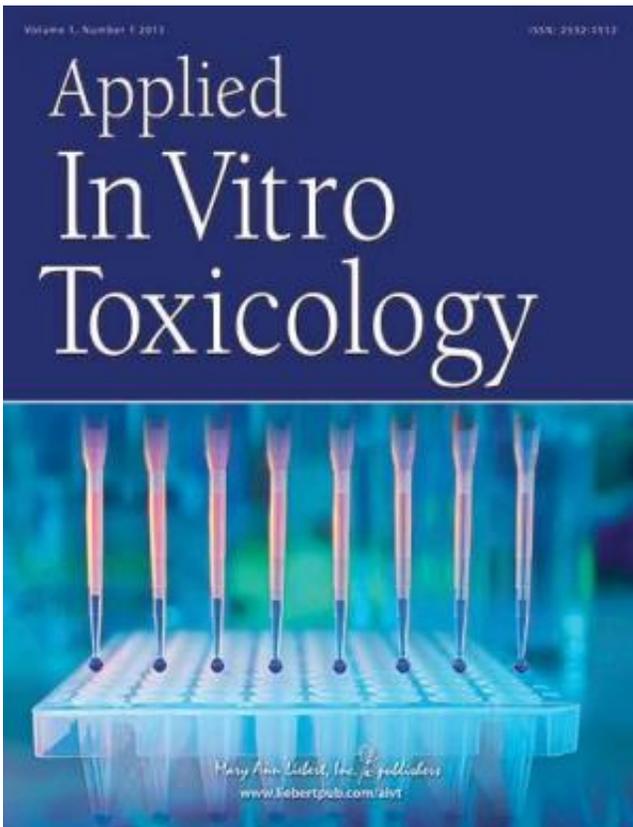


Expert insights on in vitro alternatives for drug and chemical toxicity testing

August 7 2014



Credit: 2014, Mary Ann Liebert, Inc., publishers

In vitro toxicity testing is rapidly being adopted in the pharmaceutical, chemical, and cosmetics industries, for example, as an alternative to animal studies to predict adverse health effects of drugs and personal care products and the health consequences of environmental exposures.

An insightful Roundtable Discussion focused on how to apply these novel toxicology models to everyday hazard prediction, risk assessment, and decision making in industry is published in the preview issue of the new journal *Applied In Vitro Toxicology*.

In the Roundtable Discussion "[Comments on How to Make the New Vision of Toxicity Testing in the 21st Century a Reality](#)," Moderator Jim McKim, Editor-in-Chief of *Applied In Vitro Toxicology* and Founder and CEO, IONTOX, LLC, challenges the panelists to present a realistic view of how far the field has advanced in implementing the strategy put forth in a National Academy of Sciences report to improve toxicity testing.

Panelists Alan Goldberg, Consulting Editor of the Journal, Nicole Kleinstreuer, ILS/National Toxicology Program Interagency Center for Evaluation of Alternative Toxicological Methods (Research Triangle Park, NC), Francois Busquet, Center for Alternatives to Animal Testing (Konstanz, Germany), and Melvin Andersen, The Hamner Institutes for Health Sciences (RTP, NC) participate in an interactive discussion on the use of human cell models combined with high-throughput screening methods to test for toxicity, and the complexity of applying adverse outcome pathways (AOPs). The conversation covers topics ranging from policy issues, challenges related to data interpretation and understanding the information gained from in vitro models, the emergence of three-dimensional tissue culture models that integrate cells from multiple human organs, and the different approaches being used to assess risk from high-dose, short-term exposures compared to exposure to lower concentrations of a chemical over longer periods of time.

"Improved analytical technologies and improvements in human tissue models will allow us to change the animal safety testing paradigm," says Jim McKim.

More information: The article is available free on the *Applied In Vitro*

Toxicology [website](#).

Provided by Mary Ann Liebert, Inc

Citation: Expert insights on in vitro alternatives for drug and chemical toxicity testing (2014, August 7) retrieved 26 April 2024 from <https://medicalxpress.com/news/2014-08-expert-insights-vitro-alternatives-drug.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.