

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.		OMB APPROVED 0579-0036
This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.		Interagency Report Control No. 0180-DOA-AN
Fiscal Year: 2023		
UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)		
REGISTRATION NUMBER: 52-R-0124 Customer Number: 493 2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include ZIP Code) Virginia Commonwealth University DIVISION OF ANIMAL RESOURCES RICHMOND, VA 23298 Telephone: (804) 828-6587		

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary)
FACILITY LOCATIONS (Sites) See Attached Listing
1101 E. Marshall Street, Richmond, VA 23298-5008

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A.)					
A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4 Dogs	0	0	0	0	0
5 Cats	0	0	0	0	0
6 Guinea Pigs	0	5	0	0	5
7 Hamsters	0	0	0	0	0
8 Rabbits	0	30	178	34	242
9 Non-Human Primates	0	0	0	0	0
10 Sheep	0	0	0	0	0
11 Pigs	0	0	51	0	51
12 Other Animals	127	1	0	111	112
California mouse	127	1	0	111	112

ASSURANCE STATEMENTS		
1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.		
2.) Each principal investigator has considered alternatives to painful procedures.		
3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.		
4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.		
CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL (Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.)) I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).		
SIGNATURE OF C.E.O. OR I.O. s/AMY KCHUANG	NAME AND TITLE OF C.E.O. OR I.O. (Type or Print) AMY KCHUANG DIRECTOR	DATE SIGNED 11-29-2023

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0579-0036

Interagency Report Control No. 0180-DOA-AN

Fiscal year: 2023

**UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

**Annual Report of Research Facility
Column E Explanation**

(TYPE OR PRINT)

This information is required by law (7 U.S.C. 2143 and 9 C.F.R. §2.36). Failure to report according to the regulations can result in an order to cease and desist.

1. REGISTRATION NUMBER

52-R-0124

2. Research Facility Headquarters address

Virginia Commonwealth University (Box 980568)
800 East Leigh Street Biotech One Suite 3000
Richmond, VA 23298

3. Number of animals used in the study.

111

4. Species (common name) of animals used in the study.

Peromyscus californicus

5. Explain the procedure producing pain and distress.

a) Mice are separated from their bonded mate for 10 days.

b) Animals are euthanized without the assistance of anesthetics or analgesics via rapid decapitation by trained and experienced animal researchers.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

a) The central hypothesis of the study is that social bond disruption alters mitochondrial metabolism and immune function. Therefore, separation from the bonded mate is essential to the study. Neither anesthetics or analgesics could be applied for the 10 days of separation without compromising the integrity of the study.

b) The primary outcome of the research is to study mitochondrial function which is impacted by the use of anesthetic drugs at the time of tissue collection. As such, use of these drugs would compromise the research outcomes and limit interpretability.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

NA

Agency

CFR

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**UNITED STATES DEPARTMENT OF AGRICULTURE
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**Annual Report of Research Facility
Column E Explanation**

(TYPE OR PRINT) Virginia Commonwealth University

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1. REGISTRATION NUMBER

52-R-0124

2. Research Facility Headquarters address

Virginia Commonwealth University (Box 980568)
800 East Leigh Street Biotech One Suite 3000
Richmond, VA 23298

3. Number of animals used in the study.

34

4. Species (common name) of animals used in the study.

Rabbits

5. Explain the procedure producing pain and distress.

Animals that have tibial nerve surgery have analgesics withheld one week prior to CMAP/nerve action potential testing at the terminal surgery (scientific endpoint). NOTE: Animals do receive Buprenorphine SR LAB prior to surgery, the effect of which lasts 3 days post-op. In addition during the entire period of the study, if any animal develops wounds or complications resulting in pain/distress, the animal will be given analgesics to relieve that pain. Analgesics are withheld on the last week before the animal reaches the scientific end point for the study.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

Due to the inherently painful nature of nerve injuries, any animal demonstrating discomfort/pain as noted by excessive licking at toes or chewing the nails is treated by administering analgesics, and/or loosening or removing bandages. Such animals are assessed at least once daily for resolution of any distress. Administration of analgesics within a week of CMAP/nerve action potential testing may alter data and alternative methods of addressing discomfort will be discussed with DAR's Veterinary staff.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

NA

Agency

CFR