

Our Institute

The Institute for Neurosciences of Montpellier (INM) is the Joint Research Unit U1298 Inserm/University of Montpellier. It comprises 8 research teams and a staff of 200 personnel, located at the heart of the biomedical campus of the St Eloi Montpellier hospital. INM aims to gather fundamental and translational research to study the development, synaptic plasticity and integration, and neurodegenerative processes leading to disorders of the central and sensory-motor systems.



crédit photos : MC Lucat

Contact us

INM – Inserm UMR 1298

CHU Site St Eloi

80 rue Augustin Fliche

34000 Montpellier

www.inmfrance.com

Institute for Neurosciences of Montpellier

INM – Inserm UMR 1298

Inserm

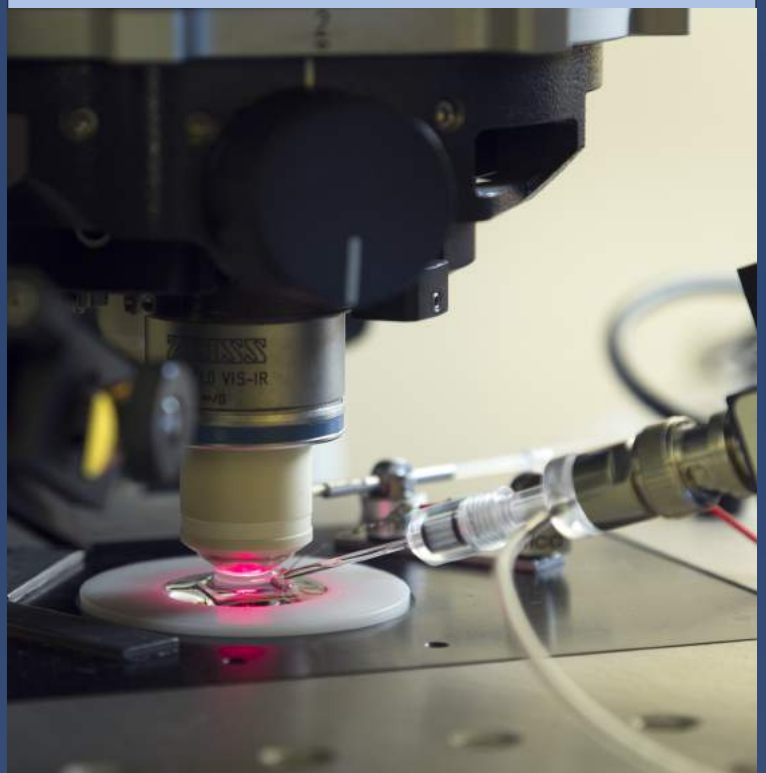


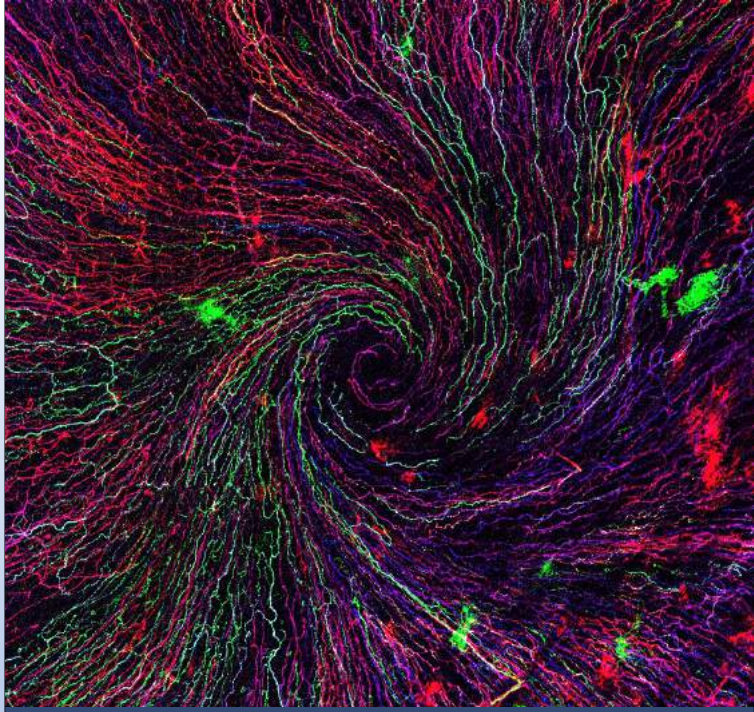
Our research

Our fundamental research is the ground for the development of innovative therapeutic (pharmacological, cell and gene therapy) and diagnostic (genetics and proteomics) strategies for hereditary retinal and optic nerve blindness, corneal damages, auditory neuropathy (deafness and tinnitus), somatosensory diseases (touch and pain), sleep disorders (narcolepsy), neurodevelopmental disorders (autism, schizophrenia, environmental stress) and neurodegenerative diseases (amyotrophic lateral sclerosis, multiple sclerosis, Alzheimer's disease).

