|  |  |
| --- | --- |
| **Purpose:** |  |
| **Date:** |  |
| **Coordinates** | |  |  |  | | --- | --- | --- | | **A-P** | **M-L** | **D-V** | |  |  |  | |  |  | Start: | |  |  | End: | |
| **Weight:** |  |
| **Dose:** |  |
| **Volume Injected:** |  |
| **Injection type:** |  |
| **Notes/Bleeding:** |  |

# Prepare virus

Keep virus cool in cold block and ice

# Injection procedure

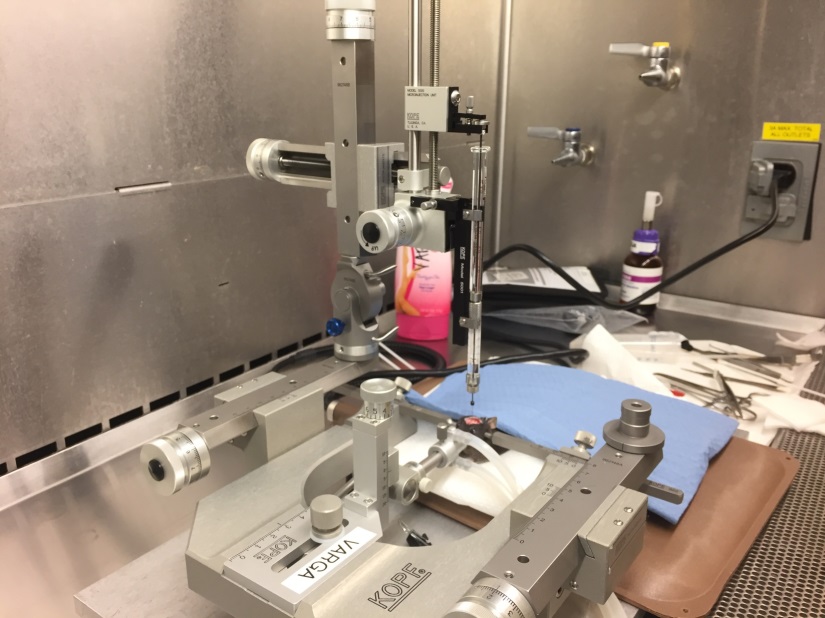
1. Set up stereotaxic frame.
2. Set up isoflurane vaporizer (2%).



1. Anesthetize and load/prep animal.
2. Nair, inject lactated ringer, apply eye ointment
3. Midline incision (from between ears to just behind eyes), hemostat skin, H2O2 skull surface
4. Set up drill (on left arm), measure Bregma/Lambda, drill holes (withdrawing once fluid emerges)
5. Lower Isoflurane to 1.5%
6. Load Syringe into Kopf adapter
7. Set up right arm.
8. Attach syringe+adapter:



1. Backfill syringe with cargo.
2. Approach Right side bore hole. Zero the “Start Z” coordinate (D-V axis).
3. Go to “End Z -0.02”. Hold for 10 sec. Make pocket for virus.
4. Pull back to “End Z”. Inject manually (as slowly as possible).
5. Wait 10 min for virus to diffuse:



1. Pull back to “End +0.02”. Hold for 5 min.
2. Slowly, pull out of brain.
3. Reload syringe for other injection site.
4. Repeat steps for Left side.
5. Drop isoflurane to 1.0%.
6. When done, apply small drop of cyanoacrylate glue to bore holes.
7. Suture with autoclip.
8. Inject lactated ringer.
9. Allow mouse to recover in cage on heating pad; use a paper towel to prevent choking on bedding
10. Monitor breathing as mouse comes out from under anesthesia.

# Prepare Neuros Syringe

Clean out syringe

Backfill with virus (do this when syringe+adapter is on frame)

# References

1. Direct Intraventricular Delivery of Drugs to the Rodent Central Nervous System
2. Optogenetic interrogation of neural circuits- technology for probing mammalian brain structures
3. Stereotaxic Microinjection of Viral Vectors Expressing Cre Recombinase to Study the Role of Target Genes in Cocaine Conditioned Place Preference