

MEMBERSHIP OF THE INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

Date: 10/10/2019			
Name of Institution: North Carolina State University			
Assurance Number: D16-00214			
IACUC Chairperson			
Name*: William L. Flowers (member code #5)			
Title*: Professor		Degree/Credentials*: PhD	
Address*: (street, city, state, zip code) Department of Animal Science, Polk Hall (b) (4) Box 7621 NCSU Campus, Raleigh, NC 27695			
E-mail*: flowers@ncsu.edu			
Phone*: (b) (6)		Fax*: (b) (6)	
IACUC Roster			
Name of Member/ Code**	Degree/ Credentials	Position Title***	PHS Policy Membership Requirements****
(b) (6)			S
			NS
			S
			NA, NS
			S
			V
8 Gabriel McKeon	DVM, DACLAM	University Attending Veterinarian	V
(b) (6)			NS
			S
			NA, NS

			(b) (6) S
			S
			S

* This information is mandatory.

** Names of members, other than the chairperson and veterinarian, may be represented by a number or symbol in this submission to OLAW. Sufficient information to determine that all appointees are appropriately qualified must be provided and the identity of each member must be readily ascertainable by the institution and available to authorized OLAW or other PHS representatives upon request.

*** List specific position titles for all members, including nonaffiliated (e.g., banker, teacher, volunteer fireman; not "community member" or "retired").

**** [PHS Policy](#) Membership Requirements:

<i>Veterinarian</i>	veterinarian with training or experience in laboratory animal science and medicine or in the use of the species at the institution, who has direct or delegated program authority and responsibility for activities involving animals at the institution.
<i>Scientist</i>	practicing scientist experienced in research involving animals.
<i>Nonscientist</i>	member whose primary concerns are in a nonscientific area (e.g., ethicist, lawyer, member of the clergy).
<i>Nonaffiliated</i>	individual who is not affiliated with the institution in any way other than as a member of the IACUC, and is not a member of the immediate family of a person who is affiliated with the institution. This member is expected to represent general community interests in the proper care and use of animals and should not be a laboratory animal user. A consulting veterinarian may not be considered nonaffiliated.



Facility and Species Inventory

Date: June 30, 2019			
Name of Institution: North Carolina State University			
Assurance Number: D16-00214			
Laboratory, Unit, or Building*	Gross Square Feet [<i>include service areas</i>]	Species Housed [<i>use common names, e.g., mouse, rat, rhesus, baboon, zebrafish, African clawed frog</i>]	Approximate Average Daily Inventory
(b) (4)	15,818	Frogs	2
		Mice	2500
		Rabbits	0
		Hamsters	0
		Rats	100
		Fish	7500
		Voles	100
	114260 + 128 acres pasture	Cats	0
		Cattle	75
		Chickens	250
		Dogs	50
		Exotic Birds	15
		Fish	1500
		Goat	50
		Horses/Ponies	35
		Mice	2000
		Rats	50
		Guinea Pigs	5
		Gerbils	50

(b) (4)		Hamsters	0
		Pigeons	15
		Rabbits	35
		Reptiles	0
		Sheep	50
		Pigs	75
		Turkeys	200
	2000	Fish	3000
	800	Pigs	16

*Institutions may identify animal areas (buildings/rooms) by a number or symbol in this submission to OLAW. However, the name and location must be provided to OLAW upon request.

Memorandum to: Richard Best, Director of Compliance, Institutional Official
From: Institutional Animal Care and Use Committee
Subject: Semiannual Report of the Animal Care and Use Program Review
Date: July 18 2019

This report summarizes the IACUC's results of its most recent program review and facility inspection, as required by the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals ([Policy](#)), Section [IV.B.1.-3.](#), the *Guide for the Care and Use of Laboratory Animals* ([Guide](#)), and the Animal Welfare Act ([AWA](#)) regulations, as applicable. Submission of semiannual reports to the Institutional Official is a condition of this institution's Animal Welfare Assurance with the NIH Office of Laboratory Animal Welfare (OLAW).

I. Description of the Nature and Extent of the Institution's Adherence to the PHS Policy, the *Guide*, and the AWA

Departures from the PHS Policy, the *Guide*, and the AWA.

