



Phd student, Biology

Ref SLU.ua.2022.2.5.1-1610

Department of Plant Biology

The Swedish University for Agricultural Sciences (SLU) and the forest research institute Skogforsk seeks three doctoral students for the project Rapid Cycling Breeding. The project builds on a ground-breaking scientific discovery on how spruce regulates cone-setting and aims to develop a breeding program with a shortened generation time.

A secure supply of climate-adapted seedling material is essential for the possibility of the forestry industry to cope with the anticipated climate change. However, there is a lack of elite seedling material for spruce in Sweden due to uneven cone-setting and pest damages. The lack of seeds impedes the transition into a biobased economy and also affects climate change adaptation.

The overarching aim of the research project is to increase our understanding of how conifers regulate cone-setting and to integrate this knowledge into a completely new breeding programme for spruce in Sweden. The project is a collaboration between Skogforsk and research groups at SLU in Umeå and Uppsala, financed by the Swedish Foundation for Strategic Research.

We now seek three doctoral students that will work on different parts of the project:

To the Department for Plant Biology at SLU in Uppsala, we seek a person that will study the genetic mechanisms that regulate cone-setting in conifers.

To the Department for Forest genetics and Plant physiology and Umeå Plant Science Centre, we seek a person that will study the molecular mechanisms that regulate flowering time in trees, primary focusing on the model system hybrid aspen.

See separate advert [SLU.ua.2022.2.5.1-1609](#)

To Skogforsk we seek a person who will study genomic selection methods and develop strategies for the optimal implementation of genomic selection for

conifers.

See separate advert SLU.ua.2022.2.5.1-1611

The Department for Plant Biology, SLU, in Uppsala, is part of Uppsala Biocentrum which hosts departments in the broad Life Science area and the [Linnean Centre for Plant Biology in Uppsala](#). We conduct research and research education to provide basic knowledge about the processes that govern plant growth and defence, with applications in forestry and agriculture. Contact: Jens.Sundström@slu.se <https://www.slu.se/en/ew-cv/jens-sundstrom/>

The Department for Forest Genetics and Plant Physiology is part of the Umeå Plant Science Centre (UPSC), one of the most vital research environments in Europe focused on experimental plant science. At UPSC, more than 200 persons of 47 nationalities work to understand the molecular mechanisms that regulate plant growth, development, and adaptation, with applications in forest biotechnology. We also study forest genetics and breeding in close collaboration with the forestry industry and Skogforsk. Contact:

Ove.Nilsson@slu.se <https://www.upsc.se/researchers/5943-nilsson-ove-control-of-flowering-time-and-tree-phenology.html#research>

Skogforsk develops and utilizes treematerial by the breeding of economically important tree species for the Swedish forestry. The applied research comprises of tree breeding, forest technology, resource use efficiency, environmental impacts, logistics, bioenergy, and forest maintenance. Skogforsk employs 135 persons, of which 80 are scientists (www.skogforsk.se). Contact:

Mari.Suontama@skogforsk.se <https://www.skogforsk.se/kontakt/personal/mari-suontama/>

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”Rapid Cycling Breeding”: Genetic mechanisms that regulate cone-setting in conifers

Qualifications:

Applicants should have a degree comparable to a Master of Science in biology, biotechnology or related knowledge that the employer considers equivalent and experience in molecular biology methods and bioinformatics. You should also have good communication skills, both in spoken and written English, be creative, and have capacity to take own initiatives and to work independently. Good social competence and the ability to co-operate are valued assets.

Place of work:

Uppsala.

Forms for funding or employment:

Employment (4 years).

Starting date:

According to agreement.

Application:

Click the “Apply” button to submit your application. The deadline is 2022-05-31.

To qualify for third-cycle (Doctoral) courses and study programmes, you must have a second-cycle (Master’s) qualification. Alternatively, you must have conducted a minimum of four years of full-time study, of which a minimum of one year at second-cycle level.

Applicants will be selected based on their written application and CV, degree project, copies of their degree certificate and transcript of records from previous first and second-cycle studies at a university or higher education institution, two personal references, and knowledge of English. More information about the English language requirements can be found here: www.slu.se/en/education/programmes-courses/doctoral-studies/new-doctoral-students/english-language-requirements/

Please note that applicants invited to interview must submit attested copies of their degree certificate, a transcript of records from previous first and second-cycle studies at a university or higher education institution. Applicants who are not Swedish citizens need to submit an attested copy of their passport’s information page containing their photograph and personal details.

Read about the PhD education at SLU at www.slu.se/en/education/programmes-courses/doctoral-studies/

Academic union representatives:

<https://internt.slu.se/en/my-employment/employee-associations/kontaktpersoner-vid-rekrytering/>

Contact person

Jens Sundström
Universitetslektor
Jens.Sundstrom@slu.se

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