

## Contents

• Timetable.....	4
• Floor Plan .....	5
• Scientific Programs .....	6
• Plenary Lectures.....	23
PL1.....	24
PL2.....	25
PL3.....	26
PL4.....	27
• Symposia.....	29
<b>S1.....</b>	<b>29</b>
S2.....	35
S3.....	41
S4.....	49
S5.....	55
S6.....	61
S7.....	67
S8.....	73
S9.....	79
S10.....	85
S11.....	91
S12.....	97
S13.....	105
S14.....	111
S15.....	117
• Young Scientists' Sessions.....	123
YS1 .....	123
YS2 .....	133
• Graduate Students' Presentation Session .....	143
• Technology Workshops.....	157
TW1.....	158
TW2.....	164
• Workshop .....	171
• Poster Sessions .....	173
• The 3 <sup>rd</sup> Microbiology Research Festival for High School Students .....	259
• Author Index.....	293

### The Microbiological Society of Korea

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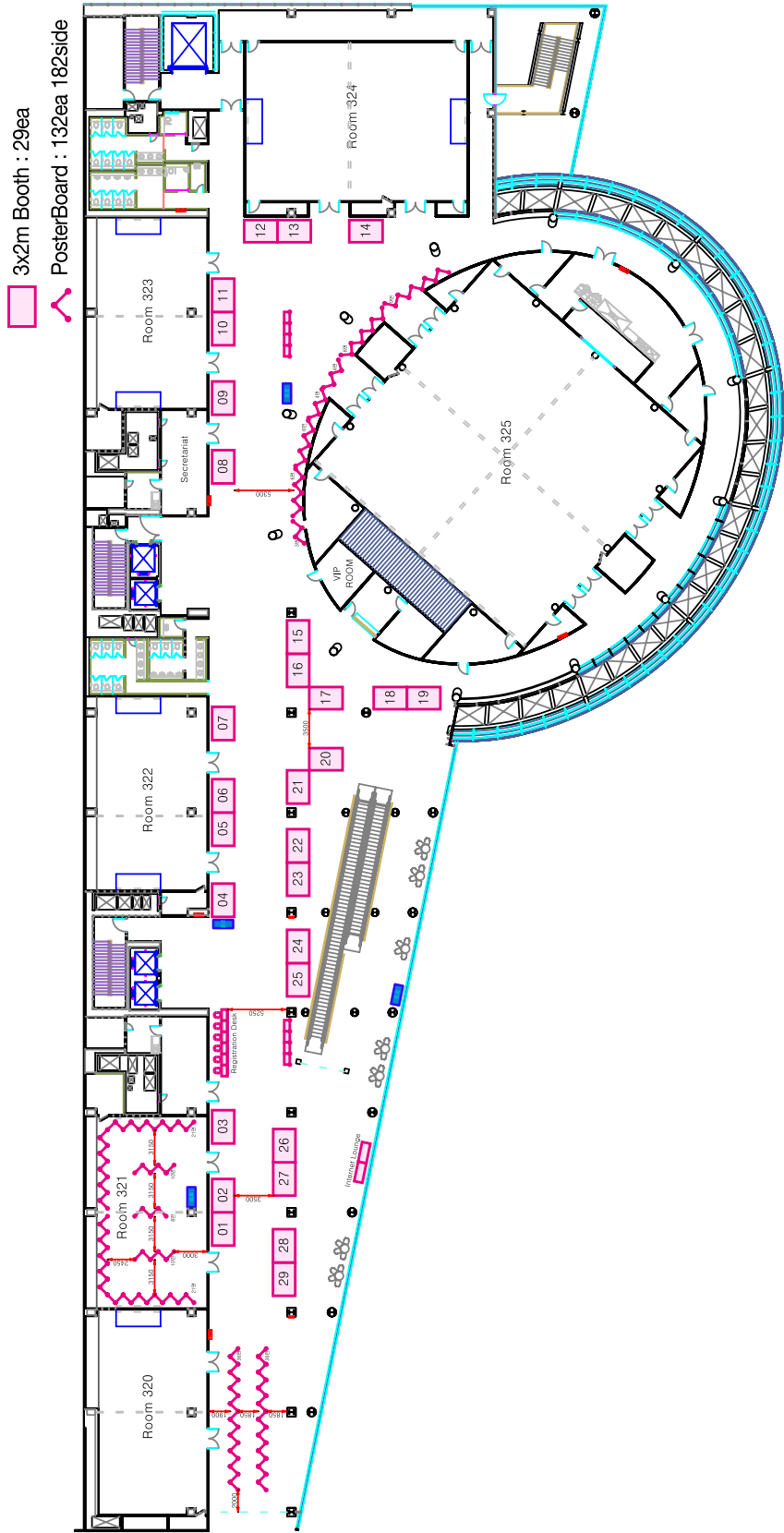
## Timetable

<b>April 30 (Wed.)</b>	Room 324	Room 323	Room 322
12:30~	Registration		
13:30-13:45	Opening Ceremony (Room 324)		
13:45-14:30	Plenary Lecture 1 (Room 324_James W. Kronstad)		
14:30-16:30	<b>TW1</b> Technology Workshop 1	<b>S1</b> Life in Cold Habitats	<b>YS1</b> Young Scientists' Session 1
17:00-18:30	관광 및 체험		

