

# Ph.D. position in Plant Functional Genomics

**Department of Biological Sciences**

**University of Alberta**

**Edmonton, Alberta, Canada**

**Plant Functional Genomics Group ([www.uhriglab.com](http://www.uhriglab.com))**

## **Introduction:**

The Ph.D. position in Plant Functional Genomics is 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, with the Department of Biological Sciences at the University of Alberta offering a diverse and vibrant community for research and education. Correspondingly, the Uhrig lab encourages students from all backgrounds and nationalities to apply, and offers a diverse, supportive and healthy work environment.

## **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. 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.

## **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 as well as collaboratively as part of a team.
3. Prior laboratory experience.
4. Experience with molecular and/or biochemical sciences; ideally technical skills in this area.
5. Experience with plant sciences.

**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:** Either May 1<sup>st</sup> 2022 OR September 1<sup>st</sup> 2022

**Contact:**

Interested applicants should send a 2-page CV to [ruhrig\[at\]ualberta.ca](mailto:ruhrig[at]ualberta.ca) ([www.uhriglab.com](http://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.