2025 10. 15-18 Oct. 15-18 BEIJING

IGT2025 iutox

IUTOX 17th INTERNATIONAL CONGRESS OF TOXICOLOGY

Toxicology for Safe Environment & Healthy Life

Program & Agenda

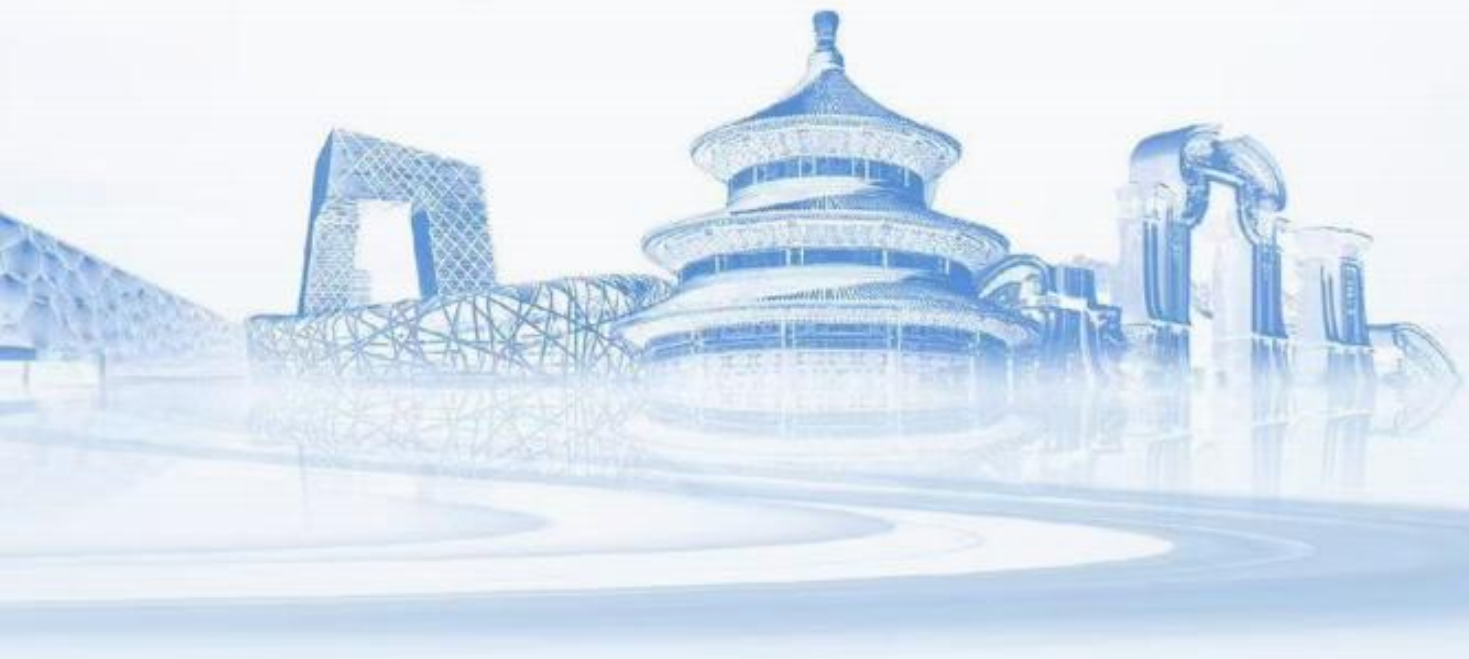
(updated on 8/27/2025)

10 Keynote Lectures

34 Scientific Sessions

10 Workshops

6 Continuing Education Courses



ICT2025 Scientific Program

(updated on 8/16/2025 #)

October 15, 2025, Wednesday

2025/10/15, Morning					
08:00-18:30	**Registration**				Conference and Exhibition Center Lobby
10:00-18:00	**Exhibition Set-up and Preparation**				Second Floor Corridor
10:00-12:00	**Room A - Guojin Hall**	**Room B - Guoxiu Hall**	**Room 3 - Guocui Hall**	**Room 4 - Guohua Hall**	
	CEC01	**CEC02**	**CEC03**	**WuXi Seminars**	
	Advancing Scientific Excellence and Increasing Confidence in NAMs Through Good In Vitro Method Practices (GIVIMP)	From the Past to the Present: Dose Particle Toxicology Really Change?	Utilizing Computational Methods and Tools for Inferring and Predicting Reference Dose (RfD) in Chemical Risk Assessment	Changing Drug Development Landscape With New Modalities Such as ADC	
12:00-13:30	**Lunch**				Yijing Coffee
2025/10/15, Afternoon					
13:30-15:30	**Continuing Education Courses**				
	Room A - Guojin Hall	**Room B - Guoxiu Hall**	**Room 3 - Guocui Hall**	**Room 4 - Guohua Hall**	
	CEC04	**CEC05**	**CEC06**	**Elsevier Seminars**	
	Episkin Academy Training	The Emerging Psychoactive Drugs: Epidemiology, Consumption Modes, and Toxicities	Advanced Toxicological Topics for Study Directors of Nonclinical	Gen AI in Scientific Publishing	
16:00-16:30	**Opening Ceremony**				Guobin Hall
16:30-17:20	**ICT2025 Award Lecture**: Guibin Jiang, China, New Pollutants Study in China: History, Progress and Challenges				
17:20-18:10	**Deichmann Lecture**: Thomas Hartung, USA, Toxicology – the Now, the New and the Next				
18:30-20:30	**Welcome Reception**				Yijing Coffee

October 16, 2025, Thursday

2025/10/16, Morning						
08:30-09:15	Keynote Lecture 1, Marc Pallardy, France, 50 Years of Immunotoxicology: Past, Present and Future					Guobin Hall
09:15-10:00	Keynote Lecture 2, Lin Lu, China, Title: Medical Potential of Cannabis and Psychedelics: Policy, Challenges and Future Direction					
10:00-10:30	**Coffee Break, Poster & Exhibition**					
10:30-11:15	Keynote Lecture 3, Michael Aschner, USA, A 40 Year Journey on the Neurotoxicity of Heavy Metals: From Worms to Humans					
11:15-12:00	Keynote Lecture 4, Robert Landsiedel, Germany, Avoiding a Reproducibility Crisis in Regulatory Toxicology – on the Fundamental Role of Standardisation and Ring Trials					
12:00-13:30	**Lunch, Poster & Exhibition**					Yijing Coffee
2025/10/16, Afternoon						
13:30-15:30	**Room 1 - Guobin Hall 1**	**Room 2 - Guobin Hall 2**	**Room 3 - Guocui Hall**	**Room 4 - Guohua Hall**	**Room 5 - Guibin Hall 1**	**Room 6 - Guoxing Hall**
	Session 01	**Session 02**	**Session 03**	**Session 04**	**Session 05**	**Session 06**
	The Serious Issue of Interference in Nanotoxicology	Toxicity of Opioids: New Insights to Understand and Face the Progressing Threat	Systemic and Next Generation Toxic Effects of Inhaled Carbonaceous Ultrafine Particles	Modernising Approaches to Safety Assessment Through Use of In Silico Approaches in Decision-making	Unlocking the Future of Safety: New Approach Methodologies (NAMs) and Microphysiological Systems (MPS)	Safety Assessments for Dietary Supplements and Herbal Products
15:30-16:00	**Coffee Break, Poster & Exhibition**					
16:00-18:00	**Session 07**	**Session 08**	**Session 09**	**Session 10**	**Session 11**	**Session 12**
	Organoids and organ-on-a-chip in toxicology	Pesticide and Herbicide Exposure: From Risk Assessment to Morbi-mortality Reduction	Interdepartmental Alternatives, Reductions, and Optimizations of Acute Toxicity Tests	PARC - New Approaches to Model Kinetic Properties	The Westward Movement of Botanicals	The Science, Application and Management in Risk Assessment
18:00-20:00	**Elsevier Author Workshop**		**Social Activity**			

October 17, 2025, Friday

2025/10/17, Morning						
08:00-10:00	**Room 1 - Guobin Hall 1**	**Room 2 - Guobin Hall 2**	**Room 3 - Guocui Hall**	**Room 4 - Guohua Hall**	**Room 5 - Guibin Hall 1**	**Room 6 - Guoxing Hall**
	Session 13	**Session 14**	**Session 15**	**Session 16**	**Session 17**	**Session 18**
	Mapping human immune development and new approach methodologies to test its vulnerability to toxicants	New Horizons in Environmental Toxicology	Airborne Micro- and Nanoplastics: Comprehensive Overview of Exposure, Toxicity and Risk Mitigation Strategies	AI-empowered Environmental Computational Toxicology	Toxicities from Traditional Pharmaceutical Drugs: New Insights Into the Mechanisms and Therapeutic Approaches	Air Pollutants and PM2.5-Chemical Composition and Health Consequences
10:00-10:30	**Coffee Break, Poster & Exhibition**					
10:30-12:30	**Session 19**	**Session 20**	**Session 21**	**Session 22**	**Session 23**	**Session 24**
	Assessing the Exposure and Toxicity of Emerging Toxicants in Humans	Advancements in Reproductive Toxicology	Safety of Recycled Plastic for Food Packaging	Thresholds of Toxicological Concern – Recent Developments Across Regions and at the Interface With Computational Modelling	Mechanisms of Immune System Toxicity and Therapeutic Approaches for Modifying Disease	Towards Next Generation Probabilistic Risk Assessment Propelled by Artificial Intelligence and Quantitative Mode-of-action Ontologies
12:00-13:00	**Lunch, Poster & Exhibition**					
2025/10/17, Afternoon						
13:30-15:30	**Room 1 - Guobin Hall 1**	**Room 2 - Guobin Hall 2**	**Room 3 - Guocui Hall**	**Room 4 - Guohua Hall**	**Room 5 - Guibin Hall 1**	**Room 6 - Guoxing Hall**
	Workshop 01	**Workshop 03**	**Workshop 05**	**Workshop 07**	**Workshop 09**	**Session25**
	Drug Toxicology and Drug Safety Evaluation	Heavy Metal Toxicity and Human Health-1	Understanding and Mitigating Occupational Heavy Metal Exposure: A Comprehensive Approach	Strategic Assessment and Prioritization of Chemicals for Hazard and Risk Assessment	Protecting People & Planet: Integrating Human and Environmental Safety in Next Generation Risk Assessment (NGRA)	Novel Strategies for Safety Assessment: A Paradigm Shift for the Future
15:30-16:00	**Coffee Break, Poster & Exhibition**					
16:00-18:00	**Workshop 02**	**Workshop 04**	**Workshop 06**	**Workshop 08**	**Workshop 10**	**Session 26**
	Application of Synchrotron Radiation Techniques in Toxicology	Heavy Metal Toxicity and Human Health-2	High-throughput Technology and Health Effects of Heavy Metal	Joining Forces Towards the Human Exposome Project	Aquatic Organisms as Models for Toxicity Evaluation of Emergent Pollutants	Next Generation Risk Assessment
18:30-21:00	**Gala Dinner**					

October 18, 2025, Saturday

2025/10/18, Morning		
08:30-09:15	Keynote Lecture 5, Yuliang Zhao, China, Nanotoxicology: Expanding the Cognitive Boundaries of Classical Toxicology	Guobin Hall
09:15-10:00	Keynote Lecture 6, Shana J. Sturla, Switzerland, Advancing Chemical Research in Toxicology: From Genotoxicity to Gut Microbial Metabolism	
10:00-10:30	**Coffee Break, Poster & Exhibition**	
10:30-11:15	Keynote Lecture 7, Jun Kanno, Japan, "Modern Toxicology" and “Poison Science” – An Inseparable Pair to Sustain Modern Civilization	
11:15-12:00	Keynote Lecture 8, Marlies De Boeck, Johnson & Johnson, Belgium, Taking Global Submissions to the Next Level	
12:00-13:00	**Lunch, Poster & Exhibition**	Yijing Coffee

2025/10/18, Afternoon						
13:00-15:00	**Room 1 - Guobin Hall 1**	**Room 2 - Guobin Hall 2**	**Room 3 - Guocui Hall**	**Room 4 - Guohua Hall**	**Room 5 - Guibin Hall 1**	**Room 6 - Guoxing Hall**
	Session 27	**Session 28**	**Session 29**	**Session 30**	**Session 31**	**Session 32**
	Environmental Genotoxic Effects: DNA Damage Response and Cell Death Signaling	RNA Dysregulations and Environmental Carcinogenesis	Environmental Toxicology on Micro- and Nano-particulate Pollutants	Genetic Toxicology, Stem Cell Toxicology and Nanotoxicology	Clinical Translation and Practice of Hepatic Toxicology	Young Toxicologist and Rising Star Forum
15:10-15:40	**Closing Ceremony**					

For any questions regarding the program, please contact the ICT Committee at: org-ict2025@chntox.org
As there are approximately 50 sessions at the ICT2025 meeting and some experts may participate in multiple sessions, we cannot guarantee that a specific session will be assigned to a particular time slot.

