The 3rd

KIST-Purdue Univ. International Symposium

Frontiers in Biomedical Innovation and Addiction Research

INVITATION

Dear Distinguished Researchers,

Addiction in its many forms — substance abuse, gambling, and digital addiction — stands as one of the most pressing public health challenges facing modern society today. Once dismissed as a matter of personal will power, addiction is now recognized as a complex problem that demands the combined efforts of neuroscience, medicine, and engineering. Its consequences are profound, leaving lasting damage not only to individuals, but to families and communities at large.

In response to this urgent challenge, the Korea Institute of Science and Technology (KIST) and Purdue University are proud to join forces and host a joint symposium, bringing together the research strengths of both institutions. The symposium will be structured around four core sessions, providing a premier forum for sharing cutting-edge findings and exchanging innovative ideas.

Bringing together leading researchers from Korea and beyond, this event is more than an academic gathering — it is an opportunity to forge new frontiers in Korea-U.S. research collaboration and to build meaningful partnerships in the fight against addiction. We warmly invite researchers, clinicians, and graduate students working in related fields to join us, and look forward to your active participation.

Purdue University
Chi Hwan Lee
Korea Institute of Science and Technology
Sun Hwa Kim

PROGRAMS

- **Session I : Advanced Drug Delivery and Pharmaceutical Formulations**
- **Session II : AI-Driven Platforms for Digital Health and Precision Medicine**
- **Session III : Recent Advances in the Neurobiology of Drug Addiction**
- **Session IV : Next-Generation Bioengineered Systems: From Organoids to Biohybrid Platforms**

Meeting Room 1, International Cooperation Center, KIST
2026.05.26. 10:00~18:00

Korea Institute of Science and Technology
PURDUE UNIVERSITY
National Research Foundation of Korea
Ministry of Science and ICT

The 3rd KIST-Purdue University International Symposium on
"Frontiers in Biomedical Innovation and Addiction Research"

Room 1, International Cooperation Building, Korea Institute of Science and Technology, Seoul, Korea
May 26, 2026

Time	Contents
10:00 – 10:30	**Registration**
	Moderator: Dr. Myung Chul Lee (KIST)
10:30 – 10:40	**Opening Remarks** **Global Collaboration Initiative for Addressing Addiction in the Digital and Pharmaceutical Era** Dr. Sun Hwa Kim (KIST)
Session I: Advanced Drug Delivery and Pharmaceutical Formulations	*Chair: Dr. Ick Chan Kwon (KIST)*
10:40 – 11:10	**Polymer Excipients for Pharmaceutical Formulations: Unsung Heroes** Prof. You-Yeon Won (Purdue University)
11:10 – 11:40	**Nanoparticulate immunoactive complex for local chemoimmunotherapy: From murine models to pilot canine study and beyond** Prof. Yoon Yeo (Purdue University)
11:40 – 12:10	**Current Perspectives on Long-acting Injectables** Dr. Sungwon Kim (PEPTRON)
12:10 – 13:10	**Lunch**
Session II: AI-Driven Platforms for Digital Health and Precision Medicine	*Chair: Dr. Kinam Park (Purdue University)*
13:10 – 13:40	**Edge-deployable Spectral Vision for Digital Health** Prof. Young L. Kim (Purdue University)
13:40 – 14:10	**AI/Protein Language Models as a Computational Substrate in Sequencing and Drugs** Dr. Chansoo Kim (KIST)
14:10 – 14:30	**Coffee Break**
Session III: Recent Advances in the Neurobiology of Drug Addiction	*Chair: Dr. Seok Lee (CREAMO, Inc.)*
14:30 – 15:00	**Investigation of molecular and circuit markers underlying drug addiction** Prof. Sangjun Lee (GIST)
15:20 – 15:50	**Reward circuit dopamine signaling dynamics induced by drugs of abuse: an in vivo FSCV approach in the nucleus accumbens** Prof. Se Jin Jeon (Hallym University)
15:50 – 16:10	**Coffee Break**
Session IV: Next-Generation Bioengineered Systems: From Organoids to Biohybrid Platforms	*Chair: Dr. Chi Hwan Lee (Purdue University)*
16:10 – 16:40	**Engineering Organoids-on-Chips for Next-Generation Biomedical Platforms** Prof. Sunghee (Estelle) Park (Purdue University)
16:40 – 17:10	**Human iPSC-Derived Skin Organoids as a Platform to Model Pigmentation Diversity** Dr. Jin Kim (KIST)
17:10 – 17:40	**Biohybrid Systems for Robotic and Biopreservation Applications** Dr. Yongdeok Kim (KIST)
17:40 – 17:50	**Closing Remarks**