EUROTOX 2021
COPENHAGEN | DENMARK
26 - 29 SEPTEMBER 2021

Sunday, 26 September 2021		
08h00–21h00	Congress registration	16h00–21h00 Exhibition
09h30–16h00	**Excursion and Workshop by Ellegaard Göttingen Minipigs**	
10h30–16h00	**Continuing Education Courses (CEC),** including coffee & lunch breaks	
10h30–16h00	**CEC01** **Thyroid hormones, brain development and toxicity testing** Chairs: Marta Axelstad, Denmark, Manon Beekhuijzen, Netherlands and Barbara Demeneix, France **Thyroid Hormone Action and Disruption During Development: pregnancy, brain and rat versus human.** Barbara Demeneix, UMR 7221 Molecular Physiology and Adaptation (CNRS/MNHN), Paris, France **Low thyroid hormone during pregnancy and consequences for child neurological development.** Peter Taylor, Cardiff University, Cardiff, UK **Safeguarding the thyroid system – developing an in vitro testing battery.** Sharon Munn, European Commission, Joint Research Centre, Ispra, Italy **Recommendations for the future: lessons learned from thyroid hormone determinations in OECD/ US EPA guideline studies.** Abby Li, Exponent Inc., San Francisco, US **Searching for an adverse effect endpoint in the developing brain.** Louise Ramhøj, Technical University of Denmark, Kgs. Lyngby, Denmark **Current guideline testing: what is still missing?** Manon Beekhuijzen, Charles River, Den Bosch, Netherlands **Panel Discussion**	
10h30–16h00	**CEC02** **Advances in conducting systematic reviews for chemical assessment: automation, uncertainty assessment and synthesis.**	

	Chairs: Andrew Rooney, US and Sebastian Hoffmann, Germany **LECTURE: Global orientation to systematic review – successes, challenges, and preparing for next generation decision making on mechanistic data.** Elisa Aiassa, Assessment and Methodological Support Unit/ EFSA, Parma, Italy **HANDS ON ACTIVITY 1: PECO, Inclusion/Exclusion** **LECTURE: Automated and semi-automated approaches for literature searching, screening, and data extraction.** Vickie Walker, National Institute of Environmental Health Sciences, Research Triangle Park, US **HANDS ON ACTIVITY 2: Critical appraisal/Risk of Bias** **LECTURE: Synthesis, Certainty (GRADE), and qualitative integration of heterogenuous evidence.** Sebastian Hoffmann, Evidence-based Toxicology Collaboration (EBTC), Paderborn, Germany **LECTURE: Quantitative evidence integration supporting toxicity value development and characterization of uncertainty.** Daniele Wikoff, ToxStrategies, Asheville, US **HANDS ON ACTIVITY 3: Evidence certainty/GRADE** **LECTURE: Conduct and reporting standards for systematic reviews in toxicology and risk assessment** Paul Whaley, Lancaster University, Lancaster Environment Centre, Lancaster, UK
10h30–16h00	**CEC03** (subject to updates) **Lessons learned and future directions for toxicology in water safety and security.** Chairs: Heidi Foth, Germany and Elaine Faustman, US **Water bodies and frame work for protection.** Heidi Foth, Martin Luther University, Institute of Environmental Toxicology, Halle (Saale), Germany **Contamination in groundwater by overuse of fertilizers and implications for human health.** Speaker TBA **Contamination pattern by pesticides in water.**

	Aristidis Tsatsakis, University of Crete, Greece **Arsenite in drinking water.** Louis Schiesari, University of Sao Paolo, Brazil **Ecotoxicological assessment of pharmaceuticals and personal care products using predictive toxicology approaches.** Susanne Boutrup and Hans Sanderson DCE (NERI) - Department of Environmental Science, Denmark **Dissipative use of lead a future risk for groundwater.** Thomas Schupp, FH Münster – University of Applied Sciences, Steinfurt, Germany **Bromate in bathing water – a carcinogenic risk?** Speaker TBA **Metagenomic approaches for surveillance and testing water.** Elaine M. Faustman, US
10h30–16h00	**CEC04** **Inflammation as a mediator of toxic responses.** Chairs: Emanuela Corsini, Italy and Ron Tjalkens, US **Inflammation as a mediator of toxic responses.** Marie Cumberbatch, Immune Insight, Alderley Park, UK **The multiple facets of skin inflammation: from direct toxic insult to specific immune responses.** Marc Pallardy, Université Paris-Saclay, Châtenay-Malabry, France **Innate immune inflammatory signaling in glial cells modulates chemical neurotoxicity.** Ron Tjalkens, Colorado Stage University, Fort Collins, US **Evaluating cytokines in immunotoxicity testing.** Emanuela Corsini, University of Milan, Milan, Italy

