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# Vezina Lab Silastic Capsule Implantation

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Works for me

This protocol is published without a DOI.

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## PROTOCOL CITATION

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### 2 weeks prior to experiment

- 1 Call RARC and reserve: (1) Isoflurane vaporizer and (2) glass bead sterilizer. Also, ensure that a sufficient amount of control and steroid pellets are available. Make more if needed.

### 2. 2 days prior to experiment

- 2 Collect necessary supplies and ensure that isoflurane and buprenorphine are still in date:
  - Betadine scrub, 32 oz (\*RARC pharmacy)
  - Surgical drape, non-sterile, 38.5 in X 100 yd (VWR 34300-532)
  - Procedure face masks, 2 Ply with Earloops, 50/bpx (\*RARC pharmacy)
  - Sterile gloves, 50/Box (\*RARC pharmacy)
  - Sterile wooden applicators with cotton tips (Fisher 14-959-91)
  - Isoflurane (FORANE), 250 mL (\*RARC pharmacy)
  - Ketoprofen, 100 mg/mL solution X 50 mL (\*RARC pharmacy)
  - Sterile saline solution (for diluting buprenorphine and/or Ketoprofen to an appropriate working solution), 0.9%, 250 mL (\*RARC pharmacy)
  - Sterile empty serum vial (for diluted buprenorphine and/or ketoprofen), 10 mL X 25/box (\*RARC pharmacy)
  - 1 mL syringe, 100/box (\*RARC pharmacy)
  - 26 G X 1/2 in length syringe needle, 100/Box (Fisher 14-826-15)
  - Suture, Vicryl 4-0, absorbable polyglactin 910,6/pk or 36/box (\*RARC Pharmacy)
  - Artificial tears, 1/8 oz tube (\*RARC pharmacy)
  - Mouse clippers (WAHL brand, Walmart)
  - 2-count Hemostat, straight, serrated tip (Fisher 08-907)
  - Blunt-pointed dissecting forceps, 5 inch (Fisher 08-890)
  - Sharp pointed dissection scissors, 4.5 inch (Fisher 08-940)
  - Gauze, 2 X 2 in, 12-ply, 200/bag (\*RARC pharmacy)
  - SILASTIC Capsules (see method for capsule synthesis)

\* For RARC pharmacy orders, complete a pharmaceuticals request form (<http://www.rarc.wisc.edu/pharmacy/index.html>) and submit it to the following email address:

3. 1 day prior to experiment:

- 3 Put the silastic capsules in a 50 mL conical full of sterile PBS. Add the silastic capsule and incubate at 37°C for 24 hr. Change the media 3X during the 24 hour period. If the wooden sticks are discolored/darkened at the end of the 24 hr incubation, discard them
- 4 Autoclave surgical equipment: Place a 4.5 inch scissors, two hemostats, and one dissecting scissors into an autoclave bag. Seal bag and complete autoclave cycle.
- 5 To prepare 1 mg/mL ketoprofen working solution, into a sterile septated vial, add 0.1 mL Ketoprofen stock (100 mg/mL) to 10 mL saline. The expiration date should be listed on the bottle, and is the earliest date of either the ketoprofen expiration date or the saline expiration date.
- 6 Review Vezina Lab Animal Care and use protocol sections that pertain to silastic capsule implant and analgesia.
- 7 Pick up vaporizer and glass bead sterilizer from RARC (372 Enzyme Institute Building).
- 8 Send the following email message to [svmvets@rarc.wisc.edu](mailto:svmvets@rarc.wisc.edu): To whom it may concern: we will be Implanting SILASTIC® capsules containing androgens into a batch of [insert number] mice on [state date of surgery] in accordance with our approved animal protocol. The mice will be housed in AHABs room B23A/B and their cage cards will be marked with a label stating the date of the surgery. We anticipate some bleeding at the surgical site that should clear within a few days of the surgery."

Day of experiment

- 9 Clear items from surgery area.
- 10 Treat bench surface with 10% bleach for 10 min.
- 11 Mop bleach from bench surface and spray with 100% ethanol and air dry.
- 12 Bring animals upstairs.
- 13 15 minutes prior to surgery, inject animals with 5 mg/kg Ketoprofen (volume = 5 microliters of 1 mg/mL Ketoprofen per gram of mouse).
- 14 Lay down sterile drape.
- 15 Enter surgery start time and other information into surgical log.

- 16 Scrub hands and gown up.
- 17 Arrange tools in surgical space.
- 18 Set isoflurane vaporizer and turn it on (set mixer to 2% and flow rate to 1 liter/minute).
- 19 Induce mouse anesthesia and pinch toe to confirm unresponsiveness.
- 20 Add artificial tears to mouse.
- 21 Shave mid back area.
- 22 Use betaine scrub to prep mid back area.
- 23 Use scissors to make a small lateral incision halfway between the front and back limbs.
- 24 Insert hemostat into the incision and move towards the neck. Gently open the hemostat. The idea is to create a small open pocket under the skin, and directly above the fat pad between the scapulae.
- 25 gently grab a silastic capsule and insert it under the skin and up towards the neck.
- 26 Close the incision with a single suture..
- 27 Remove mouse from vaporizer and return to cage. House at a density of one mouse per cage until wound is healed. Watch closely until coordination returns.
- 28 Enter surgery end time into surgical log.

- 29 Inspect mice and record date, time, and inspector into surgical log.
- 30 Mice will be euthanized if the body score becomes less than 2, if animal movement is compromised, or if animal becomes unresponsive to mild stimulus. If mouse has these symptoms, (1) euthanize mouse, (2) record the euthanasia in the surgical log, (3) alert RARC staff that an adverse event occurred (email [svmets@rarc.wisc.edu](mailto:svmets@rarc.wisc.edu) and explain what happened).
- 31 If an infection develops (1) email [svmets@rarc.wisc.edu](mailto:svmets@rarc.wisc.edu) and request antibiotics (2) record the event in the surgical log.