

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. CERTIFICATE NUMBER: 23-R-0088  
CUSTOMER NUMBER: 350

FORM APPROVED  
OMB NO. 0579-0038

**ANNUAL REPORT OF RESEARCH FACILITY**  
(TYPE OR PRINT)

Monell Chemical Senses Center  
3500 Market Street  
Philadelphia, PA 19104

Telephone: (b)(2)High, (b)(7)f

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, or experimentation, or held for these purposes. Attach additional sheets if necessary)

FACILITY LOCATIONS (Sites) - See Attached Listing

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 animal 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 in these animals and the reason such drugs were not used must be attached to this report)	F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)
4. Dogs	N/A	N/A	N/A	N/A	N/A
5. Cats	N/A	N/A	N/A	N/A	N/A
6. Guinea Pigs	0	12	0	4	16
7. Hamsters	N/A	N/A	N/A	N/A	N/A
8. Rabbits	N/A	N/A	N/A	N/A	N/A
9. Non-human Primates	N/A	N/A	N/A	N/A	N/A
10. Sheep	N/A	N/A	N/A	N/A	N/A
11. Pigs	2	0	0	0	0
12. Other Farm Animals	N/A	N/A	N/A	N/A	N/A
13. Other Animals					
Deer, Mice	0	19	0	12	31
House Musk Shrew	125	0	0	189	189

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, 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 an 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 provision 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 or Legally Responsible Institutional Official)

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)

DATE SIGNED

(b)(6), (b)(7)(c)

11/14/08

*NP*

**Column E Explanation**

This form is intended as an aid to completing the Column E explanation. It is not an official form and its use is voluntary. Names, addresses, protocols, veterinary care programs, and the like, are not required as part of an Explanation. A Column E explanation must be written so as to be understood by lay persons as well as scientists.

1 Registration Number: 23-R-0088

2. Number 4 of animals used in this study.

3. Species (common name) Guinea Pigs of animals used in the study.

4. Explain the procedure producing pain and/or distress.

Currently it is unknown which species might be the best model for emesis research and few species have been tested for this response. Animals were assessed for their responses to apomorphine (ip) and copper sulfate (po).

5. Provide scientific justification why pain and/or distress could not relieved. State methods or means used to determine that pain and/or distress relief would interfere with test results. (For Federally mandated testing, see item 6 below)

Anesthetics and analgesics interfere with the neural circuitry for emetic responses and were not used in these tests. Although emesis, when present, is an uncomfortable experience it is not constant when induced by these drug treatments (in animals that show emetic responses). These treatments are not associated with vocalizations an animal models, which can indicate a painful stimulus.

6. 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):

N/A

NOV 17 2008

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1 Registration Number: 23-R-0088

2. Number 12 of animals used in this study.

3. Species (common name) Deer Mice of animals used in the study.

4. Explain the procedure producing pain and/or distress.

Currently it is unknown which species might be the best model for emesis research and few species have been tested for this response. Animals were assessed for their responses to apomorphine (ip) and copper sulfate (po).

5. Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine that pain and/or distress relief would interfere with test results. (For Federally mandated testing, see item 6 below)

Anesthetics and analgesics interfere with the neural circuitry for emetic responses and were not used in these tests. Although emesis, when present, is an uncomfortable experience it is not constant when induced by these drug treatments (in animals that show emetic responses). These treatments are not associated with vocalizations in animal models, which can indicate a painful stimulus.

6. 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):

N/A

## Column E Explanation

NOV 17 2008

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1 Registration Number: 23-R-0088

2. Number 189 of animals used in this study.

3. Species (common name) House Musk Shrews of animals used in the study.

4. Explain the procedure producing pain and/or distress.

Shrews (~30 g, adults) were tested with cisplatin and nicotine to induce vomiting. These agents are injected intraperitoneally or subcutaneously. Although emesis is an uncomfortable experience, the emetic responses to visceral toxins in this species are not constant. For example, with a chemotherapy agent, like cisplatin, emesis is produced at a frequency of ~15 times over four hours and with nicotine ~20 times over 30 minutes.

5. Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine that pain and/or distress relief would interfere with test results. (For Federally mandated testing, see item 6 below)

Although emesis is an uncomfortable experience, the emetic responses in this species are not constant and are not associated with vocalizations, a frequent sign of pain and distress in this species. Anesthetics and analgesics interfere with the neural circuitry of the emetic responses and are not used in these experiments because this would make the data impossible to interpret. For example, opioids have suppressive and stimulatory effects on the emetic circuitry and anesthetics lead to a general decrease in neural activity and behavioral responses.

6. 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):

N/A