PhD position in Plant-Microbe Interactions

University of South Carolina, Columbia, South Carolina, USA

Position descriptions:

A Ph.D. student position is available starting in August, 2018 in Dr. Zhengqing Fu’s lab in the Department of Biological Sciences at the University of South Carolina, Columbia. Our lab studies molecular interactions between plant pathogens and plants with a focus on plant hormone salicylic acid signaling. In one of the previous projects, it was reported that a type III effector called HopU1 from plant bacterial pathogen Pseudomonas syringae functions as a mono ADP-ribosyltransferase. HopU1 ADP-ribosylates RNA binding proteins in order to suppress plant defense (Fu et al., 2007 Nature 447: 284). In a separate project, it has been shown that NPR3 and NPR4 are receptors for plant immune signal salicylic acid (Fu et al., 2012 Nature 486: 228). The research projects in the current lab aims to answer fundamental questions in Plant Pathology. Recently, we discovered that salicylic acid promotes the interaction between NPR1 and the P. syringae type III effector AvrPtoB. AvrPtoB mediates the degradation of NPR1 via the 26S proteasome dependent on its E3 ligase activity to subvert plant immunity (Chen et al., Cell Host & Microbe in press). In addition, we found that the HEN3/CDK8 kinase module of the mediator complex facilitates phosphorylation and stabilization of NPR1 protein to establish systemic acquired resistance (Chen et al., Molecular Plant under revision).

This position carries a competitive stipend, tuition waiver and health insurance.

Columbia is located in the Midlands of South Carolina only two to three hours away from the Appalachian Mountains and the beautiful Atlantic coast line.

Qualifications:

We are looking for a highly motivated and creative individual with strong background in molecular biology and proficiency in spoken and written English to fill this position. This individual should have competitive GRE scores.

How to apply:

Please apply for graduate admission to the Department of Biological Sciences from the University of South Carolina graduate school website at http://www.gradschool.sc.edu/prospective/apply.asp?page=apply. The deadline is December 1st, 2017. Inquiry letter should be sent to Dr. Zhenqing Fu at zfu@mailbox.sc.edu.