Doctoral student in Natural Science, specializing in Biology

Ref PAR 2021/1174

The University of Gothenburg tackles society’s challenges with diverse knowledge. 53 500 students and 6 500 employees make the university a large and inspiring place to work and study. Strong research and attractive study programmes attract scientists and students from around the world. With new knowledge and new perspectives, the University contributes to a better future.

At the Department of Biological and Environmental Sciences (BioEnv) we have teaching and research activities that stretch from the alpine ecosystem, through forests, cultivated land and streams, all the way into the marine environment. In these environments we study different levels of biological organisation from genes, individuals and populations, to communities and ecosystems. We work within ecology, evolution, physiology, systematics and combinations of these fields in order to understand the impact of natural and anthropogenic changes of the environment.

The department is placed at three different localities: in Gothenburg Botanical garden, at Medicinarberget in Gothenburg and Kristineberg Marine Research Station. The current position is placed in Gothenburg Botanical garden, Botanical building on Carl Skottsbergs gata.

Project description

The aim of the project is to investigate the genetic regulation of plant water use, with focus on common bean. The possibility to use the generated results in practical plant breeding for agriculture in Rwanda will be investigated. Whole genome sequencing of genetic mapping populations will be used to identify genetic loci associated with physiological traits. Traits of interest include e.g. water use efficiency, leaf-level gas exchange, and osmotic potential. The project is a collaboration between the University of Gothenburg, University of Rwanda, and Rwanda Agriculture and Animal Resources Development Board. Field trials will be conducted on site in Rwanda.

Job assignments

The main task is to conduct the PhD thesis work under supervision, which includes development of the PhD student’s methodological experience, analytical skills, as well as theoretical depth and breadth. Techniques used within the project include quantification of plant physiological traits, DNA extraction, whole genome sequencing, bioinformatic processing of sequence data, mapping of quantitative genetic traits, and molecular genetic methods. The studies will be conducted both in the field in Rwanda and in the lab in Gothenburg.

Third cycle education

Admission to third cycle education is aiming at a PhD in Natural Science, specializing Biology. The education runs for four years of fulltime studies, containing three years of thesis work and one year of academic education (i.e. course work and literature studies). A selection of courses at the Department/Faculty is available, but national/international courses can also be selected. Some teaching and/or course administration can be included which extends the contract time to the same extent.

Eligibility
To be eligible for third-cycle studies, the applicant must meet both the general and specific entry requirements. A person meets the general entry requirements for third-cycle courses and study programs if he/she:

1. has been awarded a second-cycle qualification, or
2. has satisfied the requirements for courses comprising at least 240 credits of which at least 60 credits were awarded in the second-cycle, or
3. has acquired substantially equivalent knowledge in some other way in Sweden or abroad.

To meet the specific entry requirements for third-cycle studies, applicants must:

1. have a second-cycle (advanced-level) degree in a relevant* subject area in the natural sciences, or
2. have completed studies for at least 60 higher education credits at a second-cycle level in relevant subject areas in the natural sciences, or
3. have completed a corresponding programme of relevance to the planned third-cycle programme, in Sweden or in another country, or have equivalent qualifications.

*Relevant subject for the planned third-cycle education is e.g. biology, environmental science, biotechnology, or agronomy. Studies in plant physiology and/or genetics on advanced level should be included in the second-cycle degree.

**Assessment**

Rules regarding education and employment on a doctoral level you will find in Higher Education Ordinance (HF, SFS 1993:100). Only applicants who are admitted to the postgraduate level may be hired. Upon appointment the degree of ability to successfully complete the PhD program must firstly be evaluated.

We are seeking a motivated person for PhD studies in natural science with emphasis on biology.

In addition to in-depth knowledge of a relevant subject area, the successful candidate will have a strong personal drive, curiosity, and perseverance in problem-solving.

Excellent communication skills in English, both written and spoken, are necessary since we work in an international environment.

Previous experience in processing of genetic sequence data, plant cultivation, molecular genetic methods, and plant physiology are strong merits. Basic knowledge in statistical analysis is also a merit.

**The application should preferably be written in English and must include:**

- A short cover letter with the applicant’s justification for the application, i.e., that describes how the applicant meets the selection criteria
- An attested list of qualifications (CV)
- Examination certificates and a transcript of courses with grades
- A copy of the Master thesis (or equivalent)
- Employments certificates and other documents deemed important by the applicant

The top ranked candidates will be selected for an interview, which might be held in English and could also be performed by phone /Zoom.

**Employment**

After admission to third-cycle studies you will be appointed to doctoral studentship. Regulations for employment of doctoral students are given in SFS 1993:100. The initial appointment may apply for no longer than one year. An appointment may be renewed for no more than two years at a time. A person may be appointed to a doctoral studentship for a total of eight years. The total employment period may, however, not exceed the time corresponding to full-time third-cycle study for four years.
Location: Department of Biological and Environmental Sciences. Extent: 100%. First day of employment: December or upon agreement.

Salaries for doctoral students are regulated in a local agreement at the University.

**For further information regarding the position**

Mats Andersson, associate professor (main supervisor)
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Email: mats.andersson@bioenv.gu.se

Webpage: [https://www.gu.se/en/about/find-staff/matsandersson](https://www.gu.se/en/about/find-staff/matsandersson)

Henrik Aronsson, Professor and Head of Department
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**Unions**


**Information for International Applicants**

Choosing a career in a foreign country is a big step. Thus, to give you a general idea of what we and Gothenburg have to offer in terms of benefits and life in general for you and your family/spouse/partner please visit:


[https://www.movetogothenburg.com/](https://www.movetogothenburg.com/)

**How to apply**

In order to apply for a position at the University of Gothenburg, you have to register an account in our online recruitment system. It is the responsibility of the applicant to ensure that the application is complete in accordance with the instructions in the job advertisement, and that it is submitted before the deadline. The selection of candidates is made on the basis of the qualifications registered in the application.

**Closing date:** October 10th, 2021

*The University of Gothenburg promotes equal opportunities, equality and diversity.*

Applications will be destroyed or returned (upon request) two years after the decision of employment has become final. Applications from the employed and from those who appeal the decision will not be returned.

In connection to this recruitment, we have already decided which recruitment channels we should use. We therefore decline further contact with vendors, recruitment and staffing companies.