



NeXED

Training the next generation of toxicologists

NeXED Newsletter #2



Meet the NeXED Doctoral Candidates



DC1: **Clara Kempkens** (Lead supervisor: Lisa Baumann, VU)

DC1 – Clara Kempkens

Endocrine disruption of zebrafish brain and sensory organ development



Investigating how thyroid hormone system disruptors (THSDs) impact neurodevelopment, including brain and sensory organs, in zebrafish embryos.

Fluorescent transgenic zebrafish will be exposed to THSDs to assess effects via (confocal) microscopy, histopathology, behaviour assays, and molecular methods.



NeXED

Training the next generation of toxicologists



Funded by
the European Union




VRIJE
UNIVERSITEIT
AMSTERDAM





NeXED

Training the next generation of toxicologists

 DC2: **Tommaso Giorgi** (Lead supervisor: Terje Svingen, DTU)

DC2 – Tommaso Giorgi

Improved NAM-based testing of ED-mediated reproductive toxicity



Improving knowledge on how endocrine disruptors impact reproductive development by refining AOP networks, integrating cross-axis signaling and cross-species approaches to identify predictive key events.

Systematic evidence mapping, AOP development, and rat/zebrafish studies to assess steroid, thyroid and retinoid disruption. Investigate cross-species effects by integrating *in silico*, *in vitro*, and read-across analyses.



NeXED

Training the next generation of toxicologists




Funded by
the European Union





NeXED

Training the next generation of toxicologists

 DC3: **Peter Schumann** (Lead supervisor: Dries Knapen, UA)

DC3 – Peter Schumann

Cross-species assessment of impaired neurological function caused by endocrine disruptors



Development of a cross-species AOP network linking different endocrine disrupting modalities to impaired neurological development and adult function.

The AOP network will be initially developed from existing literature and expertise to identify data gaps that may be filled with newly generated data.



NeXED

Training the next generation of toxicologists



Funded by
the European Union




University
of Antwerp





NeXED

Training the next generation of toxicologists

 DC4: **Muhammad Arslan Aslam** (Lead supervisor: Anna Beronius, KI)

DC4 – Muhammad Arslan Aslam



Towards next generation regulatory assessment and identification of endocrine disrupting chemicals



Investigate methods for mechanism-based identification of endocrine disruptors using zebrafish and AOPs to link molecular effects to relevant health outcomes.

By combining zebrafish transcriptomics, *in silico* and *in vitro* data within an AOP framework to support mechanism-based, regulatory-relevant ED assessment.



NeXED

Training the next generation of toxicologists



Funded by
the European Union




**Karolinska
Institutet**





NeXED

Training the next generation of toxicologists

 DC5: **Gabriele Morillo** (Lead supervisor: David Du Pasquier, WF)

DC5 – Gabriele Morillo

Species differences in physiology and sensitivity to thyroid hormone system disrupting chemicals



Clarifying species-specific differences in physiology and sensitivity to thyroid hormone system-disrupting chemicals and their mixtures.

Utilizing transgenic eleuthero-embryonic models of fish (Medaka) and amphibians (Xenopus), as well as human *in vitro* assays.



NeXED

Training the next generation of toxicologists



Funded by
the European Union

LABORATOIRE
WATCHFROG


MUSÉUM
NAT. HIST.
NATURELLE





NeXED

Training the next generation of toxicologists

 DC6: **Gabrielle Guillaume Boulaire** (Lead supervisor: Klára Hilscherová, MU)

DC6 – Gabrielle Guillaume Boulaire

Endocrine and neurodevelopmental disrupting potential of relevant human exposure mixtures



Investigating the potential effect of real-life exposure mixtures on human neurodevelopment linked to impairment of the thyroid hormone signaling pathway.

Using in vitro models to test exposure mixtures and get insight on mechanisms that could perturb endocrine systems and affect early neurodevelopment.



NeXED

Training the next generation of toxicologists



Funded by
the European Union

MUNI





NeXED

Training the next generation of toxicologists

 DC7: **Marta Silva** (Lead supervisor: Henrik Holbeck, SDU)

DC7 – Marta Silva

From EATS Exposome to EATS Effectome – Fish as a Vertebrate Model



We aim to study mixed exposure to estrogenic, androgenic, thyroidal, and steroidogenic (EATS) chemicals in zebrafish to explore combined effects (effectome).

