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Fiscal year:

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

**Annual Report of Research Facility
Column E Explanation**

(TYPE OR PRINT)

This information is required by law (7 U.S.C. 2143 and 9 C.F.R. §2.36). Failure to report according to the regulations can result in an order to cease and desist.

<p>1. REGISTRATION NUMBER</p> <p>52-R-0011</p>	<p>2. Research Facility Headquarters address University of Virginia, Office of VP for Research P.O. Box 400301 Charlottesville, VA 22904</p>
<p>3. Number of animals used in the study.</p> <p>65</p>	<p>4. Species (common name) of animals used in the study.</p> <p>Hamsters</p>

5. Explain the procedure producing pain and distress.

There are three studies of infectious diseases that use hamsters as a model for human disease. One study is of enterotoxigenic *Clostridium difficile* examining the role of eosinophils and some cytokines that ameliorate the clinical symptoms of diarrhea and dehydration. The hamsters are euthanized if they lose 20% or more of their body weight during the course of infection.

The second two studies use a hamster model of SARS-CoV-2 (Covid-19). Hamsters are given SARS CoV-2 by either an intra-nasal or intra-tracheal route to test of the efficacy of candidate vaccines or therapeutic treatments during the ensuing infection. The hamsters are euthanized if they lose 20% of their body weight or show severe signs of respiratory distress.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

In the *Clostridium difficile* experiments no non-steroidal anti-inflammatory analgesia is provided as this is a study that quantifies inflammation, and administering opioids would change gastrointestinal motility.

In the SARS CoV-2 experiments no non-steroidal anti-inflammatory analgesia is provided during that time as this is a study that quantifies pulmonary inflammation, and whole body plethysmography is performed to quantify components of breathing and administering opioids would depress respiration.

7. 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):

None

Agency	CFR
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