### ANNUAL REPORT OF RESEARCH FACILITY

**TYPE OR PRINT**

#### FACILITY LOCATIONS (Sites)

- **Building 338 AreaA WPALFB**

#### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY

<table>
<thead>
<tr>
<th>A. Animals Covered by The Animal Welfare Regulations</th>
<th>B. Number of animals upon which teaching, research, experiments, or tests were conducted involving anesthetic or tranquilizing drugs used</th>
<th>C. Number of animals upon which teaching, research, or experiments were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>D. Number of animals upon which teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals as for which appropriate anesthetic, analgesic, or tranquilizing drugs were used</th>
<th>E. Number of animals upon which teaching, experiments, or tests were conducted involving accompanying pain or distress to the animals 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 reason such drugs were not used must be attached to this report)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td>15</td>
<td>15</td>
<td></td>
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</tr>
<tr>
<td>5. Cats</td>
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<td></td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Lambs</td>
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<tr>
<td>8. Rabbits</td>
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<td></td>
</tr>
<tr>
<td>9. Non-human Primates</td>
<td></td>
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</tr>
<tr>
<td>10. Sheep</td>
<td></td>
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<td></td>
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<tr>
<td>11. Pigs</td>
<td>21</td>
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<td></td>
</tr>
<tr>
<td>12. Other Farm Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Other Animals</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>14. Ferrets</td>
<td>11</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 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 rest 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 specifically 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)

**SIGNATURE OF C.E.O.**

**DATE SIGNED:** 1 October
ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. CERTIFICATE NUMBER: 31-F-0003
CUSTOMER NUMBER: 451

U.S. Environmental Protection Agency
National Exposure Research Lab
26 W. Martin Luther King Drive
Cincinnati, OH 45268

Telephone: (513) -569-7401

NOV 18 2004

1. 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)

2. 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

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>Number of animals upon which teaching, research, surgery, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>Number of animals upon which teaching, research, or tests were conducted involving accompanying pain or distress to the animals as for which appropriate anesthetics, analgesics, or tranquilizing drugs were used.</th>
<th>Number of animals upon which teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetics, analgesics, or tranquilizing drugs would have adversely affected the procedures, results or interpretation of the teaching, research, experiments, surgery, or tests.</th>
<th>Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetics, analgesics, or tranquilizing drugs were used.</th>
<th>TOTAL NUMBER OF ANIMALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
<td>0</td>
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<tr>
<td>Guinea Pigs</td>
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<tr>
<td>Hamsters</td>
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<tr>
<td>Rabbits</td>
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<td>Non-human Primates</td>
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<td>Sheep</td>
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<tr>
<td>Other Farm Animals</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

13. Other Animals

<table>
<thead>
<tr>
<th>Unregulated Animals</th>
<th>Number of animals upon which teaching, research, surgery, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>Number of animals upon which teaching, research, or tests were conducted involving accompanying pain or distress to the animals as for which appropriate anesthetics, analgesics, or tranquilizing drugs were used.</th>
<th>Number of animals upon which teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetics, analgesics, or tranquilizing drugs would have adversely affected the procedures, results or interpretation of the teaching, research, experiments, surgery, or tests.</th>
<th>Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetics, analgesics, or tranquilizing drugs were used.</th>
<th>TOTAL NUMBER OF ANIMALS</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0</td>
<td>1,091</td>
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<td>1,091</td>
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<td>Mice</td>
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<td>2,229</td>
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<td>2,229</td>
</tr>
</tbody>
</table>

ASSURANCE STATEMENTS

1) Professioanally 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, 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 reported 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 an 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

SIGNATURE NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL DATE SIGNED

APHIS FOR (Aug 1)

Interagency Report Control
CONTINUATION SHEET FOR ANNUAL REPORT
OF RESEARCH FACILITY
(TYPE OR PRINT)

A. Animals Covered
By The Animal Welfare Regulations

<table>
<thead>
<tr>
<th>12 &amp;/OR 13. Other (List by species)</th>
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</thead>
<tbody>
<tr>
<td>Fathood Minnows 8,000</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathood Minnows 8,000</td>
</tr>
</tbody>
</table>

C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathood Minnows 8,000</td>
</tr>
</tbody>
</table>

D. Number of animals upon which teaching, research, experiments, or tests were conducted involving pain, distress, or use of pain-relieving drugs.

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathood Minnows 8,000</td>
</tr>
</tbody>
</table>

E. Number of animals upon which teaching, research, experiments, 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.

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathood Minnows 8,000</td>
</tr>
</tbody>
</table>

F. TOTAL NO. OF ANIMALS

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathood Minnows 8,000</td>
</tr>
</tbody>
</table>

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.

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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

APHIS
AUG 91

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL

DATE SIGNED

11-15-04

PART 1 - HEADQUARTERS
### ANNUAL REPORT OF RESEARCH FACILITY

**UNIVERSITY OF TOLEDO**

**ANNUAL REPORT OF RESEARCH FACILITY**

**2801 W. Bancroft St. 0263**

**Wolfe Hall**

**Animal Care Program**

**Toledo, OH 43606**

**Telephone: (419) -530-1561**

---

**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)

<table>
<thead>
<tr>
<th>Animals Covered by The Animal Welfare Regulations</th>
<th>Number of animals being bred or held for use in teaching, research, experiments, or surgery not yet used for such purposes</th>
<th>Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of a pain-relieving drug</th>
<th>Number of animals upon which experiments, 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</th>
<th>Number of animals upon which teaching, experiments, 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</th>
<th>TOTAL NUMBER OF ANIMALS (COLUMNS C+D+E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
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<td></td>
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<td>5. Cats</td>
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<td>6. Guinea Pigs</td>
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<td>7. Hamsters</td>
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<td>8. Rabbits</td>
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<td>9. Non-human Primates</td>
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<tr>
<td>10. Sheep</td>
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<tr>
<td>11. Pigs</td>
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<td></td>
<td>0</td>
</tr>
<tr>
<td>12. Other Farm Animals</td>
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<td>13. Other Animals</td>
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</tr>
</tbody>
</table>

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**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, testing, surgery, or experimentation were followed by this research facility.

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---

**CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL**

(Chief Executive Officer or Legally Responsible Institutional Official)

DATE SIGNED: 11/10/0
<table>
<thead>
<tr>
<th>Site No.</th>
<th>Name/Department</th>
<th>Address</th>
<th>Building</th>
<th>Floor/Room</th>
<th>Contact Person</th>
<th>Phone No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Animal Care Program</td>
<td>University of Toledo 2801 W. Bancroft Street, MS# 600</td>
<td>0263 Wolfe Hall</td>
<td>0263</td>
<td></td>
<td>(419) 530-1561</td>
</tr>
<tr>
<td>2</td>
<td>Psychology</td>
<td>University of Toledo 2801 W. Bancroft Street</td>
<td>University Hall</td>
<td>5500 University Hall</td>
<td></td>
<td>(419) 530-1561</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>
# ANNUAL REPORT OF RESEARCH FACILITY

## TYPE OR PRINT

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>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</th>
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<th>F. TOTAL NO. OF ANIMALS (Cols. C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td>26</td>
<td>205</td>
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<td>4</td>
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<td>5. Cats</td>
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<td>6. Guinea Pigs</td>
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<td>10. Sheep</td>
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<tr>
<td>13. Other Animals</td>
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<td></td>
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<tr>
<td>Ferrets</td>
<td>6</td>
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<td></td>
<td>6</td>
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</tbody>
</table>

### 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.

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### 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)

<table>
<thead>
<tr>
<th>SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL</th>
<th>NAME &amp; TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)</th>
<th>DATE SIGNED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>11/23/2004</td>
</tr>
</tbody>
</table>

APHIS FORM 7023

Replaces VS FORM 18-23 (Oct 85), which is obsolete

PART 1 - HEADQUARTERS

(AUG 91)
1. Registration Number: 31-R-0010

2/3. Species (common name) & Number of animals used in this study:

   Dogs (4)

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

   Repeat Dose Toxicity Studies in Dogs - 3 canines

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)

   Repeat Dose Toxicity Studies in Dogs - 3 canines

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: Not applicable. CFR:
FY2004 APHIS Form 7023 Column E Explanation

This form is intended as an aid to completing the APHIS Form 7023 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: 31-R-0010 / 523

2. Species (common name) of animals used in the study: Dogs
   (check all that apply for this explanation)

3. Number of animals used in this study: (Generated By System)

4. Explain the procedure producing pain and/or distress.
   Repeat Dose Toxicity Studies in Dogs - 3 canines
   These studies are used to determine the toxicity of novel pharmaceutical agents, aid in the selection of doses for future studies and describe the toxicokinetics of agents following repeated administration. The canine model used for these studies is a well established model for repeat dose toxicity testing with the FDA and equivalent international agencies. Results from these studies are used to assess the potential safety of new pharmaceuticals in future clinical studies. During the course of these studies 3 animals were identified as experiencing pain/distress related to drug compound.
   Bioavailability/Pharmacokinetic/Metabolism Studies in Dogs - 3 canines
   The purpose of this study was to evaluate the metabolism, bioavailability, and pharmacokinetic properties of one or more compounds in a pharmacologic class. On one study a single animal had what appeared to be an anaphylactic type of reaction and experienced pain/distress before appropriate treatment could be rendered.

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)
   Repeat Dose Toxicity Studies in Dogs - 3 canines
   The use of analgesics at this phase of the study when potentially new pharmaceuticals are tested would interfere with the accurate evaluation of these new drug therapies.
   Bioavailability/Pharmacokinetic/Metabolism Studies in Dogs - 3 canine
   All compounds were set to be dosed at or below the maximum tolerated dose. No adverse effects were anticipated. One animal showed unexpected signs of distress after dosing and because it developed these signs suddenly it likely was experiencing pain/distress before any pain alleviating treatment could be rendered.

VHAT, 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):
Not applicable.

TOTAL P. 63
Assurance Statement Federal Fiscal Year October 1, 2003 through September 30, 2004

We hereby certify that:

1. Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by the research facility.

2. Each principal investigator has considered alternatives to painful procedures.

3. The facility is adhering to the standards and regulations under the Act, and that it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the IACUC.

One exception to the standards was approved by the IACUC. Of the dogs listed in this report, 59 animals were part of a gingivitis colony dependent on a microbial flora which is adversely affected by the use of disinfecting agents in the dog’s primary enclosure. The IACUC approved an exception to the standards that require disinfection every two weeks. They did, however, require that dog runs be physically cleaned by washing twice daily with hot water and at the end of the study (4-6 weeks) with detergents and high-pressure water. This exception has not had any detectable adverse impact on the health status of the animals involved in the study or on the appearance of the facility.

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.
# ANNUAL REPORT OF RESEARCH FACILITY

## TYPE OR PRINT

### FACILITY LOCATIONS ( Sites ) - See Attached Listing

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>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</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>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</th>
<th>E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving 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 reason such drugs were not used must be attached to this report)</th>
<th>F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cats</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td>16</td>
<td>128</td>
<td>755</td>
<td>27</td>
<td>910</td>
</tr>
<tr>
<td>7. Hamsters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Rabbits</td>
<td>250</td>
<td>56</td>
<td>250</td>
<td></td>
<td>306</td>
</tr>
<tr>
<td>9. Non-human Primates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Sheep</td>
<td></td>
<td></td>
<td>65</td>
<td></td>
<td>65</td>
</tr>
<tr>
<td>11. Pigs</td>
<td>6</td>
<td>94</td>
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<td>100</td>
</tr>
<tr>
<td>12. Other Farm Animals</td>
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<tr>
<td>13. Other Animals</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Ferrets</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

### 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 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 to 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 an 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)

---

**SIGN**

**DATE SIGNED**

---

**APHS FORM 7023**

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

---

**UNITED STATES DEPARTMENT OF AGRICULTURE**

**ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

**ANNUAL REPORT OF RESEARCH FACILITY**

**CERTIFICATE NUMBER:** 31-R-0011

**CUSTOMER NUMBER:** 210

Childrens Hospital Medical Center
Childrens Hosp Research Found
3333 Burnet Avenue
Cincinnati, OH 45229

Telephone: (513)-636-4441

---

**DATE:** NOV 24 2004

---

**FORM APPROVED**

OMB No.: 0575-0036

---

**REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY**

(Attach additional sheets if necessary or use APHS Form 7023A.)

---

**REPORT OF ANIMALS COVERED BY THE ANIMAL WELFARE REGULATIONS**

---

**CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL**

(Chief Executive Officer or Legally Responsible Institutional Official)

---

**SIGN**

**DATE SIGNED**

---

**APHS FORM 7023**

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

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**UNITED STATES DEPARTMENT OF AGRICULTURE**

**ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

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OMB No.: 0575-0036

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**CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL**

(Chief Executive Officer or Legally Responsible Institutional Official)

---

**SIGN**

**DATE SIGNED**

---

**APHS FORM 7023**

(Replaces VS FORM 18-23 (OCT 88), which is obsolete.)
Column E Explanation Form

1. Registration Number: 31-R-0011

2. Number 27 of animals used in this study.

3. Species (common name) guinea pigs of animals used in this study. (Each species requires a form)

4. Explain the procedure producing pain and/or distress.
   Animals were inoculated with herpes simplex virus (HSV) with rare paralysis.

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)
   These animals are used to study the pathogenesis of herpes simplex virus. This virus is neurotropic and resides in neurons. Therefore, analgesics/anesthetics cannot be used due to their potential effect on the neuronal element and disruption of normal viral pathogenesis. The infection rarely causes discomfort but can induce rear leg paralysis that can last up to 72 hours. During the paralytic period, the bladder is expressed twice daily and the animals checked at least twice daily. Animals that do not recover in 72 hours are promptly euthanized with CO₂. Paralysis is a rare occurrence. The protocol is used to evaluate novel therapeutic and vaccine strategies, some of which have already progressed to human clinical trials as a result of these studies.

