



JOB DESCRIPTION

Job Title : Postdoctoral position: Understanding the role of the corticomesolimbic pathway in the emotional comorbidities of chronic pain

Job Summary :

Mood disorders such as depression are frequently observed in patients suffering from chronic pain. Epidemiological studies report a prevalence rate around 50% for major depressive disorder in chronic pain patients, meaning that these patients have 3-times more risk to develop depression than the normal population. Although this comorbidity is clinically well established, the underlying cerebral mechanisms remain unclear. To dissect these mechanisms, an important step was to establish a preclinical model of this comorbidity in rodents, and our group was among the firsts to establish such a model in mouse. Indeed, we showed that anxiodepressive-like disorders (ADD) progressively emerged and unfold over the course of several months following the induction of neuropathic pain. While this protracted and reversible course suggests dynamic brain alterations along the development of this comorbidity, the brain networks involved were not totally deciphered yet.

This project aims at assessing how the cortico-habenulo-tegmental network is affected during the successive phases of the chronic pain model. Accordingly, the post-doc will implement a new methodology, the fiber photometry, in order to perform longitudinal co-recordings of the activity of the 3 brain areas of this network in freely moving animals. The post-doc will use a well-established chronic pain induced depression (CPID) model which consists in constriction of the main branch of the sciatic nerve in C57BL/6J mice, in combination with in vivo calcium recordings.

Job Description :

The candidate will work at the Institute of Integrative and Cellular Neurosciences (Strasbourg, France), within the team “Neuroanatomy, Pain and Psychopathologies” (CNRS, UPR3212) co-directed by Dr Ipek Yalcin and Dr Michel Barrot. The candidate will be directly supervised by Dr Ipek Yalcin (Ph.D, Pharm.D), a worldwide recognized expert in the pain field who obtained her tenure researcher position at CNRS in 2010. The post-doc will benefit from the host team international expertise in animal models of depression, providing one of the best intellectual environments. Dr Yalcin will mentor and give the post-doc the appropriate training, in project and team management, organization and writing skills which will significantly strength the competences of the candidate necessary for his/her future career as an independent researcher. This project will be built on a unique synergy between Dr Yalcin’s group and the candidate. Dr Yalcin’s team is internationally known for its expertise in the comorbidity of chronic pain and mood disorders. The prospective candidate’s long expertise in fiber photometry and the analytic pipelines is required. Altogether, this project has the potential to determine the role of the cortico-habenulo-tegmental network in the genesis and maintenance of the comorbidity of chronic pain and mood disorders, helping us to uncover new anatomical targets.

Main research field :

Biological sciences / Neurosciences

Offer Requirements : Contract should be signed no later than 31 st of December, 2021. Total duration is 18 months.
Eligibility criteria : The candidate should have obtained his/her Ph.D after the 1 st of January 2017, in an Institute outside of Unistra or UHA. If the candidate did receive his/her Ph.D at the Unistra or UHA, he/she must have an international experience of at least 2 years in another research laboratory.

JOB DETAIL

Type of contract : CDD (18 months)
Status : Post-doc
Company / Institute : Institute of Integrative and Cellular Neurosciences
Country : France
City : Strasbourg
Postal Code : 67000
Street : 8 Allée du général Rouvillois

APPLICATION DETAILS (mandatory)

Provisional start date : 03/01/2022
Application deadline : 01/11/2021
Application e-mail : yalcin@inci-cnrs.unistra.fr