

Offre de poste d'étudiant en thèse de sciences à l'U982/Equipe 3 "Astrocyte et Niche vasculaire", IRIB

Contrat : 3 ans à temps plein

Employeur : Université de Rouen

Adresse : Inserm U982, Laboratoire DC2N, IRIB, Place Emile Blondel, Université de Rouen, 76821 Mont-Saint-Aignan.

Date d'entrée en poste: Octobre 2015

Pour tous renseignements et candidatures: Contacter Hélène Castel ou Pierrick Gandolfo

Offre de poste

Doctoral position in GPCR and Neuro-Oncology, Rouen, France

We are looking for a highly motivated student to integrate our Team working on peptide G protein-coupled receptors and glioma brain tumors. The candidate will have to defend the project during a competition which will take place at the end of June 2015.

This work will be done in the team Astrocyte and Vascular Niche (head, Hélène Castel) within Inserm U982 (<http://dc2n.labos.univ-rouen.fr/index.php/equipe-3>). The team is located at the University of Rouen (Mont-Saint-Aignan), will soon integrate the Research Hotel CURIB and benefits from the animal house and platform (PRIMACEN and PISSARO) facilities.

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The project will concern studies on glioblastoma multiform (GBM), the most common and aggressive form of primary tumors of the central nervous system. GBM are characterized by a strong invasion and neovascularization, two mechanisms that should be concomitantly targeted by treatments in development. These mechanisms are likely relayed in response to chemo-attractant factors such chemokines or vasoactive peptides inducing activation of receptors (GPCRs) coupled to G proteins. These G proteins are trimeric complexes composed of α and $\beta\gamma$ subunits that activate many signaling pathways and a panel of cellular responses including metabolism, invasion or angiogenesis. Until now, no benchmarking study on expression levels of all G protein subunits was performed on gliomas and even other cancers.

These objectives of the project are to 1) determine the involvement of G protein α_i and $\beta\gamma$ subunits in gliomagenesis by a gain and loss of function approach in vitro and in preclinical in vivo models and 2) Propose therapeutic tools corresponding to peptidomimetics validated in vitro and in vivo in preclinical models.

The skills of the candidate should cover the fields of molecular and cell biology applied to the field of cancer. In this context, the candidate should be trained in molecular biology, biochemistry and cell biology (transfection, viral infection, proliferation, survival/apoptosis and migration/invasion). His experience in cell biology should be dedicated to cancer research and tumor invasion mechanisms. A first experience on the receptor properties and their couplings, with expertise in imaging techniques including FRET and/or BRET would be considered as an advantage.