PhD student position in Marine Sciences specializing in Evolutionary Genomics

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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.

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Type of employment: Fixed-term employment, 4 years Extent: 100 %
Location: Tjärnö Marine Laboratory, Department of Marine Sciences, University of Gothenburg
First day of employment: as soon as possible

The Department of Marine Sciences, the Faculty of Science, University of Gothenburg, was recently launched (July 1, 2015) with the purpose to achieve the vision of "A University with marine research, teaching and cooperation of the highest international class". The department has about 110 employees - researchers, teachers, PhD students, technicians and administrators. The department carries out teaching and research in the various marine specializations, biology, oceanography, chemistry, marine geology, conservation of underwater cultural heritage, and environmental science. Research is conducted both within specialized individual projects as well as within larger interdisciplinary programs. The Department is situated in Gothenburg and at the University’s research stations at Tjärnö and Kristineberg. This position will be based at the Tjärnö Marine Laboratory, 170 km from Gothenburg (https://www.gu.se/en/tjarno).

More information on the Department can be found at www.marine.gu.se.

Project description

The marine snail, *Littorina saxatilis*, has ecotypes that have evolved repeatedly in Sweden, United Kingdom and Spain, where a high-predation environment leads to a thick-shelled form and a high wave-action environment leads to a thin-shelled form. This PhD will be part of the Swedish Research Council Project: Ecological systems biology: disentangling the molecular mechanisms of ecological speciation. The goal of this project is to identify the genetic mechanisms responsible for these parallel phenotypes, specifically the shell phenotypes. We will examine the genetics of shell formation between ecotypes and assess the relative contribution of genetic vs plastic effects on gene expression in the mantle tissue. We will examine the regulatory architecture using gene expression, eQTLs, and open chromatin sequencing (ATACseq). We will synthesize these results along with other data available from members of the Littorina Research Group https://littorina.group.shef.ac.uk, including large-scale phenotyping, examination of hybrids, and whole-genome re-sequencing of *L. saxatilis* and related species.

Job assignments

The main task is to conduct a PhD thesis, under supervision, following the basic project plan described above. This includes development of the PhD student’s practical experience, analytical skills, and theoretical knowledge, particularly in molecular techniques and bioinformatics.

As member of the project team, it is expected that the PhD student communicates and actively collaborates within the group. The PhD student will present results at conferences, seminars and project meetings. The PhD student is expected to publish their results in international peer-reviewed journals and write a final summarizing thesis in English, which is defended during a public
dissertation. A Swedish Ph.D. thesis should be completed within 4 years full-time work including
course work (60 ECTS), e.g. pedagogic and other soft-skill courses as well as courses to develop
technical skills and knowledge related to the PhD topic (please see below).

**Qualification/merits**
We seek a motivated person for PhD studies in marine biology with a deep interest in evolutionary
genomics.

The applicant must hold a Master’s degree or equivalent in evolutionary biology, genetics,
molecular biology, cell biology or related field. The candidate should have good knowledge and
practical experience of molecular laboratory work (*i.e.* DNA and RNA extraction and sequencing
library preparation), and bioinformatic/computational skills for the analysis of RNA and DNA
(familiar with R and unix command line software). Previous research experience is an added merit,
including, conference attendance, grant funding and scientific publications. These should be
documented in the CV with a brief description of the applicant’s role in the work.

The applicant should possess the ability to work independently and take responsibility for his/her
own learning and research, as well as to collaborate as part of the research team.

Excellent oral and written communication skills in English are necessary as communication within
the group will be in English and the overall working environment is international.

In addition to the formal qualification requirements, great emphasis will be placed on personal
qualities and suitability for the position.

**Eligibility**
The qualifications for education on a doctoral level are: degree in advanced level, at least 240
university points, of which 60 are on an advanced level, or in another way acquired similar
knowledge. Upon appointment, the ability to successfully complete the PhD program must first be
evaluated. Only applicants who are admitted to the PhD program at the Dep. of Marine Sciences
may be hired.

**Third cycle education**
Admission to third cycle education is aiming at a PhD in Natural Science, specializing in Marine
Sciences. 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. You will be employed at University of Gothenburg, and salary follows the regulations at
University of Gothenburg. In addition to pursuing its his/her own research studies, PhD students
may be required to perform other duties, such as teaching, research and administrative work
according to special regulations.

**Assessment**
Regulations for the evaluation of qualifications for education on a doctoral level are given in SFS
1998:80. The main assessment is a judgement for the applicant to successfully complete the PhD
education.

**Appointment Procedure**
Please apply online.

The following should be included:

- A cover letter in English describing the applicant’s *motivation* for the position (why you
  are interested in this position and how does this fit with your career plans) and how the
  applicant meets the *selection criteria* (suitability for the proposed work). Max. two A4
  pages.
- An attested list of qualifications (CV)
- Examination certificates and transcript of courses with grades.
- Relevant publications, including accepted academic papers or research thesis. For
  publications, please indicate your role in the work (1-2 sentences per publication).
- Contact information (phone, email) of two personal references
The highest ranked applicants will be contacted for interview.

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.

For further questions or to express an interest, please contact: Erica Leder (erica.leder@gu.se).

Labour union
Information on union representatives can be found here

Closing date: 28 May 2021

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.

Apply