

## Short Term Marie Curie Fellowship for PhD students (STR1)

*Computational and in-vitro screening methods for nano-materials*  
Helmholtz Zentrum München



The primary objective of the Environmental Chemoinformatics (ECO) Marie Curie Initial Training Network (ITN) is to contribute to the education of environmental chemoinformaticians who will receive an advanced training in both environmental sciences and computational in-silico methods. The fellows of the network are expected to apply their knowledge for the implementation of REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) in particular with respect to the replacement, refinement and reduction of animal tests by alternative (in-silico and in-vitro) methods.

### Topic:

High throughput screening toxicity in-vitro methods for testing of selected chemicals and nano-particles in mixtures.

Research will assess applicability of experimental high throughput screening (HTS) methods for the assessment of toxicity of nano-particles and of a standard Water Framework Directive (WFD) list of compounds (both single and mixtures) using several protocols (Tetrahymena species, rat hepatoma cells (H4IIE), transfected yeasts cells (*S. cerevisiae*) with the human estrogen receptor (hER  $\alpha$ )).

The results of the experiments with WFD-list compounds will be important to compare their toxic effects in the bulk state with those of nano-particles and to understand better their mode of action. This will allow to understand better which factors govern their behaviour and bioavailability as well as the toxicological effects of the chemicals and materials tested. Successful candidates start at the next possible timepoint, but not later than September 2010.

**Field of research** Toxicology/Cosmetics, Laboratory techniques, in-silico

### Job requirements:

- Master / diploma in chemistry, biology, biochemistry, geoecology
- Profound experience in cell culture work
- Some background in analytical chemistry involving ideally GC-MS and isotope dilution techniques
- Strong interest in molecular ecotoxicology, particularly also in in-silico screening techniques
- Interest to work in an interdisciplinary environment involving interactions between chemistry, biology, modelling, and health.
- Highly motivated for the project, like to work with others, integrate into a team

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**Application deadline (date of receipt)** 30.09.2010

**How to apply** Please apply online at <http://www.eco-itn.eu>

Formal applications should be exclusively send electronically and should include:

- Full CV and non German citizenship
- A statement of motivation (not more than one page)
- Copies of relevant exams, grades, master thesis work or publications
- Contact information of two reference persons
- Interest and willingness to stay in Turkey for at least 6 months for field work

This position is funded by EU and the applicants should check their eligibility as indicated at the web site of the project.

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