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Fiscal year: 2022

**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.

1. REGISTRATION NUMBER

74-R0069
1473

2. Research Facility Headquarters address

The University of Texas at El Paso
500 W. University Ave.
IACUC Office, Admin 209
El Paso, Texas 79968

3. Number of animals used in the study.

174

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

Prairie Voles

5. Explain the procedure producing pain and distress.

*SARS-CoV-2 Aerosol infection: Voles will be intranasally inoculated with live authentic SARS-CoV-2 viruses. The goal is to establish that prairie voles can recapitulate human COVID-19 and be used as an alternative animal model to study SARS-CoV-2 infection.

*Mtb Aerosol Infection: Voles will be inoculated with Mycobacterium tuberculosis (Mtb) to establish the susceptibility of Mtb. The goal is to develop therapeutics to treat and control tuberculosis (TB).

*Chronic Stress: Voles will be exposed to different behavioral tests (Social interaction, alloparental test, sucrose preference test, open field test, elevated plus-maze, tail suspension, forced swim, morris water maze, splash test, warm/hot plate, and antidepressant reversal experiment) to develop stress-induced depression-related behavior. The goal is to understand the impact of social stress on development of depression-related behavior and expression of key underlying neural mechanisms for major depressive disorder (MDD).

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.

*SARS-CoV-2 Aerosol infection: Prairie voles are used to detect significant differences in infectivity, viral load, and symptoms, therefore no alleviating drugs will be used. Tissue and blood collection will be obtained at the end of the procedures for histological analyses of the presence of neutralization antibodies. The following humane endpoints include, inactivity, hunched posture, loss of 20% of body weight, respiratory distress, any condition interfering with eating, and fevers persisting more than 3 days.

*Mtb Aerosol Infection: Prairie voles are used to detect significant differences in infectivity, viral load, and symptoms, therefore no alleviating drugs will be used. Tissue and blood collection will be obtained at the end of the procedures for histological analyses of granuloma formation. The following humane endpoints include, inactivity, hunched posture, loss of 20% of body weight, and respiratory distress.

*Chronic Stress: Tissue and blood collection will be obtained at the end of the procedures to analyze the differences in corticosterone levels in the blood serum. Corticosterone levels found in blood serum are sensitive to the effects of anesthesia and sedatives, and therefore could introduce confounding results. The following humane endpoints include, inactivity, hunched posture, and loss of 20% of body weight

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):

N/A

Agency

N/A

CFR

N/A