**SILICON PROBE LFP ANALYSIS**

DIRECTORY STRUCTURE:

For each rat:

SharedX🡪Neuro-Leventhal🡪ChoiceTask🡪R0XXX

Within each rat ID in the …ChoiceTask folder are subfolders:

R0326-graphs

Graphs of Behavioral training (from poke any to Choice Advanced or Testing)

R0326-histology

Histology images once animals have been sacrificed. For Jennifer Magnusson’s project (as of 04/07/2020), folders are subdivided into Native Expression and Primary Amplification. Green – AAV-hSyn or CAG into the DCN; RED – AAV-hSyn or CAG mCherry/TdTomato in SNr; goal is tracing to Mthal. Check surgical sheets and match with animal ID to determine specific virus injected.

R0326-rawdata

Raw Behavioral Data -- data are automatically saved in a ‘R0326- rawdata’ folder on the acquisition computer by the LabView Software with respective date, e.g. ‘R0326\_20190924a’.

Transfer data to SharedX and MED-LeventhalLab Dropbox

To analyze ‘Raw Data’ behavior files, use the ‘analyze\_choiceRTlogDataDaily’ function (\GitHub\LeventhalWorkflow\ChoiceRTBehavior). This function allows you to determine when to progress the rats through training levels. Other analyses for ChoiceRT task can be found in Matt’s Github. As of 4/16/2020, JM is still teasing out the quirks of these files (i.e. the weekly plots).

The ChoiceRTBehavior files are generally a separate analysis from sessions intended to incorporate electrophysiological Intan data with the behavioral data (described below)

R0326-surgery

Contains the surgical sheets from surgeries (e.g. virus injection or Probe implant).

R0326-processed

Contains session folders for \_lfp.mat, \_diffpower.mat, and \_monopolarpower.mat files

R0326-processed-graphs

Contains power spectra and differential graphs

LFP ANALYSIS WORKFLOW: