

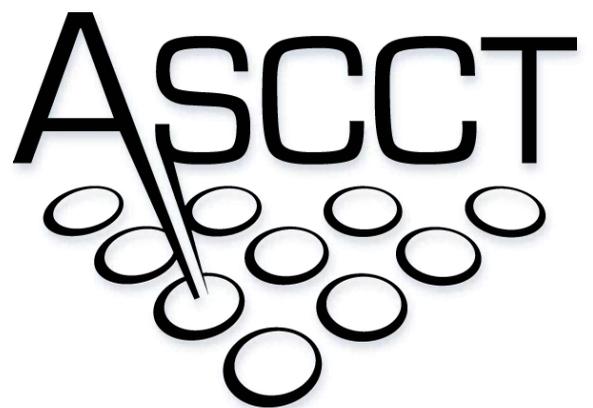
11th Annual Meeting of the American Society for Cellular and Computational Toxicology

Shifting the Paradigm
to Next-Generation
(Quantitative) Risk Assessment

Sheraton Chapel Hill

Chapel Hill, NC

October 19-21, 2022



American Society for Cellular
and Computational Toxicology

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**New for 2022: Full program and all abstracts can
be accessed *via* Oxford Abstracts**

View the online program:



app.oxfordabstracts.com/ascct22



About the American Society for Cellular and Computational Toxicology

The American Society for Cellular and Computational Toxicology (ASCCT) is a scientific society dedicated to the promotion of toxicology testing and research that reduces and replaces the use of animals.

Toxicology testing is currently undergoing a paradigm shift from a primarily observational, whole animal-based science to a predictive, mode-of-action-focused discipline. This shift has been spurred by factors as diverse as concern for the animals used in tests, logistical difficulties in assessing growing inventories of substances, and a better understanding of the interaction between chemistry and human biology at the molecular level.

The National Academies, the nation's premier scientific advisory body, recommended in 2007 nothing short of a complete overhaul in the way chemicals, pharmaceuticals, and pollutants are routinely assessed for potential hazardous effects in its report *Toxicity Testing in the 21st Century: A Vision and a Strategy*. Since the publication of this report, momentum has begun to build, bringing together a diverse set of organizations and scientific disciplines. The Physicians Committee for Responsible Medicine and the Institute for In Vitro Sciences formed the ASCCT in 2010 to harness this momentum and foster cooperation and dialog among North American scientists, regulators, and nongovernmental organizations from the pharmaceutical, chemical, pesticide, and consumer product sectors.

MISSION

The Society aims to provide an organized forum for discussion of cellular (in vitro) and computational toxicology approaches especially as replacements for animal-based toxicology methods. Through its meetings and activities, the Society will facilitate the development, acceptance, and routine use of cellular and computational methods through open dialog between industry, academic, advocacy, and regulatory scientists. The Society strives to include the participation of young scientists to promote their contributions to the field.

GOALS

- *Facilitate the development, acceptance, and routine use of cellular and computational methods.*
- *Increase the routine application and use of computational and in vitro methods for prioritization, classification, and risk assessment purpose*
- *Foster open dialog between industry, academic, advocacy, and regulatory scientists throughout North America.*
- *Include the participation of young scientists to promote their contributions to the field.*
- *Strengthen cooperation between cosmetic, pharmaceutical, and chemical industry scientists and professionals.*



ASCCT 11th Annual Meeting:
Shifting the Paradigm to Next-Generation
(Quantitative) Risk Assessment

October 19-21, 2022
Chapel Hill, N.C.

President's Message

Dear colleagues,

On behalf of the American Society for Cellular and Computational Toxicology (ASCCT) and the Annual Meeting Organizing Committee it is my distinct honor to welcome you to our 11th Annual Meeting.

The ASCCT is a growing scientific society that provides a forum for the discussion and promotion of cellular and computational toxicology approaches, especially as replacements for in vivo toxicology methods. By fostering cooperation and dialog among individuals from the pharmaceutical, chemical, pesticide, and consumer product sectors and those working in academia, government, or nongovernmental organizations, the ASCCT offers a unique opportunity to openly discuss how these methods can advance the science of toxicology and contribute to protection of human health.

Toxicology is the science of poisons: a scientific discipline at the cross-roads of biology, chemistry, pharmacology, and medicine, focused on the study of the adverse effects of chemical substances on living organisms with an ultimate goal and purpose to protect human -and ecological- health. As our understanding of the interactions between xenobiotics and biology deepens and the technological frontiers of in vitro and computational methods advances, the science of toxicology is undergoing a transformation from an observational and descriptive science using in vivo approaches to an in vitro and in silico discipline.

