The 11th Japan-Korea

Chemical Biology Symposium

J-ONE Hotel, Cheongju, Korea

December 1-3, 2025

Organizing Co-Chairs

Won Gon Kim (KRIBB, Korea)

Hideaki Kakeya (Kyoto Univ., Japan)

Organizing Co-Secretariats

Jae-Hyuk Jang (KRIBB, Korea)

Sung-Kyun Ko (KRIBB, Korea)

Jun-Pil Jang (KRIBB, Korea)

Hiroaki Ikeda (Kyoto Univ., Japan)

Advisory members

Jong Seog Ahn (KRIBB, Korea)

Hiroyuki Osada (BIKAKEN, Japan)

PROGRAM SCHEDULE

Dec 1 (MON) — Jade Hall (2F)

15:30 ~ 16:30 **Check in & Registration (Registration desk, Jade Hall, 2F)**

16:30 ~ 16:40 **Opening Ceremony** — Dr. Jong Seog Ahn (KRIBB), Dr. Hiroyuki Osada (BIKAKEN)

Young Scientist Presentation

Chairs: Dr. Myoung-Sook Shin (Gachon Univ), Dr. Aoi Kimishima (Kitasato University)

16:40 ~ 16:55 **Tyrosol blocks *E. coli* anaerobic biofilm formation via YbfA and FNR to increase antibiotic susceptibility** — Dr. Ha-Young Choi (KRIBB)

16:55 ~ 17:10 **Girolline as a sequence-selective probe into eIF5A function** — Dr. Tilman Schnider-Poetsch (RIKEN)

17:10 ~ 17:25 **Exploration of Valuable Biosynthetic Genes from Sponge Metagenomes for Marine Natural Products** — Dr. Hiyoung Kim (Konkuk Univ.)

17:25 ~ 17:40 **Establishment of a new screening strategy targeting cancer stem cells (CSCs) and development of the CSC inhibitors** — Prof. Hiroaki Ikeda (Kyoto Univ.)

17:40 ~ 21:00 **Move & Welcome Party (Gahwa Korean Restaurant, Chengju)**

Dec 2 (TUE) — Jade Hall (2F)

08:30 ~ 09:00 **Registration (Registration desk, Jade Hall, 2F)**

09:00 ~ 09:10 **Opening Remark** — Won-Gon Kim (KRIBB)

09:10 ~ 09:20 **Group Photo**

Session 1 Discovery of Bioactive Molecules

Chairs: Prof. Hyukjae Choi (Yeungnam Univ), Dr. Hiroaki Ikeda (Kyoto University)

09:20 ~ 09:40 **Logical exploration of bioactive natural products from bacteria via metabologenomic targeting** — Prof. Dong-Chan Oh (Seoul National Univ.)

09:40 ~ 10:00 **First instar silkworm in vivo screening of the Ōmura Natural Compound library identifies ThrRS targeting insecticidal lead compounds** — Prof. Yukihiro Asami (Kitasato Univ.)

10:00 ~ 10:20 **Antibiotic stress-induced metabolites from the gut bacteria** — Prof. Chung Sub Kim (Sungkyunkwan Univ.)

10:20 ~ 10:40 **SOAT isozyme-selective inhibitors from microbial sources** — Prof. Taichi Ohshiro (Kitasato Univ.)

10:40 ~ 11:00 **Coffee Break**

11:00 ~ 12:30 **Short Oral Presentation (2 min per head)**

Chair: Dr. Nak-Kyun Soung (KRIBB)

P1 **Isolation, structural determination, and biological activity of novel cancer stem cell inhibitors streptospherins A-F**

Ami Mimura (Kyoto Univ.)

P2 **Exploration of Bioactive Compounds Derived from Korean Native Actinomycetes**

Hyun-woo Je (Konkuk Univ.)

P3 **Novel azithromycin derivatives based on a Trojan horse strategy to combating *Pseudomonas aeruginosa* infection**

Dr. Aoi Kimishima (Kitasato Univ.)

P4 **Ameliorative Effects of Korean Red Ginseng-Derived Polysaccharide on Antibiotic-Associated Diarrhea and Enhancement of Intestinal Immune Response**

Dr. Myoung-Sook Shin (Gachon Univ.)

P5 **Discovery of actinoquinonal A and its congeners from the combined-culture of *Streptomyces* sp. and their production profile**

Prof. Hideaki Kakeya (Kyoto Univ.)