Our facilities

Research, from the molecular level to the integrated system, is conducted using state of the art technical platforms (functional analysis, stem cells and organoids, neurogenetics, proteomics, biostatistics and epidemiology, photonic and electronic imaging). Our translational research is based on strong interactions with clinical departments (neurology, ophthalmology, otorhinolaryngology) and national reference centers. We benefit from the support of patient associations and interact constructively with industry.





Our cutting-edge research, fueled by our close relationship with Montpellier and Nimes hospitals, is directed towards patients' health.



INM institute for neurosciences montpellier

Inserm

Call for Team Leader in Montpellier, France

The Institute for Neurosciences of Montpellier (INM) (http://inmfrance.com) is a Joint Research Unit U1298 Inserm/University of Montpellier. It comprises 8 Inserm teams and a staff of 200 personnel working on sensory-motor deficits and neurodegeneration. The INM aims at implementing fundamental and translational research to study the neurodevelopment, synaptic plasticity and integration, cognition, sleep-wake and neurodegenerative processes leading to disorders of the central and sensory-motor systems.

Research, from the molecular level to the integrated system, is conducted using cutting-edge technical platforms (functional analysis, stem cells and organoids, neurogenetics, proteomics, neurophysiology, biostatistics and epidemiology, photonic and electronic imaging). Our translational research is based on strong interactions with clinical services (neurology, ophthalmology, ENT). We benefit from the support of patient associations and interact constructively with industry.

We are seeking two junior and/or senior principal investigators wishing to join the INM to develop fundamental/translational neuroscience projects which enable interactions with current INM teams.

Junior Group Leader: Appropriate office and laboratory space for up to 6 persons/team will be available. Successful candidates must be within 10 years of their PhD degree and meet criteria for obtaining French institutional research positions (INSERM, University) as well as national and/or international starting grants. The selected candidates will receive a strong support for drafting the applications and rehearsing their interviews.

Senior Group Leader: Appropriate office and laboratory space for up to 12 persons/team will be available. Successful candidates hold a permanent research position in France, or will have to be selected beforehand in Tenure-track position program (Inserm, University), and have funding for the upcoming years.

Applicants should send a CV with a list of publications, a 2-page summary of past research achievements and future projects, and contact information for three referees, before January 31th 2024 to direction.inm@inserm.fr Short-listed candidates will be invited on site for an interview. The team's installation period is negotiable. A starting package of 100 k€ will be provided.

Please address any question regarding the call to Dr Sylvain Lehmann, INM director: sylvain.lehmann@inserm.fr

Hôpital Saint Eloi - Bâtiment INM
80, rue Augustin Fliche - BP 74103
34091 Montpellier cedex 5
Tel. : 00 33 (0)4 99 63 60 00 - Fax : 00 33 (0)4 99 63 60 20
www.inmfrance.com

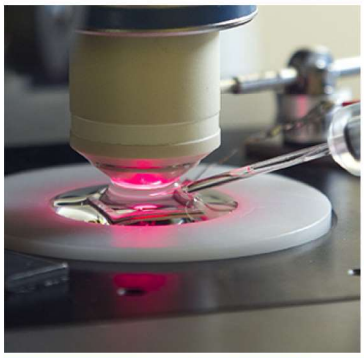


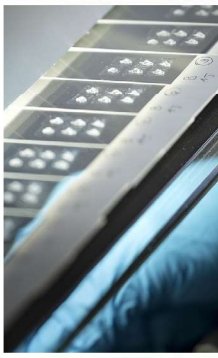
photographies: Marie-Caroline Lucat













Team Corticogenesis : « Cortical cell diversity in Health & Disease »

