



## Doctoral student in biology

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### Lund University, Faculty of Science, Department of Biology

Lund University was founded in 1666 and is repeatedly ranked among the world's top 100 universities. The University has around 44 000 students and more than 8 000 staff based in Lund, Helsingborg and Malmö. We are united in our efforts to understand, explain and improve our world and the human condition.

Lund University welcomes applicants with diverse backgrounds and experiences. We regard gender equality and diversity as a strength and an asset.

#### **Project description**

Linking effects on individual behaviour to changes on population and community level metrics for integration into ERAs (CHRONIC).

Low-level chronic exposure to emerging pollutants, such as pharmaceuticals, may have profound effects on functional traits like behaviour. Despite their potential influence on population and community dynamics, effects on functional traits are rarely acknowledged in environmental risk assessments despite their potential importance. Using aquatic invertebrates as model organisms and metals and pharmaceuticals as model chemical stressors, this project will:

- Quantify effects of within and among individual behavioural trait changes to estimate and validate effects on population (e.g. intrinsic rate of increase) and community level (e.g. competition and predator-prey) models.
- Assess interactions of chemical stress and biotic (perceived and realized predation pressure) and abiotic (pH) stressors on behaviour, population growth rate and community dynamics in response to low chronic exposure.
- Investigate putative links and propagation of effects between biomarkers (e.g. for neurotoxicity and oxidative stress, and specific biomarkers like serotonin levels) and invertebrate behaviour (predator-prey responses, avoidance, learning, and behavioural syndromes), life-history (survival, fecundity, growth) and community dynamics.

#### **Work duties**

The PhD position is part of the CHRONIC project - "CHronic exposure scenarios driving enviRONmental risks of Chemicals", which is an Innovative Training Network (ITN) funded by the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie Actions (MSCA) grant No. 956009.

While conducting your individual research project, you will be joined into a network of 13 PhD Fellows (ESRs) at academic institutions across Europe all aiming at developing tools and approaches to identify nonstandard modes of toxicity for long-term, low-dose chemical exposure

and their interactions with other environmental stressors. All CHRONIC partners have extensive experience in education and training and a high state-of-the-art scientific and technical expertise and infrastructure. The programme will therefore lay the basis for an integrated approach to environmental risk assessment.

CHRONIC includes training-by-research, joint training courses, covering technical, scientific, ethical, and transferable skills. Fellows will also engage actively in communication to scientific and public communities. Being part of CHRONIC offer you an excellent opportunity to work within a strong, interdisciplinary and intersectoral network including leading Universities and research institutions across Europe as well as industry, consultancy, governmental and non-governmental institutions in Europe and Canada. You will be able to undertake research placement at partner institution involved in the CHRONIC project from across Europe, as well as attending project training event and international conferences.

The execution of the workplan for the project plans for the research to undertake periods of secondment for a total of 6 months at Roskilde University (Denmark), UK Centre for Ecology and Hydrology (United Kingdom) and Green Transition (Denmark) where you will be trained in specific models and methods beneficial to you project.

### **Admission requirements**

A person meets the general admission requirements for third-cycle courses and study programmes if he or she:

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

A person meets the specific admission requirements for third cycle studies in Biology if he or she has passed an independent project (for example a degree project) of at least 30 credits in a relevant subject and have good oral and written proficiency in English.

### **Qualifications and specific competences:**

You must hold a master's degree or equivalent within ecology, environmental science, ecotoxicology or corresponding. Fluency in English (working language) is a requirement.

Experience in aspects of ecology, and/or ecotoxicology especially with exposure experiments with invertebrates will be valued. Designing, and maintaining experimental test systems with aquatic organisms will be central in the project and experience is thus meriting. Also experience in theoretical and practical work in the field of behavioral ecology/ecotoxicology is meriting.

You are required to be enterprising and to possess good communication skills and to be a visible, involved participant in the department's daily activities, in addition to being willing to engage in disciplinary and interdisciplinary collaboration across the department and in the CHRONIC network.

### **Eligibility:**

The EU ITN project aim to attract candidates worldwide. Thus, there are certain eligibility criteria that candidates must fulfil. First, the applicants must not have resided or carried out their main activity (work, studies, etc.) in Sweden for more than 12 months in the 3 years immediately before the recruitment date. Short stays, such as holidays, are not taken into account. Secondly, the

applicants for the MSCA fellowship must have no PhD and less than 4 years of full-time equivalent research experience from the award of the degree that entitles them to undertake a doctorate (either in the country in which the degree was obtained or in the country in which the applicant is to be recruited).

These eligibility requirements are non-negotiable and ineligible applicants will not be considered.

## Assessment

In the assessment regarding employment consideration will be given to:

- Relevant Master's degree or equivalent
- Any additional academic requirements stated in the job advertisement.

In the assessment regarding enrollment consideration will also be given to the following criteria

- Educational skills and any further professional qualifications
- Grades at Master's programme or equivalent

## Application

You must apply for the position online. Only applications in English are accepted.

Applications must include:

1. Cover (motivation) letter
2. CV
3. Documentation of education including grades from Master's programme or equivalent
4. 2 letters of recommendation
5. If applicable: Documentation for any research experience, work experience or publications.

## Terms of employment

Only those admitted to third cycle studies may be appointed to a doctoral studentship. Third cycle studies at LU consist of full-time studies for 4 years. A doctoral studentship is a fixed-term employment of a maximum of 5 years (including 20% departmental duties). Doctoral studentships are regulated in the Higher Education Ordinance (1993:100), chapter 5, 1–7 §§.[OB1]

För further information, please contact Olof Berglund ([olof.berglund@biol.lu.se](mailto:olof.berglund@biol.lu.se)).

The Faculty of Science conducts research and education within Biology, Astronomy, Physics, Geosciences, Chemistry, Mathematics and Environmental Science. The Faculty is organized into nine departments, gathered in the northern campus area. The Faculty has approximately 1500 students, 330 PhD students and 700 employees.

We kindly decline all sales and marketing contacts.

**Type of employment** Temporary position longer than 6 months  
**First day of employment** Preliminary 2022-10-01

<b>Salary</b>	Monthly salary
<b>Number of positions</b>	1
<b>Working hours</b>	100
<b>City</b>	Lund
<b>County</b>	Skåne län
<b>Country</b>	Sweden
<b>Reference number</b>	PA2022/2283
<b>Contact</b>	<ul style="list-style-type: none"><li>• Olof Berglund, universitetslektor, +46462223750,olof.berglund@biol.lu</li></ul>
<b>Union representative</b>	<ul style="list-style-type: none"><li>• OFR/ST:Fackförbundet ST:s kansli, 046-2229362</li><li>• SACO:Saco-s-rådet vid Lunds universitet, 046-2229364</li><li>• SEKO: Seko Civil, 046-2229366</li></ul>
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