10h30–16h00	**CEC05** **Nanotoxicology** Chair: Ulla Vogel, Denmark **Genotoxicity of nanomaterials.** Julia Catalán Rodríguez, Finnish Institute of Occupational Health, Helsinki, Finland **Nanomaterial-induced inflammation, acute phase response and risk of cardiovascular disease.** Ulla Vogel, National Research Center of the Working Environment, Copenhagen, Denmark **Toxicity of nanomaterial in the user-phase.** Anne Saber, National Research Center of the Working Environment, Copenhagen, Denmark **In vitro-based high-throughput screening and toxicogenomics to support effective safety evaluation of engineered nanomaterials.** Penny Nymark, Karolinska Institutet, Institute of Environmental Medicine, Stockholm, Sweden
10h30–16h00	**CEC06** **Toxicity assessment in drug development.** Chair: Stine Bartelt, Måløv, Denmark **Challenging early target safety assessment strategies.** Jens Schuemann, Novartis Institute for BioMedical Research, Basel, Switzerland **Phototoxicity of small molecules - from initial assessment to in vivo studies.** Allan Dahl Rasmussen, Lundbeck A/S, Valby, Denmark **Effects of an FGF21 analogue on the female reproductive system.** Sophia Gry Moesgaard, Novo Nordisk A/S, Måløv, Denmark **Reproductive Toxicology: impact on clinical trials/label.**

	Michele Bouisset-Leonard, Novartis A/S, Basel, Switzerland **PEGylated coagulation factor IX: The road to regulatory approval.** Hanne Offenberg, Novo Nordisk A/S, Måløv, Denmark		
16h00	**Opening of the exhibition**		
17h00–19h00	**Opening Ceremony** incl. **Keynote Lecture 01** and **EUROTOX Merit Award** **K01:** **Toxicology as a science of the known with visions of the unknown** Philippe Grandjean, University of Southern Denmark, Denmark and Harvard School of Public Health, Boston, US		
19h00–21h00	**Welcome Reception**		
Monday, 27 September 2021			
07h30–18h30	Congress registration	07h30–08h00 Morning run	09h00–16h30 Exhibition
08h30–09h30	**Bo Holmstedt Memorial Fund Lecture** Shana Sturla, ETH Zürich, Zurich, Switzerland		
09h30–10h00	Coffee Break, **Exhibition** & **Poster Viewing 1**		
10h00–12h00	**Session 01 – Symposium** **The effect of chemicals on the gut microbiota: is it the cause of all problems?** Chairs: Reinhilde Schoonjans, Italy, and 2nd Chair TBA **Gut microbiota and human health through lifespan.** Anne Salonen, University of Helsinki, Helsinki, Finland **Dietary emulsifiers, human microbiota and intestinal inflammation.** Tom Van de Wiele, Ghent University, Ghent, Belgium **Interactions of low calorie sweeteners with the gut microbiota and potential impact on health.** Ian Rowland, Reading University, Reading, UK		