The main tenet of toxicology is that the dose makes the poison (Paracelsus, 1538) – and thus, to protect human and ecological health from adverse effects of chemicals, we must limit exposures. To achieve this goal, toxicological data needs to be operationalized via the risk assessment process. In other words, for any given agent, the body of evidence available must be integrated into a framework to convert that wealth of information into a reference value – a daily oral dose or air / water concentration – that is expected to protect individuals (or ecosystems) exposed at or below that value. However, the risk assessment process has relied upon in vivo data since its inception, and we are now faced with the challenging task of finding scientifically robust and meaningful ways to use the totality of data available, and the best available data, of which an ever-growing fraction is computational or cellular-based in nature.

As we are entering this new scientific era and as these data streams continue to mature, we need to successfully integrate them into risk assessment. This is why this year's meeting is focused on fostering discussion on how we can harness the full potential of the advancements in cellular and computational toxicology to improve and strengthen chemical risk assessment. The collegial atmosphere of our Annual Meeting creates the perfect forum for this task with a setting that is conducive to dialog, idea sharing, and the exchange of information and perspectives. Together, we can help facilitate the development, acceptance, and routine use of cellular and computational methods for prioritization, classification, and ultimately risk assessment.

Therefore, we have gathered leaders in the field and look forward to your participation to the vibrant and lively scientific sessions on ecotoxicology, developmental neurotoxicity, and next generation risk assessment, a CE course on weight of evidence and risk assessment, flash presentations and poster sessions, our Awards Ceremony, as well as a mentor mixer and reception. We look forward to hearing from you as we work together to shift the paradigm to next-generation (quantitative) risk assessment.

Sincerely,



Marie C. Fortin, ASCCT President

Event Program

WEDNESDAY, OCTOBER 19th, 2022

12:00-12:45	Arrival, Registration
12:45-1:00	Welcome Marie Fortin, ASCCT President
1:00-2:30	<p>Next Generation Risk Assessment Dr. Marie Fortin, Dr. Laura Langan Oral Presentations</p> <p>1:00-1:30 [OR-01] Next Generation Risk Assessment – Accelerating the Paradigm Shift <u>Gavin Maxwell</u> <i>Unilever Safety & Environmental Assurance Centre, Bedford, United Kingdom</i></p> <p>1:30-1:50 [OR-02] Feasibility of Achieving a Modern Paradigm for Agrochemical Carcinogenicity Assessment <u>Gina Hilton</u>¹, <u>Raffaella Corvi</u>², <u>Mirjam Luijten</u>³, <u>Jyotigna Mehta</u>⁴, <u>Douglas Wolf</u>⁵ <i>¹PETA Science Consortium International e.V., Stuttgart, Germany. ²European Commission, Joint Research Centre (JRC), Ispra, Italy. ³National Institute for Public Health and the Environment (RIVM), Centre for Health Protection, Bilthoven, Netherlands. ⁴ADAMA Agricultural Solutions Ltd, Reading, United Kingdom. ⁵Syngenta Crop Protection LLC, Greensboro, NC, USA</i></p> <p>1:50-2:10 [OR-03] Identification of Changes in Biological Activities and BioMAP® Toxicity Signatures Following Treatment of BioMAP Platform Human Cell-based Disease Models with Per- and Polyfluoroalkyl Substances <u>Jennifer I. Drake</u>¹, <u>Sheryl P. Denker</u>¹, <u>Katie Paul-Friedman</u>², <u>Keith A. Houck</u>², <u>Sharlene Velichko</u>^{1,3}, <u>Antal Berenyi</u>¹, <u>Ellen L. Berg</u>^{1,4}, <u>Diane Werth</u>¹ <i>¹Eurofins Discovery, St. Charles, MO, USA. ²Center for Computational Toxicology and Exposure, Office of Research and Development, U.S. Environmental Protection Agency, Research Triangle Park, NC, USA. ³Natera, Austin, TX, USA. ⁴InSipro, South San Francisco, CA, USA</i></p> <p>2:10-2:30 [OR-04] Profiling Mechanisms That Drive Acute Oral Toxicity in Mammals and Its Prediction via Machine Learning <u>Sanjeeva Wijeyesakere</u>, <u>Dan Wilson</u>, <u>Tyler Auernhammer</u>, <u>Amanda Parks</u>, <u>Sue Marty</u> <i>The Dow Chemical Company, Midland, MI, USA</i></p>
2:30-3:30	<p>Ecotoxicology Dr. Enrica Bianchi Oral Presentations</p> <p>2:30-3:00 [OR-05] Next Generation Ecotoxicity Testing <u>Dan Villeneuve</u> <i>Environmental Protection Agency, Duluth, USA</i></p> <p>3:00-3:20 [OR-06] Expanding High-Throughput Chemical Hazard Evaluation to Ecotoxicology-Relevant Species With a Rainbow Trout Gill Cell Line <u>Felix Harris</u>^{1,2}, <u>Johanna Nyffeler</u>^{1,3}, <u>Christopher Schaupp</u>^{4,3}, <u>Steven Lasee</u>^{4,3}, <u>Clinton Willis</u>¹, <u>John Nichols</u>⁴, <u>Brett Blackwell</u>⁴, <u>Kevin Flynn</u>⁴, <u>Dan Villeneuve</u>⁴, <u>Joshua Harrill</u>¹ <i>¹US EPA CCTE, RTP, NC, USA. ²ORAU, Oak Ridge, TN, USA. ³ORISE, Oak Ridge, TN, USA. ⁴US EPA CCTE, Duluth, MN, USA</i></p>

