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ITMO Neurosciences,
sciences cognitives, neurologie, psychiatrie

Plan Maladies Neuro-Dégénératives 2014-2019

Madame Marisol Touraine, Ministre des Affaires sociales de la Santé et des Droits des femmes, Madame Laurence Rossignol, Secrétaire d'État chargée de la Famille, des Personnes âgées et de l'Autonomie et Madame Geneviève Fioraso, Secrétaire d'État chargée de l'Enseignement supérieur et de la Recherche ont annoncé, le 18 novembre 2014, le plan Maladies Neuro-Dégénératives que vous pouvez consulter sur le site de l'ITMO Neurosciences, Sciences Cognitives, Neurologie, Psychiatrie.

COLLOQUE 2014 de l'ITMO NEURO

- Les Instituts Thématiques Multi-Organismes (ITMO) Santé publique et Neurosciences, Sciences Cognitives, Neurologie, Psychiatrie organisent conjointement leur colloque à Paris le 8 et 9 décembre 2014 : https://itneuro.aviesan.fr/index.php?pagendx=718

POST-DOC

- **Postdoctoral Researchers – Electrical signatures of Autism during delivery and development - Institut de Neurobiologie de la Méditerranee (Inmed)/Neurochlore, South of France**

The team of Yehezkel Ben-Ari at Inmed (INSERM) and Neurochlore (a start-up company located in the same Institute) have made important discoveries on the alterations of intracellular chloride in neurons and
associated GABA excitatory/inhibitory shifts during delivery and in pathological disorders such as epilepsies and autism (Nardou et al Brain 2011, Tyzio et al., Science, 2006, 2014; Eftekhari et al., Science 2014). Maternal
administration of the diuretic bumetanide to 2 animal models of autism shortly before delivery attenuated the severity of the syndrome in off springs stressing the importance of delivery in the pathogenesis of the disorder.
These observations have led to a neurochlore sponsored successful double-blind randomized clinical trial inautism using the diuretic bumetanide known to produce an excitatory/inhibitory shift of GABA (Lemonnier et al., Translational Psychiatry, 2012).
The team of Yehezkel Ben-Ari at Inmed is looking for 2 post-doctoral candidates with PhDs in Neurophysiology having significant experience in electrophysiological/anatomical and/or imaging techniques to determine the properties of ionic currents and network patterns in immature neurons.. The positions are funded for up to 3 years.
Highly motivated scientists are welcome to apply with a letter of intent and a short CV.
The jobs will be based at the Inmed in the scientific campus of Luminy (Marseille, France).
Please send your full application (in one pdf document) to Yehezkel Ben-ari.
For further information on INMED visit our website http://inmed.coraxis.pro/ or /http://www.neurochlore.fr/fr/

- **POSTDOCTORAL POSITION IN CELLULAR AND SYSTEM NEUROSCIENCE**

Applications are invited for a 2-3-year postdoctoral position to study the contribution of neuronal chloride homeostasis to hippocampal rhythmogenesis at the Institut du Fer à Moulin [18] (IFM).

IFM is a research institute located in the center of the Quartier Latin in Paris and is devoted to the study of the development and plasticity of the nervous system. It hosts 7 research teams using multidisciplinar approaches from molecules to behavior and advanced technological
platforms including imaging (confocal, 2 photon, PALM/STORM...) and complete behavioral phenotyping.

Our team combines advanced imaging techniques with both in vitro and in vivo electrophysiology to explore the consequences of altered GABA signaling in hippocampal epileptogenesis. We currently seek a highly motivated and experienced

postdoctoral fellow to join a project aiming
at understanding how alterations in chloride transport affects hippocampal rhythmogenesis to promote seizures and cognitive deficits.
The position is funded by the Human Frontier Science Program (HFSP) and the Fondation pour la Recherche Médicale (FRM). It is available for 2-3 years, starting in January-March 2015.

The successful candidate will perform i) viral transduction in rats to manipulate chloride transporter expression in vivo and ii) behavioral assays combined with in vivo (EEG) and in vitro (patch-clamp) recordings to evaluate the functional impact of these manipulations.Candidates should be experienced in vitro or in vivo electrophysiologists. Some experience in animal behavior and surgery would be appreciated. Please send a complete resume, motivation letter and contact information of two references to Jean Christophe Poncer.

