I, Paul B. Bell, Jr. as named Institutional Official for animal care and use at the University of Oklahoma, Norman Campus (OUNC), hereinafter referred to as Institution, 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, or at another institution as a consequence of the subgranting or subcontracting PHS-conducted activity by this Institution. [Note: only those entities listed in this section will be entitled to use the Assurance number for grant and contract submissions to PHS agencies.]

A. The following are branches and components over which this Institution has legal authority, included are those that operate under a different name:

Branches or Components of the College of Arts and Sciences:
Departments of Biology, Chemistry and Biochemistry (Stephenson Life Science Research Center–SLSRC), Microbiology and Plant Science, Psychology, Oklahoma Biological Survey (OBS), Sutton Avian Research Center (SARC), Sam Noble Museum of Natural History (SNOMNH), Oklahoma Biological Station (UOBS), Stephenson Research & Technology Center, Aquatic Research Facility (ARF); UOBS & SARC are off campus.

Branches or Components of the College of Engineering:
Bioengineering Program, Aerospace and Mechanical Engineering, Civil Engineering and Environmental Sciences.

Many faculty of the Institution (OUNC) are engaged in teaching and research activities that involve vertebrate animals under field conditions away from campus. Field activities are reviewed by the IACUC relative to animal welfare considerations. Vertebrate group-oriented professional societies (birds, fishes, etc.) have developed relevant Field Research Guidelines, and these are consulted for issues that are not covered under laboratory guidelines.

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

Some investigators of the Institution regularly conduct collaborative biomedical research with investigators affiliated with the Veterans Administration Medical Center, the University of Oklahoma Health Science Center (OUHSC), and the Oklahoma Medical Research Foundation, all of these are in Oklahoma City, OK and operate under their own Assurances and/or have AAALAC accreditation. Further, some investigators develop collaborative studies at other Institutions. Any collaborative investigation must be approved by the IACUC of the host institution where the work will be performed, and this approval will accompany the application for protocol review by the Norman Campus IACUC (OUNC).
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 - 8th ed. (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.
F. Some studies are conducted in the field and involve nontraditional and or native species. This Institution has established policies for reviewing field studies to assure that procedures comply with state and federal regulations, and the Guide as applicable, and guidelines prepared by pertinent professional societies for using animals in field studies in accordance with "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training."

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 as follows:

The University President is the Chief Executive Officer (CEO) and the Dean of the College of Arts and Sciences (CAS) is the Institutional Official (IO); the Consulting Veterinarian has direct lines of communication with the IO and the Director of the Laboratory Animal Resources (LAR) Program (see following organization chart). Both the Director and the Veterinarian are members of the IACUC. In addition, a representative from the Deans’ office is a non-voting member of the IACUC. The LAR Director reports to the Dean (IO) relative to administering the animal care program as a whole and the LAR as a budget unit within the College of Arts and Sciences (CAS), and he also serves as Chair of the IACUC. The LAR provides administrative support for the IACUC. The Laboratory Animal Facilities Manager reports to the LAR Director. The Animal Facilities Manager supervises two animal caretakers – an Animal Care Supervisor and a Technician. Neither the OUHSC, nor Norman Campus (OUNC) Institutional Animal Care and Use Committees are directly administered under the Institutional Compliance Office, but communication liaison is maintained; the University Compliance Director is a non-voting member of the OUNC-IACUC. The OUHSC is located in Oklahoma City; their Animal Care Program is AAALAC accredited and maintains a separate IACUC.

B. Qualifications, authority and Percent time contributed
   1) Veterinarian(s):

   **Name:** Dr. Stanley D. Kosanke  
   **Degrees:**  
   D.V.M, Oklahoma State University – 1970  
   Ph.D. – Veterinary Pathology, Texas A&M University – 1975  
   **Diplomate** – American College of Veterinary Pathologist and American College of Laboratory Animal Medicine
Experience: Oklahoma University Health Sciences Center, Associate Professor, 42 years training and experience in laboratory medicine and pathology. Pathology services are provided as needed and he is available for consultancy on questions of animal care and health. He is available for training as needed. In addition to direct veterinary service, Dr. Kosanke is a member of the IACUC.

Authority: Dr. Stanley D. Kosanke has delegated program authority and responsibility for the Institutions’ animal care and use program including access to all animals. A Memorandum of Understanding (MOU 2008, LAR-OUHSC) provides the mechanism for the veterinarian service to the OUNC animal-care program. The MOU is renewed on a regular basis. The consulting veterinarians have the authority to require that steps be taken to rectify any problems they observe in animal care and use practices in teaching or research. Direct communications are maintained with the LAR Director and the Laboratory Animal Facilities Manager concerning animal care and well-being, and when Desired. Direct access to the IO is built into our structure.

Time Contributed to the Program: Regular attendance on the Norman campus is provided one day per week and 24-hour service is available around-the-clock by Dr. Kosanke or one of the other veterinarians of the OUHSC. These services are equivalent to 10% FTE.

2) Name - Dr. Gary L. White (Alternate)

Degrees: D.V.M., Oklahoma State University - 1968
M.M.S., two-year residency as NIH Post-Doctorate -1973, Laboratory Animal Science, Tulane University School of Medicine

Experience: Veterinary experience with wild animals, New Orleans Zoo. Director of Laboratory Animal Program and Professor, OUHSC.

Authority: The MOU between OUHSC and OUNC provides the same services from, and serves as the authority to Dr. White in the absence of Dr. Kosanke. Dr. White also serves as the alternate veterinarian on the IACUC.

On a weekly basis, Drs. Kosanke or White examine the status of animals in the housing facilities on the Norman campus; they discuss any health concerns with the facilities manager and/or investigators. They, or other members of their staff are available on an around-the-clock basis for consultation on questions concerning animal health and care. Although veterinary services are contracted for specific coverage rather than a dedicated amount of time, these services average approximately 10 percent of their FTE. They have the authority to require correction of any violations of the federal, state or local regulations governing animal care and use. In summary, the responsibilities of the consulting veterinarian(s) for the University of Oklahoma, Norman Campus Animal Care and Use Program are to:

1. Stay current on all federal, state, and local laws and regulations that relate to the use of laboratory animals, and to share this knowledge with animal care personnel.
2. Consult with research Principal Investigator (PI’s) on proper anesthesia, post-operative and/or post-experimental care, and proper euthanasia of lab animals when requested.
3. Provide workshops for investigators and animal care personnel on topics related to care and use of animals as needed and upon request.
4. Coordinate the animal health program with the Director of Laboratory Animal Resources.
5. Conduct pathology evaluations as needed.
C. The IACUC 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 members of the IACUC and their credentials are:

