

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

PhD. Student in the field of Population genomics of pathogens on wild tomato species.

We are interested in understanding the evolution of pathogens and pathogen resistance in relatively short time scales, therefore we study different populations from a diverse and geographically differentiated tomato species, *Solanum chilense*. We have shown that these populations show different levels of defence against a range of pathogens and have identified patterns of differential selection for defence-associated genes. However, knowledge of the pathogens occurring on these natural populations is lacking.

Therefore, we are looking for an enthusiastic PhD student to collect pathogens in the field, investigate their virulence on different plant populations and assess genetic diversity using whole genome sequencing. The applicant must have a very good MSc in biology, bioinformatics or related disciplines. Knowledge and practical experience in bioinformatics and population genetics and keen interest in molecular plant pathology and lab work are required. Sample collection will take place in the highlands of Peru and Chile, therefore the applicant should be fit and willing to travel to said places for several weeks. English skills, both written and spoken, are essential, knowledge of the Spanish language is beneficial.

The project will be carried out in the group of Dr. Remco Stam at the Chair of Phytopathology (Prof. Dr. Ralph Hückelhoven). The chair hosts several research groups studying molecular biology of plant pathogens. In addition, we have several ongoing collaborations on campus (including the large SFB924 project) and direct access to state of the art technology for next generation sequencing, diverse molecular biology techniques and extensive glass house facilities.

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. The salary is according to German income level TV-L E13.

Please send your comprehensive application including a letter of motivation (1 page), your CV, certificates, list of publications, and names of 2 potential referees as a single pdf file by email to: stam@wzw.tum.de

Website of the Group
Website of [Chair of Phytopathology](#)

Related publications

A small subset of NLR genes drives local adaptation to pathogens in wild tomato R. Stam, GA Silva-Arias, T Nosenko, D Scheikl, AC Hörger, W Stephan, G Haberer, A Tellier (2017) [BioRxiv](https://doi.org/10.1101/210559)
<https://doi.org/10.1101/210559>

The wild tomato species Solanum chilense shows variation in pathogen resistance between geographically distinct populations R Stam, D Scheikl, A Tellier (2017) [PeerJ](https://doi.org/10.7717/peerj.2910) 5, e2910
<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](https://doi.org/10.1093/gbe/evw094) 8 (5), 1501-1515 <https://doi.org/10.1093/gbe/evw094>