Contents

October 15, 2025

Continuing Education Courses

CEC01: Advancing Scientific Excellence and Increasing Confidence in NAMs Through Good In Vitro Method Practices (GIVIMP)
Chairs: Dr. Robert Landsiedel, BASF SE, Germany; Dr. Amanda Ulrey, Institute for In Vitro Sciences, Inc., US — **Room A**

10:00-10:20	**Founding principles of GIVIMP** TBD
10:20-10:40	**Good In Vitro method practices (GIVIMP) overview** Dr. Amanda Ulrey, Institute for In Vitro Sciences, Inc., USA
10:40-11:00	**Test system strategies: applying GIVIMP to improve NAMs** Dr. Samuel Constant, Epithelix, Switzerland
11:00-11:20	**Taking advantage of GIVIMP during method development** Dr. Robert Landsiedel, BASF SE, Germany
11:20-11:40	**Applying GIVIMP in a respiratory laboratory** Dr. Anna Goralczyk, Phillip Morris International, Switzerland(烟草公司，IUTOX不允许参加)
11:40-12:00	**Application of GIVIMP principles to a laboratory in China** Dr. Rong Kuang, Zhejiang Institute for Food and Drug Control, China
12:00-12:20	**Impact of increased confidence in NAMs on acceptance in China and beyond** Dr. Quanshun Zhang, Institute for In Vitro Sciences, Inc., China

CEC02: From the Past to the Present: does Particle Toxicology Really Change?
Chair: Dr. Flemming R. Cassee, Institute for Risk Assessment Sciences, Utrecht University, Utrecht, the Netherlands & National Institute for Public Health and the Environment (RIVM), Bilthoven, The Netherlands — **Room B**

10:00-10:30	**From reactionary to anticipatory toxicology, we have come a long way** Dr. Johan Øvrevik, Norwegian Institute of Public Health (NIPH) & University of Oslo, Norway
10:30-11:00	**From exposure to dose: the use of dosimetry models for In Vivo and In Vitro studies and information on biodistribution upon inhalation** Dr. Flemming R. Cassee, Institute for Risk Assessment Sciences, Utrecht University, Utrecht, the Netherlands & National Institute for Public Health and the Environment (RIVM), The Netherlands
11:00-11:30	**Toxicology of ingested particles** Dr. Roel P.F. Schins, Department of Pharmacology and Toxicology, School for Nutrition and Translational Research in Metabolism (NUTRIM), Maastricht University, The Netherlands
11:30-12:00	**Developmental toxicity of (nano)particles: The state of the science** Dr. Luisa Campagnolo, University of Rome Tor Vergata, Italy

This session will end at 12:30 at the latest.

CEC03: Utilizing Computational Methods to Infer Dose-response Relationships in Chemical Risk Assessment
Chairs: Dr. Kan Shao, Indiana University School of Public Health – Bloomington, USA; Dr. Chao Ji, Office of Innovation and Analytics, Agency for Toxic Substances and Disease Registry, Centers for Disease Control and Prevention, USA — **Room 3**

10:00-10:30 **An MOA-based dose-response modeling framework to integrate data from multiple sources for reference dose (RfD) estimation**
Dr. Kan Shao, Indiana University School of Public Health – Bloomington, USA

10:30-11:00 **Application of quantitative in vitro-in vivo extrapolation (IVIVE) to estimate reference doses from NAM Data**
Dr. Xiaoqing Chang, Integrated Laboratory Systems, LLC

11:00-11:30 **Bayesian benchmark dose estimation of genomic data**
Dr. Chao Ji, Office of Innovation and Analytics, Agency for Toxic Substances and Disease Registry, Centers for Disease Control and Prevention, USA

11:30-12:00 **Mechanistic modeling of complex toxicity endpoints using public concentration-response metadata**
Dr. Hao Zhu, Tulane University

CEC04: Episkin Academy Training
Chairs: Dr. Lizao CHEN, L'Oréal Research and Innovation Center **Room A**
Dr. Tairan Xing, L'Oréal Research and Innovation Center

13:30-14:10 **The integration of new methods and approaches in the safety assessment of cosmetic ingredients in Europe in the context of animal testing ban.**
Dr. Fabrice NESSLANY, L'Oréal Research and Innovation Center

14:10-14:40 **Overview of integrated approaches to testing and assessment (IATA) process and its application in regulatory toxicology**
Dr. Xiaofeng Fang, L'Oréal Research and Innovation Center

14:40-15:10 **Introduction of SkinEthic™ RHE skin irritation method and the stand-alone new approach methodology for eye hazard identification validated by OECD**
Dr. Chunmei Ding, L'Oréal Research and Innovation Center

15:10-15:30 **On site operation demonstration and hands on training of SkinEthic™ RHE irritation & corrosion testing and SkinEthic™ HCE eye irritation testing**
Dr. Lizao Chen, L'Oréal Research and Innovation Center

CEC05: The Emerging Psychoactive Drugs: Epidemiology, Consumption Modes, and Toxicities
Chair: Dr. Bruno Mégarbane, European Association of Poisons Centres and Clinical Toxicologists (EAPCCT) **Room B**

The synthetic cathinones
13:30-13:50 Dr. Davide Lonati, Poison Control Centre and National Toxicology Information Centre – Laboratory of Clinical & Experimental Toxicology, Toxicology Unit, Istituti Clinici Scientifici Maugeri IRCCS, Maugeri Hospital, Italy

The synthetic cannabinoids
13:50-14:10 Dr. Knut Erik Hovda, 1. Department of Acute Medicine, Oslo University Hospital, Norway; 2. Institute for Clinical Medicine, University of Oslo, Norway; 3. The Norwegian Poisons Information Centre, National Institute of Health, Oslo, Norway

The NBOMe and new hallucinogenic designer drugs
14:10-14:30 Dr. Jones Chan, Poison Treatment Centre, Prince of Wales Hospital, Hospital Authority, Hong Kong SAR, China

Gamma-hydroxybutyrate and analogues
14:30-14:50 Dr. Shaun Greene, Victorian Poisons Information Centre, Australia

The fentanyloids and non-fentanyl synthetic opioids
14:50-15:10 Dr. Bruno Megarbane, Paris Cité University, Department of Medical and Toxicological Critical Care, Lariboisière Hospital, Paris, France

Ketamine and the novel arycyclohexamines
15:10-15:30 Dr. Paul I. Dargan, Guy's and St Thomas' NHS Foundation Trust and King's College London, UK

CEC06: Advanced Toxicological Topics for Study Directors of Nonclinical Studies **Room 3**
Chair: Dr. William J. Brock; Dr. Alan Hoberman, American College of Toxicology

13:00-13:15 **Introduction to study director course**
Dr. Lijie Fu, Breakthrough Pharmaceuticals, China

13:15-13:45 **Complex study director issues and resolution**
Dr. John Kapeghian, Frontage Labs, USA

13:45-14:15 **Extrapolation: The use and application of in vivo, in vitro and in silico models, artificial intelligence and ICH S1B**
Dr. William J. Brock, Brock Scientific Consulting, LLC, USA

14:15-14:45 **The use and application of in vivo, in vitro and in silico models, artificial intelligence and ICH S1B**
Dr. David Woolley, ForthTox, UK

14:45-15:15 **Complex methods and study designs for developmental and reproductive toxicology**
Dr. Alan Hoberman, Charles River Laboratories, USA

15:15-15:45 **Scientifically sound data interpretation and report writing for toxicology studies**
Dr. Charles Wang, InnoCare Pharma Tech Co. Ltd, China

Special Seminars

WuXi AppTec Seminar: Changing Drug Development Landscape With New Modalities Such as Antibody Drug Conjugates (ADC) **Room 4**
Chair: Dr. Xuanjia Peng, PhD, Senior Vice President, Head of WuXi Testing, Head of WuXi Biology, Head of WuXi AppTec Automation Department

10:00-10:20 **Kickoff: Changing drug development landscape with new modalities such as ADC**
Dr. Xuanjia Peng, Senior Vice President, WuXi AppTec

10:20-10:40 **Overall introduction and ADC background**
Dr. Leo Pan, PhD, Senior Director, Toxicology, WuXi AppTec

10:40-11:00 **Regulatory-compliant genetic and in vitro toxicology assessment for ADCs**
Liwen Gao, MS, Med, DABT, DCST, ERT, Director, Genetic and In Vitro Toxicology, WuXi AppTec

11:00-11:20 **Overcoming the challenges for detecting the antibody in ADC drugs: Using ligand binding assay and LC-MS/MS assays for different cases**
Dr. Nan Jia, PhD, Preclinical SME, WuXi AppTec

11:20-11:40 **Pathology, off-target and on-target effects**
Rongrong Li, BAgr (Vet Med), MAgr (Vet Med), DCCVP, Senior Pathologist, WuXi AppTec

Elsevier Seminars: Symposium on Gen AI in Scientific Publishing **Room 4**
Chairs: Dr. Jagna Gent-Aalén, Senior Publisher Toxicology Journals, Elsevier
Xi Han, Publisher Toxicology and Pharmacology Journals, Elsevier

13:00-13:05 **Welcome, opening, introduction**
Jagna Gent-Aalén, Senior Publisher Toxicology Journals, Elsevier, Amsterdam, The Netherlands

13:05-13:25 **Knowledge discovery and scholarly publishing in the AI era: Harnessing tools and navigating responsibilities**
Yinhui Wu, Customer Success Director, Elsevier, Beijing, China

13:25-13:45 **Knowledge Discovery and Scholarly Publishing in the AI Era: Harnessing Tools and Navigating Responsibilities**
Wenwen Zheng, Head of Research Integrity Group, Scientometrics and Evaluation Research Center,

	Institute of Scientific and Technical Information of China
13:45-14:30	**Panel discussion including QA** Dr. José Manautou, Co-Editor-in-Chief of *Current Opinion in Toxicology* and President of IUTOX Xiaoling Kang, Academic Relations Director, Elsevier, Beijing, China Xi Han, Publisher Toxicology and Pharmacology Journals, Elsevier, Shanghai, China
14:30-14:35	**Closing** Jagna Gent-Aalén, Senior Publisher Toxicology Journals, Elsevier, Amsterdam, The Netherlands
14:35-15:05	**Post meeting communication; Demo and trail of Scopus AI, SD AI**

Opening Ceremony and Keynote Lecture

16:00-16:30	**Opening Ceremony**	**Guobin hall**
16:30-17:20	**ICT 2025 Award Lecture: New pollutants study in China: History, progress and challenges** Dr. Guibin Jiang (Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences)	
17:20-18:10	**Deichmann Lecture: Toxicology – the Now, the New and the Next** Dr. Thomas Hartung (Johns Hopkins University, USA & University of Konstanz, Germany)	
18:30-20:30	**Welcome Dinner**	**Yifeng Coffee**

October 16, 2025

Keynote Lecture

Morning, Conference Keynote Speech, banquet hall

08:30-09:15	**50 years of immunotoxicology: Past, present and future** Dr. Marc Pallardy (Head of the Department of Toxicology, Faculty of Pharmacy, University of Paris-Saclay)
09:15-10:00	**Medical potential of cannabis and psychedelics: Policy, challenges and future direction.** Dr. Lin Lu (Dean of Peking University Sixth Hospital, China)
10:00-10:30	**Coffee Break, Poster & Exhibition**
10:30-11:15	**A 40 year journey on the neurotoxicity of heavy metals: From worms to humans** Dr. Michael Aschner (Department of Molecular Pharmacology, Albert Einstein College of Medicine, the USA)
11:15-12:00	**Avoiding a reproducibility crisis in regulatory toxicology – on the fundamental role of standardisation and ring trials** Dr. Robert Landsiedel (BASF, Germany)