**MEMBERSHIP† OF THE INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE**

*Date: December 2012*

**Institution:** University of Oklahoma, Norman Campus. **Assurance Number:** A3240-01

<table>
<thead>
<tr>
<th>Chairperson</th>
<th>Address and contact numbers</th>
</tr>
</thead>
</table>
| William L. Shelton         | Biology Department, University of Oklahoma  
730 Van Vleet Oval, Norman, OK 73019 |
| Ph.D., Zoology             | Email: wshelton@ou.edu       |
| Laboratory Animal          | Telephone: 405-325-1058      |
| Resources Director         | FAX: 405-325-7031            |
D. The IACUC will:

1) Review at least once every 6 months the Institution’s program for humane care and use of animals, using the Guide as a basis for evaluation. The IACUC procedures for conducting semiannual program reviews are as follows:

All members are invited to participate. The IACUC procedures for conducting semiannual program evaluations include ongoing and progressive scrutiny of operations and procedures, and a more focused review in association with the semiannual inspection. A Program Review checklist is used to delineate areas for consideration; the checklist is used to guide the formulation of the description of the program evaluation for various activities that have been examined during the 6-month period covered by the report. The checklist is not a part of the formal report submitted to the IO, but is used to ensure that no critical area is overlooked. A narrative report is submitted to the IO describing the review, including any recommendations for modification to improve operations, or changes that have been made.

Procedures for animal care procedures being performed by caretakers is reviewed as outlined in an internal document, the Institutional Manual of Standard Operating Procedures (MSOP 2012). Information from various animal welfare organizations are monitored, and updated procedures and recommendations are discussed with the IACUC for consideration in the program – information pertinent to investigators is included in the announcements section of the locally maintained website (iacuc.ou.edu). The training program is regularly reviewed and new material incorporated. Training is provided as needed for new investigators, both faculty and graduate students. Guidelines for degree completion through the Graduate College are monitored and updated relative to the progression of graduate student theses research and the animal care and use program (gradweb.ou.edu); the most recent update was completed in 2010 which incorporated check-off items in the research planning for the student’s advisory conference review.

The procedures for the IACUC review of Animal Use Statement (AUS) protocols, both research and teaching, provides a mechanism for self-examination of criteria used relative to Federal animal welfare guidelines. The various Institutional forms are available on the IACUC website; they provide the investigators guidance as to the pertinent information that is needed by the IACUC to judge animal welfare issues during the protocol review, and to appraise the Laboratory Animal Resources (LAR) program of the requirements for housing and care so that the animals’ well being is assured. The forms completed by investigators during the process are regularly evaluated to determine whether the desired information is being provided, or whether questions need revision so as to be more efficient in obtaining the requisite description. If modification of any of the forms is indicated, the IACUC discusses the appropriate changes, and the revised form is posted on the website. Communications between the investigators and IACUC is maintained through these various program forms - animal use statements (AUS - teaching and research, field or laboratory), protocol amendment. A form is provided to report annual activities for current protocols. PI’s report annual activity and can request modifications through an amendment form.

The LAR operations are facilitated through standardized operating principles and various internal documents (MSOP 2012). All LAR forms are posted on our website for easy access by animal users (iacuc.ou.edu). The LAR forms include those for animal
orders and animal transfers. Special treatment such as post-operative analgesia is logged on a form that is maintained in the housing room. Health Inspections by the veterinarians are recorded for each visit. Training needs are met through regular orientations sessions for new personnel and Annual Occupational Health and Safety training requirements are maintained by the campus office of Environmental Health and Safety.

Specific issues are periodically included for discussion relative to the program; e.g. the OLAW website FAQ’s (http://grants.nih.gov/grants/olaw/faqs.htm) is used as a basis for reviewing local procedures. The “Protocol Review” section in Lab Animal Magazine (http://www.labanimal.com) is considered for discussion when appropriate. Recent civil disturbances by activists have been used as a means of discussing local practices and procedures to react to animal rights demonstrations. During 2012, details of the eight edition of the guide were reviewed in the context of our program.

In summary, the semiannual program review includes examination of:

a) IACUC membership, composition, and functions,
b) IACUC and LAR records,
c) Veterinary care,
d) Personnel qualifications and training,
e) Training Activities (OUNC website & MOP),
f) Occupational Health and Safety programs,
g) University Risk Assessment and Emergency Response Plans.

2) Inspect at least once every six months all of the Institution's animal facilities, including satellite facilities and surgical suites, using the Guide as a basis for evaluation. The IACUC procedures for conducting semiannual facility inspections are as follows:

Our animal housing facilities are dispersed across campus in seven separate locations, in addition to the two off-campus facilities, the Biological Station (UOBS) and Sutton Aviary Research Center (SARC). All IACUC members are invited to participate in the inspection, but a quorum of members including the chair and the veterinarian must be present. The latter two lead the inspection, using a checklist as a means of assuring that important items are not overlooked. This checklist is not included as a part of the report to the IO, but a narrative report is provided which describes the outcome of the inspection and any necessary action to be taken. Any deficiency is classified as minor or major, and a time frame is established for correction. Any discrepancy or non-compliance requiring contact with OLAW (olaw@mail.nih.gov) and APHIS (acwest@aphis.usda.gov) is done, including the corrective plan and schedule.

3) Prepare reports of the evaluations as set forth in the 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 draft report is prepared by the chair based on the program review information and the inspection of the facilities; this report is then reviewed by all IACUC members and their suggestions, including minority reports, if any, are incorporated into a single final document. Each member signs the report. The checklists used in the inspection and review are not included in the report, but the narrative that describes the evaluation and any recommended corrective action is submitted to the IO, Dr. Paul Bell, Dean of the College of Arts and Sciences. Major or Minor deficiencies are discussed with the investigator or person responsible for the space or procedure and a time line to correct is established. Corrective action for a significant deficiency is expedited, but also will have a time-line for compliance. IACUC-approved departures
from the Guide will be considered if necessary, and appropriate performance standards will be developed. Deviations from the Guides 'should' or 'must' statements, with or without IACUC approval, will be reported to the IO in the Semiannual report for the former, or promptly to the IO and OLAW for the latter. Follow-up inspections are made and the corrected problem is subsequently reported to the IO and OLAW as applicable. Any deficiencies identified in the annual USDA inspection follow the same procedures, but the corrective action and accomplishment are reported to the regional APHIS office according to the established time-line.

