

Looking For A PhD Candidate, University Jean Monnet , Saint-Etienne, France

Regulation of mitochondriostasis in a mouse model of autosomal dominant centronuclear myopathy - Development of therapeutic strategies

We are looking for a PhD candidate for a 3-year fully funded scholarship at the University Jean Monnet in Saint Etienne (France) under the supervision of Pr Damien Freyssenet (LIBM, Saint Etienne). The successful applicant will become part of a unique training and research environment within the multidisciplinary Inter-University Laboratory of Human Movement in close relationship with NeuroMyoGen Institute (INMG, Lyon).

The PhD student will be responsible for:

- Carrying out a research protocol, collecting and analyzing data
- Disseminating the results in international peer-reviewed scientific journal and conferences
- Completing a PhD dissertation within 3 years

Project Summary

Autosomal dominant-centronuclear myopathy (AD-CNM) is a rare congenital muscle disease caused by mutation predominantly found in the *dynamitin 2* gene (*DNM2*). Our team showed that the CNM KI-Dnm^{R465W} (*Dnm2*-KI) mouse, a mouse model for DNM2-AD-CNM, exhibits a postnatal skeletal muscle growth retardation between 1 and 2 months of age that is associated with a decrease in skeletal muscle mass and force, and an alteration in mitochondrial network organization. Furthermore, two-month-old female *Dnm2*-KI mice displayed a dramatically reduced number of mitochondrial abnormalities compared to male mice, strongly suggesting the existence of a sexual dimorphism in the pathogeny of the disease. The project will aim to characterize the regulation of mitochondriostasis with a particular focus on the transcriptional and non-transcriptional effects of estrogen receptor (ER) alpha in male and female mice. Therapeutic approaches based on the regulation of ERalpha activity will be also evaluated.

Applicant Profile

Applicant will have a MSc and strong background in biology and physiology with special interest in skeletal muscle biology and physiology. He or she should have experience in biological technics such as RT-qPCR, western blots, or immunohistochemistry. Previous experience with animal care and handling will be appreciated. Experience in omic data treatment would be valuable. A good background in statistical analysis will be also requested. Speaking English is mandatory. The complete application file must be sent to Damien FREYSSENET. It will include:

- a cover letter discussing your interest in the position,
- a detailed CV,
- a full record of your academic tracks,
- a letter of recommendation.

The hearing of the PhD candidate will take place by videoconference

Application must be sent before May 15th 2022 to Damien FREYSSENET

Beginning of PhD: September -October 2021

Contact

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