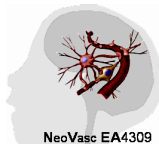




The Neuroscience Letter

Creation of an Inserm-Region team in Normandy

The Inserm-Region Neovasc team ERI28 "Microvascular Endothelium and Neonatal Brain Injury" led by Dr. **Bruno GONZALEZ**, focuses on brain injury in the newborn and neonatal disabilities.



The team works in close partnership with the Department of Pediatrics and Neonatal Resuscitation of the Rouen Hospital led by Professor **Stéphane MARRET**. Brain injuries in the newborn, involving motor, cognitive and neuro-psychic impairments, are common and affect both premature and infants born to term. Prevalence of these injuries has remained unchanged since the 50s, the diagnostic and prognostic tools are deficient and no treatment is routinely available. Conducting research in this area is of considerable medical and socioeconomic importance. Affected children and their families face life with often severe disabilities while a recent study revealed that the care cost is equivalent to that of patients with neurodegenerative diseases associated with aging. While the vascular system has been clearly associated with several risk factors causing brain damage in the newborn, the involvement of the brain microvascular endothelium remains poorly understood. The ERI28 team, which involves thirty people, including clinicians, researchers and technicians will develop and promote the translational research in order to evaluate the involvement of this vascular component.

Scientific meetings

The next World Congress of Biological Psychiatry will be held in Kyoto, Japan, from June 23rd to 27th, 2013 (www.wfsbp-congress.org). More than 4000 worldwide participants are expected to attend: psychiatrists but also pharmacologists and researchers, to exchange expertise regarding innovations in the understanding of mental illnesses and their treatments. For more information, please contact Professor **Florence THIBAUT** (florence.thibaut@chu-rouen.fr), President of WFSBP.



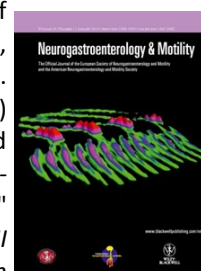
Dr. **Elodie FINO** (INSERM U667, College de France, Paris) will give a lecture entitled "Dynamics and pathophysiology of neural networks", on Tuesday, November 20th at 2 PM in Rouen (Vincent Contesse room, Campus of Mont-Saint-Aignan). The conference will be broadcasted live in Caen (visio room AC 356 from CRISI Campus 1, Building A, 3rd floor).

Awards

Dr. **Catherine LLORENS-CORTES** (CIRB-CNRS UMR 7241/INSERM U1050) has been awarded the Danièle Hermann 2012 prize, given by the Cardiovascular Research Foundation. The ceremony took place on October 17th, 2012, at the Institut de France.



During the International Congress of Neurogastroenterology (NGM2012), that took place in Bologna, Italy, Dr. **Guillaume Gourcerol** (INSERM 1073) won the best picture prize awarded by the Journal "Neurogastroenterology & Motility Cover Contest" for his image depicting a "phase III migrating motor complex in man in high 3D resolution". This image will be displayed on the cover of the journal in 2013.



New grant awards



The European project "Peptide Research Network of Excellence" (PeReNE) was approved on October 11th, 2012, by the Steering Committee of the Interreg-IVA program France (Channel) - England. This project, initiated by researchers from the University of Rouen, aims to place the Channel region at the forefront of peptide research by bringing together efforts of 23 research teams and 3 core facilities from INSERM, CNRS and Universities of Amiens, Rouen, Caen, Rennes, Brest, Exeter, Southampton, Portsmouth, Brighton, Sussex and Kent (www.perene-project.eu). The competitiveness cluster Cosmetic Valley and two SMEs (BioSIMS and RootLines Technologies) are also partners in this project. The teams will carry out 14 collaborative research activities on bioactive peptides with innovative industrial opportunities in the biomedical, cosmetic and food industries. Planned activities also include scientific meetings, communication to the lay public, workshops, participation in international fairs and trades with French and British companies. To carry out these activities, the project benefits from an EU grant of 2.79 million euros for the period 2012-2015. For more information, contact:

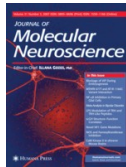
david.vaudry@univ-rouen.fr





Scientific edition

Dr. **David VAUDRY** has been nominated as a member of the editorial board of the *Journal of Molecular Neuroscience*, which publishes articles on the molecular, functional and developmental nervous system.



New equipments

In Portsmouth, the newly refurbished electrophysiology suite has been equipped with a state-of-the-art patch clamp brain slice rig. The fully automated and motorised configuration is designed for imaging and electrophysiology, including the following techniques: Patch Clamping; Sharp Electrode Recording; Microinjection and Stretch Testing. It will be used for several projects, including some of the TC2N.