karine.loulier@inserm.fr

Scientific interests

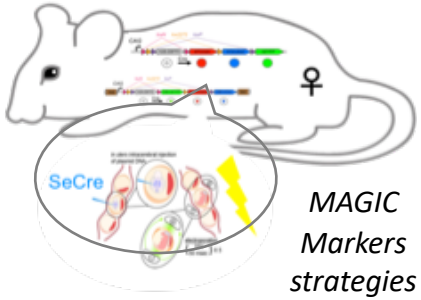



- ✓ Extent of glial cell diversity in cerebral cortex development
- ✓ Link between cortical glial cell heterogeneity, function(s) and developmental origin
- ✓ Imbalance in cortical diversity and neurodevelopmental disorders (ND)
- ✓ Impact of chronic exposure to pesticide residues on increased risk and/or severity of ND



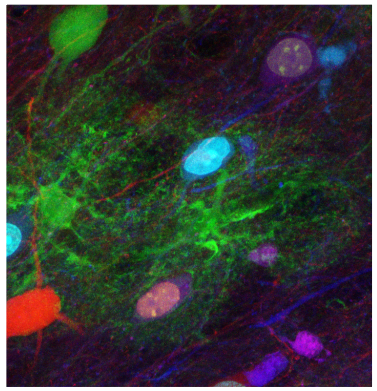
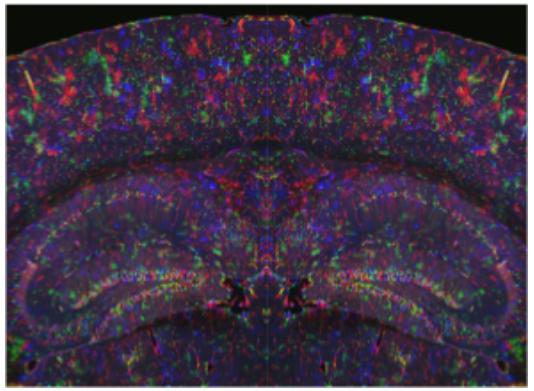
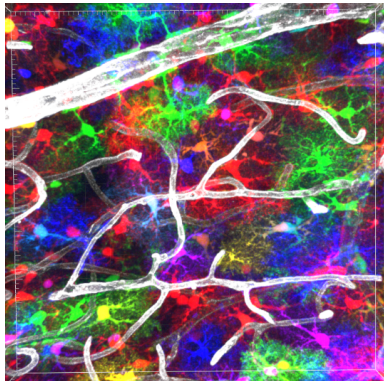

Multicolor fate mapping

In utero electroporation



MAGIC Markers strategies

Confocal and multiphoton multichannel microscopy

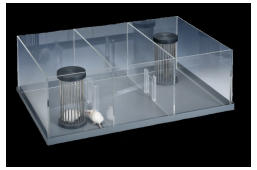
Behavioral tests



ultrasonic vocalization recording



Stereotypies



3-chamber social interaction test

Job offers :

- Junior postdoctoral position for 18 months starting next year to investigate cortical astrocyte diversity & ND
- Junior/senior researchers willing to pursue an academic career in our team will be supported to obtain competitive funding / positions
- 6-month internships for undergraduate students offered on a regular basis

@LoulierK / @CorticoG

http://www.corticogenesislab.toile-libre.org/EN_main_page.html

Team NEUROPEPS

Sleep / Cognition / Stress

Job offer: Funded PhD position

Project : Temporal and spectral characterization of sleep-wake cycle states and their continuum during neurodegeneration in humans

Director: Yves Dauvilliers
y-dauvilliers@chu-montpellier.fr

Start date : end 2023
Profile: Knowledge of signal analysis (EEG and ECG): human spectral analysis

https://inmfrance.com/en/neuropeps

Proteinopathies team

Pathophysiology, diagnosis and therapy of Alzheimer's and related neurodegenerative diseases

Team leader: Sylvain LEHMANN, MD, PhD (sylvain.lehmann@inserm.fr)

