



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

## 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

#### Invitation

존경하는 (사)한국독성학회/한국환경성돌연변이발암원학회 회원 여러분,

우리 학회는 2026년 11월 2일부터 4일까지 부산 BEXCO에서 제42차 정기학술대회를 개최합니다.

올해 추계 학술대회의 주제는 "From Drug Discovery to Approval: Safety Assessment and Regulatory Toxicology"로, 신약개발 전주기에 걸친 안전성 평가와 규제독성학의 최신 동향을 조망하고, 차세대 독성평가 기술과 규제과학의 발전 방향을 논의하고자 합니다. 신약개발 인허가 과정에서 최근 독성학 분야의 이슈로 NAMS (New Approach Methodologies), AI 기반 독성 예측, 오가노이드 및 Organ-on-a-Chip, 옴릭스 기반 독성평가 등 첨단 기술이 빠르게 발전하면서 안전성 평가의 패러다임 변화가 대두되고 있습니다. 이번 학술대회는 이러한 변화에 대응하기 위한 최신 연구성과를 공유하고 향후 연구와 규제독성학의 새로운 가능성을 함께 살펴보는 자리가 될 것입니다.

미국독성학회(SOT) Cynthia V. Rider 회장님과 일본독성학회(JSOT) Akihiko Hirose 회장님을 비롯하여 Cleveland Clinic의 김현중 교수님, 서울대학교 이장익 교수님 등 독성학과 규제과학 분야의 국내외 저명한 연구자들을 초청하여 수준 높은 학술강연을 준비하였습니다. 또한 비임상 안전성 평가, 규제과학, 국제 표준화, 질환모델, 나노물질 위해성 평가, 정량 독성학 등 다양한 주제의 심포지엄을 통해 최신 연구성과를 공유하고, 산 · 학 · 연 · 관이 함께 독성학의 새로운 방향을 논의하는 자리가 될 것입니다.

독성학은 국민 건강과 환경을 보호하고 안전한 의약품과 화학물질의 개발을 뒷받침하는 핵심 학문입니다. 이번 학술대회가 독성학의 최신 지견을 나누고 분야 간 소통을 통해 새로운 연구의 가능성을 확장하는 자리가 되기를 바랍니다. 아울러 Young Scientist Forum, 학술상 시상식, 우수포스터 발표, 독성전문가 인증식, Travel Awards 등 다양한 프로그램을 통해 차세대 연구자를 격려하고 회원 간 교류와 소통을 더욱 활성화하고자 합니다.

회원 여러분의 많은 관심과 적극적인 참여를 부탁드립니다. 부산에서 여러분을 만나 뵙기를 기대하겠습니다.

