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 2150.

See reverse side for additional information

Interagency Report Control No. 0190-00A-AN

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO. 10-F-0002

FORM APPROVED OMB NO. 0579-0036

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

439

FY99

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

Walter Reed Army Institute of Research
Washington, DC 20307-5100

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)*

Bldg 40, Walter Reed Army Medical Center	Bldg 511, WRAMC Forest Glen Annex
Washington, DC 20307-5100	Silver Spring, MD 20910

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	9	16	5	0	21
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	382	188	214	784
7. Hamsters	0	115	300	40	455
8. Rabbits	0	143	242	11	396
9. Non-human Primates	169	207	86	27	320
10. Sheep	0	0	0	0	0
11. Pigs	1	5	59	14	78
12. Other Farm Animals	0	0	0	0	0
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 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
	[redacted], Walter Reed Army Institute of Research, Washington, DC 20307-5100	

APHIS FORM 7023 (AUG 91) (Replaces VS FORM 18-23 (OCT 88), which is obsolete.)

(b)(6), (b)(7)(C)

PART 1 - HEADQUARTER

10F 0002

DEPARTMENT OF THE ARMY
WALTER REED ARMY INSTITUTE OF RESEARCH
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, D.C. 20307-5100

REPLY TO ATTENTION OF

8 November 1999

Report to Accompany APHIS Form 7023 to support Column E listing (Unrelieved Pain or Distress)

All animal protocols were developed with input from the attending veterinary staff and reviewed by the IACUC to determine that all avenues of pain/distress relief were implemented where possible. Investigators must perform literature searches for alternatives to painful procedures, and the search strategy and results must be documented in every protocol. Those studies which required unrelieved pain were statistically designed to ensure that the least number of animals needed yield significant results were exposed to unrelieved pain or distress. Those animals experiencing unrelieved pain or distress were carefully monitored and given special husbandry provisions to provide as much comfort as possible (e.g.,easy access to food and water, increased bedding). Any moribund animals were humanely euthanized as soon as possible so that they did not experience prolonged suffering.

EXPLANATION OF UNRELIEVED PAIN OR DISTRESS:

Guinea Pigs -

Protocol 1 - The study of immune response to and protective efficacy of vaccine candidates directed against *shigella* requires an accurate evaluation of the immune response raised by the administration of these vaccines. The use of analgesics, particularly opiates or narcotics, result in immunosuppression, which would invalidate the results of experiments testing immune responses as well as increasing the severity of the possible eye infection, since immunized animals frequently develop either a mild infection or no infection at all. Use of analgesics that are anti-inflammatory (e.g. aspirin) would also invalidate the model since the PI is studying a model for inflammation of epithelial cells by bacterial invasion. The eyes are scored using a system of 1 to 3. In most cases animals will be euthanized as soon as it is apparent that a score of three is reached.

Protocol 2 - This is a Refinement (3Rs/alternatives) study to use with the Sereny test. To achieve the primary objective of the study (refinement through analgesics), a minimum number of control animals must be utilized. The potential immunomodulatory effects of buprenorphine, used in conjunction with the guinea pig keratoconjunctivitis model, have yet to be evaluated. If buprenorphine is found to alter the specific immunological parameters, as measured in conjunction with the Sereny test, then alternatives methods for controlling pain can be considered.

Hamsters -

The purpose of the protocol is to establish an animal model of diarrhea, therefore any discomfort due to diarrhea cannot by treated pharmacologically due to risk of interference with the symptomatology associated with the infection. Any animal developing signs of diarrhea will be immediately provided supportive fluid treatment to diminish any discomfort associated with diarrhea. Any animals demonstrating stage two diarrhea for 2 days or stage three diarrhea for 1 day will also be euthanized. In addition, hamsters will undergo the distress of a 24 hour fast. This is necessary in order to get the best dose response prior to inoculation in order to induce actual diarrhea.

Rabbits -

Following oral challenge with ETEC, rabbits may experience the discomfort of diarrhea and possible dehydration. However, the pain or distress caused by this non-surgical challenge procedure is far less than that of the more traumatic RITARD procedure. Supportive treatment will be provided (e.g. fluids provided orally, subcutaneously) however, since studies are concerned with the pathophysiology of bacterial enteritis no pharmacological agent will be used to reduce the discomfort of diarrhea due to risk of interference with symptomatology associated with the infection. The use of opiate analgesics may interfere with the diarrhea response by decreasing intestinal motility while non-opiate analgesics may interfere with the prostaglandin-mediated intestinal secretory mechanisms associate with the diarrhea response. One week after challenge, animals will be euthanized.