	The role of diet on stability, resilience and modulation of the human gut microbiota. Carmen Pelaez, Autonomous University of Madrid, Madrid, Spain
10h00–12h00	**Session 02 – Symposium** **In vitro organotypic models for predicting the toxicity of chemicals or drugs.** Chairs: Saadia Kerdine-Römer, France and Lisbeth Knudsen, Denmark **Predictive (diseased) 3D lung models to assess effects of aerosolized nanomaterials and nanodrugs.** Barbara Rothen Rutishauser, Université de Fribourg, Fribourg, Switzerland **Advanced in vitro models for nephrotoxicity testing: as complex as possible, but simple in use.** Roos Masereeuw, Utrecht Institute for Pharmaceutical Sciences, Utrecht, Netherlands **Human 3D brain model to study developmental neurotoxicity.** Marie-Gabrielle Zurich, Université de Lausanne, Lausanne, Switzerland **Mini-gut organoids for therapeutic testing.** Nathalie Vergnolle, IRSD, Toulouse, France
10h00–12h00	**Session 03 – Symposium** **Artificial intelligence and machine learning in chemical risk assessment.** Chairs: João Barroso, Italy, and Anne Marie Vinggaard, Denmark **Systematic reviews and chemical risk assessment: current challenges, and the need for AI in overcoming them.** Paul Whaley, Lancaster University, Lancaster, UK **Use of chemical informatics, quantum chemistry modelling and artificial intelligence algorithms to predict molecular initiating events.** Tim Allen, St. John's College, Cambridge, UK **Machine learning in chemical risk assessment.** Eva Bay Wedeby, Technical University of Denmark, Kgs. Lyngby, Denmark

	Virtual physiological human. Geris Liesbet, University of Liège, Liège, Belgium
10h00–12h00	**Session 04 – Symposium** **Personalized nano-immunotoxicology for the workplace.** Chairs: Albert Duschl, Austria and Diana Boraschi, Italy **Does immunotoxicity of nanomaterials depend on the individual pre-existing conditions? A need for a personalised testing strategy.** Diana Boraschi, National Research Council, Naples, Italy **In vitro immune-nanotoxicological methods that take pre-existing conditions into account.** Albert Duschl, Salzburg University, Salzburg, Austria **Assessing the immunological hazard of sub-chronically inhaled nanomaterials in normal and diseased lung models.** Martin Clift, Swansea University, Swansea, UK **Impact of nanomaterials on haemodynamic parameters in normal and disease conditions.** Julie Laloy, Université de Namur, Namur, Belgium
10h00–12h00	**Session 05 – Symposium** **The use of minipigs in juvenile studies in an evolving regulatory landscape.** Chairs: Andrew Makin, Denmark and Lars Friis Mikkelsen, Denmark **Practical examples of the use of juvenile minipigs in testing drugs and foodstuffs to demonstrate safety for human children.** Andrew Makin , Andrew Makin Preclinical Consulting, Kokkedal, Denmark **The minipig – a rising star for nonclinical safety testing in support of development of paediatric medicines.** Georg Schmitt, Roche Pharma, Basel, Switzerland **The juvenile Göttingen minipig: role of organ development in view of food and drug safety in children.**

	Steven Van Cruchten, University of Antwerp, Antwerp, Belgium **Early life nutrition and later life cardiometabolic health in Göttingen Minipigs.** Sietse Jan Koopmans, Wageningen UR Livestock Research, Wageningen, Netherlands		
10h00–12h00	**Short Oral Communications I** *To be selected from submitted abstracts.*		
12h00–13h00	Lunch Break & **Exhibition**		
12h00–13h00	**Lunch Industry Symposium**	**Lunch Industry Symposium**	**Lunch Industry Symposium**
13h00–14h00	**Poster Viewing 1**		
14h00–15h00	**EUROTOX–SOT Debate** Alan Boobis (EUROTOX debater) and Syril Pettit (SOT debater)		
15h00–15h30	Coffee Break, **Exhibition** & **Poster Viewing 1**		
15h30–17h30	**Session 06 – Symposium** **Human induced pluripotent stem cell (iPSC)-based test systems for future mechanism-based chemical safety testing.** Chairs: Catherine Verfaillie, Belgium and Marcel Leist, Germany **iPSC-derived neurospheres for chemical safety assessment.** Andras Dinnyes, Biotalentum, Gödöllő, Hungary **Multicellular 3D liver models based on hiPSC-derived liver cells.** Catherine Verfaillie, Leuven University, Leuven, Belgium **Fluorescent reporter-based hiPSC test systems for mechanism-based safety assessment.** Bas ter Braak, Leiden Academic Centre for Drug Research, Leiden, Netherlands **Nephrotoxic liability assessment using hiPSC-derived renal glomerular and proximal tubular epithelial cells.** Anja Wilmes, Free University Amsterdam, Amsterdam, Netherlands		

