



(사)한국독성학회 Korean Society of Toxicology
한국환경성돌연변이발암원학회 Korean Environmental Mutagen Society



The 42nd Annual Meeting App.

2026 제42차 정기학술대회

The 42nd Annual Meeting of KSOT/KEMS

신약개발 전주기 안전성 평가와 규제독성

From Drug Discovery to Approval: Safety Assessment and Regulatory Toxicology

November 2 (Mon) ~ 4 (Wed), 2026

Venue : Convention Hall, BEXCO, Busan, Korea

Plenary Lectures



Simple Solutions for Complex Problems: Mixtures and Cumulative Risk

Cynthia V. Rider

President of SOT, National Institute of Environmental Health Sciences, USA



Pathomimetic Human Gut-on-a-Chip for Next-Generation Toxicology: Advancing New Approach Methodologies (NAMs) from Disease Modeling to Precision Safety Assessment

Hyun Jung Kim

Cleveland Clinic, USA

Special Lectures



NAMs and Read-Across in Food Safety Assessment: Current Applications and Challenges in Japan

Akihiko Hirose

President of JSOT, Chemicals Evaluation and Research Institute, Japan



Principles and Practice of First-in-Human Dose Selection

Jangik Lee

Seoul National University, Korea

Award Lecture

KSOT Unbong Academic Research Award Presentation

Environmental Exposures and Health:
Insights from Cigarette Smoke and Microplastics
Bumseok Kim (Jeonbuk National University)

Scientific Sessions

Session 1: Joint Session with KSNS - Industry Perspectives on Nonclinical Safety Assessment Across Diverse Pharmaceuticals

Session 2: Development of Integrated Omics-Based Biomarkers for Efficacy and Safety Prediction

Session 3: International Standardization Achievements and Plans for NAMs Developed by MFDS

Session 4: Leveraging Disease Models for Regulatory Science, Mechanistic Safety Assessment, and AI-Driven Toxicity Prediction

Session 5: Mechanistic Insights and Quantitative Approaches for Drug Development and Safety Assessment

Session 6: AOP-Based Read-Across Technology for Nanomaterial Hazard Assessment

Session 7: Trends in NAMs-Based Drug Discovery

Session 8: Young Scientist Forum

Session 9: KSOT Poster of Distinction

주최 (사)한국독성학회/한국환경성돌연변이발암원학회

식품의약품안전처 · 식품의약품안전평가원

KMPC 국가모델동물연구소

한양대학교 ERICA 약학대학
AI + PRISM 의약품·헬스케어 안전망 구축 BK 교육연구단

전북대학교 생체안전성연구소

중앙대학교-미얀마 약학연구소
CAU-Myanmar Pharmaceutical Research Center, Chung-Ang University

부산대학교 BIT 융합기술기반 대사영증표적
혁신신약개발 교육연구단

후원 KIT 국가독성과학연구소
Korea Institute of Toxicology

부산관광공사
BUSAN TOURISM ORGANIZATION

산업재해예방
안전보건공단

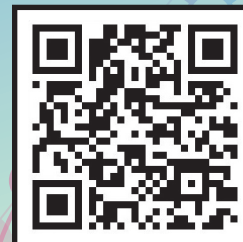
KITECH
한국생산기술연구원

KSOT/KEMS Secretariat

Tel : 82-2-888-3248

E-mail : ksot@ksot.or.kr

Website : www.ksot.or.kr



2026 제42차 정기학술대회

The 42nd Annual Meeting of KSOT/KEMS

신약개발 전주기 안전성 평가와 규제독성

From Drug Discovery to Approval: Safety Assessment and Regulatory Toxicology

November 2 (Mon) ~ 4 (Wed), 2026 Venue : Convention Hall, BEXCO, Busan, Korea

November 2, 2026 (Monday)

