

Column E Explanation

This form is intended as an aid to complete the Column E explanation. It is not an official form and its use is voluntary. Annual Reports and explanations should NOT include PII information such as names (principal investigators and research staff), addresses, protocols, meeting notes (either in part or in full), the animals room numbers, grant information, veterinary care programs, and the like. A Column E explanation must be written so as to be understood by lay person as well as scientists.

1. Registration Number: 63-R-0107
2. Number 4 of animals used in this study.
3. Species (common name) Hamster of animals used in this study.
4. Explain the procedure producing pain and/or distress. Explanations should include a brief description of the procedure, but also explain what the animal's experience, examples of which may include, but are not limited to: Neurological signs, seizures, tremors, paralysis, lethargy, inappetence, respiratory signs, GI distress, vomiting, and diarrhea.

Hamsters will be infected with *Leptospira interrogans* as a model of human leptospirosis. Different routes of infection (intraperitoneal, transdermal, conjunctival, subcutaneous) will be used and animals will be monitored for signs of disease. Urine collection and body weight measurements will be performed daily and blood collection will occur at the start of the experiment and then every 7 days.

Hamsters infected with *Leptospira* may show inappetence, weight loss, lethargy, conjunctivitis and difficulty moving. A scoring system has been created for this project and include the following euthanasia criteria: inappetence, weight loss >10%, inability/reluctance to move, permanently closed eyes.

5. Attach or include with the reason(s) for why anesthetics, analgesics and tranquilizers could not be used. (For federally mandated testing, see Item 6 below).

Anesthetic (isoflurane) is used at the time of infection, for all blood collections and at the time of euthanasia. Analgesics are not used in this study due to concerns that steroids or non-steroidal anti-inflammatory agents may alter the progression of disease and infection. Opioid administration is also associated with immunomodulatory effects, including inhibition of antibody and cellular responses, natural killer cell activity, cytokine expression, chemokine-induced chemotaxis, and phagocytic activity.

6. What, if any, federal regulation 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 _____