Four main scientific axis

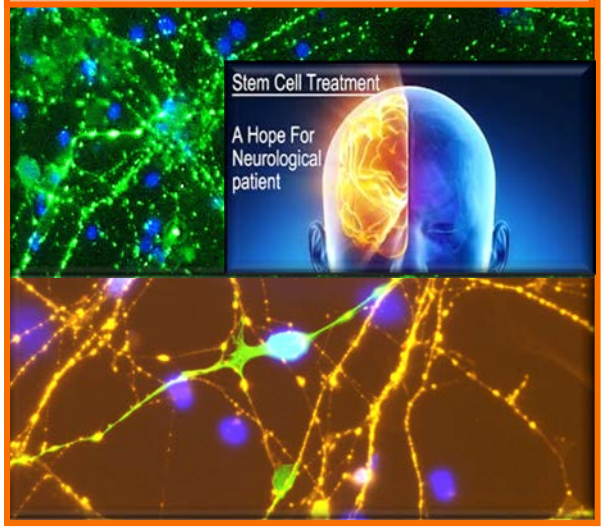
Impact of environmental pollutants on neurodevelopment and Alzheimer's disease
Véronique Perrier (veronique.perrier@inserm.fr)

Stem cells and/in neurodegenerative disorders
Carole Crozet (carole.crozet@inserm.fr)

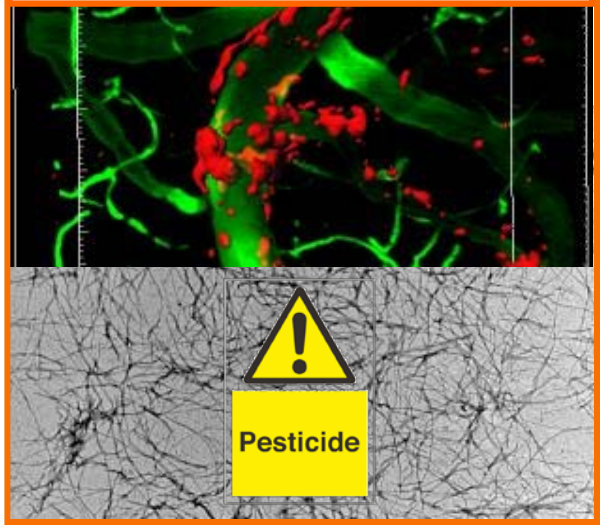
Neuroproteomics and biomarkers
Christophe Hirtz (christophe.hirtz@umontpellier.fr)

Impact of environmental pollutants on Aβ assembly and consequences for Alzheimer's disease
Joan Torrent (joan.torrent@inserm.fr)