12:00	Registration	
12:00-13:00	Council Meeting	Summit Hall
13:00-13:20	Welcome Remarks	
Grand Hall	Keon Wook Kang (President of KSOT, Seoul National University) Seogyoun Kang (Director General, National Institute of Food and Drug Safety Evaluation) Jeong-Doo Heo (President, Korea Institute of Toxicology)	
13:20-14:00	Plenary Lecture I	
Grand Hall	Chairperson: Sang Geon Kim (Seoul National University) Simple Solutions for Complex Problems: Mixtures and Cumulative Risk Cynthia V. Rider (President of SOT, National Institute of Environmental Health Sciences, USA)	
14:00-14:10	Coffee Break	
14:10-15:40	Session 1: Joint Session with KSNS - Industry Perspectives on Nonclinical Safety Assessment Across Diverse Pharmaceuticals	Session 2: Development of Integrated Omics-Based Biomarkers for Efficacy and Safety Prediction
Grand Hall	Chairperson: Byungcheol Han (Korea Ginseng Corporation)	Chairperson: Hyun Young Kim (Dankook University)
14:10-14:40	Evaluation of Toxicity in Drug Development DaeHoon Kim (Hyundai Pharmaceuticals)	Modification of Cadmium Toxicity by Transcriptional Pathway Jin-Yong Lee (Aichi Gakuin University, Japan)
14:40-15:10	Nonclinical Evaluation of Long Acting Injectable Jooyoung Cha (Inventage Lab)	DNMT1-Mediated Epigenetic Remodeling in MASLD Mirang Kim (Korea Research Institute of Bioscience and Biotechnology)
15:10-15:40	Juvenile Toxicity Assessment of Natural Product Based on ICH S11 and OECD Test Guidelines: Industrial Regulatory Applications and Case studies Eunji Kim (Korea Ginseng Corporation)	Advances in Spatial Transcriptomics for Infectious Disease Research Taehwan Oh (Dankook University)
15:40-16:00	Coffee Break	
16:00-17:30	Session 3: International Standardization Achievements and Plans for NAMs Developed by MFDS (Sponsored by NIFDS)	Session 4: Leveraging Disease Models for Regulatory Science, Mechanistic Safety Assessment, and AI-Driven Toxicity Prediction (Sponsored by KMPC)
Grand Hall	Chairperson: Kikyung Jung (National Institute of Food and Drug Safety Evaluation)	Chairperson: Je Kyung Seong (Seoul National University)
16:00-16:20	Development of NAMs and Achievements of KoCVAM in OECD TG Adoption: Focus on Phototoxicity Assay Nam Hee Kang (KoCVAM, National Institute of Food and Drug Safety Evaluation)	Impact of Underlying Diseases on Liver Function: Implications for Nonclinical Toxicity Assessment Jun-Won Yun (Seoul National University)
16:20-16:50	Comprehensive Cardiac Toxicity Profiling Using Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes Dong-Hun Woo (NEXEL Co., Ltd.)	Animal Disease Models in Pharmacology and Toxicology Studies: A Regulatory Perspective Yangmee Shin (Regulatory Expert, USA)
16:50-17:10	Evaluation of the Applicability of NAMs for Immunotoxicity Assessment of Monoclonal Antibody Therapeutics Min Seong Jang (Korea Institute of Toxicology)	A Cross-Species Transcriptomic Framework for Predicting Biologics-Induced T-Cell Activation and Cytokine-Mediated Toxicity Daeui Park (Korea Institute of Toxicology)
17:10-17:30	MFDS's NAMs Development and Global Standardization Strategy Tae Sung Kim (National Institute of Food and Drug Safety Evaluation)	
17:30-18:00	General Assembly	
Grand Hall		
18:00	Banquet	
Summit Hall		

November 4, 2026 (Wednesday)

09:00-11:00	Session 9: KSOT Poster of Distinction	Rm. 208
	Chairperson: Yong Joo Park (Kyungsung University) Beum-Soo An (Pusan National University)	
	Eight awardees oral presentation	

November 3, 2026 (Tuesday)

