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| Titre de l'annonce | <h1 style="color: purple;">Deciphering purinergic and inflammatory signaling in brain using biosensors</h1> |
| Ville | Montpellier |
| Pays | France |
| Texte de l'offre | <p>Purinergic signaling is a central component of neuronal excitability and brain inflammation. However, we still have little knowledge on spatio-temporal dynamics of these signaling pathways in both homeostatic and pathological conditions.</p> <p>This thesis project will address the mechanisms underlying the relationships between ATP, glial cells, inflammation and neuronal excitability based on a combination of newly developed fluorescent ATP and IL1β biosensors and genetically modified mouse models.</p> <p>This project will articulate around three major aims:</p> <ol style="list-style-type: none"> 1- Ex-vivo analysis of the dynamic of purinergic signaling. We will determine the spatial dynamic of ATP in response to neuronal hyperactivity and to an inflammatory activation of glial cells. We will also identify at molecular level the cellular mechanisms involved in ATP release. 2- Ex- and In-vivo analysis of IL1β dynamic in physiological and pathological conditions. Using transgenic mice expressing an IL1β biosensor, we will analyze at cellular level the expression dynamic of IL1β. We will also investigate the consequence of conditional deletion of il1β on different behaviors. 3- Study of the relationship between purinergic signaling and IL1β bioactivity in pathological states. <p>Our group which has long lasting expertise in purinergic signaling and brain inflammation, belongs to the Institute of Functional Genomics (IGF; www.igf.cnrs.fr), a large pluri-disciplinary research institute. IGF is affiliated to Montpellier University (http://www.umontpellier.fr), the French National Center for Scientific Research (www.cnrs.fr) and INSERM. IGF has state of the art shared research facilities and is located in the scientific campus Arnaud de Villeneuve that regroups 4 major biological research Institutes in Montpellier, France.</p> <p>A pre-selection will be made according to CV, letter of recommendation and results obtained in the Master program. Salary according to CNRS standards: around 1450 €/month net (health insurance included).</p> <p>Contact: Francois Rassendren, IGF, CNRS UMR5203 Université de Montpellier, 141 rue de la Cardonille, 34094 Montpellier, France Tel : +33 (0)434 35 92 85. francois.rassendren@igf.cnrs.fr</p> |
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