

ICWRER conference, Koblenz 2013
Session abstract

Title:

In vitro Toxicology – use and misuse in risk assessment and regulatory frameworks

Session chairs:

Dr. Sebastian Buchinger and Dr. Georg Reifferscheid

Scope:

In recent years considerable technological progress has been achieved in the development of *in vitro* bioanalytical methods and instruments for the elucidation of toxic effects of compounds either of natural or anthropogenic origin. Such methods which are progressively applied in environmental monitoring allow the detection of acute cytotoxic effects but as well the investigation of specific, sublethal effects of chemicals and chemical mixtures of different complexity. In toxicology, so far *in vitro* bioanalytical tools are used as screening tools or to generate scientific knowledge and to elucidate the chemical causes of effects.

It is widely accepted that *in vitro* methods add substantial value to the field of ecotoxicology because of their efficiency, high throughput capacity and the possibility to gain mechanistic information about toxicological effects. However, the use and interpretation of test results in regulation is challenging and still under discussion. Is it possible to integrate data from *in vitro* tests in risk assessment and regulation? If yes, how and under which conditions? Which are necessary test requirements and specifications in dependence of the intended purpose?

The session gives an overview about the current state of the art of *in vitro* bioassays in the field of aquatic ecotoxicology with a special focus on reasonable areas of applications. The session contributes to the discussion if and how data from *in vitro* tests can be used in risk assessment and regulation in a meaningful way.

Keywords:

In vitro tests
Ecotoxicology
Risk assessment
Water regulation

Target group:

The meeting is targeted at persons from academia, industry and authorities working in the field of water research and management.