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🌐 Intracerebroventricular administration of compound in Mus Musculus

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DISCLAIMER

Protocol requires prior approval by the users' Institutional Animal Care and Use Committee (IACUC) or equivalent ethics committee.

ABSTRACT

Intracerebroventricular administration of compound in Mus Musculus. Here we utilize the newly developed CDK14 covalent inhibitor, and inject it into lateral ventricle of Mus Musculus brain.

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Protocol status: Working
We use this protocol and it's working

Created: Feb 26, 2024

Day before surgery

- 1 16h before stereotactic surgeries, load Alzet[®] Mini-Osmotic Pumps (model 2004) with 1.47µg/uL of FMF-04-159-2 (R&D Systems 7158, Minneapolis, MN, USA in vehicle solution containing 8% DMSO (Fisher Scientific, BP231, Hampton, NH, USA), 2% Tween 80 (Fisher Scientific, BP338-500) and 90% ddH₂O). These pumps administer the solution at 0.35mg/kg/day.
- 2 Trim brain infusion catheters to 3.5cm from Alzet[®] Brain Infusion Kit and attach to pump as per manufacturer's instructions.
- 3 Incubate brain infusion assemblies at 37 °C in sterile saline until implantation.

Day of surgery

- 4 Deeply anesthetize mouse with isoflurane.
- 5 Implant canula at the appropriate location (coordinates relative to bregma: -1.1 mm medial-lateral; -0.5 mm antero-posterior and -3 mm dorso-ventral).
- 6 Secure cannula using dental cement.

- 7 Bury the pump in a subcutaneous pocket of the mouse's back.
- 8 Allow for 28 days with the brain infusion catheter implanted.
- 9 Monitor mouse body weight, activity, neurological signs, facial grimace, coat condition, and respiration within 28 days after the surgery.
- 10 Sacrificed mice, collect organs on the 28th day of the administration period.