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

a) Any concern relative to the care and use of animals can be reported directly to the IACUC Chair, any committee member, LAR staff, or the IO; all complaints will be investigated. The IACUC Chair will determine the most practicable mode of inquiry. If the incident is considered minor, the Chair may personally investigate, but, if it is potentially serious, or volatile, more extensive and/or immediate action may be required. Serious deviations from accepted standards, or volatile issues will be reported immediately to the IO, if he has not already been directly informed, and to the appropriate officials at OLAW. If potential terrorist activity/civil disobedience is anticipated, the campus police will be notified, and the IO will be consulted relative to his role as mediator and Institutional Spokesperson in direct intervention with activists. The campus police of the University of Oklahoma provide increased monitoring of buildings where animals are housed, and a mechanism for extended security to the homes of investigators is being developed.

b) In the case of a complaint that warrants an extensive investigation, a subcommittee composed of the Chair and two other IACUC representatives, including the veterinarian, will determine the validity of the complaint. Evaluation of a complaint will be based on standards of care and use found in the Guide and in the internal document, the Institutional Manual of Standard Operating Procedures. If the complaint involves a field project, then evaluation will include consideration of appropriate standards for performing field research and the Guide. The approved Animal Use Statement for the specific project under investigation will be consulted to determine if any deviations from approved procedures have occurred. If a non-compliance issue is validated, corrective action will be formulated by the IACUC and a time-line will be established. The origin of the complaint, or the identity of the individual making the complaint will not be identified to the IACUC subcommittee members, nor will it be revealed in the IACUC briefing; this information will remain confidential.

c) The substance of the incident and corrective action will be discussed with, and approved by the IACUC. A written report will be prepared by the IACUC Chair to document the details and outcome of the evaluation; this will be submitted to the IO and OLAW.

5) Make written recommendations to the IO regarding any aspect of the Institution's Animal Care and Use Program, facilities, or personnel training. The procedures for making recommendations to the IO are as follows:

Issues that are identified relative to concerns, or through suggestions developed during the program review can be recommended to the IO at any time through written or verbal communications. The IACUC Chair as LAR Director, has regular meetings with the IO in monthly Chairs and Directors meetings, and as a CAS faculty member, to discuss the
year in review and to recommend changes. Recommendations for program improvements or changes can be submitted to the IACUC Chair; these will be processed through the IACUC, and if appropriate, submitted to the IO. Modifications of substance that affect the IACD will be reported to OLAW in the annual review format. Communication with the IO is facilitated by having a representative from his office as a non-voting member on the IACUC. Recommendations for program modification that result from the semiannual inspections will be discussed with the IO if the alteration would affect the Institutional Compliance Assurance Document; OLAW will be notified of any changes through the annual reporting mechanism.

6) Review and approve, require modifications in (to secure approval), or withhold approval of PHS-supported activities related to the care and use of animals according to PHS Policy IV.C.1-3. The IACUC procedures for protocol review are as follows:

a) The IACUC reviews all research and teaching activities, including laboratory and field studies, that involve live vertebrate animals; this process involves clear communication of protocol guideline information between the IACUC and the investigators/instructors. Effective solicitation of complete and appropriate information on which to evaluate proposed protocols is facilitated by the design & composition of the Institutions’ AUS forms. The web-based instructions guide the PI’s/instructors through the process. All information pertinent to protocol submittal is posted on the IACUC website (iacuc.ou.edu), including appropriate forms, training requirements, and informational links. Credentials of PI’s are reviewed relative to proposed studies; CV’s are established upon entry into the university and updated periodically. Specific laboratory procedures, or field experience with the pertinent vertebrate group(s) are documented. Students working with these investigators are tutored in the specifics of these procedures.

b) Instructions on the website outline the procedures in a step-by-step process for animal-use statement (AUS) application, and the appropriate forms solicit pertinent information. The protocol must be received at least two weeks prior to the scheduled monthly IACUC meeting; monthly meeting dates are posted on the website. Each protocol is submitted electronically to the IACUC chair. An electronic file is established and retained in a permanent archive; a hard copy with a signed cover sheet is sent separately. Upon receipt of an AUS, the Chair assigns an Institutional Tracking Number (alpha-numeric; Research or Teaching, year + chronological number – e.g. R12-032 or T12-003). The IACUC Chair reviews the submittals prior to the meeting, and contacts the author if additional information, or clarification is needed. Any revision is accomplished prior to distribution. The meeting agenda, draft minutes and/or reports, and revised protocols are electronically distributed to all IACUC members one week prior to the meeting. Additional hard copies are available at the meeting. The meeting agenda includes announcements, a list of discussion items, and a synopsis of each AUS to be considered. All protocols are reviewed by each member; only Full-committee reviews are done, we have neither designated-member, nor expedited reviews. Only NIH “Just-in-Time” reviews are considered exceptional; these are expedited if funds are pending.

c) Each meeting is opened once a quorum is established. Minutes and/or reports from previous meetings are reviewed and corrected if needed, then approved; minutes document discussion and action items from the previous meeting. Announcements of important issues are discussed. Animal Use Protocols are classified as teaching or research. A research protocol can be for field or laboratory studies, and these studies are sub-divided as to whether manipulations are involved or not. The IACUC reviews protocols for compliance with the care and use of animals as set forth in the PHS Policy (IV.C.2). Consideration of the 3-r’s (replacement, reduction, refinement) is included. An AUS that involves experimental manipulations, must describe the protocol in detail and must identify whether the procedure will cause pain or distress, and if it does, how these
will be relieved through anesthesia and/or analgesia. Minor or major surgery will be reviewed relative to accepted practices, and the credentials of the investigator for these procedures will be verified. Appropriate antibiotics and post-operative care are discussed. If euthanasia is required, the procedure must be in compliance with the AVMA Guidelines on Euthanasia (2007).

d) Each protocol is evaluated relative to:

1. Clear description of the study, including objectives,
2. Evidence of non-duplication based on literature search (search engine & search terms),
3. Explanation of the use of the particular animal model relative to “Alternatives”,
4. Appropriateness of the procedures to the questions posed by the study,
5. Justification of the number of animals to be used; statistical validation, if needed,
6. Whether the manipulation will involve pain or distress to the animals, and if so, how it will be relieved or alleviated, study end points,
7. The anesthesia to be used, and dosage information (Kohn et al. 1997),
8. Review of specific procedures in the protocol, e.g. water/food deprivation
9. Review of post-surgical analgesia procedures (MSOP 2012),
10. Appropriateness of the method of euthanasia in laboratory and/or field studies,
11. Use of applicable field guidelines (see IACUC website) relative to methods of collection, marking techniques, and well being during live-trapped restraint,
12. Credentials of the investigators’ are reviewed relative to the protocol(s) and required licenses (laboratory) or permits (field) are verified,
13. Protocols that involve radioactive or biohazards, are referred to the appropriate University Committee (Compliance Office website) before being approved.