Symposium Program

Afternoon

Session 01: The Serious Issue of Interference in Nanotoxicology — **Room 1**
Chair: Dr. Mary Gulumian, North-West University, South Africa

13:30-13:50	**In vitro toxicity assays: Potential assay interferences by nanomaterials** Dr. Naouale El Yamani, The Climate and Environmental Research Institute, Department for Environmental Chemistry and Health, Health Effects Laboratory, NILU, Instituttveien 18, Kjeller 2007, Norway
13:50-14:10	**In vitro toxicity assays: Potential assay interferences by carbon-based nanomaterials** Dr. José María Navas Antón, Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA), CSIC, Department of Environment and Agronomy, Madrid, Spain
14:10-14:30	**Necessity of accurate assessment of the rate limiting step in initiation of inflammation** Dr. Mary Gulumian, North-West University, South Africa
14:30-14:50	**Serious concern with big data: Criteria for journals to accept publications using assay systems with interference** Mr. Kailen Boodhia, North-West University, South Africa
15:30-16:00	**Coffee Break, Poster & Exhibition**

Session 02: Toxicity of Opioids: New Insights to Understand and Face the Progressing Threat **Room 2**
Chair: Dr. Bruno Mégarbane, Paris Cité University, France

13:30-14:00 **Toxicological and pathological findings in opioid-related deaths**
Dr. Lydia Bennedich Kahn, Department of Oncology–Pathology, Karolinska Institute, Stockholm, Sweden; Swedish National Board of Forensic Medicine, Stockholm, Sweden

14:00-14:30 **Opioid-related mechanisms of neuro-respiratory toxicity: Interindividual variability and drug-drug interactions**
Dr. Bruno Mégarbane, Paris Cité University, Department of Medical and Toxicological Critical Care, Lariboisière Hospital, France

14:30-15:00 **Engineering hybrid peptidomimetics for improved pain treatments**
Dr. Steven Ballet, Vrije Universiteit Brussel, Belgium

Session 03: Systemic and Next Generation Toxic Effects of Inhaled Carbonaceous Ultrafine Particles **Room 3**
Chair: Dr. Flemming R. Cassee, Utrecht University, The Netherlands

13:30-14:00 **Investigation of the priming effect of inhaled carbon nanoparticles on the lung**
Dr. Roel P.F. Schins, Department of Pharmacology and Toxicology, School for Nutrition and Translational Research in Metabolism (NUTRIM), Maastricht University, Maastricht, The Netherlands

14:00-14:30 **Small particles, big impact: Neurotoxic effects of early-life exposure to ultrafine carbonaceous particles**
Dr. Kenneth Vanbrabant, Centre for Environmental Sciences, Hasselt University, Belgium

14:30-15:00 **Early-life exposure to ultrafine particles from air pollution affects proximal tubular epithelial cells development and resilience**
Dr. Alessandra Tammaro, Department of Pathology, Amsterdam Cardiovascular Science and Amsterdam Infection and Immunity, Amsterdam UMC, University of Amsterdam, Amsterdam, The Netherlands

15:00-15:30 **Aircraft Cabin air quality assessment of pulmonary and neurological effects of contaminants including ultrafine particles**
Dr. Flemming R. Cassee, Institute for Risk Assessment Sciences, Utrecht University, Utrecht, The Netherlands; Netherlands & National Institute for Public Health and the Environment (RIVM), Bilthoven, The Netherlands

15:30-16:00 **Coffee Break, Poster & Exhibition**

Session 04: Modernising Approaches to Safety Assessment through Use of In Silico Approaches in Decision-making **Room 4**
Chair: Dr. Fiona Sewell, UK National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs), UK

13:30-14:00 **Opportunities for the use if in silico NAMS within next generation risk assessment of cosmetic ingredients**
Dr. Bruno Campos, Unilever

14:00-14:30 **Development of in silico tools based on curated toxicological databases**
Dr. Sylvia E. Escher, Fraunhofer Institute for Toxicology and Experimental Medicine, Germany

14:30-15:00 **An end-user perspective on supporting the development of a QSAR model to predicts human respiratory irritancy of single compounds and mixtures**
Dr. Chantal Smulders, Shell

15:00-15:30 **Drug safety and efficacy evaluation using AI-informed modelling & simulation**
Dr. Blanca Rodriguez, Department of Computer Science, University of Oxford, UK

15:30-16:00 **Coffee Break, Poster & Exhibition**

Session 05: Unlocking the Future of Safety: New Approach Methodologies (NAMs) and Microphysiological Systems (MPS)
Chairs: Dr. Paul L. Carmichael, Unilever Safety & Environmental Assurance Centre (SEAC); Dr. Jose Manautou, University of Connecticut, USA; Shuangqing Peng, Shanghai Medicilon Inc, China; Jin Li, Unilever, Safety, Environment and Regulatory Sciences, UK
Room 5

13:30-14:00 **Fit for purpose evaluation of a NAM-based systemic toxicity toolbox**
Dr. Paul Carmichael, Unilever Safety & Environmental Assurance Centre (SEAC)

14:00-14:30 **The significance of mechanistic evidence in NGRA: is key characteristics-structuralized NAMs a reasonable approach?**
Dr. Jingbo PI, China Medical University, China

14:30-15:00 **A pharma perspective on the use and utility of MPS for drug safety assessment**
Dr. Remi Villenave, Pharma Research and Early Development, Switzerland

15:00-15:30 **Perspective on qualification of the microphysiological systems for regulatory use**
Dr. Yoko Hirabayashi, National Institute of Health Sciences, Japan

15:30-16:00 **Coffee Break, Poster & Exhibition**

Session 06: Safety Assessments for Dietary Supplements and Herbal Products
Chairs: Dr. Ayşe Nurşen Başaran, Başkent University, Turkey, Nan Mei, National Center for Toxicological Research (NCTR) U.S. Food and Drug Administration (FDA)
Room 6

13:30-14:00 **The serious adverse reactions due to the adulteration of herbal products with chemicals and synthetic drugs**
Dr. Ayşe Nurşen Başaran, Başkent University, Turkey

14:00-14:30 **ecNGS reveals increased hepatocarcinogenic risk of aristolochic acid under steatohepatitis inflammation**
Dr. Yang Luan, Shanghai Jiao Tong University, China

14:30-15:00 **The balance between safety and efficacy for the approvement of dietary supplements in Korea**
Dr. Mihi Yang, Sookmyung Women's University, Korea

15:00-15:30 **Malaysia's safety framework for herbal and dietary products**
Ami Fazlin Binti Syed Mohamed, National Institutes of Health Malaysia (NIH), Ministry of Health Malaysia, Malaysia

15:30-16:00 **Coffee Break, Poster & Exhibition**

Session 07: Organoids and Organ-on-a-chip in Toxicology
Chair: Dr. Zhongze Gu, Southeast University, China
Room 1

16:00-16:20 **The innovation of organ-on-a-chip in toxicology research**
Dr. Zhongze Gu, Dean of State Key Laboratory of Digital Medical Engineering, Southeast University, China

16:20-16:40 **TBD**

16:40-17:00 **Introduction of the development of MPS in Japan and their way to the regulatory acceptance**
Dr. Seiichi Ishida, National Institute of Health Sciences, Japan

17:00-17:20 **Human multi-organ-chips advancing from toxicology testing toward preclinical "safficacy" evaluation in vitro**
Dr. Uwe Marx, CEO & CSO, TissUse GmbH, Germany

17:20-17:40	**Qualifying the soluble and mechanical environments of microphysiological systems for enhanced regulatory utility** Dr. Alastair Stewart, ARC Training Centre for Personalised Therapeutics Technologies, Department of Biochemistry and Pharmacology, School of Biomedical Sciences, University of Melbourne, Australia
Elsevier Author Workshop on how to prepare your manuscript for peer review, understanding the process, scientific publishing ethics, journal selection, the Guide for Authors importance, and more.	
18:00-20:00	Dr. Jagna Gent-Aalén, Senior Publisher Toxicology Journals, Elsevier Xi Han, Publisher Toxicology and Pharmacology Journals, Elsevier
Session 08: Pesticide and Herbicide Exposure: From Risk Assessment to Morbi-mortality Reduction Chairs: Dr. Martin F. Wilks, University of Basel, Switzerland; Dr. Bruno Mégarbane, Paris Cité University, France	**Room 2**
16:00-16:30	**Mixed organophosphate poisoning: An emerging toxicological crisis in LMICs** Dr. Fazle Rabbi Chowdhury, Centre for Cardiovascular Science, University of Edinburgh, UK
16:30-17:00	**Acute pesticide exposure & antidote therapy** Dr. Bruno Mégarbane, Paris Cité University, Department of Medical and Toxicological Critical Care, Lariboisière Hospital, France
17:00-17:30	**Glyphosate: Toxicity, cancer risk and the role of the formulation** Dr. Martin F. Wilks, University of Basel, Switzerland
17:30-18:00	**Pesticide regulations & impact on mortality by suicide** Dr. Michael Eddleston, Centre for Pesticide Suicide Prevention, Centre for Cardiovascular Science, University of Edinburgh, UK
18:00-20:30	**Dinner**
Session 09: Interdepartmental Alternatives, Reductions, and Optimizations of Acute Toxicity Tests Chair: Dr. Fiona Sewell, UK National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs), UK	**Room 3**
16:00-16:25	**Refining and removing global requirements for mammalian acute toxicity testing across sectors** Dr. Mark Blee, UK National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs), UK
16:25-16:50	**Applying the 3Rs in fish acute toxicity tests for chemicals safety assessments** Dr. Adam Lillicrap, Norweigian Institute for Water Research (NIVA), Norway
16:50-17:15	**Case studies for assessing acute oral toxicity without animal testing for cosmetic ingredients** Dr. Hajime Kojima, Sanyo-Onoda City University, Japan
17:15-17:40	**Progress with assuring consumer safety of cosmetics without animal testing** Dr. Carl Westmoreland, Retired from Unilever
17:40-18:05	**SARA-ICE: A self-contained model for predicting a human relevant point-of-departure for skin sensitization** Dr. Jin Li, Unilever, Safety, Environment and Regulatory Sciences, UK
18:00-20:10	**Dinner**
Session 10: PARC – New Approaches to Model Kinetic Properties Chair: Dr. Doris Marko, University of Vienna, Austria	**Room 4**
16:00-16:30	**A tiered testing strategy to assess absorption of volatile compounds** Dr. Sylvia Escher, Fraunhofer ITEM, Germany

16:30-17:00	**First physiologically based modeling of *Alternaria* toxins** Dr. Doris Marko, University of Vienna, Austria
17:00-17:30	**Quantifying the gut microbiome's impact on toxicokinetics by physiologically based kinetic (PBK) modeling** Dr. Georg Aichinger, Laboratory of Toxicology, Department of Health Science and Technology, ETH Zürich, Switzerland
17:30-18:00	**PBK model-based QIVIVE for a NAMs based assessment of emerging mycotoxins** Dr. Nynke Kramer, Toxicology Chair Group, Wageningen University, Wageningen, The Netherlands
18:00-20:30	**Dinner**

Session 11: The Westward Movement of Botanicals — **Room 5**
Chairs: Ms. Kelly Magurany, NSF International, USA; Ms. Shannon Cousineau

16:00-16:30	**The western movement** Dr. Sakan Warinhomhoun, Rangsit University, Thailand
16:30-17:00	**Generally recognized as safe/new dietary ingredients** Ms. Shannon Cousineau, NSF, USA
17:00-17:30	**Regulatory perspectives** Dr. A.Wallace Hayes, University of South Florida, USA
17:30-18:00	**Botanicals and herbal medicines** Dr. Peter Pressman, University of Maine, USA
18:00-20:10	**Dinner**

Session 12: The Science, Application and Management in Risk Assessment — **Room 6**
Chair: Dr. Ying Wang, Procter & Gamble Technologies (Beijing) Ltd.