Event Program

WEDNESDAY, OCTOBER 19th, 2022

3:30-4:30	Flash Poster Session Dr. David Allen, Ms. Kristie Sullivan Flash Posters
4:30-6:00	Poster Session I and Reception Poster Board Posters should be attended by presenters at the minimum between 4:45 pm - 5:30 pm.
6:00-6:30	Mentor Mixer, Reception Continued Please indicate if you'd like to participate as a mentor or mentee when you register. All are welcome to attend reception; additional activities will be offered for mentors and mentees.

THURSDAY, OCTOBER 20th, 2022

8:00-8:30	Coffee/Poster Viewing Poster Boards
8:30-10:30	<p>Developmental Neurotoxicity Ms. Erin Hill, Dr. Sairam Jabba Oral Presentations</p> <p>8:30-9:00 [OR-07] The DNT in Vitro Battery on the Road to Regulation <u>Ellen Fritsche</u> <i>IUF - Leibniz Research Institute of Environmental Medicine, Düsseldorf, Germany</i></p> <p>9:00-9:30 [OR-08] Application of DNT NAMs Data in Regulatory Scenarios <u>Tim Shafer</u> <i>Environmental Protection Agency, Research Triangle Park, USA</i></p> <p>9:30-9:50 [OR-09] Neural Rosette ArraysTM for Quantitative High-Throughput Screening of Human Developmental Neurotoxicity Randolph Ashton^{1,2,3}, <u>Gavin Knight</u>^{2,3}, Nikolai Fedorchak^{2,3}, Brady Lundin^{2,3}, Rebecca Willett^{1,4} ¹Neurosetta LLC, Madison, WI, USA. ²University of Wisconsin-Madison, Madison, WI, USA. ³Wisconsin Institute for Discovery, Madison, WI, USA. ⁴University of Chicago, Chicago, IL, USA</p> <p>9:50-10:10 [OR-10] Increasing the Dimensionality of Rapid Behavioral Screening in Planarians Danielle Ireland¹, Alexander Lehner¹, Ellen Adams¹, Luca Cerbin¹, Ameet Soni¹, <u>Eva-Maria Collins</u>^{1,2} ¹Swarthmore College, Swarthmore, PA, USA. ²Center of Excellence in Environmental Toxicology, University of Pennsylvania, Philadelphia, PA, USA</p> <p>10:10-10:30 [OR-11] In Vitro Developmental Neurotoxicity (DNT) Dosing Vehicles Nominally Impact Growth, Viability, and Phenotypic Profile of Human Neural Progenitor Cells <u>Megan Culbreth</u>, Kelly Carstens, Joshua Harrill <i>CCTE, ORD, USEPA, Durham, NC, USA</i></p>

Event Program

THURSDAY, OCTOBER 20th, 2022

10:30-11:00	Break
11:00-1:00	<p>Human Data for WoE Toxicology Dr. Stephen Edwards Oral Presentations</p> <p>11:00-11:30 [OR-12] Characterizing Human Exposure to Contaminant Mixtures: New Sampling Tools to Support Exposome Research <u>Heather Stapleton</u> <i>Duke University, Durham, USA</i></p> <p>11:30-12:00 [OR-13] Utilizing Electronic Health Records to Understand Health Risks of Chemical Exposure <u>Cavin Ward-Caviness</u> <i>Environmental Protection Agency, Research Triangle Park, USA</i></p> <p>12:00-12:20 [OR-14] Leveraging Electronic Health Record Data for Environmental Health Research and WoE Toxicology <u>Karamarie Fecho</u>^{1,2}, <u>Stanley Ahalt</u>^{1,3}, <u>Ashok Krishnamurthy</u>^{1,3,4}, <u>Emily Pfaff</u>^{4,5}, <u>Lisa Stillwell</u>¹, <u>Hong Yi</u>¹ ¹<i>Renaissance Computing Institute, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA.</i> ²<i>Copperline Professional Solutions, Pittsboro, North Carolina, USA.</i> ³<i>Department of Computer Science, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA.</i> ⁴<i>North Carolina Translational and Clinical Sciences Institute, Chapel Hill, North Carolina, USA.</i> ⁵<i>Department of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA</i></p> <p>12:20-12:40 [OR-15] Human 3D Liver Spheroids - the Smallest Functional Unit of the Liver as a Pragmatic Tool for Industrial DILI Hazard Identification <u>Armin Wolf</u>, <u>Friederike Wenz</u>, <u>Lola Fäs</u>, <u>Monika Tu</u>, <u>Natalie Zapiorkowska</u>, <u>Bruno Filippi</u> <i>InSphero AG, Schlieren, NA, Switzerland</i></p> <p>12:40-1:00 Additional Q&A</p>
1:00-2:30	<p>Lunch + Poster Session II Poster Board Posters should be attended by presenters at a minimum between 1:30 pm - 2:15 pm.</p>
2:30-3:00	<p>Funding and Employment Opportunities Dr. Hao Zhu</p> <p>[OR-16] NIEHS Funding Opportunities for Cellular and Computational Toxicology Methods Development <u>Lingamanaidu Ravichandran</u> <i>Division of Extramural Research and Training, NIEHS, NIH, Research Triangle Park, USA</i></p> <p>[OR-17] Employment Opportunities at US EPA Office of Pollution Prevention and Toxics <u>Iris Camacho</u> <i>EPA, Washington, DC, USA</i></p>

