Post-doctoral Position

RNA metabolism and astrocyte dysfunction in myotonic dystrophy

REDS • Repeat Expansions and Myotonic Dystrophy

Centre de Recherche en Myologie • Paris

A two-year postdoctoral position is available from early 2023, in the laboratory *Repeat Expansions and Myotonic Dystrophy*, at the Myology Research Centre in Paris, France. The project is funded by the French "Agence Nationale de Recherche" (ANR) and coordinated by Mario Gomes-Pereira.

PROJECT SUMMARY | Perturbations of RNA homeostasis are implicated in the aetiology of several pathologies, for which myotonic dystrophy type 1 (DM1) is a paradigmatic example. DM1 is an inherited neuromuscular disease that affects multiple tissues and cell types. The neurological manifestations are exceptionally debilitating, however important gaps still exist in our understanding of brain disease. Based on our recent findings, we believe that DM1 has a major impact on astrocyte morphology, adhesion, and RNA metabolism, with subsequent consequences on brain function. In addition, we propose that MBNL proteins play a role in astrocyte dysfunction. This project will explore the causes and effects of glial dysfunction in DM1, using unique mouse models, patient-derived human induced pluripotent stem cells (hiPSC) and brain organoids. Transcriptomics, bioinformatics and high-resolution imaging will elucidate the mechanisms behind DM1 brain disease, as well as fundamental aspects of RNA biology in astrocytes. More information can be found **here**.

References: Dincă *et al* (2022) **Nat Commun**. doi: 10.1038/s41467-022-31594-9; González-Barriga *et al* (2021) **Front Cell Neurosci**. doi: 10.3389/fncel.2021.662035; Sicot *et al* (2017) **Cell Rep**. doi: 10.1016/j.celrep.2017.06.006.

LOCATION | The REDS laboratory, headed by D. Furling and G. Gourdon is a leading laboratory in the field of DM1, combining complementary expertise, from genetics and pathophysiology to the development of new therapeutic tools. Our laboratory is located at the Myology Research Centre, a renowned institution dedicated to the basic understanding of neuromuscular diseases, and to the translation of fundamental science to the improvement of patient care. The campus of Sorbonne University and Pitie Salpetriere Hospital offer a dynamic environment with state-of-the art facilities and platforms.

QUALIFICATIONS | Candidates must hold a PhD in a relevant subject (molecular biology, cell biology, neuroscience or genetics). They must have received good training in molecular and cell biology. Knowledge of neurobiology is desirable. The successful candidate is expected to be highly motivated, well-organised, have excellent communication skills, a high level of accuracy in all aspects of work and the ability to contribute to a multidisciplinary project and research group with insight and enthusiasm. He/she will (1) provide input into decisions on experimental approaches and techniques; (2) keep up to date with current developments in the field; (3) collaborate with other members of the group and liaise with external collaborators; (4) take a lead in the presentation of results and paper writing. Good knowledge of the English language is essential.

SALARY | Salary will be commensurate with experience following Inserm guidelines.

APPLICATION DETAILS | Applications in English should include a cover letter, a detailed CV and the contact details of at least two academic references. Applications and informal inquiries should be e-mailed to Mario Gomes-Pereira (mario.pereira@inserm.fr). Please send your application before the **15th October 2022.**

Mario Gomes-Pereira, PhD - ***Repeat Expansions and Myotonic Dystrophy***
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