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Slow Release Pellet Implantation

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We use this protocol and it's working

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Abstract

This protocol describes how to subcutaneously implant slow-release pellets into mice.

Surgery Setup

1 Draw up drugs needed for surgery (e.g. anesthetics, analgesics).

2 Turn on bead sterilizer and light.

3 Prepare a recovery cage on a heating pad.

4 Place sterile surgical tools (forceps, scalpel, small scissors, hemostat) to one side of the stereotax.

5 Dispense a small amount of betadine into a weigh boat and place to one side.

6 Place a packet of sterile swabs nearby.

7 Turn on the heating pad for the stereotax.

Anesthesia and Incision

8 Turn on oxygen and place mouse into isoflurane chamber and adjust isoflurane to 1-5% until mouse has fallen asleep.

9 Place mouse onto the stereotaxic frame and adjust isoflurane flow to 2%. Monitor the depth of anesthesia at least every 5 minutes during surgery.

10 Apply eye lubricant.

11 Prep the animal between the neck and shoulder blades:

11.1 Shave off a patch of fur.

11.2 Apply alternating swabs of betadine and 80% ethanol x 3

12 Confirm there is no bipedal toe pinch response. Use the scalpel to cut a midline incision that is 1.5x the diameter of the slow-release pellet.

Pellet implantation and suture

13 Spread the subcutaneous tissue to create a pocket for the pellet. The pocket should be large enough such that the pellet is not resting immediately beneath the incision.

14 Insert the sterile slow-release pellet.

15 Close the wound with suture.

Monitoring and Clean up

16 Turn the isoflurane off, remove the mouse from the stereotax and inject with analgesics.

17 Place mouse into recovery cage, and monitor until ambulatory before returning to its home cage.

18 Clean and sterilize instruments between each mouse.

19 At the end of the day:

19.1 Clean and sterilize all instruments.

19.2 Remove consumables from the surgical area.

19.3 Make sure isoflurane and oxygen are set to zero and turned off. Turn of the heating pad and bead sterilizer.

Post-operative care

20 Follow appropriate postoperative care according to IACUC protocol