SEMIANNUAL REPORT

ANIMAL CARE AND USE
PROGRAM REVIEW AND FACILITY INSPECTION
OF THE

National Institute of Neurological Disorders and Stroke
National Institute on Deafness and Other Communication Disorders
National Center for Complementary and Integrative Health

April 2020

Section A – Site Visits & Program Review

1) Inspections of the NINDS-NIDCD-NCCIH animal facilities (AF), satellite holding facilities (SF), USDA-defined study areas for regulated species (SA) and areas where any surgical manipulations (Surg) are performed (as applicable) were conducted as indicated below:

Location	Type	Date	ACUC Members
Redacted by agreement	Surg	2/18/20	Redacted by agreement
	AF, Surg	2/27/20	
	AF, Surg	2/6/20	Redacted by agreement Merrill,
	AF, Surg	1/30/20	Redacted by agreement
	Surg	1/30/20	
	SF	2/27/20	
	Surg	N/A	N/A (Inspection not conducted as per approved waiver from OLAW)
	Surg	N/A	N/A (Inspection not conducted as per approved waiver from OLAW)
	SF	N/A	N/A (Inspection not conducted as per approved waiver from OLAW)
	Surg	9/17/19	Redacted by agreement
	SF	9/17/19	

2) Visits by at least one member of the ACUC to all remaining areas where animal activities

were performed were conducted. These visits occurred during the previous six months and findings and corrective actions are described in this or the previous semiannual report.

3) The following document(s) was/were used as the basis for review of the animal care and use program:

	Document/Resource:
	Guide for the Care & Use of Laboratory Animals, 8th Edition (Guide)
X	AAALAC Program Description
	OACU "Animal Program Semiannual Assessment Checklist" (1 page summary)
X	OACU/OLAW "Semiannual Program Review & Facility Inspection Checklist" (24 pages)
	Other documents/resources (please specify)
X	NINDS/NIDCD/NCCIH Program Review Supplement S20

The NINDS/NIDCD/NCCIH ACUC reviews the program every Spring (usually April) and Fall (usually October). When topics related to program review come up at ACUC meetings or site visits, they are discussed when the topic is presented. These discussions are supplemental to the full reviews discussed at October and April meetings. Supplemental discussions which occurred at meetings during the Spring 2020 reporting period (October 2019 through March 2020) and during site visits are listed in the table below.

Additional Topic Review Dates and Topics:

Date of Program Review	Animal Program Topics Covered on this Date
11/14/19	1. The Committee continued its review of its policies and guidelines: a) Policy 12: Satellite Animal Facilities – This policy was approved as written. b) Policy 13: Tracking Pre-Weanling Pups – This policy was approved pending the following changes: change NCCAM to NCCIH and remove references to Sections B and H of the ASP form. c) Policy 17: Housing Mouse and Rat Litters – This policy was approved with some minor edits related to the eighth edition of The Guide. d) Policy 18: Pain/Distress Categorization in Tumor Studies – This policy was approved with an added sentence about the pain/distress category for intravenous metastatic tumor models.
12/12/19	1. Continuing review of Committee policies and guidelines: a) Guideline 3: Anesthetized Animals – This policy was tabled for a later meeting.
1/9/20	1. The Chair talked about the discussions at the most recent ARAC meeting, which covered the changes to the NHP safety program at NIH and the ARAC Guidelines for Collecting and Releasing Animal Images and Audio Recordings. 2. Continuing review of Committee policies and guidelines: a) Guideline 3: Anesthetized Animals – This policy was approved with some minor editorial changes.
2/13/20	1. The Chair talked about the discussions at the most recent ARAC meeting, which covered continued discussion of the changes to the NHP safety program at NIH and the ARAC Guideline for Review, Approval, and Post Approval Monitoring of Animal Study Proposals Including Designated Member Review. 2. The Committee discussed the changes made to the new edition of the AVMA Guidelines for the Euthanasia of Animals. The biggest impact is the change in

