

## Job posting

### Type of position

  

scientific  
administrative

### Target group

  
  

graduates  
post docs  
other

**Title** Fourteen Research Positions in bio-diagnosis and chemical structure elucidation (13 PhD students and 1 postdoc)

**Institution** Within the 7th Framework Programme “Innovative biodiagnosis meets chemical structure elucidation – Novel tools in effect-directed analysis to support the identification and monitoring of emerging toxicants on a European scale“ – EDA-EMERGE.  
Modern bio-diagnosis and effect directed analysis (EDA) are interdisciplinary approaches requiring biological as well as chemical skills to be successful. While the monitoring of priority pollutants in European river basins is well developed there is an increasing awareness that non-priority “emerging” chemical substances may pose a risk to aquatic ecosystems and human health. Typically, environmental samples are contaminated with thousands of compounds from different sources that may impact organisms and communities inhabiting surface waters and eventually penetrate ground and drinking water. Integrated and interdisciplinary approaches such as EDA including bio-diagnosis, effect-based monitoring, fractionation and chemical analysis are required, which requires a new generation of well trained young scientists.  
Salaries will be in accordance with Marie Curie rules of the European Commission ([http://ec.europa.eu/research/mariecurieactions/careers\\_en.htm](http://ec.europa.eu/research/mariecurieactions/careers_en.htm)).  
Women are explicitly encouraged to apply to increase their share in science and research. Physically handicapped persons will be favoured if they are equally qualified.

**Position** PhD project 1  
Title: Mechanism-specific screening tools in early life stages of *Danio rerio*  
Required expertise: environmental science or biochemistry or similar  
Location: RWTH Aachen University, Institute for Environmental Research, Department of Ecosystem Analysis, Aachen, Germany  
Contact: Prof. Dr. Henner Hollert; email: [Henner.Hollert@bio5.rwth-aachen.de](mailto:Henner.Hollert@bio5.rwth-aachen.de)  
Link: <http://www.zhv.rwth-aachen.de/mainzhv.php?scriptid=job&param=vorschau&nr=9925&typ=engl>

PhD project 2  
Title: Novel fish-based biological tools for EDA of endocrine disrupting chemicals (EDCs)  
Required expertise: cell biology and/or analytical chemistry

Location: Institut National de l'Environnement Industriel et des Risques, Unité ECOT, France

Contact: Dr Selim Aït-Aïssa, email: [selim.ait-aissa@ineris.fr](mailto:selim.ait-aissa@ineris.fr)

Link: <http://www.ineris.fr/emplois/emploi-theses-details.php?id=1192>

#### PhD project 3

Title: Fluorescing vertebrate models to detect endocrine disrupting compounds

Required expertise: Transgenesis, molecular biology

Location: WatchFrog, France

Contact: Dr. Andrew Tindall, email: [Tindall@WatchFrog.fr](mailto:Tindall@WatchFrog.fr)

Link: [http://watchfrog.fr/company/news\\_en.html#20100970](http://watchfrog.fr/company/news_en.html#20100970)

#### PhD project 4

Title: DNA microarray fingerprints directing EDA

Required expertise: Molecular biology

Location: Norwegian Institute for Water Research, Oslo, Norway;

Contact: Dr. Kevin Thomas, Tel: +47 92265694; email: [kth@niva.no](mailto:kth@niva.no)

Link: <http://niva.easycruit.com/vacancy/652199/44555?iso=no>

#### PhD project 5

Title: Proteomics approach to validate in vitro readouts and direct EDA

Required expertise: Biochemistry or analytical chemistry

Location: Swiss Federal Institute of Aquatic Science and Technology, Department of Environmental Chemistry, Switzerland

Contact: Prof. Kristin Schirmer, email: [Kristin.Schirmer@eawag.ch](mailto:Kristin.Schirmer@eawag.ch)

Link:

<http://internet1.refline.ch/673277/0095/++publications++/1/index.html>

#### PhD project 6

Title: Organisms metabolic functioning directing toxicant identification

Required expertise: analytical chemistry or environmental sciences, with an interest in biochemistry

Location: Vrije Universiteit Amsterdam, Faculty of Earth and Life Sciences, Institute for Environmental Studies, Amsterdam, Netherlands

Contact: Dr. Pim Leonards, Tel: +31(0) 20 598 9509; email: [pim.leonards@ivm.vu.nl](mailto:pim.leonards@ivm.vu.nl)

Link: [http://www.vu.nl/nl/Images/1.2012.00002\\_tcm9-249334.pdf](http://www.vu.nl/nl/Images/1.2012.00002_tcm9-249334.pdf)

#### PhD project 7

Title: Fractionation procedures for comprehensive characterisation of contaminants using EDA

Required expertise: environmental or analytical chemistry

Location: Rudjer Boskovic Institute, Division for Marine and Environmental Research, Croatia

Contact: Prof. Dr. Marijan Ahel; Tel:+385-1-4560940, email: [ahel@irb.hr](mailto:ahel@irb.hr)

Link: <http://www.irb.hr/files./eda-emerge>

#### PhD project 8

Title: Identification and high-throughput quantitative chemical screening

of environmental pollutants using comprehensive multidimensional gas chromatography – mass spectrometry

Required expertise: analytical chemistry, mass spectrometry, chromatography

Location: Environmental Institute, Slovakia

Contact: Dr. Jaroslav Slobodnik, email: [slobodnik@ei.sk](mailto:slobodnik@ei.sk)

