

PREDOCTORAL POSITION IN MOLECULAR NEUROSCIENCES

Molecular Physiology of the Synapse Laboratory

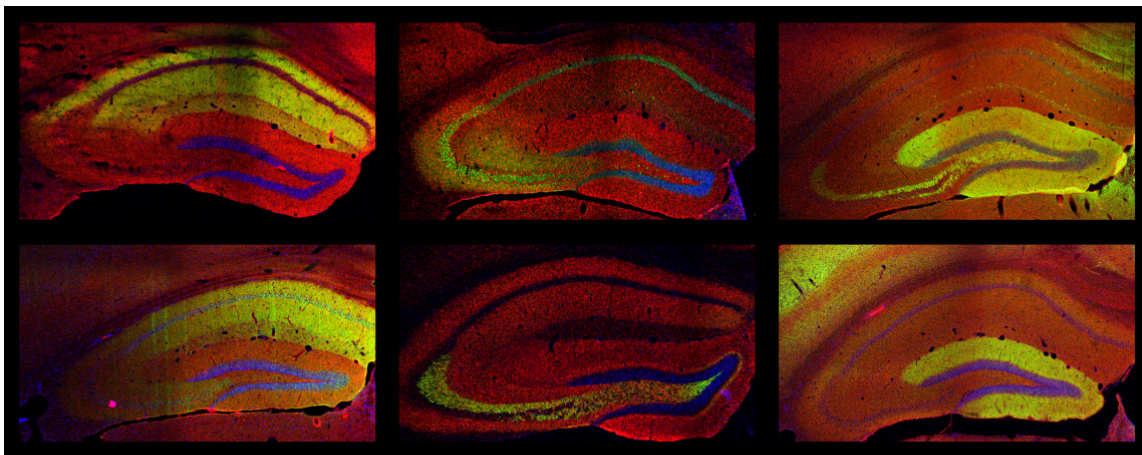
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www.molecular-synapse.org

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We offer a three-year predoctoral contract. With the possibility to extend it for one extra year depending on the performance of the candidate.

We are looking for a PhD candidate with a strong academic record, high motivation for basic and translational research, independent and critical thinking and a keen interest to investigate the biology of synapses - particularly at the molecular level - and their role in cognition and disease. Experience in basic and translational research, academic or professional experience abroad, hands-on work with experimental animal models, and programming skills will be considered strong assets.



Reig-Viader et al. *Nature Communications* 2025

The applicant will work in the project entitled **Targeting Synapses and Brain Oscillations: Novel Therapeutic Strategies in SYNGAP1 Related Disorders**, funded by the Ministerio de Ciencia, Innovación y Universidades (MICIU). The main goal of this project is to further explore how brain oscillations characteristic of sleep control the remodelling of the synaptic proteome using a mouse model of the neurodevelopmental disorder caused by the deficit of the *SYNGAP1* gene. And how rescuing these oscillations in *Syngap1*^{+/-} could improve the cognitive impairments found in these animals, with the goal to explore future therapeutic strategies.

Contact: **Àlex Bayés** at abayesp@sanpau.cat

Key Publications of the Group: Reig-Viader et al. **Nature Communications**, 2025; Feuermann et al. **Nature**, 2025; Trubetsky et al. **Nature**, 2022; Kilinc et al. **eLIFE**, 2022; Koopmans et al, **Neuron**, 2019; Ramos-Vicente et al. **eLife**, 2018; Bayés et al. **Nature Communications**, 2017; Kirov et al. **Molecular Psychiatry**, 2012; Bayés et al. **Nature Neuroscience**, 2011; Bayés et al. **Nature Reviews in Neuroscience**, 2009.