Western Carolina University
Office of Research Administration
Institutional Animal Care and Use Committee
Standard Operating Procedures

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SOP# 100.1	TITLE: Review of New Projects	Date Effective: 9/20/19 Last Revision Date: 4/12/2019

I. Purpose

This sets forth two pathways for the IACUC review process and criteria for approval

II. Definitions

Initiation of research, teaching, or other uses of animals may not begin until a project has been reviewed and approved by the IACUC. The project may only take place during the term approved by the IACUC. The project must be carried out as approved by the IACUC, no modifications to the study protocol may be initiated without prior approval of the IACUC. Failure to adhere to study protocol or to perform animal research without an IACUC approved protocol may constitute serious non-compliance.

The Principal Investigator on all IACUC project submissions must be a full-time faculty or staff member. All experimental activities using animals must be conducted by personnel trained specifically for such activities. Students involved in animal experimentation must be trained and their activities closely monitored by the Principal Investigator. All personnel are required to take the online course offered through CITI Programs entitled “Investigators, Staff, and Students – Lab Animal Research”. Training requirements must be renewed every five years. Additional species or study-specific training may be required by the Office of Safety and Risk Management.

The IACUC has the authority to approve, require modification, or disapprove all research or teaching activities using animals. The IACUC reviews all projects at a convened meeting, except where project qualify for designated member review. Full board review is required for a project meeting any of the following:

- PI has listed the USDA pain category as category E
- Multiple survival surgeries will be performed on the same animal
- An IACUC member has requested full-board review

Full-board review may only be conducted when a quorum of IACUC members is present. A quorum consists of a majority of the members of the IACUC. Quorum must be met prior to initiating any discussion of a research proposal and must be maintained through the entire discussion and voting. Maintenance of quorum must be documented in meeting minutes. All members present at a meeting have full voting rights. No member may participate in the IACUC review or approval of an activity in which that member has a conflicting interest (e.g., is personally involved in the activity), except to provide information requested by the IACUC, nor may a member who has a conflicting interest contribute to the constitution of a quorum. Meetings will be held in person, but members may teleconference into the meeting if necessary.

If full-board review is not required, review may be conducted by one member of the IACUC, designated by the Chair and qualified to conduct the review. A designated reviewer will have the all the authority of the full-board, except they may not disapprove a project. Written descriptions of all projects approved via designated reviewer will be made available to the full committee.

Criteria for approval:

1. Procedures with animals will avoid or minimize discomfort, distress, and pain to the animals, consistent with sound research design;
2. The principal investigator has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animals and has provided a written narrative description of the methods and sources used to determine that alternatives were not available;
3. The principal investigator provides written assurance that the activities do not unnecessarily duplicate previous experiments;
4. 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 and will continue for only the necessary period of time. These procedures will include, in their planning, consultation with the attending veterinarian or his/her designee, and not include the use of paralytics without anesthesia;
5. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized at the end of the procedure or, if appropriate, during the procedure;
6. The animals' living conditions 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 the attending veterinarian or other scientist trained and experiences in the proper care, handling, and use of the species being maintained or studies;
7. Medical care for animals will be available and provided as necessary by a qualified veterinarian;
8. Personnel conducting procedures on the species being maintained or studies will be appropriately qualified and trained in those procedures;
9. Methods of euthanasia used must be in accordance with the recommendations of the American Veterinary Medical Association (AVMA), unless a deviation is justified for scientific reasons, in writing, by the investigator

III. Procedure

Submission and Screening

1. Investigators must submit a completed application form and any associated permits to the IACUC via email.

2. The IACUC administrator receives the submission and conducts and initial review for completeness of materials and verifies CITI training for all personnel. The IACUC administrator will email the Safety

Officer notifying them of personnel and species involved in the application so appropriate safety training can be assigned

3. The IACUC administrator generates a new protocol folder within the H:/IACUC/Protocol/FY## Protocol Requests. The new folder should be named "AUP 20##-00# Last name, First Name". The application is saved as pdf to this folder under the same name.

4. The IACUC administrator logs the project information in the "IACUC FY## Log."

5. The IACUC administrator emails the application and the most up to date version of the "IACUC FY## Log" to the entire IACUC and provides a one week period for members to review the material and request full board review or provide comments.

