

(사)한국독성학회/한국환경성독물연변이발암원학회

2025 제41차 정기학술대회

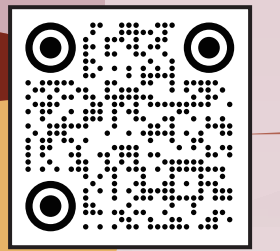
미래 세대를 위한 독성학: 안전을 넘어 건강하고 지속가능한 사회로

The 41st Annual Meeting of KSOT/KEMS

# Beyond Safety: Advancing Toxicology for a Healthier Future and Sustainable Society

November 17 (Mon) ~ 19 (Wed), 2025

- Venue : International Convention Center Jeju, Korea



The 41st Annual Meeting App.

## Plenary Lectures



Next-Generation Predictive Toxicology: Scaling Zebrafish in vivo Phenotypic Screening

Robyn L. Tanguay  
Vice President-Elect of SOT, Oregon State University, USA



Detoxification of Chalcogen Elements, Selenium and Tellurium in Animals

Yasumitsu Ogra  
Chiba University, Japan



Advancing Standards to Support Translation of Stem Cells and Organoids

Tongbiao Zhao  
Chinese Academy of Sciences, Beijing, China

## Special Lectures



Bridging Science, Risk Assessment, and Regulatory Challenges in Inhalation Toxicology: Titanium Dioxide and Beyond

Gustav Bruer  
Fraunhofer ITEM, Germany



80th Anniversary of Liberation : The History and Future of Toxicology in Korea

Ki Taek Nam  
Yonsei University, Korea

## Scientific Sessions

**Session 1:** (JSOT-KSOT Joint Session) Human-relevant Toxicology: Stem Cells, Organoids, & MPS

**Session 2:** Reproductive Toxicity

**Session 3:** Development of Integrated Omics-based Safety Prediction Evaluation Technology Using AI

**Session 4:** Innovative Technologies in Toxicology

**Session 5:** AI Application in Toxicology

**Session 6:** Recent Cosmetics Risk Assessment

**Session 7:** Organoid-based Modeling for Respiratory Toxicity Assessment

**Session 8:** Young Scientist Forum

**Session 9:** KSOT Poster of Distinction


## Award Lecture

KSOT Unbong Academic Research Award Presentation

주최  (사)한국독성학회/한국환경성독물연변이발암원학회

 식품의약품안전처 · 식품의약품안전평가원

후원  국가독성과학연구소  
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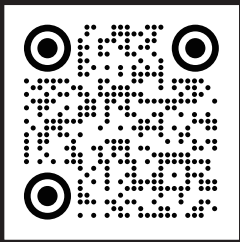
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November 17, 2025 (Monday)

12:00	Registration	
12:00-13:00	Council Meeting	
13:00-13:20	Welcome Remarks Kyung-Chul Choi (President of KSOT, Chungbuk National University) Seogyoun Kang (Director General, National Institute of Food and Drug Safety Evaluation) Jeong-Doo Heo (President of Korea Institute of Toxicology)	
13:20-14:00	Plenary Lecture I	Eng
	Chairperson: Young-Jin Chun (Chung-Ang University)	
	Next-Generation Predictive Toxicology: Scaling Zebrafish in vivo Phenotypic Screening Robyn L. Tanguay (Vice President-Elect of SOT, Oregon State University, USA)	
14:00-15:30	Session 1: (JSOT-KSOT Joint Session) Human-relevant Toxicology: Stem Cells, Organoids, & MPS	Eng
	Chairperson: Minsoo Noh (Seoul National University)	
	Session 2: Reproductive Toxicity	Samda Hall
	Chairperson: Jeong-Hwan Che (Seoul National University Hospital)	
14:00-14:25	Development of an Intestinal Model for Drug Discovery Using iPSC Cell, Organoid, and Organ-on-a-Chip Technologies Kazuo Takayama (Institute of Science Tokyo, Japan)	
14:25-14:45	Development of hiPSC-Derived Liver Organoids as an Alternative Toxicity Testing Model Han-Jin Park (Korea Institute of Toxicology)	
14:45-15:10	Practical Applications and Challenges of Safety Evaluation Using Complex in vitro Models in the Pharmaceutical Industry Takuma Iguchi (Daiichi Sankyo Co., Ltd., Japan)	
15:10-15:30	Neurotoxicity Evaluation of Spironolactone Using Neural Stem Cells Hyun-Jung Kim (Chung-Ang University)	
15:30-15:50	Coffee Break / Poster Session	
15:50-16:30	Plenary Lecture II	Eng
	Chairperson: Keon Wook Kang (Seoul National University)	
	Detoxification of Chalcogen Elements, Selenium and Tellurium in Animals Yasumitsu Ogra (Chiba University, Japan)	
16:30-18:00	Session 3: Development of Integrated Omics-based Safety Prediction Evaluation Technology Using AI (Sponsored by NIFDS)	Halla Hall
	Chairperson: SangAeh Park (National Institute of Food and Drug Safety Evaluation)	
	Session 4: Innovative Technologies in Toxicology	Samda Hall
	Chairperson: Hyun-Jung Kim (Chung-Ang University)	
16:30-17:00	A Cohort Study Integrating Multi-Omics for Precision Therapeutics in Cardiovascular, Kidney, and Metabolic Health Soo-Heon Kwak (Seoul National University Hospital)	
17:00-17:30	Data Science Approaches to Multi-Omics Analysis for Drug Response and Toxicity Prediction Seungeun Lee (Seoul National University)	
17:30-18:00	Translational Metabolomics: LC-MS/MS-Driven Biomarker Discovery in Diabetic Kidney Disease and Glaucoma Hyunbeom Lee (Korea Institute of Science and Technology)	
18:00-18:20	General Assembly	Halla Hall
18:20	Banquet	Ocean View Hall