7) Review and approve, require modifications in (to secure approval), or withhold approval of those activities related to the care and use of animals, or modifications required to secure IACUC approval according to PHS Policy IV.C. The IACUC procedures for reviewing proposed significant changes in ongoing research projects are as follows:

Action on an AUS requires a quorum of voting IACUC members to be present and a majority vote for the recommendation, but minority opinions are reported. All voting members are considered equivalent in establishing the quorum. Members with a conflict are excused from voting, and if they are investigators on the project, they are excused from the meeting during that portion of the discussion. Action on a protocol a can be:

1. **Approved**, or approved but needing minor administrative modifications— the items that need clarification are communicated to the investigator; these changes are incorporated into the AUS without additional committee review.

2. Some protocols are **tabled** or **deferred** for more information, and are returned to the investigator for revision. The investigator is supplied with specific instructions concerning the questions or kinds of modifications required; the revised draft is reviewed at the next IACUC meeting.

3. Approval can be **denied** if the procedures are in conflict with provisions of the PHS Policy IV.C, if the objectives of the study are not warranted relative to the issues of pain and/or suffering of the animals, if the investigator lacks appropriate experience, or if the facilities/equipment are inadequate to successfully support the study relative to appropriate animal well being.

Modifications to previously approved, ongoing protocols may be submitted as needed (AUS Protocol Amendment, IACUC website). Deviations in either protocol or number of animals must be explained and justified. The IACUC will review, discuss and decide on the appropriate action in the same manner as for any new project (see III.D.6a-d above). If
approved, the amendment will be referenced to the original AUS document tracking number and identified by a suffix of the approved protocol (e.g. R12-032A); the change will be incorporated into the original protocol.

8) Notify the 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 decision regarding protocol review are as follows:

When the IACUC approves an AUS, or an amendment, the decision is conveyed in writing to the investigator(s), the Institutions’ Office of Research Services (ORS), and the IO. For efficient record-keeping, the approval letter, approved AUS, and any amendments are filed in the administrative office, LAR Directors office and Facility Managers office. The AUS deliberations and action are entered in the minutes of the IACUC meeting, and a separate file for each meeting is retained in the administrative records of all three offices.

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

a) Letters of protocol approval are prepared by the Chair and are sent directly to the PI, the Office of Research Support (ORS), the IO, and Facilities Manager; ORS notifies the extramural funding agency that the IACUC has evaluated and approved the protocol. Agency funding may be multi-year awards, however, the protocol must receive a full review every three years. In the event of a “just-in-time” review by the IACUC, ORS will notify the funding agency that the protocol is under review and of any changes that are required in the proposed procedures subsequent to the IACUC review.

b) If a protocol is not approved, the investigator is provided a written explanation of reasons for denial.

c) Copies of all communication with the PI relating to an AUS protocol, are maintained in hard copy in the offices of the LAR, the IACUC Chair, and the Animal Facilities Manager. These are backed up in electronic files as well as a redundant external hard drive.

d) A spread-sheet file is maintained by the IACUC Chair which is organized by the alpha-numeric Institutional tracking number; the tracking system provides an abbreviated summary of active projects. Entries in this file can be sorted by the chronological alpha-numeric code, by date (approval/ expiration) or by PI. This filing system permits interrogation for critical dates, such as expiration of approval, amendments and modifications, etc. This file is automatically backed up daily by an electronic software system (Retrospect) in another building, and archived weekly on a tape. In addition, a summary list of active protocols in an excel file is maintained as a working document by the LAR Director.

e) Each active AUS is monitored by the IACUC through our tracking system, which is briefly described in the following paragraph and reiterated in section V. The amendment process and annual reviews provide mechanisms to update and modify active protocols; the mechanism for approving animal orders (MSOP & website) provides a tracking of the animals used on the protocol relative to the number approved in the AUS. Protocols reaching the 3-year time limit are revised if the investigation is to continue, or to be submitted for further funding; each protocol receives a complete committee review in accordance with the PHS Policy and as described in Section III.D6a-d above. The Institutional tracking prefix number provides an annual status, and the dated approval letter indicates the expiration date. Previous to the expiration, the PI is contacted to determine whether the project will continue, and the appropriate action. Annual reviews are conducted for projects using USD-covered species. The Annual Review form is sent to designated PI’s, requesting information on any changes in personnel, procedures, or funding.
f) An investigator may request an amendment to an approved protocol. The request is submitted to the IACUC on the appropriate form (IACUC website). This multipurpose form is to be used to report additional funding, new personnel, a request to modify the number of animals or approved procedures; sufficient detail and justification for the procedural and/or animal number change must be included. A change in protocol or increase in the number of animals must be reviewed and approved by the IACUC in a regular monthly meeting. Relative to supplemental funding, no IACUC action is required unless the funding is for an extension beyond the three-year approval period. In this case, a new protocol must be reviewed by the IACUC prior to expiration of the AUS. The report of new personnel (graduate students, lab technicians, post-doctoral assistants) will initiate the notification to complete any requisite animal welfare training as described later in this document.

g) On the anniversary of the AUS approval, an annual update report is requested from an investigator (IACUC website). The IACUC chair notifies the investigator that an annual review is needed, and attaches a copy of the form. This exchange provides a mechanism to update progress on a study, report any transitions in personnel, interim upgrade training of personnel, and information on projected end of the study. New personnel who have not undergone requisite training, are notified of this requirement. The request for the annual review also provides a mechanism to update information on the status of required biannual drug inventories.

h) At least once every 3 years a complete review of individual protocols will be conducted by IACUC according to the requirements set out in the PHS Policy IV.C.1-4. If the project is to continue, a complete revision of the protocol is requested and is reviewed by the IACUC as previously described.