16:00-16:25	**The future is now: Implementing animal-free safety assessment for cosmetics** Dr. David Allen, International Collaboration on Cosmetics Safety (ICCS), USA
16:25-16:50	**The development, challenge and opportunity of risk assessment in China** Dr. Xingfen Yang, Southern Medical University, China
16:50-17:15	**Use of NAMs to refine and strengthen SAR read-across** Dr. Corie Ellison, The Procter & Gamble Company, USA
17:15-17:40	**Discussion on the practice of safety assessment for cosmetics under regulatory framework in China** Dr.Ni Lin,National Institutes for Food and Drug Control(NIFDC),China
17:40-18:30	**Roundtable discussion**
18:00-20:10	**Dinner**

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Session 13: Mapping Human Immune Development and New Approach Methodologies to Test Its Vulnerability to Toxicants
Chairs: Dr. Fenna Sillé, Johns Hopkins University, USA; Dr. Norbert E. Kaminski, Michigan State University, USA
Room 1

08:00-08:30 **Developmental immunotoxicity testing: Challenging the status quo**
Dr. Fenna Sillé, Johns Hopkins University, Bloomberg School of Public Health, Department of Environmental Health & Engineering, Center for Alternatives to Animal Testing (CAAT), USA

08:30-09:00 **An immune map of human body across ages and sexes based on single-cell deconvolution**
Dr. Xianwen Ren, Institute of Zoology, Chinese Academy of Sciences, Beijing, China

09:00-09:30 **Microfluidic models of human bone marrow and lymph node for immunotoxicity studies**
Dr. Leopold Koenig, TissUse GmbH, Germany

09:30-10:00 **Human umbilical cord blood derived CD34+ hematopoietic stem cells as an in vitro model for investigating developmental immunotoxicity**
Dr. Norbert E. Kaminski, Michigan State University, USA

10:00-10:30 **Coffee Break, Poster & Exhibition**

Session 14: New Horizons in Environmental Toxicology
Chairs: Dr. Sijie Lin, Tongji University and Dr. Huan Meng, National Center for Nanoscience and Technology (NCNST), China
Room 2

08:00-08:25 **Structural differences in oxygenated PAH developmental toxicity**
Dr. Daniel Schlenk, Professor, University of California in Riverside, USA

08:25-08:50 **Safe-by-design metal-phenolic network nanocomposites for environmental remediation**
Dr. Monika Mortimer, National Institute of Chemical Physics and Biophysics, Estonia

08:50-09:15 **Synthesis and characterization of novel antibacterial and antifungal silver-chitosan nanocomposites: a mechanistic study**
Dr. Kaja Kasemets, National Institute of Chemical Physics and Biophysics, Estonia

09:15-09:40 **The Gain Law of Evolving Networks: How Interface Perturbations Are Amplified to Rewire Ecology and Resistance**
Dr. Chengdong Zhang, Professor, Beijing Normal University, China

09:40-10:05 **Protein corona and its toxicology implications**
Dr. Iseult Lynch, Professor, University of Birmingham, UK

10:00-10:30 **Coffee Break, Poster & Exhibition**

Session 15: Airborne Micro- and Nanoplastics: Comprehensive Overview of Exposure, Toxicity and Risk Mitigation Strategies
Chair: Dr. Robert Landsiedel, German Toxicology Society, Germany; Dr.Bernd Albert Sachweh, CAS Institute of Process Engineering, China; Lan Ma-Hock, BASF SE, Department of Toxicology and Ecology, 67056 Ludwigshafen am Rhein, Germany
Room 3

08:00-08:30 **Green process value chain approach to prevent micro/nano plastics (MNP) from entering the environment**
Dr. Bernd Albert Sachweh, International Panel of Mesoscience (IPM), CAS Institute of Process Engineering, China

08:30-09:00 **Advancements in aerosol measurement and aerosol filtration: A path towards a clean and sustainable environment**
Dr. David Y.H. Pui, University of Minnesota, Minnesota, U.S.A.

09:00-09:30 **Inflammation-related key events stimulated by micro- and nanoplastics**
Dr. Raymond Pieters, Institute for Risk Assessment Sciences, Utrecht University, The Netherlands

09:30-10:00 **Toxicological effects of inhaled micro- and nanoplastic particles: A study of polystyrene and polyamide in rats**
Dr. Lan Ma-Hock, BASF SE, Department of Toxicology and Ecology, Germany

10:00-10:30 **Coffee Break, Poster & Exhibition**

Session 16: AI-empowered Environmental Computational Toxicology **Room 4**
Chair: Dr. Jingwen Chen, Dalian University of Technology, China

08:00-08:30 **AI-empowered environmental computational toxicology on risk prediction and control of chemicals**
Dr. Jingwen Chen, Dalian University of Technology, China

08:30-09:00 **Predictive models for ABC transporter inhibition and chemical efflux: Data collection, model development, and application for predicting chemical properties and toxicities**
Dr. Hao Zhu, Tulane University, USA

09:00-09:30 **Unlocking safer futures: Computational toxicology models shaping next generation risk assessment (NGRA)**
Dr. Jin Li, Regulatory Science Leader, The Unilever- Safety, Environment and Regulatory Sciences (SERS), United Kingdom

09:30-10:00 **Modernizing environmental chemical risk assessment through an AI-Powered dose-response modeling system**
Dr. Kan Shao, Department of Environmental and Occupational Health, School of Public Health, Indiana University - Bloomington

10:00-10:30 **Coffee Break, Poster & Exhibition**

Session 17: Toxicities From Traditional Pharmaceutical Drugs: New Insights Into the Mechanisms and Therapeutic Approaches **Room 5**
Chair: Dr. Bruno Mégarbane, Paris Cité University, France

08:00-08:30 **Acetaminophen toxicity: Role of the c-jun N-terminal kinase pathway and benefits of fomepizole**
Dr. Hartmut Jaeschke, University of Kansas Medical Center, USA

08:30-09:00 **Metformin toxicity: Understanding mitochondria impairment and expanding therapeutic applications**
Dr. Lucie Chevillard, Paris Cité University, France

09:00-09:30 **Lithium toxicity: Understanding brain distribution variability to improve elimination**
Dr. Bruno Mégarbane, Paris Cité University, Department of Medical and Toxicological Critical Care, Lariboisière Hospital, France

09:30-10:00 **Local anaesthetics toxicity: Evidence and controversies on lipid emulsion**
Dr. Michael Fettiplace, University of Illinois, USA

10:00-10:30 **Coffee Break, Poster & Exhibition**

Session 18: Air Pollutants and $PM_{2.5}$ - Chemical Composition and Health Consequences **Room 6**
Chairs: Dr. Tsung-Jung Liu, National Yang-Ming Chiao-Tung University, Taiwan, China; Dr. Ying-Jan Wang, National Cheng Kung University, Taiwan, China

08:00-08:25 **From air to cells: The genomic impact of environmental carcinogens**
Dr. Hsuan-Yu Chen, Institute of Statistical Science, Academia Sinica, Taiwan, China

08:25-08:50 **Air pollution and chronic obstructive pulmonary disease**
Dr. Hsiao-Chi Chuang, School of Respiratory Therapy, Taipei Medical University, Taiwan, China

08:50-09:20 **Novel analytical and bio-analytical concepts for addressing the composition as well as the toxicological impact of airborne particulate matter (PM)**
Dr. Ralf Zimmermann, Division of Analytical and Technical Chemistry, Institute of Chemistry, University of Rostock, Germany

09:20-09:45	**An exposome approach to evaluate the biological and health effects of air pollution: Evidence from multiple studies** Dr. Marc Chadeau-Hyam, Computational Epidemiology and Biostatistics, School of Public Health, Imperial College London, UK
09:45-10:10	**Study on the Mechanism of Pulmonary Injury Caused by Inhalation Exposure to Microplastics and Risk Assessment for Occupational Populations** Qian Bian, Institute of Toxicology & Risk Assessment, Jiangsu Provincial Center for Disease Control and Prevention， Nanjing China
10:00-10:30	**Coffee Break, Poster & Exhibition**

Session 19: Assessing the Exposure and Toxicity of Emerging Toxicants in Humans **Room 1**
Chair: Dr. Yun Wang, Peking University, China

10:30-10:45	**Old and new insights in the respiratory toxicity of carbon-based nanomaterials** Dr. Tobias Stoeger, Institute of Lung Health and Immunity (LHI), Comprehensive Pneumology Center (CPC), Helmholtz Center Munich, Germany; Member of the German Center for Lung Research (DZL), Munich, Germany
10:45-11:00	**Children's third-hand smoke exposure assessment** Dr. Yun Wang, School of Public Health, Peking University, China
11:00-11:15	**Rethinking health in the face of modern environmental risks: The role of exposomics** Dr. Roel Vermeulen, Institute for Risk Assessment Sciences, Utrecht University, The Netherlands
11:15-11:30	**Leveraging pulmonary nanotoxicological discoveries for the design of inhalable nanotherapeutics** Dr. Huan Meng, National Center for Nanoscience and Technology (NCNST), China
11:30-11:45	**Toxicity of electronic cigarette aerosols** Dr. Xiang Wang, Department of Medicine, University of California, Los Angeles (UCLA) / California NanoSystems Institute (CNSI), USA
12:00-13:30	**Lunch, Poster & Exhibition**

Session 20: Advancements in Reproductive Toxicology **Room 2**
Chair: Dr. Yankai Xia, Nanjing Medical University, China

10:20-10:35	**Advancements in reproductive toxicology** Dr. Yankai Xia, Nanjing Medical University, China
10:35-10:50	**Where the exposome meets toxicology** Dr. Adrian Covaci, Toxicological Center, University of Antwerp, Belgium
10:50-11:05	**Impact of a real-life mixture of PFAS on placental health** Dr. Ana Claudia Zenclussen, Department of Environmental Immunology, Helmholtz Centre for Environmental Research GmbH - UFZ, Leipzig, Saxony, Germany
11:05-11:20	**Developmental toxicology in a dish – when stem cell biology meets environmental health sciences** Dr. Guang Hu, National Institute of Environmental Health Sciences, USA
11:20-11:35	**Constitutive androstane receptor regulates germ cell homeostasis, sperm quality, and male fertility via akt-foxo1 pathway** Dr. David VOLLE, Université Clermont Auvergne, GReD Institute, France
11:35-11:50	**Research on reproductive and developmental toxicity based on the integration of exposome and metabolome analyses** Dr. Minjian Chen, School of Public Health, Nanjing Medical University, China
11:50-12:05	**Arsenic and the Developmental Clock: Disrupted Neurotransmission from Womb to Lifespan** Dr. Wenjuan Wang, Professor, Doctoral Supervisor, Guizhou Medical University, China
12:00-13:30	**Lunch, Poster & Exhibition**

Session 21: Safety of Recycled Plastic for Food Packaging **Room 3**
Chair: Dr. Songsak Srianujata, Mahidol University, Thailand

10:30-10:50 **Regulation of Thai FDA for recycled PET plastic**
Dr. Jarunee Wonglek, Thai FDA, Thailand

10:50-11:10 **Safety assessment process of food contact material produced from rPET**
Dr. Chaniphun Butryee, Mahidol University, Thailand

11:10-11:30 **Surrogate migration testing using a mathematical model for safety assessment of recycled PET**
Dr. Dharmendra K. Mishra, Purdue University, USA

11:30-11:50 **Thailand Risk Assessment Center as the safety assessment organization of recycled plastic for food packaging**
Dr. Songsak Srianujata, Mahidol University, Thailand

12:00-13:30 **Lunch, Poster & Exhibition**

Session 22: Thresholds of Toxicological Concern – Recent Developments across Regions and at the Interface with Computational Modelling **Room 4**
Chair: Dr. Philip Marx-Stoelting, Federal Institute for Risk Assessment, Germany; Dr. Heli Miriam Hollnagel, Dow Europe GmbH; Dr. Haixia Sui, China National Center for Food Safety Risk Assessment, China

10:30-10:50 **Application of TTC in food safety risk assessment in China**
Dr. Haixia Sui, China National Center for Food Safety Risk Assessment, China

10:50-11:10 **TTC based on plasma concentrations (internal TTC)**
Dr. Corie Ellison, The Procter & Gamble Company, USA

11:10-11:30 **Development of TTC values for inhalable substances**
Dr. Sylvia E. Escher, Fraunhofer Institute for Toxicology and Experimental Medicine, Germany

11:30-11:50 **Thresholds for skin sensitization**
Dr. Isabelle Lee, Research Institute for Fragrance Materials (RIFM), USA

