Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Department of Molecular Sciences

11/10/2022

Postdoctoral researcher in protease biochemistry and cell biology of the plant wound response

This open position is part of an ambitious 5-year Wallenberg Academy Fellows project funded by the Knut and Alice Wallenberg Foundation and is aimed at uncovering the role of damage-activated proteolysis in the plant wound response and impact on plant-insect interaction and immunity. Protease- and substrate-centered proteomics will be performed in close collaboration with the SciLife lab for Chemical Proteomics (Stockholm, Sweden) and the candidate will benefit from a strong (inter-)national network of collaborators in protease biology. The successful candidate for this position will join the Stael Lab, part of The Plant Catabolism Laboratories, at the Department of Molecular Sciences, Uppsala BioCenter, SLU.

Uppsala BioCenter brings together scientists and students from the Departments of Molecular Sciences, Forest Mycology and Plant Pathology and Plant Biology. The Departments share advanced technological platforms and enjoy both basic and applied research across all kingdoms of life, thus offering a stimulating environment for scientific development and education.

Department of Molecular Sciences conducts research and education in chemistry, biochemistry, molecular biology, food science and microbiology with a focus on fundamental biological processes as well as development of applications for a sustainable life.

About: The host laboratory has recently uncovered a signaling pathway in the plant wound response that relies on damage-activation of metacaspases and cleavage of immunomodulatory signaling peptides (doi/10.1126/science.aar7486). The main purpose of this project is to find out additional substrate targets of metacaspases and explore the activation of other proteases during physical damage. The work will involve an exploration of the damage-activated protease-substrate network through proteomics in a variety of plants, including economically relevant species such as Norway Spruce, poplar and wheat. Further biochemical, genetic and cell biological approaches will be mainly performed in the model organisms *Arabidopsis thaliana* and *Marchantia polymorpha*.

Qualifications: We are looking for a highly motivated plant biologist with strong analytical skills and keen interest in uncovering novel mechanisms of the plant wound response. Candidates are required to have experience in protease biology, proteomics, development of analytical techniques for detection and measurement of protease substrate cleavage or plant wound responses. Candidates that have worked with *Marchantia polymorpha* are particularly encouraged to apply. Excellent communication skills in both oral and written English are expected. To be eligible for a postdoctoral position, the applicant must have a PhD degree in life sciences obtained within the last three years.

Place of work: Uppsala, Sweden

Mailing address: Box 7015, S-750 07 Uppsala, Sweden
Street address: Uppsala BioCenter, Almas Allé 5, Room C351
VAT no: SE202100281701
www.slu.se

Phone: +46 1867 3187
simon.stael@slu.se

Employment: a two-year postdoc position with the possibility of extension

Extent: 100%

Starting date: 1st of January 2023, or soon thereafter

Application: Submit your application until the 4th of November, 2022, at https://www.slu.se/en/about-slu/work-at-slu/jobs-vacancies/

The application must contain: i) a cover letter explaining why you are applying for this position and what you would like to discover in this project (max 1 page), ii) CV, including a list of publications, and iii) contact information of minimum two references.