	CO2 displacement flow rate. The Committee decided that it would wait until after the public comment period and OLAW acceptance before implementing ACUC recommendations to investigators. 3. Continuing review of Committee policies and guidelines: a) Guideline 2: Extent of Detail Required for Animals Used Only for Tissue Harvest – A revised policy with substantial changes was approved as written. 4. Some minor deficiencies found on semi-annual site-visits were described to the Committee. No significant deficiencies were found at this time. None of the Committee members had any additional questions or concerns.
3/12/20	1. Some concerns brought up during the recent visit from OLAW were presented to the Committee. OLAW said the zebrafish satellite facility was not at the same standard as Redacted by agreement the Committee hopes to get more specifics when the intramural program receives the report from OLAW. The OLAW visitors also pointed out some changes that need to be made to the VVC policy in order to meet their expectations. 2. Some minor deficiencies found on semi-annual site-visits were described to the Committee. No significant deficiencies were found at this time. The Attending Veterinarian suggested coming up with some guidance for investigators for using "tips only" sterilization after visiting some of the labs.
4/9/20	1. The Committee voted to approve revisions to the Significant Changes policy. The revised document includes references for the VVC review process. 2. The Committee voted to approve ad hoc committee members for the Poolesville site visit. 3. The Attending Vet described the current staff shortages and the impact it's had on the animal facility procedures. The Committee voted to approve the emergency facility plans for providing animal care during the COVID-19 pandemic.

4) The program review was conducted in the following manner:

	Program Review Process
	Full committee member review for *ALL* of the review, i.e. the documents/resources listed in A3) are included in the meeting packet and reviewed at a fully convened meeting
	Full committee and subcommittee review, i.e. the documents/resources listed in A3) are assigned to various members who review their parts/sections and then they discuss their reviews with the full committee for a final review/approval
	Designated member review, i.e. the documents/resources listed in A3) are assigned to various members who review their parts/sections and then report back to the full committee the results of their designated review
X	Other, please describe:
	Review of the NINDS/NIDCD/NCCIH Program Review Supplement S20 by the Attending Veterinarian

Section B – Regulatory Compliance:

Except as noted in Sections F and G below, the facilities and program are in full compliance with the Public Health Service Policy, the Animal Welfare Act Regulations and the Guide, which were used as the basis for this evaluation.

Section C – Program Changes:

The following administrative and procedural changes have occurred since the program was last evaluated:

1) Administrative/Procedural Changes:

- All caging equipment coming out of room Redacted by agreement continues to be autoclaved prior to washing due to the discovery of *Spironucleus muris* in the colony. This began January 31, 2019. On July 31, 2019, some animals from this room were moved to Redacted by agreement and are being held under the same quarantine procedures. The animals in this room are on study until springtime. Quarantine procedures are expected to be in place for the duration of the study.
- ACRF caging/equipment continues to be processed in the Redacted by agreement cagewash facility due to cagewash renovations. This is expected to be ongoing for the next 1-3years.
- A contract was established with Pakolatus, Inc. for equipment storage in their Baltimore warehouse. Eighteen pallets of caging components have been moved to this storage location thus far.
- Animal care contract was awarded to Charles Rivers with a start date of December 1, 2019.
- Significant Changes policy revised to include references for the VVC review process.
- Due to the COVID-19 pandemic, facility procedures were modified to account for staff shortages beginning March 11, 2020. Reduction in animal numbers and maximum teleworking of staff initiated where possible.

2) Key Personnel Changes - ACUC Chair, ACUC Attending Vet, APD, or Program Manager:

Role (ACUC Chair, ACUC AV, IC APD, or IC Animal Program Manager)	**Name**	**Action** (joined or departed)
Acting Chair	Marsha Merrill	Chair

3) Animal Facility/Area Changes:

Facility Type (AF/SF)	**Location**	**Action** (opened, closed, under renovation, etc.)
AF	Redacted by agreement	All caging equipment coming out of room Redacted by & Redacted by agreement is being autoclaved prior to washing due to the discovery of Spironucleus muris in the colony. This began July 18, 2019 and will continue until the room quarantine is lifted. Quarantine status remains in effect at this time.
AF		In January and February proximity card readers at facility entrances, procedure rooms & animal holding rooms were upgraded to meet the new NIH standard. A small number of readers still need to be upgraded.
AF		On April 1st imported mice being held for isolation in Redacted by were moved to Redacted by agreement Due to changes in operations during the COVID-19 pandemic, no new imports are planned. Redacted by is closed until we return to normal operations.
AF		Renovations to convert procedure room Redacted by to an animal holding room began in early March.

