2.31(e)(3) 
Institutional Animal Care and Use Committee (IACUC).

Sixteen rabbits were used on a protocol that had a series of general approved procedures that could be done utilizing the animals. All of these procedures and the general experimental timeline were approved on the associated IACUC protocol; however, the specific combination of procedures was not approved.

Eighteen antelope ground squirrels were used on a surgical protocol in which an intraperitoneal temperature sensor was implanted. The type of suture used for skin and abdominal wall closure, and the use of vetbond surgical glue on top of the sutures after skin closure were not described in the IACUC approved protocol. In addition, surgical repair of a failed abdominal incision was performed by the principal investigator without the procedure being authorized in the protocol. Six of eighteen of these ground squirrels developed complications.

On 8/14/23, a male pigtail macaque received a second minor surgical procedure to replace a telemetry implant. The protocol only describes one repair/replacement surgery as being allowed.

All the procedures to which the animals are subjected must be included in a complete description of the proposed use of the animals. It is essential that this information be included in the protocol to ensure judicious and humane use of the animals.

Corrected prior to the inspection.

2.32(a) 
Personnel qualifications.

On 1/6/23, a male rhesus macaque sustained an injury to the cerebral tissue during placement of a recording device by a trainee. The trainee placing the device was relatively new to the lab and in the process of being trained. As part of the training process, the principal investigator was supervising the trainee as they performed the procedure. The principal investigator briefly stepped away from supervising the trainee to take an emergency phone call when the incident occurred. In this incident, the guide cannula was extended too far and caused trauma to the underlying tissue as the device was placed. The animal was observed exhibiting noticeable neurologic impairment within minutes, at which point the procedure was terminated, veterinary staff were immediately contacted, and treatment was initiated.
It is the responsibility of the research facility to ensure that all personnel involved in animal use are adequately trained to perform their duties. This trainee was not adequately trained to conduct this procedure alone and the procedure should have been halted while the principal investigator was absent. The facility shall ensure that all personnel are adequately trained to conduct their duties.

Corrected prior to the inspection.

2.33(b)(1)  Critical

Attending veterinarian and adequate veterinary care.

On 6/26/23, an adult male rhesus macaque died while under anesthesia. The animal was initially sedated with injectable agents. After induction of anesthesia, the animal began to experience poor oxygenation based on peripheral SpO2 monitoring and a rapid, irregular heartbeat. Due to these vital signs, a decision was made to transition the animal to inhalant anesthesia with oxygen support. A technician quickly retrieved a portable anesthesia machine to bring to this procedure space. The animal was attached to the anesthesia machine and immediately stopped breathing. A veterinarian was called, and the monkey was taken to an area that had an anesthesia ventilator. The animal went into cardiac arrest and was unable to be resuscitated.

The incident was reviewed, and it was found that the anesthesia machine did not work properly with the circuit that was attached to it. The machine was not functioning properly, and this resulted in elevated pressures rapidly developing within the tubing. Evidence of barotrauma was confirmed at gross necropsy confirming this increased pressure as the cause of death.

The facility failed to provide adequate equipment to prevent the death of the monkey. The facility shall ensure that all equipment is readily available and functioning properly.

Corrected prior to the inspection.

3.83
Watering.

On 10/28/22, a male rhesus macaque did not receive his daily ration of water. The animal was on an IACUC approved protocol that included the use of water regulation while animals performed behavioral tasks. No abnormalities had been seen during daily observations. On 10/31/22, the facility discovered the missed water. The animal was assessed by a veterinarian, sedated for bloodwork, and provided fluids. No abnormalities were noted on exam or in the bloodwork. All animals on study were then placed on ad lib water while the process for providing water was reviewed.

Potable water must be provided in sufficient quantity to every nonhuman primate at the facility to ensure their health and well-being. The research facility must provide water as described in the research protocol to ensure the humane care of the monkeys on the study.

Corrected prior to the inspection.
This inspection and exit interview were conducted with the facility representatives.

Additional Inspectors:

Eduardo Vivas, VETERINARY MEDICAL OFFICER
KURT HAMMEL, VETERINARY MEDICAL OFFICER
## United States Department of Agriculture
Animal and Plant Health Inspection Service
Customer: 1016
Inspection Date: 12-Sep-2023

### Species Inspected

<table>
<thead>
<tr>
<th>Count</th>
<th>Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>000014</td>
<td><em>Macaca fascicularis</em></td>
<td>CRAB-EATING MACAQUE / CYNOMOLGUS MONKEY</td>
</tr>
<tr>
<td>000169</td>
<td><em>Macaca mulatta</em></td>
<td>RHESUS MACAQUE</td>
</tr>
<tr>
<td>000217</td>
<td><em>Macaca nemestrina</em></td>
<td>PIG-TAILED MACAQUE</td>
</tr>
<tr>
<td>000013</td>
<td><em>Canis familiaris</em></td>
<td>DOG ADULT</td>
</tr>
<tr>
<td>000028</td>
<td><em>Oryctolagus cuniculus</em></td>
<td>DOMESTIC RABBIT / EUROPEAN RABBIT</td>
</tr>
<tr>
<td>000010</td>
<td><em>Mesocricetus auratus</em></td>
<td>SYRIAN / GOLDEN HAMSTER</td>
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<tr>
<td>000001</td>
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<td>ANNA'S HUMMINGBIRD</td>
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<tr>
<td>000100</td>
<td><em>Zonotrichia leucophrys</em></td>
<td>WHITE-CROWNED SPARROW</td>
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<tr>
<td>000000</td>
<td><em>Ammospermophilus leucurus</em></td>
<td>WHITE-TAILED ANTELOPE SQUIRREL</td>
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</table>

| 000552  | **Total**                |                                                     |