

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}
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- 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 likelihood 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 influences 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

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