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
   (b)(6), (b)(7)(C)
   CFR
   Signature
## ANNUAL REPORT OF RESEARCH FACILITY

### FACILITY LOCATIONS

- See Attached Listing

### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY

#### A. Animals Covered By The Animal Welfare Regulations

<table>
<thead>
<tr>
<th>Type of Animal</th>
<th>B. Number of animals being held, conditioned, or used for research in teaching, testing, experiments, or held for use in surgery</th>
<th>C. Number of animals upon which teaching, research, experiment, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>D. Number of animals upon which teaching, research, experiment, or tests were conducted involving pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs were used</th>
<th>E. Number of animals upon which teaching, research, experiment, 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, experiment, surgery, or tests.</th>
<th>F. TOTAL NUMBER OF ANIMALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td>14</td>
<td>301</td>
<td>315</td>
<td>123</td>
<td></td>
</tr>
<tr>
<td>5. Cats</td>
<td>5</td>
<td>118</td>
<td>315</td>
<td>123</td>
<td></td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td>8</td>
<td>303</td>
<td>415</td>
<td>415</td>
<td></td>
</tr>
<tr>
<td>7. Hamsters</td>
<td>66</td>
<td>1457</td>
<td>365</td>
<td>1560</td>
<td></td>
</tr>
<tr>
<td>8. Rabbits</td>
<td>113</td>
<td>252</td>
<td>365</td>
<td>365</td>
<td></td>
</tr>
<tr>
<td>9. Non-Human Primates</td>
<td>12</td>
<td>65</td>
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<tr>
<td>10. Sheep</td>
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<tr>
<td>11. Pigs</td>
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<td>486</td>
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<td>Cows</td>
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</tr>
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</table>

### 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, 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 been determined that exceptions to the standards and regulations are 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 will include 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

<table>
<thead>
<tr>
<th>Signature of C.E.O. or Institutional Official</th>
<th>Name &amp; Title of C.E.O. or Institutional Official</th>
<th>Date Signed</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Chief Executive Officer or Lawfully Responsible Institutional Official)</td>
<td>(Type or Print)</td>
<td>11-29-04</td>
</tr>
</tbody>
</table>
### CONTINUATION SHEET FOR ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

#### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>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</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>D. Number of animals upon which teaching, research, experiments, or tests were conducted involving pain, distress, or use of pain-relieving drugs</th>
<th>E. Number of animals upon which teaching, research, experiments, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs were used</th>
<th>F. TOTAL NO. OF ANIMALS (Col. C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Other Animals</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td>Camilids (Alpaca and Llama)</td>
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<td>35</td>
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<td>Bats</td>
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<td>Deer Mice</td>
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<td>803</td>
<td>66</td>
<td>869</td>
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<td>Frogs</td>
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<td>Gerbils</td>
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<tr>
<td>Lemmings</td>
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<td>33</td>
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<tr>
<td>Opossum</td>
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<td></td>
</tr>
<tr>
<td>Raccoons</td>
<td>8</td>
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<td>Turtles</td>
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<td>432</td>
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<tr>
<td>Gnotobiotic Pigs</td>
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<tr>
<td>Gnotobiotic Cows</td>
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<td>44</td>
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<td></td>
</tr>
</tbody>
</table>

#### 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)

**SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL**

**(AUG 91)**

**NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL**

**(Type or Print)**

**DATE SIGNED**

11-29-04

**PART 1 - HEADQUARTERS**
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: 31-R-0014

2. Number of animals used in this study. 37

3. Species (common name) Siberian Hamsters of animals used in the study.

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

   The resident-intruder paradigm will be used.

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)

   Aggression is the purpose of the study as we are studying nNOS regulations.

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 __________________________
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: 31-R-0014

2. Number 66 of animals used in this study.

3. Species (common name) Deer Mice of animals used in the study.

   P. Californicus, P. Eremicus

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

   Under anesthesia a 3.5mm punch biopsies will be done creating two uniform full-thickness wounds.

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)

   Post-wounding analgesia will not be used as it may alter wound healing rates. Our experience with behavioral observation of animals following wounding does not suggest that they are experiencing pain, as they exhibit normal eating, grooming, social interaction, et cetera.

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________________________
Registered Facility Name: University Laboratory Animal Resources
Registration Number: 31-R-0014

Please list below all sites that house animals under the above registration number. Be sure to include all requested information. Do not leave any spaces blank. If the line does not apply, please mark it N/A. If you have more than three (3) sites, please copy this form as many times as needed before filling in the sites.

Site No.: 1 Name/Department: Postle Hall
Address: 305 W. 12th Ave. (Street Name)
Cols., OH 43210 (Town/City)
Building: N/A
Floor/Room: 0089
Contact Person:

Site No.: 2 Name/Department: Laboratory Animal Center
Address: 6089 Godown Rd. (Street Name)
Cols., OH 43235 (Town/City)
Building: Buildings 1,3,4, and 6
Floor/Room: N/A
Contact Person:

Site No.: 3 Name/Department: Marion Campus
Address: 1465 Mt. Vernon Ave. (Street Name)
Marion OH 43302 (Town/City)
Building: Marrill Hall
Floor/Room: 390
Contact Person:
Please list below all sites that house animals under the above registration number. Be sure to include all requested information. Do not leave any spaces blank. If the line does not apply, please mark it N/A. If you have more than three (3) sites, please copy this form as many times as needed before filling in the sites.

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Name/Department</th>
<th>Address</th>
<th>Building</th>
<th>Floor/Room</th>
<th>Contact Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Graves Hall</td>
<td>333 W. 12th Ave.</td>
<td>N/A</td>
<td>B167</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Wiseman Hall</td>
<td>400 W. 12th Ave.</td>
<td>N/A</td>
<td>171</td>
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</tr>
<tr>
<td>6</td>
<td>Biological Sciences</td>
<td>484 W 12th Ave.</td>
<td>N/A</td>
<td>525</td>
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</table>

Registered Facility Name: University Laboratory Animal Resources
Registration Number: 31-R-0014
<table>
<thead>
<tr>
<th>Site No.</th>
<th>Name/Department</th>
<th>Address</th>
<th>Building</th>
<th>Floor/Room</th>
<th>Contact Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Parks Hall</td>
<td>500 W 12th Ave.</td>
<td>N/A</td>
<td>531</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cols., OH 43210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Goss Laboratory</td>
<td>1925 Coffey Rd.</td>
<td>N/A</td>
<td>257A and 257B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cols., OH 43210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Sisson Hall</td>
<td>1900 Coffey Rd.</td>
<td>N/A</td>
<td>A-31</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cols., OH 43210</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Registered Facility Name: University Laboratory Animal Resources
Registration Number: 31-R-0014

Please list below all sites that house animals under the above registration number. Be sure to include all requested information. Do not leave any spaces blank. If the line does not apply, please mark it N/A. If you have more than three (3) sites, please copy this form as many times as needed before filling in the sites.
<table>
<thead>
<tr>
<th>Site No.</th>
<th>Name/Department</th>
<th>Address</th>
<th>Building</th>
<th>Floor/Room</th>
<th>Contact Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Veterinary Hospital</td>
<td>601 Tharp Street, Cols., OH 43210</td>
<td>N/A</td>
<td>0126</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Ohio Agriculture Research and Development Center</td>
<td>1680 Madison Ave., Wooster, OH 44691</td>
<td>N/A</td>
<td></td>
<td>(b)(6), (b)(7)(C)</td>
</tr>
<tr>
<td>12</td>
<td>Botany and Zoology</td>
<td>1735 Neil Ave., Cols., OH 43210</td>
<td>N/A</td>
<td>181</td>
<td>(b)(6), (b)(7)(C)</td>
</tr>
<tr>
<td>14</td>
<td>Alice L. Finley Memorial Center</td>
<td>2108 Plain City-Georgesville Rd., West Jefferson, OH 43216</td>
<td>N/A</td>
<td></td>
<td>(b)(6), (b)(7)(C)</td>
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<tr>
<td>Registered Facility Name:</td>
<td>University Laboratory Animal Resources</td>
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<td>--------------------------</td>
<td>----------------------------------------</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Registration Number:</td>
<td>31-R-0014</td>
<td></td>
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</tr>
</tbody>
</table>

Please list below all sites that house animals under the above registration number. Be sure to include all requested information. Do not leave any spaces blank. If the line does not apply, please mark it N/A. If you have more than three (3) sites, please copy this form as many times as needed before filling in the sites.
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.

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NO. 31-R-2017
2. CUSTOMER NO. 223
3. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)
   CLEVELAND CLINIC FOUNDATION
   BIOLOGICAL RESOURCES UNIT/FRP-04
   9500 EUCLID AVE
   CLEVELAND, OH 44195

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

   FACILITY LOCATION(S)(Area)
   COLLEGE OF MEDICINE
   ROOTSTOWN, OH 44495
   CLEVELAND CLINIC FOUNDATION
   PULASKI, PA 16143
   DALWOOD FARMS
   WAKEMAN, OH 44889

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, experiments, research, or surgery but not yet used for such purposes | C. Number of animals upon which experiments, teaching, research, or tests were conducted involving pain, distress, or use of pain-relieving drugs | D. Number of animals upon which experiments, teaching, research, 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
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
<td>8</td>
<td>355</td>
<td></td>
<td></td>
<td>355</td>
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<td>Cats</td>
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<tr>
<td>Guinea Pigs</td>
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<tr>
<td>Hamsters</td>
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<td></td>
</tr>
<tr>
<td>Rabbits</td>
<td>24</td>
<td>286</td>
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<td>310</td>
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<tr>
<td>Non-Human Primates</td>
<td>6</td>
<td>7</td>
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<td></td>
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<tr>
<td>Sheep</td>
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<td>27</td>
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<td>Other Farm Animals</td>
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<tr>
<td>Goats</td>
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<tr>
<td>Other Animals</td>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

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, experimentation, or observation 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 the 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

APHIS FORM 7023
11/30/2004

(AUG 91)

PART 1 - HEADQUARTERS
REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY

(AUG 91)

CONTINUATION SHEET FOR ANNUAL REPORT
OF RESEARCH FACILITY

(TYPE OR PRINT)

RECORD OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH

1. REGISTRATION NO. 31-R-0017  
CUSTOMER NO. 223  
FORM APPROVED OMB NO. 0579-0026

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

CLEVELAND CLINIC FOUNDATION
BIOLOGICAL RESOURCES UNIT/FFB-04
3900 EUCLID AVE
CLEVELAND, OH 44195

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

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>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</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>D. Number of animals upon which experiments, 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</th>
<th>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)</th>
<th>F. TOTAL NO. OF ANIMALS (Cols. C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>calves</td>
<td>52</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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, 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 to cease and desist and to be subject to penalties as provided for in Section 2143. 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)

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

APHIS FORM 7023A (Replaces VB FORM 18-23 (Oct 89), which is obsolete)  
AUG 91  
PART 1 - HEADQUARTERS  

11/30/2004
The following additional sites have been reported by the facility. The reported sites have not been verified by APHIS and have been provided by the facility solely for completeness of the APHIS Form 7023 Annual Reporting submission.

<table>
<thead>
<tr>
<th>Registration Number:</th>
<th>31-R-0017</th>
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</thead>
<tbody>
<tr>
<td>Customer Number:</td>
<td>223</td>
</tr>
<tr>
<td>Facility:</td>
<td>CLEVELAND CLINIC FOUNDATION BIOLOGICAL RESOURCES UNIT/FF6-04 9500 EUCLID AVE CLEVELAND, OH 44195</td>
</tr>
</tbody>
</table>

Cleveland Clinic Foundation
FF Building, 6th Floor and 2nd Floor
9500 Euclid Avenue
Cleveland, OH 44195
Cleveland Clinic Foundation
L Building
9500 Euclid Avenue
Cleveland, OH 44195
Cleveland Clinic Foundation
Cole Eye Institute
9500 Euclid Avenue
Cleveland, OH 44195
Cleveland Clinic Foundation
NC Building, 4th Floor and 5th Floor
9500 Euclid Avenue
Cleveland, OH 44195
Northeastern Ohio Universities College of Medicine
4209 State Route 44
PO Box 95
Rootstown, OH 44272
Raven?
1234 Pine Glenn Road
Pulaski, PA 16143
NAMSA, Inc.
2261 Tracy Road
Northwood, OH 43619
### ANNUAL REPORT OF RESEARCH FACILITY

**1. CERTIFICATE NUMBER:** 31-R-0023  
**CUSTOMER NUMBER:** 230  
**FORM APPROVED ON:** 05/07/03

**Good Samaritan Hospital**  
Dept. Of Medical Research  
375 Dixmyth Avenue  
Cincinnati, OH 45220  
Telephone: (513)-872-1850

### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>D. Number of animals upon which teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquillizing drugs were used.</th>
<th>E. Number of animals upon which teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquillizing drugs were used.</th>
<th><strong>F. TOTAL NUMBER OF ANIMALS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td>(COLUMNS C + D + E)</td>
</tr>
<tr>
<td>5. Cats</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7. Hamsters</td>
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<tr>
<td>8. Rats</td>
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<tr>
<td>9. Non-human Primates</td>
<td>3</td>
<td></td>
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<tr>
<td>10. Sheep</td>
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<tr>
<td>11. Pigs</td>
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<tr>
<td>12. Other Farm Animals</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>13. Other Animals</td>
<td>35</td>
<td></td>
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</tr>
</tbody>
</table>

### ASSURANCE STATEMENTS

1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquillizing drugs, prior to, during, and following actual research, e.g., 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 an 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

[Signature]  
(Date)
### ANNUAL REPORT OF RESEARCH FACILITY

**TYPE OR PRINT**

#### 1. REGISTRATION NO. 31-R-0026  
**CUSTOMER NO.** 232  
**FORM APPROVED** OMB NO. 0579-0036

#### 2. HEADQUARTERS RESEARCH FACILITY  
*Name and Address, as registered with USDA, include Zip Code*  
**BOWLING GREEN STATE UNIVERSITY**  
**120 MCFALL CENTER**  
**BOWLING GREEN, OH 43403**

#### 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)**

**BOWLING GREEN UNIVERSITY**  
**BOWLING GREEN, OH 43403**

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### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY  
(Attach additional sheets if necessary or use APHIS FORM 7023A)

