This report is required by law (7 USC 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 21!

See attached form for additional information.

Interagency Report Control No.:

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. CERTIFICATE NUMBER: 32-R-0027
CUSTOMER NUMBER: 803

FORM APPROVED
OMB NO. 0579-0036

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

Indiana University-Southeast
4201 Grant Line Rd.
New Albany, IN 47150

Telephone: (812) -941-2200

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 Atached 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 ye used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use o 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 an 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 wh the use of appropriate anesthetic, analgesic, or tranquiliz drugs would have adversely affected the procedures, res or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reas such drugs were not used must be attached to this report	F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					
Frogs		144			144
Sprague-Dawley Rats		51	21		72
Marsh Rice Rats	195	0	238	181	419

ASSURANCE STATEMENTS

1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anestetic, analgesic, and tranquilizing drugs, prior to, during, and following actual rese 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 ap 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 inc 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

11/17/08

APHIS FORM 7023
(AUG 91)

(Replaces VS FORM 18-23 (OCT 88), which is obsolete.)

NOV 24 2008

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: 32-R-0027

2. Number 181 of animals used in this study.

3. Species (common name) Marsh Rice Rats of animals used in the study.

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

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)

   See attached

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 _____

NOV 9 4 2008

Provide a scientific justification to explain why the use of anesthetics, analgesics, sedatives or tranquilizers during and/or following painful or distressing procedures is contraindicated:

Collection of trunk blood samples in two experiments performed required rapid sacrifice to prevent a potential stress-induced alteration of neurohormone (melatonin) levels. Therefore, no anesthetic or tranquilizing drugs were used prior to sacrifice as is recommended by the AVMA Panel on Euthanasia. One experiment examined the effects of different methods of euthanasia on pineal gland melatonin content and, therefore, drugs could not be used as I did not want to risk altering the data by the use of drugs. Our results showed that the method of euthanasia used did significantly influence pineal melatonin content. Based on this result the second experiment (Effects of Ontogeny on Pineal Melatonin Content in Juvenile Rice Rats) also did not use any drugs as we had definitive evidence that the method of euthanasia could influence pineal melatonin content in rice rats.

In addition, literature searches conducted indicate that rapid euthanasia without the use of anesthesia is a necessary research technique whenever there is a likelihood of anesthesia or stress interfering with the chemistry of the tissues under investigation. As this could potentially happen, I did not want to jeopardize the outcome of the experiments by administering any drugs to these animals prior to decapitation. That would defeat the purpose of the experiments and possibly result in the use of additional animals, an outcome that the IACUC Committee wants to avoid. In support of the use of decapitation only, Nakai et al., 2005 state that it is critical to avoid anaesthetizing experimental animals and that decapitation is the preferred method for euthanasia when conducting neurochemical studies. In addition, Holson, 1992, has shown that euthanasia by decapitation produces prompt, painless unconsciousness in laboratory rodents, while Derr, 1991 has shown that the maximum time that pain and distress could be perceived would be about 2.7 seconds and that decapitation of rats may be considered a humane method of euthanasia. Lastly, Vanderwolf, 1988 concluded the cerebral reaction to decapitation does not resemble the cerebral reaction to painful stimuli and that decapitation would also not be considered inhumane. Recently, the ACLAM Task Force on Rodent Euthanasia issued a report on the effects of decapitation alone on various biological parameters, but no information was included regarding effects on the neurohormone of interest (melatonin from the pineal gland). Since little or nothing is known it was advisable to perform these studies utilizing only decapitation to prevent possible effects on the data being obtained.