

IBEC (Institute for Bioengineering of Catalonia) is an interdisciplinary research center focused on Bioengineering and Nanomedicine and one of the Severo Ochoa Excellence Centers. IBEC's **mission** is to develop international high quality interdisciplinary research that, while creating knowledge, contributes to making a better quality of life, improving health and creating wealth. A close link with key universities, reference hospitals and corporations, are assets that facilitate achieving the mission.

IBEC was founded in 2005 by the Generalitat de Catalunya, the University of Barcelona (UB) and the Polytechnic University of Catalonia (UPC).

IBEC is located within the **Barcelona Science Park**, with premises of 2.500 square meters, 16 research groups and a team of researchers and support services of 250 people from 20 different countries.
www.ibecbarcelona.eu



Predoctoral and postdoctoral Positions in Neuroimaging (Ref. NI-PG)

The [Nanoprobes and Nanoswitches](#) group at the **Institute for Bioengineering of Catalonia (IBEC)** is looking for doctoral and postdoctoral candidates to develop research in novel synthetic photoswitches (light-regulated drugs, optopharmacology or photopharmacology).

Tasks and responsibilities:

- Multidisciplinary research in neuroscience on the in vivo applications of novel synthetic light-regulated drugs and peptides designed to modulate the function of endogenous receptors and signaling enzymes.
- The candidate will implement a research strategy to record and manipulate neuronal activity in an all-optical fashion; and she/he will be using synthetic photoswitches to modulate the behavior of an animal using light, and will study the potential applications of phototherapies for a number of neurological disorders.

Requirements for candidates:

- Master degree in molecular biology, biochemistry, biophysics or equivalent (for doctoral position).
- PhD degree in molecular biology, biochemistry, biophysics or equivalent (for postdoctoral position).
- Experience in advanced fluorescence microscopy of neurons (high resolution time-lapse, ion imaging, photostimulation, FRAP, TIRF) (postdoc).
- Knowledge of neuronal receptors, synaptic physiology and electrophysiology techniques (patch clamp, two-electrode voltage clamp) are a plus (postdoc).
- Knowledge of rodent manipulation and brain surgery will be an asset (postdoc).
- High level of English and good communication skills.
- Ability to maintain accurate and up to date records; to organise and prioritise own work and research within the project schedule.
- Computer literacy, analytical skills and effective team working.
- Self-critical, capacity to learn and bring knowledge.

Selected references:

- Pittolo S, et al. Nat Chem Biol. 2014, 10:813.
- Izquierdo-Serra et al. J. Am. Chem. Soc. 2014, 136:8693.
- Bahamonde MI, et al. Bioconjug Chem. 2014, 25:1847.
- Nevola L, et al. Angew Chem Int Ed Engl. 2013, 52:7704.



HR EXCELLENCE IN RESEARCH

IBEC is committed to the principles of the Code of Conduct for the Recruitment of Researchers of the European Commission. Thus, there are no restrictions of citizenship or gender and candidates with disabilities are strongly encouraged to apply.