Justifications for Column E

2020-11424
Hamsters (n=393) were used to identify potential vaccine candidates for an infectious biological agent that causes clinical disease in humans and is a public and world health concern. Animals demonstrated expected clinical signs of systemic disease which included decreased activity, hunched posture, and ruffled fur and disease specific clinical signs such as pulmonary, neurologic and/or vascular abnormalities. Since the clinical course of the disease is immunopathologically based, the use of analgesics and/or anti-inflammatory drugs will alter the disease pathogenesis and confound interpretation of vaccine efficacy.

2022-20243
Hamsters (n=120) were used to study diagnostic approaches and development of vaccines and therapeutics for an infectious biological agent. Some animals developed expected clinical signs such as weight loss, lack of feeding/drinking, lethargy, jaundice, and lack of grooming. Animals were humanely euthanized upon reaching a point where recovery was unlikely to occur. Given that the study relies heavily on expression of the clinical signs of the disease, treatment with analgesics, non-steroidal anti-inflammatories for pain and distress would alter outcome of the microbial potency, vaccine, and diagnostic testing.

Justifications for Column E

2021-11497
Thirteen-lined ground squirrels (n=27) experienced either 48-hour food withholding or 24-hour water withholding in order to study the physiological and metabolic resilience to prolonged fasting and adaptations in the regulation of internal water balance during hibernation. Animals were implanted with telemetric wireless transponders that measured and transmitted core body temperature and changes in the vital signs. There are no suitable alternatives to food or water withholding, as this mimics what squirrels may experience in the natural environment.