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

Doctoral candidate 12:

Development of a zebrafish metabolome atlas and bridging to EDC exposure

Host Institution	Vrije Universiteit Amsterdam, Netherlands
PhD enrolment	Vrije Universiteit Amsterdam, Netherlands
Lead Supervisor	Pim Leonards, Amsterdam Institute for Life and Environment
Subject area	Chemistry, neurotoxicity, mass spectrometry

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

This DC position will be hosted by the section Chemistry for Environment and Health at the Amsterdam Institute for Life and Environment of Vrije Universiteit Amsterdam (https://vu.nl/en/about-vu/faculties/faculty-of-science/more-about/chemistry-for-environment-health). The section performs world-leading research to develop analytical chemistry and computational methodologies for the prioritisation and identification of environmental and health issues of emerging concern. High-quality targeted analysis, suspect-screening and non-target screening approaches, supported by advanced modelling and data analysis pipelines, are applied for exposure assessment, human biomonitoring, effect-directed analysis, and metabolomics/lipidomics purposes, that are closely interlinked with the section Environmental Health and Toxicology.

The research project

The objective of this DC is to investigate at a molecular level (metabolome) the developmental and neurotoxic effects of endocrine disruptors in whole zebrafish embryos with a focus on specific organs (e.g. brain, liver, heart, gills, kidney, eyes), study at high time resolution the development of the normal zebrafish metabolome until 5 dpf and link these to the development of organs and tissues using advanced mass spectrometry techniques including tissue imaging techniques (MSI). This will provide

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comprehensive information on the effects of EDCs on the metabolome and link these to developmental and neurotoxic adverse effects (e.g. behaviour).

Your tasks

You will

- Perform metabolomics experiments with zebrafish and further develop tissue imaging mass spectrometry for zebrafish
- Enrol in the PE&RC **graduate school** (https://www.pe-rc.nl) 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 Chemistry
- Engage with and further support a limited number of **teaching activities** for the section Chemistry for Environment and Health of the Amsterdam Institute for Life and Environment

Secondments

The following research stays are planned:

- Interdisciplinary secondment: Henrik Holbech (2 months) at University of Southern Denmark (SDU, Denmark)
- Intersectoral secondment: Michael Rodamer (2 weeks) at Agilent (Company, Germany)
- Interdisciplinary secondment: Dries Knapen (2 months) at University of Antwerp (UA, Belgium)

What we offer

- The selected candidate will be employed full-time by Vrije Universiteit Amsterdam on the MSCA-Doctoral Network project for a period of **36 months**
- Doctoral candidates are offered an employment contract for full-time employment, with a **competitive remuneration** based on the MSCA allowances in line with the MSCA WP 2023-2025
- The gross monthly amount at Vrije Universiteit Amsterdam corresponds to minimum € 3,378 and maximum € 3,707 (PhD) in the third (last) year. Fringe

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benefits include a maximum of 41 days of annual leave based on full-time employment, 8% holiday allowance and 8.3% end-of-year bonus
- Funding is available for technical and personal skills training and participation in international research events
- The **expected start date** is between July-September 2025. Last-year master students expected to graduate by this time are encouraged to already apply
- Read more about working at Vrije Universiteit Amsterdam here

Specific requirements

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

- A 3-year PhD trajectory at Vrije Universiteit Amsterdam is only possible if:
  - the candidate has completed an accredited Research Master prior to the PhD trajectory or the candidate has comparable qualifications, as demonstrated by their curriculum
  - This requires that the Master's degree amounts to at least 120 ECTS and that at least 60 ECTS has been spent on research preparation within the programme that ties in with the theme of the PhD trajectory to be followed
- Master's degree in analytical chemistry
- Familiar with metabolomics or tissue imaging mass spectrometry is a plus

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 Pim Leonards (pim.leonards@vu.nl).

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