Develop and test an Effect-Marker Package (EMP) covering the EATS effectome using zebrafish exposure scenarios and assess vertebrate applicability of the EMP.



NeXED

Training the next generation of toxicologists



Funded by
the European Union


SDU 
Syddansk Universitet





NeXED

Training the next generation of toxicologists

 DC8: **Laura Veensalu** (Lead supervisor: Lucia Vergauwen, UA)

DC8 – Laura Veensalu

AOP network-based assessment of interactions among endocrine axes



Understanding interactions between endocrine axes and adverse effects of PFAS mixtures using the Adverse Outcome Pathway (AOP) framework.

By combining zebrafish embryo assays, AOP network analysis and mixture toxicity modelling, the project aims to uncover mechanistic links between molecular targets and real-life mixture effects.



NeXED

Training the next generation of toxicologists



Funded by
the European Union




University
of Antwerp





NeXED

Training the next generation of toxicologists

 DC9: **Javier Marin** (Lead supervisor: Adrian Covaci, UA)

DC9 – Javi Marín Lucas

Combined exposomics and metabolomics for complex exposure scenarios



Characterizing the chemical exposome and metabolome of zebrafish embryos exposed to real-life mixtures. Linking human-relevant exposures to biological responses to understand health impacts of complex pollution scenarios.

Employing target, suspect, and non-target screening using advanced chromatographic and mass spectrometric techniques, and developing case studies from both environmental sites and human cohorts.



NeXED

Training the next generation of toxicologists



Funded by
the European Union



University
of Antwerp





NeXED

Training the next generation of toxicologists

 DC10: **Lea Berger** (Lead supervisor: Barbara Viviani, UMIL)

DC10 – Lea Berger

Novel approaches to assess the impact of EDCs in the adult nervous system



Identify EDC-sensitive endpoints in the mature nervous system, focusing on retinoid signaling pathways across species to support IATA development.

This project will involve developing Adverse Outcome Pathways (AOPs) and using neuronal and glial cell models to study neurotoxicity.



NeXED

Training the next generation of toxicologists



Funded by
the European Union



UNIVERSITÀ
DEGLI STUDI
DI MILANO





NeXED

Training the next generation of toxicologists

 DC11: **Yann Stehly** (Lead supervisor: Elvis Genbo Xu, SDU)

DC11 – Yann Stehly

Exploring nuclear receptor cross-talk in aquatic molluscs and how it translates to vertebrates



Investigate conserved nuclear receptors (RXR/RAR/TR) and their potential cross-talk in molluscs to support AOP development for cross-species EDC risk assessment.

Determine sensitive life stages for EDC exposure, analyze NRs cross-talk via chemical/molecular assays, compare outcomes to vertebrates; and build AOPs.



NeXED

Training the next generation of toxicologists



Funded by
the European Union


SDU 
Syddansk Universitet





NeXED

Training the next generation of toxicologists

 DC12: **Emilie Daut** (Lead supervisor: Pim Leonards, VU)

DC12 – Emilie Daut

Development of a metabolome atlas and bridging to EDC exposure



Investigating neurotoxic effects of endocrine disrupting chemicals on zebrafish embryo development in the first 5 days post fertilization. Changes in the metabolome will be linked to developmental and neurotoxic effects.

Using liquid chromatography combined with high resolution mass spectrometry and advanced mass spectrometry techniques including tissue imaging to get a better understanding of effects in specific organs.



NeXED

Training the next generation of toxicologists



Funded by
the European Union




VRIJE
UNIVERSITEIT
AMSTERDAM





NeXED

Training the next generation of toxicologists

 DC13: **Giorgio Repossi** (Lead supervisor: Jean-Baptiste Fini, CNRS)

DC13 – Giorgio Repossi

Central integration of peripheral endocrine signals



Determine hypothalamic cellular and molecular signatures of developmental EDC exposure to enable cross-species comparison and improve risk assessment.

Integrate human iPSC-derived hypothalamic neurons, mouse and aquatic models, omics technologies, and cross-species biomarkers to develop AOPs.