Select A or B:

- ☐ A. There were no departures during this reporting period.
☒ **B. The departures have been reviewed and approved by the IACUC. See table at end of document.**
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**II. Deficiencies in the Institution's Animal Care and Use Program
Animal Care and Use Program Review Date(s): June 20, 2019**

Select A or B:

- ☒ **A. There were no deficiencies in the program during this reporting period.***
☐ **B. The following deficiencies have been identified:**

Areas for Improvement

Status of Continuing improvements since the last Semiannual Program Review Report:

During the two most recent AAALAC International (AAALACi) reaccreditation processes, site visitors recommended improvement of our existing Occupational Health and Safety Program for Personnel with Animal Contact through establishment of annual health re-evaluation of enrollees. A proposed method for periodic check of changes in employees medical or animal handling status which could prompt an updated animal contact form submission has been reviewed with key personnel in SHS and CVM. It is presently under review by CVM college management for any concerns associated with implementation.

During the recent AAALACi reaccreditation process at the College of Veterinary Medicine (CVM), Dr. McKeon discovered that university owned mares are being used as recipients for client embryos. AAALAC required IACUC oversight/inspection of the housing of the NCSU-owned mares during their gestation period at the client-owned farms. There is no easy mechanism to temporarily transfer ownership of the horses to the clients. It is also not feasible for the IACUC to semiannually inspect the client-owned farms that temporarily house these university-owned mares. The service was halted until an IACUC oversight mechanism was established. Ownership will be retained by NCSU. The IACUC will assign a subcommittee to perform a site inspection of each farm that receives a surrogate mare. The subcommittee will include one representative veterinarian from the equine theriogenology service as well as one committee member (generally the AV). A checklist has been developed to ensure that the standards are met by each farm.

III. Deficiencies in the Institution's Animal Facilities

Animal Facility/Lab Inspection Date(s): Multiple dates: January 7 and 8; February 4, 5 and 6; March 3, 4, 5 and 6; April 1, 2, 3, 17 and 24; May 1, 2 and 6.

- ☐ A. There were no deficiencies in the animal facilities during this reporting period.
- ☒ B. The following deficiencies were noted in animal facilities during this reporting period. Also included are approved plans and schedules for correction approved during this reporting period for deficiencies noted during the previous reporting period.

Plan and Schedule for Correction of Deficiencies

Facility	Centennial Toxicology (b) (4)
Date of Inspection	November 13, 2018

DEFICIENCY	M/S	ACTION/DESCRIPTION OF PLAN TO CORRECT	SCHEDULE FOR CORRECTION	
Deficiency(ies) are described below	Minor	-Replacement -Renovation or Repair	Proposed Scheduled Date(s) of	Deficiency Confirmed Corrected by

	Or Signi- ficant	-Modification of Policies or SOPs -Other	Corrective Action (Start/Finish)	IACUC (date and by whom)
(b) (4) Planchart/Mattingly Lab: Upon inspection, numerous zebrafish were individually housed. The research technician explained that this was necessary for the establishment of genotype sequencing. The fish could be individually housed for up to 3-4 months if they are used for CRISPR genome editing. Because zebrafish are a social species, this is an exception to standards that is not listed on the approved protocols. An amendment must be submitted to add this exception to provide the committee with proper scientific justification.	M	An amendment submission was approved on 12/12/2018 to individually house zebrafish for genotyping purposes for protocol 18- 041-B.	12/12/2018	1/15/19 Confirmed by (b) (6)

Facility	CVM's Research Building Vivarium
Date of Inspection	March 4, 2019

DEFICIENCY	M/S	ACTION/DESCRIPTION OF PLAN TO CORRECT	SCHEDULE FOR CORRECTION	
Deficiency(ies) are described below	Minor Or Signi- ficant	-Replacement -Renovation or Repair -Modification of Policies or SOPs -Other	Proposed Scheduled Date(s) of Corrective Action (Start/Finish)	Deficiency Confirmed Corrected by IACUC (date and by whom)

<p>The peeling ceiling in the hallway between the entry doors into vivarium is in need of repair. The manager indicated a work order had been submitted months ago. However, upon inquiry to why the repair hasn't been done, she was told due to a person working in the building with an allergy to latex, the repair and painting cannot be performed. The Attending veterinarian will contact facilities personnel to determine how best to repair the damaged surface since latex is not an option.</p>	M	<p>Working with paint shop to get the all clear to paint RBV with signage and notification for CVM staff member with latex allergy or a different type of paint that will meet our regulations needs</p>	<p>Aug 2019</p>	<p>To be confirmed at next IACUC inspection.</p> <p>(b) (6)</p>
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Facility		Small Ruminant Education Unit (SREU)		
Date of Inspection		March 5, 2019		
DEFICIENCY	M/S	ACTION/DESCRIPTION OF PLAN TO CORRECT	SCHEDULE FOR CORRECTION	
Deficiency(ies) are described below	Minor Or Significant	-Replacement -Renovation or Repair -Modification of Policies or SOPs -Other	Proposed Scheduled Date(s) of Corrective Action (Start/Finish)	Deficiency Confirmed Corrected by IACUC (date and by whom)

