Source:

1 | Grace's Meeting Notes

- Interested in memory
- Synapses are influencing each other => allows cluster processing => provide more insight
- Understanding brains+memory is key to understanding human behavior => excited about the mechanisms of the brain
- Memory is interesting b/c its complex and we don't know about => personal and culture narratives are critical

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- Like to talk about the causal pathways found

    - Figs 1, 8, 3
    - Personally want to focus on the background, observation, and pathways
    - General structure of presentation: Figures 1,8,3 between the structure of {Big pic, {hypo, result, pathway}, implication}

- Scientific story — what we talk about last time: the story of the LTP induced intra-synaptic PAP outflow cross talk
- Knew how signal strength could be changed + changes the likelyhood of neuron cross-talk => astroglia actually have an active role in memory encoding
- Paper complicates the preexisting definition of long term potentiation + pulls in novel information — that LTP is not just LTP but also influnces how other neurons fire
- New Figures!!

    - (old) 1, 8, 3
    - Figures 6C (nearby neurons are excited) and 8H (glutamate is dispersed more) => impact of the extra glutamate release

- Master ordering of figures

    - Intro
    - Discovery
        - 1D — astroglia shrinking when LTP happened
    - Effect
        - 6C + 6H — why this would matter
    - Pathway
        - 3D — AQP4 astroglia changed the most when LTP, so that's causing it?
    - Process
        - Redrawn 8D
    - Backup
        - 1F — In backup to show control metric

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Background stuff

- LTP: system how repeated firing of a synapse cause synapse to fire

- Glumate: involved in making neurons excited
- fEPSP: avg. amount of firing in a population of neurons
- VF: volume fraction
- MKCC1: protein — for neural remodeling
- Astroglia:

Personal Story — new way of conceptualizing memory.

- Memory Drives different behaviors — LTP is an interesting method of getting at how enviroments directly alter actions
- Direct pathway to what is experienced and the behavior