

Post-doctoral position in Optogenetics and reconstruction of neuronal circuits

DESCRIPTION

The institute: ICFO is offering a postdoctoral position to a well-qualified, highly motivated and dynamic young scientist who wishes to enhance his/her scientific career in an international, friendly and stimulating environment. The mission of our institute is to proactively advance the very limits of knowledge in Photonics, namely the science and technology of harnessing Light. Light, especially laser light, is one of the major enabling technologies currently available to humankind. We focus on current and future problems in Health, Energy, Information, Safety, Security and caring for the Environment.

The group: The successful candidate will be joining the *Neurophotonics and Mechanical Systems Biology* group led by Michael Krieg (livinglight.icfo.eu). The group has ample experience in *C. elegans* molecular systems biology, mechanobiology and optogenetics. We work highly interdisciplinary at the interface of biology, physics and engineering, using advanced experimental techniques, backed by computational methods. The group is currently home to a spinning disk microscope with integrated optical trap and optogenetic patterning module, several fluorescence microscopes for microfluidic integration, dedicated behavioral and bioluminescence workstations. Other available resources includes high resolution microscopes, animal facilities and unrestricted access to NanoFabLab (Mechanics Workshop, μ Fluidic Foundry) and the institutes state-of-the-art light microscopy facilities (SLN and Nikon's Center of excellence).

The position: During the course of this project we strive to establish new genetically encoded optical tools for long-term superresolution imaging and optogenetics. We will generate specific defects in well characterized neuronal circuits in *C. elegans* and quantify them on the behavioral and neurophysiological level using optical genetically encoded reporters of neuronal activity. In a second step we will target novel optogenetic drivers and reporters cell specifically in various neuronal mini-circuits with the aim to build a fully functional, reconstituted circuit based on orthogonal strategies. Graduating or newly graduated Ph.D. with strong experience in microscopy, bioengineering and/or neuroscience, are encouraged to apply. The successful candidate will work within a larger team of engineers and physicists and will closely be mentored by the PI to advance his/her professional career.

ELIGIBILITY AND CONDITIONS

Candidates must hold an internationally-recognized Ph.D.-equivalent degree (or evidence of its completion in the nearest future) preferably in molecular genetics, neuroscience or bioengineering. Previous experience in calcium or voltage imaging and *C. elegans* as a model organism is desired but not necessary.

ICFO is an equal opportunity employer. Candidates are selected exclusively on merit and potential on the basis of submitted application material. No restrictions related to disabilities, citizenship or gender apply to ICFO positions. ICFO abides by the principles of openness, efficiency, transparency, supportiveness, and international comparability as stated in the European Charter for Researchers and the European Code of Conduct for the Recruitment of Researchers.

The contract is offered for periods of one year, renewable for a total of up to three years.

APPLICATION PROCEDURE

The formal application should be submitted online via <http://jobs.icfo.eu/?detail=522>

Suitable candidates are requested to submit:

- Presentation letter with a declaration of interest,
- Curriculum Vitae, including contact details,
- The contact e-mail of two potential referees.

Candidates may contact jobs@icfo.eu for informal enquiries regarding the application, as well as address scientific enquiries to michael.krieg@icfo.eu.

DEADLINE

The call will remain open until September 20, 2020.

For updated information about ICFO, please visit <http://www.icfo.eu/>.