

Document Number: ANP043	Subcutaneous Pump Implantation in Rodents CONFIDENTIAL INFORMATION MOLECULAR MEDICINE RESEARCH INSTITUTE	Effective Date: December 2012
Section: Animal Research		Supersedes Date: June 2007
Subsection: Facility		Page: 1 of 2

1.0 OBJECTIVE

- 1.1 The objective of this procedure is to describe the procedure for subcutaneous pump implantation in rodents.

2.0 SCOPE

- 2.1 This procedure applies to animals used for experimentation.

3.0 POLICY

- 3.1 It is the policy of MMRI to establish written and approved procedures to ensure that the health and well being of employees is protected, and that potentially hazardous procedures are performed in a safe manner.

4.0 RESPONSIBILITIES

- 4.1 It is the responsibility of Manager of Animal Research or designated alternate to implement this procedure and revise it when necessary.

5.0 REFERENCES

- 5.1 SOP# ANP00X, Anesthesia of Rats and Mice

6.0 SAFETY PRECAUTIONS

- 6.1 It is the responsibility of all personnel to use good judgment and safe practices in the laboratories. Protective clothing (e.g., laboratory coats, coveralls, boots, face masks, aprons, rubber gloves and safety glasses) are provided by the company.
- 6.2 Sterile rubber gloves, face masks, bouffants and safety glasses are worn when performing surgery.
- 6.3 Disposable scalpel blades, hypodermic needles and syringes are placed in a disposable sharps container located in the procedure room. When full, the container is disposed of safely.
- 6.4 All injury accidents are promptly reported to the appropriate Supervisor.

7.0 EQUIPMENT AND MATERIALS

Autoclaved surgical instruments
Anesthetic (Domitor® and Ketamine combination or Ketamine and Xylazine combination or isoflurane)
Animal clippers and blade #40
Nolvasan® or Betadine® surgical scrub and 70% Isopropyl Alcohol

Document Number: ANP043	Title: SUBCUTANEOUS PUMP IMPLANTATION IN RODENTS <i>CONFIDENTIAL INFORMATION</i> MOLECULAR MEDICINE RESEARCH INSTITUTE	Effective Date: December 2012
Section: Animal Research		Supersedes Date: June 2007
Subsection: Facility		Page: 2 of 2

Gauze Sponges
Syringes (1.0 mL)
Suture materials (3-0 to 5-0 black braided silk or Dexon) or staples.
Heating Pads
Surgical light
Magnifying loop or dissecting scope.

8.0 PROCEDURE

8.1 Preparation of the Animal

- 8.1.1 Weigh the animal and mark the tail (other identification methods can also be used such as ear tags, ear punch, tattoos etc)
- 8.1.2 Anesthetize animal as per SOP. Monitor surgical plane by toe pinch reflex. During the procedure, monitor color and respiration periodically.
- 8.1.3 Shave the anterior half of the animal's back.
- 8.1.4 Prepare surgical sites with Nolvasan® or Betadine® surgical scrub alternating with 70% Isopropanol (2-3 times).

8.2 Subcutaneous Pump Implantation Procedure

- 8.2.1 Make a skin incision in the interscapular area. For double pump implantation, each incision is placed in the scapular area.
- 8.2.2 Insert a hemostat, and gently open and close its jaws to create a pocket for the pump. The pocket should be large enough to allow some free movement of the pump (e.g., 1 cm longer and wider than the pump).
- 8.2.3 Insert the filled pump in the pocket, exit port first.
- 8.2.4 Close the incision with wound clips or sutures.

8.3 Post-Op

- 8.3.1 Provide buprenorphine (0.1–1.0 mg/kg) following surgery or peri-surgery
- 8.3.2 Remove staples 7-14 days after surgery