(사)한국독성학회/한국환경성돌연변이발암원학회 회장 강 건 욱

| 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)<br>Seogyoun Kang (Director General, National Institute of Food and Drug Safety Evaluation)<br>Jeong-Doo Heo (President, Korea Institute of Toxicology) |                                                                                                                                                                                      |             |
| 13:20-14:00               | Plenary Lecture I                                                                                                                                                                                                    |                                                                                                                                                                                      | Eng         |
| Grand Hall                | Chairperson: Sang Geon Kim (Seoul National University)                                                                                                                                                               |                                                                                                                                                                                      |             |
|                           | Simple Solutions for Complex Problems: Mixtures and Cumulative Risk<br>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:<br>Joint Session with KSNS - Industry Perspectives on Nonclinical Safety Assessment Across Diverse Pharmaceuticals                                                                                        | Session 2:<br>Development of Integrated Omics-Based Biomarkers for Efficacy and Safety Prediction                                                                                    | Medium Hall |
|                           | Chairperson:Byungcheol Han<br>(Korea Ginseng Corporation)                                                                                                                                                            | Chairperson: Hyun Young Kim<br>(Dankook University)                                                                                                                                  |             |
|                           | 14:10-14:40<br>Evaluation of Toxicity in Drug Development<br>DaeHoon Kim (Hyundai Pharmaceuticals)                                                                                                                   | 14:10-14:35<br>Modification of Cadmium Toxicity by Transcriptional Pathway<br>Jin-Yong Lee (Aichi Gakuin University, Japan)                                                          |             |
|                           | 14:40-15:10<br>Nonclinical Evaluation of Long Acting Injectable<br>Jooyoung Cha (Inventage Lab)                                                                                                                      | 14:35-15:00<br>DNMT1-Mediated Epigenetic Remodeling in MASLD<br>Mirang Kim (Korea Research Institute of Bioscience and Biotechnology)                                                |             |
|                           | 15:10-15:40<br>Juvenile Toxicity Assessment of Natural Product Based on ICH S11 and OECD Test Guidelines: Industrial Regulatory Applications and Case studies<br>Eunji Kim (Korea Ginseng Corporation)               | 15:00-15:20<br>Advances in Spatial Transcriptomics for Infectious Disease Research<br>Taehwan Oh (Dankook University)                                                                |             |
|                           |                                                                                                                                                                                                                      | 15:20-15:40<br>Integrated Single-Cell Genomics of Systemic Immunity Reveals Host Genetic Regulation of ICI Response-Associated Networks in NSCLC<br>Hyungtai Sim (Yonsei University) |             |
| 15:40-16:00               | Coffee Break<br>Poster Session                                                                                                                                                                                       |                                                                                                                                                                                      |             |
| 16:00-17:30               | Session 3:<br>International Standardization Achievements and Plans for NAMs Developed by MFDS (Sponsored by NIFDS)                                                                                                   | Session 4:<br>Leveraging Disease Models for Regulatory Science, Mechanistic Safety Assessment, and AI-Driven Toxicity Prediction (Sponsored by KMPC)                                 | Medium Hall |
|                           | Chairperson: TBA (National Institute of Food and Drug Safety Evaluation)                                                                                                                                             | Chairperson: Je Kyung Seong<br>(Seoul National University)                                                                                                                           |             |
|                           | 16:00-16:30<br>MFDS's NAMs Development and Global Standardization Strategy<br>Tae Sung Kim (MFDS/NIFDS)                                                                                                              | 16:00-16:30<br>Impact of Underlying Diseases on Liver Function: Implications for Nonclinical Toxicity Assessment<br>Jun-Won Yun (Seoul National University)                          |             |
|                           | 16:30-17:00<br>Achievements of KoCVAM in OECD TG Adoption: Focus on Phototoxicity Assay<br>Nam Hee Kang (MFDS/NIFDS)                                                                                                 | 16:30-17:00<br>Animal Disease Models in Pharmacology and Toxicology Studies: A Regulatory Perspective<br>Yangmee Shin (Regulatory Expert, USA)                                       |             |
|                           | 17:00-17:30<br>Evaluation of the Applicability of NAMs for Immunotoxicity Assessment of Monoclonal Antibody Therapeutics<br>Min Seong Jang (Korea Institute of Toxicology)                                           | 17:00-17:30<br>A Cross-Species Transcriptomic Framework for Predicting Biologics-Induced CRS<br>Daeui Park (Korea Institute of Toxicology)                                           |             |
| 17:30-18:00               | General Assembly                                                                                                                                                                                                     |                                                                                                                                                                                      | Grand Hall  |
| 18:00                     | Banquet                                                                                                                                                                                                              |                                                                                                                                                                                      | Summit Hall |

| November 4, 2026 (Wednesday) |                                                                                              |  |         |
|------------------------------|----------------------------------------------------------------------------------------------|--|---------|
| 09:00-11:00                  | Session 9:<br>KSOT Poster of Distinction                                                     |  | Rm. 208 |
|                              | Chairperson: Yong Joo Park (Kyungsung University)<br>Beum-Soo An (Pusan National University) |  |         |
|                              | Eight awardees oral presentation                                                             |  |         |

#### Registration

The registration fee includes admission to all scientific sessions, the exhibition, coffee breaks, and an abstract book. Participants are encouraged to register for the 42nd Annual Meeting of KSOT/KEMS by September 30, 2026, to take advantage of the discounted fee.