		Procedure room Redacted by agreement will also be converted, but that work has not yet begun.
AF	Redacted by agreement	The new eSirius software includes multiple modules in addition to the ACUC module. The vet records and cage card modules are currently being tested by the AHCS staff.

Section D – Guide Departures & USDA Exceptions:

Departures from the standards of the *Guide* and exceptions to the USDA *Animal Welfare Act Regulations,* which have been approved by the Animal Care and Use Committee, include the following:

1. Departures from the Guide:

Guide Departures	***Guide Departure Citation (page #)***	***Justification (scientific, veterinary, or animal welfare)***
Prolonged restraint of NHPs during awake MRI.	29/30	Scientific
Hindlimb suspension in mice for muscular atrophy from disuse study. In conjunction, a raised metal grid may be used to provide traction.	29/30 51	Scientific
Animal placed in a jig to restrict movement for targeted irradiation without anesthesia.	29/30	Scientific
Dark-rearing rodents to study brain modification due to environmental stimulus.	47/48	Scientific
Black tetras are obtained from a pet store because no other vendors are available.	106/107	Scientific

2. Exceptions to the AWAR:

Species	***# Animals Affected (this Period)***	***9CFR title/section***	***Description and Rationale***
Marmosets	2 animals	9CRF §2.31(d)(1)(iv)(A)	Experimental autoimmune encephalomyelitis (EAE) is a marmoset model for Multiple Sclerosis which may result in ataxia and paralysis. Pain is not expected, but restriction of movement may cause distress. EAE is a relapsing, remitting disease, and animals will be given a 24-hour chance to recover if hind limb paralysis occurs.
Marmosets	0 animals	9CRF §3.80b	Some breeding marmosets are housed in family groups in cages with less floor space than described in the Guide and AWR.

			These cages provide extra height and perches for the marmosets that are an arboreal species. Juveniles are kept with parents to learn parenting skills when a younger litter is born. Using clinical appearance, aggression and reproductive success as performance standards, no adverse effects have been observed in animals housed under these conditions.

Section E – Previous Deficiencies & Plans:

The committee validated that the plans and schedules for deficiencies noted during the previous NINDS/NIDCD/NCCIH program review, and facilities and laboratory inspections were achieved within the time intervals projected on the previous semiannual report.

Section F – Current Deficiencies & Plans:

Deficiencies found *over the past 6 months* during NINDS/NIDCD/NCCIH program review, facility inspections, and laboratory inspections, are as follows:

	Deficiency	[1]M/S	Location	Correction Plan	Responsible Party	Scheduled Completion Date (mm/dd/yy)	[2]Status: C/P
1	Anti-viral medications not in bite/scratch kit.	M	Redacted by agreement	Medications will be obtained from pharmacy	MIF staff	2/28/20	C
2	(b)(5)						
3	Hood needs to be cleaned.	M	Redacted by agreement	Cleaning procedures modified to prevent hazing of hood surfaces.	Lab staff	3/12/20	C
4	(b)(5)						
5	Alcohol used as primary instrument sterilant	M	Redacted by agreement	Investigator will follow procedures in approved ASP.	Lab staff	3/6/30	C

[1]M=minor; S=significant **[2]C=corrected; P=pending**

Section G – Reportable Events:

PHS Policy (i.e. OLAW) reportable events that occurred in the last 6 months or that are still awaiting final disposition are as follows: **[ ] None**

