Ph. D position in molecular cell biology

The Botany Chair is looking for a doctoral student to support the Assaad group, starting as of early summer 2021.

Your research and responsibilities:

The Botany Chair is well integrated in a vibrant community of plant biologists at the TUM Center for Life Sciences (WZW). The Assaad group studies plant adaptive responses to multiple stress conditions. Adaptive responses can be broken down into four steps: sensing, signal integration, decision making processes and the execution of these decisions. While progress has been made in the field of Arabidopsis to understand signal perception and integration, little is known about decision making processes, which we refer to as allocation decisions, and their execution. To address this, we have set up a “conflict of interest” forward genetic screen to identify major players in allocation decisions. Together with reverse genetic approaches and screens for interactors, we have uncovered a three-component module. The first component of the module is a family of shaggy-like kinases (AtSKs), which mediate signal integration. The second component is the conserved TRAPPII multi-subunit tethering complex that mediates decision-making processes at the trans-Golgi-network (TGN). The third component comprises a family of RAB GTPases that are posited to execute decisions downstream of the first two components. The goal is to identify molecular mechanisms by which signaling at the TGN modulates sorting decisions that contribute to cell division, elongation, growth anisotropy and meristem function. Mechanistic insights gained here are laying down a foundation for understanding plant adaptive growth and allocation decisions.

Your activities will include: (1) elucidating the impact of post-translational modifications on the assembly, interactomes and function of TGN-associated TRAPP tethering complexes, (2) characterizing functional interactions between TRAPP complexes and Rab GTPases, and (3) assessing how these instruct sorting and trafficking decisions.

Within the context of local and international collaborations, you will deploy a broad range of methods, including proteomics at our state-of-the-art BayBioMS facility on campus, confocal microscopy at the CALM facility (in house), biochemistry, genetics and stress physiology.

Your qualifications:

You have a Master’s degree in biology, biochemistry, biotechnology or biophysics, are able to work in a small team and are interested in independently investigating scientific questions. Knowledge of German is not essential.

Our offer:

We offer a position as academic staff with the opportunity to attend courses at the TUM/WZW graduate school and to pursue a doctoral degree. The position will initially be limited to three

years, and will be prolonged pending renewed funding. Payment will be based on the Collective Agreement for the Civil Service of the Länder (*TV-L;* starting at 50% E13). TUM strives to raise the proportion of women in its workforce and explicitly encourages applications from qualified women. Applications from disabled persons with essentially the same qualifications will be given preference.

Your application:

Please send your application **no later than April 30th** to farhah@wzw.tum.de as a **single PDF** including (i) a motivation letter (ii) a strong CV (iii) contact information for two references (iv) your transcripts.

As part of your application, you provide personal data to the Technical University of Munich (TUM). Please view our privacy policy on collecting and processing personal data in the course of the application process pursuant to Art. 13 of the General Data Protection Regulation of the European Union (GDPR) at https://portal.mytum.de/kompass/datenschutz/Bewerbung/. By submitting your application you confirm to have read and understood the data protection information provided by TUM.

Find out more about us at https://www.botanik.wzw.tum.de/forschung/assaad-lab/research-fa/