11:50-12:10 **Application of the TTC concept to complex mixtures**
Dr. Heli Miriam Hollnagel, Dow Europe GmbH

12:00-13:30 **Lunch, Poster & Exhibition**

Session 23: Mechanisms of Immune System Toxicity and Therapeutic Approaches for Modifying Disease **Room 5**
Chair: Dr. Yasumitsu Nishimura, Kawasaki Medical School, Japan

10:30-10:50 **Immune suppression by exposure to PFAS: Focus on B cell development and metabolism**
Dr. Jamie DeWitt, Oregon State University, USA

10:50-11:10 **Environmental pollutants as drivers of autoimmune disease**
Dr. Sarah Blossom, University of New Mexico, USA

11:10-11:30 **Immune signatures of asbestos exposure and mesothelioma: Biomarkers for asbestos-induced immune suppression and immunotherapy**
Dr. Yasumitsu Nishimura, Kawasaki Medical School, Japan

11:30-11:50 **Molecular machinery of particle-caused inflammation and allergy in lung immunity**
Dr. Etsushi Kuroda, Hyogo Medical University, Japan

11:50-12:10 **Arsenic trioxide targeting Cys213 in PML-RARa protein to cure acute promyelocytic leukemia**
Dr. Hua Naranmandura, Zhejiang University, China

12:00-13:30 **Lunch, Poster & Exhibition**

Session 24: Towards Next Generation Probabilistic Risk Assessment Propelled by Artificial Intelligence and Quantitative Mode-of-Action Ontologies **Room 6**

Chair: Dr. Mathieu Vinken, Vrije Universiteit Brussel, Belgium

10:30-10:50	**Probability is the very guide of life (Cicero, 106-43 B.C.) and of toxicology (2024+)** Dr. Thomas Hartung, Center for Alternatives to Animal Testing (CAAT), Johns Hopkins University, USA
10:50-11:10	**From uncertainty to clarity: Using chemoinformatics to improve probabilistic risk assessment** Dr. Alexandra Maertens, Johns Hopkins University, USA
11:10-11:30	**Mode-of-action ontologies as the basis for setting up animal-free test batteries for hazard identification: Liver toxicity as a case study** Dr. Mathieu Vinken, Vrije Universiteit Brussel, Belgium
11:30-11:50	**Explainable artificial intelligence models for (eco)toxicity prediction using the adverse outcome pathway framework** Dr. Jinhee Choi, School of Environmental Engineering, University of Seoul, Korea
11:50-12:10	**Linking in vitro concentrations, internal tissue concentrations and external exposure through physiologically-based models** Dr. Susana Proença, esqLABS GmbH Am Sportplatz 26683 Saterland-Germany
12:00-13:30	**Lunch, Poster & Exhibition**

October 17, 2025 Afternoon

Session 25: Novel Strategies for Safety Assessment: A Paradigm Shift for the Future
Chairs: Dr. Tianyi Jiang, Pharmaceutical Sciences Department, China Innovation Center of Roche, China; Dr. Fengying Liu, Project Strategy Group, Global Nonclinical Safety and DMPK Department, Boehringer Ingelheim, Germany **Room 6**

13:30-14:00	**Strategies to minimize the use of non-human primates in drug development** Dr. Bianca Feyen, Johnson & Johnson Innovative Medicine
14:00-14:30	**Transgenic animal models for safety assessment** Dr. Eunice Musvasva, Roche Pharma Research & Early Development
14:30-15:00	**Alternative approaches for safety assessment** Dr. Yun Zhang, Drug Safety Team Lead (DSTL), Pfizer Pearl River, USA
15:00-15:30	**Nonclinical Safety Assessment of Peptide Therapeutics** Dr. Wei Wang, Director, Toxicology Project Lead, Eli Lilly and Company, USA
15:30-16:00	**Coffee Break, Poster & Exhibition**

Session 26: Next Generation Risk Assessment
Chairs: Dr. Philip Marx-Stoelting, German Federal Institute for Risk Assessment, Germany; Dr. Zhaoping Liu, National Food Safety Risk Assessment Center, China; Dr. RIVIERE Gilles, French Agency for food, environment and occupational health & safety (Anses) **Room 6**

16:00-16:25	**PARC** Dr. Philip Marx-Stoelting, German Federal Institute for Risk Assessment, Germany
16:25-16:50	**Using NGRA to analyse microcystin toxicity** Dr. Daniela Morais Leme, Federal University of Paraná (UFPR), Brazil
16:50-17:15	**The ASPIS Safety profiler Algorithm (ASPA)** Dr. Sylvia Escher, Fraunhofer ITEM, Germany
17:15-17:30	**Improving the EST for NGRA of DART substances** Dr. Seung-Jin Lee, Korea Institute of Toxicology (KIT), Korea

17:30-17:55 **AI-Driven text mining and NLP for advancing AOP development in chemical risk assessment: A PARC Perspective**
Dr. Vikas Kumar, Universitat Rovira i Virgili (URV), Spain

18:30-21:00 **Gala Dinner**

Workshop Program

Workshop 01: Drug Toxicology and Drug Safety Evaluation
Chair: Dr. Quanjun Wang, Drug Toxicology and Safety Evaluation Committee of the Chinese Society of Toxicology, China; Dr. Rakesh Dixit, Bionavigen Oncology, LLC, Maryland, USA; TMAB THERAPEUTICS, Houston, TX, USA; Regio Biosciences, Maryland, USA **Room 1**

13:30-13:55 **Developing non-clinical safety assessment strategy for new drug development**
Dr. Yun Zhang, Drug Safety Research & Development (DSRD), Pfizer Pearl River, USA

13:55-14:20 **Special considerations in conducting an enhanced pre- and postnatal development (ePPND) study in cynomolgus monkeys of biotherapeutics**
Dr. Linhai Qu, Saifu Laboratories Suzhou, China

14:20-14:45 **Key considerations and case studies in non-clinical research of cell therapy products for solid tumors**
Dr. Wei Yang, Chinese Society of Toxicology, China

14:45-15:10 **Safety of immunotherapy in cancer and autoimmune diseases: preclinical to clinical translation**
Dr. Rakesh Dixit, Unilever, Safety, Environment and Regulatory Sciences, UK

15:10-15:35 **Nonclinical safety strategies for cancer immunotherapies**
Dr. Weimin Chen, DABT, Associate Scientific Director, Johnson and Johnson USA

15:30-16:00 **Coffee Break, Poster & Exhibition**

Workshop 02: Application of Synchrotron Radiation Techniques in Toxicology
Chair: Dr. Xiao He, Institute of High Energy Physics, the Chinese Academy of Sciences, China **Room 1**

16:00-16:20 **Nanoscopic X-ray analytical techniques with synchrotron radiation to assess toxicity mechanisms of metals and nanomaterials in ecosystems**
Dr. Carlos Alberto Pérez, Brazilian Synchrotron Light Laboratory (LNLS), Brazilian Center for Research in Energy and Materials (CNPEM), Brazil

16:20-16:40 **Synchrotron radiation-based characterization of nanomaterial biotransformation: Environmental degradation and *in vivo* metabolism**
Dr. Xiao He, Institute of High Energy Physics, the Chinese Academy of Sciences, China

16:40-17:00 **Applications of synchrotron-based scanning transmission X-ray microscopy in toxicology**
Dr. Jian Wang, Canadian Light Source Inc., University of Saskatchewan, Canada

17:00-17:20 **Synchrotron-based X-ray microscopy for cell imaging**
Dr. Ying Zhu, Shanghai University, China

17:20-17:40 **X-ray investigation for aqueous – biomembrane interfaces at the beamline P08 of PETRA III**
Dr. Chen Shen, Deutsches Elektronen-Synchrotron DESY, Germany

17:40-18:00 **Synchrotron radiation- and MS-based analysis of nano-bio interface: Composition, structure, and effects**
Dr. Liming Wang, Institute of High Energy Physics, the Chinese Academy of Sciences, China

18:30-21:00 **Gala Dinner**

Workshop 03: Heavy Metal Toxicity and Human Health-1
Chairs: Dr. Chuanshu Huang, Oujiang Laboratory, Wenzhou, China; Dr. Bing-Hua Jiang, Academy of Medical Science, Zhengzhou University, China **Room 2**

13:30-13:45 **Arsenic and lead drive luminal to basal reprogramming in breast cancer via redox changes to the epigenome**
Dr. Marcelo G. Bonini, Northwestern University, USA

13:45-14:00 **Crosstalk between NRF1 and NRF2 in osteoclastogenesis and osteoporosis induced by prolonged cadmium exposure**
Dr. Jingbo PI, China Medical University, China

14:00-14:15 **Distinct mutational profile in mouse skin tumor generated by arsenic and ultraviolet radiation co-exposure**
Dr. Kejian Liu, Stony Brook University, USA

14:15-14:30 **Investigating the role of histone acetyltransferase MYST-mediated NLRP3 inflammasome activation in microglia during lead-induced neurotoxicity**
Dr. Jianbin Zhang, Fourth Military Medical University, China

14:30-14:45 **Environmental metal exposure and craniosynostosis risk**
Dr. Aihua Gu, Nanjing Medical University, China

14:45-15:00 **Exposure to heavy metals and cancer**
Dr. Ann Olsson, International Agency for Research on Cancer (IARC/WHO)

15:00-15:15 **Prenatal cadmium exposure drives Rapsn m6A modification to enhance multigenerational susceptibility of male infertility**
Dr. Hua Wang, Anhui Medical University, China

15:15-15:30 **The role of transcription factor Nrf2 in arsenic-induced malignant transformation and its underling mechanism**
Dr. Yuanyuan Xu, China Medical University, China

15:30-16:00 **Coffee Break, Poster & Exhibition**

Workshop 04: Heavy Metal Toxicity and Human Health-2
Chairs: Dr. Chuanshu Huang, Oujiang Laboratory, Wenzhou, China; Dr. Bing-Hua Jiang, Academy of Medical Science, Zhengzhou University, China; Dr. Mazhar Iqbal Zafar, Quaid-i-Azam University, Pakistan **Room 2**

16:00-16:15 **Risk-Based evaluation of heavy metals and disinfection byproducts in groundwater**
Dr. Mazhar Iqbal Zafar, Quaid-i-Azam University, Pakistan

16:15-16:30 **Effects of metal exposome in pregnant women during pregnancy and neurodevelopmental impairment in offspring**
Dr. Xiaobo Yang, Guangxi Medical University, China

16:30-16:45 **Epigenetic mechanisms of metal exposure in colorectal cancer**
Dr. Meilin Wang, Nanjing Medical University, China

16:45-17:00 **Hexavalent chromium inhibits myogenic differentiation and muscle regeneration**
Dr. Hong Sun, NYU Grossman School of Medicine, USA

17:00-17:15 **Cadmium exposure promotes the progress of chronic kidney disease through Hippo pathway**
Dr. Ming Gao, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China

17:15-17:30 **Dissection and mechanism study of environmental Pb on cognition and mood dysfunctions**
Dr. Huili Wang, Hefei University of Technology, China

17:30-17:45 **Arsenic discordantly regulates H3K9me3 and H3K27me3 by selective bias between PRC2.1 and PRC2.2**
Dr. Fei Chen, Stony Brook University, USA

17:45-18:00 **ER sensor protein PERK-coupled autophagy protects the cells from arsenite-induced apoptosis**
Dr. Lun Song, Beijing Institute of Basic Medical Sciences, China

18:30-21:00 **Gala Dinner**

Workshop 05: Understanding and Mitigating Occupational Heavy Metal Exposure: A Comprehensive Approach **Room 3**
Chairs: Dr. Vanitha Thurairasu, Department of Public Health, Ministry of Health, Malaysia; Dr. Tian Chen, Capital Medical University, China

13:30-13:50 **Advancements in heavy metal detection and monitoring techniques: Innovations, applications, and challenges**
Dr. Ahmad Shalihin Mohd Samin, Malaysia National Poison Centre, University Sains Malaysia, Malaysia

13:50-14:10 **The study on the repair effect and mechanism of small EVs derived from nasal mucosal mesenchymal stem cells in the treatment of manganese poisoning**
Dr. Tian Chen, Capital Medical University, China

14:10-14:30 **Ecological and human health impacts of heavy metal contamination: Challenges and mitigation strategies**
Dr. Vanitha Thurairasu, Department of Public Health, Ministry of Health, Malaysia

