



Post-doctoral position in molecular and cellular biology at IGBMC-Strasbourg-France

Membrane remodeling and diseases

Membrane trafficking and remodeling controls cellular homeostasis and intercellular communication. Defects in these processes are at the basis of a plethora of human diseases. However, the regulation of membrane remodeling in specific tissues is still poorly understood. Our previous work has identified the physiological relevance of membrane remodeling for muscle function, in particular the importance of amphiphysin and dynamin proteins for organelles structure and positioning. Moreover, mutations in these two proteins cause severe myopathies, and their modulation efficiently rescues these diseases.

We now like to dissect the molecular and cellular interaction between these proteins under healthy and pathological conditions, with an emphasis on skeletal muscle. Indeed, muscles have specific membrane structures (like triads) and specific isoforms of amphiphysin and dynamin, supporting particular regulatory mechanisms not yet discovered. The molecular regulation will be studied with interactomics and NMR approaches, cell regulation by state-of-the-art cell biology methods and the establishment of in-cell fluorine NMR, and the physiological result can be tested in murine models already available in the team.

A 2-year salary is available; amount depends on previous experience; social security, pension scheme and insurance at the charge of the employer. Start date as soon as possible.

Candidate profile: you are a highly motivated and talented researcher holding a PhD and a first author publication, with strong interest in cellular mechanisms and human disease. Proven expertise in cellular biology, imaging, and recombinant protein production. Knowledge in membrane trafficking is a plus. English is the communication language in the team.

The IGBMC institute is one of the main European centers in Biomedical research and offers a unique environment with 50 research teams, a dozen of state-of-the-art platforms, a PhD program and 45 different nationalities.

Strasbourg is a cosmopolitan city in a beautiful countryside, close to Germany and less than 2 hours from the center of Paris by train.

References:

.Lionello et al. Sci Transl Med. doi: 10.1126/scitranslmed.aav1866

.D'Alessandro et al. Dev Cell. 2015. doi: 10.1016/j.devcel.2015.09.018

<https://www.igbmc.fr/en/recherche/teams/pathophysiology-of-neuromuscular-diseases>

Applications: send a single pdf file with your CV, a cover letter, and contact details for at least two referees to: Jocelyn Laporte <jocelyn@igbmc.fr>



Post-doctoral position in muscle pathology and therapy at IGBMC-Strasbourg-France

Novel therapeutic approaches for Myopathies

Myopathies are severe inherited diseases having a strong impact on patient quality of life, on their family and on our health care system. There is no specific therapy for most of these diseases. We aim to validate novel therapeutic proof-of-concepts for different myopathies. Our previous work has identified several therapeutic targets that we like to validate in transgenic mice faithfully modelling the human disease. Modulation of these therapeutic targets will be performed with drugs, oligonucleotides (antisense/exon skipping), and/or viral vector-mediated transduction. The efficiency of the therapies will be monitored through molecular, cellular, physiological and multi-omics analyses. All tools (including animal models and chemicals to modulate the therapeutic targets) required for this project are already available in the team or existing.

A 2-year salary is available; amount depends on previous experience; social security, pension scheme and insurance at the charge of the employer. Start date as soon as possible.

Candidate profile: you are a highly motivated and talented researcher holding a PhD and a first author publication, with strong interest in human disease and therapies. Proven expertise in mouse pathology and physiology is required. Knowledge in viral vectors and in muscle physiology is a plus. English is the communication language in the team.

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References:

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.Tasfaout et al. Nat Commun. 2017. doi: 10.1038/ncomms15661

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