SA 1st noted	Description of event	Current Status
F19	Technician had a mouse cage out of the holding room during routine cage change. The animal's cage was not changed upon their return to the room. Animals ate the remaining food and facility staff failed to note the diminishing feed level and replenish it. Two mice were found dead and a third was found moribund. The surviving mouse was treated with fluids and supplemental food and recovered fully.	Resolved November/19
F19	Fish room experienced low temperatures for four days following a steam leak on 8/9/19. Despite multiple tickets, calls, and requests for information on this animal room emergency, the issue was not addressed in a timely manner. Five fish died during this period.	Resolved March/20
F19	When an NINDS PI left the NIH, the ASP was taken over by the SD, so that the remaining lab members could complete their work. The protocol was closed on 12/11/18, but the lab members weren't notified and one of them performed a procedure on the newly closed ASP. The lab member was notified, and the mouse was euthanized. There were no animal welfare concerns.	Resolved November/19
S20	On Monday, November 11 two cages were found by the facility staff without food. The cages appeared to contain recently weaned animals that were found either dead or moribund. The Chair will start an investigation into the incident.	Resolved February/20
S20	An incident involving a PI performing unapproved procedures was described at the October meeting by the attending veterinarian. The PI was instructed to immediately cease any ongoing activities not covered by the currently approved ASP. This situation arose because the PI inadvertently removed some ongoing procedures when intending to combine two ASPs into one. The Chair met with the PI who confirmed a) how the situation arose, b) that the lab has stopped performing the procedures and c) that the PI is submitting an amendment to add the procedures (described in a previous ASP) to the current ASP. The Chair will draft an incident report. MOVE	Resolved November/19

Section H – Shared & Central Facilities:

This semiannual report also encompasses review and oversight of animals and animal activities which were present or occurred in shared or central facilities. Deficiencies were noted and

transmitted directly to the facility, and if necessary, to the responsible Animal Care and Use Committee. These reviews were conducted as indicated below:

Building	Date	ACUC Members
Redacted by agreement	2/18/20	Redacted by agreement
	2/27/20	
	1/30/20	
	2/20/20	Redacted by O'Malley
	3/5/20	Redacted by agreement

Section I – Minority Report

There is a minority report filed with this semiannual report. Please see the attached letter.

NINDS/NIDCD/NCCIH ACUC Member Signatures:

Dr. Marsha Merrill Chairperson	
Redacted by agreement	
Dr. James O'Malley Attending Veterinarian	
Redacted by agreement	

(Revised – 03/2020)

Semiannual Report Attachment 3
Supplemental Information
Spring 2020

Instructions: Submit the following information with your Spring 2020 Semiannual Report as a separate file called IC SI S20.

Performance Standards:
Provide a description of ACUC-approved performance standards. For additional information and examples, see the "Guide Departures & Performance Standards" document developed by OACU.

All exceptions are approved on case by case basis for each ASP. We do not have any policies or guidelines for approving exceptions on the basis of performance standards.

Veterinary Verification & Consultation:
If your IC has a VVC policy, please include a copy with your semiannual report submission.

A copy is attached.

Animal Adoption:
If applicable, please provide the number of animals adopted from your IC by species.
If your IC has an adoption policy, please include a copy with your semiannual report submission.

No animals have been adopted out and we do not currently have an adoption policy.

NINDS/NIDCD/NCCIH Animal Care and Use Committee (ACUC) Policy for Significant Changes (Modifications) to Animal Study Proposals

INTRODUCTION

This policy is in place to comply with the NIH Animal Research Advisory Committee (ARAC) Guideline Regarding Significant Changes to Animal Study Proposals which was revised to address the OLAW Revised Guidance on Significant Changes to Animal Activities: http://grants.nih.gov/grants/guide/notice-files/NOT-OD-14-126.html

Amendments to Animal Study Proposals (ASPs) are submitted through the eSirius website and notifications are received by the ACUC Coordinators. The coordinators perform the initial review and route the amendment to the appropriate review mechanism as outlined below. Anyone performing any level of review has the option of calling for full ACUC review.

