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"Intelligence-led Assessment of Pharmaceuticals in the Environment"

Interview with Anja Coors - ECT

Dr Anja Coors is the Managing director of ECT Oekotoxikologie GmbH. She is a member of the Executive Team and Work Package Leader within the iPiE project.

What is your current role in iPiE?

I am leading work package 5 ('Experimental validation of developed models'), in which all experimental work of iPiE is organized. My organization, ECT Oekotoxikologie GmbH, is contributing to all tasks in this work package by conducting a broad range of studies investigating fate and effects of pharmaceuticals. Within my organization, I coordinate and evaluate the research for iPiE to which many of my colleagues at ECT are contributing. In addition, I am a member of the Executive Team of iPiE that is supporting the coordinator in the overall management of the project.

What is your overall vision of the project?

The objective of iPiE is to provide a framework that can be used to prioritise existing

pharmaceuticals for environmental risk assessment and identify better targeted testing strategies for pharmaceuticals in the development phase. I believe that we will accomplish this task and develop a useful framework that both builds on existing prioritisation approaches and integrates new aspects and ideas. In the long term, such a framework shall support better assessment and management of possible environmental risks of pharmaceuticals, to the advantage of all involved stakeholders as well as the environment.

What do you find most challenging about the project?

There are so many open questions! Despite all the work and efforts invested in iPiE, we will not be able to solve them all, naturally. This is science: answer one question and get two new ones. From a more practical view, the wide range of partners in iPiE and the diversity of addressed topics makes it quite challenging to coordinate and reach at a common conclusion that integrates all findings.

Tell us a bit about the company/organization you work for.

My organization is a small, privately own contract research organization. With about 40 people, we conduct the full range of ecotoxicological studies under GLP (Good Laboratory Practice) that are needed for the environmental risk assessment of chemicals in various regulatory arenas. Besides performing standard studies, ECT has a long history of being involved in and leading research projects. One of the first large EU-funded research projects addressing pharmaceuticals in the environment (ERAPharm) was coordinated by ECT more than ten years ago. In our research projects, the focus is often on improving risk assessment strategies and on developing, standardising and validating new experimental methods.

What represents for your organization the involvement in the iPiE project?

For ECT, involvement in iPiE is a great networking opportunity. Such involvement in research projects is rather an investment than by any means a way to make money, but we believe that there will be return in the long term. We consider research projects generally as a good way to keep up with the state of the art in ecotoxicology and environmental risk assessment in accordance with the profile of ECT. There is of course also the extra trigger from the personal fun in doing science.

What are your expectations from the iPiE project?

For the project as a whole, my expectation is that we do excellent science that progresses the issue of pharmaceuticals in the environment. There is a lot of concern about potential effects of pharmaceuticals in the environment. My expectation is that the approach of iPiE, which reaches intentionally beyond just investigating a few candidates of the highest concern, can provide a framework to systematically address and help solving these concerns.

iPiE internal workshop

Internal workshop on developing the frameworks for application of the IPIE tools

In the first week in September members of the executive committee and work package leaders met to prepare a concept for the frameworks, in which the IPIE tools and models can be applied for future usage. The concept will lead into a guidance document, which will be published and provide the introduction for the use of IPIE in various scenarios.
We discussed and evaluated the available models and experimental work in terms of a prioritization and prediction framework.
It is the intention that the guidance document will be available for a dissemination workshop in spring 2019, where an open event is planned to be organized. Information on this workshop will be available soon.

Outcome of workshop

The available models for exposure and effects predictions were discussed in detail and evaluated with regard to the prioritization framework.
The group worked on schemes which reflect the different use cases envisaged. This includes systems for (prioritization of a larger group of compounds, identification of regional or local risks by human pharmaceuticals i.e. in waste water of river basins, and environmental evaluations of R&D candidates for innovation of new medicines.
The structure of the guidance document was drafted and the future work will go along this.
Also, the guidance will include a description of case studies and a section on recommendations, which will also take in account the experience gained by the experimental work performed within the project.

Dr Reinhard Laenge
Project coordinator

iPiE News

iPiE Next Forum Meeting

The next iPiE FM will be held from the 13th to the 15th of November 2018 in Brussels. The meeting will be structured on workshops and general sessions to discuss updates. The meeting will count with a session with the SAB members.

iPiE at the EFPIA website - Blog Articles

Pharmaceuticals in the Environment – Industry contribution to a strategic approach
Dr Reinhard Laenge, Head of Ecotoxicology Research & Development, Pharmaceuticals at Bayer AG and iPiE project leader, writes an article for the EFPIA Blog in which he reflects upon how pharmaceutical industry in Europe focused on pharmaceuticals in the environment (PIE) together with the Academic Scientists and the EU Commission. He also explains how iPiE project came up, among others, to develop sound scientific methodology for prediction and screening of environmental hazards and risks of pharmaceuticals.

iPiE Publications

ARTICLE (UFZ): Influence of pH on the toxicity of β-blockers in embryos of zebrafish,*Danio rerio*. Bittner L, Teixido E, Seiwert B, Escher B, Klüver N. *Aquatic Toxicology*. (2018) 201: 129- 137


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