Designated Member Review

1. If no full board review is requested, the IACUC administrator will send the protocol to the chair along with any comments submitted by members. Chair may conduct the review as a designated reviewer or may designate another member.
2. The designated reviewer will transmit any comments or requested revisions via email to the researcher with the IACUC administrator cc'ed. Designated member may approve or request modifications to a project but they may not disapprove a project.
3. Once an application is approved the designated review will issue an Approval Letter and email it to the researchers with the IACUC administrator cc'ed. The reviewer will save a copy of the Approval Letter in the protocol file on the H drive.
4. During the course of the designated review, the reviewer may request that the project receive full-board review at any time.

Full-board Review

1. The chair of IACUC serves as the primary reviewer for the project. The primary reviewer is responsible for conducting an in-depth review and presenting an overview of the project to the other members at the convened meeting. The IACUC chair may delegate the vice chair - or other designee - as the primary reviewer for full board reviews. This may occur when the IACUC chair has a conflict of interest, is unavailable for the meeting, or if several full board reviews are planned for the same meeting.

2. Each IACUC member is provided access to all submitted documents. All members should review the package in enough depth to be able to discuss the project at the meeting.

3. The primary reviewer briefly summarizes the project and identifies any initial items for discussion.

4. All IACUC members have the opportunity to discuss each project on the agenda. The board discusses issues related to the approval criteria. The board also evaluates any additional protocol-specific criteria.

5. The IACUC determines the approval period. Projects must undergo continuing review at least annually, unless the project has progressed to a point that it involves only data analysis.

6. After all controversial issues have been discussed, an IACUC member motions to vote on one of the four review outcomes listed below. Each IACUC member casts one of the following votes – yes, no, abstention. The outcome must receive a "yes" vote from the majority of the members present to pass. All votes (including abstentions and recusals) are recorded in the meeting minutes.

Review Outcomes

1. The IACUC makes one of the following four determinations:
   a) Approved: The study is approved as submitted. The IACUC chair emails an *Approval Letter* to the researchers and saves a copy in the protocol folder. The start of the approval period is the date of the convened IACUC meeting.
   b) Approved with Conditions: The study requires minor changes or clarification as detailed in the minutes. These items are communicated to the investigators in writing within 10 days of the meeting. A designated reviewer or subcommittee grants final approval once verifying the investigator has satisfactorily addressed the comments. IACUC chair emails an *Approval Letter* to the researchers and saves a copy in the protocol folder. The start of the approval period will be the date of the final approval.
   c) Deferred: The study requires major changes or clarification before the IACUC can make a determination on the study, as detailed in the minutes. These items are communicated to the investigators in writing within 10 days of the meeting. The investigator responses are evaluated by the convened IACUC at a subsequent meeting and a subsequent outcome determined.
   d) Disapproved: The committee disapproves the project for reasons outlined in the minutes. This decision and the justification is communicated to the investigators in writing. The investigator has the option to appeal the decision with the IACUC. Appeals and re-submissions are evaluated by the convened committee at a subsequent meeting.

2. The investigator is notified of the outcome of the review in writing via formal letter. The letter will specify the approval period for the project. The Office of Research Administration retains all records and correspondence related to the project.

SOP# 101.1	TITLE: Modifications to Approved Projects	Date Effective: 09/20/19 Last Revision Date: 04/12/19

I. Purpose

This sets forth the process for conducting review of modifications to previously approved projects.

II. Definitions

Modifications to any previously approved projects must be submitted to the IACUC prior to implementation. Modifications include any minor adjustments to the project or significant changes.

Significant changes are defined as any change that has a potential impact on the health or well-being of the experimental animals. Minor adjustments are defined as any change that does not have a potential impact on the health or well-being of the experimental animals.

Minor adjustments to projects reviewed by the full-board may be reviewed utilizing expedited review procedures. All other modifications must be reviewed by the convened board.

Failure to submit a modification request prior to implementing a change to an project will constitute non-compliance and will be handled in accordance with SOP ###.

III. Procedure

Submission and Screening

1. Investigators must submit the "*Request for Modification*" application form to the IACUC via email.

2. The IACUC administrator receives the submission and conducts an initial review for completeness.

3. The IACUC administrator and IACUC have the authority to determine that a modification request constitutes a change in scope or the addition of major new activities such that a new application is required rather than a modification to an existing application.