SIGNIFICANT CHANGES: Changes to approved ASPs described in the Categories 1 and 2 below are all classified as significant changes

Category 1: Mandatory non-administrative review process

These changes require consideration by **Full Committee Review** (FCR) or an expedited **Designated Member Review** process (DMR):

- Changes from non-survival to survival surgery
- Changes resulting in greater pain, distress or degree of invasiveness
- Changes in housing and/or use of animals in a location that is not currently part of the animal program overseen by the ACUC
- Changes in species
- Changes in study objectives
- Changes in Principal Investigator (PI)
- Changes that could impact personnel safety
- Increase in rodent or aquatic animal numbers greater than 25% of what was previously approved or greater than double the originally approved number; any increase in NHP numbers
- Addition of genotype/strain/stock of animal with an adverse phenotype that may require special medical/husbandry care that is not already described for previously approved strains
- Addition or change in hazardous agent(s) that requires DOHS review or registration.
- Addition or change of food or fluid control.
- Addition or change in physical restraint.
- Requests for exemption from social housing

Procedure:

- The PI submits the amendment through the Internet Animal Study Proposal (IASP) as described in AHCS SOP 8722-PI, Creating an Amendment to an Animal Study Proposal (ASP) – for Investigators.
- The amendment is handled as described in AHCS SOP 8220, Processing of Animal Study Proposal Amendments, the ACUC Policy for DMR (http://ahcs.ninds.nih.gov/ACUC_pages/pg_001_designated_review.html) and AHCS SOP 8240, Post-Approval Processing of ASPs, Amendments and Annual Reviews.
- DMR will be the default method for review of changes in principal investigator; all ACUC members will have the opportunity to call for FCR.

Category 2: Conditional Administrative Review Process (Veterinary Verification and Consultation aka VVC)

These changes may be approved by an Animal Health Care Section (AHCS) veterinarian in consultation with the principal investigator when the changes are within the scope of the following:

Approved: 2/2002; Revised: 10/2002, 9/2003, 5/2005, 9/2006, 3/2007, 10/2007, 6/2008, 11/2010, 6/2013, 6/2015, 10/2015, 6/2016, 12/2016, 5/2017, 5/2019, 4/2020
Last Reviewed: 4/2020

- Changes in **anesthesia, analgesia, sedation** (compound, dosage, route, frequency) when consistent with:
    - ACUC Suggested Anesthesia and Analgesia (http://ahcs.ninds.nih.gov/ACUC_pages/sug_anes.html)
    - Plumb's Veterinary Drug Handbook
    - Hawk and Leary's Formulary for Laboratory Animals
    - American College of Laboratory Medicine 'Blue Book' Series
    - James W. Carpenter Exotic Animal Formulary
- Changes in method of **euthanasia** which are not expected to increase pain or distress or impact the approved personnel safety considerations and when consistent with the following:
    - Euthanasia of mouse and rat neonates
    - Guidelines for Euthanasia of Rodents Using Carbon Dioxide
    - Guidelines for Use of Zebrafish in the NIH Intramural Research Program
    - Other methods of euthanasia that are approved or approved with conditions by the AVMA Guidelines for the Euthanasia of Animals: 2020 Edition
    - ACUC policy on euthanasia by cervical dislocation
- Changes in **substances that are the same class of compounds** currently approved in the ASP and which are not expected to increase pain or distress, impact the approved endpoint criteria, or impact the approved personnel safety considerations. The ACUC has approved the following sources for consultation for such changes:
    - ACLAM Formulary for Laboratory Animals, 3rd edition https://www.aclam.org/publications
    - Association of Primate Veterinarians' NHP Formulary
    - Plumb's Veterinary Drug Handbook
    - American College of Laboratory Medicine 'Blue Book' Series
    - James W. Carpenter Exotic Animal Formulary
- Changes in **substances that are different types of compounds** than those currently approved in the ASP but which are not expected to change the objectives of the study, increase pain or distress, impact the approved endpoint criteria, or impact the approved personnel safety considerations. Examples of compounds known to be innocuous include antibiotics, colloidal fluids, diluents, imaging contrast agents and gene expression compounds. The ACUC has approved the following particular compounds and sources for consultation for such changes:
    - BRDU
    - Doxycycline
    - Evans Blue Dye
    - Tamoxifen
    - ACLAM Formulary for Laboratory Animals, 3rd edition https://www.aclam.org/publications
    - Association of Primate Veterinarians' NHP Formulary
    - Plumb's Veterinary Drug Handbook
    - American College of Laboratory Medicine 'Blue Book' Series
    - James W. Carpenter Exotic Animal Formulary
- Changes from a pharmaceutical grade (PG) to a non-pharmaceutical grade (NPG)compound due to unavailability of the PG compound when the pH is neutral and solution is isosmolar, nonpyrogenic and sterile (if parenterally administered).
- Increases in **animal numbers ≤25%** of previously approved aquatic or rodent animal numbers **and do not raise the total above 200%** of the originally approved numbers, provided a rationale for the increase is provided and the increase does not represent a change in the study objectives
- **Changes in duration, frequency, type or number of procedures performed** on an animal that are not expected to increase pain or distress, impact the approved endpoint criteria, or impact the approved personnel safety considerations. The following procedures are allowed:
    - Blood sampling method, volume, and frequency consistent with ARAC guidelines http://oacu.od.nih.gov/ARAC/documents/Rodent_Bleeding.pdf
    - Genotyping method consistent with ACUC policy on Tail snips and pup identification
    - Behavior test methods, interval or duration consistent with those described in *"Guidelines for the care and use of mammals in neuroscience and behavioral research" NRC, 2003*,