15h30–17h30	**Session 07 – Roundtable** **Setting the European Environment and Health Research Agenda, 2020-2030: the HERA project.** Chairs: Robert Barouki, France and Manolis Kogevinas, Spain **Identifying research gaps in environment and health research.** Roel Vermeulen, Utrecht University, Utrecht, Netherlands and Annette Peters, Helmholtz Zentrum, Munich, Germany **Stakeholder approach for identification of research needs of policy and practice in environment, climate and health.** Brigit Staatsen, RIVM, Bilthoven, Netherlands **Major environmental stressors and their effect on health: a global perspective.** Julia Nowacki, WHO Regional Center, Bonn, Germany **Infrastructure needs in the field of environment and health.** Jana Klanova, Recetox, Brno, Czech Republic
15h30–17h30	**Session 08 – Symposium** **Back-translation from clinical outcomes, how did investigative toxicology, modelling and simulation actually perform?** Chairs: Harrie C.M. Boonen, Denmark and François Pognan, Switzerland **Application of modelling and simulation techniques to aid forward and back translation of safety endpoints.** Teresa Collins, AstraZeneca, Cambridge, UK **A case study of retrospective DILI liabilities based on in vitro data and exposure prediction.** Thomas Steger-Hartmann, Bayer AG, Berlin, Germany **Moving from detection of cardiovascular liabilities to quantitative mechanistic translational understanding: challenges and opportunities.** Amy Pointon, AstraZeneca, Cambridge, UK **In vitro rat and human GI organoid models for oncology candidate compounds assessment.** Nicole Rathfelder, Novartis Pharma AG, Basel, Switzerland

15h30–17h30	**Session 09 – Workshop** **Increasing confidence in non-animal approaches for regulatory decision-making.** Chairs: Suzanne Fitzpatrick, US and Fiona Sewell, UK **Acceptance of in silico methods for regulatory purposes.** Glenn Myatt, Leadscope, Columbus, US **How metabolomics can inform chemical risk assessment.** Tomasz Sobanski, ECHA, Helsinki, Finland & Mark Viant, University of Birmingham, Birmingham, UK **A new path for pesticide assessment: using the AOP framework as a tool in risk assessment.** Susanne Hougaard Bennekou, Technical University of Denmark, Kgs. Lyngby, Denmark
15h30–17h30	**Session 10 – Symposium** **Computational modeling of AOP networks to assist risk assessment of chemicals.** Chairs: Frederic Bois, UK and Joost Beltman, Netherlands **Quantitative Bayesian networks analyses of mitochondrial toxicity.** Frederic Bois, CERTARA Inc., Sheffield, UK **Logic modeling of toxicity pathways.** Attila Gabor, EMBL, Heidelberg, Germany **Linking cellular stress pathway activity to cellular adversity through dynamic modeling.** Joost Beltman, Leiden University, Leiden, Netherlands **Virtual liver modeling.** Dirk Drasdo, INRIA & University of Leipzig, Paris & Leipzig, France & Germany
15h30–17h30	**Short Oral Communications II** *To be selected from submitted abstracts.*
17h30–18h30	**COVID-19 presentation (TBA)**

18h30–19h30	**Speciality Section Meetings**		
18h30–19h30	**Young Scientists Meeting**		
	Social Reception (TBA)		
Tuesday, 28 September 2021			
07h30–18h30	Congress registration	07h30–08h00 Morning run	09h00–16h30 Exhibition
08h30–09h30	**SOT Merit Award Lecture**		
09h30–10h00	Coffee Break, **Exhibition** & **Poster Viewing 2**		
10h00–12h00	**Session 11 – Symposium** **Emerging tools for the investigation and prediction of liver toxicity.** Chairs: Mathieu Vinken, Belgium and Magnus Ingelman-Sundberg, Sweden **ULA 3D spheroids as a tool for studying normal and diseased liver function and for prediction of drug pharmacokinetics and hepatotoxicity.** Magnus Ingelman-Sundberg, Karolinska Institutet, Stockholm, Sweden **Functional imaging of hepatotoxicity.** Jan Hengstler, Leibniz Research Center (IfADo), Dortmund, Germany **Dynamic imaging of stress response pathway activation for quantitative systems liver toxicity approaches.** Bob van de Water, Leiden University, Leiden, Netherlands **Using real time sensors to illuminate human-relevant mechanisms of action.** Yaakov Nahmias, Silberman Institute of Life Sciences, Jerusalem, Israel		
10h00–12h00	**Session 12 – Symposium** **Application of high throughput transcriptomics in mechanism-based chemical safety assessment.** Chairs: Hennicke Kamp, Germany and 2nd Chair (TBA)		

