



The Neuroscience Letter

LARC-Neuroscience network

The 16th scientific meeting of the LARC-Neuroscience network was organized at Action Stations, Portsmouth Historic Dockyard, on November 9th, 2012, by Prof **Darek GORECKI**, Dr **Frank SCHUBERT** and Mr **Andy MEW**. The meeting brought together 120 people, including 78 from France. Traditionally, it was a combination of high profile keynote speakers and young researchers presenting their results. Prof **Graham COLLINGRIDGE** (Director of the Centre for Synaptic Plasticity MRC and former President of the British Society for Neuroscience) presented a lecture entitled "*Synaptic plasticity in the hippocampus*" and Prof **Peter SOMOGYI** (Director of the Anatomical Neuropharmacology Laboratory at the University of Oxford) presented a lecture entitled "*Space and time in cooperating neural circuits of the hippocampus*". Ten oral communications and 56 posters were presented by doctoral students and young researchers, working in the LARC network laboratories. The prize for the best oral presentation was awarded to Miss **Magda HAMZA** (Inserm U982, Rouen) for her work on "*Spatiotemporal characterization of mouse cerebellum in pleiotrophinergic system: evidence for its key role during ontogenesis and adulthood*". Two prizes for the best poster presentations were also awarded to Miss **Nicole BELLEFONTAINE** (INSERM U837, Lille) for her work on "*Nitric oxide signaling within the preoptic area of the hypothalamus is critical for the stimulatory action of leptin on the neuroendocrine reproductive axis*" and to Miss **Alexandra SPITTLE** (University of Bristol) for her work on "*Group I mGluR modulation of AMPA/kainate receptor-mediated Ca²⁺ flux in oligodendrocyte precursor cells*". The organization of the meeting was financed thanks to the support of the Interreg project TC2N and the three prizes were offered by the companies Scientifica, Tripple Red and Roche.



The Steering Committee of the Network proposed that the 17th scientific meeting of the LARC-Neuroscience network should be organized in Rouen by Dr **David VAUDRY** (Inserm U982) and Prof **Sergei FETISSOV** (Inserm U1073) on October 25th, 2013.

During year 2012, the structure of the LARC-Neuroscience website (<http://larc-neurosciences.org>) has been totally rebuilt to allow continuous updates of the profiles of the 52 teams affiliated with the network. Now it also includes a section for abstract submission and management for the conferences and an arrangement to automatically dispatch the Neuroscience Letter. Please note that you can also submit news to be published on the website (recruitment, conferences ...) by sending your text to Dr **David VAUDRY** (david.vaudry@univ-rouen.fr) at any time. In 2013, a corresponding English version of the website will be developed.

Scientific meetings

The next annual meeting of the French Society for Brain and Cerebrovascular Disease (SCMC) will be held in Paris on February 12th, 2013. The SCMC will award a prize of €1,000 to a person whose work will develop important knowledge on brain and cerebrovascular diseases. For more information, visit <http://www.scmc.asso.fr>



The British Neuroscience Association's biennial meeting will be a unique event held April 7th to 10th, 2013. Eighteen learned societies with a neuroscience interest, both clinical and non-clinical, have contributed one or more symposia to the program, creating a meeting with 56 scientific sessions and 8 plenary lectures involving more than 240 speakers, over 80 from outside the U.K. The hottest topics in neuroscience research will be covered, and over 1,000 poster presentations representing all aspects of the subject are expected. For more information visit : www.bna2013.com



The 26th International Symposium on Cerebral Blood Flow, Metabolism and Function and the 11th International Conference on Quantification of Brain Function with PET will be held in Shanghai (China) from May 20th to 23rd, 2013. For more information, visit : <http://brain.kenes.com>



The 39th Symposium of the French Society of Neuroendocrinology (SNE) will be held in Fez (Morocco) from September 24th to 27th, 2013 organized by Prof **Rabea MAGOUL** (University Sidi Mohamed Ben Abdallah) and Dr **Youssef ANOUAR** (Inserm U982). Twenty travel grants should be awarded to young researchers with the support that the Obelisk Foundation brings to the SNE. For more information on the program of the meeting, visit : <http://sne2013.univ-rouen.fr>



Awards

Miss **Marion DENORME** (INSERM U 982), second year PhD student (Supervisors: Prof **Laurent YON** and Dr **Christophe DUBESSY**) was awarded the French Society of Angiogenesis (SFA) and the League Against Cancer prize for the best oral presentation following her talk entitled "*Evaluation of anti-angiogenic treatments of pheochromocytoma*" presented at the 4th Congress of the SFA, which was held in the Principality of Monaco from October 28th to 30th, 2012. This work illustrates the therapeutic potential of Sunitinib and Sorafenib, two tyrosine kinase inhibitors with anti-angiogenic and anti-tumoral activities, for the treatment of pheochromocytoma, a neuroendocrine tumor of the adrenal medulla.





Appointments

Dr **Vincent PREVOT** (Inserm U837) has been appointed President of the French Neuroendocrinology Society (SNE). Dr **David VAUDRY** (Inserm U982) was appointed General Secretary of the SNE. For more information on the activities of the SNE, please see: <http://www.societe-neuroendocrinologie.fr>

Brain Awareness Week

The Brain Awareness Week will take place this year in all European countries, between March 11th to 17th, 2013. In Rouen, an exhibition entitled "The Chemistry of Love" will be presented



at the Faculty of Science and Technology in Mont-Saint-Aignan (France) during this period. A series of lectures will be given on Saturday, March 16th, 2013 starting at 3 PM at the h₂O Science Center (Boisguilbert Quay, Rouen). The detailed program will soon be available on the LARC-Neuroscience website (<http://larc-neurosciences.org>).