P6 **Harnessing Biosynthetic Pathway Disruption to Discover Novel Microbial Metabolites**

Thinh T. M. Bui (Kyung Hee Univ.)

P7 **Discovery of Novel Histone Acylation Induced by Food-Derived Carboxylic Acids Using a Histone–Reader Protein Interaction Assay**

Komei Aoki (Tokyo Univ.)

P8 **Bioactive Peptides from Marine and Wildfire-Affected Terrestrial Bacteria**

Yeong-Seo Kim (Kyung Hee Univ.)

P9 **Identification of pyrrolizilactone biosynthetic gene cluster with unique SDR gene for 3-methylproline formation**

Prof. Naoki Kato (Setsunan Univ.)

P10 **Simverlactam: a Novel Polyene Macrolactam isolated from the vtlG Disruptant**

Dr. Katsuyuki Sakai (RIKEN)

P11 **Antibiotics and Antiproliferative Metabolites from Marine Sediments-Derived Actinomycetes**

Chan Kim (Kyung Hee Univ.)

P12 **Mavintramycin A is a promising antibiotic for treating *Mycobacterium avium* complex infectious disease**

Dr. Satoru Shigeno (Kitasato Univ.)

P13 **Isolation of pulvomycin and its potential analogues from the Actinobacteria *Streptomyces* sp.**

Son Vu Nguyen (Yeungnam Univ.)

P14 **Syo_1.56, Atypical SARP Regulator Drives Multi-Metabolite Biosynthesis in *Streptomyces* sp. RK18-A0406**

Dr. Islam A. Abdelhakim (RIKEN)

P15 **Polycyclic Alkaloids from the Endophytic Bacterium *Streptomyces* sp. YP1610**

Sangbeom Kim (Yeungnam Univ.)

P16 **Biosynthetic Study of Ascamycin**

Ryouhei Kurita (RIKEN)

P17 **Isolation of Novel Polyketides from *Streptomyces* sp. 23A143 Using an Iron Deficiency Strategy**

Hyunhee Oh (KRIBB)

P18 **Identification of molecular target of phepropeptin D in human cancer cells**

Dr. Ryota Kawahara (Keio Univ.)

P19 **Isolation of Novel Rifamycin Derivatives from a Microbial Metabolites Fraction Library of 22MC006**

Ji-Eun Lee (KRIBB)

P20 **Exploration of bioactive natural products through activation of fungal secondary metabolism based on a global regulator LaeA**

Dr. Sota Honma (Kitasato Univ.)

P21 **Discovery of Novel Microbial Secondary Metabolites by Media Composition-regulated Culture of Actinomycete**

Dr. Gwi Ja Hwang (KRIBB)

P22 **Discovery of Atromentin B as a β-Lactams potentiator against MRSA**

Dr. Yukiko Ujie (Kitasato Univ.)

P23 **Isolation of Novel Migrastatin Derivatives from a Microbial Metabolites Fraction Library of *Streptomyces* sp. 20A130**

Jihun Park (KRIBB)

P24 **Antibacterial activity of the combination of novel macrolide derivative YT-650 and SPR741 against Gram-negative bacteria**

Dr. Taichi Kamo (Kitasato Univ)

P25 **Discovery of New Siderophore Compounds 1−3 from *Nocardia* sp. 22A609-1 under Iron-limited Conditions**

Minhee Kim (KRIBB)

P26 **Study on nectriatides which potentiate the antifungal activity of amphotericin B**

Dr. Keisuke Kobayashi (Kitasato Univ.)

P27 **Activation of a Cryptic Non-ribosomal Peptide Synthetase (NRPS) Gene Cluster from *Streptomyces* sp. W3009 by Genome Mining**

Beomcheol Park (KRIBB)

P28 **Creation of an albicanol synthase through functional modification of drimenol synthase from *Aquimarina spongiae* by site-directed mutagenesis**

Kotoha Hiroyama (Tokyo Denki Univ.)