	High throughput transcriptomics for determining chemical-induced perturbations to predict adverse renal outcomes. Paul Jennings, Free University Amsterdam, Netherlands **Early prediction of late adverse outcome using benchmark dose modelling of high throughput transcriptomics data.** Scott Auerbach, U.S. NIEHS/National Toxicology Program, Durham, US **Transcriptomic profiling of the inter-individual variability of chemical-induced cellular stress response activation in primary human hepatocytes.** Marije Niemeijer, Leiden University, Leiden, Netherlands **Genomics-based platforms in combination with machine learning algorithms enabling well informed and reliable risk assessments for different toxicological endpoints.** Andy Forreryd, SenzaGen, Lund, Sweden
10h00–12h00	**Session 13 – Workshop** **Modes of action in non-genotoxic carcinogenesis.** Chairs: Jan Vondracek, Czech Republic and William H Bisson, US **Developing an OECD integrated approach for the testing and assessment of non-genotoxic carcinogens.** Miriam Jacobs, Public Health England, Chilton, UK **Cellular and newly proposed models to study the transforming ability of pollutants for translational toxicology and therapeutics.** William H Bisson & Annamaria Colacci, OHSU Knight Cancer Institute & ARPAE, Portland & Bologna, US & Italy **Non-coding RNAs mechanisms enforcing oncogenic programs and allowing establishment of metastatic niches.** Martin Bushell, The Beatson Institute, Glasgow, UK

10h00–12h00	**Session 14 – Symposium** **New approaches using in vitro assays and 3D models can improve prediction of immune reactions to xenobiotics.** Chairs: Marc Pallardy, France and Saadia Kerdine-Römer, France **Immune response to chemicals and drugs: understanding is key for prediction.** Marc Pallardy, University Paris-Sud, Châtenay-Malabry, France **How mechanisms can be used to develop new approaches to predict drug-induced hypersensitivity.** Dean Naisbitt, University of Liverpool, Liverpool, UK **The challenges of predicting biological products immunogenicity using T-cell assays.** Bernard Maillère, University of Paris Saclay, Paris, France **Challenges and opportunities of 3D-skin models: the way forward for assessing chemical sensitizers?** Sue Gibbs, Amsterdam University Medical Center, Amsterdam, The Netherlands
10h00–12h00	**Session 15 – Symposium** **Impact of climate change on food safety** Chairs: Angela Mally, Germany and George Kass, Italy **The impact of climate change on mycotoxin and related fungi risks in Europe: current scenario and future perspectives.** Antonio Moretti, Institute of Sciences of Food Production, National Research Council, Bari, Italy **Climate change impacts on harmful algal bloom toxicity.** Dedmer van de Waal, Netherlands Institute of Ecology (NIOO-KNAW), Wageningen, Netherlands **Ocean warming and Ciguatera poisoning.** Elisa Berdalet, Institute of Marine Sciences (ICM-CSIC), Barcelona, Spain **Tetrodotoxins in seafood from European waters.** Ron Hoogenboom, RIKILT Wageningen University & Research, Wageningen, Netherlands

