

**NeXED**

Training the next generation of toxicologists

NeXED Newsletter #1



Launching NeXED, an MSCA Doctoral Network!



NeXED will train the next generation of true cross-disciplinary toxicologists specialized in harmonized One Health approaches for the assessment of endocrine disruptors, no longer approaching assessment of chemicals from either a human or an environmental health perspective separately.



We bring together 10 partners and 10 associated partners from 10 countries, all leading experts in the assessment of endocrine disruptors.



NeXED will host 15 PhD candidates across Europe!

Learn more at <https://www.nexed.eu>!

Follow us on [LinkedIn](#)!



Introducing the core NeXED principles

NeXED is a doctoral network that is designed to train a new generation of cross-disciplinary toxicologists specialised in human AND environmental risk assessment of endocrine disruptors.

Why is this cross-disciplinary approach so important? 💡

Traditionally, regulatory procedures for identification and assessment of endocrine disrupting chemicals (EDCs) are separated for human health and the environment. Due to the similarities in toxicological responses between humans and wildlife, there is an opportunity to share toxicological information between these two disciplines. Several projects have been working on such a holistic approach, including the Horizon 2020 [EURION cluster](#) project [ERGO EU Project](#), by developing a cross-species approach for extrapolation of EDC effects across vertebrate classes. Also the [European Partnership for the Assessment of Risks from Chemicals \(PARC\)](#), focuses on development of methods, AOPs and IATAs for both human and environmental health. The separation of disciplines is also reflected in the different trainings of toxicologists and ecotoxicologists at Universities.





Consequently, based on past and ongoing efforts in EURION and PARC, NeXED combines the expertise of 15 EDC researchers from both fields: classic toxicology (focused on humans) and ecotoxicology (focused on the environment).

Doctoral candidates in NeXED will benefit from being trained in both fields, human and environmental toxicology, thereby promoting the urgently needed paradigm shift in EDC assessment towards One Health.

The mixture makes the poison? ☠️💧

Current risk assessment methods for EDCs focus on individual chemicals, as required by EU regulations like REACH. However, in real life, humans and the environment are exposed to complex mixtures of potential EDCs, such as PFAS.

Chemical mixtures, with different ED mechanisms, can interact in ways we don't fully understand, especially given the crosstalk between endocrine systems, such as the thyroid and steroid hormone system. Thus, investigating the effects of real-life EDC mixtures is essential for more accurate and realistic EDC assessments to protect human and environmental health.

In NeXED, we will gain insight into interaction among endocrine axes in complex exposure mixtures including analysis of the exposome in order to improve environmental realism in EDC assessment. 5 of the 15 PhD projects in NeXED will work with mixtures of EDCs and assess their effects using different *in silico*, *in vitro* and *in vivo* methods.

How can we improve regulatory testing of endocrine disruptors EDCs? 🏠💧☠️

The current regulatory framework for EDC testing has multiple gaps that will be addressed in the doctoral network NeXED:

- ❌ The [European Chemicals Agency](#) / [European Food Safety Authority \(EFSA\)](#) guidance currently focuses on Estrogen, Androgen, Thyroid and Steroidogenesis (EATS) modalities but does not include other endocrine modalities, such as retinoic acid pathway signalling or xenobiotic receptors.
- ❌ Currently validated assays only cover vertebrate species (mammals, fish and amphibians) but lack tests for the assessment of EDCs in invertebrates, even though promising approaches are available.
- ❌ Existing test approaches do not take the complexity of the endocrine system into account. Advanced metabolomics analyses can be applied to investigate crosstalk and feedback loops.
- ✅ PhD projects in NeXED will develop novel approaches for EDC assessment such as the inclusion of non-EATS modalities, application of invertebrate tests, and advanced metabolomics approaches.





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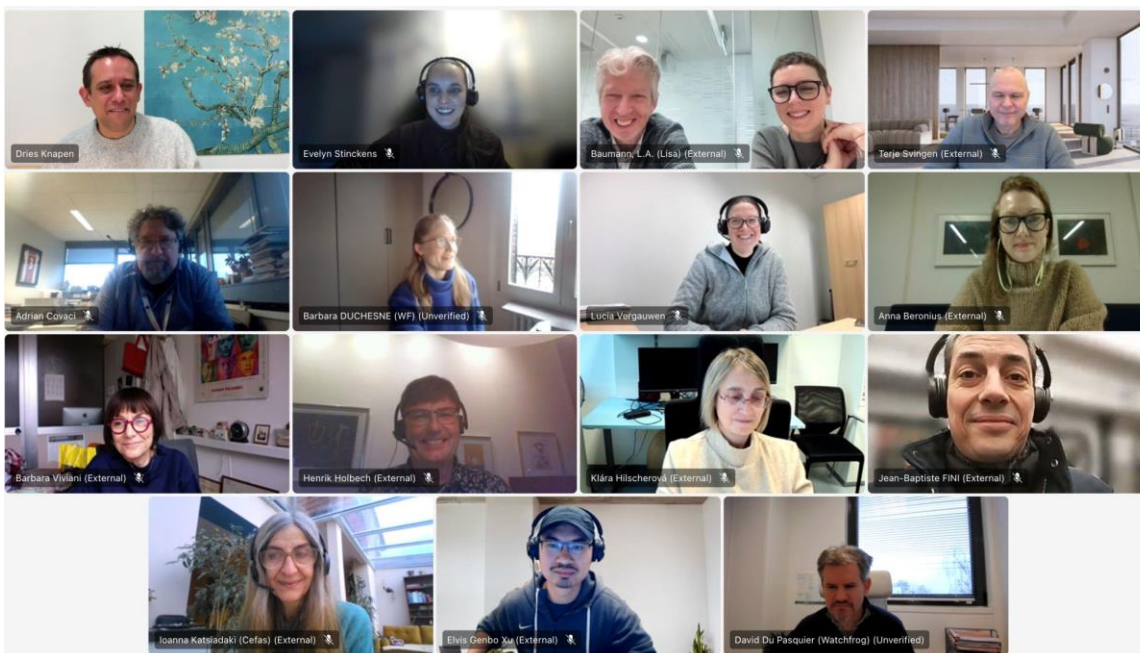


