Lehrstuhl für Systembiologie der Pflanzen
Wissenschaftszentrum Weihenstephan
Technische Universität München

We are looking for a

Ph.D. student

Plant hormone signaling and abiotic stress response

A funded Ph.D. student position is available at the Chair of Plant Systems Biology at the Life Sciences campus of the Technische Universität München in Freising-Weihenstephan. The project is integrated into the SFB924 "Molecular mechanisms regulating yield and yield stability in plants".

We are interested in understanding the molecular mechanisms controlling plant growth in abiotic stress conditions in response to the plant hormone gibberellin. Many abiotic stresses (cold, heat, salt, dought) have a negative impact on plant growth and yield. Gibberellins have been implicated in various stress responses and here we seek to understand the molecular processes underlying the interplay between gibberellin and cold as well as salt stress. For this purpose, we have already generated a comprehensive gene expression dataset from the plant model species *Arabidopsis thaliana* and the crop plants tomato and barley, after exposure to cold and salt stress in the presence and absence of the gibberellin hormone. Through data analysis, we have identified a range of stress response elements that we now want to analyse at the molecular and biological level.

We are seeking a highly motivated Ph.D. student to integrate genetic, physiological and cell biological analyses and to identify novel players in abiotic stress responses in plants. The laboratory has expertise in a very broad range of cell biological techniques as well as molecular biology and physiology approaches.

The Chair of Plant Systems Biology has direct access to state of the art technology for cell biological and biochemical analysis, next generation sequencing etc. and possesses all techniques and equipment required for state-of-the-art plant research. The laboratory also has strong ties with the LMU Munich, the University of Regensburg and the Plant Bioinformatics Institute at the Helmholtz Zentrum München.

Please send a letter of motivation and a CV to: claus.schwechheimer@wzw.tum.de

The position will remain open until filled.

References

Website of the Chair Link

Website of the SFB924 Link

Selected recent publications

Lutz *et al.* (2017) Natural haplotypes of FLM non-coding sequences fine-tune flowering time in ambient spring temperatures in Arabidopsis. **Elife** 15,6. Link

Tal *et al.* (2016) The Arabidopsis NPF3 protein is a GA transporter. **Nat Commun.** 7:11486. Link

Richter *et al.* (2013) Convergence of auxin and gibberellin signaling on the regulation of the GATA transcription factors GNC and GNL in *Arabidopsis thaliana*. **Proc Natl Acad Sci USA** 110(32):13192-7. Link

Technische Universität München
Prof. Dr. Claus Schwechheimer
Tel. +49 8161 712880; Fax +49 8161 712886