

Postdoc to develop protein-based nanotools for light and electron microscopy

We open a 2-year postdoc position funded with a HFSP project. The researcher will develop intracellular nanotools to overcome the limits of fluorescence microscopy and cryo-Electron Tomography and to time-resolve fundamental mechanisms in cell growth.

In the past, our lab combined cell engineering and advanced live-cell imaging to develop a new method that can resolve molecular architectures *in vivo* (Picco *et al*, 2017, *Cell*; Irastorza-Azcarate *et al*, 2019, *Structure*).

In collaboration with the groups of Daniel Castaño-Díez (Univ. Basel, Switzerland) and Alex de Marco (Monash Univ., Australia), we received a HFSP grant to continue pushing the limits of microscopy to investigate molecular structures in the cell with Å resolution.

The researcher is expected to lead the development of new protein-based nanotools capable to push the resolute power of live-cell imaging and cryo-ET in yeast. Two new PhD students will also join in this project. The Postdoc will complement our expertise in the fields of protein engineering, optical physics, quantitative live-cell imaging or image analysis. Depending on the candidate's background, tasks might include (but are not limited) designing protein structures, developing sample preparation, implementing new imaging and/or image analysis.

If you are interested, please send a short cover letter, your CV and the contact for 3 referees to oriol.gallego@upf.edu

Deadline: June 19th 2020

The position:

- Starting date around November 2020 - January 2021
- Salary according to the researcher expertise
- 2-year position

Requirements

- Highly motivated, enthusiastic and creative researcher.
- Expertise in at least one of the following: Protein engineering, optical physics, quantitative fluorescence microscopy or image analysis.
- Excellent written and oral communication skills in English.

The Lab (www.gallegolab.org)

The candidate will join a newly emerging lab devoted to study large protein machines that control cell growth. We also develop imaging techniques in the frontier between cell biology and structural biology. We are well equipped, including our own microscope for live-cell imaging and single molecule localization microscopy. Postdocs are strongly mentored for their next step. As part of the Pompeu Fabra University, the lab is located at the PRBB, one of the strongest scientific campus in south Europe. With state-of-the-art research facilities, PRBB offers an ideal scientific and international environment.

References:

- Picco, A., Irastorza-Azcarate, I., ..., Gallego, O., (2017) *Cell* 168, 400-412.e18.
- Irastorza-Azcarate, I., ..., Gallego, O., (2019) *Structure*. 27, 886-892.