

**Title: Project iFLASH – Imaging calcium in the Aging Synapse**

**Synopsis:**

[Lopes\\_lab@iMM\\_Lisboa](mailto:Lopes_lab@iMM_Lisboa) is focused on understanding the mechanisms inducing the "early-aging", which render the hippocampus - the brain area related to learning and memory – particularly susceptible. The team explores the molecular mechanisms associated to hippocampal loss of function and its outcome in behavior performance and synaptic function, using rodent models.

**We are seeking a highly motivated biomedical or bioengineering Master student for the project iFlash, in order to setup a miniscope in our lab to image calcium signals from live brain (GCaMP6f mice)**

The miniature fluorescence microscope is a design pioneered by Mark Schnitzer's Lab at Stanford and published in a paper in Nature Methods in 2011. It uses wide-field fluorescence imaging to record neural activity in awake, freely moving mice. The microscope introduced (Miniscope) has a mass of 3 grams and uses a single, flexible coaxial cable (0.3mm to 1.5mm diameter) to carry power, control signals, and imaging data to custom open source Data Acquisition (DAQ) hardware and software. For more info please visit [Miniscope.org](http://Miniscope.org).

To apply and more info please email Luísa Lopes@iMM Lisboa, [lvlopes@medicina.ulisboa.pt](mailto:lvlopes@medicina.ulisboa.pt) using the subject reference iFLASH.

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Webpage of the group: <https://imm.medicina.ulisboa.pt/en/investigacao/labs/lopes-lab/>

**Bibliography:**

Nature Methods 8, 871–878 (2011) doi:10.1038/nmeth.1694

**Remunerated or volunteer training:** Volunteer (Master thesis)