

INSTITUTIONAL ANIMAL CARE AND USE PROTOCOL APPLICATION

APPENDIX #1 – Surgical Procedures

Note: Duplicate this appendix for each surgical procedure. Procedures performed under the same period of surgical anesthesia may be combined.

OVERVIEW

1. Title of Protocol:
2. Principal Investigator (PI):
Telephone:
Email:
3. Veterinarian:
Telephone:
Email:

IDENTIFICATION

4. Procedure Name:
5. Species or rodent strain (Common Name):
6. Number of species or rodent strain:
7. What type of surgery will the species or rodent strain undergo?
Major - Penetrates and exposes a body cavity, produces substantial impairment of physical or physiologic functions, or involves extensive tissue dissection or transection (e.g., laparotomy, thoracotomy, joint replacement, limb amputation)
Minor - Does not expose a body cavity and causes little or no physical impairment (e.g., wound suturing, peripheral vessel cannulation, percutaneous biopsy)

PROCEDURE DETAILS

8. Where will the surgery(s) be performed?

9. Aseptic Procedures: Sterile instruments, implants and a sterile field are required for ALL surgeries in which the animal will recover from anesthesia. Sterile materials are recommended for other procedures. Indicate methods used to ensure the sterility of these materials, excluding materials that are sterilized by the manufacturer (e.g., surgical gloves, surgical blades, suture, etc.).

Sterilization of Instruments	Check all that apply
High-pressure / temperature steam	
Gas sterilization	
Dry heat	
Plasma sterilization	
Chemical sterilant	
Type	
Duration of treatment	
Other (Describe)	

Sterile Field	Check all that apply
Surgeon cap	
Face mask	
Surgeon scrub	
Sterile gown	
Sterile drapes	
Sterile gloves	
Other (Describe)	

10. Pre-operative Procedures: Identify all pre-operative procedures performed during the surgical preparation.

Pre-operative Procedures

Check all that apply

Fasting (*rarely used in rabbits or rodents*)

Specify timing and duration:

Withhold water

Specify timing and duration:

IV Catheter placement

Catheter size, vessel(s) accessed:

Intubation

Application of sterile ophthalmic ointment

Warming pads to maintain body temperature

Removal of hair from the surgical site

Shaving

Depilatory (e.g. Nair)

Application of skin disinfectant

Betadine/chlorhexidine followed by alcohol, repeated 3 times

Other (Describe):

Other (Describe):

11. Pre-operative and intraoperative anesthesia, analgesia, and other medications: Identify the anesthetics, analgesics and other agents administered prior to or during surgery. Examples include antibiotics, sedatives, tranquilizers, anticholinergics, paralyzing agents, fluids, or other pharmaceuticals.

Agent	Dose / Volume		Route (e.g., iv, ip, sc)	Frequency of Administration (e.g., once, continuous, other)
	mg/kg	mL		

12. Monitoring depth of anesthesia: Identify the metrics used to confirm and monitor anesthesia during the surgical procedure.

- Toe pinch
- Eye blink
- Respiration rate
- Mucous membrane color
- Heart rate (requires monitor)
- Jaw tone (large animals)
- Blood pressure (large animals)
- Other, please explain.

13. Are paralytics employed during this surgical procedure?

No

Yes: If YES, will anesthesia be used when paralytics are employed?

No

Yes

14. If animals are under anesthesia and the influence of paralytics, how will animals be monitored for pain perception? (i.e., heart rate, ECG, etc.)

15. Provide a complete narrative of the surgical procedure. You must provide all of the relevant details without making reference to other protocols.

16. Is it expected that the species or rodent strain will survive the surgical procedure?

No

Yes: If YES, complete the section titled 'Survival Surgery and Post-Operative Care and Monitoring.'

SURVIVAL SURGERY AND POST-OPERATIVE CARE AND MONITORING

17. List all implanted materials and/or devices (e.g. ligatures, telemetry units, catheters, electrodes, fracture plates, pumps, etc.)

#	Implanted Device (description, size, composition, etc.)	Anatomic Location	Duration (days)
1			
2			
3			
4			

18. Specify methods used to sterilize implanted materials and/or devices.

Sterilization Method	Material and/or Device	Check all that apply
Received sterile from the manufacturer		
High-pressure/temperature steam		
Gas sterilization		
Dry heat		
Plasma sterilant:		
Type:		
Duration of Treatment:		
Other (Describe)		

19. Tissue Apposition and Wound Closure.

Type	Type	Size	When will these be removed?	Check all that apply
Deep Tissue Sutures				
Skin Sutures				
Wound Clips				
Staples				
Animal tissue adhesive (e.g., VetBond)				
Other (Describe)				

20. Will post-operative analgesia be used to provide post-operative pain relief to the animals following surgery?

No: If NO, Provide a justification for not using postoperative analgesics. Include supporting literature references to justify the exclusion of postoperative analgesia.

Yes: If YES, identify the analgesics and anesthetics that will be given.

Agent	Dose / Volume		Route (e.g., iv, ip, sc)	Frequency of Administration (e.g., once, continuous, other)
	mg/kg	mL		

21. What will be the duration of survival after surgery?

22. What will be the frequency of monitoring from surgery to euthanasia? **Note:** The typically accepted minimum monitoring might include twice a day for 3 days then 2-3 times weekly for the duration of the experiment. Consult the veterinarians.

a. What parameters will be monitored?

Behavior and activity level	Specify frequency	Check all that apply
Body weight		
Overall condition		
Body temperature		
Food and water intake		
Hydration status		
Other (Describe)		

b. Who will provide post-op support?

23. Describe management of indwelling transcutaneous implants, such as venous catheters, electrical leads, central lines, etc. Include skin care, antibiotic prophylaxis, etc.

24. How will you manage the implant (e.g., cleaning and flushing catheters)?

25. Is it possible the surgical model lead to persistent, chronic pain or distress unrelieved by analgesics?

No

Yes, If YES, place these animals under pain category E under question 2 of the main animal use protocol and complete a & b below.

a. What are the potential long-term consequences or complications?

Long-term pain or discomfort

Immobility

Organ failure

Paralysis

Paresis (muscle weakness, partial paralysis)

Difficulty obtaining food and/or water

Other: Describe

b. What methods or non-pharmacological environmental comfort measures will be employed to minimize pain or distress?

Paper bedding

Access to soft pellet feed

Gel packs

Housing Huts

Other: Describe

26. Will the animals be subjected to more than one survival surgery taking place during separate periods of anesthesia?

No

Yes: If YES, list the surgical procedures sequentially and justify why it is scientifically necessary to operate on these animals more than once.

ATTACH THIS DOCUMENT TO YOUR IACUC PROPOSAL