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>Number of Animals Being Held for Use in Teaching, Testing, Experiments, Research, or Surgery but Not Yet Used for Such Purposes</th>
<th>Number of Animals Upon Which Experiments, Teaching, Research, Surgery, or Tests Were Conducted Involving No Pain, Distress, or Use of Pain-Relieving Drugs</th>
<th>Number of Animals Upon Which Experiments, Teaching, Research, Surgery, or Tests Were Conducted Involving Accompanying Pain or Distress to the Animals and for Which the Use of Anesthetic, Analgesic, or Tranquilizing Drugs Were Used</th>
<th>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 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)</th>
<th>TOTAL NO. OF ANIMALS (Col. C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cats</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Guinea Pigs</td>
<td></td>
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</tr>
<tr>
<td>Hamsters</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Rabbits</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Non-Human Primates</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Sheep</td>
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<td></td>
</tr>
<tr>
<td>Pigs</td>
<td></td>
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<td></td>
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<td>Other Farm Animals</td>
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<td>Other Animals</td>
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<td>124</td>
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</tbody>
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**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 the 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 the 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 Official 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**  
**DATE SIGNED**

10/25/2004

**APHIS FORM 7023** (Replaces VS FORM 18-23 (Oct 88), which is obsolete)  
**PART 1 - HEADQUARTERS**

(AUG 91)
**ANNUAL REPORT OF RESEARCH FACILITY**

**TYPE OR PRINT**

**UNITED STATES DEPARTMENT OF AGRICULTURE**

**ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

**REPORT OF**

**ASSURANCE STATEMENTS**

1. **CERTIFICATE NUMBER:** 31-R-0027
2. **CUSTOMER NUMBER:** 233
3. **REPORTING FACILITY:** University Of Cincinnati Research & Advanced Studies P.O. Box 210627 Cincinnati, OH 45221 Telephone: (513) - 556-4532

**FACILITY LOCATIONS (Sites)** - See Attached Listing

**REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY**

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animals</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>D. Number of animals upon which teaching, research, surgery, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>E. Number of animals upon which 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</th>
<th>F. Total number of animals (COLUMNS C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
<td>10</td>
<td>32</td>
<td></td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>Cats</td>
<td>20</td>
<td></td>
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<td></td>
<td>20</td>
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<tr>
<td>Guinea Pigs</td>
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<tr>
<td>Hamsters</td>
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<tr>
<td>Rabbits</td>
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<td>Other Animals</td>
<td>72</td>
<td></td>
<td></td>
<td></td>
<td>72</td>
</tr>
</tbody>
</table>

**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 or planned teaching, research, 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)
KETERING LAB COMPLEX

CARDIOVASCULAR RESEARCH CENTER

CROSLEY TOWER

RIEVESCHL HALL

FRENCH EAST

VONTZ CENTER

Health Professional Building

Genome Research Institute
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 laypersons as well as scientists.

1. Registration Number: 31-R-0027

2. Number of animals used in this study: 10

3. Species (common name) sheep of animals used in the study.

4. Explain the procedure producing pain and/or distress. Protocol #03-11-19-02

   The category E procedure outlined in this protocol is designed to surgically develop a model of end stage heart failure in sheep, which in turn will provide a teaching model of mitral valve repair using a robotic system (Da Vinci Robot). The sheep's circumflex coronary artery will be embolized up to five times. From the result of the damage caused by the multiple emboli, the sheep are expected to develop end stage heart failure.

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)

   The sheep will be clinically treated with all the appropriate analgesics and pharmaceuticals, but they may still experience pain and distress due to the end stage heart failure. The sheep may experience resting tachycardia, resting tachypnea, pulmonary congestion, decreased appetite and mobility, peripheral edema and lethargy.

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
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: \( 31-R-0027 \)

2. Number of animals used in this study: 19

3. Species (common name): hamsters

4. Explain the procedure producing pain and/or distress. Protocol \#02-06-20-03

The hamsters that are undergoing the tissue harvesting for receptor binding studies are classified as category \( E \) due to their genetic potential of developing high blood pressure, which when left untreated can lead to heart failure. These strains of hamsters are used as a model of human congestive heart failure (dilated cardiomyopathy and hypertrophic cardiomyopathy).

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)

The hamsters will be clinically treated as necessary, but they may experience pain and distress due to the development of heart failure. Treatment may include but not be limited to opioid agonists or antagonists (as part of the experimental study), pharmaceutical-grade, sterilized saline injections, ip, and moistened food pellets (to reduce weight loss and dehydration), removal of pneumothorax via thoracic puncture with a sterile needle and syringe. If treatment does not alleviate the sign(s) of distress within a 24-hour period, animals will be removed from the study and euthanized.

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: __________________________
University of Cincinnati
Institutional Animal Care and Use Committee

Approval of Departures from Regulatory Standards

Principal Investigator(s): [(b)(6), (b)(7)(C)]

Protocol #: 01-06-11-03

Protocol Title: Neural Transplantation of Circadian Clock

Full Committee Review Date: 11/13/03

Exemption Approval Date: 11/13/03

Species: Hamster
Number Approved: 450

Description of exemption:

Altered Light Cycle: Housing of Hamsters in complete darkness with no light cycle, or altered light cycle.

Justification: Research aims of this protocol include studying the effects of light cycle on the circadian clock.

See attached pages from the approved protocol.

Expired 9/13/04

Signature of IACUC Chairperson  Date
C. For each individual, describe his/her training and experience relevant to the procedures he/she will perform:

[Redacted] is the P.I. on this project and has over 20 years experience working with hamsters, mice and rats, as well as with large animals species (sheep). [Redacted] is co-P.I. and has 13 years of experience working with rodents. Both [Redacted] and [Redacted] have direct experience with the procedures, either at the University of Cincinnati or other institutions. [Redacted] are Neuroscience graduate students who have been working with rodents for 3 and 4 years, respectively, and have been trained in all of the described procedures by [Redacted] and [Redacted]. [Redacted] is a newly hired Research Assistant Professor in Lehman lab. While a graduate student at Rutgers University, she supervised a laboratory course in lab animal science management and techniques. She has experience in handling rodents and carrying out the type of neuroanatomical and behavioral studies described here.

D. For any individuals lacking adequate training and experience, list who will be responsible for training that individual: [Redacted]

5) A. PI's Office Building and Room Number: Vontz 3316

B. Lab Building and Room Number: Vontz 3220, 3222, 3224, 3226, 3228

C. Animal Procedure Locations (Building and Room Number): MSB R405, R859A, G502

6) Source of Funds: NIH R01 NS35657, NIH R01 DD14413 (pending)

7) Who Administers the Funds? [Redacted]

8) Provide your reasons for doing the proposed work:

One of the long-term interests of my laboratory is the functional organization of the mammalian circadian system. Ongoing projects represent the continuation of that line of research, which has recently extended into molecular/cellular studies of clock function, circadian rhythms in nociception, and the role of the circadian oscillator in the eye.

Animal Information

9) Provide your rationale for involving animals:

There are at present, no in vitro systems with which to study the behavioral functions of the mammalian circadian clock, located in the suprachiasmatic nucleus (SCN) of the hypothalamus. Indeed, the complexity and heterogeneity of the neuronal circuitry involved makes the use of in vitro models essential for our understanding of the circadian timing system. Since malfunctions of the mammalian circadian system have been implicated in a variety of psychiatric and neurologic disorders, understanding pacemaker mechanisms and the signals by which the clock communicates with the rest of the brain will likely lead to potential clinical applications.

10) Provide your rationale for the selection of each species:
Hamsters, mice and rats exhibit precise and robust circadian rhythms in a wide variety of behavioral and physiological functions, and from our work and that of our colleagues we know a great deal about the anatomy and physiology of the SCN in these species. Each species has also been used for neural transplantation experiments, and stereotaxic coordinates exist both for producing electrolytic lesions of the SCN, and the transplantation of fetal tissue into the ventricular system of the brain. Mutant mice and hamsters (e.g., tau mutant hamster) that exhibit altered circadian rhythms are invaluable as hosts or sources of donor tissue for these experiments since they provide a phenotypic marker for the function of the grafted tissue. Cross-species transplantation of fetal rat tissue into hamster hosts, in conjunction with the use of a donor-specific neurofilament marker, provides a morphological marker for the graft. In addition, transgenic mice that express unique markers (e.g., ROSA 26 mice that express the E.Coli lacZ transgene) can also be used as sources of donor tissue, and when used for grafting to wild type mice (C57BL-6) allow us to identify grafted tissue and determine whether graft outgrowth is correlated with recovery of function.

Rhythms in pain sensitivity have been studied with respect to diseases and drug addiction in humans. However, the mechanisms underlying rhythms in pain are largely unknown. Therefore, we will use a mouse model to investigate the circadian control of pain and the neural mechanisms underlying the circadian control of pain. It is suggested that circadian rhythms in pain is connected with the circadian rhythm of opioid peptides. Opioid peptides have been implicated in the regulation of nociception. Therefore, the proposed studies will make use of available mouse models, in particular mice that lack the mu opioid receptor, to study the involvement of opioids in the control of circadian rhythms of pain. The knowledge of occurrence of circadian rhythms of pain in animals will reveal critical information that will lead to a better understanding of stress and post-stress analgesia, and susceptibility to narcotic analgesics.

11) For each species, list the following:

A. Species and breed/stock/strain: Syrian hamsters, Mice (C57BL-6 strain, DBA-2 strain, ROSA26 transgenic strain, mu receptor knockout transgenic), rats (Sprague-Dawley)

B. Source: Charles River (hamsters, rats); Jackson Labs (C57BL-6, DBA-2, ROSA-26 mice); lab, LAMS (mu receptor knockout transgenic mice)

C. Number used/ per year: 150 male Syrian hamsters (Charles River), 150 C57BL-6 mice (Jackson Laboratories); 50 DBA-2 mice (Jackson Laboratories), 50 ROSA-26 transgenic mice (Jackson Laboratories), 50 mu-opioid receptor knockout mice (Jackson Laboratories), and 50 Sprague-Dawley rats (Charles River).

D. Sex: Hamsters (male, female); Mice (male, female); rats (female)

E. Age or weight range: Hamsters (120-130 g); Mice (25-30 g); Rats (150-200 g)

F. Housing location: Hamsters (R405); Mice (LAMS); Rats (LAMS)

G. Use classification: D

H. Time on study: Hamsters (1 year); Mice (6 months); Rats (7-14 days)
animals in order to be sure of having a sufficient number of successful cases to be able to interpret our results. For example, even with the best of experimental technique, only about 50% of bilateral SCN lesions are later found to be complete and thus produce arrhythmic hosts; this is due to the small size of this nucleus and the fact that even small remnants of the SCN are able to maintain rhythmicity in lesioned mice and hamsters. Thus, for a single study in Year 01, we can expect about 25 animals to have complete SCN lesions and therefore serve as hosts for experimental and control grafts. Previous work in our lab has shown that positive control SCN grafts restore locomotor rhythmicity to approximately 60% of lesioned hosts; hence to achieve a power of 95% with an alpha value of 0.05, will require at least 9 animals/group. Each study will include positive and negative control groups (n=9/group) as well as experimental groups (e.g., in Exp. 2, grafts implanted into the lateral, third and fourth ventricles). Therefore, a minimum of 90 animals (to produce 45 SCN lesioned hosts) will be needed for each study, and we will add animals in Years 02 and 03 until appropriate group sizes are reached. For enucleation studies, variability among individuals in the cellular rhythms we will studying (see below) require approximately 10 animals per group (enucleation at 2 days, 1 and 2 months, and sham controls at 1 and 2 months) to achieve a power of 95% with an alpha value of 0.05.

Husbandry Information

14) Will LAMS/Shriners provide husbandry care for all animals?  
   (If yes, please delete A-H and skip to question 15.)
   No. Hamsters in R405 will be cared for members of the--------- ------ --------
   ------- --------- ------  ------ --------
   ----------
   (b)(6), (b)(7)(C)

   A. Who will be responsible for the daily care of the animals?  
   (b)(6), (b)(7)(C)

   B. Where will the animals be housed?  
   Animals for these studies will be housed in either Room R405 or R859A. For circadian studies, animals need to be maintained undisturbed under constant dim illumination so that their circadian (daily) rhythms can be continuously recorded for periods of several months. To accomplish this, and yet still be able to check animals daily and clean their cages regularly, animals and their cages will be housed in the inner room of two connected rooms (R405), together comprising a "double darkroom". For breeding and observations under a defined light:dark cycle, animals will be housed in R859A. In our circadian studies to monitor multiple behavioral and physiological rhythms (activity, drinking, body temperature, heart rate) under constant conditions will require the use of radiotelemetry devices. The details of the type of housing required follows in C, and the surgical implantation of telemetry devices is described in section 21).
   Given the limited availability of double darkrooms, multiple species (hamsters and mice) will be housed in the same room; mice will be housed in a static microisolator within this room (R405). Animals are checked daily and on weekends by remote monitoring of their activity, body temperature, heart rate, and drinking, using the telemetry devices and sensors described below, and a record is kept of each animal and reported to LAMS.

   C. What type of caging will be used?
University of Cincinnati
Institutional Animal Care and Use Committee

Approval of Departures from Regulatory Standards

Principal Investigator(s): (b)(6), (b)(7)(C)
Protocol #: 02-11-25-01

Protocol Title: Hemodynamic Changes in Twin to Twin Transfusions
Full Committee Review Date: 11/13/03
Exemption Approval Date: 11/13/03

Species: Sheep Number Approved: 75

Description of exemption: Housing Cart (30"x60"), less than USDA recommend Space

Justification: Cart is designed to protect instrumentation and catheters.

See attached pages from the approved protocol.

Signature of IACUC-Chairperson Date
24b. What analgesic will be used? Buprenorphine HCl (Buprenex).

24c. What dose and route of administration will be used? 0.005 - 0.01 mg/kg IM.

24d. How frequently will the analgesic be given? On the day of surgery, immediately prior to surgery, again post-op (not within 4 hrs of pre-op dose) Subsequent administration will occur as needed. (see Section 24f)

24e. How long will the analgesics be administered? Immediately post-op and then as needed.

24f. How will the animal(s) pain and distress be monitored to ensure that the analgesic is effective? Food and water intake, guarding of incision site, grinding of teeth, lack of mobility, ability to stand, and the incision site condition.

25. Will other experimental, prophylactic, or therapeutic drugs be used? YES

25a. What drug(s) will be used and why? Penicillin and Ampicillin will be used for antibiotic prophylaxis.