- **Post-doctoral position in neuroscience - Center for Interdisciplinary Research in Biology (Collège de France, Paris, France)**

A 2-year post-doctoral position is open at the Center for Interdisciplinary Research in Biology (Collège de France, Paris, France) in the team « Junctional communication and interaction between glial and neuronal networks » headed by Dr. C. Giaume. This team focuses on the role of astroglial connexins (Cxs), membrane proteins forming gap junction channels and hemichannels, in physiological and pathological situations.
The proposed post-doctoral project aims at understanding the contribution of astroglial Cxs to neuronal dysfunction in a murine model of Alzheimer's disease (AD), the APPswe/PS1dE9 mouse. Since in these mice, hemichannels are chronically activated allowing for gliotransmitter release, the consequences on neuronal function and behavioral performances of APPswe/PS1dE9 mice in which hemichannel activity is suppressed will be investigated.

This project will be conducted in collaboration with the team of Dr L. Rondi-Reig (UPMC, Paris, France) for the behaviour Candidates with previous experience in behavioural tests and electrophysiology should send their CV, motivation letter and at least one letter of reference to Annette Koulakoff

The grant is supported by LECMA. The position begins in january 2015.

- **Post-doctoral position Neural stem cells microgenomics - A post-doctoral position at junior or senior level is currently open at the NeuroPSI Institute (CNRS and Paris-Saclay University), in collaboration between the research teams of Jean-Stéphane Joly and Laure Bally-Cuif.**

This position is funded for one year by the Paris-Saclay Idex, starting on Jan. 1st, 2015.

Our teams are focusing on the biology of neural stem cells, using the zebrafish model (Danio rerio). Teleost fish have the incomparable advantage of maintaining high numbers of active neural stem cells in their adult brain, and we have developed transgenic lines specifically highlighting these stem cells in several brain subdivisions. The proposed microgenomics post-doctoral project will aim to characterize the genome active sites of different neural stem cell subtypes (radial glia or neuroepithelial cells) in different states (quiescent or activated) and different brain territories (forebrain, midbrain). This comparative approach will permit a first identification of the epigenetic signature underlying the specific properties of these stem cells within the mature brain.

This project will be conducted within the dynamic environment of the new NeuroPSI Institute, which will open on Jan 1st, 2015. This Institute unites 29 research teams focusing on the biology of the nervous system, from its embryonic development to the generation of its emerging properties and the computation of its circuits.

Key necessary expertise: excellent theoretical and experimental knowledge of state-of-the art molecular biology and biochemistry techniques, especially re. the analysis of chromatin marks.
Additional relevant expertise: cell sorting, bioinformatics and genome analysis.

Websites of the host teams : http://www.inaf.cnrs-gif.fr/ned/equipe01/accueil_01.html et http://www.inaf.cnrs-gif.fr/ned/equipe08_eng/accueil_08.html

Contact : please email your CV, your motivation letter and at least one letter of reference simultaneously to both addresses: Jean-Stépahne Joly et Laure Bally-Cuif

- **Post-doc position at Neurospin, Saclay (France) to collaborate to the high-resolution human brain mapping subproject of the Human Brain Project, in collaboration with S. Dehaene and B. Thirion**

The application deadline is November 20th. The position begins in February 2015. For details please see here.

- **Postdoctoral position in neurophysiology (dopamine and synaptic plasticity).**

Applications are invited for a 3-year postdoctoral position to study dopamine modulation of calcium influx underlying synaptic plasticity, at the Center for Interdisciplinary Research in Biology (College de France, Paris, France). We are seeking a highly motivated and talented research candidate to work on a project concerning the pathophysiology of dopamine and its impact on calcium influx in striatal neurons underlying corticostriatal synaptic plasticity. The position is funded by the National Agency for Research (ANR) associated with the National Science Foundation (NSF) in the NSF program Partnerships for International Research and Education. The position is available for 3 years.
The successful application will perform 2-photon imaging (Trimscope II, LaVision) combined with patch-clamp experiments with optogenetics first in acute brain slices and in a second step an upgrade to in vivo experiments would be developed. Center for Interdisciplinary Research in Biology of the College de France is home to a collegial, interdisciplinary and vibrant neuroscience community and has excellent

research facilities.
Candidates, preferably with a previous experience of in 2-photon imaging and electrophysiology (patch-clamp), should send their CV, brief statement of research interests contact information of two references and representative publications to: Laurent Venance