Thesis

On October 23rd, 2012, Miss **Amandine JULIENNE** (Inserm U919) has defended her thesis (Science) entitled « *Mechanisms of the deleterious effects of plasminogen activator on ischemic stroke unit* ». (Supervisor: Prof **Carine ALI**).

On October 30th, 2012, Mr **Axel MONTAGNE** (Inserm U919) has defended his thesis (Science) entitled « *Tissue plasminogen activator in the central nervous system: from neuroprotection to molecular imaging* ». (Supervisor: Prof **Denis VIVIEN**).



Publications

D. Lanfray, S. Arthaud, J. Ouellet, V. Compère, J.L. Do Rego, J. Leprince, B. Lefranc, H. Castel, C. Bouchard, B. Monge-Roffarello, D. Richard, G. Pelletier, H. Vaudry, M.C. Tonon, F. Morin. Gliotransmission and brain glucose sensing: critical role of endozepines. In this paper, published in *Diabetes* (published online November 16th, 2012), researchers from INSERM U982 in collaboration with a team of Laval University of Quebec show that activation of the melanocortin pathway by endozepines, a family of peptides notably produced by tanycytes in the hypothalamus, induces a reduction of food intake and blood glucose levels in the periphery. This study can shed new light on mechanisms involved in glia/neuron coupling, and supports the notion that endozepines play an important role in the central control of the energy balance.

Y. Hamdi, H. Kaddour, D. Vaudry, S. Bahdoudi, S. Douiri, J. Leprince, H. Castel, H. Vaudry, M.C. Tonon, M. Amri, O. Masmoudi-Kouki. The octadecaneuropeptide ODN protects astrocytes against hydrogen peroxide-induced apoptosis via a PKA/MAPK-dependent mechanism - **Y. Hamdi, H. Kaddour, D. Vaudry, S.**

Douir, S. Bahdoudi, J. Leprince, H. Castel, H. Vaudry, M. Amri, M.C. Tonon, O. Masmoudi-Kouki. The stimulatory effect of the octadecaneuropeptide ODN on astroglial antioxidant enzyme systems is mediated through a GPCR. In these two papers published in *PlosOne* (2012; 2012;7:e42498) and in *Front. Neuroendocr. Sci.* (2012; 3:138), researchers from INSERM U982 and from a team of the University of Tunis El Manar (Tunisia), show that the peptide ODN, an endozepine produced by astroglial cells in the CNS, possesses a glioprotective effect against oxidative stress *in vitro*. ODN exerts its anti-apoptotic activity through the activation of a receptor pharmacologically different from classical benzodiazepines receptors, leading to the activation of the PKA/MAK pathway. These data suggest that ODN is a potential candidate for the development of specific agonists that would mimic its protective activity.

A. Corroyer-Dulmont, E.A. Pérès, E. Petit, J.S. Guillamo, N. Varoquaux, S. Roussel, J. Toutain, D. Divoux, E.T. Mackenzie, J. Delamare, M. Ibazizène, M. Lecocq, A.H. Jacobs, L. Barré, M. Bernaudin, S. Valable. Detection of glioblastoma response to temozolomide combined with bevacizumab based on μ MRI and μ PET imaging reveals [18F]-fluoro-L-thymidine as an early and robust predictive marker for treatment efficacy. In this article published in *Neuro Oncology* (2013; 15: 41-56), researchers from CNRS UMR 6301, in collaboration with Roche and the European Institute of Molecular Imaging in Munster, demonstrate that it is possible using functional imaging, including FLT-PET and, to a lesser extent blood volume measured by MRI, to evaluate very early, the efficacy of chemotherapy combined with anti-angiogenic therapy in two orthotopic models of brain tumors developed in nude rats.

L. Marteau, S. Valable, D. Divoux, S. Roussel, O. Touzani, M. Bernaudin, E. Petit. Angiopietin-2 is vasoprotective in the acute phase of cerebral ischemia. In this article published in *J. Cereb. Blood Flow* (doi: 10.1038/jcbfm.2012.178), researchers from the University of Caen show that the administration of angiotensin-2 during the acute phase of ischemia may limit the volume of the infarcted area by reducing the permeability of the blood-brain barrier.

C.F. Lien, S.K. Mohanta, M. Frontczak-Baniewicz, J.D. Swinny, B. Zablocka, D.C. Górecki. Absence of glial α -dystrobrevin causes abnormalities of the blood-brain barrier and progressive brain edema. This paper published in *J. Biol. Chem.* (2012; 287: 41374-41385), shows that dystrobrevin protein anchors water and ion channels in astrocytic end feet. This ensures that water is being pumped between the blood and the brain, which could be a key element to understand brain damage in various diseases. Illustration from this work conducted by research teams from the University of Portsmouth, UK and Mossakowski Medical Research Centre in Poland has been on the cover of *J. Biol. Chem.* dated November 30th, 2012 and also reached the lay media : <http://uk.news.yahoo.com/plumber-protein-discovery-hailed-025053786.html>

