Postdoctoral Position  
(2 years)

We are looking for a motivated post-doc to join the Jagla Lab at iGReD-Clermont-Ferrand, funded by a “Excellence Initiatives” program or IDEX/i-Site Grant. The position represents an exciting opportunity to work as part of a collaborative with Jean-François Côté (Montreal clinical research institute, Montreal) to investigate the molecular, and cellular diversity of the muscle system.

Project: Hox genes code for evolutionarily conserved transcription factors that specify the anteroposterior axis in all bilaterians. Having a well-known role in the formation of ectoderm derivatives, less is known about the functions of Hox in the development of different types of muscles.

Here, we will provide an overview of the function of Hox proteins in Drosophila and mouse muscle development at single-cell resolution, with an emphasis on the conserved regulation of their target genes. Given the close communication between muscles, muscle stem cells, and tendons necessary for locomotion, we will provide a comprehensive view of Hox regulation on these connected cell types along the A-P axis. We will apply tissue-specific single cell (sn)-RNAseq as well as a cut & tag approach to unravel Hox GRN. The final objective of the project is to better understand why muscles are affected differently according to their A-P positioning in myopathies.

Bertin et al., Scientific Reports 2021  
Lavergne et al., Development 2020  
Hamoud et al., Nat Commun. 2018

Host Institute: The GReD Institute (www.gred-clermont.fr) is a scientifically vibrant interdisciplinary research center focusing on the genetic and epigenetic control of normal development and pathological states.

Clermont-Ferrand is located next to the Chaîne des Puys - Limagne listed as a UNESCO World Heritage Site. Many trails bypass the volcanoes, connect them and lead to their peaks. The exploration of these volcanic landscapes combines exceptional panoramas, sumptuous nature, wild fauna and protected flora. A jewel of natural heritage!

Post-doctoral Profile:

• Curiosity to understand how the muscle diversity arises

• Imagination to decipher how Hox factors control the development of functional muscles

• Capacity to work in a multi-disciplinary team.

• Experience with (Single nuclei) transcriptomic/genomic analysis

• Drosophila genetics (preferential).

If You are interested please send the following documents to: guillaume.junion@uca.fr
- Cover letter (please include contacts of at least two references)
- CV including major achievements

Deadline 09/2022