

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
31-R-0030

CUSTOMER NO.  
224

FORM APPROVED  
OMB NO. 0579-0036

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

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)  
KENT STATE UNIVERSITY  
DIVISION OF RESEARCH & GRAD. KENT STATE UNIVERSITY  
125 AUDITORIUM BLDG PO BOX 5190  
KENT, OH 44242  
(330) 672-2704

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

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 in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS (Cols. C + D + E)
4. Dogs			10		10
5. Cats			4		4
6. Guinea Pigs					
7. Hamsters	309	60	0	157	217
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs			4		4
12. Other Farm Animals					
13. Other Animals					

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 the 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)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

b6, b7c

DATE SIGNED

11/14/07

*RAW*

## 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: 31-R-0030
2. Number of animals used in the study: 160
3. Species (common name) of animals used in the study: Syrian Hamsters
4. Explain the procedure producing pain and/or distress:

This project was categorized as category "E" pain level by the IACUC because it involves the euthanasia method of decapitation without anesthesia.

This project is designed to address the question of whether there are sex differences in the control of the body's daily biological clock. This clock is responsible for the timing of daily events, such as sleep and waking, body temperature, as well as for driving the normal cycle of reproductive hormones in females. The vast majority of research on this biological clock has been conducted exclusively using male animals. This project represents an attempt to compare daily clock function between males and females. There appear to be important differences in the timing of daily cycles depending on the state of the female reproductive cycle. This proposal examines behavioral rhythms, the location and expression level of estrogen receptors, and the effect of steroid hormones (estradiol) on daily rhythms of activity. If successful, this research will lead to a greater understanding of how female hormones influence the biological clock, and how males and females react differently to stimuli which affect the clock.

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)

Decapitation without anesthesia is used in experiments in which gene expression levels are going to be quantitatively measured. Gene expression levels can change within seconds and can be altered by the administration of anesthetics. In these experiments, it is necessary to obtain a "snapshot" of the gene expression levels without interference from anesthesia or excessive handling of the animal. Decapitation is the most humane method for this procedure in hamsters.

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):

Agency \_\_\_\_\_ CFR \_\_\_\_\_