14:30-14:50 **Immune regulation patterns in response to environmental pollutant chromate exposure-induced genetic damage: A cross-sectional study applying machine learning methods**
Dr. Zekang Su, Chengddu Medical College, China

14:50-15:10 **Introduction to occupational heavy metal exposure: Pathways, risks, and bioaccumulation**
Dr. Indika Neluwa-Liyanage, University of Sri Jayewardenepura, Sri Lanka

15:10-15:30 **Hexavalent chromium inhalation exposure induces metabolic reprogramming underlying lung injury and partial endogenous repair**
Dr. Changmao Long, Nanchang University, China

15:30-16:00 **Coffee Break, Poster & Exhibition**

Workshop 06: High-throughput Technology and Health Effects of Heavy Meatal **Room 3**
Chair: Dr. Guang Jia, Peking University, China; Dr. Hideko Sone, Graduate School of Pharmaceutical Sciences, Yokohama University of Pharmacy, Japan

16:00-16:15 **High-Throughput Technologies to Elucidate Effects of Heavy Metals on Early-Life Neuro development and Airway/Lung Maturation**
Dr. Hideko Sone, Graduate School of Pharmaceutical Sciences, Yokohama University of Pharmacy, Japan

16:15-16:30 **Metabolism of chalcogen elements in animals**
Dr. Yasumitsu Ogra, Chiba University, Japan

16:30-16:45 **Serum metabolome associated with occupational multi-metal mixture exposure and ECG conduction disturbances in lead smelter workers**
Dr. Fankun Zhou, Nanchang University, China

16:45-17:00 **Hexavalent chromium alters diet-induced liver disease**
Dr. Jamie Lynn Wise, University of Louisville, USA

17:00-17:15 **Research on the toxicity and underlying mechanism of poorly soluble metal oxide nanomaterials**
Dr. Zhangjian Chen, Peking University, China

17:15-17:30 **Lead contamination in African countries**
Dr. Mayumi Ishizuka, Hokkaido University, Japan

17:30-17:45 **Respiratory toxicity and biomarkers of chromates: Insights from multi-Omics analysis**
Dr. Guiping Hu, Beihang University, China

17:45-18:00 **Elucidating mechanisms of nickel carcinogenicity to ensure safe use through robust risk assessments**
Dr. Samuel Buxton, Human Health Toxicologist, NiPERA Inc., Nickel Institute

18:30-21:00 **Gala Dinner**

Workshop 07: Strategic Assessment and Prioritization of Chemicals for Hazard and Risk Assessment **Room 4**
Chair: Dr. Virunya BHAT, World Health Organization

13:30-14:00 **A semi-quantitative risk-based prioritization scheme for chemicals of concern in Nordic countries**
Dr. Hans Sanderson, Aarhus University, Denmark

14:00-14:30 **Multi-country regulatory data-driven hazard assessment for the prioritization of chemicals**
Dr. Salmaan Inayat Hussain, Ipieca and the Malaysian Society of Toxicology, Malaysia

14:30-15:00 **Risk-based prioritization of chemicals**
Dr. Engr. Ana Trinidad F. Rivera, Food and Drug Administration, Philippines

15:00-15:30 **A tiered decision-making framework for identifying and prioritizing national chemical inventories for risk assessment**
Dr. Virunya BHAT, World Health Organization

15:30-16:00 **Coffee Break, Poster & Exhibition**

Workshop 08: Joining Forces towards the Human Exposome Project **Room 4**
Chair: Dr. Fenna Sillé, Johns Hopkins University, USA

16:00-16:25 **A call for a human exposome project**
Dr. Thomas Hartung, Center for Alternatives to Animal Testing (CAAT), Johns Hopkins University, Bloomberg School of Public Health, USA & University of Konstanz, Germany

16:25-16:50 **Recent advances in China national human biomonitoring and exposomics research**
Dr. Xiaoming Shi, Chinese Center for Disease Control and Prevention, China

16:50-17:15 **Rethinking health in the face of modern environmental risks: The role of exposomics**
Dr. Roel Vermeulen, Utrecht University, the Netherlands

17:15-17:40 **ExposomeX: Integrative exposomic platform expedites discovery of "exposure-biology-disease" nexus**
Dr. Mingliang Fang, Fudan University, China

17:40-18:05 **Global harmonization for exposomics: Opportunities and challenges**
Dr. Fenna Sillé, Johns Hopkins University, USA

18:30-21:00 **Gala Dinner**

Workshop 09: Protecting People & Planet: Integrating Human and Environmental Safety in Next Generation Risk Assessment (NGRA) **Room 5**
Chairs:Dr. Jin Li, Unilever, UK, Prof Shuangqing Peng, China

13:30-13:55 **Integrating Human and Environmental data streams to Support Safety Decisions**
Dr. Bruno Campos, Unilever-Safety, Environmental and Regulatory Science, UK

13:55-14:20 **Phosphoproteomics: A Cutting-Edge Tool for Analyzing Low-Dose Chemical Toxicity in NextGeneration Non-Animal Alternative Toxicology**
Dr. Ping Xu, Beijing Proteome Research Center, Institute of Lifeomics, China

14:20-14:45 **Knowledge-Driven Artificial Intelligence as an Effective Approach to Overcome the "Black Box" Dilemma**
Dr. Wei Shi, School of Environment, Nanjing University, China.

14:45-15:10	**PBTK-IVIVE-Enhanced Risk Assessment of EDCs Using In Vitro Effect Data** Dr. Yiping Xu, Research Center for Eco-Environmental Sciences (RCEES), Academy of Sciences (CAS), Chinese
15:10-15:35	**Next - Generation Risk Assessment (NGRA) Practice for Innovative Drugs via New Approach Methodologies (NAMs): Applying Alternative Methods in Preclinical Safety Evaluation** Dr. Xiaoyan Yuan, Medicilon Preclinical Research Co., Ltd. China
15:30-16:00	**Coffee Break, Poster & Exhibition**

Workshop 10: Aquatic Organisms as Models for Toxicity Evaluation of Emergent Pollutants — **Room 5**
Chairs: Dr. María Fernanda Cavieres, Universidad de Valparaíso, Chile
Dr. Zhengtao Liu, Chinese Research Academy of Environmental Sciences, China

16:00-16:15	**Introduction to the use of aquatic species for toxicity evaluation** Dr. María Fernanda Cavieres, Universidad de Valparaíso, Chile
16:15-16:30	**Study of the ecotoxic effect, development of PNEC and risk assessment of typical pollutants** Dr. Xiaonan Wang, Chinese Research Academy of Environmental Sciences
16:30-16:45	**Rotifers as experimental models for the study of estrogenicity** Dr. María Fernanda Cavieres, Universidad de Valparaíso, Chile
16:45-17:00	**Evaluation of pharmaceutical compounds using sea urchins as model organisms** Dr. Gabriela Aguirre Martínez, Universidad Arturo Prat,Chile
17:00-17:15	**Neurological damage by DEHP in zebrafish and its epigenetic mechanism** Shuhui Men, Chinese Research Academy of Environmental Sciences
17:15-17:30	**Molecular biomarkers in fish as tools for environmental monitoring** Dr. Rodrigo Orrego, Universidad de Antofagastat, Chile
17:30-17:45	**The use of aquatic trophic chain to study the role of microplastics as vectors of pesticides** Dr. Gabriela Aguirre Martínez, Universidad Arturo Prat, Chile
17:45-18:00	**Potential ecological risks of reclaimed water: Insights into systemic stress and reproductive threats in earthworms revealed by Omics and physiological analyses** Xinwei Wang, School of Environment, Nanjing University, China
18:30-21:00	**Gala Dinner**

October 18, 2025

Keynote Lecture

Morning, Conference Keynote Speech, Guobin hall

08:30-09:15	**Nanotoxicology: Expanding the cognitive boundaries of classical toxicology** Dr. Yuliang Zhao (Chinese Academy of Sciences, China)
09:15-10:00	**Advancing Chemical Research in Toxicology: From Genotoxicity to Gut Microbial Metabolism** Dr. Shana J. Sturla (ETH Zürich, Switzerland)
10:00-10:30	**Coffee Break, Poster & Exhibition**
10:30-11:15	**"Modern Toxicology" and "Poison Science" – An inseparable pair to sustain Modern Civilization** Dr. Jun Kanno (National Institute of Health Sciences/Nissan Tamagawa Hospital, Pathology, Medical Director, Japan)
11:15-12:00	**Taking global submissions to the next level** Dr. Marlies De Boeck (Johnson & Johnson Belgium)

Afternoon, October 18, 2025

Symposium Program

Session 27: Environmental Genotoxic Effects: DNA Damage Response and Cell Death Signaling — **Room 1**

Chair: Dr. Pingkun Zhou, Beijing Institute of Radiation Medicine, China

13:00-13:20 **Exploring molecular targets and therapeutic strategy in radiation-induced pulmonary fibrosis**
Dr. Yun-Sil Lee, Graduate School of Pharmaceutical Sciences, Ewha Womans University

13:20-13:40 **DNA repair and subsequent cancer risk ——"Can DNA repair backfire?**
Dr. Roger Godschalk, Department of Pharmacology & Toxicology, Maastricht University, the Netherlands

13:40-14:00 **Toxicological assessments based on intestine 3D organoids reveal environmental low-dose nanosized microplastics (NPs) exposure aggravates radiation-induced intestine injury**
Dr. Ruixue Huang, Central South University, China

14:00-14:15 **The mechanism of ECs-HSCs transition in bone marrow hematopoiesis repair after irradiation**
Dr. Qian Ran, Army Medical University, China

14:15-14:30 **Tetrahydrobiopterin metabolism in radiation-induced injuries: Preclinical studies and phase II trial**
Dr. Shuyu Zhang, Sichuan University, China

14:30-14:45 **Evaluation of oxidative stress and genetic instability among residents near mobile phone base stations in Germany**
Dr. Igor Belyaev, Head, Department of Radiobiology Cancer Research Institute, BMC SAS, Slovak Republic

14:45-15:00 **The effect of whole abdominal FLASH irradiation on the histopathology changes in mice and its potential mechanisms**
Dr. Zhifei Cao, The Second Affiliated Hospital of Soochow University, China

Session 28: RNA Dysregulations and Environmental Carcinogenesis — **Room 2**

Chairs: Dr. Yiguo Jiang, Guangzhou Medical University, China; Dr. Chengfeng Yang, Stony Brook University, Stony Brook, New York, USA

13:00-13:25 **Circular RNA dysregulation and epigenomic reprogramming by iAs in carcinogenesis**
Dr. Yvonne Fondufe-Mittendorf, Van Andel Institute, Grand Rapids, Michigan, USA

13:25-13:50 **Long noncoding RNA ABHD11-AS1 up-regulation promotes hexavalent chromium carcinogenesis**
Dr. Chengfeng Yang, Stony Brook University, Stony Brook, New York, USA

13:50-14:15 **Regulatory mechanisms of circular RNAs in carbon black nanoparticle-induced DNA damage and malignant transformation of human airway epithelial cells**
Dr. Yun Zhou, Guangzhou Medical University, Guangzhou, Guangdong, China

14:15-14:40 **Role of RNA m6A methylation dysregulation in arsenic and benzo(a)pyrene co-exposure-induced cell transformation and tumorigenesis**
Dr. Zhishan Wang, Stony Brook University, Stony Brook, New York, USA

14:40-15:05 **Mechanisms of environmental carcinogenesis: how hexavalent chromium induces DNA repair dysregulation targeting RNA and protein**
Dr. John Pierce Wise, Sr., University of Louisville, Lexington, Kentucky, USA

Session 29: Environmental Toxicology on Micro- and Nano-particulate Pollutants — **Room 3**

Chair: Dr. Sijie Lin, Tongji University, China

13:00-13:30 **Biotests and biosensors for the evaluation of ecosafety of novel (nano)materials**
Dr. Anne Kahru, National Institute of Chemical Physics and Biophysics, Estonia

13:30-14:00	**Immunotoxicology of 2D nanomaterials** Dr. Bengt Fadeel, Professor, Karolinska Institutet, Sweden
14:00-14:30	**High-throughput screening and safer-by-design and nanomaterials** Dr. Tian Xia, Professor, University of California, Los Angeles, USA
14:30-15:00	**Toxicology and health risks of particulate pollutants** Dr. Sijin Liu, Professor, Shandong First Medical University, China
15:00-15:30	**The impact of microplastics(MPs) exposure on intestinal health** Dr. Wenhui Liu, Southern University of Science and Technology, China