P29 **De novo microbial production of 3-hydroxyphloretin and 3-hydroxyphloretic acid via an engineered Escherichia coli co-culture system**

Juhee Won (KRIBB)

P30 **Naptofuran family compound, a novel anticancer agent, enhances ETS-tubulin interactions**

Yerim Choi (KRIBB)

P31 **MO-2097 inhibits EMT and angiogenesis in colorectal cancer by targeting RAF/MEK/ERK signaling**

Sumin Kim (KRIBB)

P32 **Kurarinone Induced p53-Independent G0/G1 Cell Cycle Arrest by Degradation of K-RAS via WDR76 in Human Colorectal Cancer Cells**

Taehoon OH (KRIBB)

P33 **A high affinity CSE1L-binding compound suppresses tumor cell migration and invasion by blocking CSE1L-mediated nucleocytoplasmic shuttling**

Jihong Kim (KRIBB)

P34 **Antioxidant Activities of Enzymatic Hydrolysates Produced from Atlantic Salmon Muscle and Skin Protein**

Prof. Hee-Guk Byun (Gangneung-Wonju National Univ)

P35 **Antioxidant Properties of Bioactive Peptides Derived from Chum Salmon (Oncorhynchus keta) by Enzymatic Hydrolysis**

Prof. Hee-Guk Byun (Gangneung-Wonju National Univ)

P36 **Antioxidant Activity of Enzymatic Hydrolysates Obtained from Scallop By-products**

Prof. Hee-Guk Byun (Gangneung-Wonju National Univ)

12:30 ~ 13:30 **Lunch (Sky Lounge & Bar, 32F)**

Session 2 Biosynthesis of Bioactive Molecules

Chairs: Dr. Jin-Soo Park (KIST), Dr. Naoki Kato (Setsunan Univ.)

13:30~ 13:50 **Structural diversity of deazapurine natural products driven by evolution of amide-forming enzymes**

Prof. Haksoo Kang (Konkuk Univ.)

13:50 ~ 14:10 **Biosynthesis of reveromycin derivatives by altering the regioselectivity of cytochrome P450revI**

Dr. Shunji Takahashi (RIKEN)

14:10 ~ 14:30 **Exploring the biosynthetic potential of cave-derived microorganisms for bioactive natural products**
Prof. Yeonhee Ban (Kangwon National Univ.)

14:30 ~ 14:50 **Discovery of Type II Polyketide Synthase-like Enzymes for Cispentacin Biosynthesis**
Prof. Tomohisa Kuzuyama (Univ. of Tokyo)

14:50 ~ 15:30 **Poster Presentation (Standing)**

Session 3 Mechanism of Bioactive Molecules

Chairs: Dr. Sung-Kyun Ko (KRIBB), Dr. Siro Simizu (Keio University)

15:30 ~ 15:50 **STK-X Potentiates Microtubule-Depolymerizing Agents by Reinforcing ETS–Tubulin Binding and Enabling PROTAC-Mediated Target Protein Degradation**
Dr. Nak-Kyun Soung (KRIBB)

15:50 ~ 16:10 **What do you expect for anticancer drugs targeting mitochondria?**
Dr. Manabu Kawada (BIKAKEN)

16:10 ~ 16:30 **Tsukapyrazine mitigates Parkinson's disease by modulating dopamine receptor expression and neuroinflammatory responses**
Prof. Min-Kyoo Shin (Seoul National Univ.)

16:30 ~ 16:50 **Development of RK-701, a Selective G9a Inhibitor, as a Chemical Tool for γ-Globin Regulation and Its Therapeutic Potential in SCD**
Prof. Akihiro Ito (Tokyo Univ. of Pharmacy and Life Sciences)

16:50 ~ 17:10 **Coffee Break**

Session 4 New Technology in Drug Discovery

Chairs: Dr. Jong Seog Ahn (KRIBB), Dr. Hiroyuki Osada (RIKEN)

17:10 ~ 17:30 **From Natural Products to Drug Candidates: Targeting and Mechanistic Exploration**
Prof. Ho Jeong Kwon (Yonsei Univ.)

17:30 ~ 17:50 **Heterologous expression of large biosynthetic gene clusters and in vitro module editing**
Dr. Kazuo Shin-ya (AIST)

17:50 ~ 18:10 **Ubiquilin-2 Liquid Droplets Catalyze α-Synuclein Fibril Formation and Its Regulation by a Small Molecule**
Prof. Masaya Imoto (Juntendo Univ.)

18:10 ~ 18:20 **Introduction of *The Journal of Antibiotics***
Prof. Kazuo Shiomi (Editor-in-Chief, J. Antibiot.)

18:20 ~ 18:40 **Awards Ceremony & Closing Remark**
Hideaki Kakeya (Kyoto Univ.)
Won-Gon Kim (KRIBB)

19:00 ~ 21:00 **Banquet (Sky Lounge & Bar, 32F)**

Dec 3 (WED)

09:00 ~ 12:00 **General meeting/excursion**
12:00 ~ 13:00 **Lunch**