

3 PhD positions in Plant cell and molecular biology (m/f/d)

Three funded PhD student positions are available at the Chair of Plant Systems Biology at the School of Life Sciences of the Technische Universität München in Freising-Weihenstephan.

- Polarity regulation by protein kinases during stomata development
- Phospho-regulation of the plant cytoskeleton
- Developmental adaptations for plant growth in soil

We seek highly motivated PhD students to strengthen our interactive and collaborative team. The projects are founded on the well-established and highly visible track record of the laboratory in the analysis of plant growth processes regulated by AGC1 kinases.

The Chair of Plant Systems Biology has strong expertise in all relevant molecular, cell biological, biochemical, physiological and genetic techniques. The group also has strong ties with the LMU Munich, the University of Regensburg and the Helmholtz Zentrum München.

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

The positions are available in early 2025 and will remain open until filled.

Further information: <https://www.mls.ls.tum.de/en/plasysbio/home/>

Selected recent publications

Graf, A., Bassukas, A.E.L., Xiao, Y., Barbosa, I.C.R., Mergner, J., Grill, P., Michalke, B., Kuster, B., and Schwechheimer, C. (2024). D6PK plasma membrane polarity requires a repeated CXX(X)P motif and PDK1-dependent phosphorylation. *Nat Plants* 10, 300-314.

Hammes, U.Z., Murphy, A.S., and Schwechheimer, C. (2022). Auxin Transporters - A Biochemical View. *Cold Spring Harb Perspect Biol* 14.

Janacek, D.P., Kolb, M., Schulz, L., Mergner, J., Kuster, B., Glanc, M., Friml, J., Ten Tusscher, K., Schwechheimer, C., and Hammes, U.Z. (2024). Transport properties of canonical PIN-FORMED proteins from Arabidopsis and the role of the loop domain in auxin transport. *Dev Cell* S1534-5807(24)00569-0. doi: 10.1016/j.devcel.2024.09.020.

Koh, S.W.H., Marhava, P., Rana, S., Graf, A., Moret, B., Bassukas, A.E.L., Zourelidou, M., Kolb, M., Hammes, U.Z., Schwechheimer, C., and Hardtke, C.S. (2021). Mapping and engineering of auxin-induced plasma membrane dissociation in BRX family proteins. *Plant Cell* 33, 1945-1960.

Marhava, P., Bassukas, A.E.L., Zourelidou, M., Kolb, M., Moret, B., Fastner, A., Schulze, W.X., Cattaneo, P., Hammes, U.Z., Schwechheimer, C., and Hardtke, C.S. (2018). A molecular rheostat adjusts auxin flux to promote root protophloem differentiation. *Nature* 558, 297-300.

Xiao, Y., Zourelidou, M., Bassukas, A.E.L., Weller, B., Janacek, D.P., Schulz, L., Brajkovic, S., Šimura, J., Ljung, K., Kuster, B., Hammes, U.Z., Li, J., and Schwechheimer, C. (2024). KIPK and KIPK-LIKE1 suppress overbending during negative hypocotyl gravitropic growth. *bioRxiv* 2024.2005.2024.595653