Meet the NeXED consortium

We are an international team of toxicologist and ecotoxicologist working on endocrine disruptor assessment. In this MSCA Doctoral Network, we will combine our expertise with different partners from academia, industry, regulatory agencies, SMEs and consultancy firms.

We will train the next generation of cross-disciplinary toxicologists specialized in harmonized One Health approaches to protect humans and the environment from the impact of harmful chemicals.

Meet the 15 PIs and project manager: [Dries Knapen](#), [Lucia Vergauwen](#), [Lisa Baumann](#), [Timo Hamers](#), [Henrik Holbech](#), [Pim Leonards](#), [Elvis Genbo Xu](#), [Klara Hilscherova](#), [Anna Beronius](#), [Terje Svingen](#), [David Du Pasquier](#), [Jean-Baptiste FINI](#), [Ioanna Katsiadaki](#), [Adrian Covaci](#), [Barbara Viviani](#) and [Evelyn Stinckens](#).



See our list of NeXED lead supervisors [here](#)!

Click [here](#) to browse the entire consortium!





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NeXED applications are now closed!

On January 21st, we had our kick-off meeting and prepared the PhD vacancies, which have now been filled by 15 promising NeXED Doctoral Candidates. The NeXED job openings were posted on our [NeXED website](#), [LinkedIn](#), [Euraxess](#), [Academic Positions](#), [SETAC Career Center](#), [Society of Toxicology Job Bank](#), the websites of beneficiaries, etc., using the following announcement:



Applications now open!
Deadline: 21 April 2025

15 PhD positions

In the field of endocrine disruptor assessment



NeXED
MSCA Doctoral Network

*Last-year Master students
are encouraged to apply*



- 🥳 In total 503 students applied, of which 87 were pre-selected!
- 🥳 48% of applicants were male and 52% were female, a near perfect gender balance!
- 🥳 Ages ranged from 22 to 49 years old.
- 🥳 Students from all over the world applied, with 64% of the applicants originating from Asia, 21% from Europe, 13% from Africa and 2% from North America.
- 🥳 The most popular vacancy platforms were Euraxess, our NeXED LinkedIn page and the NeXED website.
- 🥳 We selected 15 enthusiastic, talented and driven doctoral candidates 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.








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Meet the NeXED Doctoral Candidates

-  DC1: **Clara Kempkens** (Lead supervisor: Lisa Baumann, VU)
-  DC2: **Tommaso Giorgi** (Lead supervisor: Terje Svingen, DTU)
-  DC3: **Peter Schumann** (Lead supervisor: Dries Knapen, UA)
-  DC4: **Muhammad Arslan Aslam** (Lead supervisor: Anna Beronius, KI)
-  DC5: **Gabriele Morillo** (Lead supervisor: David Du Pasquier, WF)
-  DC6: **Gabrielle Guillaume Boulaire** (Lead supervisor: Klára Hilscherová, MU)
-  DC7: **Marta Silva** (Lead supervisor: Henrik Holbeck, SDU)
-  DC8: **Laura Veensalu** (Lead supervisor: Lucia Vergauwen, UA)
-  DC9: **Javier Marin** (Lead supervisor: Adrian Covaci, UA)
-  DC10: **Lea Berger** (Lead supervisor: Barbara Viviani, UMIL)
-  DC11: **Yann Stehly** (Lead supervisor: Elvis Genbo Xu, SDU)
-  DC12: **Emilie Daut** (Lead supervisor: Pim Leonards, VU)
-  DC13: **Giorgio Repossi** (Lead supervisor: Jean-Baptiste Fini, CNRS)
-  DC14: **Nora Karlsson** (Lead supervisor: Timo Hamers, VU)
-  DC15: **Megan Parker** (Lead supervisor: Ioanna Katsiadaki, Cefas)



Stay tuned - a more detailed introduction is coming soon!



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News

Follow us on LinkedIn for all our latest news, and explore the full archive of news items and newsletters on our website.

Follow us on [LinkedIn!](#)

Click [here](#) to browse all news items



Events

We are actively developing the NeXED training program. All NeXED training events will be announced on our NeXED website.

Future events



NeXED Kick-off event, 2 days | In person



NeXED Core training workshops, 7-10 workshops of 2h | Online



NeXED DC project proposals, 3 afternoons | Online



NeXED Summer school: *in vitro* tools & gene editing, 4 days | In person

Click [here](#) to explore all upcoming training events



Outreach



A first scientific publication is in preparation to introduce NeXED as an MSCA-DN project!



We look forward to sharing more updates and dissemination activities once the Doctoral Candidates have started their prestigious PhD projects!

Click [here](#) to discover all our outreach activities





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