10h00–12h00	**Industry Symposium**		
12h00–13h00	Lunch Break & **Exhibition**		
12h00–13h00	**Lunch Industry Symposium**	**Lunch Industry Symposium**	**Lunch Industry Symposium**
13h00–14h00	**Poster Viewing 2**		
14h00–15h00	**HESI Lecture**		
15h00–15h30	Coffee Break, **Exhibition** & **Poster Viewing 2**		
15h30–17h30	**Session 16 – Symposium** **Human microengineered organs-on-chips: advancing regulatory science through innovation.** Chairs: Suzanne Fitzpatrick, US and Adrian Roth, Switzerland **Organs-on-chips for safety testing and disease modeling.** Geraldine A. Hamilton, Emulate Inc., Boston, US **Human on a chip – are we there yet?** Uwe Marx, TissUse GmbH, Berlin, Germany **Integrating organ on a chip into an IATA.** Sofia Batista Leite, European Commission's Joint Research Centre, Ispra, Italy **An industry perspective: importance of organs-on-chips for advancing drug discovery and development.** Adrian Roth, Roche Pharma, Basel, Switzerland		
15h30–17h30	**Session 17 – Symposium** **Designing toxicology studies to support development of cell-based therapies.** Chairs: Niklas Öhrner, Novo Nordisk, Denmark, and 2nd Chair (TBA) **Regulatory Considerations for Cell Based Therapies.** David Jones, MHRA, UK		

	Non-clinical study design considerations in the development of cellular therapeutics. Mark Johnson, Charles River, Mattawan, US **Preclinical assessment of a pluripotent cell therapy for Parkinson's Disease.** Agnete Kirkeby, Lund University, Lund, Sweden **A stepping stone to cure type 1 diabetes.** Dorthe Bach Toft, NovoNordisk, Måløv, Denmark
15h30–17h30	**Session 18 – Symposium** **Mechanistic toxicology as the basis for modelling and prediction of organ-specific toxicity.** Chairs: Anna Bal-Price, Italy and Ulla Vogel, Denmark **Applying the adverse outcome pathways network for understanding and predicting neurotoxicity.** Anna Bal-Price, European Commission Joint Research Centre, Ispra, Italy **Application of the adverse outcome pathway conceptual framework for translation of mechanistic data into regulatory decisions: adverse outcome pathways for kidney injury as case study.** Angela Mally, University of Würzburg, Würzburg, Germany **Novel means of enabling high-throughput toxicogenomics and adverse outcome pathways for prediction of lung toxicity.** Penny Nymark, Karolinska Institute, Stockholm, Sweden **Development and application of an adverse outcome pathway of cholestatic liver injury.** Mathieu Vinken, Vrije Universiteit Brussels, Brussels, Belgium
15h30–17h30	**Session 19 – Workshop** **Can we panelize seizure?** Chairs: Ruth Roberts, UK and Jennifer Pierson, US

	Seizure liability in drug discovery and development. Jean-Pierre Valentin, UCB, Braine-l'Alleud, Belgium **Using ion channels to panelize seizure: where are we up to?** Mike Morton, ApconiX, Alderley Park, UK **Development of seizure prediction methods using in vitro microelectrode array (MEA).** Ikuro Suzuki, Tohoku Institute of Technology, Sendai, Japan **Panel Discussion focusing on key questions: confidence in the biology, confidence in the robustness of the assay and confidence in translation to the clinic and the patient.** All speakers
15h30–17h30	**Session 20–Symposium** **Modernizing Cancer Risk Assessment: Beyond the Bioassay.** Chairs: Gina Hilton, UK and Mirjam Luijten, Netherlands **Current challenges in a paradigm shift for cancer risk assessment.** Alan Boobis, Imperial College London, UK **Utility of new approach methods to safely assess cancer risk.** Virunya Bhat, NSF International, US **Practical strategies for a weight of evidence-based safety assessment.** Jan Willem van der Laan, Netherlands Organization for Applied Scientific Research (TNO), Zeist, Netherlands **Visioning a risk assessment without the rodent bioassay.** Mirjam Luijten, RIVM, Netherlands
15h30–17h30	**Industry Symposium**
19h30–0h00	Congress Dinner at Langelinie Pavillonen

