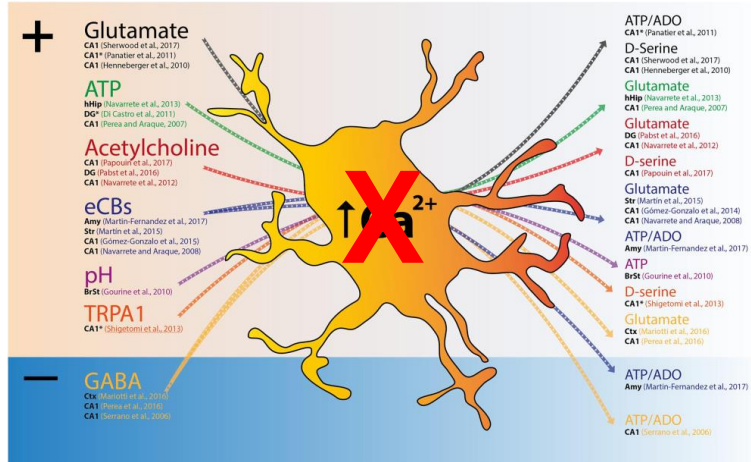


# The role of astrocytes in complex cognitive processing

Grant 37/18

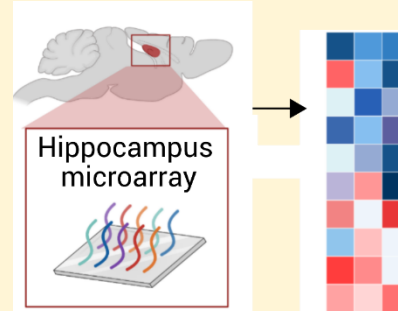
Dissect the cellular mechanisms by which astrocytes influence cognitive function processed by cortico-limbic circuits

## PROJECT AIM



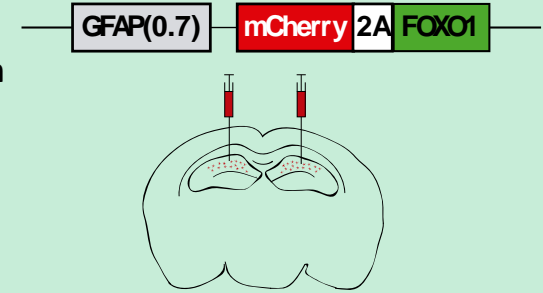
## The main finding

Astrocyte calcium controls the FOXO1 transcription factor



## The main approach

Astrocytic overexpression of FOXO1 in the mouse hippocampus

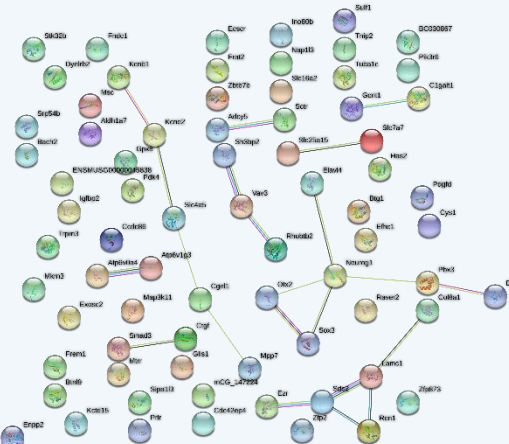


## Publications in the scope of this project:

1. Viana et al, 2023. BioRxiv
2. Viana et al, 2023. Glia
3. Oliveira and Araque A, 2022. Glia
4. Escartin et al, 2021. Nature Neuroscience
5. Canedo et al, 2021. Neuropsychopharmacology
6. Loureiro-Campos et al, 2021. eLife
7. Mateus-Pinheiro et al, 2021. Molecular Psychiatry
8. Falcón-Moya et al, 2020. Nature Communications
9. Batiuk et al, 2020. Nature Communications

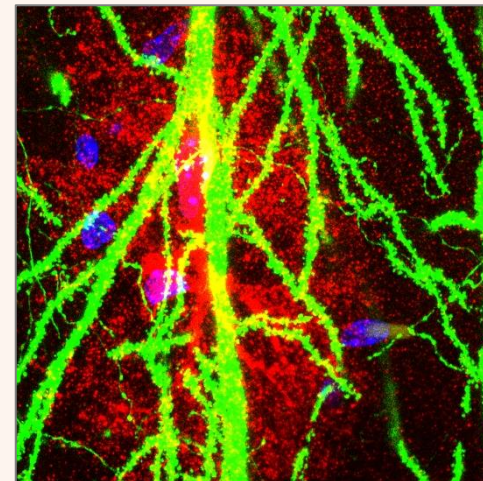
## Molecules

FOXO1 regulates gene pathways involved in structural modulation



## Cells

Astrocytic FOXO1 causes a shift to an immature spine profile



## Circuits and Behavior

Astrocytic FOXO1 regulates synaptic plasticity and long-term memory