Event Program

THURSDAY, OCTOBER 20th, 2022

<p>3:00-4:00</p>	<p>Models supporting Next Gen Risk Assessment Ms. Amy Carpenter, Dr. Ruchir Shah</p> <p>3:00-3:20 [OR-18] Integrating High-Throughput Toxicokinetics and Concentration-Dependent Toxicity Data Into Adverse Outcome Pathway Models of Hepatotoxicity Daniel Russo¹, Lauren Aleksunes², Hao Zhu¹ ¹Rutgers University, Camden, NJ, USA. ²Rutgers University, Piscataway, NJ, USA</p> <p>3:20-3:40 [OR-19] OPERA Models to Support Regulatory Needs Kamel Mansouri¹, Todd Martin², Xiaoqing Chang³, Dave Allen³, Antony Williams², Nicole Kleinstreuer¹ ¹NIH/NIEHS/DNTP/NICEATM, RTP, NC, USA. ²CCTE/ORD/EPA, RTP, NC, USA. ³Inotiv, RTP, NC, USA</p> <p>3:40-4:00 [OR-20] Integration of Technological Interference into the Interpretation of Curated High-throughput Screening (cHTS) Data Victoria Hull¹, Alexandre Borrel¹, Agnes Karmaus¹, Kim To¹, David Allen¹, Nicole C. Kleinstreuer² ¹Inotiv, Research Triangle Park, NC, USA. ²NIH/NIEHS/DNTP/NICEATM, Research Triangle Park, NC, USA</p>
<p>4:00-5:00</p>	<p>Sponsor Tools Showcase Ms. Jessica Conley, Dr. Jessica Ponder</p> <p>SABEU Dennis Benkmann</p> <p>InSphero Armin Wolf</p> <p>Scitovation Les Recio</p>
<p>5:00-5:30</p>	<p>Break</p>
<p>5:30-6:00</p>	<p>ASCCT Business Meeting Dr. Marie Fortin, Ms. Erin Hill, Ms. Kristie Sullivan Everyone is welcome!</p>
<p>6:00-6:30</p>	<p>Awards Ceremony Ms. Erin Hill, Dr. Sue Leary</p>
<p>6:30-8:30</p>	<p>Reception & Dinner</p>

Event Program

FRIDAY, OCTOBER 21st, 2022

<p>8:00-9:30</p>	<p>CE course: Weighing the evidence in safety evaluation and risk assessment: data considerations and the potential for NAM integration.</p> <p>Dr. Alysha Simmons</p> <p>Speakers:</p> <p>Anna Lowit, US Environmental Protection Agency Nikaeta Sadekar, Research Institute for Fragrance Materials</p>
<p>9:30-11:00</p>	<p>Envisioning decision-making with NAMs Dr. Kelly Carstens, Dr. Jack Fowle Oral Presentations</p> <p>9:30-10:00 [OR-24] An FDA/CDER Perspective on Nonclinical Testing Strategies Including New Approach Methodologies <u>Paul Brown</u> <i>Food and Drug Administration/CDER, College Park, USA</i></p> <p>10:00-10:30 [OR-25] Integration of New Approach Methodologies for Prospective Selection of Chemicals for Additional Study <u>Katie Paul Friedman</u> <i>Environmental Protection Agency, Research Triangle Park, USA</i></p> <p>10:30-10:45 [OR-26] Novel Non-Animal Preclinical Safety Testing Strategy for Recombinant Human Monoclonal Antibodies Directed Against Foreign Targets <u>April Naab¹</u>, Jeffrey Brown¹, Esther Wenzel², Stefan Dübel², Paul Stickings³, Michael Hust² <i>¹PETA Science Consortium International e.V., Stuttgart, Germany. ²Technische Universität Braunschweig, Braunschweig, Germany. ³National Institute for Biological Standards and Control, Hertfordshire, United Kingdom</i></p> <p>10:45-11:00 [OR-27] Investigating the Impact of Cytochrome P450 Metabolism on Chemical-Mediated Transcription Factor Transactivation <u>Agnes Karmaus¹</u>, Amber Daniel¹, Victoria Hull¹, Emily Reinke¹, Alex Medvedev², David Allen¹, Nicole Kleinstreuer³, Warren Casey³ <i>¹Inotiv, RTP, NC, USA. ²Attagene, Inc., Morrisville, NC, USA. ³NIH/NIEHS/DNTP/NICEATM, RTP, NC, USA</i></p>
<p>11:00-12:30</p>	<p>Building Confidence as a Community: Identifying and Overcoming Barriers to NAM use for Risk Assessment Dr. Shaun McCullough, Dr. Anax Oliveira</p> <p>Panelists:</p> <p>Annie Jarabek, US EPA Andrew Maier, TERA Gavin Maxwell, Unilever Octavio Presgrave, BRACVAM</p>

