

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE  <b>ANNUAL REPORT OF RESEARCH FACILITY</b> ( TYPE OR PRINT )	1. CERTIFICATE NUMBER: 86-R-0003 CUSTOMER NUMBER: 1044	FORM APPROVED OMB NO. 0579-0036
The University Of Arizona University Animal Care 1501 N. Campbell Ave., Room 1126 P O Box 245092 Tucson, AZ 85724		

**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 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 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		20	2		22
5. Cats			14		14
6. Guinea Pigs		125	6		131
7. Hamsters			11		11
8. Rabbits		20	33		53
9. Non-human Primates		12	6		18
10. Sheep			29		29
11. Pigs		1	208	56	265
12. Other Farm Animals					
Cattle			19		19
13. Other Animals					
Wild Rodents		97			97
Squirrels		150			150
Deer		4			4

**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 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 )

DATE SIGNED  
 11/24/08

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.      CUSTOMER NO.  
**86-R-0003**                    **1044**

FORM APPROVED  
OMB NO. 0579-0036

**CONTINUATION SHEET FOR ANNUAL REPORT  
OF RESEARCH FACILITY**  
(TYPE OR PRINT)

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

The University of Arizona  
University Animal Care -P.O.Box 245092  
Tucson, AZ 85724

**REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY** (Attach additional sheets if necessary or use this form.)

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)
Chinchilla		2			2
Bats		136			136

**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)

DATE SIGNED

11/24/08

b6, b7c

## Column E Explanation: Pigs

1. **Registration Number:** 86-R-0003
2. **Number of Animals used in the study:** 56
3. **Species:** Pig
4. **Procedure:** There are two research projects, funded by USDA and being conducted by the same research group, with the aims of identifying genes expressed in *Campylobacter jejuni* virulence. While the main thrust of this research is for the hog industry, the results would be applicable to any species, including humans that contract Campylobacteriosis. The studies are evaluating pathogenicity, utilizing various mutants of the organism. The studies should confirm that mutations in genes involved in macrophage survival are directly related to the ability of the isolate to produce lesions in the host.

Newborn piglets are fasted for 6 hours and then inoculated with *Campylobacter jejuni* transformants. Fecal samples are taken before inoculation and during the evaluation period. All piglets are observed daily for clinical signs of campylobacteriosis (diarrhea). Fecal samples are collected daily for the identification of *C. jejuni* DNA by PCR. Depending upon clinical signs and shedding of the microorganism, piglets are euthanized at 9, 48, and 120 hours post-inoculation and necropsied. Small and large intestinal tissue is collected in the vicinity of areas displaying gross lesions for microscopic examination. Any animal that is unable to feed or water itself or unable to rise without aid is immediately euthanized.

5. **Justification for withholding pain/distress aids:** The administration of analgesics, etc, may affect the normal progression of disease and microscopic lesions necessary for diagnosis. It has been shown (Kohn and Muir, 1996) that the use of opioid analgesics, such as methadone, can release histamines, decrease gut motility, etc. NSAIDs inhibit the inflammatory response. Neostigmine and xylazine decrease gut motility (Kohn and Muir, 1988). Gut motility and host inflammatory response are critical to the progression of disease or lack thereof. It would be contradictory to the study to introduce compounds that would effect these factors, whether individually given or in conjunction. The scope of the project is to reproduce disease as seen in the "field" and examine protective measures, not to investigate the effects of various analgesics on establishment of disease. The clinical signs observe—watery/bloody diarrhea, diminished appetite, mild weight loss—are observed in the normal progression of the disease. All moribund animals are immediately euthanized.
6. **Federal Regulations requirements:** None

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

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