

Dear readers,

The Proceedings of the 8th World Congress on Alternatives and Animal Use in the Life Sciences are now online and can be found on the ALTEX homepage at <http://www.altex.ch/en/index.html?id=90>. The Proceedings contain summaries of all scientific sessions written by the sessions' co-chairs as well as 84 manuscripts submitted by oral presenters. They are published by ALTEX Proceedings, which will be devoted solely to the production of Abstract Books and Conference Proceedings in cooperation with the organizers of 3Rs relevant conferences. The Proceedings provide an excellent overview of the many different facets and the status quo of 3Rs research as well as the current activities and strategies followed in these areas.

The current issue of ALTEX kicks off with a Food for Thought ... contribution by Thomas Hartung and colleagues on the concept of systems toxicology. Systems toxicology aims to harness the various omics technologies to map toxic chemicals' signatures of toxicity, i.e., patterns of changes, for example, in gene expression, protein expression, or metabolism, in cells caused by toxic chemicals and to associate these with pathways of toxicity, i.e., signaling sequences in cells that are known to lead to cell dysfunction. Detection of a known signature of toxicity triggered by a chemical in a virtual experiment would point towards relevant confirmatory *in vitro* testing approaches to better and more efficiently inform the safety assessment of the chemical.

A second Food for Thought ... article by Barry Hardy et al. provides a vision of the way forward in toxicology ontology, while a review by the same authors describes recent advances in ontologies within the toxicology field. People working in the field of predictive toxicology need to be able to access existing toxicology findings in a convenient and efficient way that allows them to answer their queries by drawing on information from various sub-disciplines. Standardized toxicology vocabularies and ontologies contribute to enabling access to the relevant information and clarifying the meaning of terminology used in related scientific areas.

Daniele Ferrario and colleague critically evaluate the new EU Biocides Regulation scheduled to enter into force in 2013. Although the new regulation includes improvements

that will decrease the number of animals used for testing of biocidal products, the authors criticize that it holds on to testing biocides, i.e., chemicals that control harmful organisms, for example, pesticides, mainly in traditional animal experiments without recognizing the rapid developments in the field of alternative methods that can also be applied to this group of chemicals and could potentially reduce severe animal experiments much further without compromising the level of consumer safety.

Marco Fabbri et al. investigate the toxicity of cadmium using whole genome analysis and microRNAs in an *in vitro* approach and Susanne Gauggel et al. explore and evaluate numerous methods to characterize particulate matter from wood combustion to inform subsequent *in vitro* toxicity assessments.

A workshop report by Toni Lindl et al. presents a scheme for the ethical evaluation of applications for animal experiments that is in concordance with the current German legislation and the EU Directive 2010/63/EU and may well be a useful basis for other EU countries called on to install an evaluation process by the Directive for the protection of animals used for scientific purposes.

Two exciting developments given in more detail in the News section are that Allergan's replacement assay for testing of botulinum neurotoxin containing products has been approved in numerous EU countries and Switzerland and that the Government of India has called for a complete replacement of animal dissections and experiments in medicine, pharmacy, and life science teaching, which could result in India becoming the first country to achieve a fully humane higher education.

Hoping you enjoy this issue of ALTEX as well as the Proceedings of WC8,



Sonja von Aulock
Editor in chief, ALTEX