10) Be authorized to suspend an activity involving animals according to PHS Policy at IV.C.6. The IACUC procedures for suspending an ongoing activity are as follows:

This action may be initiated by the attending veterinarian either as a result of the semiannual inspection, or through a report of a concern (section III.D.3 above). As previously described, any person who is aware of practices in any program of research or teaching which violate the principles of humane care and use of animals, may bring this information to the attention of the IACUC Chair, or to any intermediary who may then convey the information to the Chair. The IACUC procedures for suspending an ongoing activity are:

a) The IACUC Chair will investigate the matter and determine the validity and seriousness of the alleged violation, and if warranted, a committee composed of the IACUC chair, veterinarian and another member, will investigate the matter further.

b) The investigator will be informed by letter if the violation is validated and is sufficiently serious. He/she will be asked to respond in writing, and an appearance before the IACUC will be scheduled. The IO will be informed of the status of the hearing procedures.

c) The investigator will discuss the situation with the IACUC and report inaccuracies or falsehoods related to the accusation; if violate procedures or practices are confirmed, appropriate action will be taken. If the practice is discontinued, the decision may be to permit the project to continue without punitive action being taken. The IO will be informed of the IACUC decision.

d) The activities of the PI will be monitored for a reasonable period by IACUC representatives, including the veterinarian and facilities manager. If the corrective action is discontinued and violations are repeated, the IACUC is authorized to terminate the research program; suspension requires a majority vote of the IACUC members, providing a quorum of voting members is present. The termination will be reported to the IO, the appropriate official at OLAW (olaw@mail.nih.gov), and the funding agency.
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:

(http://www.ouhsc.edu/ehso/training-norman/labchoice.html)

1) Personnel in the OUNC LAR program participate in an annual campus-wide safety training and hazardous materials management. The web page depicted below provides information and training to maintain compliance with the requirements of the University of Oklahoma Environmental Health and Safety and Occupational Safety Program.

2) A file of pertinent information for animal handlers has been collated and is posted on our website (iacuc.ou.edu). Review of these documents is part of the orientation training required of all personnel who will engage in teaching or research using live vertebrate animals. When these web-based resources have been reviewed, a signatory form is obtained which is co-signed by the supervisor (iacuc website, Training Section). During the AUS review by the
IACUC, the training files for key personnel are consulted to verify that all participants have received the appropriate training.

3) During the semiannual facilities inspection, potential safety hazards are considered.

4) Protocols involving biohazards or radioactive materials must be reviewed by the appropriate University committee (Institutional Biosafety Committee or Radiation Safety Office, Compliance Office website).

5) If a student is working on an AUS protocol of their faculty advisor or supervisor, evidence of their review of this document is also required. The record of this training is retained in an individual file in the offices of the IACUC Chair and the Facilities Manager.

6) A pre-employment physical is not required, but medical history is discussed during the initial interview (see references in Appendix A - NRC 1997, Occupational Health and Safety in the Care and Use of Research Animals: 9-10, and the Guide, p 22). Periodic physical examination are encouraged but not required.

7) Employees are required to obtain a tetanus immunization prior to employment and to maintain their immunity during their employment. Rodents (rats, mice, chipmunks, chinchillas and guinea pigs) and lagomorphs are the only mammalian species used at this Institution, consequently rabies vaccine is not routinely required. No non-human primates are housed, or pass through the OUNC Institutional facilities, so bi-annual tuberculin testing is not required. Special clothing, immunizations, etc. necessary for maintaining employee health and safety are provided by the LAR.

8) Employees are trained to perform their tasks so as to minimize personal injury. Employees are also encouraged to be vigilant of potential problem areas and take appropriate corrective and preventative action.

9) Employees are trained in any special precautions necessary for working safely with infected animal models. If an infected animal study is being undertaken, the general containment procedures outlined in the Manual of Standard Operating Procedures (MSOP 2012) will be followed. Special procedures necessary for individual projects will be developed in consultation with the investigators, consulting veterinarian, facilities manager, and LAR Director. These will include proper disposal of carcasses and contaminated bedding. Employee training in these procedures will be provided by supervisors of the unit. These considerations will be included in the AUS during initial IACUC review.

10) Emergency treatment for on-the-job or job-related minor injuries will ordinarily be handled by the employee’s supervisor, or a co-worker. First-Aid kits are available in each facility. Injuries or other health emergencies requiring more than first-aid will be treated at the University of Oklahoma Goddard Health Center, or Norman Regional Hospital, or by the employee’s personal physician.

11) The Facilities Manager will observe animal care personnel for symptoms of possible zoonoses for development of allergic responses, and if such symptoms appear, the employee will be referred to a physician.

12) Animal orders are approved by the LAR Director and a copy of the processed order is returned to the investigator and to the Animal Facilities Manager. The order is also recorded in the PI file for monitoring of numbers approved on the protocol.

13) Biohazards and biological wastes are handled with appropriate routines and disposed through standard practices (MSOP 2012). Animal handlers and caretakers must adhere to the following procedures:
**Infectious agent or Hazardous Material Containment:** when handling animals or their wastes where hazardous or infectious material are involved, animal care personnel should wear appropriate protective clothing, shoes or shoe covers and gloves. When required, face masks must also be worn in infectious disease areas. Animal waste should be contained inside the animal room and then labeled and disposed of properly. Disposal of biowastes are through a licensed contractor: the wastes are color-code labeled, have the PI’s name, and contents:

(a) Delivered by investigators to the freezer in the Animal House for disposal
(b) Carcasses are placed in plastic bags and labeled on a white tag
(c) Biohazardous or infectious material will be labeled with a yellow tag
(d) Laboratory or surgical trash will be autoclaved
(e) The Radiation Safety Office will dispose of radioactive materials

F. The total gross number of square feet in each animal facility (including each satellite facility), the species of animals housed there and the average daily inventory of animals, by species, in each facility is provided in the attached Facility and Species Inventory table.

**FACILITY AND SPECIES INVENTORY (Main Campus)**

**ANIMAL HOUSING FACILITIES AND LABORATORY LOCATIONS ARE REDACTED FROM THIS POSTED DOCUMENT – ALL FACILITIES ARE SUBJECT TO SEMI-ANNUAL INSPECTION AS REQUIRED BY FEDERAL REGULATIONS.**

2) **Water Resources** - Since the inception of the Animal Care Program at the OUNC, the source of water has been deep wells on University land. Water from the same ground water source has been the primary water supply for the city of Norman. Relative to the purposes of meeting water quality for aquatic animal, the water source is also suitable (TDS is about 500 mg/L; total alkalinity = 300-350 mg/L; total hardness = <20 mg/L; pH = 8.5-9.0; total ammonium-nitrogen = <0.5 mg/L; dissolved oxygen is 5-8 mg/L and zero CO₂ delivered from the well). Water quality for fishes in aquaria and/or recirculation holding systems must be maintained relative to oxygen demands from organic oxidation, metabolic waste accumulation, and bacterial load. These systems vary, depending on the type of life support systems, e.g. open ponds with natural photosynthetic aeration, to aquaria with aeration and enclosed water circulation through activated charcoal systems vs. closed, recirculation systems with aeration, biofilters and UV-sterilization. We use both of these laboratory management systems, depending on the species. The latter system is used for intensive-housed colonies of aquarium fishes, while the more extensive support systems are used for holding other species which are non-breeding populations. Frogs and turtles require only reasonably clean conditions, but not managed to maintain the high water quality conditions needed by fishes.