ASCCT Awards

Edward Carney Predictive Toxicology Award

Dr. Edward Carney was an active and dedicated member of the ASCCT, and a partner, mentor and friend to many in our fields. His passion and leadership will continue to inspire investigators in *in vitro* and *in silico* toxicology through the Edward Carney Predictive Toxicology Award. This \$500 award is provided to an exemplary presenter at each ASCCT annual meeting.

Previous Ed Carney Predictive Toxicology Awardees:

2021: Dr. Kelly Carstens, US EPA ORISE

2020: Eva Vitucci, University of North Carolina, Chapel Hill

2019: Ignacio Tripodi, University of Colorado, Boulder

2018: Sudin Bhattacharya, Michigan State University

2017: Ellen Garcia, Virginia Tech

2016: Emma Bowers, University of North Carolina, Chapel Hill

2015: Nicole Kleinstreuer, NICEATM

Ray Tice Tox21 Student Award

Dr. Ray Tice, a leader in the development and use of high-throughput test methods and other alternatives, established the Tox21 Student Award. This \$500 award is provided to a graduate student first author of a poster or oral presentation at the ASCCT annual meeting.

Previous Ray Tice Tox21 Student Awardees:

2021: Anouck Thienpont, Vrije Universiteit Brussel

2020: Sherri Bloch, Université de Montréal

2019: Vy Tran, Johns Hopkins University

2018: Dan Russo, Rutgers University

2017: Wenyi Wang, Rutgers University

Suzanne Fitzpatrick Student Travel Award

Dr. Suzanne Fitzpatrick, Senior Science Advisor for Toxicology in FDA's Center for Food Safety and Applied Nutrition, is the principal FDA representative to ICCVAM and to the Tox 21 partnership with EPA, NCATS, and NIEHS. Dr. Fitzpatrick established this award to reimburse travel expenses for a student to present a poster at the 11th Annual Meeting.

ASCCT Poster Awards

Three \$200 awards will be selected from poster presenters who indicated interest at registration.

The William and Eleanor Cave Award



William and Eleanor Cave were devoted officers of The American Anti-Vivisection Society (AAVS) for decades. They recognized the opportunities in developing new technologies and alternative methods to address the problems of animal experimentation. They dedicated resources to fund research, eventually resulting in the establishment of the Alternatives Research & Development Foundation.

The William & Eleanor Cave Award is presented to honor achievements in advancing alternatives to the traditional use of animals in testing, research, or education. The award, presented biennially, is accompanied by an honorarium of \$10,000.

Previous William & Eleanor Cave Award recipients:

- 2020 Suzanne Fitzpatrick, US Food and Drug Administration
- 2018 Robert Kavlock, Kavlock Consulting
- 2016 Raymond Tice, RTice Consulting
- 2014 Frank Gerberick, Procter & Gamble Company
- 2012 Mel Andersen, Hamner Institute for Health Sciences
- 2010 Alternatives to Laboratory Animals (Michael Balls, Editor), FRAME
- 2008 Rodger Curren, Institute for In Vitro Sciences
- 2006 Daniel Smeak, Ohio State University
- 2002 Leon Bruner, Gillette Company
- 2000 John Sheasgreen, MatTek Corporation
- 1998 George Russell, Adelphi University
- 1996 Ruy Tchoa, Philadelphia College of Pharmacy & Science

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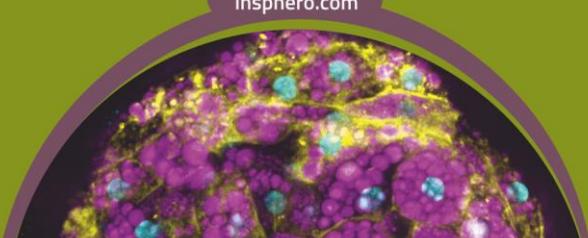
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Poster Session I