25b. List the dose, route of administration, and frequency. Penicillin: 10,000 to 20,000 units/kg IM given the day of surgery and daily for 3 days post-operatively. Ampicillin: 1 gram to amniotic fluid sac the day of surgery.

26. Will any prescription drugs (including controlled substances) be purchased through LAMS? Sodium Pentobarbital, Valium, Buprenex, Socumb.

27. What type(s) and degrees of pain and distress are the animals likely to experience as a result of this project? There will be minor post surgical discomfort controlled with analgesics. There will be no stress or pain during the actual recording period which will last no more than 120 min. Signs of pain and distress will be used as criteria for euthanasia and early removal from the study. Although these signs rarely occur the veterinary staff will supervise need for euthanasia based on immobility, prolonged lack of food and water intake or urine and stool production, untreatable infection, lameness, respiratory distress/cyanosis, fetal death, hemorrhage, and peritonitis.

29. Will food or water be withheld as part of this study? YES

29a. Why will food and water be withheld? Pre-operative fasting.

29b. How long will food and water be withheld? Food and water for 17 hours.

29c. How and how often will the animals be monitored to ensure that they do not become dehydrated or malnourished? Twice daily monitoring of food and water intake by LAMS and OB/GYN personnel.

30. Will the animals be used for multiple blood or tissue collections? (If no, skip to question 31.) Yes

30a. List the collection method: Sterile blood collection via indwelling catheters.

30b. List the frequency of collection: on gestational days (GD) 116, 117, 118, 119, 120, 124, 127, 131, 134, 137 and 138.

30c. What is the maximum amount of each collection? Maternal blood 6-8 ml/time and fetal 4-6 ml/time.

31. Will the animals be restrained as part of this project? YES, in a 10 sq foot cage (normal space is 15 - 20 sq ft based on USDA and AAALAC rules) and again with a harness during recording periods which will last less than 2 hours during which time the sheep will be allowed to move its head and drink and eat, but not be able to turn around.

31a. Why will restraint be used? Cage restraint will be utilized to prevent the sheep from damaging its catheters and flowprobes and other equipment during the study period that would cause early termination of the study animal.

31b. Describe the method of restraint: The cages themselves are designed to be narrow enough to prevent the sheep from turning around to chew on their own instrumentation or the instrumentation of other in-house sheep and are thus considered a passive form of restraint in terms of minimum floor space requirements. The cages do not result in any other form of restraint. A standard livestock halter is used ONLY during actual...
experimentation (<2 hrs/day) and is tied to the cart frame to prevent the sheep from damaging instrumentation exposed during actual experimentation.

31c. How frequently will the animal be restrained? on gestational days (GD) 116, 117, 118, 119, 120, 124, 127, 131, 134, 137 and 138

31d. What will be the maximum duration of restraint? Approximately 2 hours.

32. Will hazardous agent be used as part of this project? YES

32a. List the hazardous agents: 70% ethanol, isoflurane

32b. For chemical agents, where will the MSDS sheets be stored? Room 107 French East

32c. Describe procedures for personnel protection: Ethanol is stored in the chemical fume hood. Isoflurane is exhausted through a scavenger and then to the air outside. The sheep facility is a separate secured access facility with a separate air handling system.

32d. Will medical surveillance of personnel be needed? YES

32e. Will environmental monitoring be needed? NO

32f. Will hazardous or regulated waste materials be generated? YES. All disposable items in contact with sheep tissue and/or blood products will be disposed of in a clearly labeled and approved biohazard container that is then removed by the Dept. of Environmental Safety and incinerated.

32g. Are any of the hazardous agents to be used on the CDC’s Select Agents List? NO

33. For euthanasia, list the following for each species:

33a. How will the animals be euthanized? Euthanasia solution injection (Socumb).

33b. If drugs will be used, list drug, dose, and route of administration: Socumb, 200 mg/kg, intravenous

33c. Is this method in agreement with the recommendations of the AVMA panel on Euthanasia? YES

33d. How will you ensure that the animals cannot recover? Open pneumothorax upon necropsy.
University of Cincinnati
Institutional Animal Care and Use Committee

Approval of Departures from Regulatory Standards

Principal Investigator(s): (b)(6), (b)(7)(C)

Protocol #: 02-11-26-02

Protocol Title: Development of Fetal Surgery Methods: Laser Photocoagulation of Placental Vessels

Full Committee Review Date: 11/13/03

Exemption Approval Date: 11/13/03

Species: Sheep                     Number Approved: 30

Description of exemption: Housing Cart (30"x60"), less than USDA recommend Space

Justification: Cart is designed to protect instrumentation and catheters.

See attached pages from the approved protocol.
27. What type(s) and degrees of pain and distress are the animals likely to experience as a result of this project? There will be minor post surgical discomfort controlled with analgesics.

28. What signs of pain and distress will be used as criteria for euthanasia and early removal from the study? Immobility, prolonged lack of food and water intake or urine and stool production, untreatable infection, lameness, respiratory distress/cyanosis, fetal death, hemorrhage, and peritonitis as determined daily by LAMS veterinarians.

29. Will food or water be withheld as part of this study? YES food only. (If no, skip to question 30.)

29a. Why will food and water be withheld? To prevent regurgitation and bloating during surgery.

29b. How long will food and water be withheld? Food for 17 hours pre-op no restrictions on water.

29c. How and how often will the animals be monitored to ensure that they do not become dehydrated or malnourished? Twice daily monitoring of food and water intake by LAMS and OB/GYN personnel.

30. Will the animals be used for multiple blood or tissue collections? (If no, skip to question 31.)


30b. List the frequency of collection. Once daily

30c. What is the maximum amount of each collection? 1 ml fetal blood/day

31. Will the animals be restrained as part of this project YES, in a 10 sq foot cage (normal space is 15 - 20 sq ft based on USDA and AAALAC rules) animals can lay down normally in these cages and turn around which they do frequently. When blood gases or blood pressure is measured animals are placed in a live stock harness but can still its head and drink and eat, but not be able to turn around. This done to prevent the animal from damaging the catheters which exit its body. In this surgical model animals would only be in the harness for less than 30 minutes.

(If no, skip to question 32.)

31a. Why will restraint be used? To perform surgery as described in Sec. 21a. To prevent damage to instrumentation.
31b. Describe the method of restraint. The mobile carts used to house the sheep are considered a passive form of restraint as they are narrow enough to prevent the sheep from turning around to chew on their own catheters or that of other in-house sheep but do not inhibit any other behavior.

31c. How frequently will the animal be restrained? Sheep are in mobile carts for the duration of their stay in the lab.

31d. What will be the maximum duration of restraint? <10 days.

32. Will hazardous agent be used as part of this project? YES (If not, skip to question 33.)

32a. List the hazardous agents: 70% ethanol, isoflurane

32b. For chemical agents, where will the MSDS sheets be stored? Room 107 French East

32c. Describe procedures for personnel protection: Ethanol is stored in the chemical fume hood. Isoflurane is exhausted through a scavenger and then to the air outside. The sheep facility is a separate secured access facility with a separate air handling system.

32d. Will medical surveillance of personnel be needed? NO

32e. Will environmental monitoring be needed? NO

32f. Will hazardous or regulated waste materials be generated? YES. All disposable items in contact with sheep tissue and/or blood products will be disposed of in a clearly labeled and approved biohazard container that is then removed by the Dept. of Environmental Safety and incinerated.

32g. Are any of the hazardous agents to be used on the CDC’s Select Agents List? NO

33. For euthanasia, list the following for each species:

33a. How will the animals be euthanized? Euthanasia solution injection (Socumb).

33b. If drugs will be used, list drug, dose, and route of administration: Socumb, 200 mg/kg, intravenous

33c. Is this method in agreement with the recommendations of the AVMA panel on Euthanasia? YES If not, provide justification.

33d. How will you ensure that the animals cannot recover? After cessation of breathing and heart beat via Socumb injection, animal will have an open pneumothorax upon necropsy.
University of Cincinnati
Institutional Animal Care and Use Committee

Approval of Departures from Regulatory Standards

Principal Investigator(s): [b](6), [b](7)(C)

Protocol #: 03-01-03-02

Protocol Title: Mechanisms of Fetal Growth

Full Committee Review Date: 11/13/03

Exemption Approval Date: 11/13/03

Species: Sheep Number Approved: 96

Description of exemption: Housing Cart (30"x60"), less than USDA recommend Space

Justification: Cart is designed to protect instrumentation and catheters.

See attached pages from the approved protocol.
Protocol 03-01-03-02

Fetal: 1 ml/day for blood gas assessment.

31. Will the animals be restrained as part of this project? YES
(If no, skip to question 32.)

31a. Why will restraint be used? To prevent the sheep from turning around and damaging instrumentation during recording periods.

31b. Describe the method of restraint. Animals will be restrained via a livestock harness which allows them free access to water and food and only prevents them from turning around in the cage.

31c. How frequently will the animal be restrained? Once daily to record hemodynamic parameters and obtain fetal blood gas sample. For a period of approximately 45-60 minutes.

31d. What will be the maximum duration of restraint? Animals will be maintained in cages from the time of receipt until the completion of the study. This time varies due to differences in the time in house prior to the study.

32. Will hazardous agent be used as part of this project? YES
(If not, skip to question 33.)

32a. List the hazardous agents: 70% ethanol, isoflurane.

32b. For chemical agents, where will the MSDS sheets be stored? Room 107c, French East

32c. Describe procedures for personnel protection: Ethanol is stored in the chemical fume hood. Isoflurane is exhausted through a scavenger and then to the air outside. The sheep facility is a separate secured access facility with a separate air handling system.

32d. Will medical surveillance of personnel be needed? NO

32e. Will environmental monitoring be needed? NO

32f. Will hazardous or regulated waste materials be generated? YES.
All disposable items in contact with sheep tissue and/or blood products will be disposed of in a clearly labeled approved biohazard container that is then removed by the Dept. of Environmental Safety and incinerated.

32g. Are any of the hazardous agents to be used on the CDC's Select Agents List? NO
University of Cincinnati
Institutional Animal Care and Use Committee

Approval of Departures from Regulatory Standards

Principal Investigator(s): [Redacted]
Protocol #: 03-01-03-03
Protocol Title: Effects of Drugs on Mother and Fetus
Full Committee Review Date: 11/13/03
Exemption Approval Date: 11/13/03
Species: Sheep
Number Approved: 90

Description of exemption: Housing Cart (30"x60"), less than USDA recommend space

Justification: Cart is designed to protect instrumentation and catheters.

See attached pages from the approved protocol.
29a. Why will food and water be withheld? Prevent regurgitation & bloating during surgery.

29b. How long will food and water be withheld? Food will be withheld for 24 hours pre-op with no restrictions on water.

29c. How and how often will the animals be monitored to ensure that they do not become dehydrated or malnourished? Twice daily monitoring of food and water intake by LAMS and OB/GYN personnel.

30. Will the animals be used for multiple blood or tissue collections? (If no, skip to question 31.)
   YES

30a. List the collection method: Blood or urine collection via indwelling catheters.

30b. List the frequency of collection: Maternal: 2 or 3 times per week. Fetal: blood once daily to assess fetal well-being.

30c. What is the maximum amount of each collection?
   Maternal blood: 8 ml/day for a period of 30 days (not to exceed 6.6 ml/kg over a 30 day period). Fetal blood: 2-4 ml/day for blood gas assessment for 30 days (not to exceed 6.6 ml/kg of estimated fetal body weight over a 30 day period).

31. Will the animals be restrained as part of this project? YES (If no, skip to question 32.)

31a. Why will restraint be used? To prevent the sheep from damaging their own or others' instrumentation.

31b. Describe the method of restraint. Sheep will be housed in movable stainless steel carts (30"x 60"). Carts have a wire grate bottom and removable refuse pans that are changed daily by DLAM staff technicians.

31c. How frequently will the animal be restrained?
   The animal will be placed in a cage prior to the study for acclimation and will stay there for the duration of the study. Additionally, once daily the animals head will be put in a livestock halter for 15-30 minutes so it cannot turn around so fetal blood gas sample can be obtained. During experimental studies the animals will be placed in a halter for a period of approximately 4 hours during which time they can eat and drink.

31d. What will be the maximum duration of restraint?
Animals will be maintained in carts from the time of receipt until the completion of the study. Additional restraint will occur via a halter for the first seven days after instrumentation for a period of 5-15 minutes to determine fetal viability and blood gases and finally animals will be restricted via a livestock halter for periods of approximately 4 hours 3 to 4 times a week during studies in which pharmacological agents are being evaluated. During this period they have access to food and water.

32. Will hazardous agent be used as part of this project? YES (If not, skip to question 33.)

32a. List the hazardous agents: 70% ethanol, isoflurane.

32b. For chemical agents, where will the MSDS sheets be stored? Room 107c, French East

32c. Describe procedures for personnel protection: Ethanol is stored in the chemical fume hood. Isoflurane is exhausted through a scavenger and then to the air outside. The sheep facility is a separate secured access facility with a separate air handling system.

32d. Will medical surveillance of personnel be needed? NO

32e. Will environmental monitoring be needed? NO

32f. Will hazardous or regulated waste materials be generated? YES.
All disposable items in contact with sheep tissue and/or blood products will be disposed of in a clearly labeled and approved biohazard container that is then removed by the Dept. of Environmental Safety and incinerated.

32g. Are any of the hazardous agents to be used on the CDC’s Select Agents List? NO

33. For euthanasia, list the following for each species:

33a. How will the animals be euthanized? Euthanasia solution injection.

33b. If drugs will be used, list drug, dose, and route of administration:
Sodium pentobarbital euthanizing solution. (200 mg/kg), intravenous

33c. Is this method in agreement with the recommendations of the AVMA panel on Euthanasia? YES If not, provide justification.

33d. How will you ensure that the animals cannot recover? After cessation of breathing and heartbeat via Secumb injection, animal will have an open pneumothorax upon necropsy.
University of Cincinnati
Institutional Animal Care and Use Committee

Approval of Departures from Regulatory Standards

Principal Investigator(s): (b)(6), (b)(7)(C)

Protocol #: 03-01-03-04

Protocol Title: Hypertension in Pregnancy

Full Committee Review Date: 11/13/03

Exemption Approval Date: 11/13/03

Species: Sheep

Number Approved: 96

Description of exemption: Housing Cart (30"x60"), less than USDA recommend Space

Justification: Cart is designed to protect instrumentation and catheters.

