

Two open MSc/PhD positions in the DeFalco lab @ Western

The DeFalco lab studies how plants sense and respond to their environment at the molecular level. Like animals, plants rely on cell surface receptors to perceive external stimuli. The most abundant of these receptors in plants are the receptor kinases (RKs), which recognize self or non-self ligands to control essentially all aspects of plant life, from growth, development, and reproduction to immunity and stress responses. We use a variety of highly-collaborative molecular, biochemical, and genetic approaches to study the cellular signal transduction pathways downstream of these RKs.

We currently have two open graduate (MSc/PhD) positions available in the DeFalco lab on the following projects (expected starting date fall 2024):

1. Identification of novel components in RK signaling
2. Engineering of RK signaling pathways

We are seeking highly-motivated candidates with an interest in plant and molecular biology. Students interested in either position should send a cover letter, cv, and unofficial transcript as a single pdf file to tdefalc@uwo.ca with the subject line "graduate opening 2024". Only students considered for an interview will be contacted.

About Western:

Located in London, Ontario, Western University is one of the top research universities of Canada, with state-of-the-art research facilities and infrastructure. London is the main hub of southwestern Ontario, with a vibrant cultural scene, extensive trails and greenspace, and a high quality of life. The Biology Department is one of the largest at Western, with approximately 40 faculty members and more than 120 graduate students.

Relevant recent publications:

Chu J, Monte I, DeFalco TA, Köster P, Derbyshire P, Menke FLH, Zipfel C. (2023) Conservation of the PBL-RBOH immune module in land plants. *Current Biology* 33:1-8

DeFalco TA, Anne P, James S, Willoughby A, Schwanke F, Johanndrees O, Genolet Y, Derbyshire P, Wang Q, Rana S, Pullen AM, Menke FLH, Zipfel C, Hardtke C, Nimchuck Z. (2022) A conserved module regulates receptor kinase signalling in immunity and development. *Nature Plants* 8:356–365

Dindas J, DeFalco TA, Yu G, Zhang L, David P, Thibaud MC, Custódio V, Castrillo G, Nussaume L, Macho AP, Zipfel C. (2022) Direct inhibition of phosphate transport by immune signaling in Arabidopsis. *Current Biology* 32:1-8

DeFalco TA, Zipfel C. (2021) Molecular mechanisms of early plant pattern-triggered immune signaling. *Molecular Cell* 81:3449-3467

