Ph.D. Position in Plant Functional Genomics

Department of Biological Sciences
University of Alberta
Edmonton, Alberta, Canada

Plant Functional Genomics Group (www.uhriglab.com)

Application Deadline: July 31st 2023

The Uhrig Lab & Edmonton:

- The Ph.D. position will be hosted through the Department of Biological Sciences at the University of Alberta, Edmonton, Alberta, Canada in the laboratory of Dr. R. Glen Uhrig.
- The University of Alberta is a Top 5 Canadian university, with the Department of Biological Sciences at the University of Alberta offering a diverse and engaging community for research and education.
- Coupled with its reputation, The University of Alberta is located in Edmonton, Alberta, Canada, which is a vibrant and cost-effective location to undertake graduate research.
- The Uhrig lab is comprised of post-doctoral fellows, technicians and graduate students of multiple backgrounds and nationalities. Correspondingly, we offer a diverse and supportive work environment that aims to balance research achievement and life.

Research and Training:

The Uhrig lab is focused on understanding how plant cells are regulated throughout the day at the protein-level using advanced quantitative proteomics, biochemistry and diverse functional genomic techniques. At the protein-level, protein post-translational modifications (PTMs) such as protein phosphorylation, play a critical role in the regulation of cellular processes. The PhD research of the applicant will focus on utilizing quantitative proteomics and functional genomics to define novel intersections between cell signaling events and the underlying cellular processes governing plant growth and development. To undertake this work, the student will utilize the model plant *Arabidopsis thaliana*, but will be part of a research program utilizing a diversity of plant systems directly and through extensive collaboration.

The applicant student will obtain hands-on skills using advanced quantitative proteomics, biochemistry and functional genomics. The PhD applicant will learn a variety of cutting-edge techniques (e.g. hands-on training with mass spectrometry, targeted biochemistry, amongst others) and will seek to answer fundamental questions regarding how different levels of cellular regulation intersect to allow plants to grow under changing environmental conditions. Outcomes of this project will feed into collaborative applied research efforts aimed at developing better crop varieties through genetic engineering, genome editing or advanced breeding. Within the general scope of the project, the student will be encouraged to develop independent and creative lines of inquiry, with support from Dr. R. Glen Uhrig and other lab members. The student will be given training and support in a number of aspects of science including: technical skills, communication and critical thinking to prepare them for careers in academia, industry, publishing and other fields.

Applicant Qualifications:
Candidates should have most of the skills below:

1. Excellent oral and written abilities in English.
2. An ability to work both independently and collaboratively as part of a team.
3. Tangible hands-on experience with molecular and/or biochemical sciences.
4. Basic bioinformatics experience (e.g. R, Python)
5. Experience with plant sciences (recommended).

Eligibility, Admissions and Finances:
For all admission requirements and funding details on graduate studies in the Department of Biological Sciences, please refer to the Department of Biological Sciences website (https://www.ualberta.ca/biological-sciences/graduate-studies). Admission is subject to academic and English language requirements set by the Department (https://www.ualberta.ca/biological-sciences/graduate-studies/for-applicants).

Interested students are highly encouraged to apply for eligible internal and external graduate student scholarships and will receive active support from the Uhrig lab in these funding applications (https://www.ualberta.ca/graduate-studies/awards-and-funding/scholarships). Additional funding and financial aid opportunities for international students: https://www.ualberta.ca/graduate-studies/awards-and-funding/international-student-funding.

Appointment Start Date: January 1st 2024

Contact:
Interested applicants should send a 2-page CV to **ruhrig[at]ualberta.ca** (www.uhriglab.com) that includes references.

Only short-listed applicants will have their references solicited for letters of recommendation and be asked to interview via Zoom.