PW-01 Developing Metrics to Track Animal Use and the Impact of NAMs

Sue Marty¹, Amanda Andrus¹, [Katherine Groff](#)²
1 Dow, Inc., Midland, MI, US. 2 People for the Ethical Treatment of Animals, Norfolk, VA, US

PW-02 Practical Pathways to Address Reagent Source as a Variable in Study Reproducibility

Katherine Groff¹, Tilo Weber²
1 PETA Science Consortium International e.V., Stuttgart, Germany. 2 German Animal Welfare Federation, Bonn, Germany

PW-03 Engineering a Computable Epiblast for in silico Gastrulation and Predictive Modeling of Developmental Toxicity with in vitro Data from the ToxCast Stem Cell Assay

Kaitlyn Barham^{1,2}, Richard Spencer³, Thomas Knudsen¹
1 U.S. Environmental Protection Agency, Durham, NC, US. 2 Oak Ridge Associated Universities, Oak Ridge, TN, US. 3 General Dynamics Information Technology, Falls Church, VA, US

PW-04 Progress Towards the Replacement of In Vivo Leptospirosis Vaccine Potency Testing in the United States

Bridget Rogers¹, Jeffrey Brown², David Allen³, Warren Casey⁴, Amy Clippinger¹
1 PETA, Norfolk, VA, US. 2 PETA, London, United Kingdom. 3 Inotiv, Durham, NC, US. 4 NIEHS NTP, Durham, NC, US

PW-05 Characterizing the Sub-Chronic Tissue Toxicity and Mutagenicity of Formaldehyde Fumes at Low Concentrations in an in Vitro Human Airway Model

Yuan Le¹, Baiping Ren¹, Levan Muskhelishvili², Kelly Davis², Yiyang Wang¹, Diego Rua³, Xuefei Cao¹
1 National Center for Toxicological Research, Jefferson, AR, US. 2 Toxicologic Pathology Associates, Jefferson, AR, US. 3 Center for Devices and Radiological Health, Silver Spring, MD, US

PW-06 Metabolic Similarity in Read-Across Prediction: A Case Study in Using Graph Kernels and Predicted Metabolism Information

Brett Hagan^{1,2}, Grace Patlewicz², Imran Shah²
1 Oak Ridge Associated University, Oak Ridge, TN, US. 2 US EPA, RTP, NC, US

PW-07 Identification of Candidate Reference Chemicals Using Multidimensional Literature and Database Mining Using EPA's PubMed Abstract Sifter

Nancy Baker¹, Thomas Knudsen²
1 Leidos, Research Triangle Park, NC, US. 2 EPA, Research Triangle Park, NC, US

PW-08 Benefits of a GIVIMP Certification Program

Amanda Ulrey, [Erin Hill](#)
Institute for In Vitro Sciences, Inc., Gaithersburg, MD, US

PW-09 Chemical Grouping Using an Automated KNIME Workflow: An Interpretable Machine Learning Approach

Jose Teofilo Moreira-Filho, Mike Conway, Charles Schmitt, Nicole Kleinstreuer, Kamel Mansouri
DNTP/NIEHS/NIH, Durham, NC, US

PW-10 Urban Particulate Matter Induces Cell Cycle Arrest and Senescence in a Human keratinocyte Cell Line (HaCaT).

Juanita Alzate Ramirez, Natalia Rendón Serna, Jean Paul Delgado, Belfran Carbonell-M
Universidad de Antioquia, Medellín, Antioquia, Colombia

PW-11 Methods for Selecting Analogs and Quantifying Suitability for SAR-Based Toxicological Safety Assessment

Cathy Lester, Byrd ELlantae', Mahmoud Shobair, Gang Yan
The Procter & Gamble Co., Mason, OH, US

PW-12 Developing NAMs for Evaluating the Safety of Inhalation Exposure to Chemicals With Complex Physico-Chemical Properties

Nikaeta Sadekar¹, Anne Marie Api²
1 Research Institute for Fragrance Materials, Woodcliff Lake, NJ, US. 2 RIFM, Woodcliff Lake, NJ, US

PW-13 Evaluation of the ToxCast Assay Suite for Detection of Neuroactivity

Amy Carpenter^{1,2}, Kelly Carstens¹, Melissa Martin¹, Timothy Shafer¹, Katie Paul Friedman¹
1 Center for Computational Toxicology and Exposure, ORD, US EPA, RTP, NC, US. 2 Oak Ridge Institute for Science and Education, Oak Ridge, TN, US

PW-14 Next Generation Risk Assessment (NGRA) using NAMs for skin sensitization: Reproducibility and precision of the GARDskin Dose-Response assay for PoD determination.

