Explanation for entries in Column E of USDA form
Customer # 1345
Registration #: 93-R-0381
Species: Guinea Pig
Number: 388

Explanation per CFR 9.2.36 b (7)
Animals were used to screen novel therapeutics for potential activity as a human therapeutic for various respiratory distress disorders, primarily asthma. Experimental protocol resulted in some animals (especially untreated controls) experiencing short-term respiratory distress characterized by airway spasm. Although bronchoconstriction of this type is not characterized by human asthmatics as a painful experience, it may cause anxiety and distress. Therefore, animals may also experience distress related to this short term experimentally induced compromise. Drug intervention (beyond the testing paradigm) to eliminate distress was contraindicated due to the scientific need to test the novel compounds in the disease model.

Note: No exceptions to the regulations and standards were requested by the PI or approved by the IACUC.
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Number of Animals</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Non-human Primates</td>
<td>12, 15</td>
<td>10, 20</td>
</tr>
<tr>
<td>2.</td>
<td>Other Farm Animals</td>
<td>409</td>
<td>352</td>
</tr>
<tr>
<td>3.</td>
<td>Other Animals</td>
<td>31, 280</td>
<td>322</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>650</td>
<td>818</td>
</tr>
</tbody>
</table>

**Assurance of Records**

1. All pertinent records documenting the date, time, and cause of death, including any applicable record of euthanasia, are maintained for each animal in the facility. The records are reviewed on a regular basis and are updated as necessary.
2. The facility is equipped with appropriate equipment for the care and maintenance of the animals, and the equipment is regularly maintained.
3. The facility is clean and hygienic, and the animals are maintained in a manner that is consistent with their species-specific needs.
4. The facility is staffed by qualified personnel who are trained in animal welfare and care.

**Certification by Headquarters Research Facility Official**

<table>
<thead>
<tr>
<th>Signature</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>11/19/2004</td>
</tr>
</tbody>
</table>

**Approval Form**

<table>
<thead>
<tr>
<th>Form No.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>7520-0565</td>
<td>APHIS FORM 7520 (AUG 01)</td>
</tr>
</tbody>
</table>

**Additional Information**

- This report is required by 7 U.S.C. 1974. Failure to report accurately is punishable by fine and imprisonment.
- This report is also required by the Animal Welfare Act (7 U.S.C. 1901 et seq.).

**Contact Information**

- AIR FORCE RESEARCH LAB
- 200A NEWMANN ST
- VETERINARY WICHESS DIVISION
- BROOKS AIR FORCE BASE, TX 78235-5111

**Facility Location**

AIR FORCE RESEARCH LAB
BROOKS AIR FORCE BASE, TX 75425
CONTINUATION SHEET FOR ANNUAL REPORT
OF RESEARCH FACILITY

<table>
<thead>
<tr>
<th>A.</th>
<th>Type of Animals Used</th>
<th>Amount Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Small Mammals</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>Birds</td>
<td>10</td>
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<tr>
<td>3.</td>
<td>Fish</td>
<td>15</td>
</tr>
<tr>
<td>4.</td>
<td>Other</td>
<td>25</td>
</tr>
<tr>
<td>5.</td>
<td>TOTAL # OF ANIMALS</td>
<td>50</td>
</tr>
</tbody>
</table>

ASSURANCE STATEMENTS

1. The facility is a research facility licensed under the Animal Welfare Act and is not engaged in activities described in the standards and regulations set forth by the United States Department of Agriculture (USDA).
2. The facility is in compliance with all applicable laws and regulations.
3. The facility is in compliance with all applicable laws and regulations.
4. The facility is in compliance with all applicable laws and regulations.
5. The facility is in compliance with all applicable laws and regulations.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL

[Signature]

DATE SIGNED: 11/18/2004

APHIS FORM 7823A

PART 1 - HEADQUARTERS

(AUG 91)
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 in as to be understood by lay persons as well as scientists.

1. Registration Number: 7AF-0001

2. Species (common name) & Number of animals used in this study:
   Dogs (15)

4. Explain the procedure producing pain and/or distress:
   
   Dogs will be exposed to a non-lethal weapon system which penetrates the skin of its target to a depth of approximately 0.3 mm, leading to intense, momentary pain and escapes/fight behavior.

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 question that this proposed research is designed to answer is: What is the effect of a specific form of momentary and escapable pain on the behavior of a dog, specifically a military working dog? More specifically, the key question is: Under this type of pain impact in the short term, is the MWGD's threshold behavior (CPR) in order to answer these questions, an anesthetic, pain, and unaffected (by use of anesthetics, tranquilizers, etc.) dog must be used. This is a study in which the use of anesthetic and/or analgesics would be contraindicated.

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: None.
   CFR: 

1. Registration Number: TAF-0001

2/3. Species (common name) & Number of animals used in this study:
Non-human Primates (5)

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

Monkeys are required to perform a continuous compensatory tracking task, on the primate equilibrium platform (PEP). By the nature of this adversively motivated task performance, the subject must avoid or escape the aversive stimulus (brief tail shock) by meeting the performance requirements of the task.

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 criterion for shock delivery is set so that trained animals can easily perform for many hours without experiencing a shock. Many animals voluntarily experience an occasional shock to "test the system," i.e., to ascertain whether they are still being required to perform. This demonstrates the necessity of maintaining the shock contingency and the mildness of the distress involved. Attempts to train similar performance under appetitive motivation (food reward) for successful performance are counterproductive. Such training has been attempted and was found to take at least 4 to 10 times longer to elicit a final performance that is much less stable than that attained by adversively motivated subjects.

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: None.
CFR: 
4. Explain the procedure producing pain and/or distress.

Mice will be infected with [M12] will be delivered to the lungs by placing drops of spore suspension on the tip of the nose and allowing inhalation while under anesthesia. Resulting infection can produce pain and distress.

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 8 below)

The use of anesthetics is not justified since this may be a confounder in the progress of infection.

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: None.

CFR:

Approval Status: Disapproved
Approved/Disapproved By: 
Date: 
Disapproved Reason: 


1. Registration Number: 74-F-00001 / 433

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

Rats (202)

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

1. Rats will be exposed to millimeter waves, environment heat, and infrared heating. They may experience pain during the recovery period but will not be given routine analgesics. 2. Rats will be given kainic acid injection as a necessary positive control for neuronal damage.

5. Provide scientific justification why pain and/or distress could not be relieved. State methods or reasons used to determine that pain and/or distress relief would interfere with test results. (For Federally mandated testing, see item 6 below)

6. Routine administration of analgesics to the recovery animals will not be used because pain and distress is expected to be minimal and the analgesics is very likely to confound the results of the assay used in this study. Animals that are identified as moribund or in noticeable pain or distress will be immediately and humanely euthanized. 2. The use of kainic acid to induce neurodegeneration leads to behaviors. While the kainic acid induces are not painful, there may be some distress associated with the paraformaldehyde associated with an onpering infection. Induction of neurodegeneration is necessary to the protocol, because of the nature of the system being studied, some pain and discomfort are unavoidable.

8. 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):