

Ph.D. Position & M.Sc. Position

Contribution of cis-regulatory elements in a plant's response to environmental stress

Zoé Joly-Lopez Laboratory

Université du Québec à Montréal (UQAM), Chemistry Department

Earliest starting date: immediately available, flexible

Closing date: accepting applications until filled

Description

Rooted in the ground, plants have unique strategies for being more resilient to changes in their environment, a major part of which involves the reprogramming of gene expression. While a number of key genes have been identified to confer high temperature tolerance, many studies aiming to determine genetic variants associated with tolerance traits have identified variants located within cis-regulatory elements. Whereas the importance of distal cis-regulatory elements, such as enhancers, in gene regulation has been shown in many eukaryotic genomes, their impact on genome-wide and stress-specific transcriptional reprogramming remains largely unknown in plants. Our group seeks to understand the contribution of distal cis-regulatory elements to a plant's ability to respond to environmental stressors. The project involves using systems biology approaches (functional genomics, bioinformatics, genome editing) to focus on a specific class of distal cis-regulatory elements, enhancers, in the context of high temperature stress in the staple food Asian rice (*Oryza sativa*).

Qualifications in any of these fields :

molecular biology, genetics, plant biology, computer sciences, or bioinformatics

Equal opportunity employer

UQAM is an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, sex, sexual orientation, gender identity, age, or disability. We aim to have a dynamic diverse lab, which is essential to tackle scientific questions from different creative angles.

Contact

Prospective students are requested to send the following information: (1) Letter of interest; (2) CV; (3) Unofficial transcripts; and (4) contact information of two references whom I can ask for letters of recommendation. Applications must be submitted at joly-lopez.zoe@uqam.ca