November 18, 2025 (Tuesday)

09:00-09:30	KSOT Unbong Academic Research Award Presentation	
	Chairperson: Kyu-Bong Kim (Dankook University)	
	To be announced	
09:30-11:00	Session 5: AI Application in Toxicology	Halla Hall
	Chairperson: Ji-Eun Kim (The Catholic University of Korea)	
	Session 6: Recent Cosmetics Risk Assessment	Samda Hall
	Chairperson: Kyung-Min Lim (Ewha Womans University)	
09:30-10:00	Adverse Outcome Pathway Framework Based Explainable AI Model for Toxicity Prediction Jinhee Choi (University of Seoul)	
10:00-10:30	Toxicity Prediction in AI Agent Era Hyun Kil Shin (Korea Institute of Toxicology)	
10:30-11:00	Machine Learning-driven Prediction of Clinical Toxicity from a Curated Database Myeong Gyu Kim (Ewha Womans University)	
09:30-10:00	Advancement of Cosmetic Risk Assessment : Current Trends and Challenges in Cosmetics Ingredients (Others) and Colorants Jung Dae Lee (Dankook University)	
10:00-10:30	Safety Assessment of Cosmetic Ingredients: Practical Case Studies Woo-hyuck Choi (LG H&H)	
10:30-11:00	Recent Trends in New Approach Methodologies for Safety Assessment of Cosmetics Taehyung Yoon (National Institute of Food and Drug Safety Evaluation)	
11:00-11:20	Coffee Break	
11:20-12:00	Plenary Lecture III	Eng
	Chairperson: Mi-Kyoung Kwak (The Catholic University of Korea)	
	Advancing Standards to Support Translation of Stem Cells and Organoids Tongbiao Zhao (Chinese Academy of Sciences, Beijing, China)	
12:00-13:30	Lunch Poster Session	
13:30-14:10	Special Lecture I	Eng
	Chairperson: Kyuhong Lee (Korea Institute of Toxicology)	
	Special Lecture II	Samda Hall
	Chairperson: Donghak Kim (Konkuk University)	
	Bridging Science, Risk Assessment, and Regulatory Challenges in Inhalation Toxicology: Titanium Dioxide and Beyond Gustav Bruer (Fraunhofer ITEM, Germany)	
	80th Anniversary of Liberation : The History and Future of Toxicology in Korea Ki Taek Nam (Yonsei University)	
14:10-15:40	Session 7: Organoid-based Modeling for Respiratory Toxicity Assessment	Halla Hall
	Chairperson: Taehoon Shin (Jeju National University)	
	Session 8: Young Scientist Forum	Samda Hall
	Chairperson: Bumseok Kim (Jeonbuk National University)	
14:10-14:40	Lung Organoids as a Model for Unraveling the Cellular and Molecular Toxicity of Air Pollutants Seok-Ho Hong (Kangwon National University)	
14:40-15:10	Organoid Modelling of Human Alveolar Development and Lung Diseases Kyungtae Lim (Korea University)	
15:10-15:40	Toxicity Assessment of Industrial Chemical Substances in the Respiratory System Se-Ran Yang (Kangwon National University)	
14:10-14:35	3D Human Liver Organoids to Model "Liver Disease in a Dish" Hyun Young Kim (Dankook University)	
14:35-15:00	Induction of IgE in Non-allergic Conditions Jaechul Lim (Seoul National University)	
15:00-15:25	Next-Generation Gene and Cell Therapeutics in Alzheimer's Disease Hanseul Park (Chungbuk National University)	
15:25-15:50	Leveraging Chief Cell-derived Organoids to Study Cancer Development Mechanisms Haengdueng Jeong (Hanyang University)	
15:50-16:10	Awards Ceremony & Closing Remarks	

November 19, 2025 (Wednesday)

09:00-11:00	Session 9: KSOT Poster of Distinction	Rm. 202
	Chairperson: Doyoung Kwon (Jeju National University) Ji Won Kim (Jeju National University)	
	Eight awardees oral presentation	