See attached pages from the approved protocol.
25b. List the dose, route of administration, and frequency.
Penicillin: 10,000 - 20,000 units/kg once a day, intramuscular the day before surgery, the day of surgery and 3 days post-operatively to the ewe.
Ampicillin: 1 gram to amniotic fluid sac the day of abdominal surgery.

26. Will any prescription drugs (including controlled substances) be purchased through LAMS? If so, list which drugs. Sodium Pentobarbital, Valium, Socumb.

27. What type(s) and degrees of pain and distress are the animals likely to experience as a result of this project? There will be postsurgical discomfort controlled with analgesics.

28. What signs of pain and distress will be used as criteria for euthanasia and early removal from the study? Although these signs rarely occur, the veterinary staff will supervise need to euthanasia based on immobility, prolonged lack of food and water intake or urine and stool production, untreated infection, lameness, respiratory distress/cyanosis, fetal death, hemorrhage, peritonitis, renal disease or failure and inability to perform normal bodily functions.

29. Will food or water be withheld as part of this study? Yes, food and water. (If no, skip to question 30.)

29a. Why will food and water be withheld? Prevent regurgitation & bloating during surgery.

29b. How long will food and water be withheld? Food and water will be withheld for 1 day (24 hours).

29c. How and how often will the animals be monitored to ensure that they do not become dehydrated or malnourished? Twice daily monitoring of food and water intake by LAMS and OB/GYN personnel.

30. Will the animals be used for multiple blood or tissue collections? (If no, skip to question 31.)
YES

30a. List the collection method: Blood or urine collection via indwelling catheters.

30b. List the frequency of collection: Maternal: 2 or 3 times per week.
Fetal: blood once daily to assess fetal well-being.

30c. What is the maximum amount of each collection? Maternal: blood 6.6 ml/kg per 2-week period.
Fetal: 1 ml/day for blood gas assessment.

31. Will the animals be restrained as part of this project? YES (If no, skip to question 32.)
31a. Why will restraint be used? To prevent the sheep from damaging their own or others' instrumentation.

31b. Describe the method of restraint. Sheep will be housed in movable stainless steel carts (30" X 60"). Carts have a wire grate bottom and removable refuse pans that are changed daily by DLAM staff technicians.

31c. How frequently will the animal be restrained? For the duration of the study including the initial acclimation period. Additionally, once daily to obtain a fetal blood gas sample for a period of 15-30 minutes.

31d. What will be the maximum duration of restraint? Animals will be maintained in carts from the time of receipt until the completion of the study. This time varies due to differences in the time in house prior to the study.

32. Will hazardous agent be used as part of this project? YES (If not, skip to question 33.)

32a. List the hazardous agents: 70% ethanol, isoflurane.

32b. For chemical agents, where will the MSDS sheets be stored? Room 107c, French East

32c. Describe procedures for personnel protection: Ethanol is stored in the chemical fume hood. Isoflurane is exhausted through a scavenger and then to the air outside. The sheep facility is a separate secured access facility with a separate air handling system.

32d. Will medical surveillance of personnel be needed? NO

32e. Will environmental monitoring be needed? NO

32f. Will hazardous or regulated waste materials be generated? YES. All disposable items in contact with sheep tissue and/or blood products will be disposed of in a clearly labeled and approved biohazard container that is then removed by the Dept. of Environmental Safety and incinerated.

32g. Are any of the hazardous agents to be used on the CDC's Select Agents List? NO

33. For euthanasia, list the following for each species:

33a. How will the animals be euthanized? Euthanasia solution injection (Socumb).

33b. If drugs will be used, list drug, dose, and route of administration: Socumb, 200 mg/kg, intravenous
University of Cincinnati
Institutional Animal Care and Use Committee

Approval of Departures from Regulatory Standards

Principal Investigator(s): (b)(6), (b)(7)(C)

Protocol #: 03-05-22-01

Protocol Title: Hormonal Modulation of the Cardiovascular System

Full Committee Review Date: 11/13/03

Exemption Approval Date: 11/13/03

Species: Sheep Number Approved: 90

Description of exemption: Housing Cart (30"x60"), less than USDA recommend Space

Justification: Cart is designed to protect instrumentation and catheters.

See attached pages from the approved protocol.
30a. List the collection method: Via indwelling catheters in aorta & vena cava.

30b. List the frequency of collection: 2 or 3 times per week

30c. What is the maximum amount of each collection? 6.6 ml/kg per 2-week period.

31. Will the animals be restrained as part of this project? YES
(If no, skip to question 32.)

31a. Why will restraint be used? To prevent damage to catheters and flowprobes during blood sampling and/or experimentation period while attached to measurement instrumentation.

31b. Describe the method of restraint: Sheep will be housed in movable stainless steel carts (30"X 60"). Carts have a wire grate bottom and removable refuse pans that are changed daily by DLAM staff technicians.

31c. How frequently will the animal be restrained? For the duration of the study including the initial acclimation period.

31d. What will be the maximum duration of restraint? Animals will be maintained in carts from the time of receipt until the completion of the study. This time varies due to differences in the time in house prior to the study.

32. Will hazardous agent be used as part of this project? YES
(If not, skip to question 33.)

32a. List the hazardous agents: 70% ethanol, isoflurane.

32b. For chemical agents, where will the MSDS sheets be stored? Room 107c, French East

32c. Describe procedures for personnel protection: Ethanol is stored in the chemical fume hood. Isoflurane is exhausted through a scavenger and then to the air outside. The sheep facility is a separate secured access facility with a separate air handling system.
# ANNUAL REPORT OF RESEARCH FACILITY

**TYPE OR PRINT**

---

**REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY**

<table>
<thead>
<tr>
<th>A.</th>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>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</th>
<th>C. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>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</th>
<th>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)</th>
<th>F. TOTAL NO. OF ANIMALS (Cols. C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td>24</td>
<td>11</td>
<td>212</td>
<td>50</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td>5. Cats</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td>41</td>
<td>154</td>
<td>436</td>
<td>25</td>
<td>615</td>
<td></td>
</tr>
<tr>
<td>7. Hamsters</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>83</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>8. Rabbits</td>
<td>70</td>
<td>29</td>
<td>751</td>
<td>0</td>
<td>780</td>
<td></td>
</tr>
<tr>
<td>9. Non-Human Primates</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>10. Sheep</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>11. Pigs</td>
<td>16</td>
<td>0</td>
<td>244</td>
<td>14</td>
<td>258</td>
<td></td>
</tr>
<tr>
<td>12. Farm Animals</td>
<td>2</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>13. Gerbil</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>14. Other Animals</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15. Chinchilla</td>
<td>13</td>
<td>0</td>
<td>104</td>
<td>0</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>16. Ferret</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

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**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**

<table>
<thead>
<tr>
<th>SIGNATURE OF</th>
<th>I.D. NUMBER &amp; TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)</th>
<th>DATE SIGNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>obsolel(e)</td>
<td>PART 1 - HEADQUARTERS</td>
<td>11/9/2002</td>
</tr>
</tbody>
</table>

---

**APHIS FORM :**

(AUG 91)
The following sites have been reported by the facility.

- **Registration Number:** 31-R-0028
- **Customer Number:** 234
- **Facility:** CASE WESTERN RESERVE UNIVERSITY
  10900 EUCLID AVE
  CLEVELAND, OH 44106
  (216) 368-4432

- CASE WESTERN RESERVE UNIVERSITY
  MEDICAL SCHOOL
  10900 EUCLID AVE
  CLEVELAND, OH 44106

- CLEVELAND CLINIC FOUNDATION
  9500 EUCLID AVE
  CLEVELAND, OH 44195

- RAVENS GLENN FARM
  2604 PINE GLENN FARM
  PULASKI, PA 16143

- Metrohealth Medical Center
  2500 Metrohealth Drive
  Cleveland, Ohio 44109
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: 31-R-0028

2. Number of animals used in this study: 13

3. Species (common name) of animals used in this study: pig

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

The purpose of this study involves the elucidation of metabolic alterations that occur in neonatal sepsis (infection). Young pigs instrumented with arterial and venous catheters implanted under general anesthesia and followed by postoperative analgesia are used as the experimental model. The study is classified as Category E because after 4-7 days of surgical recovery, endotoxin is administered to conscious pigs to simulate physiologic conditions of sepsis. The nonlethal dose of endotoxin causes fever and malaise that persists for several hours.

5. Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine than pain and/or distress would interfere with test results.

Anesthetics, analgesics and antipyretics may not be used to mitigate the fever and malaise induced by the endotoxin administration as they would alter the physiologic parameters assessed in this study.

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.

N/A

1. Registration number: 31-R-0028

2. Number of animals used in this study: 1
3. Species (common name) of animals used in this study: pig

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

This aim of this study is to develop and perfect Magnetic Resonance (MR) guided thermal ablation of the lumbar spine as a human clinical therapeutic modality to treat malignancy of the spine. This study was retrospectively classified as Category E due to observation of post operative distress and paralysis in one pig noted upon recovery from anesthesia. Analgesia was administered but did not relieve the distress of the posterior paralysis. This pig was euthanized.

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 would interfere with test results.

In order to delineate the safe limits of this treatment modality under which human vertebral ablation may be performed investigators needed to determine the maximum size of an ablation. Pain relief modalities were unable to relieve the paralyzed pig's distress. However, once this information was determined in one pig, no further MR ablations of this magnitude were performed and subsequent pigs did well with postoperative pain and distress alleviated.

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.

N/A

1. Registration number: 31-R-0028

2. Number of animals used in this study: 50

3. Species (common name) of animals used in this study: dog

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

Implantation of cardiac pacemaker and pacing to achieve congestive heart failure. Surgery is well tolerated by animals but some animals develop evidence of congestive heart failure, including dyspnea, edema, and decreased appetite. The terminal study must be performed using a heart remodeled by congestive heart failure. Signs of severe congestive heart failure are an indication to perform a terminal hemodynamic study.
5. Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine than pain and/or distress would interfere with test results.

Although surgical and post surgical pain from the pacemaker implantation are relieved appropriately with general anesthesia and analgesia and endpoints to limit distress from fulminent heart failure are in place, this study is classified as Category E because all distress associated with the development of a significant level of cardiac failure cannot be prevented. Achievement of a significant level of heart failure is required to induce the cardiac remodeling and physiologic alterations that are the objectives of this study. Drugs used to limit the degree of heart failure may not be used as they would interfere with these objectives.

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.

1. Registration number: 31-R-0028
2. Number of animals used in this study: 25
   a. Species (common name) of animals used in this study: guinea pig
3. Explain the procedure producing pain and/or distress.

The guinea pigs develop fungal septicemia on intravenous inoculation of Aspergillus fumigatus that leads to dissemination in various internal organs. This model is used to test the efficacy of new antifungal drugs. Untreated control guinea pigs may develop clinical features of infection. Treated animals may have no signs of infection.

4. Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine than pain and/or distress would interfere with test results.

Knowledge gained from these studies is crucial in evaluating the efficacy of the antifungal agent tested. Pain and distress from fulminent infection cannot be pharmacologically relieved without altering the outcome of the study and ability to determine the efficacy of the tested drug. Criteria for interventional euthanasia of severely ill guinea pigs have been established and are
described below. Guinea pigs are examined twice a day with the following criteria used as indicators for interventional euthanasia:

a. Rough hair coat, hunched posture, lethargy or permanent recumbancy.

Any condition interfering with eating or drinking, e.g., difficulty in ambulation (including ataxia).

5. What, if any, federal regulations require this procedure? Cite the agency, the code of Federal Regulations (CFR) title number and the specific section number.

1. Registration number: 31-R-0028
2. Number of animals used in this study: 83
3. Species (common name) of animals used in this study: hamster
4. Explain the procedure producing pain and/or distress.

Hamsters are infected with the scrapie prion protein and observed for the development of neurodegenerative disease.

5. Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine than pain and/or distress would interfere with test results.

The study requires analysis of brain tissue taken from animals in the terminal stages of spongiform encephalopathy. No palliative treatment is available for spongiform encephalopathy. Animals are checked daily after the onset of symptoms. Animals ultimately lose the ability to move and feed themselves. Criteria for interventional euthanasia of severely ill hamsters have been established. Animals unable to ambulate and/or feed are euthanized.

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.
### Meadow Voles

<table>
<thead>
<tr>
<th>Animals</th>
<th>B.</th>
<th>C.</th>
<th>D.</th>
<th>E.</th>
<th>F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>House Mice</td>
<td>1,800</td>
<td>1,800</td>
<td>1,800</td>
<td>1,800</td>
<td>1,800</td>
</tr>
<tr>
<td>pine voles</td>
<td>480</td>
<td>480</td>
<td>480</td>
<td>480</td>
<td>480</td>
</tr>
<tr>
<td>prairie voles</td>
<td>1,440</td>
<td>1,440</td>
<td>1,440</td>
<td>1,440</td>
<td>1,440</td>
</tr>
</tbody>
</table>

**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, 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 requested that exceptions to the standards and regulations be specified and explained by the principal investigator and 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)
# CONTINUATION SHEET FOR ANNUAL REPORT OF RESEARCH FACILITY

**(TYPE OR PRINT)**

## REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY

(Affix additional sheets if necessary or use this form)

**A.**

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes</th>
<th>Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>Number of animals upon which experiments, teaching, 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 were used.</th>
<th>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)</th>
</tr>
</thead>
<tbody>
<tr>
<td>white-footed mouse</td>
<td>9</td>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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, 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)

**NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL**

**DATE SIGNED**

10/12/04

**APHIS FORM 7023A**

**(AUG 91)**

**PART 1 - HEADQUARTERS**
### Annual Report of Research Facility

**Form 702**

**Certification by Headquarters Research Facility Official**

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>Number of Animals Used</th>
<th>Number of Animals Used</th>
<th>Number of Animals Used</th>
<th>Number of Animals Used</th>
<th>Number of Animals Used</th>
<th>TOTAL NUMBER OF ANIMALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
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<td></td>
<td></td>
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<tr>
<td>Cats</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guinea Pigs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamsters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rabbits</td>
<td>14</td>
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<td></td>
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<td></td>
<td>14</td>
</tr>
<tr>
<td>Non-human Primates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Pigs</td>
<td>57</td>
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<td></td>
<td>57</td>
</tr>
<tr>
<td>Other Farm Animals</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Other Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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 or intended 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 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 the explanations 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

**Signature of C.E.O. or Institutional Official:**

**Name & Title of C.E.O. or Institutional Official:**

**Date Signed:**

APHIS Form 7023

(AUG 91)
The following sites have been reported by the facility.

