Ph.D. position in Plant Functional Genomics

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

Plant Functional Genomics Group (www.uhriglab.com)

Introduction:
The Ph.D. position will be based in 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. The Department of Biological Sciences at the University of Alberta offers a diverse and vibrant community for research and education. The main interests of the Uhrig lab are to understand how cells regulate their function using advanced proteomics, biochemical and genomics techniques. Several cellular processes are controlled by rapidly changing protein post-translational modifications (PTMs) such as phosphorylation. Protein phosphorylation is the most widely occurring PTM and is important for diverse processes such as growth, signaling, responses to stress and regular biological functioning in eukaryotic species. The Uhrig lab focuses on studying phosphorylation in the context of diel changes in response to stress using the model plant, *Arabdiopsis thaliana*.

Research and Training:
To do this, the Uhrig lab predominantly trains students in techniques such as systems-level quantitative proteomics, protein interactomics and plant molecular biology. The current project employs these techniques to connect protein PTM events to other levels of cellular regulation. The PhD student 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. It is expected that the 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.

Qualifications:
We are looking for qualified students who will enroll into the graduate program at the University of Alberta. The graduate student is expected to be cooperative, collaborative and have good written and spoken communication skills. Prior laboratory experience (depending upon individual circumstances) in biochemistry and/or plant biology is preferred. This project will

intersect with other on-going biochemistry, genomics and gene-editing projects in the lab affording great opportunities for mutual learning and teamwork.

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.

The Uhrig lab encourages students from all backgrounds and nationalities to apply, and offers a diverse, supportive and healthy work environment.

Appointment Start Date: Either January 2022 or September 2022

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.