

Doctoral candidate 6:

Endocrine and neurodevelopmental disrupting potential of relevant human exposure mixtures

Host Institution/PhD enrolment

RECETOX, Faculty of Science, Masaryk University, Czech Republic

Lead Supervisor

Assoc. Prof. Klára Hilscherová

Bioanalytical Toxicology research group

Subject area

Environmental Health Sciences/Environmental Toxicology

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

RECETOX centre focuses on interdisciplinary research and education in the area of Environment & Health, studying toxic compounds, their effects, fate & bioaccumulation, the exposure and health risks to humans and environment, and developing technologies and approaches for their mitigation. It operates state-of-the-art research facilities including eco/toxicological laboratories, accredited analytical laboratories, population cohorts, databases and information portals and develops an interdisciplinary expertise in international research teams. This DC position will be hosted by [Environmental Toxicology](#) research program and supervised by [Assoc. Prof. Klára Hilscherová](#) leading the Bioanalytical Toxicology research group.

Masaryk University (MU) is modern, dynamic and the most attractive university in the Czech Republic with ten faculties, more than 6500 staff and 33 000 students, a wide range of research areas and a strong international position.

Faculty of Science MU, holder of the [HR Excellence in Research Award](#) by the European Commission, is a research-oriented faculty, offering university education (Bachelor's, Master's, and Doctoral degree programs) closely linked to both primary and applied research and teaching of the following sciences: Mathematics, Physics, Chemistry, Biology, and Earth sciences. We are the most productive scientific unit of Masaryk University generating around 40 % of MU research results.



Brno, where RECETOX is located, is a safe, student- and family-friendly university city. It is a modern metropolis with a long history and culture, the capital city of the South Moravian Region, situated approximately halfway between Prague and Vienna. Recognizing the university's significant role in making Brno one of the most innovative cities in Central Europe, it continuously supports the local scientific, start-up, and high-tech communities.

The research project

The goal of this project is to advance the knowledge on the endocrine disrupting (ED) mechanisms of human exposure mixtures and their potential influence on (neuro)development. The studied mixtures will be based on their association with (neuro)developmental delays/impairment in epidemiological studies. The project aims to identify the most relevant chemicals and ED mechanisms using a combination of *in silico*, *in chemico* and *in vitro* human cell-based methods, including neurodevelopmental models.

Your tasks

You will

- Enrol in the **Environmental Health Sciences** Doctoral program and comply with the doctoral training requirements ([PhD programme | RECETOX](#))
- 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 Health Sciences**

Secondments

The following research stays are planned:

- Interdisciplinary secondment: ED-and neurodevelopment related endpoints in non-mammals and environmental ED assessment (2M) at [Vrije Universiteit Amsterdam](#) (Netherlands)
- Intersectoral secondment: Advanced methods for neurotoxicity assessment (2M) at [DNTOX](#) (Germany)
- Intersectoral secondment: Insight into consultancy work on systematic review (2wk) at [EcoMole](#) (Czech Republic)

What we offer

- The selected candidate will be employed full-time by RECETOX on the MSCA-Doctoral Network project for a period of **36 months**, with possible extension supported by RECETOX
- Doctoral candidates are offered an employment contract, including social security coverage and health insurance, with a **competitive remuneration** based on the MSCA allowances in line with the [MSCA WP 2023-2025](#)
- The gross monthly income within this MSCA project corresponds to about 150% of the median salary in the Czech Republic
- 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
- Employee benefits such as 6 weeks of paid vacation per year, pension insurance contribution or nursery/children group allowance, a financial meal allowance, lunches in MU canteens, Multisport card, vaccinations free of charge, discounted language courses, exclusive mobile tariff offer by Vodafone, childcare groups
- Opportunity to work and live in a [modern and dynamic city](#) (for more information on costs of living, you can refer to [Numbeo](#))
- [Welcome Office MU](#) provides support with your relocation to Brno; further support is possible from [Brno Expat Centre](#) and [Centre For Foreigners JMK](#)
- Read more about working at RECETOX [here](#)

Specific requirements

In addition to the [general eligibility and selection criteria](#) of the NeXED Doctoral Network,

- The applicants must have (before starting their employment) a Master degree in biology, toxicology, environmental health, biochemistry, molecular biology, (environmental) chemistry, medicine or other relevant field with knowledge and experience in experimental biological/chemical laboratory research
- An advantage is previous experience namely with in vitro approaches and human cell-based systems, but also any of the following methodologies: molecular biology techniques, zebrafish embryo test, omics, biomarker analyses
- Fluency in English (working language) is a requirement

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

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 Klara Hilscherova (hilscherova@recetox.muni.cz).