Andy Forreryd¹, Shashi Donthamsetty², Paul Sterchele², Xiao Huang², Gregory Ladics², Mihwa Na³, Isabelle Lee³, Anne Marie Api³, Robin Gradin¹, Henrik Johansson¹
1 SenzaGen AB, Lund, Sweden. 2 International Flavors & Fragrances, Hazlet, NJ, US. 3 Research Institute for Fragrance Materials, Woodcliff lake, NJ, US

PW-15 Application of the ToxProfiler Reporter Assay in Toxicological Case Study of Selected Sartans

Bas ter Braak, Liesanne Wolters, Giel Hendriks, Torben Osterlund
Toxys B.V., Oegstgeest, Netherlands

PW-16 Integrating Population Enzyme Variability Into Physiologically-Based Kinetic Models of Parent Chemicals and Metabolites

David Hines¹, Bethany Cook¹, [Victoria Hull](#)¹, Dave Allen¹, Jean-Lou Dorne², Jeremy Erikson³, Nicole Kleinstreuer³, Kamel Mansouri³
1 Inotiv, Morrisville, NC, US. 2 European Food Safety Authority, Parma, Italy. 3 NIH/NIEHS, RTP, NC, US

Poster Session I

PW-17 Assessing the Effects of Silver Nanoparticles on ARPE-19 Cells via Imaging-Based High Throughput Phenotypic Profiling

Gabrielle Byrd^{1,2}, Alice Goldstein-Plesser^{3,2}, Johanna Nyffeler^{1,4}, Clinton M. Willis¹, Anna Fisher³, William K. Boyes³, Joshua A. Harrill¹
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PW-18 Descriptor Free QSAR Modeling for Fraction Unbound in Human Plasma and Microsomal Clearance

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PW-19 Assessing the Language We Use to Build the Bioactivity Narrative

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PW-20 An in Vitro 3D Model of Human Renal Proximal Tubule for Nephrotoxicity Screening Studies

Adam Pearson, Gregory Travlos, Stephen Ferguson NIEHS, Durham, NC, US

PW-21 Robust Phenotypic Profiling Assay for Predictive Toxicity on Human Hepatic Cells

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PW-22 Application of BioPath Metabolism Tools within ChemTunes.ToxGPS for Next Generation Risk Assessment

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PW-23 The Use of the GARDskin Dose-Response Assay to Assess Skin Sensitizing Potency in Developing Novel Fragrance Ingredients

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PW-24 Applying Deep Learning Toxicity Models Across the Chemical Universe

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PW-25 Evaluation of Skin Sensitization Classification Rules to Reflect Human Potency and Support Weight-of-Evidence Assessments

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PW-26 Facilitating Global Connections through the Microphysiological Systems for COVID Research (MPSCoRe) Working Group

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PW-27 Effect of Inter-individual Variability on a Phenotypic Endpoint Assay Battery in an In Vitro Co-culture Model of the Human Bronchus after Exposure to Model Reactive Gas Acrolein
Alysha Simmons¹, Emily Aungst², Lisa Dailey², Nicholas Mallek¹, Phillip Clapp¹, Shaun McCullough²
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PW-28 Differences in Neurotoxic Outcomes of Organophosphorus Pesticides Revealed via Multi-Dimensional Screening in Adult and Regenerating Planarians

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PW-29 Evaluation of Per- and Poly Fluoroalkyl Substances (PFAS) in Vitro Toxicity Testing for Developmental Neurotoxicity

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Poster Session II

PTH-01 Improving the Efficiency of Literature Identification for the ECOTOXicology Knowledgebase Using Deep Learning

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PTH-02 A Modern Framework to Establish Scientific Confidence in NAMs

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PTH-03 Policy Initiatives for Integrating New Approach Methodologies for Pharmaceutical Testing

Emily Anderson, Elizabeth Baker
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PTH-04 Bringing NAMs Into Regulatory Decision-Making: Replacing the Use of Animals in Personal Lubricant Biocompatibility Testing via FDA's MDDT Program

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PTH-05 Strength in Teams: AI-Human Hybrid Intelligence, Defined Approaches, and Improved Risk Assessment

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PTH-06 Advantages and Applications of the Reconstructed Human Epidermis Model for Skin Irritation and Corrosion

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PTH-07 Liquid Application Dosing Alters Air-Liquid Interface Bronchial Epithelial Culture Physiology and Toxicity Testing Relevant Endpoints

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PTH-08 In Vitro to In Vivo Extrapolation to Facilitate the Animal-free Risk Assessment of Potential Developmental Toxicants

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PTH-09 In Vitro Modeling of Human Hepatic Responses to Chemical Exposures With 3D Spheroid Transcriptomics

