

The Neuroscience Letter

New format for the Neuroscience Letter

We will now issue, within the framework of the Interreg IVA Trans-Channel Neuroscience Network (TC2N), a bilingual Neuroscience Letter. This Letter will be published at least 3 times a year, and will replace the former Neuroscience Letter published since 1988 in Normandy. It will be dedicated to promote the activities of all members of the LARC-Neuroscience network: from Nijmegen to Brest to Portsmouth. In addition to the annual meeting of the LARC-Neuroscience network, this Letter is aimed at keeping people in touch and fully informed of the activities of the various teams within our scientific community. We hope that this initiative will help to develop collaborations between the 44 teams of the network and we also expect that it will result in establishing new interactions with private companies. Most importantly, this newsletter is yours, so please feel free to send us the information you want to highlight. All colleagues registered on the website of the LARC-Neuroscience network (<http://larc-neurosciences.org>) will automatically receive an e-mail to access the letter in a PDF format.

16th Annual meeting of the LARC-Neuroscience network

The 16th Annual Meeting of the LARC-Neuroscience network will be organized on **November 9th, 2012, in Portsmouth, UK** by Pr **Darek GORECKI and his colleagues**. The program will comprise two keynote lectures, three sessions of oral communications and two poster sessions. In agreement with the LARC-Neuroscience network spirit, oral communications will be given in English by young investigators (Ph.D. students and post-docs).

Forty travel awards of up to 300 € each will be allocated by the Interreg TC2N project to support travel costs of young investigators (students and post-docs). Details on the award application will be given in the June 2012 issue of this Neuroscience Letter.



Scientific Editor

Dr **Hubert VAUDRY** has been appointed to the editorial board of the journal PLoS ONE. PLoS ONE features peer-review reports of original research from all disciplines within science and medicine.



Knowledge Forums

Dr **Francis EUSTACHE** will give a lay-public lecture entitled «**Le fonctionnement de la mémoire humaine**» to be held during the Knowledge Forum on March 22nd, 2012, in the chamber of the Regional Council of Haute-Normandie (Rouen, France).



Summer School on experimental models of brain diseases

As part of the TC2N project, the Inserm U919 «Serine Proteases and Pathophysiology of the Neurovascular Unit» and the team CERVOxy of the UMR CNRS 6232 «Hypoxia and Cerebrovascular Pathophysiology» will organize a Summer School entitled «**Experimental models of brain diseases: stroke, glioma and multiple sclerosis**»; April 3rd to 6th, 2012 at the Cycecon Centre in Caen (France).

The goal of this Summer School is to provide lectures and practical courses to show the principles and the implementation of a number of animal models used for research in the fields of cerebral ischemia, brain tumors and multiple sclerosis. It will enable participants to be familiar with animal models of these diseases and acquire technical skills to evaluate brain damage in these models.

Training program:

Day 1 (April 3rd, 2012): Review of animal models of cerebral ischemia, brain tumors and multiple sclerosis, presentation of laboratories and equipment, demonstration of surgical procedures

Day 2 (April 4th, 2012): Practical training in surgery

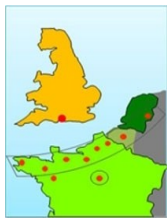
Day 3 (April 5th, 2012): Practical training in surgery and brain damage assessment methods (using MRI, histology ...)

Day 4 (April 6th, 2012): Oral presentations by invited speakers

For the practical part, the number of attendees is limited to 10. The School is open to all for the presentations on April 6th.

Contacts: **Carine ALI** (ali@cycecon.fr) and **Omar TOUZANI** (touzani@cycecon.fr).





Research project news

The Inserm U1077 focuses on **NORMA** subjects: young subjects, asymptomatic, related to a patient with a familial form of Alzheimer's disease linked to a genetic mutation.



As part of the research project IMAP+ aiming to better understand and diagnose Alzheimer's disease at early stages, the Research Unit Inserm 1077 in Caen (formerly Unit 923), in collaboration with several teams of the LARC-Neuroscience network, will study a population of subjects called **NORMA**. These asymptomatic individuals, members of a family carrying a genetic autosomal dominant mutation (PSEN1 mutation, PSEN2 or APP), are at risk of developing the early-onset familial form of Alzheimer's disease.

This study will contribute to the understanding of the mechanisms responsible for the development of the disease specifically during its early stages. Although the familial form of Alzheimer's disease accounts for only approximately 1% of cases, the brain changes are similar to those observed in Alzheimer's disease called sporadic (non-familial, which represents 99% of cases). Analysis of brain changes from the asymptomatic stage to the stage of Alzheimer's disease observed in subjects carrying the mutation will contribute to the identification of early markers of this disease and the cascade of events leading to dementia.

