

## Post-doctoral Engineer position in Neurobiology MMDN U1198 University of Montpellier (France)

**Project:** Pathological events that contribute in amyotrophic lateral sclerosis (ALS) involve impairments in unfolded protein response, mitochondrial dysfunction and aberrant nucleocytoplasmic trafficking. Finding a therapeutic target to alleviate all those defects is particularly challenging. By using genetic tools in *Drosophila*, we provided the first direct evidence that increasing S1R confers neuroprotection against toxicity of the key ALS protein, TDP43. We now wish to provide the proof of concept that S1R is an efficient therapeutic target for ALS. For that purpose, we will take advantage of zebrafish to validate that S1R prevent TDP43-induced pathology in a vertebrate model. The mechanisms underlying the beneficial effects of S1R will also be dissected. Finally we wish to identify S1R ligands able to alleviate TDP43-induced pathology in zebrafish as well as in a mouse model. This project is funded through the AFM-Téléthon association.

**Tasks and profile:** The Engineer will be in charged to characterize the impact of S1R overexpression or activation on zebrafish and mouse TDP43 models of ALS. The candidate should hold a PhD degree in Neurosciences and have solid expertise in cellular biology and biochemistry. Zebrafish experience is an asset but not mandatory. Prior experience on mice would be recommended, especially on locomotor tests. Skills in molecular biology techniques, immunofluorescence, western Blot, Rt-qPCR and microscopy would be appreciated. Other selection criterion is to be able to work with enthusiast in a research team. Good oral and written English is an asset. The Engineer position has two years of initial funding.

**Working environment:** Our Lab possesses all facilities to generate zebrafish models (Ze-Neuro; <https://mmdn.umontpellier.fr/en/groups/platform-1>) and to monitor their locomotor behavior (Zebrasens; <https://mmdn.umontpellier.fr/en/groups/platform-2>). We also have access to facilities to monitor locomotor performances on mouse models using open-fields, rotarod, footprint analysis, and grip strength.

**Candidates should send a CV with references and a brief statement of research experience to Dr. JC Liévens: [jean-charles.lievens@umontpellier.fr](mailto:jean-charles.lievens@umontpellier.fr)**

**Application deadline: October 1<sup>st</sup> 2021      Starting date: October-December 2021**

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