	<b>Biological Resource Centre</b>		Page 1 of 2
	<b>BRC/IACUC/002</b>	<b>Appendix XI – Standard Procedures On Surgical Procedures</b>	<b>08</b>

### **Standard Procedures on Surgical Procedures**

#### **Surgical preparation of animal:**

- 1) Anaesthetize the animal according to instructions provided by the IACUC protocol or as recommended by the BRC veterinary staff.
- 2) Apply small amount of sterile ophthalmic ointment in both eyes to prevent corneal desiccation.
- 3) Shave the surgical area. Provide at least 1 cm (for mice) and 2cm (for rats) of shaved skin on each side of the planned incision to prevent entry of hair into the incision site.
- 4) Remove the loose hair around the surgical site.
- 5) Using clean or sterile gloves, scrub the skin gently with a povidone iodine scrub.
- 6) Use a clean gauze sponge or cotton swab to scrub the skin from the centre of the surgical site to the periphery in a circular motion.
- 7) Swab the skin using 70% alcohol.
- 8) Alternate steps 5 to 7 thrice.
- 9) Prior to surgery, depth of anesthesia is verified by loss of animal's pedal withdrawal reflex. The animal must be maintained in a surgical plane of anesthesia throughout the surgical procedure.

#### **Preparation of surgical team:**

Surgeons to thoroughly wash hands using bactericidal scrub and put on surgical attire, i.e. hair cover, face mask, gown and surgical gloves.

#### **Patient monitoring during anesthesia and surgery to include records of:**

Anaesthetic depth has to be constantly monitored, once every 10mins or more frequently if the animal is unstable. This can be achieved using the “pedal withdrawal reflex” technique. Slight movements from the animal, changes to heart rates and respiratory rates may indicate that the animal is not in the surgical plane of anesthesia.

The temperature of the animal should be monitored with a rectal probe if possible.

#### **Post-Operative Recovery:**


The animal must be moved to a clean and dry cage.

The animal should remain under observation until it regains righting reflexes. Observe respiratory rate, heart rate, body temperature and color of the mucous membranes.

Prevent heat loss by providing warmth to the animal, if necessary.

Administration of warmed sterile saline or balanced electrolyte solution parenterally will help to speed up the recovery process. If necessary, refer to instructions provided by the BRC veterinary staff for recommended volumes.

Return the animal to the animal holding rooms only after it has regained its righting reflex.

	<b>Biological Resource Centre</b>		<b>Page 2 of 2</b>
	<b>BRC/IACUC/002</b>	<b>Appendix XI – Standard Procedures On Surgical Procedures</b>	<b>08</b>

All observations, treatments and procedures must be recorded on post-operative monitoring cage cards for the entire duration of the post-operative care.

Recommended guidelines: Antibiotic treatment (minimum 5 days) and Analgesia (minimum 3 days).

Examine the wound daily (for at least 5 days) and for major surgeries, measure body weight daily in addition to examining the wound.

Ensure that skin sutures/wound clips are removed from the rodents when wounds have healed (and not longer than 7-10 days after surgery).

If there are any surgical complications, contact BRC veterinary staff as soon as possible.

Post-operative monitoring cage cards must be returned to the vet trays once completed.

***If pain/distress is not controlled at this stage, veterinary staff and PI must be alerted for decision on humane euthanasia.***