Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

PhD position (m/f) in Plant Molecular Biology

Plant energy management in response to energy limiting conditions

The Dröge-Laser lab offers a PhD positon at the **University of Würzburg, Germany**. We are looking for a talented student, preferentially with background knowledge on plant molecular biology, holding a master's degree in Biology, Biochemistry or related disciplines. The applicant will be part of a small international team focussing on plant stress signalling, transcriptional control and pathogen defence.

Project description: Sustaining energy homeostasis is crucial to every living being. To balance energy supply and demand, plants make use of an evolutionarily conserved managing system consisting of two counteracting kinases: TOR (TARGET OF RAPAMYCIN) supports anabolic, energy-consuming metabolism, whereas SnRK1 (Snf1-RELATED PROTEIN KINASE1) activates catabolic, energy-preserving responses. Natural conditions such as low-light, abiotic stresses or pathogen infections lead to energy depletion. Recently, we identified members of the bZIP (basic leucine ZIPPER) transcription factor family as downstream mediators of SnRK1. Using the Arabidopsis model, this project focusses on the mechanism of starvation-induced transcription, facilitated by SnRK1 and particular bZIPs. This knowledge will be crucial for future attempts to increase yield and stress tolerance of crop plants. For further information see: https://www.biozentrum.uni-wuerzburg.de/pbio/abteilung-prof-dr-wolfgang-droege-laser/

Methods: genome editing by CRISPR-CAS9, promoter analyses in protoplasts, transcription factor binding assays, RNAseq, ChIPseq, Confocal Microscopy

Selected References:
Dröge-Laser and Weiste TIPS (2018); Pedrotti et al., Plant Cell (2018); Hartmann et al., Plant Cell (2015); Mair et al., eLife (2015); Weiste and Dröge-Laser, Nature Com. (2014)

The Julius-von-Sachs Institute for Plant Science offers an excellent, multi-disciplinary research environment applying state-of-the-art techniques in plant physiology, molecular biology, biophysics, metabolomics and eco-physiology. The successful candidate will benefit from a structured PhD education due to participation in the Graduate School of Life Sciences (GSLS), Würzburg. The University of Würzburg is an equal opportunity employer and particularly welcomes applications from qualified women and individuals with disabilities. Payment according to TV-L.

Please, submit your complete application as one composite PDF file including a statement of motivation and two references to: wolfgang.droege-laser@uni-wuerzburg.de. Review of applications will begin July, 1st 2018 until the position is filled.