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

Doctoral candidate 3:

A cross-species approach to assessing impaired neurological function caused by endocrine disruptors

Host Institution	University of Antwerp, Belgium
PhD enrolment	University of Antwerp, Belgium
Lead Supervisor	Dries Knapen, Zebrafishlab
Subject area	AOP network, endocrine disruption, impaired neurodevelopment, cross-species assessment

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 University of Antwerp is a dynamic, forward-thinking, European university. We offer an innovative academic education to more than 20000 students, conduct pioneering scientific research and play an important service-providing role in society. We are one of the largest, most international and most innovative employers in the region. With more than 6000 employees from 100 different countries, we are helping to build tomorrow's world every day. Through top scientific research, we push back boundaries and set a course for the future – a future that you can help to shape.

This DC position will be hosted by Zebrafishlab at the Department of Veterinary Sciences, Faculty of Biomedical, Pharmaceutical and Veterinary Sciences. The research of Zebrafishlab focuses on investigating the mechanisms underlying toxicity, the development of adverse outcome pathways (AOPs) in predictive ecotoxicology and toxicology, and the development of alternative, non-animal test methods for ecological and human risk assessment, including in vitro assays and zebrafish embryo methods. The research group builds upon many existing long-standing national and international collaborations between academia, regulatory entities and industry.

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The research project

The main objective of this research project is to develop a cross-species approach to assessing impaired neurological function caused by endocrine disruptors. This will facilitate the use of **NAMs** such as cell-based methods and zebrafish embryos for raising concern on neurological effects in **humans and non-target organisms**. While neurological development generally receives most attention in the context of ED assessment, this research will also include adult neurotoxicity. An AOP network linking different ED modalities to impaired neurological development and adult function will be developed based on existing literature and expertise across the consortium, including newly generated data. Cross-species applicability of the pathways will be investigated, focusing both on humans and non-target organisms. Methods, especially NAMs, will be collected along with their readiness level and will be mapped to the AOP network to cover the most relevant mechanistic aspects. Based on this foundation, an approach for evaluating the potential of chemicals to cause impaired neurological function through an ED mechanism will then be developed.

Your tasks

You will

- Enrol in the **University of Antwerp** Doctoral School and comply with the doctoral training requirements
- 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 Environmental Toxicology
- Engage with and further support a limited number of **teaching activities** for the research group Veterinary Physiology and Biochemistry of the Department of Veterinary Sciences (e.g., by assisting in practical courses Biochemistry and supervising thesis students)

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Secondments

The following research stays are planned:

- Interdisciplinary secondment: Barbara Viviani (2 months) at Università degli Studi di Millano (Italy)
- Intersectoral secondment: Sandrine Jouan (2 months) at Federal Public Service Public Health (Belgium)

What we offer

- The selected candidate will be employed full-time by University of Antwerp on the MSCA-DN project for a period of **36 months**. In line with the University of Antwerp regulations and following a positive evaluation by the doctoral committee, UAntwerpen may provide additional funding for a maximum of 12 months to complete the doctoral degree
- Doctoral candidates are offered a direct contract with equivalent benefits to an employment contract, including social security coverage, with a **competitive remuneration** based on the MSCA allowances in line with the MSCA WP 2023-2025. The gross monthly amount at UAntwerpen corresponds to the amount for doctoral scholarship holders
- Funding is available for technical and personal skills training and participation in international research events
- The **expected start date** is between September and December 2025. Last-year master students expected to graduate by this time are encouraged to already apply
- Read more about working at the University of Antwerp here

Specific requirements

In addition to the general eligibility and selection criteria of the NeXED Doctoral Network,

- You hold a **Master's degree** in one of the **life sciences** (Biomedical sciences, Biology, Biochemistry, Pharmaceutical sciences,...) or you will have obtained it by the time you start work
- You have **knowledge** of (eco)toxicology
- **A background** in adverse outcome pathways and neurotoxicity and **experience** in working with cell-based methods and zebrafish embryos are considered an asset
- Excellent proficiency in **English** is required
- You can work accurately and independently as well as within a multidisciplinary team

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- You obtained a FELASA B/C certificate for animal research, or are willing to do so as soon as possible
- Your teaching competences are in line with the University of Antwerp's educational vision
- Your research qualities are in line with the faculty and university research policies

Application procedure

Applications must be submitted 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 Dries Knapen (dries.knapen@uantwerpen.be).

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