<b>May 1 (Thu.)</b>	Room 324	Room 323	Room 322
09:00-09:45	Plenary Lecture 2 (Room 324_Timothy J. Donohue)		
09:45-11:45	<b>S2</b> Biochemistry and Molecular Biology of Prokaryotes	<b>S3</b> Novel Insights for Microbial Ecology	<b>S4</b> Signal Transduction and Gene Expression in Fungi
11:45-12:15		Poster Presentation 1	
12:15-12:30			
12:30-13:30	Workshop 1(ChunLab)	Lunch	
13:30-15:30	<b>S5</b> Microbial Systems Biology and Genome Engineering	<b>S6</b> Korea Traditional Fermented Food	<b>S7</b> Host-Fungal Pathogen Interactions
15:30-16:15	Plenary Lecture 3 (Room 324_Pei-Yuan Qian)		
16:15-18:15	<b>S8</b> New Approaches in Understanding of Microbial Pathogenesis	<b>S9</b> Novel Concepts in Gene Expression System	<b>YS2</b> Young Scientists' Session 2
18:30-21:00	Welcome Reception (Hotel Inter-Burgo EXCO, Grand Ballroom A)		

<b>May 2 (Fri.)</b>	Room 324	Room 323	Room 322
09:00-11:00	<b>S10</b> Structural Microbiology and Pathogenesis	<b>GS</b> Graduate Students' Presentation Session	<b>S11</b> Molecular Epidemiology and Control of Enteric Virus
11:00-13:00	<b>S12</b> Microbial and Toxicological Burdens in Biomaterials : How to Measure and Remove?	<b>S13</b> Animal Gut Microbiome	<b>S14</b> Molecular & Cellular Biology of Yeast
13:00-14:00	General Meeting of MSK	Lunch	
14:00-14:45	Plenary Lecture 4 (Room 324_Nils Gunnar Hansson von Heijne)		<b>HS</b> High School Students' Presentation Session (14:00-16:00)  Special Lecture for High School Students (16:00-17:00)
14:45-15:30	Poster Presentation 2		
15:30-16:00			
16:00-17:00	<b>S15</b> Lactic Acid Bacteria and Human Health	<b>TW2</b> Technology Workshop 2	
17:00-17:30			
17:30-18:00	Closing Ceremony (Room 324)		

# Floor Plans



Room 321	Poster Sessions
Room 322	Symposia, Young Scientists' Sessions, High School Students' Presentation Session, Special Lecture for High School Students
Room 323	Symposia, Graduate Students' Presentation Session, Technology Workshop 2
Room 324	Opening Ceremony, Plenary Lectures, Technology Workshop 1, Symposia, Workshop, MSK General Meeting, Closing Ceremony
Lobby	Registration Desk, Exhibition, Poster Sessions

## Scientific Program

### ■■■ Plenary Lectures

**PL1**

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#### Plenary Lecture 1

April 30 (Wed.), Room 324

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*Chair:* Hyun Ah Kang, Chung-Ang University

**13:15-14:30**

Targeting the Acquisition of Iron and Other Nutrients in Fungal Pathogens of Humans  
James W. Kronstad, University of British Columbia, Canada

**PL2**

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#### Plenary Lecture 2

May 1 (Thu.), Room 324

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*Chair:* Jung-Hye Roe, Seoul National University

**09:00-09:45**

Gaining Biological Insights from Mining Bacterial Genomes & Pathways  
Timothy J. Donohue, University of Wisconsin-Madison, USA

**PL3**

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#### Plenary Lecture 3

May 1 (Thu.), Room 324

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*Chair:* Sang-Jin Kim, Korea Institute of Ocean Science and Technology

**15:30-16:15**

Genome Mining for Drug Lead Discovery from Marine Bacteria  
Pei-Yuan Qian, The Hong Kong University of Science and Technology, Hong Kong

**PL4**

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#### Plenary Lecture 4

May 2 (Fri.), Room 324

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*Chair:* Hyun Kim, Seoul National University

**14:00-14:45**

Co-translational Insertion and Folding of Membrane Proteins *In Vivo*  
Nils Gunnar Hansson von Heijne, Stockholm University, Sweden

## ■■■ Symposia

**S1**

### Life in Cold Habitats

April 30 (Wed.), Room 323

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Chair: Hong Kum Lee, Korea Polar Research Institute

**S1-1 14:30-15:00**

Exploring Microbial Diversity in Antarctic Terrestrial Ecosystems

Ok-Sun Kim, Korea Polar Research Institute

**S1-2 15:00-15:30**

Bacterial Community Structure of Tundra Soils

Yoo Kyung Lee, Korea Polar Research Institute

**S1-3 15:30-16:00**

DNA-based Fecal Analyses for Trophic Relations of Svalbard Reindeer (*Rangifer tarandus platyrhynchus*)