Wednesday, 29 September 2021		
08h00–13h00	Congress registration	09h00–12h00 Exhibition
08h30–09h30	**Keynote Lecture 02** **"Genetics load the gun, but environment pulls the trigger" – the human early-life exposome** Martine Vrijheid, ISGlobal, Barcelona, Spain	
09h30–11h30	**Session 21 – Symposium** **Drug – exposome interactions.** Chairs: Benedikt Warth, Austria and Angela Mally, Germany **The exposome: drugs, toxicants, and metabolites.** Gary W. Miller, Columbia University, New York City, US **Impact of dietary xenoestrogens and other food contaminants on drug metabolism and action.** Benedikt Warth, University of Vienna, Vienna, Austria **The Central European Longitudinal Studies of Parents and Children (CELSPAC) from an exposome perspective.** Jana Klánová, Masaryk University, Brno, Czech Republic **Biotransformation-driven interactions and precision responses to chemotherapy.** Shana Sturla, ETH Zurich, Zurich, Switzerland	
09h30–11h30	**Session 22 – Symposium** **Computational models to reliably predict chemical mixture toxicity.** Chairs: Aristidis Tsatsakis, Greece and Michael Aschner, US **Neurodegenerative effects of metal mixtures: the search for biomarkers of exposure and outcome.** Michael Aschner, Albert Einstein College of Medicine, New York, US **Systems toxicology models for the development of AOP networks induced by exposure to complex mixtures.**	

	Denis Sarigiannis, University School of Advanced Studies IUSS, Pavia, Italy **Computational modelling: A new paradigm for chemical mixtures risk assessment?** Antonio F. Hernandez, University of Granada School of Medicine, Granada, Spain **PBPK modelling: Bridging animal-free toxicology tools and conventional in vivo testing for cumulative risk assessment after long-term-low-dose exposure to chemical mixtures.** Marina Goumenou, University of Crete Medical School, Heraklion, Greece
09h30–11h30	**Session 23 – Symposium** **The value of micro-physiological systems for drug safety assessment – a series of case studies** Chairs: Ekaterina Breous-Nystrom, Switzerland and Thomas Steger-Hartmann, Germany **Immune-competent microphysiological system to recapitulate antibody-induced organ damage in cancer immunotherapies.** Adrian Roth, Roche, Basel, Switzerland **A microfluidic two-organ chip to investigate species specific differences of thyroid-liver crosstalk in human and rats.** Diana Karwelat, Bayer AG, Berlin **The importance of patient-centricity to improve the productivity of organ-chip models.** Lorna Ewart, Emulate, London, UK **In vitro rat and human GI organoid models for oncology candidate compounds assessment.** François Pognan, Novartis Pharma AG, Basel, Switzerland
09h30–11h30	**Session 24 – Symposium** **Building confidence in the use of New Approach Methodologies for safety decision-making.** Chairs: Alistair Middleton, UK and Ans Punt, Netherlands **Strategies to develop and apply integrated in vitro-in silico PBPK models in next generation risk assessment.** Ans Punt, RIKILT Wageningen University and Research, Wageningen, Netherlands

	***In silico* approaches to link adverse outcomes to molecular initiating events through AOPs.** Oliveira Anax, Lhasa Limited, Leeds, UK **Strategic Use of High-Throughput Transcriptomics and Phenotypic Profiling Data in Support of Regulatory Decisions.** Joshua Harrill, US EPA NCCT, Research Triangle Park, US **An industry perspective on strategies for integrating new approach methodologies for next generation risk assessment: coumarin as a case study.** Maria Baltazar, Unilever Safety and Environmental Assurance Centre, Bedford, UK
09h30–11h30	**Session 25 – Symposium** **Safeguarding female reproductive health across disciplines.** Chairs: Julie Boberg, Denmark and Paul Fowler, UK **Effects of early EDC exposure on female rat reproductive development.** Hanna KL Johansson, Technical University of Denmark, Kgs. Lyngby, Denmark **Reproductive toxicity in wildlife.** Alan Vajda, University of Colorado, Denver, US **Influence of EDCs on female puberty – evidence from human epidemiology.** Anders Juul, Copenhagen University Hospital, Copenhagen, Denmark **EDCs and female fertility – what can we learn from human clinical samples?** Pauliina Damdimopoulou, Karolinska University Hospital, Stockholm, Sweden
11h30–12h00	Coffee Break & **Exhibition**
12h00–14h00	**Session 26 – Symposium** **Computational Toxicology - New Advances and Acceptance in Academia, Industry and Regulation.** Chairs: Timothy Allen, UK and Ruth Roberts, UK