The Federal and State standards for one component of potable water classification was changed effective January 2006. The criterion that resulted in the water source revision was the change of acceptable concentration of Arsenic from 50 ppb to 10 ppb; the average concentration in the University wells has been 17-35 ppb. The University water supply was changed to the City of Norman system in December 2005. Switching to the City water supply had primary effects on the Animal Care Program. The City of Norman draws water from ground water as well as surface sources; consequently, the water is treated with Chloramines to control microbial organisms. Chloramines are more
chemically stable than gaseous chlorine, and thus, not easily stripped by simple aeration. Therefore, to be suitable for aquatic animals, an activated charcoal system is installed for any areas where treated water is used. Also because the current well-water, by the new definition, is no longer considered to be potable, we were not able to continue using it for animal drinking water (USDA opinion, June 2004). Consequently, because of the necessity of the required non-toxic water quality needed for aquatic organisms, we retained the well-water supply for aquatic animals. The supply is labeled, as NON-POTABLE WELL WATER. Water for mammals has been changed to the potable city water supply. Some PI’s do not want chlorinated water for their animals, consequently we have installed renewable charcoal filters in these housing areas.

The water for the South Campus Aquatic Research Facility is supplied by shallow wells (75 ft). The water quality is similar to the well water supply to the main campus, with some important differences. This aquifer has no arsenic contamination, and while the total alkalinity is similar (ca. 400 mg/L), total hardness is much higher (300-350 mg/L) and CO₂ gas is 30-40 mg/L. The carbon-dioxide gas is volatilized through aeration before being delivered to fish holding containers. Water temperature is consistent at 20-21°C and DO at about 12 mg/L. This water supply is good quality and needs no treatment to maintain aquatic animals. Water is pumped to the greenhouse laboratories or ponds as needed.

3) Animal Care in Housing Areas

(a) The care provided to animals that are housed in LAR facilities is described in detail in our internal Manual of Operating Procedures (MSOP 2012). If changes to these written guidelines are considered, and they would affect the operational description in the IACD, the LAR staff discusses with the IACUC, and with the concurrence of the IO, make appropriate adjustments in accordance with the Guide. These changes will be documented and reported to OLAW in the Annual Report.

(b) Either the facilities manager or one of the animal technicians provide care for all animals daily. Thus, animal well being is under regular scrutiny of animal care givers, the consulting veterinarian and the researchers; any animal health-related issue is to be reported to one of the LAR staff, who in turn will report to the consulting veterinarian. The consulting Veterinarian inspects the facility and its animals on a weekly basis; this activity is recorded on a summary report (forms posted on IACUC website). If problems occur, the Veterinarian has direct access to the IACUC Chair and/ or the IO, depending on the seriousness of the problem. The consulting veterinarian will determine the cause of the health change and recommend treatment, and he will determine if the procedures approved in the AUS are being followed. If the PI is deviating from the approved procedures, he/she will be required to justify these deviations to IACUC. If the new procedure is approved, the protocol will be amended as described above and entered in the record (IACUC website-amendment form). If the protocol deviations are unacceptable, and the PI persists, the project may be suspended. Any suspensions must be approved by a majority of an IACUC quorum and the action to suspend a project will be reported to the IO who, in consultation with IACUC, will determine appropriate corrective action. This action and a full explanation will be reported to the appropriate official in OLAW.

(c) The numbers of animals approved for use in a project are monitored by LAR through a system of records and procedures. A procedure for animal procurement (MSOP 2012-website) directs the PI to complete an Animal Procurement, Use and Disposal Form and submit to the LAR. The form is processed, copied, and the approved form is returned to the PI; copies are maintained in files of the Animal Facilities Manager and in the LAR office. The information included on the form provides animal facilities personnel a time line for delivery of the specified number of animals, their type, and
any instructions for special care. As the research project progresses, the numbers of animals used based on this record is compared with the approve number in the AUS. An inquiry will be made to the PI, as the approved number of animals is nearing the limit and appropriate revision for IACUC review will be requested if necessary.

(d) Water and feed is changed daily, and fresh bedding is provided regularly. Cages are washed and sterilized weekly. The LAR charges a daily subsistence fee for each animal which covers costs of supplies; the CAS provides an operating budget which subsidizes the actual expense of the animal care program (IACUC website, per diem rate).

(e) Semiannual facility inspections include both animal housing and experimental space. Any deficiencies in either of these areas are noted in the inspection report and a plan for corrective action is developed; a subsequent visit will be made to verify that the problem has been corrected.

(f) All of these sources of information provide a tracking mechanism for monitoring operations by the LAR. Conversely, individual investigators also have access to the IACUC and/ or the Director of Laboratory Animal Resources, if needs are perceived for facility upgrades, for special training, or to rectify any deficiencies in animal care procedures, or to discuss management of the animal care and use program. This continual monitoring of program activity feeds into the Program Review process in addition to the more formal IACUC-driven semi-annual review process.

(g) If some needed action is identified through one of these sources, a plan is developed to address the problem. Actions to correct or rectify the problem will be made within the budgetary constraints of the Laboratory Animal Resources (LAR). For problems that involve expenditures beyond the scope of the budget, the Director of LAR will discuss with the IO. Long-term planning for facility support is presented to the IO (CAS Dean) in the LAR Director’s annual administrative report from the budget unit. The IO is directly available for issues that might require a more immediate decision.