- **Postdoctoral Positions (Multi-Modal Brain Analysis)**

Postdoctoral research opportunities are available in the area of biomedical signal treatment at the Inserm Group (Inserm U 1105) in the University Hospital of Amiens, France.
The GRAMFC U1105 constitutes a competitive multidisciplinary team of around 20 peoples allowing strong interactions between clinical and fundamental neurophysiologists, neuropaediatricians, and specialists in signal processing. The group is well implanted in the University Hospital for clinical evaluation through the clinical unit of Exploration Fonctionnelles du Système Nerveux pédiatrique and is also localized in the Faculty of medecin for signal treatment and more fundamental study on animal models. The GRAMFC is the only group in France to develop tools for high-resolution electric imaging (EEGHR) coupled with high-resolution optical imaging (HR NIRS) applied to children and newborns at a moment where it has to be considered as an emerging approach in the field of neurosciences. In this, they were the first to publish results about the relationship between electric and local hemodynamic activity during seizures or during interical spikes. This group participates in a new upcoming field investigating mechanisms at the origin of physiological and pathological neuronal synchronization during development. Translational research on neurovascular coupling is supported by the use of preclinical research in rodents. The U1105 developed different patents for simultaneous EEG NIRS acquisition and is at the origin of the development of Medelopt, spin off of the U 1105. Collaborations with Neurospin (Orsay, France), University of Montréal (Canada) and Illinois (USA) are among the most important.
Candidate Profile
Candidates with an advanced background and experience/interest in signal treatment are sought to join leading efforts in the development and application of advanced electrophysiological and optical imaging approaches such as High density EEG/Near infra-red spectroscopy. Application areas include the clinical translation of multimodality imaging of the brain function and disorders, the diagnosis of neurovascular disease in children and premature. The candidates will actively participate in the international cooperations and in the encadrement of PhD students. He will have to present its work in international congress.
Requirements:
PhD (or equivalent) in strong backgrounds in Biomedical Engineering, Physics, Medical Physics, Computer Science, Electrical Engineering, Optics, or closely related fields is required. Advanced programming skills in Matlab. Familiarity with multi-modal image reconstruction/visualization and light propagation models is preferred.
To apply:
Interested candidates should send their detailed CV, a cover letter describing training and research experience, and names and contact information of three referees. Send correspondence via email to Pr. Fabrice Wallois with the subject line: Postdoctoral application in cortical signal treatment.
Salary

The grant is supported by Inserm and Region Picardie. The amount is 2539,39EUR brut per month

- **Postdoctoral position in neuroeconomics, decision making, motivation and reward processing in the lab of Dr JC Dreher** : http://dreherteam.cnc.isc.cnrs.fr/en/contacts/open-positions/

  Candidates, preferably with fMRI experience and familiarity with computational models of decision making, should send their CV, statement of research interests and representative publications to: Dr Jean-Claude Dreher.

- **POST DOCTORAL POSITION - The Neurofunctional Imaging Group (GIN) is a CNRS-CEA joint research unit of the Bordeaux University (UMR 5296, dir. Bernard Mazoyer) and a core member of the TRAIL Laboratory of Excellence :** http://trail.labex.u-bordeaux.fr/Jobs/POST-DOCTORAL-POSITION-gray-matter-anatomical-connectivity-networks-2-years,Job-169.html

  For further information, please contact Dr. Fabrice Crivello

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ACCUEIL D'EQUIPE

- **Institut Pasteur - Creation of new research groups in the department of Neuroscience**

  The Department of Neuroscience at Institut Pasteur launches a call for junior, mid-career and senior group leaders.

  Institut Pasteur is located in central Paris and offers an outstanding and unparalleled research environment through its state-of-the-art research laboratories with integral biological services capability, cutting-edge scientific equipment, and technologically-advanced platforms.

  Within this campus, the major focus of the Department of Neuroscience is the elucidation of genetic (and epigenetic), molecular, cellular and circuit mechanisms underlying the neural basis of behavior. Further information can be found on the Departmental website: http://www.pasteur.fr/en/research/neuroscience. Detailed description of the Institute and on-campus facilities can be found at: http://www.pasteur.fr/en.

