### SEMIANNUAL REPORT

#### ANIMAL CARE AND USE PROGRAM REVIEW AND FACILITY INSPECTION OF THE

### NIDDK

### April 2020

### Section A – Site Visits & Program Review

 Inspections of the NIDDK animal facilities (AF), satellite holding facilities (SF), USDAdefined study areas for regulated species (SA) and areas where any surgical manipulations (Surg) are performed (as applicable) were conducted as indicated below:

Location	Туре	Date	ACUC Members	
Redacted by agreement	AF	J/UJ/ZUZU	Redacted by agreement	St Claire
	SF	3/05/2020	agreement	St Claire
	SF	3/05/2020		St Claire
	AF	3/05/2020		St Claire
	AF	3/05/2020		St Claire

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

Program Review Process
 Full committee member review for <i>ALL</i> 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
Other, please describe:

### Section B – Regulatory Compliance:

Except as noted in Section F 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: N/A

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

Role (ACUC Chair, ACUC AV, IC APD,	Name	Action
or IC Animal Program Manager)		(joined or departed)
N/A	N/A	N/A

### 3) Animal Facility/Area Changes: N/A

Facility Type (AF/SF)	Location	Action (opened, closed, under renovation, etc.)		
N/A	N/A	N/A		

### 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	Justification (scientific, veterinary, or animal welfare)
Extended staples removal past 10 days	Scientific-To reduce stress and risk of abortion after embryo transplantation
Holding mice for up to 7 days at 39.20 F	Scientific-To study brown fat metabolism
Extended cage changing frequency 2 weeks or up to 3 weeks.	Veterinary-Only to be activated in the case of an emergency or disaster circumstance that disrupts supplies or staff being able to provide full services

#### 2. Exceptions to the AWAR:

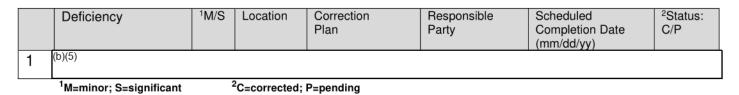
Species	9CFR title/section	Description and Rationale
N/A	N/A	N/A

#### Section E – Previous Deficiencies & Plans:

The committee validated that the plans and schedules for deficiencies noted during the previous *NIDDK* 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 **NIDDK** program review, facility inspections, and laboratory inspections, are as follows:



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:

SA 1 <sup>st</sup> noted	Description of event	Status
	Failure to amend ASP for injection of chemical in	Letter to OLAW
	mice	

### 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	3/05/2020	Redacted by agreement	(approved as ad hoc		
		qualified inspector)			
	2/25/2020	Redacted by agreement	(approved as ad hoc qualified		
	_/_0/_0_0	inspector)			
	2/26/2020	Redacted by agreement	by agreement approved as ad hoc qualified		
		inspector)			
	2/26/2020	Redacted by agreement	(approved as ad hoc qualified		
		Inspector)			
	2/26/2020	Redacted by agreement	(approved as ad hoc qualified		
		inspector)			
	12/06/19	Redacted by agreement	(approved as ad hoc qualified		
	,,	inspector)			

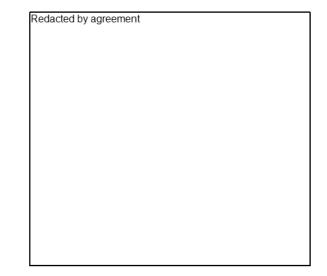
### Section I – Minority Report

There is not a minority report filed with this semiannual report.

Constance T.	Digitally signed by Constance T.
Noguchi -S	Noguchi -S Date: 2020.04.20 12:58:53 -04'00'

Constance T. Noguchi, Ph.D., Chair

Redacted by agreement	



Digitally signed by Mark B. Foster St Claire -S Date: 2020.04.20 07:57:24 -04'00' Claire -S Mark B. St. Claire, D.V.M., Attending Veterinarian

(Revised - 09/2019)

Mark B. Foster St

## 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.

As for deviation from the Guide, the ACUC has approved a cold adaptation protocol which includes gradual reduction of Ta to 39.20 F(4oC) for 7 days in the metabolic chambers.

Animals utilize multiple mechanisms to adapt to cold, including formation of thermogenically active brown fat-like cells, called beige, within white fat depots in response to chronic cold exposure. Brown and beige fat depots have been recently found in adult people but in much smaller quantities than in rodents. It has been proposed that induction of beige/brown adipocyte differentiation and pharmacological activation of these cells will increase energy expenditure in people and might be used as a therapy for treatment of obesity. Since beiging of fat occurs only during chronic cold exposure, to study the underlying mechanisms mice are exposed to cold for a week (Cohen et al. Cell 156, 304-316, 2014; Kong et al Cell 158, 69-83, 2014). For these experiments only mice which can maintain body temperature during acute cold tolerance test are maintained at 4C. The mice are EW implanted with e-mitters and temperature is monitored on the individual mice and gradually adapted to cold by reducing environmental temperature by 20C/day (200C-180C-140C-120C-100C-80C until 4C). Guide: Chapter 3,Enviroment, Housing and Management page 43.

