MeLiS Mechanisms in Integrated Life Sciences

Post-doctoral position *in vivo* functional evaluation of *KCNH2*/hERG variants

Context:
We are looking for a motivated post-doctoral fellow to join our team in Lyon, as part of a translational research project in collaboration with the Centre National de Référence des Troubles du Rythme Cardiaque d'Origine Héréditaire (CERA). This project focuses on the analysis of variants in the *KCNH2* gene, responsible for long QT syndrome (LQTS), an inherited cardiac channelopathy affecting 1/2000 births. Around 39% of the variants identified are classified as 'variants of uncertain significance' (VSI), underlining the importance of functional studies for their interpretation.
Related publication: Delinière et al, Gene, 2024. DOI: 10.1016/j.gene.2023.148076

Aims of the project:
To study the impact of mutations on the biosynthesis, assembly and trafficking of potassium channels in vivo using genetically modified models in *C. elegans*.
This original project combines complementary approaches for an in-depth assessment of the molecular and cellular mechanisms associated with pathogenic variants.

Main tasks:
Generate and characterise *C. elegans* knock-in models containing *KCNH2* variants using CRISPR/Cas9.
Perform advanced imaging analyses (e.g. FRAP, fluorescence quantification) to assess channel trafficking defects.
Collaborate with clinicians and biologists to interpret the data in a translational context.
Present work at international conferences.

Qualifications:
PhD in cell biology, genetics, or related disciplines with less than two years post-doctoral experience.
Experience in *in vivo* imaging and advanced microscopy. Knowledge of genetics (ideally CRISPR/Cas9) and/or animal models. Interest in translational research and collaborative work.
Good level of English (written and spoken).

Conditions:
1-year contract (renewable for 1 year).
Location: Lyon, France. MeLiS laboratory https://inmg.fr/melis/en/index.php
Stimulating research environment with access to state-of-the-art technological platforms.

Application:
Candidates should email a CV, cover letter and contact details of two references to olga.andrini@univ-lyon1.fr. Applications will be accepted until 30/04/2025.

Join us to explore the molecular mechanisms of long QT syndrome and contribute to promising therapeutic advances! http://www.excitingworms.eu