



EU-ToxRisk/Tox21 Press Release

Mainz, 15th September 2016

The EU-ToxRisk project and the Toxicology in the 21st Century (Tox21) initiative in the US have agreed to collaborate on efforts to reduce the use of animals and achieve more efficient chemical safety assessments.

A total of 28 representatives from both projects gathered in a workshop held in Mainz (Germany) on the 12th-14th September 2016 to initiate collaboration across areas of mutual interest within the field of risk assessment. The following areas were agreed upon for areas of mutual practical cooperation.

- Develop practices of cross-consortium data sharing with particular emphasis on the ongoing EU-ToxRisk case studies
- Develop core methodology in read-across and the application of high-throughput transcriptomics for safety assessment
- Create synergies across overlapping chemical subsets
- Utilise ongoing developments of in vitro tissue models and computer-based predictions of drug concentrations for risk assessment
- Develop joint case studies focused on innovations in the application of alternative approaches

Andy White (Unilever), partner of EU-ToxRisk and chair of the workshop, said: “This workshop marks the start of what is expected to be a fruitful collaboration between EU-ToxRisk and the ongoing American efforts in Tox21 and ToxCast. This collaboration will help to strengthen communication between both sides with the objective to foster synergies to accelerate the shift in toxicology towards a new mechanism-based chemical safety testing strategy. On both sides of the Atlantic, there is a drive to enhance scientific capabilities to improve safety assessment approaches based on alternatives to animal testing.”

Richard Paules (National Toxicology Program), from the Tox21 initiative, added: “We had very productive discussions about the similarities and differences in the US and European approaches. We are looking forward to collaborating with our international partners in many areas, including transcriptomic strategies, toxicodynamics, toxicokinetics and computational approaches.”

The workshop, organised at the behest of the EU-ToxRisk project following the initiatives of the EU-ToxRisk Coordinator Bob van de Water (University of Leiden), features as a crucial part of the strategy implemented by the project to advance international cooperation on the topic of new approaches to chemical risk assessment. Exchange and cooperation with many likeminded international initiatives on approaches, data exchange and knowledge harmonisation within the field of alternative toxicity testing will help drive this field forward and evolve towards a new era of safety sciences to the benefit of citizens worldwide.

EU-ToxRisk – An Integrated European ‘Flagship’ Programme Driving Mechanism-based Toxicity Testing and Risk Assessment for the 21st century – is a European collaborative project funded by the EU Framework Programme for Research and Innovation, Horizon 2020. With 39 partner organisations and a budget of over 30 million €, the project started on 1st January 2016 and will last for a duration of 6 years. The vision of EU-ToxRisk is to drive the required paradigm shift in toxicological testing away from animal testing towards a toxicological assessment based on human cell responses and a comprehensive mechanistic understanding of cause-consequence relationships of chemical adverse effects. These novel mechanism-based test methods will be integrated in fit-for-purpose testing batteries that are in line with the regulatory framework and will meet industrial implementation.

Toxicology in the 21st Century (Tox21) is a federal collaboration among the US Environmental Protection Agency, the National Institutes of Health, including the National Center for Advancing Translational Sciences and the National Toxicology Program at the National Institute of Environmental Health Sciences, and the US Food and Drug Administration. Tox21 researchers aim to develop better toxicity assessment methods to quickly and efficiently test whether certain chemical compounds have the potential to disrupt processes in the human body that may lead to negative health effects. One major effort involves using a high-throughput robotic screening system housed at NCATS in order to test ~10,000 environmental chemicals (called the Tox21 10K library) for their potential to disrupt biological pathways that may result in toxicity. Screening results help the researchers prioritize chemicals for further in-depth investigation.



<http://www.eu-toxrisk.eu/>



<http://tox21.org/home>
<http://ntp.niehs.nih.gov/results/tox21/>
<https://www.epa.gov/comptox/tox21>
<http://www.ncats.nih.gov/tox21>

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