Network for Cross-disciplinary assessment of Endocrine Disrupting compounds
https://www.nexed.eu

Doctoral candidate 4:

Next generation regulatory assessment and identification of endocrine disrupting chemicals

Host Institution	Institute of Environmental Medicine, Karolinska Institutet, Sweden
PhD enrolment	Karolinska Institutet, Sweden
Lead Supervisor	Anna Beronius, Unit of Biochemical Toxicology
Subject area	Endocrine disruptor assessment for human health

About this vacancy

NeXED is a Marie Skłodowska-Curie Actions (MSCA) Doctoral Network, funded by the European Union. NeXED will in total recruit 15 enthusiastic, talented and driven Doctoral Candidates (DCs) who are highly motivated to be part of a new generation of cross-disciplinary toxicologists specialised in using harmonised approaches in a One Health framework to develop and support the implementation of innovations in the field of endocrine disruptor assessment. This vacancy is one of those 15 opportunities. Make sure to also read the general eligibility and selection criteria!

Host institution and research group

The Institute of Environmental Medicine (IMM) is a department at Karolinska Institutet and an interdisciplinary research institute. IMM conducts advanced research and education in environmental and occupational medicine, toxicology, physiology, epidemiology and biostatistics with a focus on clarifying how environmental and lifestyle factors affect human health. IMM is also a national expert body in environmental medicine and IMM's researchers are scientific advisors to authorities and other decision-makers and participate in national and international expert groups.

This DC position will be hosted by the Unit of Biochemical Toxicology at IMM (Unit of Biochemical Toxicology | Karolinska Institutet). The research at the unit aims at understanding the connection between exposure to chemicals and complex negative health effects, such as cancer and effects caused by endocrine disruption. Our research activities focus mainly on elucidating mechanisms of toxicity and developing risk assessment methodology.

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The research project

The aim of this doctoral project is to explore a mechanism-based approach for identifying and assessing chemicals that may act as endocrine disruptors in humans. The project will be anchored in Adverse Outcome Pathway (AOP) methodology, which will be used as a framework to organize and integrate different types of data (*in silico*, *in vitro*, *in vivo* and human) and to establish links between early mechanistic events and apical health effects. The project will specifically explore the use of mechanistic data from the Zebrafish model, such as transcriptomics data, in the assessment of endocrine disruptors for human health, including considerations of cross-species extrapolations. As such, the project includes elements of experimental and computational work, as well as literature-based analyses. Application in the regulatory context is an important aspect.

Your tasks

You will

- Enrol in Karolinska Institutet's doctoral education and comply with the doctoral training requirements
- Actively engage in **tasks related to the doctoral project**, including contributing to the development and evaluation of relevant AOPs and AOP networks; conducting laboratory work using the Zebrafish model; and collect, organise, evaluate and interpret existing toxicological data
- **Discuss** the research and results with the scientific community, policymakers and with different groups in society
- Write **project reports** on a regular basis, and **publish** high-quality research results related to the research project in international conference proceedings and peer-reviewed scientific journals
- **Participate actively** in the NeXED training, dissemination, communication and exploitation activities
- Work actively on the preparation and defence of a **doctoral thesis** in the field of toxicology
- Engage with and further support a limited number of teaching activities at IMM

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Secondments

The following research stays are planned:

- Interdisciplinary secondment: Henrik Holbech (2 months) at the University of Southern Denmark
- Intersectoral secondment: Ellen Hessel (2 months) at the National Institute for Public Health and the Environment (RIVM), the Netherlands

What we offer

- The selected candidate will be employed full-time by KI for a period of 48 months, whereof **36 months** on the MSCA-DN project
- Doctoral candidates are offered an employment contract, with a **competitive remuneration** based on the MSCA allowances in line with the MSCA WP 2023-2025
- The gross monthly amount will correspond to the salary for employed doctoral students at Karolinska Institutet, which is regulated in a local collective agreement. More information about salaries, employment and social benefits can be found here: Employment as a doctoral student at KI | Staff Portal
- Funding is available for technical and personal skills training and participation in international research events
- The **expected start date** is between 1 September – 1 November 2025. Last-year master students expected to graduate by this time are encouraged to already apply
- Read more about working at Karolinska Institutet here: Choose to work at KI – Ten reasons why | Karolinska Institutet

Specific requirements

In addition to the general eligibility and selection criteria of the NeXED Doctoral Network, the DC must meet the eligibility criteria for doctoral education at Karolinska Institutet. Follow the instructions on the web page Entry requirements (eligibility) for doctoral education. The DC must also show proficiency in English equivalent to the course English B/English 6 at Swedish upper secondary school. Follow the instructions on the web page English language requirements for doctoral education.

Project-specific skills and personal qualities

For this project, it is **required** that the DC has basic understanding of *in vitro* and *in vivo* toxicity test methods, health risk assessment of chemicals, endocrine disruption and AOP methodology.

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Further, it is **desired** that the DC has:

- practical experience with evaluating and interpreting different types of data (human, animal *in vivo*, *vitro* and *in silico*) and basic understanding of weight of evidence assessment
- practical experience with developing or applying AOPs
- practical experience working with *in vitro* methods
- basic knowledge of European chemicals regulation

The DC must be highly motivated, organized and thorough and able to take own initiatives. The DC should be able to work well within a team, have good cooperation and communication skills and should communicate well in English, both orally and in writing.

Application procedure

For your application to be valid, it must both be submitted through the Karolinska Institutet Varbi system: https://kidoktorand.varbi.com/en/what:job/jobID:808281/type:job/where:4/apply:1, and through the NeXED job application platform (https://www.uantwerpen.be/en/projects/nexed/job-openings/apply/).

Deadline for applications: April 21, 2025, 23:59 CET. More information about the application procedure for NeXED PhD positions can be found here.

Contact

For additional information about this vacancy, please contact Anna Beronius (anna.beronius@ki.se).

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