

NOV 17 1999

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

71-R-0100

FORM APPROVED  
OMB NO. 0579-0038

ANNUAL REPORT OF RESEARCH FACILITY  
(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

AR CHILDREN'S HOSP RES INST  
1120 S MARSHALL ST  
Suite 255  
LITTLE ROCK, AR 72202-3591

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)

Arkansas Children's Hospital Research Institute  
1120 Marshall Street  
Little Rock, AR 72202

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			3		3
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits			56		56
9. Non-human Primates					
10. Sheep					
11. Pigs		5	44		49
12. Other Farm Animals					
Cattle			3		3
13. Other Animals					
Rats		84	482	41	607
Mice		187	138		325

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 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).

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

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

DATE SIGNED

ACHRE

11-11-99

## Optional Column E Explanation Form

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: 71-R-0100
2. Number Protocol 2005/7 approved <sup>for 504</sup> of animals used in this study.
3. Species (common name) Rats of animals used in this study.

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

Protocol Title: Mechanisms underlying Behavioral & Neurobiologic Effects of Neonatal Pain

Neonatal rat pups will be subjected to moderate and repetitive painful stimuli, in order to produce an experimental model that corresponds with the clinical care currently given to premature infants. Following completion of the repetitive pain paradigm from P0 to P7, the older rats will only be exposed to the hot plate test for measurement of pain thresholds. Exposure to painful stimuli will also occur for P15, P21, and P30 animals in Experiment 2, and for P14 animals in Experiment 3. These time points are necessary to illustrate the complete ontogeny of the pain system beyond the neonatal pain, some exposure to painful stimuli cannot be avoided. There are no drugs available that can provide analgesia for acute and short-term stimuli; thus the effects of the drug would outlast the effects of any painful stimulus by a large factor.

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 question 6 below)

For these acute and intermittent stimuli, pain relieving drugs cannot be given because: (a) they would prevent the processing of painful stimuli in the brain (b) they would cause independent neurobiological effects, unrelated to the experimental paradigm, and (c) they would have an unpredictable duration of effects since the metabolism of analgesic drugs changes drastically during development. Neurobiologic effect of pain and distress is what is being studied as to how it has manifested abnormal behaviors in later childhood and adolescence. If relief is given, pain and distress would not effect the behavioral pattern that is being analyzed.

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 \_\_\_\_\_