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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

Cert No. 65-R-0102

2. Research Facility Headquarters address

University of Mississippi Medical Center
c/o Center for Comparative Research
2500 North State Street
Jackson, MS 39216

3. Number of animals used in the study.

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

Rabbits

5. Explain the procedure producing pain and distress.

Rabbits are an exceptional model for infectious keratitis studies. Prior research contributed to a collaborative project involving the use of an innovative Cold Atmospheric Plasma (iCAP) as preliminary data for a Phase II clinical trial. A total of 64 animals were enrolled in the rabbit study, with 32 receiving the iCAP procedure. Within these 32 animals, varying time points were used to apply the iCAP procedure. Four (4) animals were administered the iCAP procedure daily for 8 consecutive days. In this specific sub-group, all animals were noted to have extreme ocular irritation. Further, grimace scores indicated discomfort by the eighth day, when the experiment ended. In addition, histopathologic assessment also indicated corneal changes of inflammatory cells and structural alterations to collagen fibers.

Throughout the experiment, animals were provided close observation and veterinary care. In all cases, the rabbits continued to eat, socialize, self-groom, and display normal behavior. At no point did the animals display indications of lethargy, health concerns, or morbidity.

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.

The study sought to determine the efficacy of the iCAP procedure plus topical antibiotics in the treatment of infectious keratitis. In an effort to minimize variables and to assess tolerance to the iCAP procedure, ocular analgesia was not provided. The IACUC reviewed and approved this study on December 31, 2020.

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):

NA

Agency	CFR