G. The training or instruction available to scientists, animal technicians, and other personnel involved in animal care, treatment, or use is as follows:

It is the responsibility of the Institution to ensure that all personnel involved in animal care and use are appropriately qualified to perform their duties and conduct proposed activities as prescribed in Animal Welfare Regulations, Section 9 CFR, Part 2, Subpart C, section 2.32(c). The development and implementation of a training program are usually performed by the IACUC, the veterinary staff, and in some cases. Many resources are used in training (NAS 1974; Kohn 1997; Klaunberg et al. 2004), depending on the level and orientation of the recipients; e.g. in-house training of PI’s to include general orientation to resources and discussion of regulations and guidelines (Guide – NRC 1996), then to continued On-the-job training in the local procedures of animal care as described above. Some are trained on specific techniques by investigators who have specific skills in the techniques used in their laboratories. Specific technical training for graduate students is accomplished by their major professor who has the expertise in the appropriate activities, whether laboratory or field techniques. Completion of milestone training for PI’s is entered into their personnel file along with their record of credentials; an electronic record is also maintained. The training or instruction available to scientists, animal technicians, and other personnel involved in animal care and use at this institution is organized relative to experience and need (see outline below); the OUNC Training Program is summarized in the outline on the IACUC website, and links to various training resources are also provided. The program is structured to emphasize initial orientation to animal welfare, and Institutional facilities and operations. In the orientation training, for investigators and new graduate students, all are fully briefed on local procedures, resources and the importance of the AUS protocol.
Factors of stress, distress and pain are discussed, including the application of the “3 R’s” (Reduction, Refinement, Replacement), and the resources that are available for considering “Alternatives”. The training program is outlined below.

Institutional procedures specific to thesis research are emphasized in the graduate student orientation, as the administration has some unique features. A graduate student may work under the authorization of a protocol of their major professor, or on one that they develop themselves. In the former instance, unless they were listed as key personnel during the original review, the graduate college does not know that their animal research is covered. Consequently, an amended approval letter is produced by the IACUC chair to add the student on the project; this action does not extend the usual 3-year approval period. Within the university system, several key documents verify that the student has either developed their own AUS protocol or is working on one of their major professors. The Graduate Student Handbook elaborates on this requirement and several Graduate College forms have check-off blocks to verify that the requirement has been accomplished. Important forms are completed and serve as reminders of the requirements: 1) Checklist for Masters Degree - thesis option, 2) Application for approval of the master’s thesis topic and committee membership, 3) Report of doctoral advisory conference, and 4) Request for authority for defense of dissertation (University of Oklahoma website, Graduate College).

The training of IACUC members uses additional resources to supplement their functional role (OLAW 2002; Podolsky and Lukas 1999; Silverman and Murphy 2000; Silverman 2002); committee member training is in much greater depth relative to their IACUC responsibilities. They are provided numerous publications to guide them in performing their duties ("Survival Portfolio", MSOP 2012). Periodic training sessions for IACUC members are conducted as needed; the NRC “Guide for the Care and Use of Laboratory Animals – 8th ed." is reviewed as well as the OLAW (2002), “Institutional Animal Care and Use Guidebook”. The chair completed the PRIM&R “IACUC 101” in 2006 and the PRIM&R “Essentials of IACUC Administration” in 2007.

The animal care technicians are also provided an orientation, but their ongoing training is more technical and applied as described in Section II.G above (Manning and Wagner 1976; Wiesbroth et al. 1984; Flecknell 1987; Gay and Heavner 1989; Harkness and Wagner 1989; Borchard et al. 1991; Baker et al. 1997; Paddleford 1999). Each technician is engaged in continuing upgrade training, to progress through the AALAS certification levels or maintain currency through the Registration mechanisms. One OUNC staff member is certified at the highest level (LATG) and he has 15 years of experience with the LAR; he replaced a former employee who was with the LAR for 35 years. Two other animal caretakers are new employees who is working toward AALAS certification and receiving on-the-job training. The senior employee completed the PRIM&R “IACUC 101” training during 2007 and regularly attends annual State AALAS meetings.

In short, our training program is modified according to the needed skills and required information for various roles. A record of training for each investigator and their technicians, IACUC members, and LAR staff is maintained in the LAR Directors’ office. The LAR Director periodically teaches an Senior capstone class on animal welfare, conducts regular training sessions for the new personnel (faculty, graduate students, lab technicians), e.g. annual orientation workshops are conducted to introduce new investigators to the animal welfare requirements and the resources in the OUNC program. Orientation to laboratory safety and Occupational Health is included in the orientation and periodic refreshers are required by the university safety office. Completion of milestone training for PI’s is entered into their personnel file.
The OUNC Training Program is summarized in the following outline:

Orientation - SEE FORM BELOW*

1. Principal Investigators new to the Institution.

Personal meeting with LAR Director to discuss Animal Care Program, including facilities, IACUC operations, and Regulations, Policies and Guidelines for animal care and use, including pain/distress and 3R’s.
   a. Establish personnel file that documents credentials and experience.
   c. Discuss website and procedures for filing Institutional AUS.

2. New Graduate Students. Orientation for incoming students (August of each year)
   a. Introduction to animal regulations and Institutional Animal Care and Use Program and filing of AUS.
   b. Introduce on-line tutorial - PHS Policy on Humane Care & Use Lab. Animal. – see above
   c. More detailed follow-up in Graduate School Professional Aspects (required for all graduate students - includes professional ethics, proposal writing, etc.).

3. IACUC members.
   a. Survival Portfolio – OUNC IACD, MSOP, SOP’s, IACUC Handbook (CRC), Guide (NRC), Code-Title 9 (USDA), IACUC Committee Guidebook (OLAW), field guides [Fish, Birds, mammals and herptiles], and discussion of resource links (www.aalas.org].
   b. Periodic workshops conducted by Chair–review IACUC Committee Guidebook (OLAW); new Guide; NIH Introduction to Animal Care & Use Committees (researchtraining.org).
   c. Semiannual Program Review and facilities inspection provide review of regulations and guidelines.

4. LAR Personnel.
   a. AALAS certification and registration (www.aalas.org)
   b. On-the-job training, including familiarization with IACUC operations, regulations and guidelines, and Occupational Health and Safety issues.
   c. Review of Manual of Standard Operating Procedures (MSOP)

5. Lab Technicians, Undergraduate Students & Student research Assistants and Technicians
   a. Training on animal care and welfare issues – Orientation
   b. Specific training from PI on experimental protocols
   c. Occupational Health and Safety and Health Hazards are included.

*All receive annual training in appropriate safety areas (e.g. radiation, chemical, etc.) through the Institutional Environmental Health and Safety Office (http://www.ou.edu.ehos) and LAR Occupational Health Information for research investigators, technicians and students, relative to the animal types in their respective research area.
IACUC ORIENTATION TRAINING FORM
University of Oklahoma Institutional Animal Care and Use Committee

This form must be completed by all Staff and Students (undergraduate and graduate) prior to their involvement in live vertebrate animal research. A separate form is required for each individual and the form must be cosigned by the Faculty Advisor and a representative of the Laboratory Animal Resources Program.

