

Detecting hazards and effects of endocrine disruptors on early development and metamorphosis

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Detection of endocrine disrupting effects currently still is focused mostly on estrogenic effects. Endocrine disruption, however, is much broader and includes effects on early development and metamorphosis. It is a challenge for scientists and policy makers to predict, prevent and analyze the occurrence of endocrine disrupting effects. For hazard analysis and biomonitoring especially *in vitro* bio-analysis methods are favoured. Based on examples of the application of *in vitro* reporter gene assays in practice, some important opportunities and pitfalls of these methods will be discussed. In addition attention is paid to answering 'so-what' question which usually follows *in vitro* analysis of the toxicological potencies of environmental extracts or (mixtures) of standards. For this *in vivo* validation of the methods is necessary. Special attention will be paid to analysis of thyroid hormone disruption and delayed effects of exposure to realistic levels of (mixtures) of contaminants.

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