or *"What's wrong with my mouse?" 2nd, edition 2007* if there is no change in the current pain/distress level of C or D. For behavior tests classified as USDA Category E, any increase in duration, frequency, type or number must go to FCR or DMR.

- Adding/changing agents that do not change the animal biosafety level. Any changes will require prior approval/signature by Safety Officer and/or the Institutional Biosafety Committee for the agent. Sources consulted are the NIH Chemical Hygiene Plan, the NIH Recombinant DNA Guidelines and the "Biosafety in Microbiological and Biomedical Laboratories" 5th edition.
- Adding special husbandry requests for floor feeding, delayed weaning, or alternative nonmedicated feed or bedding.

Procedure:

- The PI submits the amendment through the Internet Animal Study Proposal (IASP) as described in AHCS SOP 8722-PI, Creating an Amendment to an Animal Study Proposal (ASP) – for Investigators.
- The amendment is forwarded to an AHCS veterinarian for VVC. Once approved by the veterinary signature, the ACUC Coordinators follow AHCS SOP 8240, Post-Approval Processing of ASPs, Amendments and Annual Reviews.

MINOR CHANGES (MODIFICATIONS)

Category 3: Unconditional Administrative Process (ACUC Designee)

These changes may be approved by the ACUC Coordinators:

- Correction of typographical errors
- Correction of grammar
- Contact information updates
- Change in personnel other than the PI. Removal of investigators does not require an amendment.
- Change in housing or procedure room location or other area currently overseen by the ACUC and associated routes of transport
- Addition of physiologically normal strains from approved sources, or the addition of strains from approved sources with the same physiologic abnormalities as strains already approved on the protocol
- Requests for exemption from taking the ACUC-required training in aseptic surgery techniques provided the PI states that the individual will not be performing surgery
- Removal of a method of euthanasia (e.g. guillotine) from a protocol if other previously approved methods of euthanasia will be used instead

Procedure:

- The ACUC Coordinators can make these changes in the protocols or amendments without further ACUC notification during the review. Minor changes made after approval will be documented in the next set of ACUC meeting minutes.
- For personnel changes, the ACUC Coordinators will review the Training and Experience forms and consult with the AEP and training databases to ensure all training, occupational health & safety, and other IC program requirements have been met. Approval will be by the ACUC Coordinators' signature.
- Animal care staff, in facilities affected by the changes are notified of the approved modification by email.