6. The IACUC administrator saves the modification request in the original project submission folder in a new folder labeled "Modifications."

7. The IACUC administrator logs the project information in the "IACUC FY## Log."

8. If the modification is a minor adjustment to a project previously review via designated member review or full-board review, the IACUC administrator will email the modification request to the original submission designated reviewer or chair.
9. If the modification is a significant change the modification request will be added to the agenda for the next full-board meeting.
10. The review of the modification request is completed in accordance with SOP## Review of Projects.

SOP# 102.1	TITLE: Continuing Review of Active Projects	Date Effective: 09/20/19 Last Revision Date: 04/12/19

I. Purpose

This sets forth the annual continuing review process and the calculation of project expiration dates.

II. Definitions

All projects approved by the IACUC are subject to continuing IACUC review at least annually (or more frequently if specified by the IACUC based on the degree of risk) until the research involves only data analysis.

Prior to the expiration date listed in the original approval letter, investigators must submit a request for renewal and a report of animal usage. Once the project has expired, all activity must cease. If there is a lapse in approval while the continuing review is conducted, the investigator must cease activity, unless the IACUC has determined that it is in the best interest of the animals for activities to continue due to an overriding safety or ethical concern. Any animal activity conducted on an expired protocol constitutes serious non-compliance and is handled in compliance with SOP ###.

Continuing review may be conducted using designated member or full-board review procedures. Continuing review must be conducted at least annually. At the discretion of the IACUC, projects may require review at more frequent intervals.

III. Procedure

Submission and Screening

1. At time of initial submission approval, the investigator receives a letter documenting the approval and expiration dates. Two weeks prior to the project expiration date, the IACUC administrator emails the researcher notifying them of their upcoming project expiration. It is the investigator's responsibility to submit the "*Request for Renewal"* form prior to the project expiration date.

2. If the "*Request for Renewal"* form is received more than 30 days after the project expiration date, the investigator will be required to re-submit their project as a new project. Once the project expires, all activity on the project must cease immediately.

3. Investigators must submit the "*Request for Renewal"* form via email to the IACUC.

4. The IACUC administrator receives the project and conducts an initial review for completeness and processes the submission for review as described in SOP #202.

SOP# 103.1	TITLE: Animal Facility Inspection and Program Evaluation	Date Effective: 09/20/19 Last Revision Date: 04/12/19

I. Purpose

This sets forth the annual continuing review process and the calculation of project expiration dates.

II. Definitions

At least once every six months the IACUC will conduct an administrative review of the University's animal care and use program. The review will examine institutional policies and procedures related to IACUC function, evaluate the effectiveness of the board composition and its functions, and audits recordkeeping and reporting as needed. All IACUC members must be invited to participate and a quorum is required to conduct the review.

At least once every six months the IACUC will conduct inspections of any animal facilities housing (any location where animals are held for more than 12 hours) any USDA covered species. The inspection must be conducted by at least two voting members of the IACUC and no IACUC member that wishes to participate may be excluded.

In addition to required semi-annual inspections and evaluation, the IACUC has the authority to conduct inspections of all animal facilities and research records related to the use of animals at any time. The IACUC has the authority to observe any research or animal care procedures at any time as part of post-approval monitoring.

III. Procedure

Semi-Annual Program Evaluation

1. Once every six months, the IACUC will hold a convened meeting and conduct a review of the institutional policies and procedures related to care and use of animals.

2. The IACUC will complete the "IACUC_Programmatic Review Checklist" and will focus on any areas of concern that have arisen over the previous six months. The board will also discuss opportunities for greater efficiencies and process improvement.

3. Any items identified on the checklist as being a "Significant deficiency" will be communicated to the Institutional Official.

Semi-Annual Animal Facility Inspections

1. Once every six months, the Research Compliance Office will conduct an audit of all active IACUC protocols to determine whether there are any active protocols where facility inspections are required.

2. For any protocols where a facility inspection is required, the RCO will notify the Principal Investigator and provide them a preparatory checklist in advance of the inspection.