Session 30: Genetic Toxicology, Stem Cell Toxicology and Nanotoxicology
Chairs: Dr. Francesco Faiola, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China; Dr. Qunwei Zhang, University of Louisville, USA
Room 4

13:00-13:25	**Innovative approaches to assessing pollutant toxicity: From stem cells to AI** Dr. Francesco Faiola, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China
13:25-13:50	**Genotoxic and carcinogenic effects of metal nanoparticles** Dr. Qunwei Zhang, University of Louisville, USA
13:50-14:15	**The study on dual effect of tumor radiosensitization and normal tissue radioprotection based on DNA damage and repair mechanism** Dr. Zhihui Feng, Shandong University, China
14:15-14:40	**Environmental toxicants induce unexplained miscarriage** Dr. Huidong Zhang, The Eighth Affiliated Hospital, Sun Yat-sen University, China
14:40-15:05	**Evaluation and regulation on the genotoxicity of drug Impurities** Dr. Hairuo Wen, National Institutes for Food and Drug Control, National Center for Safety Evaluation of Drugs, China

Session 31: Clinical Translation and Practice of Hepatic Toxicology
Chairs: Dr. Haibo Song, National Center for ADR Monitoring of China, China
Dr. Jiabo Wang, the School of Chinese Medicine, Capital Medical University.
Dr. Yufeng Qin, Nanjing Medical University, China
Room 5

13:00-13:30	**Challenges in drug-induced liver injury: Paving the way for precision medicine** Dr. Raúl J. Andrade, University of Malaga, Spain
13:30-14:00	**DILI: Molecular biology to clinical application** Dr. Guru P. Aithal, University of Nottingham, UK
14:00-14:30	**Drug-induced liver injury in children: A nationwide cohort study from China** Dr. Rongtao Lai, Shanghai Jiaotong University School of Medicine, China
14:30-15:00	**Why do microplastics aggravate cholestatic liver disease? The NLRP3-mediated intestinal barrier integrity damage matter** Dr. Fang Xiao, Central South University, China

Session 32: Young Toxicologist and Rising Star Forum
Chair: CST
Room 6

Keynote Speakers

Guibin Jiang, Professor

State Key Laboratory of Environmental Chemistry and Ecotoxicology,

Research Center for Eco-Environmental Sciences,

Chinese Academy of Sciences, China

Title: New pollutants study in China: History, progress and challenges

Bio: Professor Jiang Guibin graduated from Shandong University in January 1982 and received his master's and doctoral degrees from the Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences in 1987 and 1991. From 1989 to 1991 and 1994 to 1996, he was a visiting scholar and postdoctoral researcher at the National Research Council of Canada and the University of Antwerp, Belgium, respectively. Jiang's research is mainly focused on analytical development, environmental fate, toxicology and health effects of persistent organic pollutants (POPs), endocrine disruptors, organometallic compounds, nanomaterials and new pollutants. He has contributed more than 1300 papers in peer-reviewed international scientific journals with 70,000 times of citations (web of science) and published 26 monographs. He is now a founding editor-in-chief of the ACS journal Environment & Health (E&H).

Abstract: The governance of new pollutants has become the primary policy for environmental protection in China. New pollutant is an emerging scientific term, in analogy to contaminants of emerging concern, which refers to any synthetic or naturally occurring chemical or micro-organism that can cause significant known, or suspected toxic effects and health hazards when deposited in the environment. At present, the new pollutant analogues of extensive concern include persistent organic pollutants, endocrine disruptor compounds, and antibiotics. In general, the rapid growth in the use of synthetic chemicals is the underlying cause of the new pollutant issue. A significant number of chemical substances that are environmentally persistent, bio-accumulative and toxic are becoming a potential threat to the ecosystem and public health. International scientific research on New Pollutants has been developing rapidly in the 2000s, and it is well recognized that the rapid development of analytical instrumentation and analytical techniques has been an intrinsic driving force. As quoted from a presentative review article (Science, 2020, 367, 388): "Along with the increased use of chemicals in commerce and the advances in analytical methodology, rising attention is being paid to a variety of chemicals that have not been detected and are thereby not regulated". It is also linked with the research on traditional environment pollutants, uniting the efforts of Chinese scholars for decades. For instance, the studies on screening and control for environmental endocrine disruptors were funded by the National 863 Program since 1999. A prospective exploration of the pollution characteristics, interfacial behavior, and health effects of emerging pollutants (i.e., PBDEs, PFAS and SCCP) has been realized with the financial support of the National 973 Program during 2003-2018. Basic research is a systemic endeavor that could be a key underpinning of the New Pollutants governance initiative. Many topics of this international toxicology conference, such as analytical toxicology, computational toxicology, biochemical and molecular toxicology, epigenetic toxicology, drug and food safety and risk assessment, as well as alternative approaches in toxicology, are elements that should be focused on for support in basic science research on New Pollutants. Along with the development of new approach methodologies such as machine learning and big data analytics, high-throughput toxicology testing, quantitative structure-property relationship modeling, and stem cell research will play a critical role. Future challenges also lie in a number of areas, for instance, the identification of key toxicants from complex matrices, the scientific assessment of the effects and mechanisms of combined exposures, the population exposure levels and safety thresholds for new pollutants, and the causal links between environmental exposures and ecological/health risks.

Thomas Hartung, Professor

1 Center for Alternatives to Animal Testing (CAAT), Johns Hopkins University, Bloomberg School of Public Health, Baltimore, MD, USA;

2 CAAT Europe, University of Konstanz, Konstanz, Germany

Title: Toxicology – the Now, the New and the Next

Bio: Thomas Hartung, MD PhD, is professor at Johns Hopkins Bloomberg School of Public Health in Environmental Health & Engineering as well as Molecular Microbiology and Immunology, the Whiting School of Engineering and the School of Medicine In Cellular and Molecular Medicine, as well as Georgetown University, Washington D.C., in Environmental Metrology and Policy, and University of Konstanz, Germany, in Pharmacology and Toxicology; he also is Director of Centers for Alternatives to Animal Testing (CAAT) in the US and Europe and Field Chief Editor of Frontiers in AI. He authored 730+ scientific publications with 52,000+ citations (h-index 124) and his COURSERA toxicology classes had 22,000+ active learners.

Abstract: Toxicology stands at a historic inflection point. In the wake of technological innovation, mounting societal demands, and a pressing need for human relevance, the discipline is undergoing a profound transformation. This keynote will reflect on the Now—the current state of toxicological science, still heavily reliant on animal testing, fragmented data, and limited human predictivity. It will then pivot to the New—emerging paradigms that redefine toxicology through new approach methodologies (NAMs), including organoid(-on-chip) systems, integrated omics, high-content imaging, and artificial intelligence. These tools are already reshaping regulatory frameworks and enabling evidence-based assessments rooted in mechanistic insights and human biology. Building trust into them and their formal validation, however, represent major challenges. Finally, the Next will be outlined: a bold vision for a predictive, preventive, and personalized toxicology. This includes the integration of microphysiological systems (MPS), exposomics, and agentic AI into a global infrastructure for health risk assessment—aiming ultimately at a Human Exposome Project and Green Toxicology, i.e., benign-by-design chemicals and early testing in product development. Emphasis will be placed on establishing reproducibility standards (e.g., GCCP 2.0, GIVReSt), trust-building in AI applications, and a shift toward probabilistic, systems-based assessments.The keynote will also highlight the organizational and cultural shifts needed to accelerate this transition—from validation bottlenecks to transdisciplinary collaboration and public-private partnerships. By connecting scientific innovation with regulatory foresight, toxicology can lead the way toward a truly 21st-century biomedical and environmental health science.

Marc Pallardy, Professor

Dean of the Faculty of Pharmacy at University Paris-Saclay

Title: 50 years of Immunotoxicology: Past, present and future

Bio: Full professor and head of the Department of toxicology (Faculty of Pharmacy, University of Paris-Saclay) since 1997. Head of the team 2 “Drug and Chemical Allergy, Immunotoxicology and Immunopathology”, INSERM UMR 996. Member of the EUROTOX Executive committee and chairman of the EUROTOX Education committee. Member of the HESI board of trustees and co-chairman of the “Immunogenicity Technical Committee”. He has chaired the IMI ABIRISK consortium on the immunogenicity of therapeutic proteins (2012-2018).

He was Dean of the Faculty of Pharmacy, University Paris-Saclay from 2015 to 2025 and ViceDean for research from 2000 to 2015.Marc Pallardy has 185 publications in international peer-reviewed journals and more than 120 invited presentations.

Abstract: Immunotoxicology is a discipline that studies the interactions between chemical, physical or biological substances and the immune system. Where does the term "Immunotoxicology" come from? It is commonly accepted that the origin of taking-into-account the effects on the immune system linked to exposure to environmental products is a publication from the RIVM at the end of the 1970s (Vos JG. CRC Crit Rev Toxicol. 1977). This publication primarily concerned immunosuppression and its possible consequences on human health. As a result, the bulk of research for many years concerned understanding the mechanisms of immunosuppression to environmental pollutants (dioxin, PCB, HPA, etc.) and developing assessment models. However, it is only very recently that exposure to environmental products has been linked to measurable effects on human health with PFAS and upper airborne infections but also the recent classification of PFOA in Group 1 of the IARC classification of carcinogens, partly linked to its immunosuppressive mechanisms.

But the understanding of immunity, the discovery of cytokines/chemokines and their production in recombinant form, the culture of immune cells, and the identification of numerous immune cells using monoclonal antibodies have made possible to address other aspects of immunotoxicology. This is the case for allergy mechanisms with the emergence of the pi-concept developed by W. Pichler and the identification of T lymphocytes recognizing small molecules such as beta-lactams. But understanding immunotoxic effects over time is also achieved through accidents or side effects linked to the use of products that modulate immunity: therapeutic antibodies and "cytokine release" "immune checkpoint inhibitors" and "autoimmune" diseases. Recent advances in research have finally made possible to identify the “Key Characteristics” that allow the identification of an immunotoxic product and also to define an AOP (Adverse Outcome Pathway) for skin allergy following exposure to chemical products.

Michael Aschner, Professor

Department of Molecular Pharmacology, Albert Einstein College of Medicine, the USA, michael.aschner@einsteinmed.edu

Title: A 40 Year journey on the neurotoxicity of heavy metals: From worms to humans

Bio: Dr. Aschner will focus on several topics related to pertinent public health issues in China, namely exposures to mercury and manganese. He will address to role of: (1) modulation of C. elegans genes (aat, skn-1, daf-16) that are homologous to mammalian regulators of methylmercury (MeHg) uptake and cellular resistance will modify dopaminergic neurodegeneration in response to mercury exposure, (2) Nrf2 (a master regulator of antioxidant responses) in coordinating the upregulation of cytoprotective genes that combat mercury-induced oxidative injury, and genetic and biochemical changes that negatively impact upon Nrf2 function, (3) PARK2, a strong PD genetic risk factor, in altering neuronal vulnerability to modifiers of cellular manganese status, particularly at the level of mitochondrial dysfunction and oxidative stress. He will emphasize key findings from his 40-year scientific career that (1) shed novel mechanistic insight into metal-induced neurodegeneration; (2) identify targets for genetic or pharmacologic modulation of neurodegenerative disorders; (3) increase knowledge of the pathway involved in oxidative stress; (4) develop improved research models for human disease using knowledge of environmental sciences.

Abstract: Over the past four decades, research led by Dr. Michael Aschner has fundamentally advanced our understanding of heavy metal neurotoxicity across biological systems—from simple invertebrate models to complex mammalian brains. This body of work has elucidated the molecular, cellular, and systemic effects of metals such as methylmercury, lead, manganese, and arsenic, leveraging a multidisciplinary toolkit spanning *C. elegans*, rodents, and human studies. Pioneering use of *C. elegans* enabled high-throughput insights into metal-induced oxidative stress, mitochondrial dysfunction, and dopaminergic neurodegeneration, offering mechanistic parallels to human neuropathologies such as Parkinson's disease. In parallel, translational investigations have characterized critical windows of susceptibility, neurodevelopmental impacts, and gene-environment interactions in mammalian and human populations. Through integration of molecular neurobiology, toxicogenomics, and epidemiology, this research continuum has informed risk assessment, therapeutic targeting, and public health policy. Dr. Aschner's work exemplifies the power of model organisms in uncovering conserved neurotoxic pathways, laying the foundation for precision neurotoxicology in the era of environmental health.