	Developing and Assessing In Silico Profilers for Organ-Level Toxicity Using Non-Standard Data. Mark Cronin, Liverpool John Moores University, Liverpool, UK **In Silico Toxicology - what computational tools can (and cannot) do.** Andreas Bender, University of Cambridge, Cambridge, UK **Industrial perspectives on in silico tools - early screening to regulatory applications.** Catrin Hasselgren, Genentech, San Francisco, US **Open source computational Toxicology tools in food and feed safety: Integrating historical data, meta-analysis and species-specific generic models.** Jean-Lou Dorne, EFSA, Parma, Italy
12h00–14h00	**Session 27 – Symposium** **Predictive systems to identify etiological factors and pathogenic mechanisms of neurodegeneration.** Chairs: Jonathan Doorn, US and Jason Cannon, US **Translation of mechanistic data into in vivo systems to predict risk for neurodegeneration.** Jason Cannon, Purdue University, West Lafayette, US **Altered neurotransmitter homeostasis as a mechanistic biomarker of neurotoxicity progressing to neurodegeneration.** Jonathan Doorn, University of Iowa, Iowa City, US **Application of an adverse outcome pathway-based in vitro testing battery for neurotoxicity evaluation.** Ellen Fritsche, IUF-Liebniz Research Institute for Environmental Medicine, Düsseldorf, Germany **In vitro neurotoxicity test methods: from development to degeneration.** Remco Westerink, Utrecht University, Utrecht, Netherlands

12h00–14h00	**Session 28 – Symposium** **Preclinical immune-safety evaluation of immuno-oncology therapies.** Chairs: Curtis Maier, US, and 2nd Chair (TBA) **Current nonclinical evaluation of immune-related safety risks for IO biopharmaceuticals.** Simon Chivers, Integrated Biologix, UK **Current nonclinical evaluation of immune-related safety risks for engineered T cell therapies.** Hervé Lebrec, AMGEN, US **Clinical immune-related adverse events.** Nathalie Chaput-Gras, University Paris-Sud Institut Gustave Roussy, Châtenay-Malabry & Villejuif, France **Regulatory considerations and establishing FIH dose across immunomodulators.** Gabriele Reichmann, Paul-Ehrlich-Institut, Langen, Germany
12h00–14h00	**Session 29 – Symposium** **Is there a human risk to PFAS exposure?** Chairs: Philippe Grandjean, Denmark, and 2nd Chair **Health effects and mechanisms of action of fluorinated chemicals – an overview.** Anne Marie Vinggaard, Technical University of Denmark, Kgs. Lyngby, Denmark **Epidemiological approaches to PFAS toxicity.** Philippe Grandjean, University of Southern Denmark & Boston University, Odense & Boston, Denmark & US **Risk to PFAS in the human population – bioassay testing of PFAS mixtures in human blood.** Eva Bonefeld-Jørgensen, University of Aarhus, Aarhus, Denmark **Wide-spread PFAS contamination of drinking water in Sweden – exposure and health risk assessment.** Anders Glynn, SLU, Uppsala, Sweden

12h00–14h00	**Session 30 – Symposium** **Revisiting paracetamol-induced multisystem toxicity: Novel mechanistic insights** Chairs: Hilmi Orhan, Turkey and Hartmut Jaeschke, US **Paracetamol hepatotoxicity: Discovering new drugs based on mechanistic insight from animal studies.** Hartmut Jaeschke, University of Kansas Medical Center, Kansas City, US **Paracetamol-associated adverse reactions in kidney: different mechanistic pathways compared to liver.** Hilmi Orhan, Ege University, Izmir, Turkey **Paracetamol and pregnancy: short- and long-term consequences for mother and child.** Gisa Tiegs, University Medical Center Eppendorf, Hamburg, Germany **Paracetamol and development – reasons for concern.** David Kristensen, University of Copenhagen & Inserm, Irset, Copenhagen & Rennes, Denmark & France
14h00–14h30	**Closing Ceremony** and **Awards presentation**