3. The RCO will invite all members of the IACUC to attend the inspection, at least two must be present.

4. The IACUC members will conduct the inspection in accordance with the laboratory inspection checklist. Any minor or significant deficiencies will be noted in the checklist. During the inspection, emphasis will be placed on reviewing practices involving pain to animals, the condition of the animals, and compliance with approved protocols.

5. After the inspection a report will be presented to the convened IACUC board for review and discussion. The IACUC will determine appropriate corrective actions for any identified deficiencies.

6. The Principal Investigator will be provided with a written report of the inspection and any identified deficiencies with required corrective actions. The IACUC will provide a timeframe within which deficiencies must be corrected. If the deficiency is not corrected within the required time frame, the IACUC may suspend the protocol.

SOP# 104.1	TITLE: Suspension or Termination of an Approved Project	Date Effective: 09/20/19 Last Revision Date: 04/12/19

I. Purpose

This sets for the process by which the IACUC may suspend or terminate an approved project.

II. Definitions

The IACUC has the authority to suspend or terminate any approved research protocol that is not conducted in accordance with IACUC requirements, university policy, or the AWAR. The IACUC may also suspend or terminate any approved research protocol that has resulted serious animal welfare concerns.

Suspension is a temporary halt in any ongoing research activities including enrollment of new participants or activities involving previously enrolled participants.

Termination is a permanent halt in all ongoing research activities and closure of the project.

III. Procedure

1. The convened IACUC may vote to suspend or terminate a previously approved project if they become aware (via either internal or external report) that a project is not conducted in accordance with IACUC approval or requirements. The decision and rationale is documented in the meeting minutes.
2. If the IACUC Attending Veterinarian (AV)) becomes aware (via either internal or external report) that a project has had a significant impact on animal welfare, they may immediately temporarily suspend the project until the convened IACUC is able to meet. The convened IACUC must review the decision and determine by a majority vote whether they will impose a suspension.
3. The IACUC must notify the Institutional Official (IO) when a project is suspended. The IACUC will consult with the IO to review the reason for suspension and determine appropriate corrective actions. The IO may also independently choose to suspend a project, but the project may only be reinstated through a majority vote of the IACUC at a convened meeting.
4. If the IACUC AV or the convened IACUC suspend or terminate a project, the PI must be promptly informed in writing with a statement of the reasons for the suspension or termination.
5. The PI must submit a report to the IACUC with a plan to bring the research back into compliance and ensure the issues do not arise again. The PI must also submit any modifications to the protocol to ensure future compliance.
6. The RCO and Director of ORA, with the IO, will assist the IACUC in reporting any suspension or termination decisions to external sponsors and/or regulatory agencies, if applicable to the study.
7. At a convened meeting of the IACUC, the committee will review the proposed action plans, amendments submitted, and a timeline for completion. The IACUC will create a corrective action

plan which will include a determination of which corrective actions need to be in place prior to protocol reinstatement and develop a plan and schedule for the items which must be developed and implemented prior to lifting the suspension. A convened quorum of the committee shall be present for this review to determine whether the measures will satisfy requirements for reactivation.

SOP# 105.1	TITLE: Mistreatment or Non-Compliance	Date Effective: 09/20/19 Last Revision Date: 04/12/19

I. Purpose

This procedure sets forth the definition of non-compliance and the IACUC process for assessing non-compliance and issuing corrective actions

II. Definitions

All university personnel teaching or conducting research with animals are expected to comply with the highest standards of ethical and professional conduct in accordance with federal regulations and institutional policies and procedures. Any member of the research team (i.e., faculty, students, staff) may be subject to allegations or inquiries into non-compliance. Categorization of type of non-compliance will be determined by the IACUC based on the totality of circumstances surrounding the event.

Non-Compliance is defined as a failure to adhere to laws, regulations, policies, and procedures while using animals in teaching or research. Noncompliance may range from relatively minor, administrative violations to serious violations that pose risks to animal welfare.

Continuing Non-Compliance is defined as a repeated failure to adhere to the laws, regulations, policies, and procedures governing the use of animals in teaching and research.

IV. Procedure

Allegations of Non-Compliance

1. Reports or complaints of non-compliance may be submitted to the IACUC or to the Office of Research Administration (ORA) verbally or in writing. Reports may arise internally (e.g., from faculty, staff, investigator self-reports, ORA staff, IACUC members, etc) or from external constituents (e.g. regulators). The ORA/IACUC will maintain the confidentiality of submitter to the fullest extent possible.