Faculty Investigator: ________________________________

Training Areas (Please check off when completed: Section I to be completed by all, and II, III, or IV as appropriate – Section V if applicable):

Section I. I have:

- Familiarized myself with the contents of the Tutorial on the “Public Service Policy on Humane Care and use of Laboratory Animals”

Section II – Laboratory Research:

Read the following Chemical Safety Publications and the Occupational Health Fact Sheets:
- Proper Handling & Utilization of Chemicals in a Lab Animal Care Facility
- Personal Hygiene
- Human Allergies to Animals
- Immunosuppression and Working with Animals
- Animal Bites and Scratches
- Rat Bite Fever
- Salmonellosis

Section III – Field Research:

- Read the appropriate field research guidelines for your animal group (e.g. fishes, mammals, etc. – see ‘Links’ on iacuc.ou.edu)

Section IV – Aquatic Field Research:

- Examine and read the pertinent sections of the “Fisheries Safety Handbook”
  (http://www.fisheries.org/afs/docs.pdf)

Section V – Lab Technicians:

- I have received orientation from my supervisor relative to the specific procedures described in the pertinent IACUC-approved Animal-Use protocol(s).

  Protocol Number _________  Title: ________________________________________________.

  ____________________________________  __________________________  ____________
  Printed Name  Signature  Date:

Signature of Faculty Investigator: ________________________________  Date: ______________
Other Training Opportunities

The consulting veterinarians, Dr. Gary White and Dr. Stanley Kosanke, offer a two semester-long workshop/training program on the University of Oklahoma, Health Sciences Campus, which meets on a weekly basis for two semesters each year. Participants are taught administration of anesthetics, euthanasia procedures, administration of chemo-therapeutic agents, general diagnostic procedures, and other material which would aid them in assessing health care problems in their animal colonies. Animal care technicians, research technicians and investigators are encouraged to participate in this program. A Laboratory Animal Training Course for Research Investigators and Technicians is also available on-line through the OUHSC.

IV. Institutional Program Evaluations and Accreditation

All of this Institution's programs and facilities (including satellite facilities) for activities involving animals have been evaluated by the IACUC within the past 6 months and will be reevaluated by the IACUC at least once every 6 months according to PHS Policy IV.B.1.-2. Reports have been and will continue to be prepared according to PHS Policy IV.B.3. All IACUC semiannual reports will include a description of the nature and extent of this Institution's adherence to the PHS Policy and the Guide (8th ed.). Any departures from the Guide will be identified specifically and reasons for each departure will be stated. Reports will distinguish significant deficiencies from minor deficiencies. Where program or facility deficiencies are noted, reports will contain a reasonable and specific plan and schedule for correcting each deficiency. Semiannual reports of the IACUC's evaluations will be submitted to the Institutional Official. Semiannual reports of IACUC evaluations will be maintained by this Institution and made available to the OLAW upon request.

This Institution is Category 2 — not accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC). Reports of the IACUC’s semiannual evaluations will be made available upon request. The report of the most recent evaluations is attached.

V. Recordkeeping Requirements

A. This Institution will maintain for at least 3 years:
   1. A copy of this Assurance and any modifications made to it, as approved by the PHS
   2. Minutes of IACUC meetings, including records of attendance, activities of the committee, and committee deliberations
   3. Records of applications, proposals, and proposed significant changes in the care and use of animals and whether IACUC approval was granted or withheld
   4. Records of semiannual IACUC reports and recommendations (including minority views) as forwarded to the Institutional Official, Dr. Paul B. Bell, Dean, College of Arts and 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 3 years after completion of the activity.
C. All records shall be accessible for inspection and copying by authorized OLAW or other PHS representatives at reasonable times and in a reasonable manner.

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. Paul B. Bell, Dean, College of Arts and 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:</th>
<th>Dr. Paul B. Bell, Jr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td>Dean, College of Arts and Sciences</td>
</tr>
<tr>
<td>Name of Institution:</td>
<td>University of Oklahoma</td>
</tr>
<tr>
<td>Address (street, city, state, country, postal code):</td>
<td>653 Eim Street, Ellison Hall, Room 323 University of Oklahoma, Norman, OK 73019</td>
</tr>
<tr>
<td>Phone:</td>
<td>(405) 325-2077</td>
</tr>
<tr>
<td>Fax:</td>
<td>(405) 325-7709</td>
</tr>
<tr>
<td>E-mail:</td>
<td><a href="mailto:pbell@ou.edu">pbell@ou.edu</a></td>
</tr>
</tbody>
</table>

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

Signature: [Signature]
Date: 6/4/13

#### B. PHS Approving Official (to be completed by O.LAW)

<table>
<thead>
<tr>
<th>Name/Title:</th>
<th>Office of Laboratory Animal Welfare (OLAW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Institutes of Health</td>
<td></td>
</tr>
<tr>
<td>6/10 Rockledge Drive</td>
<td></td>
</tr>
<tr>
<td>RKLL, Suite 350, MSC 7982</td>
<td></td>
</tr>
<tr>
<td>Bethesda, MD USA 20892-7982 (FedEx Zip Code 20817)</td>
<td></td>
</tr>
<tr>
<td>Phone: +1 (301) 496-7163</td>
<td></td>
</tr>
<tr>
<td>Fax: +1 (301) 915-9465</td>
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</tr>
</tbody>
</table>

Signature: 
Date: 

Assurance Number: 
Explication Date: 
Effective Date: 
Expiration Date: 
VIII. Membership of the IACUC – See Section III.C above.

IX. Other Key Contacts (optional) – see IACUC Chair

X. Facility and Species Inventory - See Section III.F above

References and Literature


Field Studies Guidelines and Discipline-specific guidelines:
  Mammals – (http://www.mammalsociety.org/pubsociety/index.html)
  Birds – (http://www.nmnh.si.edu/BIRDNET)
  Fish – (http://www.asih.org/pubs/fishguide.html)
  Reptiles/Amphibians – (http://www.asih.org/pubs/herpcoll.html)

  Guidelines for the care and use of mammals in neuroscience and behavioral research – http://www.nap.edu

  Methods and welfare considerations in behavioral research with animals – www.nimh.nih.gov/researchfunding/animals.pdf

  Information resources on fish welfare – www//nal.usda.gov/awic/pubs/Fishwelfare/fishwelfare.htm


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Guide.
Academic Press, Inc.
================================================================
Attachment:

PROGRAM REVIEW
&
INSPECTION OF FACILITIES

CONDUCTED IN ACCORDANCE WITH FEDERAL GUIDELINES
REPORT REDACTED FROM THIS DOCUMENT