OMB APPROVED
0579-0036, 0579-0486

This report 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.

Interagency Report Control No. 0180-DOA-AN

Fiscal Year: 2025

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY

(TYPE OR PRINT)

1. 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
800 East Leigh Street Biotech One Suite 3000
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*

Building 1

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					
5. Cats					
6. Guinea Pigs	0	3	0	0	3
7. Hamsters					
8. Rabbits	8	0	91	20	111
9. Non-human Primates					
10. Sheep					
11. Pigs	2	0	85	0	85
12. Other Farm Animals					
13. Birds					
14. Other Mammals					
Peromyscus californicus	18	2	5	63	70

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.	NAME AND TITLE OF C.E.O. OR I.O. *(Type or Print)*	DATE SIGNED
DocuSigned by: Kwei-Lan Amy Chuang 3487C192480549F...	Amy Chuang Director, Animal Care and Use Program	12/16/2025

APHIS Form 7023 Site Addendum for FY: 2025

Registration Number:	52-R-0124
Customer ID Number:	493
Facility Business Address Information:	Virginia Commonwealth University (Box 980568) 800 East Leigh Street Biotech One Suite 3000, Richmond, VA 23298
Telephone:	(804)828-6587
Facilities Site(s) Address Information:	1101 E. Marshall Street, Richmond, VA 23298-5008
Site Codes:	Building 1

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Interagency Report Control No. 0180-DOA-AN

Fiscal year: 2025

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

Annual Report of Research Facility
Column E Explanation

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
800 East Leigh Street Biotech One Suite 3000
Richmond, VA 23298

3. Number of animals used in the study.
20

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 Ethiqa XR (or Buprenorphine ER) 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 endpoint of the study. To mitigate chewing and disruption of the incision, animals are maintained in Elizabethan collars(e-collars) for prolonged periods. This, in and of itself, is a source of distress to the animals, as it presents a barrier to normal behavior including access to cecotropes which are essential to digestion in rabbits.

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.

Animals are often maintained on e-collars for prolonged periods because, following surgery, they tend to chew at their incision, which increases the risk of dehiscence. Analgesics are administered for the first 72 hours post-operatively, and throughout the study if needed. Any animal showing discomfort/pain, as noted by excessive licking of the toes or chewing of the nails, will receive appropriate treatment, including analgesics and/or loosening or removal of bandages. These animals are evaluated at least once daily until signs of distress have resolved. Administration of analgesics within a week of the scientific endpoint of the study, including CMAP/nerve action potential testing, may alter the data; therefore, it will be withheld. If necessary, 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

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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

800 East Leigh Street Biotech One Suite 3000
Richmond, VA 23298

3. Number of animals used in the study.

63

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 nor 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**