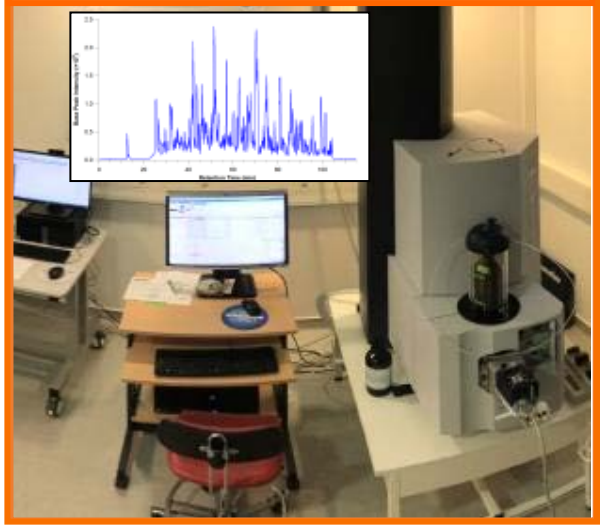
Stem Cell, Organoid



Protein conformation



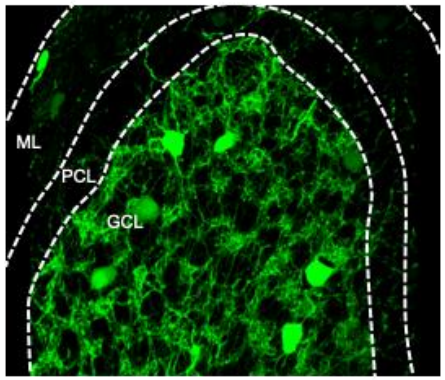
Mass spectrometry

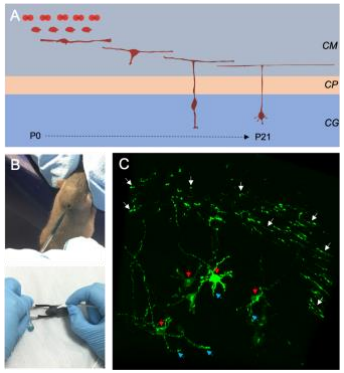


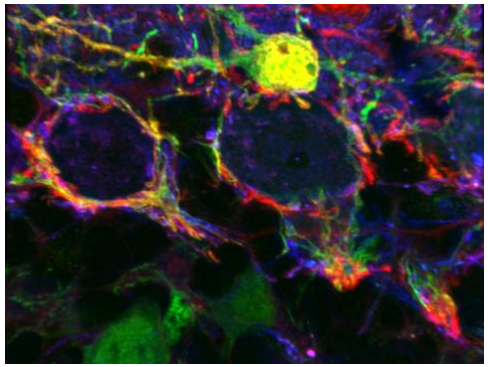
Somatosensori-Cerebellar Circuits Plasticity & Development (SENSATION)

https://inmfrance.com/fr/

Scientific interest: Our laboratory studies the development and plasticity of somatosensory circuits that mediate the sense of touch, pain, and sensation from peripheral sensory neurons. We are interested in the impact of sensory experience on the development of the spinal cord and cerebellar circuits. Our research program will explore the neurodevelopmental and pathophysiological mechanisms of altered peripheral sensory neuron function that contribute to multiple neurological conditions such as chronic pain and autism spectrum disorders.







Research strategies: In addition to the standard molecular, cellular, and behavioral approaches, we develop viral strategies, in utero electroporation, neuron graft, neuron 3D reconstruction, brain clearing protocols, long-read RNA sequencing and High-Density Multiple Electrodes Array (HD-MEA) to elucidate how aberrant somatosensory inputs alter brain function.

JOB OFFER

Postdoctoral position for 2 years starting next year (01/2024)

The candidate will have a strong background in neuroscience, combined with expertise in single- and multi-unit extracellular electrophysiology (patch-clamp on slices and/or isolated cells), and calcium imaging on primary neuron cultures. Experience in molecular biology, including but not limited to transcriptomics analysis, is also desirable. Candidates should also be open to interdisciplinary collaboration.

An assistant professor position at the university of Montpellier CNU Neurosciences is open in our team.

The candidate must be qualified by the national council of universities (CNU) and should apply for qualification between September 21th and November 10th 2023 (https://galaxie.enseignementsup-recherche.gouv.fr/antares/can/index.jsp).

Please contact fabrice.ango@inserm.fr for more information

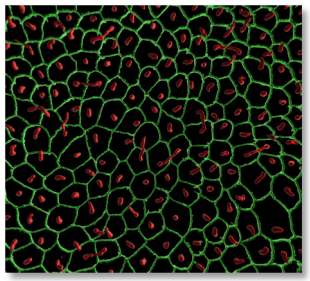
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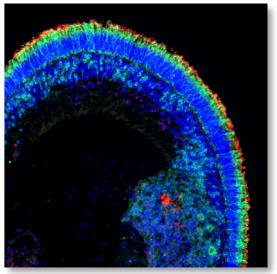
Vision

Inherited visual diseases: from genetics to therapy

Scientific interest: Our research is aimed at establishing genotype-phenotype correlations, resolving diagnostic impasses, elucidating pathophysiological processes and developing innovative therapies for inherited retinal diseases (IRDs). We are tightly linked to the National Reference Centre for Inherited Sensory Disorders and the Reference Medical Biology Laboratory for Neurosensorial Disorders of the Montpellier University Hospital. CHU



Research strategies: We use human disease-specific 2D and 3D iPSC-derived models (RPE and retinal organoids) combined with NGS and CRISPR/Cas genome editing to unravel the effects of genetic variants and pathophysiological pathways. We use fluorescent, biphoton and electronic microscopy as well as calcium imaging techniques to assay retinal morphology and functionality. Recent articles are PMID: 31909088; 33724552; 36114559; 37654703; 37768732.



Job offers

Post-doctoral position for 2 y: The candidate will have extensive & rigorous cell culture expertise, and molecular & cellular biology expertise. Stem cell culture & differentiation experience would be an advantage.

Inserm tenured scientist: We welcome an Inserm CRCN or DR with similar or complementary research expertise who is willing to disseminate their work to patient organisations. A track record of successfully obtaining research grants would be appreciated.

All applicants must have strong communication skills and be willing to work collaboratively as part of a team.

Applicants should send a letter of motivation and a comprehensive CV (including referees' contact details) to Dr Vasiliki Kalatzis (vasiliki.kalatzis@inserm.fr).