- Early registration can be made through the internet site of KSOT/KEMS ([www.ksot.or.kr](http://www.ksot.or.kr)).

|                     | Early Registration<br>(~ September 30) | On-site Registration | Banquet                                                                     |
|---------------------|----------------------------------------|----------------------|-----------------------------------------------------------------------------|
| KSOT Member         | ₩160,000                               | ₩200,000             | ₩20,000<br><br>* Banquet :<br>November 2 (Mon)<br>18:00<br>Summit Hall (2F) |
| KSOT Student Member | ₩100,000                               | ₩120,000             |                                                                             |
| Non-Member          | ₩230,000                               | ₩270,000             |                                                                             |
| Student Non-member  | ₩120,000                               | ₩140,000             |                                                                             |

#### ■ Important Dates

Deadline for Early Registration : September 30, 2026  
Deadline for Abstract Submission : September 30, 2026

| November 3, 2026 (Tuesday) |                                                                                                                                                                                                            |                                                                                                                                                                                            |                                                                                                                                                                                     |                                                                                                                                                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 09:00-09:30<br>Grand Hall  | KSOT Unbong Academic Research Award Presentation                                                                                                                                                           |                                                                                                                                                                                            |                                                                                                                                                                                     |                                                                                                                                                                                      |
|                            | Chairperson: Mi-Kyoung Kwak (The Catholic University of Korea)                                                                                                                                             |                                                                                                                                                                                            |                                                                                                                                                                                     |                                                                                                                                                                                      |
|                            | To be announced                                                                                                                                                                                            |                                                                                                                                                                                            |                                                                                                                                                                                     |                                                                                                                                                                                      |
| 09:30-10:10<br>Grand Hall  | Plenary Lecture II                                                                                                                                                                                         |                                                                                                                                                                                            | Eng                                                                                                                                                                                 |                                                                                                                                                                                      |
|                            | 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<br>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                                                                                                     | Grand Hall                                                                                                                                                                                 | Session 6: AOP-Based Read-Across Technology for Nanomaterial Hazard Assessment (Sponsored by Development of Safety Assessment Technologies for the Advanced Nanomaterials Industry) |                                                                                                                                                                                      |
|                            | 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<br>Eun Kyong Chung (Kyung Hee University) | 10:20-10:40                                                                                                                                                                         | Hazard Assessment Approach Based on TpA(AID-AEP-AOP) Considering Metallic Nanomaterials' Particulate and Ionization Behavior<br>Dahee Han (Korea Institute of Industrial Technology) |
|                            | 10:45-11:10                                                                                                                                                                                                | Systems-Based Quantitative Modeling for Clinical Safety Assessment: Role and Perspectives of QSP<br>Sungpil Han (The Catholic University of Korea)                                         | 10:40-11:00                                                                                                                                                                         | TpA (AID-AEP-AOP)-Based Hazard Assessment Approach for Fibrous Nanomaterials<br>Youngtae Choe (Korea Institute of Industrial Technology)                                             |
|                            | 11:10-11:35                                                                                                                                                                                                | From Genetic Discovery to Drug Development: A Translational Journey in URAT1<br>Sung Kweon Cho (Ajou University)                                                                           | 11:00-11:20                                                                                                                                                                         | Substance Identification Profile Analysis and Equivalence Assessment Algorithm Design for Nanomaterials<br>Sunmi Kim (Korea Research Institute of Chemical Technology)               |
|                            | 11:35-12:00                                                                                                                                                                                                | New Insights into Methylmercury Toxicity and Pain<br>Gi-Wook Hwang (Tohoku Medical and Pharmaceutical University, Japan)                                                                   | 11:20-11:40                                                                                                                                                                         | Grouping and Read-Across Strategies for Environmental Hazard Assessment of Nanomaterials<br>Eunki Min (Seoul National University of Science and Technology)                          |
