Network for Cross-disciplinary assessment of Endocrine Disrupting compounds
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Doctoral candidate 15:

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

Host Institution	Centre for Environment, Fisheries and Aquaculture Science, UK
PhD enrolment	The University of Southampton, UK
Lead Supervisor	Ioanna Katsiadaki, Cefas Weymouth Laboratory
Subject area	Primary producers, Micronutrients, Metabolic state, Endocrine signalling

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 Centre for Environment, Fisheries and Aquaculture Science (Cefas) is an Executive Agency of the Department for Environment, Food & Rural Affairs (Defra), and a multidisciplinary scientific research and consultancy centre specialising in fisheries science and management and marine monitoring and assessment. Cefas currently employs over 600 staff based in 2 UK laboratories, has its own ocean-going research vessel and provides services to a large number of UK and international public and private sector clients, including Defra, the Environment Agency and the European Commission. Many Cefas scientists are leaders in their fields and advisors on international bodies such as ICES, OSPAR, STECF, ICCAT, IWC.

This DC position will be hosted by the Applied Aquatic Animal Science (3AS) team, which hosts interdisciplinary expertise on physiology, endocrinology, immunology, biophysical chemistry, toxicology, animal welfare, animal behaviour and biodiversity assessment using metagenomic tools resides. The team currently supports a £6M work program on One Health where chemicals, natural and man-made, are integrated in understanding health and disease, expanding the scope of one health from zoonotics to all pathologies. The team is primarily concerned with aquatic animal health and enjoys access to a state-of-the-art aquarium for experimental purposes as well as a research vessel that surveys our seas (Aquatic animal health - Cefas (Centre for Environment, Fisheries and Aquaculture Science).

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The research project

The objectives of DC15 are to:

a) map out the different strategies life evolved to synchronise abundance and quality of food with key metabolic decisions as regulated by the wider (including paracrine and neuroendocrine) endocrine signalling pathways,
b) assess the risk of animal phyla in this context as many chemicals, natural and synthetic can interfere with these signalling pathways,
c) better anticipate environmental endocrine disruption in wildlife under a changing regime (climate and food availability).

Focus here will be on micronutrients that animals cannot synthesise and as such rely on bacteria and algae to acquire and to incorporate this knowledge in a framework that is useful for the risk assessment of chemicals via the development of Adverse Outcome Pathways (AOPs) and Integrated Approaches for Testing and Assessment (IATAs). The expected results include a direct contribution to AOP and IATA development highlighting similarities and differences across animal taxa, the creation of new knowledge on systems thinking in the area of phylo-toxicogenomics, and new information to anticipate and manage environmental pollution under a climate change scenario to better protect wildlife, ultimately halting biodiversity loss.

Your tasks

You will

- Enrol at the University of Southampton, UK 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 metabolic and endocrine disruption in the aquatic environment

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Secondments

The following research stays are planned:

- Intersectoral secondment: Nic Bury (3 months) at University of Southampton, (UK)
- Interdisciplinary secondment: Anna Beronius (2 months) at Karolinska Institute, (Sweden)

What we offer

- The selected candidate will be employed full-time by [University of Southampton via Cefas, the host institute] on the MSCA-DN project for a period of **36 months**
- Doctoral candidates are offered an direct contract with equivalent benefits to an employment contract, including national insurance, with a **competitive remuneration** based on the MSCA-DN allowances in line with the MSCA WP 2023-2025
- The gross monthly amount will follow the MSCA-DN guidelines for scholarships in the United Kingdom
- 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 University of Southampton and Cefas, as well as studying at University of Southampton and within the School of Ocean and Earth Science

Specific requirements

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

- You'll need to have a 2:1 undergraduate honours degree, or equivalent qualification, in an appropriate subject
- If English is not your first language, you'll need an IELTS minimum level of 6.5 with a 6.0 in writing, reading, speaking and listening

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Application procedure

Applications can be submitted through the NeXED online 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 Ioanna Katsiadaki (ioanna.katsiadaki@cefas.gov.uk).

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