

Postdoc opportunity in plant-microbe interaction at Umeå Plant Science Center, Sweden

A postdoctoral opportunity is available in the group of Dr Judith Felten at the Department of Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences at the Umeå Plant Science Center (www.upsc.se), Sweden from early fall 2016 for two years.

Project

We are looking for a postdoctoral researcher to discover the molecular mechanisms behind the establishment of the ectomycorrhizal symbiosis in *Populus* and *Picea* tree roots with a selection of ectomycorrhizal fungi. The aim of the project is to uncover the cell wall modulations that are required for the symbiosis to form. The candidate will analyse ectomycorrhizae generated with a variety of existing wildtype and mutant fungi using techniques ranging from Raman micro-spectroscopy, scanning and transmission electron microscopy and carbohydrate microarrays to immunolocalization of cell wall polymers. The candidate will also generate and analyse transcriptome data and auxin-metabolome data for the different ectomycorrhizal partnerships, correlate those data and reveal the molecular key actors for the cell wall modulations observed.

Workplace

Umeå is situated in the North of Sweden with easy access to Stockholm and the world. Umeå is a vibrant university town where work and leisure, cultural activities and nature are in close proximity. The Department of Forest Genetics and Plant Physiology at the Swedish University of Agricultural Sciences forms together with the Department of Plant Physiology, Umeå University the Umeå Plant Science Center (www.upsc.se), one of Europe's strongest research centres in experimental plant biology. UPSC is a multicultural workplace employing 190 people from over 40 nations. UPSC's research focuses on plant molecular biology, plant physiology, cell biology, tree biotechnology, ecophysiology and forest genetics and is supported by a large choice of specialist driven technical platforms. The postdoctoral researcher will be working in a young research group and will carry out experiments at the local Vibrational Spectroscopy Platform, the Umeå Core Facility Electron Microscopy platform and the Metabolomics platform with support of the respective specialists. Furthermore the candidate will work in cooperation with our partners, including short stays, at INRA, Nancy (France), the Natural Resources Institute Finland and Copenhagen University (Denmark). The candidate will benefit from regular opportunities to participate in international conferences.

Qualifications

The successful candidate holds a PhD in biology or biochemistry not older than 2 years. The candidate has experience in working with different microscopy techniques, including electron and confocal microscopy, sample preparation and sectioning. Experience in statistics, multivariate analysis and bioinformatics is desirable. The work includes generation of biological material under sterile condition, for which experience is valuable. The candidate should have prior knowledge or interest in working with cell wall polymers. The candidate must be able to independently gather and evaluate scientific literature. As a person the candidate is open-minded, appreciates to interact with people with different cultural backgrounds and has excellent communication and English skills.

Please submit your letter of interest, your CV (including your publication list), a short description of your research profile and vision for the next 5 years (max 1 page) as well as 2-3 reference letters no later than July 3rd 2016 to Judith.felten@slu.se

Please indicate in your email subject the reference "postdoc_ECM2016".

The desired starting date for the project is early fall 2016 (September/October). The project will extend over 1+1 years. The candidate will be paid by a taxfree fellowship (22 500 SEK/month).

For further questions please **contact** judith.felten@slu.se