|                            |                                                                                                                                                                                                            |                                                                                                                                                                                            | 11:40-12:00                                                                                                                                                                         | Mechanistic Evidence-Based Grouping and Human Health Risk Assessment of Manufactured Nanoparticles<br>Donghyun Kim (Keimyung University)                                             |
| 12:00-13:30                | Lunch<br>Poster Session                                                                                                                                                                                    |                                                                                                                                                                                            |                                                                                                                                                                                     |                                                                                                                                                                                      |
| 13:30-14:00                | Special Lecture I                                                                                                                                                                                          | Eng                                                                                                                                                                                        | Grand Hall                                                                                                                                                                          |                                                                                                                                                                                      |
|                            | Chairperson: Kouichi Yoshinari (University of Shizuoka, Japan)                                                                                                                                             |                                                                                                                                                                                            |                                                                                                                                                                                     |                                                                                                                                                                                      |
|                            | NAMs and Read-Across in Food Safety Assessment: Current Applications and Challenges in Japan<br>Akihiko Hirose (President of JSOT, Chemicals Evaluation and Research Institute, Japan)                     |                                                                                                                                                                                            | Special Lecture II                                                                                                                                                                  |                                                                                                                                                                                      |
|                            |                                                                                                                                                                                                            |                                                                                                                                                                                            | Chairperson: Ja Hyun Koo (Seoul National University)                                                                                                                                |                                                                                                                                                                                      |
|                            |                                                                                                                                                                                                            |                                                                                                                                                                                            | Principles and Practice of First-in-Human Dose Selection<br>Jangik Lee (Seoul National University)                                                                                  |                                                                                                                                                                                      |
| 14:00-15:30                | Session 7: Trends in NAMs-Based Drug Discovery                                                                                                                                                             | Grand Hall                                                                                                                                                                                 | Session 8: Young Scientist Forum                                                                                                                                                    |                                                                                                                                                                                      |
|                            | 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<br>Tae-Eun Park (UNIST)                                                                                                              | 14:00-14:30                                                                                                                                                                         | GalNAc-Conjugated Antisense Oligonucleotides Targeting DDR1 Inhibit Hepatocellular Carcinoma Progression in Fibrotic Liver<br>Wonseok Lee (Gachon University)                        |
|                            | 14:30-15:00                                                                                                                                                                                                | Non-Destructive Electrochemical Monitoring of Cellular Metabolism for Drug Toxicity Assessment in Kidney Organoids<br>Tae-Hyung Kim (Sungkyunkwan University)                              | 14:30-15:00                                                                                                                                                                         | A Small Molecule Targeting Somatic CAG Repeat Expansion: Toward Disease-Modifying Therapies<br>Sangyoon Ko (KAIST)                                                                   |
|                            | 15:00-15:30                                                                                                                                                                                                | Brain-on-a-Chip Technology for Assessing Environmental Toxicity and Metabolic Disruption<br>Hong Nam Kim (Korea Institute of Science and Technology)                                       | 15:00-15:30                                                                                                                                                                         | Next-Generation Drug Screening Platform: Unveiling DMD Cardiomyopathy Using Novel MEA-Integrated Cardiac Organoids<br>Ye Seul Kim (Gyeongsang National University)                   |
| 15:30-16:00                | Awards Ceremony & Closing Remarks                                                                                                                                                                          |                                                                                                                                                                                            | Grand Hall                                                                                                                                                                          |                                                                                                                                                                                      |

주최 (사)한국독성학회/한국환경성돌연변이발암원학회

식품의약품안전처 · 식품의약품안전평가원

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The 42nd Annual Meeting App.