<p>The issue of falling ceiling insulation was noted as a minor deficiency on a previous semiannual inspection and those problem areas of insulation were removed. There were new areas of the ceiling's insulation that are torn and falling down that should be removed/repared.</p> <p>A section of pen gates in the barn, where animals are held, was wobbling and the anchor bolts need to be replaced to stabilize the gate and to keep it from falling down.</p>	M	<p>Repair ceiling</p> <p>Insulation will continue to be removed as sections come loose</p>	Bimonthly	<p>To be reviewed with the next self-evaluation checklist submitted to IACUC.</p>
	M	<p>Pen will be repaired</p> <p>Concrete anchors and welding</p>	<p>To be completed by end of May '19</p>	

Facility	Dairy Education Unit (DEU)
Date of Inspection	March 6, 2019

DEFICIENCY	M/S	ACTION/DESCRIPTION OF PLAN TO CORRECT	SCHEDULE FOR CORRECTION	
Deficiency(ies) are described below	Minor Or Significant	<p>-Replacement</p> <p>-Renovation or Repair</p> <p>-Modification of Policies or SOPs</p> <p>-Other</p>	Proposed Scheduled Date(s) of Corrective Action (Start/Finish)	Deficiency Confirmed Corrected by IACUC (date and by whom)

<p>The roof on the pole barn is damaged in many places with metal roofing material missing and/or flapping in the wind. Additionally, the wood truss in one section of the barn is damaged. A gate has been put up so that animals cannot be access this section to prevent possible injury to them. There are small holes in the roofing throughout this building. This roof needs to be repaired or replaced to prevent potential injury to animals and personnel working in the area.</p>	M	<p>The pole on the roof barn has been a topic of our ongoing repair lists. I have begun to gather quotes for these repairs to be made by a roofing contractor. These notes have been shared with the Assistant Director of NCARS. Together we are working on a plan to get this building fixed.</p> <p>MV</p>	<p>Start - March 2019 – finish asap, pending available funding</p>	<p>To be reviewed with the next self-evaluation checklist submitted to IACUC.</p>
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Facility/location	CVM PI lab – CVM C360
Date of Inspection	5/6/19

DEFICIENCY	M/S	ACTION/DESCRIPTION OF PLAN TO CORRECT	SCHEDULE FOR CORRECTION	
Deficiency(ies) are described below	Minor Or Significant	-Replacement -Renovation or Repair -Modification of Policies or SOPs -Other	Proposed Scheduled Date(s) of Corrective Action (Start/Finish)	Deficiency Confirmed Corrected by IACUC (date and by whom)
The plexiglass box used for rodent euthanasia needs to have instructions for flow meter use. The technician will add these instructions to the box for all users. This comment was previously made during a semi-annual inspection in November 2018.	M	Lab manager confirmed via e-mail that the sign including the instructions and the flow rate for the flow meter was hung on 5/30/2019	5/30/2019	5/30/19 email to IACUC office

Facility/location	CVM PI labs – CVM C260 Gait Lab
Date of Inspection	5/6/19

DEFICIENCY	M/S	ACTION/DESCRIPTION OF PLAN TO CORRECT	SCHEDULE FOR CORRECTION	
Deficiency(ies) are described below	Minor Or Significant	-Replacement -Renovation or Repair -Modification of Policies or SOPs -Other	Proposed Scheduled Date(s) of Corrective Action (Start/Finish)	Deficiency Confirmed Corrected by IACUC (date and by whom)
Disinfectant bottle labels indicated that disinfectant was expired. All labels need to reflect actual expiration date of disinfectant and only in date cleaning products should be used. This comment was previously made during a semi-annual inspection in November 2018.	M	IACUC staff verified lab will discard the expired chemicals and a plan is in place to prevent re-occurrence. Lab has delegated a research assistant to keep up with expiration dates of chemicals to prevent re-occurrence.	6/25/19	Verified by IACUC staff 6/25/19

Minority Views

Select A or B:

☒ A. No minority views were submitted or expressed.

☐ B. The following minority views were expressed:

IV. Status of AAALAC Accreditation

The College of Veterinary Medicine is accredited.
The College of Sciences is accredited.