Assessment of Allegations

1. The Director of ORA and the Research Compliance Officer (RCO) will review the allegation to determine whether there are any supporting documents or statements.
2. If the allegation is determined to be unsubstantiated, the ORA Director and RCO may consult with the IACUC chair or their designee. They may decide that no additional action is needed, further inquiry is necessary, or the issue should be presented to the convened IACUC.
3. If the allegation is determined not to involve non-compliance, no further action will be taken.
4. If the allegation is substantiated but only involves minor or administrative issues, the RCO will contact the investigator to resolve the concern. The ORA Director and RCO will notify the IACUC

chair of the report. They may decide that no additional action is needed, further inquiry is necessary, or the issue should be presented to the convened IACUC.

5. If the allegation is substantiated and may involve serious or continuing non-compliance the IACUC chair will be notified and an inquiry may proceed. If the allegation involves an increased risk of or actual harm to the welfare of the animal, then the Attending Veterinarian will be consulted and the chair may immediately suspend the project until the inquiry is complete (as in SOP ### Suspension and Termination).
6. At the completion of the assessment, and when it is appropriate, the RCO will communicate, the IACUC chair's decision to the complainant, through the complainant's chosen mode of communication.

Inquiry into Non-Compliance

1. The ORA Director, RCO, and IACUC chair make a determination that an inquiry is necessary based on the nature and seriousness of the complaint.
2. An inquiry may also be initiated by the IACUC chair in response to *Adverse Event* reports by investigators in situations where multiple reports involving immediate risks to animals have been submitted to the IACUC, or at the Chair's discretion.
3. The IACUC Chair notifies the Principal Investigator of the inquiry in writing and conveys the nature of the complaint.
4. The IACUC chair designates a sub-committee of at least three individuals, consisting of the RCO, IACUC members, and non-members as appropriate to constitute the appropriate expertise to assess the complaint.
5. The sub-committee may take any of the following actions during the course of the inquiry:
    a. Review protocol(s) specific to the complaint.
    b. Review any sponsor audits, if available.
    c. Review relevant study records and documents.
    d. Conduct facility inspections.
    e. Conduct interviews with research personnel.
6. If the PI requests or is requested to be present at a sub-committee meeting to be interviewed about the alleged non-compliance, they may be accompanied by a faculty representative, legal counsel, or another member of their department. The role of the individual is to provide support to the PI, they may not engage in the discussion between the IACUC and the PI.
7. The sub-committee creates a written report of its findings and recommendations of corrective and/or disciplinary actions.
8. The results of the inquiry are reviewed at a convened IACUC meeting where all IACUC members will have access to relevant protocol documents and the inquiry report. The sub-committee may provide a report at the convened meeting.
9. If the inquiry suspects research misconduct, the findings are shared with the Research Integrity Officer and further investigation will follow University Policy #56: Ethics in Research.

10. If the inquiry substantiates a finding of serious and/or continuing non-compliance, the IACUC votes to determine corrective action(s). Possible corrective actions include, but are not limited to:
    a. Increased monitoring of research procedures, by IACUC members or ORA staff.
    b. Increased frequency of the continuing review cycle.
    c. Requiring additional education and training for research personnel.
    d. Requiring modifications to protocol
    e. Destruction of data.
    f. Preventing release of data to contribute to generalizable knowledge.
    g. Suspension of the study.
    h. Termination of the study.
11. The IACUC notifies the Principal Investigator in writing of the determination and basis for determination. The Principal Investigator must implement the corrective actions within the specified time frame determined by the IACUC. Failure to fully implement the corrective actions within the specific time frame results in the IACUC suspending or terminating IACUC approval for the specific study.
12. The PI has 10 days to appeal the decision in writing, if they so choose. The IACUC reviews the appeal and decide whether to reject the appeal or to re-open the inquiry.
13. The RCO and Director of ORA assists the IACUC in reporting any non-compliance determinations to external sponsors and/or regulatory agencies, if applicable to the study.
14. The IACUC Chair is responsible for informing the investigator's department head, dean, and the institutional official of the corrective actions recommended by the committee as appropriate.