

Column E Explanation

This form is intended as an aid to completing the 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 so as to be understood by lay persons as well as scientists.

1. Registration Number: 33-R-0029

2. Number 63 of animals categorized as column E used in this study.

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

4. Explain the procedure producing pain and/or distress. Explanations should include a brief description of the procedure, but also what the animal's experience, examples of which may include, but are not limited to: Neurological signs, seizures, tremors, paralysis, lethargy, inappetance, respiratory signs, GI distress, vomiting, and diarrhea.

Animals received dextran sodium sulfate (DSS) which results in colitis. DSS was diluted in water, and dosage was poured into animals bowl before the first feed of the day.

Animals developed bloody diarrhea and did not show any other symptom such as fever, lethargy and anorexia.

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

Antibiotics are known to directly impact the homeostasis of the bacterial communities within the gut, particularly in the critical phase of the microbiome establishment. NSAID inhibits prostaglandins, which are known for its inflammatory effects in the body. In addition, NSAID can modify normal microbial populations.

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). If the requirement is per a guidance document, such as an Agency notice or harmonization guideline, please provide specific sufficient information to identify the cited document.

Not Applicable

Agency _____ CFR _____

~~10 DEC 2019~~

Agricultural Housing for Animals Assigned to Biomedical Studies:

Four investigators (4 protocols) were approved for agricultural type housing (pastures, paddocks, stalls, floor pens, gestation and farrowing crates) for agricultural species.

Most of the animals (Cattle, horses, llamas, pigs, sheep and goats) were on one protocol that houses the resident teaching herds for the College of Veterinary Medicine. During the reporting period, the following were acquired/born for the teaching herds:

57 horse
4 Llama
65 cattle
194 pigs
65 sheep
8 goats

Three investigators (3 protocols) are approved to house pigs used in biomedical studies in an agricultural setting. This housing situation was deemed most suitable for the nature of the study by the IACUC.

237 pigs were used during the reporting period.

Multiple Major Survival Surgeries:

One investigator was approved for two surgeries (swine) for scientifically justified reasons.

35 pigs were used on this protocol during the reporting period.

Prolonged Restraint:

One investigator was approved for prolonged restraint of calves. Calves are tethered in their crates for 6 – 8 days, restricting their ability to turn around during fecal collections to prevent contamination with urine.

2 calves were used on this protocol during the reporting period.

One investigator was approved for prolonged restraint of young pigs. The restraint is suspension in a sling within an experimental chamber for up to one hour at a time, to test eye blink conditioning. Pre-experimental acclimation was employed, and no distress was noted by the researchers.

14 pigs were exposed to this testing during the reporting period.

Non-standard temperature conditions

Guinea Pigs are used to investigate the biology of influenza infection. During transmission experiments, animals may be housed under temperature (10-15°C) and relative humidity (RH; 10-20%) conditions that fall below the range recommended in the Guide (20-26°C and 30-70% RH). These conditions are required for optimal transmission of influenza virus in this model. No adverse behaviors have been observed under these conditions.

0 Guinea pigs were used on this protocol during the reporting period.

Exceptions to Standards and Regulations under the AWA for Reporting Period 10/1/2018 – 9/30/2019:

The following exceptions to Guide standards were reviewed by the IACUC and are approved in protocols active during this reporting period.

Housing (Individual):

Fourteen investigators were approved to individually house social animals (pigs, calves, guinea pigs, cats and dogs) on 28 protocols. Investigators provided scientific justification for this housing (precision of feeding, monitoring feed intake, prevention of coprophagy, protection of surgical sites, infection protocols; safety of animal and personnel).

Pigs: Most individually housed pigs are 1) neonatal piglets housed in an artificial-rearing system for up to 5 weeks, 2) following surgical procedures to prevent interference of the surgical site from pen mates. The cages currently in use for artificial rearing of piglets meet Guide standards for space.

Additionally, pregnant gilts and sows may be housed individually as per standard agricultural practice. Some are maintained in standard farrowing crates from mid-gestation until after farrowing/caesarian section delivery or weaning. Some gilts may be housed in isolation due to experimental infection protocol. These studies utilize the piglets, and the sows are euthanized following delivery.

Most often pigs that are housed individually are adjacent to conspecifics, with visual, olfactory and/or auditory access to conspecifics. Some sows used in infection studies are housed one per isolation room, but have olfactory and auditory access to conspecifics as well as frequent human contact, and will eventually have litters.

A total of 868 pigs were used during this reporting period.

Cattle: Calves are held in metabolic crates for up to 10 days. After acclimation, calves are inoculated with *C. parvum* oocysts. This is followed by fecal collections.

Two calves were housed individually during this reporting period.

Dogs and cats: Dogs are typically housed individually, adjacent to conspecifics, with visual, olfactory and/or auditory access to conspecifics. Most are on feeding studies, requiring individualized feed intake and prevention of coprophagy. Dogs are allowed outside of pens daily for playing with conspecifics and with caretakers. Cats are on feeding studies, requiring individualized feed intake and prevention of coprophagy. Cats are allowed outside of pens most of the time for playing with conspecifics and with caretakers, with cage confinement only during meal and collection periods.

38 dogs and 38 cats were housed as described during the reporting period.

Guinea Pigs: Guinea pigs are housed individually to prevent virus transmission for short periods, as part of the approved influenza study.

34 Guinea pigs were housed individually during this reporting period.