, Rat 20, Zebrafish 6000</td>
<td></td>
</tr>
<tr>
<td>Knapp Center for Biomedical Discovery</td>
<td>30,277</td>
<td>Mouse 24615, Zebrafish 200</td>
<td></td>
</tr>
<tr>
<td>Gordon Center for Integrative Science</td>
<td>21,399</td>
<td>Mouse 24615, Zebrafish 200</td>
<td></td>
</tr>
</tbody>
</table>

Unless otherwise indicated, mice and rats means mice of the genus mus and rats of the genus rattus that are purposely bred for research.
### Appendix B

**Fish Species**

<table>
<thead>
<tr>
<th>Species Housed [use common names, e.g., mouse, rat, rhesus, baboon, zebrafish, African clawed frog]</th>
<th>Approximate Average Daily Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alligator Gar</td>
<td>14</td>
</tr>
<tr>
<td>Australian lungfish</td>
<td>1</td>
</tr>
<tr>
<td>African lungfish</td>
<td>5</td>
</tr>
<tr>
<td>Slippery wrasse</td>
<td>3</td>
</tr>
<tr>
<td>Hogfish wrasse</td>
<td>1</td>
</tr>
<tr>
<td>Princess parrotfish</td>
<td>2</td>
</tr>
<tr>
<td>Skates</td>
<td>25</td>
</tr>
<tr>
<td>Paddlefish</td>
<td>Occasionally present</td>
</tr>
<tr>
<td>Triggerfish</td>
<td>Occasionally present</td>
</tr>
<tr>
<td>Sea bream</td>
<td>Occasionally present</td>
</tr>
<tr>
<td>Bass</td>
<td>Occasionally present</td>
</tr>
<tr>
<td>Darters</td>
<td>Occasionally present</td>
</tr>
<tr>
<td>Bowfin</td>
<td>Occasionally present</td>
</tr>
<tr>
<td>Grouper</td>
<td>Occasionally present</td>
</tr>
<tr>
<td>Pacus</td>
<td>Occasionally present</td>
</tr>
<tr>
<td>Bluegill</td>
<td>15</td>
</tr>
<tr>
<td>Mexican Cavefish</td>
<td>15</td>
</tr>
<tr>
<td>Round goby</td>
<td>10</td>
</tr>
<tr>
<td>Armored catfish</td>
<td>4</td>
</tr>
</tbody>
</table>