#### Veterinary Verification & Consultation:

If your IC has a VVC policy, please include a copy with your semiannual report submission. 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.

n/a

April 30, 2020

#### Assurance#: A-4149-01

Date:

# Institutional Animal Care & Use Committee Roster

\_4/30/2020

				New
Member Name	Degree/Credentials	Position Title	PHS Policy Membership Role	Member
Constance T. Noguchi	PhD	Section Chief	Chair	
Mark B. Foster St. Claire	DVM, MS, DACLAM	Animal Program Director	Attending Veterinarian	
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ACUC Chair Mailing Address & Phone #:

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 Diabetes and Digestive and Kidney Diseases

# Spring Semiannual Report Submission Date: April 30, 2020

Spring Program Review Date(s):	4/15/20					
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Fall Program			
Review Date(s):			

Bldg/Area/Rm	Facility Insp. Da Spring / Fa	ate(s) AF/SF; Il Gross S	q. Ft.	Species Housed		Average Daily Inventory			
Redacted by agreement	3/05/2020	AF,3	700	<sup>1</sup> mouse 4	<sup>2</sup> Rat 5	3 6	<sup>1</sup> 2,843 4	<sup>2</sup> 20 5	3 6
	3/05/2020	AF, <sup>7</sup>	1200	<sup>1</sup> mouse 4	2 5	3 6	<sup>1</sup> 1,149 4	2 5	3 6
	3/05/2020	AF, a	800	<sup>1</sup> mouse 4	2 5	3 6	<sup>1</sup> 1,981 4	2 5	3 6
	3/05/2020	SF,6	600	4	2 5	3 6	1 20 4	2 5	3 6
	3/05/2020	SF2	240	1 mouse 4	2 5	3 6	1 12 4	2 5	3 6

#### NIDDK Lab Visits - attachment 2 Spring/Fall 2020 Survival Procedures

Building	Room	Species	ASP	PI	In Vivo Procd's	Date of Visit		Visitors					
			Redacted by agreemen	t				Current Findings					
			]			Spring*	Fall						
Redacted by a	-	Mouse			Surgery, euthanasia, bleed samples, imaging	3/5/2020		Redacte St Claire	ok				
		Mouse			Eye Test								
Redacted by a		Mouse			Hearing test, Euthanasia/tissue harvest	3/9/2020		Redacte d St Claire					
		Mouse			Behavior test	3/5/2020		Redacted St Claire, Redacted by agreement	ok				
		Mouse			Imaging	3/5/2020		Redacted St Claire, Redacted by agreement	ok				
			N		If not visited during the current six								
						st all procedure locations whether visited every 6 months or once annually ate of Visit should include spring and fall dates if visited every 6 months per calendar year							
					Multiple ASPs can be included in								
					If multiple PIs or ASPs are listed in								
					Please list locations in ascending	order by Buildir							

#### NIDDK Lab Visits - attachment 2 Spring/Fall 2019 Survival Procedures

Building	Room	Species		PI	In Vivo Procd's	Date of Visit				Visitors			
			Redacted by agreeme	ent					Current Findings				
			1			Spring*	Fall						
Redacted by ag	greement		]		Surgery, euthanasia, bleed								
		Mouse			samples, imaging	3/14/2019		Redacted by agre	ement St Claire	e and ,Redacted by agreement	ok		
								Redacted by	St Claire		ok		
		Mouse			Eye Test	3/14/2019		Redacted by agre	ement St Claire	e and ,Redacted by agreement	expire eye medicationsremoved 3/14/2019		
			]				9/18/2019	Redacted by	St Claire		expire eye medicationsremoved 9/18/2019		
					Hearing test, Euthanasia/tissue								
		Mouse			harvest	3/14/2019		* St Claire Rec	lacted by agreemen	it	ok		
		Modoc				0/11/2010	9/20/2019	Redacted by	St Claire				
		Mouse	1		Behavior test	3/26/2019	0/20/2010	Redacted by agre		St Claire	ok		
			]				9/20/2019	Redacted by	St Claire				
		Maria			lun e sin si	2/14/2010		Reducted by agr					
		Mouse	l		Imaging	3/14/2019	9/20/2019		<sup>eement</sup> St Claire, St Claire		ok ok		
							9/20/2019	Reducted by	St Claire		OK		
				Notes:	If not visited during the current six								
						st all procedure locations whether visited every 6 months or once annually ate of Visit should include spring and fall dates if visited every 6 months per calendar year ultiple ASPs can be included in a row if all involve same location and procedure							
						<sup>i</sup> multiple PIs or ASPs are listed in a row, findings found should identify the responsible PI Please list locations in ascending order by Building and room							
					riease list locations in ascending		iy anu ioor	11					