NeXED

Training the next generation of toxicologists



Funded by
the European Union




**SORBONNE
UNIVERSITÉ**





NeXED

Training the next generation of toxicologists

 DC14: **Nora Karlsson** (Lead supervisor: Timo Hamers, VU)

DC14 – Nora Karlsson

Disruption of thyroid hormone transport to the brain in organoid models, zebrafish, and humans



The aim is to study EDC-induced disruption of thyroid hormone transport in the developing brain, comparing *in vitro* cell-based models, zebrafish, and humans.

The effects of real-life mixtures will be tested on thyroid hormone transmembrane transporters in cell lines, novel organoid models, and zebrafish embryos.



NeXED

Training the next generation of toxicologists



Funded by
the European Union



VRIJE
UNIVERSITEIT
AMSTERDAM





NeXED

Training the next generation of toxicologists

 DC15: **Megan Parker** (Lead supervisor: Ioanna Katsiadaki, Cefas)

DC15 – Megan Parker

Exploring the link between food, metabolic state and endocrine signalling across aquatic taxa



Map out the different strategies evolved to synchronise abundance and quality of food with metabolic decisions affecting endocrine signalling pathways.

Use multi-omic techniques and AOP frameworks to unravel how micronutrient dynamics influence endocrine disruption via metabolic state, in the environment.



NeXED

Training the next generation of toxicologists



Funded by
the European Union



Cefas



University of

Southampton

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

Follow us on [LinkedIn](#)!

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





News

👋 First NeXED Doctoral Candidates meeting

On 5 November 2025, we had our first group meeting with the NeXED DCs. Really happy to meet everyone and kick off the research and training program.



💎 Meet the NeXED team! 💎

On 27 January 2026, we held our first online meet & greet meeting, bringing together our PhD candidates and their supervisors for the first time. Everyone introduced themselves and shared their research interests and roles within the network, giving a great overview of the exciting science ahead. The meeting was very engaging and set a positive, collaborative tone for the project. We're thrilled to be working with such a motivated and diverse team and are really looking forward to the collaboration, training activities, and scientific progress to come.





NeXED

Training the next generation of toxicologists



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



  **Campus Club at the University of Antwerp - Laura Veensalu and Peter Schumann**

On February 3, Campus Club took place at the [University of Antwerp](#) ([#UAntwerpenFBD](#) [#UAntwerpen](#)), welcoming students from the fifth and sixth years of secondary school to get a first taste of university life.


During the zebrafish embryo workshop, our doctoral candidates [Laura Veensalu](#) and [Peter Schumann](#), supervised by [Dries Knapen](#) and [Lucia Vergauwen](#), introduced students to early developmental stages while sharing their experiences as PhD researchers.

Students observed zebrafish embryos under the microscope, identified different developmental stages themselves, and discussed their observations - thinking like real researchers. Beyond developmental biology, the session also highlighted how zebrafish embryos are used in (eco)toxicology to study the impact of environmental pollutants on early life stages.

We hope this workshop sparked curiosity and perhaps even inspired the next generation of scientist.



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

 Stay tuned!





Events

Recent events

NeXED Kick-off event, 2 days | In person

On 19-20 March 2026, our NeXED team finally came together in person and it was absolutely energizing!

We enjoyed two days filled with inspiring oral and poster presentations, plenary sessions, scientific discussions, and many moments of genuine connection. The room was buzzing with ideas, collaboration, and excitement for what's ahead.

A huge thank you to all participants for your enthusiasm. You made this kickoff a true success. This is only the beginning, and we are very much looking forward to what's coming NeXED!



NeXED Core training workshops, 8 workshops of 2h | Online

Between 4 February and 30 April 2026, all doctoral candidates successfully completed the NeXED Core Training Workshops. Throughout the program, they explored topics such as principles of (eco)toxicology, principles of endocrine disruption, regulatory assessment and identification of EDs, New Approach Methodologies (NAMs), analytical chemistry and its application for assessment of EDs, Adverse Outcome Pathways (AOPs) and its applications, and systematic review methodology and Weight of Evidence assessment.








