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Intravagal AAV injection in mice

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Protocol status: Working

We use this protocol and it's working

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Abstract

The protocol details AAV vector injections into the mouse vagus nerve and describes pre and post-operative mouse handling.

- 1 Anesthetize the mouse with isoflurane and use pain killers (e.g. Temgesic) following the ethical committee procedures
- 2 Clean the surgery area with skin disinfectant, make a small incision at the midline of the neck, and isolate the left vagus nerve. Place a holder underneath to keep it isolated and to form a base to insert the needle.
- 3 Using a micropump and a 35-gauge blunt steel needle fitted to a 10- μ l NanoFil syringe, inject 800 nl AAV-containing solution. Keep the needle in place for another minute to avoid backflow.
- 4 Suture and clean the wound and return the mouse to a clean cage. Follow the ethical committee's recommendations for post-operative care.

post-operative drug treatments

- 5 Post-operative drug treatments:
 - 5.1 To stimulate DREADDs, inject 1 mg/kg CNO (Tocris) dissolved in 0.9% saline intraperitoneally.
 - 5.2 For in situ oxidative stress assessments dissolve DHE (Dihydroethidium) in saline/dimethyl sulfoxide (DMSO) (1:1 ratio) and inject intraperitoneally at a dose of 15 mg/kg.