

PhD candidate in Neurophysiology of Pain and Itch

We are looking for candidates to offer the possibility of doing a PhD Thesis (doctorate) in the field of neurophysiology of pain and itch. The main focus of the proposed PhD project is to study the regulation of **neuronal excitability** by **ion channels** and second messengers in the **pain** and **itch transduction** fields as part of a recently funded research project.

The candidate will be integrated in the group of Neurophysiology of pain of the Department of Biomedicine, Medical School and the Institute of Neuroscience lead by Núria Comes, Gerard Callejo and Xavier Gasull. The group is interested in establishing the role of different ion channels implicated in the detection of noxious stimuli and the mechanisms involved in shaping the excitability of sensory neurons of the dorsal root and trigeminal ganglia. The primary goal of the group is to determine which alterations occur during tissue injury as well as in inflammatory and neuropathic pain states by using different methodological approaches including molecular biology, biochemistry, electrophysiological recording and in vivo animal models.

Most relevant recent publications:

Castellanos A, et al. *J Physiol*. 2020 Mar;598(5):1017-1038.
Chakrabarti S, et al. *Arthritis Rheumatol*. 2020 Oct;72(10):1749-1758
Lee MC, et al. *Cell Rep*. 2020 Jul 21;32(3):107941.
Royal P. et al. *Neuron*. 2019 Jan 16;101(2):232-245.e6
Hockley JRF et al. *Gut*. 2019 Apr;68(4):633-644.
Castellanos A, et al. *Pain*. 2018 Jan;159(1):92-105.

Candidates:

Candidates must have an official university degree in Biomedicine, Biology, Biochemistry, Biotechnology, Pharmacy, Medicine or a similar degree adapted to the European Higher Education Area awarding 300 ECTS credits, of which at least 60 ECTS credits must correspond to master level.

A **good academic record** will be required in order to apply for a predoctoral PhD fellowship.

It will be specially appreciated a positive attitude as well as a good dedication to the lab work. It will be also appreciated, but not required, to have previous experience working in a lab, working with laboratory animals, in molecular and cellular biology techniques.

In the present project, different methodological approaches will be used including in situ hybridization, quantitative PCR, western blot, immunohistochemistry, electrophysiological recording (patch clamp, current clamp, extracellular recordings) and in vivo animal models (behavioral tests) to pursue the scientific problem regarding the function of ion channels and receptors in sensory neurons.

Those who are interested, please send a letter of interest and a CV by email to xgasull@ub.edu or gerard.callejo@ub.edu.

Dr. Xavier Gasull and Dr. Gerard Callejo

Dept Biomedicine, School of Medicine
Institut de Neurociències, University of Barcelona
C/ Casanova 143
08036 Barcelona
<http://www.neurociencies.ub.edu/neurophysiology/>