

Postdoctoral position (2 years) in the physiology of aspen (*Populus tremula*) phenology

Umeå University, Faculty of Science and Technology

Umeå University is dedicated to providing creative environments for learning and work. We offer a wide variety of courses and programmes, world leading research, and excellent innovation and collaboration opportunities. More than 4 300 employees and 31 500 students have already chosen Umeå University. We welcome your application!

The Department of Plant Physiology carries out research and postgraduate education in different fields of the plant sciences including ecophysiology, biochemistry, physiology, developmental biology, and genomics. The department is part of the Umeå Plant Science Centre, which hosts ca 200 employees and 35 principal investigators, representing more than 45 nationalities. For more information, see www.upsc.se

The position is for 2 years starting 2018-01-01 or as agreed. Last day to apply is 2017-11-10.

Project description

The project concerns the mechanisms behind tree phenology, in particular aspen autumn leaf senescence. We approach this in several ways, for example through studies on the physiology, biochemistry and cell biology of senescing aspen leaves. We try to understand how plant hormones and metabolites change and interact with the circadian clock of the trees, and how the different parts of the tree interact to ensure that its calendar is properly adapted to the environmental conditions. The project is part of the Formas-financed project "How do Trees Know it is Autumn?".

Tasks

You will work with aspens in greenhouse and in the field, plan and perform physiological and biochemical studies aiming at understanding the mechanisms behind autumn leaf senescence. The work will be performed in collaboration with the UPSC technical platforms and other persons in the project. Significant amounts of data already exist.

Qualifications

The successful candidate should have a PhD degree or a foreign degree that is deemed equivalent to a PhD in biology or equivalent with a specialization in plant physiology, plant cell- and molecular biology or equivalent field. To be eligible for this position, you should have completed your doctoral degree maximum three (3) years before the end of the application period unless certain circumstances exist.

Previous expertise with plant senescence is a merit. Experience from research on trees is also an advantage, but not a prerequisite. Very good skills in written and spoken English are necessary, as well as good communication skills and ability to work in a team..

The application should contain

- CV with full publication list, and copies of the relevant degree certificates
- a two-page cover letter in which the applicant explains the research experiences and motivation for applying
- name and contact information of two referees
- a copy of the PhD thesis and relevant publications.

The application is to be submitted on the MyNetwork Pro recruitment system by 2017-11-10 at the latest. See <http://www.umu.se/english/about-umu/open-positions?languageId=1>

For further information please contact professor Stefan Jansson, stefan.jansson@umu.se

Postdoctoral position (2 years) in genetics and genomics of aspen (*Populus tremula*) phenology

Umeå University, Faculty of Science and Technology

Umeå University is dedicated to providing creative environments for learning and work. We offer a wide variety of courses and programmes, world leading research, and excellent innovation and collaboration opportunities. More than 4 300 employees and 31 500 students have already chosen Umeå University. We welcome your application!

The Department of Plant Physiology carries out research and postgraduate education in different fields of the plant sciences including ecophysiology, biochemistry, physiology, developmental biology, and genomics. The department is part of the Umeå Plant Science Centre, which hosts ca 200 employees and 35 principal investigators, representing more than 45 nationalities. For more information, see www.upsc.se

The position is for 2 years starting 2018-01-01 or as agreed. Last day to apply is 2017-11-10.

Project description

The project concerns the mechanisms behind tree phenology, in particular aspen autumn leaf senescence. We approach this in several ways, for example studies on variation in collections of natural aspen genotypes (e.g. the SwAsp collection) grown in common gardens, which have their genomes sequenced allowing for Genome Wide Association Studies (GWAS) to identify candidate genes. The expression of the candidate genes can be modified and the resulting trees are studied in field experiments, we also use genome editing (CRISPR-Cas9) to change the sequences of the genes. We also study gene expression using RNAseq and investigate how plant hormones and other factors regulate the process with physiological approaches in the lab and in the field. The project is part of the KAW-financed initiative "Understanding the environmental regulation of the annual growth cycle in trees"

Tasks

You will analyse genomics data from aspen in relation to large field experiments, but also perform studies in the lab and greenhouse. The work is carried out together with the UPSC Bioinformatics platform, transformation platform, greenhouse and field staff and other persons involved. Significant amounts of data already exist.

Qualifications

The successful candidate should have a PhD degree or a foreign degree that is deemed equivalent to a PhD in biology or equivalent with a specialization in genetics, genomics, cell-molecular biology or equivalent field. To be eligible for this position, you should have completed your doctoral degree maximum three (3) years before the end of the application period unless certain circumstances exist.

Previous expertise in the analysis of large genomics datasets is required. Experience from research on trees or other plants is an advantage, but not a prerequisite. Very good skills in written and spoken English are necessary, as well as good communication skills and ability to work in a team.

The application should contain

- CV with full publication list, and copies of the relevant degree certificates
- a two-page cover letter in which the applicant explains the research experiences and motivation for applying
- name and contact information of two referees
- a copy of the PhD thesis and relevant publications.

The application is to be submitted on the MyNetwork Pro recruitment system by 2017-11-10 at the latest. See <http://www.umu.se/english/about-umu/open-positions?languageId=1>

For further information please contact professor Stefan Jansson, stefan.jansson@umu.se