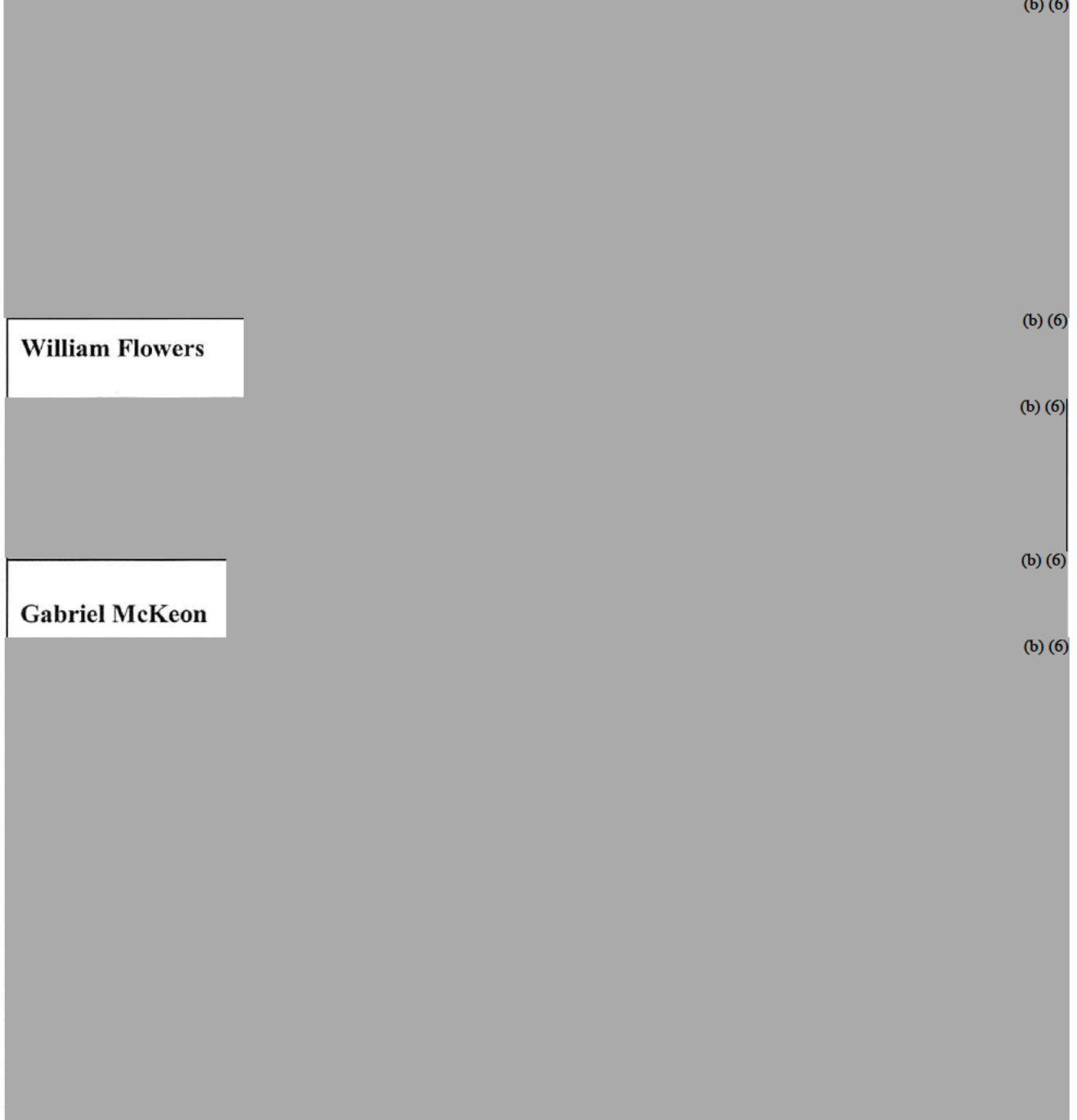
Active IACUC Approved Exceptions to Standards Specified by Either the *Guide* or the *Ag Guide*

ID#	Standard	Species	IACUC-Approved Exception	Date	
19-016-B	Guide	Dog	Housed in cages with lowered lids	01/24/2019	

Signatures: NCSU IACUC's semiannual evaluation of the Animal Care and Use Program was completed by a convened quorum on June 20, 2019 and the final report approved and verified with the signatures below on July 18, 2019. All current voting members of the committee have had an opportunity to review this semiannual program report to the Institutional Official.

Printed Names of Voting Members of the IACUC

Signatures

		(b) (6)
		(b) (6)
		(b) (6)
		(b) (6)
William Flowers		(b) (6)
		(b) (6)
Gabriel McKeon		(b) (6)
		(b) (6)