Registration Number: 31-R-0033
Customer Number: 237
Facility: AKRON CITY HOSPITAL CAMPUS
          RESEARCH ADMINISTRATION 5
          525 E. MARKET STREET
          AKRON, OH 44309
          (330) 375-4045

SURGICAL RESEARCH BLDG
525 EAST MARKET STREET
P O BOX 2090
5TH FLOOR
AKRON, OH 44304

NEOUCOM
4209 SR 44
ROOTSTOWN, OH 44272
1. CERTIFICATE NUMBER: 31-R-0034
CUSTOMER NUMBER: 238

Ethicon Endo Surgery Inc
4545 Creek Road
Cincinnati, OH 45242
Telephone: (513) -337-8971

FACILITY LOCATIONS ( Sites ) - See Attached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY ( Attach additional sheets if necessary or use APRIS 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 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 teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.

E. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.

F. TOTAL NUMBER OF ANIMALS ( COLUMNS C + D + E )

4. Dogs 12 70 70
5. Cats
6. Guinea Pigs
7. Hamsters
8. Rabbits
9. Non-Human Primates
10. Sheep
11. Pigs 34 1434 1434
12. Other Farm Animals
13. Goats 0 15 15
14. 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.

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CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
( Chief Executive Officer or Legally Responsible Institutional Official )

DATE SIGNED 11-9-04

38) which is obsolete.
# Annual Report of Research Facility

**FACILITY LOCATIONS:**
- 1. Raabe College of Pharmacy
- 2. Dept. of Biological Sciences
- 3. Dept. of Psychology

## A. Animals Covered By The Animal Welfare Regulations

<table>
<thead>
<tr>
<th>Animals</th>
<th>B. Number of animal being treated, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>D. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.</th>
<th>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.</th>
<th>F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cats</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
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<tr>
<td>7. Hamsters</td>
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<td></td>
</tr>
<tr>
<td>8. Rabbits</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>9. Non-human Primates</td>
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<tr>
<td>10. Sheep</td>
<td></td>
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</tr>
<tr>
<td>11. Pigs</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>12. Other Farm Animals</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>13. Other Animals</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>No covered animals are 0 being used at this time.</strong></td>
</tr>
</tbody>
</table>

## 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 to 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 of this research facility has appropriate authority to ensure the provision of adequate veterinary care and to evaluate 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:**  
**DATE SIGNED:** 9/21/04  

APHIS Form 7023A (Rev. 6-94)  
(AUG 91)
United States Department of Agriculture  
Animal and Plant Health Inspection Service  

Annual Report of Research Facility  
(Type or Print)

1. Certificate Number: 31-R-0043  
Customer Number: 240

Medical College of Ohio  
Health Education Building  
3055 Arlington Ave.  
Toledo, OH 43614  
Telephone: (419) 383-4310

2. 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)

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>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</th>
<th>C. Number of Animals upon Which Teaching, Research, Experiments, or Tests were Conducted Involving No Pain, Distress, or Use of Pain-Relieving Drugs</th>
<th>D. Number of Animals upon Which Experiments, Teaching, Research, Surgery, or Tests were Conducted Involving Accompanying Pain or Distress to the Animals or for Which Appropriate Anesthetic, Analgesic, or Tranquilizing Drugs were Used</th>
<th>E. Number of Animals upon Which Teaching, Experiments, Research, Surgery or Tests were Conducted Involving Accompanying Pain or Distress to the Animals or for Which Appropriate Anesthetic, Analgesic, or Tranquilizing Drugs were Used</th>
<th>F. Total Number of Animals</th>
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<tbody>
<tr>
<td>4. Dogs</td>
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<td>5. Cats</td>
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<td>0</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7. Hamsters</td>
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<td>0</td>
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<tr>
<td>8. Rabbits</td>
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<td>0</td>
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</tr>
<tr>
<td>9. Non-human Primates</td>
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<td>10. Sheep</td>
<td>0</td>
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<tr>
<td>11. Pigs</td>
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<td>18</td>
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<tr>
<td>12. Other Farm Animals</td>
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<tr>
<td>13. Other Animals</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

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 the 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 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 the research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of all aspects of animal care and use.

Certification by Headquarters Research Facility Official  
(Chief Executive Officer or Legally Responsible Institutional Official)

[Signed]

APHIS  
(AUG 91)

Interagency Report Control No.  
Form Approved  
OMB No. 0570-0036
**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)

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>A. Number of Animal Being Tied, Conditioned, or Held for Use in Teaching, Testing, Experiments, Research, or Surgery but Not Yet Used for Such Purposes</th>
<th>B. Number of Animals Upon Which Teaching, Research, Experiments, or Tests Were Concluded Invoking No Pain, Distress, or Use of Pain-Relieving Drugs</th>
<th>C. Number of Animals Upon Which Teaching, Research, Experiments, or Tests Were Conducted Engaging in Pain, Distress, or Use of Pain-Relieving Drugs</th>
<th>D. Number of Animals Upon Which Teaching, Research, Surgery, or Tests Were Conducted Engaging in Pain-Relieving Drugs</th>
<th>E. Number of Animals Upon Which Teaching, Research, Surgery, or Tests Were Conducted Engaging in Pain-Relieving Drugs</th>
<th>F. Total Number of Animals (Columns C + D + E)</th>
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<tbody>
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<td>Other Farm Animals</td>
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</tbody>
</table>

**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, 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 an Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to verifying the IACUC-approved exceptions, this summary includes an 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)

<table>
<thead>
<tr>
<th>Signature of C.E.O. or Institutional Official</th>
<th>Name &amp; Title of C.E.O. or Institutional Official (Type or Print)</th>
<th>Date Signed</th>
</tr>
</thead>
</table>

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

**AUG 91**
# ANNUAL REPORT OF RESEARCH FACILITY

**CERTIFICATE NUMBER:** 31-R-0049

**CUSTOMER NUMBER:** 241

**OAHU Form No.:** OMB No. 0579-0026

**Date:** SEP 23, 2004

---

**FACILITY LOCATIONS (Sites):** See Attached Listing

---

## REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY

**Columns:** C + D + E

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animals</th>
<th>C. Number of animals upon which teaching, research, surgery, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>D. Number of animals upon which 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.</th>
<th>E. Number of animals upon which 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.</th>
<th>F. TOTAL NUMBER OF ANIMALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
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<tr>
<td>9. Non-human Primates</td>
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<td>0</td>
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</tr>
<tr>
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<tr>
<td>11. Pigs</td>
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<tr>
<td>12. Other Farm Animals</td>
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<td>0</td>
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<tr>
<td>13. Other Animals</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td><strong>TOTAL NUMBER OF ANIMALS</strong></td>
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<td>0</td>
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<td>0</td>
</tr>
</tbody>
</table>

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## 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 institutional 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 is intended to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

---

**HEADQUARTERS RESEARCH FACILITY OFFICIAL**

(Officer or Legally Responsible Institutional Official)

**DATE SIGNED:** 9-21-04
### Annual Report of Research Facility

**Certification Number:** 31-R-0053  
**Customer Number:** 229  
**Facility:** Hiram College  
**Address:** Hinsdale Hall, P.O. Box 1838, Hiram, OH 44234  
**Telephone:** (330) -569-5264  
**Date:** November 10, 2004

#### Facilities Locations (Sites) - See Attached Listing

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of Animal Being Breed, Conditioned, or Held for Use in Teaching, Testing, Experiments, Research, or Surgery but Not Yet Used for Such Purposes</th>
<th>C. Number of Animals Upon which Teaching, Research, Experiments, or Tests Were Conducted Involving No Pain, Degrading, or Use of Pain-Relieving Drugs</th>
<th>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</th>
<th>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, Result or Interpretation of the Teaching, Research, Experiments, Surgery, or Tests. (An Explanation of the Procedures Producing Pain or Distress to These Animals and the Reason Such Drugs were Not Used Must Be Attached to This Report)</th>
<th>F. Total Number of Animals (Columns C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td></td>
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<tr>
<td>5. Cats</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7. Hamsters</td>
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</tr>
<tr>
<td>8. Rabbits</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9. Non-human Primates</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>10. Sheep</td>
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</tr>
<tr>
<td>11. Pigs</td>
<td></td>
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</tr>
<tr>
<td>12. Other Farm Animals</td>
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</tr>
<tr>
<td>13. Other Animals</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

#### Assurances

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

(Certification By Executive Officer or Legally Responsible Institutional Official)

**(AUG 91)**

---

**United States Department of Agriculture**  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

---

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

---

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

---

**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.**
### Report of Animals Used by or Under Control of Research Facility

#### A. Animals Covered by The Animal Welfare Regulations

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Animals Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
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<tr>
<td>Cats</td>
<td>0</td>
</tr>
<tr>
<td>Guinea Pigs</td>
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<tr>
<td>Hamsters</td>
<td>0</td>
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<tr>
<td>Rabbits</td>
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</tr>
<tr>
<td>Non-human Primates (Psych)</td>
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<tr>
<td>Sheep</td>
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</tr>
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<td>Pigs</td>
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<tr>
<td>Other Farm Animals</td>
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<tr>
<td>Other Animals</td>
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</tr>
<tr>
<td>Mice (Psycho)</td>
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<tr>
<td>Rats (Psycho)</td>
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<tr>
<td>Mice (Bio)</td>
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<tr>
<td>Rats (Bio)</td>
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</tr>
</tbody>
</table>

#### B. Number of Animals Being Used

- **Rats (Psycho)**: 27 (239+20-0)  
- **Mice (Psycho)**: 259  
- **Mice (Bio)**: 40  
- **Rats (Bio)**: 22

#### C. Number of Animals Upon Which Teaching, Research, Experiments, or Tests Were Conducted

- **Rats (Psycho)**: 27  
- **Mice (Psycho)**: 259  
- **Mice (Bio)**: 40  
- **Rats (Bio)**: 22

#### D. Number of Animals Upon Which Experiments, Research, Surgery, or Tests Were Conducted Involving Pain, Distress, or Use of Pain-Relieving Drugs

- **Rats (Psycho)**: 17  
- **Mice (Psycho)**: 20  
- **Mice (Bio)**: 40  
- **Rats (Bio)**: 22

#### E. Number of Animals Upon Which Teaching, Experiments, Research, Surgery, or Tests Were Conducted Involving Accompanying Pain or Distress to the Animals

- **Rats (Psycho)**: 10  
- **Rats (Bio)**: 0

#### F. Total Number of Animals Used

- **Rats (Psycho)**: 0  
- **Mice (Psycho)**: 0  
- **Mice (Bio)**: 0  
- **Rats (Bio)**: 0

### 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 testing, research, surgery, or experimentation were followed by this research facility.

2. Each principal investigator has considered alternatives to painful procedures.

3. The facility is adhering to the standards and regulations under the Act, and it has been required that exceptions to the standards and regulations be specified and explained by the principal investigator and the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. A brief explanation of the exceptions, as well as the species and number of animals affected, is attached.

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**: 12/6/04
Office of the Vice President for Academic Affairs
The College of Wooster
1189 Beall Avenue
Wooster, OH 44691-2363

Psychology Department location:
Burton D. Morgan Hall
930 College Mall
Wooster, OH 44691

Biology Department location:
Mateer Hall
931 College Mall
Wooster, OH 44691
United States Department of Agriculture
Animal and Plant Health Inspection Service

Annual Report of Research Facility

<table>
<thead>
<tr>
<th>FACILITY LOCATIONS (Sites)</th>
<th>See Attached Listing</th>
</tr>
</thead>
</table>

Report of Animals Used by or Under Control of Research Facility

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
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<tbody>
<tr>
<td>Animals Covered By The Animal Welfare Regulations</td>
<td>Number of Animal being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.</td>
<td>Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</td>
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<td>Number of animals upon which teaching, research, experiments, or tests were conducted involving accompanying pain or distress to the animals or for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.</td>
<td>Total Number of Animals (Columns C + D + E)</td>
</tr>
<tr>
<td>Dogs</td>
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</tr>
</tbody>
</table>

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.
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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

<table>
<thead>
<tr>
<th>Signature of CEO or Institutional Official</th>
<th>Date Signed</th>
</tr>
</thead>
</table>

APHIS Form 7023

(Replaces VS Form 16-23 (Oct 88) which is obsolete.)
Licensee/Registrant Name:  Wright State University

License/Registration Number:  31-R-055

Please list below all sites that house regulated animals under the above number. Be sure to include all requested information. If the line does not apply, please mark it N/A. If you have more than three (3) sites copy this form as many times as needed before filling in the sites.

Site No.:  1 Name/Department:  Laboratory Animal Resources - Health Sciences Facility
Address:  053 Health Sciences Building
Dayton, OH 45435
Building:  Biological Sciences/Health Sciences Building
Floor/Room:  053 Health Sciences Building
Contact Person:  
Phone No.:  

Site No.:  2 Name/Department:  Laboratory Animal Resources - Fawcett Hall Animal Facility
Address:  Fifth Floor, Fawcett Hall
Dayton, OH 45435
Building:  Fawcett Hall
Floor/Room:  514A & 514B Fawcett Hall
Contact Person:  
Phone No.:  

Site No.:  3 Name/Department:  Laboratory Animal Resources - Receiving and Conditioning Building
Address:  Receiving and Conditioning - W.S.U.
Dayton, OH 45435
Building:  Receiving and Conditioning
Floor/Room:  
Contact Person:  
Phone No.:  

All redactions on this page are pursuant to (b)(6) & (b)(7)(c).
Licensee/Registrant Name:  Wright State University
License/Registration Number:  31-R-055

Please list below all sites that house regulated animals under the above number. Be sure to include all requested information. If the line does not apply, please mark it N/A. If you have more than three (3) sites copy this form as many times as needed before filling in the sites.

