Comparison of 5XFAD mouse and fAD-like zebrafish brain transcriptomes

# Materials and Methods

## fAD-like zebrafish dataset

* Refer to Newman et al. [1] and Hin et al. [2]

## 5XFAD mouse dataset

* Hippocampus, 1, 2, and 4 months old (5 biological replicates, no WT): <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE97113>
* Frontal cortex, 6 and 11 months (3 biological replicates + WT): <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE142633>
* Cortex, 3, 6, and 12 months (2-3 biological replicates + WT): <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE140286>
* ~~Hippocampus, not sure on age (4 biological replicates + WT):~~ [~~https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE115437~~](https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE115437) ~~(couldn’t find age anywhere in metadata…)~~
* ~~Half brains from 2-14 months old (5 biological replicates + WT) however the platform was specific to their experiment and only ~800 genes’ expression was measured~~ [~~https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE141509~~](https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE141509)

# Analysis

* Removing batches from

# References

1. Newman M, Hin N, Pederson S, Lardelli M. Brain transcriptome analysis of a familial Alzheimer’s disease-like mutation in the zebrafish presenilin 1 gene implies effects on energy production. Mol Brain [Internet]. BioMed Central Ltd.; 2019 [cited 2020 Apr 30];12:43. Available from: https://molecularbrain.biomedcentral.com/articles/10.1186/s13041-019-0467-y

2. Hin N, Newman M, Pederson SM, Lardelli MM. Iron Responsive Element (IRE)-mediated responses to iron dyshomeostasis in Alzheimer’s disease. bioRxiv. Cold Spring Harbor Laboratory; 2020;2020.05.01.071498.