The Chair of Phytopathology at the Technical University of Munich, TUM School of Life Sciences, hires a

**PhD Student to study**

**Molecular genomics of secondary metabolite pathways in wild tomato species.**

We are interested in understanding the diversity and evolution of pathogen resistance within plant species. Therefore we study different populations from a diverse and geographically differentiated tomato species, *Solanum chilense*. We have shown that populations show different levels of defence against a range of pathogens and have identified patterns of differential selection for defence-associated genes. However, the implications of these findings on a molecular level remain unknown.

Therefore, we are looking for an enthusiastic PhD student to investigate the diversity of secondary metabolites in *S. chilense* and the effects thereof on plant defence mechanisms in an evolutionary context. The applicant must have a very good MSc in biology, biotechnology or (bio)chemistry with an interest in evolutionary biology. Knowledge and practical experience in biochemistry, molecular plant sciences and an interest in bioinformatics and population genetics are required. English skills, both written and spoken, are essential.

The project will be carried out in the group of Dr. Remco Stam at the Chair of Phytopathology (Prof. Dr. Ralph Hücckelhoven). The chair hosts several research groups studying molecular biology of plant pathogens and is well equipped to study pathogen defence responses on different levels. The project will be carried out in collaboration with the Bavarian Center for Biomolecular Mass Spectrometry (BayBioMS) and the Chair for Experimental Bioinformatics, both located on campus. The project is integrated into the SFB924 "Molecular mechanisms regulating yield and yield stability in plants", allowing direct access to state of the art technology for cell biological and biochemical analysis, next generation sequencing etc.

The Technical University of Munich wishes to increase the percentage of employed women. Women are therefore explicitly encouraged to apply. Handicapped persons with equivalent qualification will be given preference.

Please send your comprehensive application including a letter of motivation highlighting how your interests and expertise match this position (1-2 pages), your CV, certificates and names of 2 potential referees as a single pdf file by email to: stam@wzw.tum.de

**References**

Website of the Group
Website of the Chair
Website of the SFB924

**Related publications**

The wild tomato species *Solanum chilense* shows variation in pathogen resistance between geographically distinct populations. R Stam*, D Scheikl, A Tellier (2017) *PeerJ* 5, e2910 [https://doi.org/10.7717/peerj.2910](https://doi.org/10.7717/peerj.2910)

Pooled enrichment sequencing identifies diversity and evolutionary pressures at NLR resistance genes within a wild tomato population. R Stam*, D Scheikl, A Tellier (2016) *Genome biology and evolution* 8 (5), 1501-1515 [https://doi.org/10.1093/gbe/evw094](https://doi.org/10.1093/gbe/evw094)