Stephen Ferguson¹, Sreenivasa Ramaiahgari¹, Katelyn Lavrich¹, Scott Auerback¹, Dhiral Phadke², Ruchir Shah², Georgia Roberts¹, Jenni Gorospe³, Barney Sparrow³, Michael DeVito⁴, Alex Merrick¹
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PTH-10 NURA Program Trains Scientists in New Approach Methodologies to Advance Human Relevant Science

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PTH-11 Panel of Bacterial Mutagenicity in Silico Models for Substructure-Based Analysis

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PTH-12 Characterizing the Impacts of Assay Design on Cytotoxic Concentration Range

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PTH-13 Application of in Vitro and Aquatic Models to Predict Developmental Toxicity and Endocrine Disruptors in New Product Development

Enrica Bianchi, Jessica LaRocca
Corteva Agriscience, Indianapolis, Indiana, US

PTH-14 Collective Cellular Dynamics for Nano Safety Assessment

Karmveer Yadav
ICAR-National Dairy Research Institute, Karnal, Haryana, India

PTH-15 Synthetic Cooling Agents in US-marketed E-cigarette Refill Liquids and Popular Disposable E-cigarettes:

Chemical Analysis and Risk Assessment
Sairam Jabba¹, Hanno Erythropel², Deyri Torres², Lauren Delgado², Jackson Woodrow², Paul Anastas², Julie Zimmerman², Sven-Eric Jordt¹
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PTH-16 Prediction of Endocrine Disruption Potential of Chemicals Using QSAR Modeling of In vitro and In vivo Assays

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PTH-17 ICE Tools to Facilitate PBPK Modeling and IVIVE for Various Exposure Scenarios

Aswani Unnikrishnan
Inotiv, Research Triangle Park, NC, US

Poster Session II

PTh-18 A Potential Novel Integrative Strategy for Read-Across to Evaluate Large Numbers of Nitro-Polycyclic Aromatic Hydrocarbons (NPAHs) for Cancer Hazard Evaluation

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PTh-19 Multi-Scale Regression Modeling on Acute Toxicity using Data Augmentation, Feature Engineering and Perturbation Theory Machine Learning Approaches.

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PTh-20 Utilizing 3D Chemical Features to Determine Potential Interactions For Early Risk Assessment

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PTh-21 Integration of Machine Learning and Cheminformatics Approaches Towards Nanomaterials Toxicity Assessment

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PTh-22 Simulated Gastric Leachate of 3D Printer Metal-Containing Filaments Induces Cytotoxic Effects in Rat and Human Intestinal Models

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PTh-23 Data-Driven Derivation of an Adverse Outcome Pathway Linking VEGF and Cardiotoxicity

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PTh-24 Integrating High Throughput Transcriptomics into a Tiered Framework to Prioritize Chemicals for Toxicity Testing

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PTh-25 Use of Chemical Structure and Bioactivity to Map Mechanistic Pathways for Acute Oral Systemic Toxicity

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PTh-26 Use of Two Simple Techniques for Spheroids Production With Toxicity in Vitro Assessment

Angie Castro, Dayan Guerra, Andrés Pareja
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PTh-27 In-Vitro Toxicity Assessments of Air Pollutants Using Two Co-Culture Strategies for Skin and Ocular Models

Dayan Guerra, Angie Castro, Andres Pareja
Universidad CES, Medellín, Antioquia, Colombia

PTh-28 In Silico Approach That Supports Neurotoxicity Assessment of Chemical Substances by IATA: Refining Categories by Using Substructures and Physicochemical and Biochemical Parameters Related to Neurotoxicity

Takashi Yamada, Shinji Tsujii, Minoru Miura, Akiko Saito, Tomoko Kawamura, Taeko Maruyama, Naruo Katsutani, Akihiko Hirose
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PTh-29 Potency Classifications for Contact Dermal Sensitization as Determined by the h-CLAT Assay

George DeGeorge
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PTh-30 Intralaboratory Validation of a Non-Animal Integrated Testing Strategy (ITS) to Identify GHS Categories NC, 1, 2 Irritants via the BCOP-EIT Assays

Rachael Koch, Christopher Kalimtzis, George DeGeorge
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PTh-31 Aerosolized fluorescent tracers provide insight into particle deposition and cellular uptake at the air-liquid interface

Jessica Murray¹, Elise Carlsten^{2,1}, Wyatt Zander², Jason Weinstein¹, Q. Todd Krantz¹, Adam Speen^{3,1}, Mark Higuchi¹
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PTh-32 Towards systematic read-across using Generalised Read-Across (GenRA)

Grace Patlewicz, Imran Shah
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PTh-33 Towards Reproducible Structure-Based Chemical Categories for PFAS to Inform and Evaluate Toxicity and Toxicokinetic Testing

Grace Patlewicz, Ann Richard, Antony Williams, Richard Judson, Russell Thomas
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