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Name/Department</th>
<th>Address</th>
<th>Building</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Laboratory Animal Resources - Cox Research Institute Animal Facility</td>
<td>3525 Southern Boulevard, Dayton, OH 45429</td>
<td>Cox Heart Institute</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Building:</td>
<td>Contact Person:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Floor/Room:</td>
<td>Phone No.:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Name/Department</th>
<th>Address</th>
<th>Building</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Building:</td>
<td>Contact Person:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Floor/Room:</td>
<td>Phone No.:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Name/Department</th>
<th>Address</th>
<th>Building</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Building:</td>
<td>Contact Person:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Floor/Room:</td>
<td>Phone No.:</td>
</tr>
</tbody>
</table>

All redactions on this page are pursuant to (b)(6) & (b)(7)(c).
### UNITED STATES DEPARTMENT OF AGRICULTURE

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

### ANNUAL REPORT OF RESEARCH FACILITY

**TYPE OR PRINT**

<table>
<thead>
<tr>
<th>1. CERTIFICATE NUMBER:</th>
<th>31-R-0058</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSTOMER NUMBER:</td>
<td>244</td>
</tr>
</tbody>
</table>

Cleveland State University
Programs & Research
2121 Euclid Ave (Keith Bldg Rm 1150)
Cleveland, OH 44115

Telephone: (216) 687-3624

---

### 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.**

<table>
<thead>
<tr>
<th>A. Animals Covered by the Animal Welfare Regulations</th>
<th>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</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>D. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>E. Number of animals upon which teaching, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquillizing drugs were used</th>
<th>F. Total Number of Animals (Columns C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cats</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guinea Pigs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamsters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rabbits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-human Primates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Farm Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Total

- Mice: 22,339
- Rats: 483

### 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, 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 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 an 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)

<table>
<thead>
<tr>
<th>NAME OR TITLE OF OFFICIAL</th>
<th>DATE SIGNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Redacted]</td>
<td>11/29/04</td>
</tr>
</tbody>
</table>
**ANNUAL REPORT OF RESEARCH FACILITY**

**TYPE OR PRINT**

1. **REPORTING FACILITY**
   (List all locations where animals were housed or used in actual research, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

   FACILITY LOCATIONS:

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ADDRESS</th>
<th>CITY</th>
<th>STATE</th>
<th>ZIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILACRON, INC.</td>
<td>CINCINNATI, OH 45209</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. **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**
   - Dogs
   - Cats
   - Guinea Pigs
   - Hamsters
   - Rabbits
   - Non-Human Primates
   - Sheep
   - Pigs
   - Other Farm Animals
   - Other Animals

   **B. Number of Animals upon which teaching, research, surgery or tests were conducted involving no pain, distress, or use of pain-relieving drugs.**

<table>
<thead>
<tr>
<th>Animal</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
<td>7</td>
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<tr>
<td>Guinea Pigs</td>
<td>325</td>
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<tr>
<td>Hamsters</td>
<td></td>
</tr>
<tr>
<td>Rabbits</td>
<td></td>
</tr>
<tr>
<td>Non-Human Primates</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td></td>
</tr>
<tr>
<td>Other Farm Animals</td>
<td></td>
</tr>
<tr>
<td>Other Animals</td>
<td></td>
</tr>
</tbody>
</table>

   **C. Number of animals upon which 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.**

<table>
<thead>
<tr>
<th>Animal</th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>Hamsters</td>
<td>69</td>
</tr>
<tr>
<td>Rabbits</td>
<td></td>
</tr>
<tr>
<td>Non-Human Primates</td>
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<tr>
<td>Sheep</td>
<td></td>
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<tr>
<td>Pigs</td>
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</tr>
<tr>
<td>Other Farm Animals</td>
<td></td>
</tr>
<tr>
<td>Other Animals</td>
<td></td>
</tr>
</tbody>
</table>

   **D. Number of animals upon which 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.**

<table>
<thead>
<tr>
<th>Animal</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guinea Pigs</td>
<td>394</td>
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<tr>
<td>Hamsters</td>
<td></td>
</tr>
<tr>
<td>Rabbits</td>
<td></td>
</tr>
<tr>
<td>Non-Human Primates</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td></td>
</tr>
<tr>
<td>Other Farm Animals</td>
<td></td>
</tr>
<tr>
<td>Other Animals</td>
<td></td>
</tr>
</tbody>
</table>

   **E. Number of animals upon which 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.**

<table>
<thead>
<tr>
<th>Animal</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guinea Pigs</td>
<td>394</td>
</tr>
<tr>
<td>Hamsters</td>
<td></td>
</tr>
<tr>
<td>Rabbits</td>
<td></td>
</tr>
<tr>
<td>Non-Human Primates</td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td></td>
</tr>
<tr>
<td>Other Farm Animals</td>
<td></td>
</tr>
<tr>
<td>Other Animals</td>
<td></td>
</tr>
</tbody>
</table>

**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, research, surgery, or experimentation were followed by this research facility.

2. The 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 the annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the specific 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**

<table>
<thead>
<tr>
<th>NAME &amp; TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL</th>
<th>DATE SIGNED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10/18/2004</td>
</tr>
</tbody>
</table>

APHIS FORM 7023 (Replaces VS FORM 18-23 (Oct 88), which is obsolete)

(AUG 91)
This report is required by law (7 U.S.C. 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.

### ANNUAL REPORT OF RESEARCH FACILITY

#### TYPE OR PRINT

**DEC 01 2001**

#### 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.)

See Attached Listing

**Douglass Research Facility**

#### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>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</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>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 the use of appropriate anesthetic, analgesic, or tranquilizing drugs were used</th>
<th>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 procedure producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)</th>
<th>F. TOTAL NO. OF ANIMALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6. Cats</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7. Hamsters</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8. Rabbits</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>9. Non-Human Primates</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10. Sheep</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11. Pigs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>39</td>
<td>43</td>
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<tr>
<td>12. Other Farm Animals</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13. Other Animals</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### 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**

**AP**

**(AUG 91)**
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 0180-00A-AN

ANNUAL REPORT OF RESEARCH FACILITY
(TYPE OR PRINT)

1. REGISTRATION NO. 31-R-0066
   CUSTOMER NO. 236
   FORM APPROVED
   OMB NO. 0579-0036

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)
   YOUNGSTOWN STATE UNIVERSITY
   ONE UNIVERSITY PLAZA
   YOUNGSTOWN, OH 44555

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 (see NA)
   MAIN CAMPUS FACILITIES
   YOUNGSTOWN, OH 44555

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023a)

| Animals Covered By The Animal Welfare Regulations | Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes | Number of animals upon which experiments, teaching, research, surgery, or tests were conducted including accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs were used | Number of animals upon which teaching, experiments, 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 | TOTAL NO. OF ANIMALS (Cols. 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

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.
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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

APHIS FORM 7023
(Replaces VS FORM 18-23 (Oct 88), which is obsolete)

PART 1 - HEADQUARTERS

(AUG 91)
### ANNUAL REPORT OF RESEARCH FACILITY

#### (TYPE OR PRINT)

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

**ANNUAL REPORT OF RESEARCH FACILITY**

**Cuyahoga Community College**  
**11000 Pleasant Valley Road**  
**Parma, OH 44130**

**Telephone: (216) -987-5450**

**NOV 01 2004**

---

#### 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**

- 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**

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animal being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery, but not used for such purposes</th>
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<th>D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals or for which appropriate anesthetic, analgesic, or tranquilizing drugs were used</th>
<th>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, result or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedure producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)</th>
<th>F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td>16</td>
<td></td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cats</td>
<td>19</td>
<td></td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7. Hamsters</td>
<td>4</td>
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<td>8. Rabbits</td>
<td>4</td>
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<tr>
<td>9. Non-human Primates</td>
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<td></td>
</tr>
<tr>
<td>10. Sheep</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>11. Pigs</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>12. Other Farm Animals</td>
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<td></td>
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<tr>
<td>13. Other Animals</td>
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<td>Gerbils</td>
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<td>2</td>
<td></td>
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</tbody>
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---

#### 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 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 contains 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)

**DATE SIGNED**

APHIS FORM 7023  
(Replaces VS FORM 18-23 (OCT 88), which is obsolete)
**ANNUAL REPORT OF RESEARCH FACILITY**

**TYPE OR PRINT**

---

### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY

**Attach additional sheets if necessary or use APHIS Form 7023A**

| Animals Covered by The Animal Welfare Regulations | **B. Number of animals:***<br>**Number of animals held for use in teaching, testing, research, or surgery but not used for such purposes.**<br>**C. Number of animals upon which teaching, research, or surgery was conducted involving no pain, distress, or use of pain-relieving drugs.**<br>**D. Number of animals upon which teaching, research, or surgery was conducted involving pain or distress to the animals or for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.**<br>**E. Number of animals upon which teaching, research, or surgery was conducted involving pain or distress to the animals or for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.**<br>**F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)** |
|------------------------------------------------|-------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| **4. Dogs**                                     | **0**                                           | **1**                                           | **183**                                         | **184**                                         |
| **5. Cats**                                     | **6. Guinea Pigs**                             | **300**                                         | **22,200**                                      | **22,320**                                      |
| **7. Hamsters**                                | **8. Rabbits**                                 | **72**                                          | **9,008**                                       | **7,604**                                       |
| **9. Non-human Primates**                      | **10. Sheep**                                  | **3**                                           | **3**                                          | **3**                                          |
| **11. Pigs**                                   | **12. Other Farm Animals**                     | **154**                                         | **154**                                         | **154**                                         |
| **13. Other Animals**                          | **2 Goats**                                    | **2**                                           | **2**                                          | **2**                                          |

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**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 and experimental teaching, testing, surgery, or experimentation were followed by this research facility.

2) Each principal investigator 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 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)

<table>
<thead>
<tr>
<th>NAME &amp; TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL</th>
<th>DATE SIGNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Signature]</td>
<td>12-1-04</td>
</tr>
</tbody>
</table>

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**DEC 2004**

[See attached form for additional information.]

---

The 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 213.
United States Department of Agriculture
Animal and Plant Health Inspection Service

Annual Report of Research Facility
(Type or Print)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY
(Attach additional sheets if necessary or use APHIS Form 7023A.)

<table>
<thead>
<tr>
<th>Animals Covered by the Animal Welfare Regulations</th>
<th>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</th>
<th>C. Number of Animals Upon Which Teaching, Research, Experiments, or Tests Were Conducted Involving No Pain, Distress, or Use of Pain-Relieving Drugs</th>
<th>D. Number of Animals Upon Which Experiments, Teaching, Research, Surgery, or Tests Were Conducted Involving Accompanying Pain or Distress to the Animals or for Which Appropriate Anesthetic, Analgesic, or Tranquilizing Drugs Were Used</th>
<th>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, Result or Interpretation of the Teaching, Research, Experiments, Surgery, or Tests. (An Explanation of the Procedures, Result, or Interpretation of the Teaching, Research, Experiments, Surgery, or Tests, Which Would Have Adversely Affected the Procedures, Result, or Interpretation of the Teaching, Research, Experiments, Surgery, or Tests.)</th>
<th>F. Total Number of Animals (Column C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
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</tr>
<tr>
<td>5. Cats</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9. Non-human Primates</td>
<td></td>
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<td></td>
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<tr>
<td>11. Pigs</td>
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<td></td>
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<tr>
<td>12. Other Farm Animals</td>
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<td>13. Other Animals</td>
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<td></td>
</tr>
<tr>
<td>Bats</td>
<td>4</td>
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<td></td>
<td>2</td>
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<tr>
<td>Monodelphis</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

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 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 held 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 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 is the sole exception to the standards and regulations under the Act, 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)

Name & Title of C.E.O. or Institutional Official (Type or Print)

Date Signed

(Aug 91)
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.

1. CERTIFICATE NUMBER: 31-R-0088
   CUSTOMER NUMBER: 252

   Columbus State Community College
   550 E. Spring Street
   Columbus, OH 43216
   Telephone: (614)-287-2400

2. 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

3. REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS Form 7023A)

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animal being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
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<th>E. Number of animals upon which teaching, research, experiments, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used</th>
<th>F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
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<td>30</td>
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<td>6. Guinea Pigs</td>
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<td>12</td>
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<tr>
<td>7. Hamsters</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8. Rabbits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Non-human Primates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Sheep</td>
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<td>11. Pigs</td>
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</tr>
<tr>
<td>12. Other Farm Animals</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>13. Other Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ASSURANCE STATEMENTS

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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

DATE SIGNED

APHIS FORM 7023

(Replaces VS FORM 18-23 (OCT 88), which is obsolete)
### UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

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

2004

<table>
<thead>
<tr>
<th>Certificate Number: 31-R-0089</th>
<th>Customer Number: 253</th>
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<tbody>
<tr>
<td>WII Research Laboratories Inc</td>
<td>1407 George Road</td>
</tr>
<tr>
<td>Ashland, OH 44805</td>
<td>Tel: (419)-289-8700</td>
</tr>
</tbody>
</table>

#### 2. 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 (Site) - Buildings B and D at above address

#### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY
(Attach additional sheets if necessary or use APHIS Form 7023A)

<table>
<thead>
<tr>
<th>Animals Covered</th>
<th>A. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.</th>
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<th>E. Number of animals upon which teaching, research, experiments, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.</th>
<th>F. TOTAL NUMBER OF ANIMALS</th>
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</thead>
<tbody>
<tr>
<td>Dogs</td>
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<td>788</td>
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</tr>
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<td>Guinea Pigs</td>
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<tr>
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<tr>
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<td>168</td>
</tr>
<tr>
<td>Sheep</td>
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</tr>
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<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

#### 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:**

**DATE SIGNED:**

(APHIS FORM 7023 (Revised 12/97), which is obsolete.)
USDA Annual Report-2004

Reporting Period- October 1, 2003 through September 30, 2004

Facility Registration Number: 31-R-0089 prior to 10/1/04
31-R-0117 after 10/1/04

Category “E” Rabbits

Eleven rabbits were classified under Category “E.”