Link: [http://www.ei.sk/?id=1\\_3\\_0\\_0](http://www.ei.sk/?id=1_3_0_0)

#### PhD project 9

Title: Structure elucidation combining accurate mass LC-MS/MS approaches with models and computer tools to predict retention and fragmentation

Required expertise: analytical chemistry or environmental sciences

Location: Department of Effect Directed Analysis, Helmholtz Centre for Environmental Research – UFZ, Leipzig, Germany

Contact: Dr. Werner Brack, Tel: +49(0) 341 2351531; email: [werner.brack@ufz.de](mailto:werner.brack@ufz.de)

Link: [http://www.ufz.de/index.php?de=11426&coma4\\_data\[ske\\_stl\\_id\]=1200&coma4\\_data\[ske\\_seite\]=detail](http://www.ufz.de/index.php?de=11426&coma4_data[ske_stl_id]=1200&coma4_data[ske_seite]=detail)

#### PhD project 10

Title: Diagnostic derivatisation in LC-MS/MS to provide new functional group-specific classifiers in structure elucidation

Required expertise: analytical chemistry or environmental sciences

Location: Department of Effect Directed Analysis, Helmholtz Centre for Environmental Research – UFZ, Leipzig, Germany

Contact: Dr. Werner Brack, Tel: +49(0) 341 2351531; email: [werner.brack@ufz.de](mailto:werner.brack@ufz.de)

Link: [http://www.ufz.de/index.php?de=11426&coma4\\_data\[ske\\_stl\\_id\]=1200&coma4\\_data\[ske\\_seite\]=detail](http://www.ufz.de/index.php?de=11426&coma4_data[ske_stl_id]=1200&coma4_data[ske_seite]=detail)

#### PhD project 11

Title: Development of a feasible procedure to monitor persistent toxic organic compounds or by-products formed during treatment processes such as drinking water production or wastewater treatment.

Required expertise: environmental or analytical chemistry with knowledge or interest in statistics and informatics

Location: Swiss Federal Institute of Aquatic Science and Technology, Department of Environmental Chemistry, Switzerland

Contact: Prof. Dr. Juliane Hollender; email: [Juliane.Hollender@eawag.ch](mailto:Juliane.Hollender@eawag.ch)

Link:

<http://internet1.refline.ch/673277/0097/++publications++/1/index.html>

#### PhD project 12

Title: High-throughput EDA – automated approaches to directly link fractionation, biotesting and identification

Required expertise: analytical chemistry or environmental sciences

Location: Norwegian Institute for Water Research, Oslo, Norway;

Contact: Dr. Kevin Thomas, Tel: +4792265694; email:

kth@niva.no

Link: <http://niva.easycruit.com/vacancy/652239/44555?iso=no>

#### PhD project 13

Title: Two-dimensional micro-fractionation approaches for separation of complex mixtures combined with bioassays and mass spectrometry

Required expertise: analytical chemistry or environmental sciences, with an interest in toxicology

Location: Vrije Universiteit Amsterdam, Faculty of Earth and Life Sciences, Institute for Environmental Studies, Amsterdam, Netherlands

Contact: Dr. Marja Lamoree, Tel: +31(0) 20 598 9573; email: [marja.lamoree@ivm.vu.nl](mailto:marja.lamoree@ivm.vu.nl)

Link: [http://www.vu.nl/nl/Images/1.2012.00001\\_tcm9-249333.pdf](http://www.vu.nl/nl/Images/1.2012.00001_tcm9-249333.pdf)

#### Postdoc project 1

Title: Innovative hybrid sample preparation techniques and compilation of a comprehensive chemical analytical toolbox for EDA

Required expertise: a PhD in environmental (analytical) chemistry or environmental (eco) toxicology, preferably with experience in Effect Directed Analysis (EDA) and/or related bioassays.

Location: KWR, Watercycle Research Institute, The Netherlands

Contact: Dr. Merijn Schriks; email:

[Merijn.Schriks@kwrwater.nl](mailto:Merijn.Schriks@kwrwater.nl)

Link: <http://www.kwrwater.nl/page.aspx?id=4618>

#### **Responsibilities**

The objective of the initial training network EDA-EMERGE is to train 14 young scientists (13 early stage researchers and 1 experienced researcher) with the skills to successfully address complex mixtures of chemicals impacting biological systems in European water bodies and human health, and to identify and prioritise major toxicants in these mixtures. An extensive training program will thus be implemented to provide competences in biological and chemical analysis, experimental and modelling approaches to link both toxicant identification and assessment. Furthermore, practical experience in organising and running actual monitoring campaigns on a European scale will be facilitated.

#### **Requirements**

Positions are intended to encourage mobility of researchers and are therefore subject to specific regulations of the European Commission. Applicants can be of any nationality but must not have resided or carried out their main activity (work, studies, etc) in the country of their host organisation for more than 12 months in the 3 years immediately prior to the starting date of the fellowship. PhD candidates (early stage researchers) should have an MSc degree or equivalent and less than 4 years of equivalent research experience from the date of the award of the degree that allows them to undertake doctoral studies. The experienced researcher (postdoc) must at the time of recruitment by the host organization, be in possession of a doctoral degree and have less than 5 years of full-time equivalent research experience. Please see the specific requirements for each of the advertised

position.

**Application  
procedure  
(deadline  
etc.)**

Please follow the instructions related to each specific project. Applications should be submitted directly to the respective hosts.

**Contact**

For more information about the main project please contact: eda-emerge@ufz.de. For further details regarding specific positions, please contact the responsible scientists indicated in the specific advertisement.