The IMAP+ research project combines a detailed neuropsychological assessment, laboratory tests and neuroimaging studies. These assessments are already performed in patients with subjective memory complaints (known as SCI for "Subjective Cognitive Impairment") and patients with isolated episodic memory deficits and an increased risk of developing Alzheimer's disease (known as MCI for "Mild Cognitive Impairment"). These patients will be monitored regularly for 3 years in order to assess the evolution of brain and cognitive changes and the relationship of cause and effect between these changes. This study is conducted in collaboration with Inserm Research Unit 919 and CNRS Research Unit 6232 in Caen, as well as the University Hospital of Tours and the reference centres for 'Young Alzheimer Patients' from Rouen and Lille Hospitals.

The Inserm 1077 Unit has been studying for more than 10 years MCI patients and has already contributed to the development of new clinical criteria for an earlier diagnosis of Alzheimer's disease. The present research project will focus on even earlier, asymptomatic, stages of the pathology, since recent discoveries suggest that the neurodegenerative process could be slowed down at these stages. It is within this context that this ambitious project will be conducted. While aiming to study a rare population, it will certainly provide some key pieces of information to understand and treat this disease.

The Inserm 1077 Unit has been studying for more than 10 years MCI patients and has already contributed to the development of new clinical criteria for an earlier diagnosis of Alzheimer's disease. The present research project will focus on even earlier, asymptomatic, stages of the pathology, since recent discoveries suggest that the neurodegenerative process could be slowed down at these stages. It is within this context that this ambitious project will be conducted. While aiming to study a rare population, it will certainly provide some key pieces of information to understand and treat this disease.

Laser capture microdissection and Q-PCR

Researchers and engineers from Inserm U982 and the Cellular Imaging Platform of Haute-Normandie PRIMACEN (<http://primacen.crihan.fr>) in Rouen (France)



will organize a training program on laser capture microdissection and gene expression analysis by quantitative PCR (May 23 to 25, 2012). This training is intended for staff working in Inserm research units: researchers, engineers and students who want to acquire knowledge and skills to apply laser capture microdissection technique in their laboratories or platforms. Several applications of this technique will be presented and practical sessions will review protocols to conduct transcriptomic analysis. For more information please contact Dr **Magalie BENARD** (magalie.benard@univ-rouen.fr) or Dr **David VAUDRY** (david.vaudry@univ-rouen.fr). For application to register please contact Mrs **Marie-Noëlle FOURMAUX** (marie-noelle.fourmaux@inserm.fr).

will organize a training program on laser capture microdissection and gene expression analysis by quantitative PCR (May 23 to 25, 2012). This training is intended for staff working in Inserm research units: researchers, engineers and students who want to acquire knowledge and skills to apply laser capture microdissection technique in their laboratories or platforms. Several applications of this technique will be presented and practical sessions will review protocols to conduct transcriptomic analysis. For more information please contact Dr **Magalie BENARD** (magalie.benard@univ-rouen.fr) or Dr **David VAUDRY** (david.vaudry@univ-rouen.fr). For application to register please contact Mrs **Marie-Noëlle FOURMAUX** (marie-noelle.fourmaux@inserm.fr).



will be presented and practical sessions will review protocols to conduct transcriptomic analysis. For more information please contact Dr **Magalie BENARD** (magalie.benard@univ-rouen.fr) or Dr **David VAUDRY** (david.vaudry@univ-rouen.fr). For application to register please contact Mrs **Marie-Noëlle FOURMAUX** (marie-noelle.fourmaux@inserm.fr).

International collaboration

As part of the INSERM-DGRS exchange program, Dr **Oifa MASMOUDI** and Mrs **Seyma BAHOUDI** (University of Tunis) will conduct a research internship in the Inserm Unit 982 (Rouen, France) starting on December 29th, 2011.

Visit of Laboratories

The Laboratory of Neurophysiology (LATIMER, Inserm U1101, Brest, France) will present during the Open House of the University of Occidental Brittany (UBO) on March 3rd, 2012 its research activities on cardiovascular and respiratory effects of neuropeptides in the brain.

News from the TC2N project

In the context of the TC2N project, Mr **Marc KERMORGANT** was recruited as a Ph.D. student in the laboratory of Neurophysiology of Brest (LATIMER, Inserm U1101, Brest, France). He will perform his research work under the mentorship of Dr **Jean-Claude LE MEVEL** on the central effects of fluoxetine on cardiovascular and respiratory functions.



Fluoxetine is a selective inhibitor of serotonin reuptake, which has an antidepressant action. However, present in an aquatic environment, fluoxetine can also act as a neuroendocrine disruptor in fish.

Fluoxetine is a selective inhibitor of serotonin reuptake, which has an antidepressant action. However, present in an aquatic environment, fluoxetine can also act as a neuroendocrine disruptor in fish.

