



## Doctoral Candidate (DC5) – *In-vitro* to *in-vivo* extrapolations

### About QTOX

Chemical risk assessment typically involves extrapolation of effects observed *in-vitro* and *in-vivo* under laboratory conditions to predictions of effects at the ecosystem level. This is a very challenging task and current extrapolation models have limitations, notably due to a number of ecological processes that are disregarded by the models and the paucity of data for parameterisation and validation. QTOX ([www.qtox.eu](http://www.qtox.eu)) will develop mechanistic knowledge and data-efficient modelling tools to bridge the gap between standard toxicity data (typically acute effects of single chemicals) and ecologically relevant endpoints arising from chronic, time variable exposures to chemical mixtures. The results will be achieved through an interdisciplinary and intersectoral research and training program in which 10 doctoral candidates will characterise the mechanistic processes describing the successive events from exposure to ecosystem-level effects and develop models for extrapolation of adverse effects across levels of biological organization under environmentally realistic conditions. Notably, the effects of chemical mixtures, dynamic exposure conditions, and their interaction with climate change scenarios will be characterised in a series of mesocosm experiments at three sites in central and southern Europe. The mesocosm work will serve as a uniting training element and a rich source of data for testing and validating the modelling framework. QTOX will produce an open access toolbox for quantitative extrapolations in ecotoxicology and a cohort of researchers equipped with the knowledge and skills necessary to implement and develop rigorous approaches for predicting adverse effects of chemicals.

### About UFZ

The Helmholtz Centre for Environmental Research (UFZ) with its 1,100 employees has gained an excellent reputation as an international competence centre for environmental sciences. We are part of the largest scientific organisation in Germany, the Helmholtz community. Our mission: Our research seeks to find a balance between social development and the long-term protection of our natural resources.

### Tasks description

This DC position will be hosted by the Department of Cell Toxicology at the Helmholtz Centre for Environmental Research – UFZ, Leipzig, Germany [www.ufz.de/celltoxicology](http://www.ufz.de/celltoxicology)

#### In this position, you will:

- Work on a research project that aims to develop quantitative *in-vitro* to *in-vivo* extrapolation methods in ecotoxicology
- Measure mixture effects of triclosan and copper or related organic-metal mixtures in a fish gill cell line assay as an *in vitro* model for the fish acute toxicity assay.
- Measure uptake kinetics into fish cell lines and develop a toxicokinetic and toxicodynamic model for fish cells.
- Write project reports for your local and network supervisors on a regular basis.
- Enrol for a Doctoral degree at Eberhard Karls Universitaet Tuebingen, Germany.
- Participate actively in the QTOX training, dissemination, communication, and valorization program.
- Prepare a doctoral thesis, and publish scientific articles related to the research project.

Furthermore, the selected candidate will take part in short-term academic/industrial secondments to complement the QTOX training programme and doctoral research project.

### Profile & requirements

- Applicants must hold a master's degree or equivalent in the field of environmental sciences, biology, chemistry, bioanalysis, (eco)toxicology, environmental system analysis, geoecology or related fields.
- Applicants must have a solid knowledge of environmental chemistry and ecotoxicology.
- Transcripts of the master's degree must be available by the date of the recruitment.
- Applicants should have obtained outstanding academic results.
- Applicants must have an ability to understand and express themselves in both written and spoken English to a level that is sufficiently high for them to derive the full benefit from the network training.
- Applicants must be eligible to enrol on a PhD programme at the Eberhard Karls Universitaet Tuebingen, Germany.
- Applicants must have the necessary academic skills and background to make the success of a doctoral degree.
- Applicants can be of any nationality but must comply with the Horizon Europe MSCA eligibility criteria:



- **HORIZON MSCA Mobility Rule:** researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of the host organisation for more than 12 months in the 3 years immediately before the recruitment date. Compulsory national service, short stays such as holidays and time spent by the researcher as part of a procedure for obtaining refugee status under the Geneva Convention are not taken into account.
- **HORIZON MSCA eligibility criteria:** supported researchers must be doctoral candidates, i.e. not already in possession of a doctoral degree at the date of the recruitment. Researchers who have successfully defended their doctoral thesis but who have not yet formally been awarded the doctoral degree will not be considered eligible.

## Benefits

- The selected candidate will be employed by the host organisation for **23 months. After this duration as an MSCA Doctoral Candidate, there is funding for the completion of the PhD with a regular UFZ contract.**
- **The start date will be as of January 1<sup>st</sup>, 2025.**
- Doctoral candidates are offered a competitive remuneration based on the MSCA allowances in line with the [MSCA WP 2021-2022](#) (page 78), which includes a country correction coefficient and accounts for all compulsory employer and employee taxes. The gross monthly amount at UFZ corresponds to the amount for doctoral scholarship holders. Moreover, funding is available for technical and personal skills training and participation in international research events.
- The opportunity to be part of an MSCA Doctoral Network: the selected candidate will benefit from the designed training programme offered by the host organisation and the QTOX consortium.
- The selected candidate will participate in international secondments to other organisations within the QTOX network.

Please, find additional information in the [Horizon Europe Work Programme MSCA](#) from p.75 onwards.

## Application

- **Interested candidates are invited to apply for this position through the link below:**  
<https://recruitingapp-5128.de.umantis.com/Vacancies/3058/Description/2>
- The closing date for applications is **October 5<sup>th</sup>, 2024.**
- The selection committee will review all the applications upon the application deadline.
- The recruitment process of QTOX is in line with the principles set out in the [European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers](#).
- Ukrainian researchers are eligible to benefit from the Science4Refugees initiative without the need of holding the refugee status.

## Additional information

For additional information about the research project and this individual position, please contact:

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