Begin actual OLAW guidance:

The following resources provide guidance to Public Health Service (PHS) awardee institutions on significant changes to animal activities. For additional clarification of the guidance, see a prerecorded Special Seminar (includes slides and transcript) and other helpful references below.

Approved: 2/2002; Revised: 10/2002, 9/2003, 5/2005, 9/2006, 3/2007, 10/2007, 6/2008, 11/2010, 6/2013, 6/2015, 10/2015, 6/2016, 12/2016, 5/2017, 5/2019, 4/2020
Last Reviewed: 4/2020

Introduction

The PHS Policy on Humane Care and Use of Laboratory Animals (Policy) (IV.C.1.) and Animal Welfare Regulations (9 CFR 2.31 (d) (1) (i)- (iv)) define the responsibilities of the IACUC regarding review and approval of proposed significant changes to animal activities. Changes to approved research projects must be conducted in accordance with the institution's Assurance, the US Department of Agriculture (USDA) Animal Welfare Act and Animal Welfare Regulations, and must be consistent with the Guide unless an acceptable justification for a departure is presented. Additionally, IACUCs are responsible for assuring that the changes to approved animal activities meet the requirements described in the PHS Policy IV.C.1.a.-g.

IACUC approval of proposed animal activities or significant changes to previously approved animal activities is granted after full committee review (FCR) or designated member review (DMR). Additionally, institutions may establish and IACUCs may approve policies (e.g., guidance documents, standard operating procedures, drug formularies) for the conduct of animal activities. These policies must be reviewed by the IACUC at appropriate intervals of no less than once every three years to ensure they are appropriate and accurate.

Significant Changes to Animal Activities Previously Approved by the IACUC

The IACUC has some discretion to use IACUC-reviewed and -approved policies to define what it considers a significant change, or to establish a mechanism for determining significance on a case-by-case basis in accordance with the PHS Policy IV.C.1.a.-g. It is the IACUC's responsibility to clearly define and communicate its policy for determining significance to investigators.

In brief, significant changes include changes that have, or have the potential to have, a negative impact on animal welfare (see paragraph 1., below). In addition, some activities that may not have a direct impact on animal welfare are also considered to be significant (see paragraphs 2. and 3., below).

In support of the use of performance standards and professional judgment and to reduce regulatory burden, IACUC-reviewed and -approved policies (e.g., guidance documents, standard operating procedures, drug formularies) for the conduct of animal activities may be used for the administrative handling of some significant changes according to the following considerations:

1. *Significant changes described in 1.a.-g., below, must be approved by one of the valid IACUC approval methods described in the PHS Policy IV.C.2., that is FCR or DMR, including changes:*
    a. *from nonsurvival to survival surgery;*
    b. *resulting in greater pain, distress, or degree of invasiveness;*
    c. *in housing and or use of animals in a location that is not part of the animal program overseen by the IACUC;*
    d. *in species;*
    e. *in study objectives;*
    f. *in Principal Investigator (PI); and*
    g. *that impact personnel safety.*
2. *The specific significant changes described in 2.a.-c., below, may be handled administratively according to IACUC-reviewed and -approved policies in consultation with a veterinarian authorized by the IACUC. The veterinarian is not conducting DMR, but is serving as a subject matter expert to verify that compliance with the IACUC-reviewed and -approved policy is appropriate for the animals in this circumstance. Consultation with the veterinarian must be documented. The veterinarian may refer any request to the IACUC for review for any reason and must refer any request that does not meet the parameters of the IACUC-reviewed and -approved policies. This includes changes in:*
    a. *anesthesia, analgesia, sedation, or experimental substances;*
    b. *euthanasia to any method approved in the AVMA Guidelines for the Euthanasia of Animals (PDF - 1.4 MB); and*
    c. *duration, frequency, type, or number of procedures performed on an animal.*
3. *A significant change that may be handled administratively according to an existing IACUC-reviewed and -approved policy without additional consultation or notification is an increase in previously approved animal numbers (PHS Policy IV.D.1.a.).*