  We encourage applications from outstanding individuals interested in the development, plasticity, computational and pathophysiology of sensory and cognitive circuits in mammalian brain (rodents to humans). Applications will be evaluated on the basis of scientific excellence. Successful candidates will be appointed with a permanent position. In addition, highly attractive packages to match the experience of the candidate will be provided, including institutional salaries (principal

investigator, technician, secretary, post-doctoral fellows), a substantial contribution to running costs and equipment, access to on campus state-of-the-art technology core facilities, as well as support for relocation expenses and administrative issues.

Applicants should provide a letter of intent (LOI) in a single PDF file (in order):
1. A brief introductory letter
2. A Curriculum Vitae, 10 most important publications and a full publication list
3. A description of past and present research activities (up to 2 pages with 1.5 spacing; Times 11 or Arial 10 font size).
4. The proposed research project (up to 2 pages with 1.5 spacing; Times 11 or Arial 10 font size).

A pdf copy of the LOI should be electronically submitted to neuroloi@pasteur.fr no later than December 30, 2014 by 5:00 pm (Central European Time). Shortlisted applicants will be notified by e-mail by February 1st 2015. A complete application will be requested and due for submission by mid-March 2015. Applicants will be invited for interview to take place at the end of April 2015.

FINANCEMENTS / BOURSES

- **The FLAG-ERA Consortium launches a dedicated joint call for proposals worth 18.5 M EUR on 27 October 2014. In parallel, FLAG-ERA announces the launch of Association Mechanisms for integration of nationally and regionally funded research into the Flagships work plans** : http://www.flagera.eu/extra-files/FLAG-ERA_Press%20release_27102014.pdf .

More information on the FLAG-ERA Joint Transnational Call 2015 is available at the page: http://www.flagera.eu/FLAG-ERA-call-2015.

More information on the Flagship Association Mechanisms can be found at: http://www.flagera.eu/flagship-association-mechanisms

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COLLOQUES / EVENEMENTS

- Conférence spéciale dédiée à deux prix internationaux, « Maladie de Huntington : huntingtine, transport intracellulaire, énergie et survie neuronale » présentée par Frédéric Saudou (Lauréat du prix Lounsbery), directeur de l'Institut des neurosciences de Grenoble, université Joseph Fourier et « De la lumière, du métal et de tout petits trous » présentée par Thomas Ebbesen (Lauréat du prix Kavli), associé étranger de l'Académie des sciences et professeur de chimie physique à l'université de Strasbourg qui se tiendra à l'Académie des sciences le mardi 9 décembre 2014 à 15h (Académie des sciences - Grande salle des séances - 23, quai de Conti - 75006 Paris) : http://www.academie-sciences.fr/

- **Dans le cadre de l'Alliance nationale pour les Sciences de la Vie et de la Santé (Aviesan), les ITMO Circulation Métabolisme Nutrition (CMN) et Technologies pour la Santé ont le plaisir de vous inviter au colloque** : **Therapeutic Innovation DU 18 et 19 décembre 2014 0 Paris :** https://its.aviesan.fr/index.php?pagendx=697

  Ce colloque conjoint a pour objectifs de présenter des exemples d'innovations thérapeutiques réussies dans les domaines de recherche couverts par l'ITMO CMN, de faire mieux appréhender aux chercheurs le potentiel de leurs recherches pour l'innovation et de les informer sur le parcours qui conduit à la valorisation de leurs résultats.

  Le colloque s'ouvrira par une conférence introductive donnée par Herman Waldmann (Therapeutic Immunology Group – University of Oxford) sur l'utilisation d'anticorps thérapeutiques pour maîtriser les mécanismes de tolérance du système immunitaire. Le programme inclut une table ronde en fin de la première journée, qui permettra d'apporter une vision à la fois académique et industrielle de l'innovation thérapeutique et d'échanger sur la problématique. Ces journées s'adressent à tous les acteurs, scientifiques, cliniciens, publics et privés.

  Inscription est gratuite mais obligatoire.

DIVERS / PLATEFORME

- **La Fédération de recherche 3C Comportement-Cerveau-Cognition / FR 3512**, propose des prestations en IRM petit animal anatomique http://federation3c.com/irm-petit-animal-federation-3c et fonctionnel et en Microdialyse intracérébrale sur animal éveillé et HPLC : http://federation3c.com/microdialyse-intracerebrale-hplc-federation-3c
  Contacts : pour la Fédération : Sandrine Basques (Coordinatrice), pour l'IRM : Nathalie Baril (Responsable), pour la Microdialyse HPLC : Nathalie Lorenzo (Responsable).