Robert Landsiedel
BASF, Germany, President of German Toxicology Society

Title: Avoiding a reproducibility crisis in regulatory toxicology – on the fundamental role of standardisation and ring trials

Bio: Robert Landsiedel is Vice President of special toxicology at BASF SE in Ludwigshafen am Rhein, Germany. He previously worked for BASF in development, regulatory and management roles in the USA and in Japan. He is an associate professor (Privatdozent) at the Free University of Berlin and has further teaching positions in Leipzig and Landau. His team at BASF is performing more than 500 regulatory toxicological studies per year under GLP, GIVIMP and ISO17020 as well as screenings for product development. In addition, they are developing new toxicological methods and testing strategies. They have received more than 20 external grants (German BMBF- and EU-funded) and their work has been recognized by several awards including the German Research Award for the development of alternative methods, German GT-Toxicology Award, the Responsible Care Award of the European Chemical Industry Council (Cefic) and the Herbert E. Stokinger Awards of the American Conference of Governmental Industrial Hygienists (ACGIH). Robert received a doctorate degree in chemistry (Dr. rer. nat.), a postgraduate degree in toxicology, and a habilitation in pharmacology and toxicology. He is a Diplomate of the American Board of Toxicology (DABT) and a Fellow of American Academy of Toxicological Sciences (FATS). He was appointed member of the European Commission's Scientific Committee for Occupational Exposure Levels (SCOEL) where he chaired the methodology working group until the Committee's decommissioning in 2019. Currently he is the chair for human toxicology of German National Hub within the "Partnership for the Assessment of Risk from Chemicals (PARC), the chairman of the German Toxicology Society (GT) and vice-president of the German Society for experimental and clinical Pharmacology and Toxicology (DGPT).

Abstract: The ongoing transition from chemical hazard and risk assessment based on animal studies to assessment relying mostly on non-animal data, requires a multitude of novel experimental methods, and this means that guidance on the validation and standardization of test methods intended for international applicability and acceptance needs to be updated. These so-called new approach methodologies (NAMs) must be applicable to the chemical regulatory domain and provide reliable data which are relevant to hazard and risk assessment. Confidence in and use of NAMs will depend on their reliability and relevance, and both are thoroughly assessed by validation. Validation demands, however, time and resources. As updates on validation guidance are conducted, the valuable components must be kept: Reliable data are and will remain fundamental. In 2016 the scientific community was made aware of the general crisis in scientific reproducibility - validated methods must not fall into this. In this commentary, we emphasize the central importance of ring trials in the validation of experimental methods. Ring trials are sometimes considered to be a major hold-up with little value added to the validation. Here we clarify that ring trials are indispensable to demonstrate the robustness and reproducibility of a new method. Further, that methods do fail in method transfer and ring trials due to different stumbling blocks, but these provide learnings to ensure the robustness of new methods. At the same time, we identify what it would take to perform ring trials more efficiently, and how ring trials fit into the much-needed update to the guidance on the validation of NAMs.

Lin Lu

Dean of Peking University Sixth Hospital, China

Title: Medical potential of cannabis and psychedelics: Policy, challenges and future irection.

Bio: Academician of Chinese Academy of Sciences
Chairman of Beijing Returned Overseas Chinese Federation
Director of National Medical Center for Mental Disorders
President of Shandong First Medical University

Prof. Lin Lu also works as member of International Narcotics Control Board, the director of National Clinical Research Center for Mental Disorders in China, and Vice President of the Chinese Preventive Medicine Association. His research focuses on the clinical diagnosis and treatment techniques as well as pathogenesis of mental diseases, and has made a series of achievements of great significance. He has published over 400 peer-reviewed articles with a total citation of more than 35000 times.

Yuliang Zhao
Chinese Academy of Sciences, China

Title: Nanotoxicology: Expanding the cognitive boundaries of classical toxicology

Bio: Professor Zhao is a Distinguished Professor and an Academician of the Chinese Academy of Sciences. He currently serves as the President of the Chinese Society for Biomaterials, the President of the GBA National Institute for Nanotechnology Innovation (CanNano), and the Director of the Key Laboratory for Nanotechnology Products Evaluation and Regulation under the National Medical Products Administration (NMPA, China's FDA). Professor Zhao is a pioneer in nanotoxicology research, focusing on the toxicological chemistry of nano-biomaterials. His work aims to elucidate how engineered nano-biomaterials, at the nanoscale, interact with cells, tissues, and biomolecules, and how these interactions translate into biological effects in vivo. He has published 659 peer-reviewed articles in international journals, with over 85,000 citations and an H-index of 153 (Google Scholar). He is the author of *Nanotoxicology*, the first global textbook on the subject, published in the United States in 2007. From 2006 to 2010, he led a team of experts from 16 universities to develop a comprehensive 10-volume book series on nanotoxicology. This seminal work has significantly advanced the understanding of nanomaterial safety and played a pivotal role in shaping evaluation protocols, particularly in facilitating the regulatory approval of nanomedicine and nano-device products by the NMPA (China's FDA).

Abstract: Nanotoxicology integrates fundamental chemical principles with biological insights to elucidate the mechanisms underlying the toxicological effects of materials at the nanoscale. As a rapidly evolving frontier in toxicology, nanotoxicology has reshaped our understanding of toxicity, with broad implications across toxicology, biomaterials, medicine, and drug delivery. Over the past two decades, our research has uncovered pivotal phenomena—including size-dependent toxicity, protein corona formation, the stealth effect, and the far-reaching effect—that have redefined the paradigms of nanomaterial safety assessment and the rational design of functional nanomaterials. This presentation aims to expand the boundaries of classical toxicology by addressing the mechanisms underlying nanotoxicological phenomena, with a focus on how nano-factors such as nano-sizes, nano-shapes, nano-surface (like surface defects electron transfer dynamics at nano–bio interfaces), AI-assisted theoretical modeling, proposing and experimentally validating a comprehensive theoretical framework for nanotoxicology. This work seeks to redefine nanotoxicological principles, fostering safer biomedical nanomaterials by rational design to advance next-generation nanomedicines and biomedical applications.

Shana J. Sturla
ETH Zürich, Switzerland, American Chemical Society Division of Chemical Toxicology

Title: Advancing chemical research in toxicology: From genotoxicity to gut microbial metabolism

Bio: Prof. Shana J. Sturla leads the Laboratory of Toxicology at the ETH Zürich in Switzerland. The goal of her research is to promote chemical, food and drug safety by elucidating the chemical basis of mutagenesis and toxicity, using innovative bioanalysis strategies for in vitro testing. Key areas that could be presented address environmental toxicants related to human disease, DNA damage and mutagenesis, drug resistance in cancer therapy and biotransformation of xenobiotics by human gut microbiota. Prof. Sturla is the editor-in-chief of Chemical Research in Toxicology. Chemical Research in Toxicology provides knowledge and innovative approaches needed to promote intelligent solutions for human and environmental health on the basis of a chemical and molecular understanding of toxicity. This research relies on creating and applying cutting-edge bioanalytical tools such as mass spectrometry for metabolomics and proteomics, and genome-wide analysis.

Jun Kanno
National Institute of Health Sciences (NIHS), Visiting Researcher, Emeritus Researcher; Nissan Tamagawa Hospital, Pathology, Medical Director; Visiting Professor, University of Tsukuba, Faculty of Medicine; Visiting Research Fellow, Systems Biology Institute (SBI)

Title: "Modern Toxicology" and “Poison Science” – An inseparable pair to sustain Modern Civilization

Bio: From 1986, Dr. Kanno served on the faculty at Pathology Department of Tokyo Medical and Dental University and was a Visiting Scientist of NIEHS (1991–1993). In 1997, he moved to National Institute of Health Sciences (NIHS) as a section chief, and from 2002 as the Head of the Division of Cellular & Molecular Toxicology, specialize in general and experimental pathology and toxicology. He served as the Director of the Japan Bioassay Research Center (2016-2019), and from 2020, he is the Visiting Researcher/ Emeritus Researcher of the NIHS, from 2021, Medical Director of Pathology at Nissan Tamagawa Hospital, and from 2023, Visiting Senior Fellow of the Systems Biology Institute. His research includes molecular toxicology on “signal toxicity” of central nervous system, “Percellome” toxicogenomics and nanomatrials toxicology. He has served as the President of Japanese Society of Toxicology and of IUTOX.

Abstract: Since time immemorial, humans have consumed plants, animals, and other prey from the mountains and seas, and accumulated knowledge about what is safe to eat and touch. This knowledge was the beginning of the "science" of "poison ". "Poison Science" studies the biological mechanisms of poisons down to the molecular level along with the making of the Poison List. In this process, a variety of test methods have developed.

In contrast, “Modern Toxicology" is a scholarly system to prevent the new products created by civilization from causing harm to the civilized society. Modern civilization creates new products to make life better for everyone. However, such products bring harm to people and/or environment that their creators do not intend.

“Modern Toxicology” uses the knowledge and experience of “Poison Science” to identify these unintended adverse effects of the new products and provide such information to the creators/manufacturers and consumers before the new products cause harm to the civilized society; this process brings a win-win situation to both industrial promotion and safety assurance.

Here, as an example, we would like to present the relation between asbestos (poison) and carbon nanotube (new product), and our approach to comprehensively analyzing unknown toxicities of new products (including PFAS) using Percellome Toxicogenomics.

Marlies De Boeck, PhD
Preclinical Sciences and Translational Safety
Johnson & Johnson Innovative Medicine, Belgium

Title: Taking Global Submissions to the next level

Bio: Dr. Marlies De Boeck is currently EU head of Submissions within Preclinical Sciences & Translational Safety at Johnson & Johnson Innovative Medicine (J&JIM), in Beerse, Belgium. She is leading a team of nonclinical scientific writers coordinating global regulatory submissions across the different regions in the context of clinical trial and marketing applications throughout the pharmaceutical development phases and covering different therapeutic indications and modalities. She combines drug development, regulatory strategy and framework expertise to drive worldwide submissions.

During 20+ years at J&JIM, Marlies has filled several roles in the Preclinical Safety Department, including positions within genetic toxicology, discovery safety screening, project management, nonclinical writing and as study director, nonclinical safety project leader and people manager. She started her career at J&JIM as a postdoctoral researcher. Marlies holds an MS in Biology and a PhD in Sciences from the Free University of Brussels (VUB).

Marlies has been active in scientific societies including the European and Belgian Environmental Mutagen Society (EEMS, BEMS) and has been involved in collaborative scientific initiatives including those led by the European Federation of Pharmaceutical Industries and Associations (EFPIA), International Workshop on Genotoxicity Testing (IWGT) and Organization for Economic Cooperation and Development (OECD).

Abstract: In the pharmaceutical industry, nonclinical submissions are essential for demonstrating the safety and efficacy of new drugs and other therapies, supporting the transition from preclinical to clinical development phases, and ultimately securing market authorization. They involve providing nonclinical pharmacology, pharmacokinetics and toxicology study data summaries, their integration and interpretation to global regulatory agencies.

The regulatory requirements are primarily driven by the International Council for Harmonisation (ICH) guidelines, yet regional differences sometimes exist in the interpretation of these guidelines. In addition, for the emerging novel modality therapies, existing guidelines may not fully inform the nonclinical testing approach. This may lead to specific nonclinical packages being prepared to adhere to country specific requirements and may require prior discussion and agreement with health authorities. An example of such specific standards is the Standard for Exchange of Nonclinical Data (SEND) needed for USA FDA submissions which are recently also being requested by some other countries.

To increase operational efficiency, consistency and robustness of these submissions, Johson & Johnson Innovative Medicine is exploring innovative solutions by integrating advanced AI/ML technologies. These tools aim to streamline the generation of nonclinical summary documents and enhance their quality control, ensuring faster, more compliant, and globally harmonized submissions. This approach represents a significant leap forward — taking nonclinical submission processes to the next level and paving the way for more agile and intelligent regulatory pathways worldwide.