NeXED

Training the next generation of toxicologists

Upcoming events

-  **NeXED DC project proposals**, 3 half-day morning sessions | Online
-  **NeXED Summer school: *in vitro* tools & gene editing**, 4 days | 1-4 September 2026 | In person | Paris (France)
-  **NeXED Advanced training workshops**, 7-10 workshops of 2h | Online

All NeXED training events will be announced on our NeXED website.

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



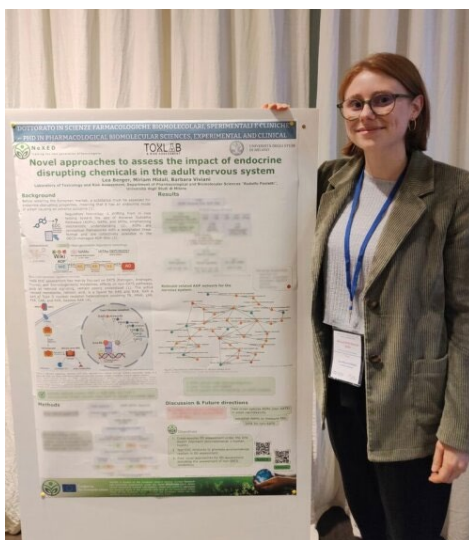
Outreach

Poster presentation - Lea Berger, University of Milan

Our doctoral candidate [Lea Berger](#), supervised by [Barbara Viviani](#), had the opportunity to present her project at the PhD Retreat 2026 in Milano Marittima.

The event was organized by the PhD program Pharmacological and Biomolecular Sciences, Experimental and Clinical at the University of Milan. Lea showcased her poster titled: “Novel approaches to assess the impact of EDCs in the adult nervous system”
















Keywords: non-EATS • retinoid signaling • adult neurotoxicity • AOPs • IATA • NAMs





Poster and oral presentations at the NeXED Kick-off meeting, University of Antwerp

All Doctoral Candidates showcased inspiring oral and poster presentations during the NeXED Kick-off event on 19 and 20 March 2026.

-  Clara Kempkens: “Endocrine disruption of zebrafish brain and sensory organs development.”
-  Tommaso Giorgio: “NAM-based testing and assessment of ED-mediated reproductive toxicity.”
-  Peter Schumann: “A cross-species approach to assessing impaired neurological function caused by endocrine disruptors.”
-  Arslan Aslam: “Next Generation Regulatory Assessment and identification of EDCs.”
-  Gabrielle Morillo: “Interspecies Differences in Physiology and Sensitivity to Thyroid System Disruptors.”
-  Gabrielle Guillaume-Boulaire: “Endocrine and neurodevelopmental disrupting potential of relevant human exposure mixtures.”
-  Marta Ferreira da Silva: “From EATS exposome to EATS effectome fish as vertebrate model.”
-  Laura Veensalu: “AOP network-based assessment of interactions among endocrine axes relevant to environmental PFAS mixtures.”
-  Javier Marín Lucas: “Exposomics and metabolomics in zebrafish embryos for complex exposure scenarios.”
-  Lea Berger: “Novel approaches to assess the impact of EDCs in the adult nervous system.”
-  Yann Stehly: “Exploring nuclear receptor cross-talk in aquatic molluscs and how it translates to vertebrates.”
-  Emilie Daut: “Development of a zebrafish metabolome atlas and bridging to EDC exposure.”
-  Giorgio Repposi: “Effects of exposure to EDC mixtures on the hypothalamic neuroendocrine integration center.”
-  Nora Karlsson: “Disruption of thyroid hormone transport to the brain in organoid models, zebrafish, and humans.”
-  Megan Parker: “Explore the link between food, metabolic state and endocrine signalling across aquatic taxa.”

We look forward to sharing more updates and dissemination activities as the Doctoral Candidates progress in their prestigious PhD journeys!

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





NeXED

Training the next generation of toxicologists

Follow us!



NeXED

Training the next generation of toxicologists

Access all previous newsletters [here!](#)



**Funded by
the European Union**

NeXED is funded by the European Union's Horizon Europe Research and Innovation programme, under the Marie Skłodowska-Curie Action (Grant Agreement number 101168892). Views and opinions expressed on this website are those of the authors only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.