Eight rabbits were in acute dermal irritation studies and may have suffered pain and/or distress from corrosive skin lesions. The purpose of these studies was to evaluate the irritative effects of test materials when applied topically as a single administration to rabbits. Seven rabbits were part of an EPA study designed and conducted under EPA OPPTS guideline 870.1200 (1998) and OECD Guidelines for Testing Chemicals, section 402 (1987). This study was also conducted in compliance with the US EPA Good Laboratory Practices (40 CFR Parts 160 and 792). One rabbit was involved in a FDA study designed in compliance with OECD guideline 404 (2002) and conducted in compliance with the US FDA Good Laboratory Practices (21 CFR part 58). The rabbits were evaluated daily by animal health technicians and the condition of their skin was graded for the severity of erythema, edema, eschar formation and fissuring present at the application site. Other signs of pain and/or distress, such as inappetence, weight loss, or vocalization were not observed.

Three rabbits that may have experienced pain and/or distress were in an ocular irritation study. This acute eye irritation study was designed and conducted in compliance with EPA OPPTS Guideline 870.2400 (1998), OECD Guidelines for Testing Chemicals, Section 405 (2002) and was also conducted in compliance with US EPA Good Laboratory Practices (40 CFR Parts 160). The purpose of this study was to evaluate the irritative effects of test materials when applied topically to the eye as a single administration to rabbits. The rabbits were evaluated daily by animal health technicians and the treated eyes were graded for severity of conjunctivitis, ocular discharge, hemorrhage of conjunctival tissue and degree of corneal damage. No other signs of pain and/or distress were noted, such as inappetence, weight loss or vocalization.
USDA Annual Report-2004

Reporting Period: October 1, 2003 through September 30, 2004

Facility Registration Number: 31-R-0089 prior to 10/1/04
31-R-0117 after 10/1/04

IACUC approved reportable exceptions to the Animal Welfare Act

97 Beagle dogs used in Telemetry Cardiovascular Assessment Studies were implanted with DSI telemetry implants and exempted from exercise during the 14 day surgical recovery period. These animals were given regular opportunity for exercise and socialization prior to and after a 14 day surgical recovery. During the surgical recovery period, dogs were given daily contact and interaction with the technical staff as well as visual, auditory and olfactory stimuli from other dogs in the room.

48 beagle dogs were part of a 4 week continuous IV infusion study. The animals were given regular opportunity for exercise and socialization prior to femoral vein catheterization. During recovery from surgery and during test article administration, dogs were exempted from exercise. The animals were given daily contact and interaction with the technical staff as well as visual, auditory and olfactory stimuli from the other dogs on this study.
**UNITED STATES DEPARTMENT OF AGRICULTURE**  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

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

1. **CERTIFICATE NUMBER:** 31-R-0092  
2. **CUSTOMER NUMBER:** 255

Northeastern Ohio Universities College Of Medicine  
- 4209 State Route 44  
P.O. Box 95  
Rootstown, OH 44272  
Telephone: (330) -325-6556

**REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY**  
(Attach additional sheets if necessary or use APHIS Form 7023A)

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animals upon which teaching, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>C. Number of animals upon which 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</th>
<th>D. Number of animals upon which 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</th>
<th>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 appropriate anesthetic, analgesic, or tranquilizing drugs were used</th>
<th>F. TOTAL NUMBER OF ANIMALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
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</tr>
<tr>
<td>13. Other Animals</td>
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</tr>
</tbody>
</table>

**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.

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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)  

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

(8/11/04, which is obsolete.)
### UNITED STATES DEPARTMENT OF AGRICULTURE

**ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

**ANNUAL REPORT OF RESEARCH FACILITY**

**TYPE OR PRINT**

---

**1. CERTIFICATE NUMBER:** 31-R-0097

**CUSTOMER NUMBER:** 256

Meridian Bioscience, Inc.

3471 River Hills Drive

Cincinnati, OH 45244

Telephone: (513) -271-3700

**OCT 1 4 2004**

---

**2. 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

---

**3. REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY**

**Attach additional sheets if necessary or use APHIS Form 7023A**

<table>
<thead>
<tr>
<th>A.</th>
<th>B. Number of animals used for such purposes.</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>D. Number of animals upon which teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals or for which teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals as required by the standards and regulations under the Act.</th>
<th>E. Number of animals upon which teaching, experiences, research, surgery, or tests were conducted involving accompanying pain or distress to the animals or for which teaching 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 procedures were not used must be attached to this report.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td>0</td>
<td>51</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Cats</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Guinea Pigs</td>
<td></td>
<td></td>
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<tr>
<td>7. Hamsters</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Rabbits</td>
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</tr>
<tr>
<td>9. Non-human Primates</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>10. Sheep</td>
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</tr>
<tr>
<td>11. Pigs</td>
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<tr>
<td>12. Other Farm Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Other Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**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 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)

---

**APHIS FORM 7023** (Replaces VS FORM 18-23, OCT 99, which is obsolete.) (AUG 81)
<table>
<thead>
<tr>
<th>Site No.</th>
<th>Name/Department</th>
<th>Address</th>
<th>Building</th>
<th>Floor/Room</th>
<th>Contact Person</th>
<th>Phone No.</th>
</tr>
</thead>
</table>
| 1       | Clerco         | 3858 Debby Carol Drive
          | Cincinnati, OH 45245 |          |              |                |           |
| 2       | Snowhill       | 3051 Snowhill Road
          | Cincinnati, OH 45245 |          |              |                |           |
| N/A     |                |                  |          |            |                |           |
1133. 

1. REGISTRATION NO. 31-R-0120 CUSTOMER NO. 247 FORM APPROVED OMS NO. 0575-0036

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA. Include Zip Code) CENTER FOR CONS & RESEARCH OF ENDANGERED WILDLIFE 3400 VINE STREET CINCINNATI, OH 45220

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.)

CENTER FOR REPRODUCTION OF ENDANGERED WILDLIFE CINCINNATI, OH 45220

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>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</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>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</th>
<th>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)</th>
<th>F. TOTAL NO. OF ANIMALS (Cols. C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cats</td>
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<td>7. Hamsters</td>
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<tr>
<td>8. Rabbits</td>
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<tr>
<td>9. Non-Human Primates</td>
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<tr>
<td>10. Sheep</td>
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<tr>
<td>11. Pigs</td>
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<tr>
<td>12. Other Farm Animals</td>
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</tr>
<tr>
<td>13. Other Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 painless procedures.

3) This facility is adhering to the standards and regulations under the ACG, 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)

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

10/25/2004

APHIS FORM 7023 (Replaces VS FORM 18-23 (Oct 88), which is obsolete) PART 1 - HEADQUARTERS (AUG 91)
## ANNUAL REPORT OF RESEARCH FACILITY

### TYPE OR PRINT

#### FACILITY LOCATIONS

**CALHOUN RESEARCH LABORATORY**  
AKRON, OH 44307

### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>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</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-reducing drugs</th>
<th>D. Number of animals upon which teaching, research, experiments, or tests were conducted involving accompanying pain or distress to the animals and for which an appropriate anesthetic, analgesic, or tranquilizing drug was used</th>
<th>E. Number of animals upon which teaching, research, experiments, 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)</th>
<th>F. TOTAL NO. OF ANIMALS (Cols. C + D = E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>5. Cats</td>
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<tr>
<td>6. Guinea Pigs</td>
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<tr>
<td>7. Hamsters</td>
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<td>8. Rabbits</td>
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<td>9. Non-Human Primates</td>
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<tr>
<td>10. Sheep</td>
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<tr>
<td>11. Pigs</td>
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<tr>
<td>12. Other Farm Animals</td>
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<tr>
<td>13. Other Animals</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### 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

**Signature of C.E.O. or Institutional Official:**

**Name & Title of C.E.O. or Institutional Official:**

**Date Signed:**

10/21/2004
ANNUAL REPORT OF RESEARCH FACILITY

1. CERTIFICATE NUMBER: 31-R-0112
2. CUSTOMER NUMBER: 1803

Oberlin College
119 Woodland St
Oberlin, OH 44074
Telephone: (440)-775-8309

1. 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)

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animals used in teaching, research, experiments, or surgery but not used for such purposes</th>
<th>C. Number of animals upon which experiments, research, or surgery were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>D. Number of animals upon which experiments, research, or surgery were conducted involving accompanying pain or distress to the animals due to the pain-relieving drugs</th>
<th>E. Number of animals upon which experiments, research, or surgery were conducted involving accompanying pain or distress to the animals due to the use of appropriate anesthetics, analgesics, or tranquillizing drugs</th>
<th>F. TOTAL NUMBER OF ANIMALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
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<td>5. Cats</td>
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<td>7. Hamsters</td>
<td></td>
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<tr>
<td>8. Rabbits</td>
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<tr>
<td>9. Non-human Primates</td>
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<tr>
<td>10. Sheep</td>
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<tr>
<td>11. Pigs</td>
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<tr>
<td>12. Other Farm Animals</td>
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<tr>
<td>13. Other Animals</td>
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<tr>
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<td>25</td>
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</table>

ASSURANCE STATEMENTS

1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetics, analgesics, and tranquillizing drugs, prior to, during, and following actual research, teaching, 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 an 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

<table>
<thead>
<tr>
<th>NAME &amp; TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Signature)</th>
<th>DATE SIGNED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20 December 2004</td>
</tr>
</tbody>
</table>
**ANNUAL REPORT OF RESEARCH FACILITY**

**1. CERTIFICATE NUMBER:** 31-R-0113  
**CUSTOMER NUMBER:** 10115

**A. Animals Covered By the Animal Welfare Regulations**

<table>
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<th>Animals</th>
<th>B. Number of Animal being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.</th>
<th>C. Number of Animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>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.</th>
<th>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 appropriate anesthetic, analgesic, or tranquilizing drugs were used.</th>
<th>F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0</td>
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<tr>
<td>7. Hamsters</td>
<td>0</td>
<td>4</td>
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<td>0</td>
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<tr>
<td>8. Rabbits</td>
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<tr>
<td>9. Non-human Primates</td>
<td>0</td>
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<td>0</td>
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</tr>
<tr>
<td>10. Sheep</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11. Pigs</td>
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<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

**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 restraint teaching, testing, research, 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 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)

**NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL:** (Type or Print)  
**DATE SIGNED:** 11/19/04
**ANNUAL REPORT OF RESEARCH FACILITY**

**TYPE OR PRINT**

<table>
<thead>
<tr>
<th>A. Animals Covered By The Animal Welfare Regulations</th>
<th>B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not used for such purposes</th>
<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>D. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs</th>
<th>E. Number of animals upon which teaching, research, experiments, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs were used</th>
<th>F. TOTAL NO OF ANIMALS (Col. C + D + E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Dogs</td>
<td>0</td>
<td>0</td>
<td>259</td>
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<td>90</td>
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<td>5. Cats</td>
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<tr>
<td>8. Rabbits</td>
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<td>0</td>
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<td>0</td>
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</tr>
<tr>
<td>9. Non-human Primates</td>
<td>0</td>
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<td>0</td>
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<td>0</td>
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<tr>
<td>10. Sheep</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>11. Pigs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
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<td>12. Other Farm Animals</td>
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<tr>
<td>13. Other Animals</td>
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<td>14</td>
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</tbody>
</table>

**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.

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**CERTIFICATION BY HEADQUARTER RESEARCH FACILITY OFFICIAL**

(Chief Executive Officer or Legally Responsible Institutional Official)

I certify that the forms are true, correct, and complete (7 USC Section 2143).

**DATE SIGNED**

11/26/04

**(AUG 31)**
**ANNUAL REPORT OF RESEARCH FACILITY**

**TYPE OR PRINT**

**1. REPORTING FACILITY**

(List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for those purposes. Attach additional sheets if necessary.)

<table>
<thead>
<tr>
<th>FACILITY LOCATIONS</th>
<th>HBE ENVIRONMENTAL, INC</th>
<th>CINCINNATI, OH 45246</th>
</tr>
</thead>
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<tr>
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<th>C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.</th>
<th>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.</th>
<th>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.)</th>
<th>F. TOTAL NO. OF ANIMALS (Cols. C # D + E)</th>
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<tbody>
<tr>
<td>4. Dogs</td>
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<td>13. Other Animals</td>
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</tbody>
</table>

**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 veterinarians for this research facility have 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)

<table>
<thead>
<tr>
<th>SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL</th>
<th>NAME &amp; TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)</th>
<th>DATE SIGNED</th>
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</table>

**APHIS FORM 7023**

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

**PART 1 - HEADQUARTERS**
### ANNUAL REPORT OF RESEARCH FACILITY

**Facility Information**

- **Certificate Number:** 31-R-0116
- **Customer Number:** 18920
- **Facility Name:** Childrens Research Institute
- **Address:** 700 Childrens Drive, Columbus, OH 43205
- **Telephone:** (614) -722-2700

**FACILITY LOCATIONS (Sites)**

- Sites 1-3: The Animal Welfare Regulations

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#### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY

<table>
<thead>
<tr>
<th>Animals Covered By The Animal Welfare Regulations</th>
<th>Number of animals used</th>
<th>Number of animals used for research, teaching, and experimentation</th>
<th>Total Number of Animals C + D + E</th>
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<tbody>
<tr>
<td>4. Dogs</td>
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<td>5. Cats</td>
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<td><strong>chinchillas</strong></td>
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---

**SIGNATURE**

**DATE SIGNED**

AUG 81
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)

Louis Stokes Cleveland DVA Medical Center (541)
10701 East Boulevard (Wade Park Unit)
Cleveland, OH 44106

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.

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(Chief Executive Officer or Legally Responsible Institutional Official)
I certify that the above is true, correct, and complete (7 USC 210(c) Section 314A).

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

TYPE OR PRINT DATE SIGNED

APHIS FORM 7023 (Replaces VS FORM 18-23 (OCT 88), which is obsolete)
(AUG 91)
### Annual Report of Research Facility

#### 3. Reporting Facility

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Chief Executive Officer or Legally Responsible Institutional Official:

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### Footnotes

1. OCR 072004

2. Interagency Report Control No 0190-DQA-AN

3. USDA ANNUAL REPORT OF RESEARCH FACILITY - 2004

4. (OCT 88), which is obsolete