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0579-0036

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Interagency Report Control  
No. 0180-DOA-AN

Fiscal Year: 2009

**UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

REGISTRATION NUMBER: 51-R-0006

Customer Number: 81

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

Johns Hopkins University, The  
 (b)(6), (b)(7)c  
 b(2)High, (b)(7) 720 Rutland Ave  
 Baltimore, MD 21205

NOV 27 2009

Telephone: (410) 955 3273

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

**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 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  | 0   | 0   | 131   | 0  | 131  |
| 5. Cats  | 6   | 3   | 51  | 0  | 54   |
| 6. Guinea Pigs                                       | 00  | 775   | 656   |  | 1431   |
| 7. Hamsters  | 0   | 73  | 8   | 0  | 81   |
| 8. Rabbits   | 0   | 87  | 487   | 0  | 574  |
| 9. Non-human Primates                                | 271   | 11  | 277   |  | 288  |
| 10. Sheep  | 0   | 3   | 7   | 0  | 10   |
| 11. Pigs   | 0   | 0   | 799   | 0  | 799  |
| 12. Other Farm Animals                               |   |   |   |  |  |
| calves   | 0   | 0   | 2   | 0  | 2  |
| 13. Other Animals                                    |   |   |   |  |  |
| alpaca   | 0   | 0   | 2   | 0  | 2  |
| 13-lined ground squirrel                             | 0   | 43  | 0   | 0  | 43   |
| chinchilla   | 0   | 0   | 29  | 0  | 29   |

**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.

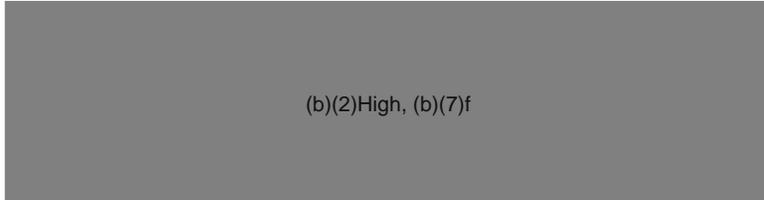
SIGNATURE \_\_\_\_\_ (b)(6), (b)(7)c \_\_\_\_\_ DATE SIGNED 11-25-09

APHIS FORM 7023A AUG 2009

EG 12-4-09

### 3. Reporting Facility Attachment for Research Registration No.: 51-R-006 (FY 09 Annual Report)

Facility Locations for The Johns Hopkins University



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#### IACUC-approved exceptions to AWA regulations:

##### A. Not cleaning or sanitizing at required frequencies.

1. A number of baboon cages may be machine sanitized at 3-5 week intervals rather than the required two-week interval. These are cages in which baboons have been fitted with chronically indwelling intravenous or intragastric catheters, which are protected by a tether and harness system. The back of the cage contains an instrument panel with levers and lights that the baboon uses to produce food pellets and /or drug delivery. To sanitize the cages, the animals must be chemically restrained (e.g., ketamine hydrochloride), and the system must be dismantled. The baboon must be chemically restrained until the cage wash is complete and the system reassembled (about 30 min). (This time is used to perform a physical examination of the baboon, shave and scrub the catheter exit site, clip nails, clean teeth, obtain a body weight, etc). For some studies, the administration of a drug like ketamine and the interruption of daily experimental assessment would introduce a potentially confounding variable if an arbitrary two-week (or shorter) interval were chosen. At the request of the investigator, the IACUC approved a maximum interval of up to 5 weeks between machine sanitization. All other routine husbandry procedures, including the cleaning of cage pans, are done on schedule. In addition some cleaning of the cage bars can be accomplished as needed when the baboon is in the cage to maintain the environment as clean as possible.

##### B. Providing space outside of that specified by the standards.

1. As part of a vaccine study, monkeys will be pair housed in a 4 sq ft Horsfall isolator for up to 21 days to prevent exposure of personnel to infectious agents. These monkeys are pair housed to maintain the psychological enrichment obtained from living with another animal. They will be returned to normal after confirmation that they are no longer shedding the infectious agents. No animals were subject to this exemption in the past year.

2. As part of other radioactive tracer blood distribution kinetics studies, dogs will be housed in transport cages (ranging in size from 2'X3.5' to 3'X4') for radioactive material containment for 48 hours. Feed water, waste removal will be done by radioactive-trained personnel. During this time, dogs will also be exempt from the exercise plan. This housing is required to assure personnel safety and prevent environmental contamination. No animals were subject to this exemption in the past year.

3. The Johns Hopkins University IACUC has approved an exception to the *Guide for the Care and Use of Laboratory Animals* (National Research Council, 1996) with regard to the floor area per animal for Group 7 monkeys as defined in Table 2.2 of the *Guide*. That is, baboons greater than 30 kg were approved for housing in cages with floor area of 10 square feet rather than the 15 square feet recommended for Group 7 monkeys in the *Guide's* Table 2.2. This exception to the *Guide* was approved due to scientific requirements of the research in that the cage serves as the experimental chamber, and has specialized equipment and computer connections. With respect to the Animal Welfare Act (AWA) Regulations, the baboons at Johns Hopkins are housed in cages with 10 square feet of floor space, which exceeds the minimum required space for baboons (i.e., Group 5 animals) set forth in Section 3.80(b) of 9 CFR Ch.1 (1-1-05 Edition). Unless exempted by protocol all baboons weighing more than 25 kg are housed in 25.1 square foot cages.

C. Exemption from the institution's environmental enrichment program and use of alternative programs during study.

1. The investigator requested and obtained an exemption from the IACUC from the requirement for social housing and/or environmental enrichment as described in the institution's Primate Environmental Enrichment Program. Prior to behavioral training, or viral infection we routinely house compatible animals together in pairs, triples or groups, depending on their age and sex. In addition, the standard cage enrichment and novel food enrichments are made available. If there is a behavioral component to the study, however, animals must be individually housed for training on to the tasks using computerized response boards (food pellet reward), or non-computerized manual dexterity devices (raisin puzzle feeder). During this time other enrichment devices may not be used. It is important to consider, however, that the animal's use of the computerized board or manual device certainly provides enrichment. The investigators will try to pair house animals during the weekends if it does not interfere with the training. During the infections animals may or may not be pair housed. Animals will be singly housed if necessary to complete the study goals.

2. As part of a study of control of appetite, satiety and gastric motility, non human primates will be singly housed, however, they will be provided toys, remain within visual and olfactory contact with other monkeys, and will interact with humans.

3. As part of a vaccine study, monkeys will not be given environmental enrichment during the infectious period to prevent exposure of personnel to infectious agents. Monkeys will be returned to normal after confirmation that they are no longer shedding the infectious agents.