09:00-09:30	KSOT Unbong Academic Research Award Presentation	
Grand Hall	Chairperson: Mi-Kyoung Kwak (The Catholic University of Korea)	
	Environmental Exposures and Health: Insights from Cigarette Smoke and Microplastics Bumseok Kim (Jeonbuk National University)	
09:30-10:10	Plenary Lecture II	
Grand Hall	Chairperson: Ji-Eun Kim (The Catholic University of Korea) Pathomimetic Human Gut-on-a-Chip for Next-Generation Toxicology: Advancing New Approach Methodologies (NAMs) from Disease Modeling to Precision Safety Assessment Hyun Jung Kim (Cleveland Clinic, USA)	
10:10-10:20	Coffee Break	
10:20-12:00	Session 5: Mechanistic Insights and Quantitative Approaches for Drug Development and Safety Assessment	Session 6: AOP-Based Read-Across Technology for Nanomaterial Hazard Assessment (Sponsored by Development of Safety Assessment Technologies for the Advanced Nanomaterials Industry)
Grand Hall	Chairperson: Jung-Hyun Kim (Ajou University)	Chairperson: Jin-Sung Ra (Korea Institute of Industrial Technology)
10:20-10:45	Physiologically-Based in Silico Modeling Approaches for Toxicity Assessment: Application to High-Dose Methotrexate in Children with Blood Cancer Eun Kyong Chung (Kyung Hee University)	Hazard Assessment Approach Based on Tpa(AID-AEP-AOP) Considering Silver Nanomaterials' Particulate and Ionization Behavior Dahee Han (Korea Institute of Industrial Technology)
10:45-11:10	Systems-Based Quantitative Modeling for Clinical Safety Assessment: Role and Perspectives of QSP Sungpil Han (The Catholic University of Korea)	Tpa (AID-AEP-AOP)-Based Hazard Assessment Approach for Fibrous Nanomaterials Youngtae Choe (Korea Institute of Industrial Technology)
11:10-11:35	From Genetic Discovery to Drug Development: A Translational Journey in URAT1 Sung Kweon Cho (Ajou University)	Substance Identification Profile Analysis and Equivalence Assessment Algorithm Design for Nanomaterials Sunmi Kim (Korea Research Institute of Chemical Technology)
11:35-12:00	New Insights into Methylmercury Toxicity and Pain Sensitivity Gi-Wook Hwang (Tohoku Medical and Pharmaceutical University, Japan)	Grouping and Read-Across Strategies for Environmental Hazard Assessment of Nanomaterials Eunki Min (Seoul National University of Science and Technology)
		Mechanistic Evidence-Based Grouping and Human Health Risk Assessment of Manufactured Nanoparticles Donghyun Kim (Keimyung University)
12:00-13:30	Luncheon Seminar BIOCETOGEN	
	Poster Session	
13:30-14:00	Special Lecture I	Special Lecture II
Eng	Chairperson: Kouichi Yoshinari (University of Shizuoka, Japan)	Chairperson: Ja Hyun Koo (Seoul National University)
Grand Hall	NAMs and Read-Across in Food Safety Assessment: Current Applications and Challenges in Japan Akihiko Hirose (President of JSOT, Chemicals Evaluation and Research Institute, Japan)	Principles and Practice of First-in-Human Dose Selection Jangik Lee (Seoul National University)
14:00-15:30	Session 7: Trends in NAMs-Based Drug Discovery	Session 8: Young Scientist Forum
Grand Hall	Chairperson: Ha Ryong Kim (Korea University)	Chairperson: Yoon-Seok Roh (Chungbuk National University)
14:00-14:30	Mature Human Gut MPS for Understanding Drug Responses Tae-Eun Park (UNIST)	GalNAc-Conjugated Antisense Oligonucleotides Targeting DDR1 Inhibit Hepatocellular Carcinoma Progression in Fibrotic Liver Wonseok Lee (Gachon University)
14:30-15:00	Non-Destructive Electrochemical Monitoring of Cellular Metabolism for Drug Toxicity Assessment in Kidney Organoids Tae-Hyung Kim (Sungkyunkwan University)	A Small Molecule Targeting Somatic CAG Repeat Expansion: Toward Disease-Modifying Therapies Sangyoon Ko (KAIST)
15:00-15:30	Brain-on-a-Chip Technology for Assessing Environmental Toxicity and Metabolic Disruption Hong Nam Kim (Korea Institute of Science and Technology)	Next-Generation Drug Screening Platform: Unveiling DMD Cardiomyopathy Using Novel MEA-Integrated Cardiac Organoids Ye Seul Kim (Gyeongsang National University)
15:30-16:00	Awards Ceremony & Closing Remarks	
Grand Hall		