Other Changes

Approved: 2/2002; Revised: 10/2002, 9/2003, 5/2005, 9/2006, 3/2007, 10/2007, 6/2008, 11/2010, 6/2013, 6/2015, 10/2015, 6/2016, 12/2016, 5/2017, 5/2019, 4/2020
Last Reviewed: 4/2020

4. *Changes that may be handled administratively without IACUC-approved policies, consultations, or notifications include:*
    a. *correction of typographical errors;*
    b. *correction of grammar;*
    c. *contact information updates; and*
    d. *change in personnel, other than the PI. (There must be an administrative review to ensure that all such personnel are appropriately identified, adequately trained and qualified, enrolled in occupational health and safety programs, and meet other criteria as required by the IACUC.)*
5. *Investigators may use fewer animals than approved. This does not require IACUC approval, notification, consultation, or administrative handling.*

The USDA Animal and Plant Health Inspection Service has reviewed and concurs with this guidance.

Approved: 2/2002; Revised: 10/2002, 9/2003, 5/2005, 9/2006, 3/2007, 10/2007, 6/2008, 11/2010, 6/2013, 6/2015, 10/2015, 6/2016, 12/2016, 5/2017, 5/2019, 4/2020
Last Reviewed: 4/2020

April 30, 2020

Assurance#: A-4149-01

Date: _____

Institutional Animal Care & Use Committee Roster

Member Name	Degree/Credentials	Position Title	PHS Policy Membership Role	New Member
Marsha Merrill	PhD	Staff Scientist	Chair	☐
James O'Malley	DVM, DACLAM, MPH	Animal Program Director	Attending Veterinarian	☐
Redacted by agreement				☐
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ACUC Chair Mailing Address & Phone #: Redacted by agreement

Attending Vet Phone #: Redacted by agreement

NATIONAL INSTITUTES OF HEALTH
Facilities and Animal Species Inventory Table
Assurance Number: A-4149-01

IC Name: National Institute of Neurological Disorders & Stroke/National Insititute on Deafness & Other Communication Disorders/National Center for Complementary & Integrative Health

Semiannual Report Submission Date: April 30, 2020

Spring Program Review Date(s):	4/9/20					

Fall Program Review Date(s):						

Bldg/Area/Rm	Facility Insp. Date(s) Spring / Fall		AF/SF; Gross Sq. Ft.	Species Housed			Average Daily Inventory		
Redacted by agreement	2/6/20		AF; 59, 735	1 mice	2 rats	3 zebrafish	1 45,435	2 938	3 10,075
				4	5	6	4	5	6
	1/30/20		AF; 1,205	1 mice	2 rats	3	1 684	2 110	3
				4	5	6	4	5	6
	2/27/20		AF; 3,462	1 mice	2	3	1 2	2	3
				4	5	6	4	5	6
	3/5/20		SF; 63	1 xenopus	2	3	1 46	2	3
				4	5	6	4	5	6
	2/27/20		SF; 385	1 zebrafish	2	3	1 600	2	3
				4	5	6	4	5	6

NATIONAL INSTITUTES OF HEALTH
Facilities and Animal Species Inventory Table
Assurance Number: A-4149-01

IC Name: National Institute of Neurological Disorders & Stroke/National Insititute on Deafness & Other Communication Disorders/National Center for Complementary & Alternative Medicine

Semiannual Report Submission Date: April 30, 2020

CONTINUATION PAGE

Bldg/Area/Rm	Facility Insp. Date(s) Spring / Fall		AF/SF; Gross Sq. Ft.	Species Housed			Average Daily Inventory		
Redacted by agreement	N/A		SF; 210	1 zebrafish	2	3	1 780	2	3
				4	5	6	4	5	6
				1	2	3	1	2	3
				4	5	6	4	5	6
				1	2	3	1	2	3
				4	5	6	4	5	6
				1	2	3	1	2	3
				4	5	6	4	5	6
				1	2	3	1	2	3
				4	5	6	4	5	6