For more information, contact: **Anthony LEWIS** (anthony.lewis@port.ac.uk) or **Jerome SWINNY** (jerome.swinny@port.ac.uk).

Thesis

October 4th, 2012, Miss **Aurore CRAVEZIC** (SCAC-IRIB) has defended her thesis (Science) entitled "*Involvement of the endomorphinergic system in the pathophysiology of depression and anxiety*" (Supervisor: Dr **Jean-Claude DO REGO**).



October 4th, 2012, Mr **Maxime GAUBERTI** (INSERM U919) has defended his thesis (Science) entitled "*Impact of thrombolysis on the neurovascular unit: from molecular imaging to the development of new thrombolytic strategies*" (Supervisor: Professor **Denis Vivien**).



Recent Publications

Y. Ishii, S.G. Bouret. Embryonic birthdate of hypothalamic leptin-activated neurons in mice. In this paper, published in *Endocrinology* (153:3657-3667, 2012), researchers from the International Associated Laboratory NEUROBESE affiliated to INSERM Unit 837 and to the SABAN Research Institute of Los Angeles, identified through embryogenesis the date of birth of the different neuronal populations which are sensible to leptin at adulthood.

N.K. Hanchate, P. Giacobini, P. Lhuillier, J. Parkash, C. Espy, C. Fouveaut, C. Leroy, S. Baron, C. Campagne, C. Vanacker, F. Collier, C. Cruaud, V. Meyer, A. Garcia-Pinero, D. Dewailly, C. Cortet-Rudelli, K. Gersak, C. Metz, G. Chabrier, M. Pugeat, J. Young, J.P. Hardelin, V. Prevot, C. Dode. SEMA3A, a gene involved in axonal pathfinding, is mutated in patients with Kallmann syndrome. In this paper, published in *PLoS Genetics* (8: e1002896, 2012), researchers from INSERM Unit 837, in collaboration with teams from the Pasteur and Cochin Institutes, show that the axon guidance factor Sema-

phorin 3A is a new "Kallmann syndrome" gene which associates impaired migration of GnRH neurons and anosmia.

N.V. Gounko, J.D. Swinny, D. Kalicharan, S. Jafari, N. Corteen, M. Seifi, R. Bakels, J.J. van der Want. Corticotropin-releasing factor and urocortin regulate spine and synapse formation: structural basis for stress-induced neuronal remodeling and pathology. In this paper, published in *Mol. Psychiatry* (2012 doi: 10.1038/mp.2012.43), researchers from Groningen and Portsmouth visualize pathways that regulate the structural machinery essential for synaptic transmission and provide a basis for understanding stress-induced mental illnesses.

M. Mengozzi, I. Cervellini, P. Villa, Z. Erbayraktar, N. Gökmen, O. Yilmaz, S. Erbayraktar, M. Manohasandra, P. Van Hummelen, P. Vandenabeele, Y. Chernajovsky, A. Annenkov, P. Ghezzi. Erythropoietin-induced changes in brain gene expression reveal induction of synaptic plasticity genes in experimental stroke. In this paper, published in the *Proc. Natl. Acad. Sci. USA* (109: 9617-9622, 2012), researchers from the Brighton & Sussex Medical School and the Flanders Institute of Biotechnology/University of Ghent demonstrate that, in a stroke model, EPO reorients gene expression, increasing genes involved in neuronal plasticity, showing that neuroprotective cytokines can promote neurorepair.

X.J. Xu, M. Boumechache, L.E. Robinson, V. Marshall, D.C. Gorecki, M. Masin, R. Murrell-Lagnado. Splice-variants of the P2X7 receptor reveal differential agonist-dependence and functional coupling with pannexin-1. In this paper, published in *J Cell Sci.* (125: 3776-3789, 2012) researchers from Cambridge and Portsmouth Universities characterised novel isoforms of the purinergic P2X7 receptor.

M. Redhead, G. Mantovani, S. Nawaz, P. Carbone, D.C. Górecki, C. Alexander, C. Bosquillon. Relationship between the Affinity of PEO-PPO-PEO Block Copolymers for Biological Membranes and their Cellular Effects. In this paper, published in *Pharmaceutical Research* (29:1908-1918), researchers from Nottingham and Portsmouth Universities describe the systematic analysis of interactions between tri-bloc copolymers (Pluronics) and cell membranes and reveal the mechanisms responsible for these observed biological effects of these widely used pharmaceutical materials.

TC2N project & LARC-Neurosciences



The fourth steering committee meeting of the TC2N project will be held on Thursday November 8th, 2012, 4 to 7 PM in Portsmouth, the day before the 16th scientific meeting of the LARC-Neuroscience Network. The conference program for the LARC is available on the network's website.

Find the program of the 16th scientific meeting of the LARC-Neuroscience Network on:

<http://larc-neurosciences.org>



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