

Postdoctoral position in stroke

Cerebral vasospasm and neuroinflammation in mouse models of subarachnoid hemorrhage

Research team: Astrocyte and Vascular Niche, INSERM U1239, Normandie Rouen University (URN), headed by Dr H el ene Castel, DR2 Inserm researcher, <http://dc2n.labos.univ-rouen.fr/index.php/equipe-3>. Institute for Research and Innovation in Biomedicine (IRIB), CURIB, 25 Rues Tesni ere, 76 821 Mont-Saint-Aignan.

- **Supported by :** Fondation pour la recherche sur les AVC (FRM)
- **Duration:** 1 year (renewable 1 year)
- **Starting date:** September/October 2018
- **Salary: maximum:** 50 000 euros/12 months

Job description: This work project is based on team previous results showing that the vasoactive peptide urotensin II (U_{II}) in subarachnoid hemorrhage patients may constitute a diagnostic marker of cerebral vasospasm, and that novel ligands of U_{II} receptor prevent cerebral vasospasm in a subarachnoid mouse model. We are looking for a motivated post-doctoral fellow to investigate the cerebral vasospasm and gliovascular consequences leading to neurobehavioral alterations of wild-type and transgenic hemorrhage mice. Specific neuroinflammatory processes will be assessed *in vivo*, through MPIO targeted against endothelial adhesion molecules for MRI (WP1 in Coll. Pr D. Vivien, Caen). At the molecular level, the aim is to understand endothelial cells integrity/EndMT transition and U_{II} receptor signaling signature pathways activated by newly designed ligands, *in vitro* and *in vivo* (WP2). We ambition to propose therapeutic molecules targeting the U_{II} receptor, to prevent post-hemorrhage deficits.

Lab: The Rouen's Inserm team Astrocyte and Vascular Niche (ASTROVASC) belongs to the Inserm Unit 1239 hosted by URN. ASTROVASC is composed of researchers, professors and clinical researchers, and is recognized for fundamental and translational research in the field of astrocyte/glioma cell brain invasion, and behavioural murine models of brain vascular pathologies. ASTROVASC is co-head of the "cancerandcognition" platform (<http://www.cancerandcognition.com/>) and is an international player in the cancer and cognition task force. The team was involved in European Interreg and TransManche programs, is coordinator of French national research projects and is under contracts with private companies. The structure offers high level research facilities including the PRIMACEN (Cell imaging of Normandie), PISSARO (Instrumental and Analytical Sciences Separative) and SCAC (animal behavioural facility) platforms.

Qualifications and skills: Applicants must hold a PhD in Neuroscience/Neurobehavior and experience in neurovascular field is strongly recommended. A solid background in animal experimental and surgery procedure is essential. Rodent brain immunohistochemical/time-lapse macroconfocal or multiphoton microscopy will be appreciated.

How to apply to the position: Please send the following information to Dr H el ene Castel: helene.castel@univ-rouen.fr

- A complete CV including description of the previous research
- A cover letter and motivations
- Names and contact information of references