Sungbae Joo, Ajou University

**S1-4 16:00-16:30**

Divergence of Endosymbiotic Bacteria of Deep-sea Hydrothermal Vent Bivalve Mussels

Yong-Jin Won, Ewha Womans University

**S2**

### Biochemistry and Molecular Biology of Prokaryotes

May 1 (Thu.), Room 324

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Chair: Soon-Jung Park, Yonsei University

**S2-1 09:45-10:15**

A *Salmonella* Virulence Protein Promotes Pathogenicity by Altering Intracellular ATP Levels

Eun-Jin Lee, Kyung Hee University

**S2-2 10:15-10:45**

Strategy of Survival of *E. coli* and Translational System

Nobuo Shimamoto, Kyoto Sangyo University, Japan

**S2-3 10:45-11:15**

O<sub>2</sub> Dependent Transcriptional Networks of *Escherichia coli*

Patricia J. Kiley, University of Wisconsin-Madison, USA

**S2-4 11:15-11:45**

Indole Inhibits Predation by *Bdellovibrio bacteriovorus* and Bdelloplast Lysis: A Transcriptomic Analysis

Robert J. Mitchell, Ulsan National Institute of Science and Technology

**S2-5 11:45-12:15**

Bacterial Cancer Therapy: Antitumor Effect of *Salmonellae* Expressing L-Asparaginase

Hyon E Choy, Chonnam National University Medical School

**S3**

**Novel Insights for Microbial Ecology**

May 1 (Thu.), Room 323

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*Chair:* Kyoung-Ho Kim, Pukyong National University

**S3-1 09:45-10:15**

Bioinformatics Effort to Better Understand Microbial Community  
Kyung Mo Kim, Korea Research Institute of Bioscience and Biotechnology

**S3-2 10:15-10:45**

Cyanobacterial Bloom: from Micro to Macro Aspect  
Chi-Yong Ahn, Korea Research Institute of Bioscience and Biotechnology

**S3-3 10:45-11:15**

Identification and Single-Cell Isolation of Active N<sub>2</sub>O Reducers in Environments  
Satoshi Ishii, Hokkaido University, Japan

**S3-4 11:15-11:45**

*Nocardioopsis*: from Its Biodiversity, Biogeography to Genetic Mechanisms of Environmental Adaptability  
Wen-Jun Li, Yunnan University, China

**S4**

**Signal Transduction and Gene Expression in Fungi**

May 1 (Thu.), Room 322

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*Chair:* Hee-Moon Park, Chungnam National University

**S4-1 09:45-10:15**

Characterization of the RGS Protein GprK and RgsC in *Aspergillus fumigatus*  
Kwang-Soo Shin, Daejeon University

**S4-2 10:15-10:45**

Septation and Conidiation in *Aspergillus nidulans*  
Ling Lu, Nanjing Normal University, China

*Chair:* Hyang Burm Lee, Chonnam National University

**S4-3 10:45-11:15**

Regulation of Pathogenesis by Light in *Cercospora zea-maydis*  
Hun Kim, Seoul National University

**S4-4 11:15-11:45**

Gene Expression in Yeast During Drug Synergy with Iron Chelating Agents  
Dee Carter, University of Sydney, Australia

**S5**

**Microbial Systems Biology and Genome Engineering**

May 1 (Thu.), Room 324

*Chair:* Byung-Kwan Cho, Korea Advanced Institute of Science and Technology

- S5-1 13:30-14:00**  
Microbial Relationships Uncovered—Community Systems Biology Approaches in Microbial Ecology  
Karsten Zengler, University of California San Diego, USA
- S5-2 14:00-14:30**  
*Eubacterium limosum* KIST612 as a Model Strain for C1 Biorefinery  
In Seop Chang, Gwangju Institute of Science and Technology
- S5-3 14:30-15:00**  
Development of Oxygen-independent *E. coli* Strain for Overproduction of Commodity Chemicals  
Vasiliy Portnoy, BP Biofuels, USA
- S5-4 15:00-15:30**  
Multiomics-guided Bacterial Genome Analysis  
Byung-Kwan Cho, Korea Advanced Institute of Science and Technology

**S6**

**Korea Traditional Fermented Food**

May 1 (Thu.), Room 323

*Sponsored by Microbial Institute for Fermentation Industry*

*Chair:* Young Soo Kim, Chonbuk National University

- S6-1 13:30-14:00**  
*Caenorhabditis elegans* Conditioning with The Probiotic Bacterium *Lactobacillus acidophilus* Strain A4 Enhances Longevity and Resistance to Foodborne Pathogen Infections  
Younghoon Kim, Chonbuk National University
- S6-2 14:00-14:30**  
Indigenous Yeasts Isolated from Traditional Fermented Soy-Sauce Can Prevent Pathogenic Bacteria Occurred at Low-Salt Fermentation Process  
Sang Ho Baik, Chonbuk National University
- S6-3 14:30-15:00**  
Changes in Transcriptional Level of Subtilisin-like Proteases of *Bacillus licheniformis* during Fermentation of Fast-fermented Soybean Paste  
Tai-Boong Uhm, Chonbuk National University
- S6-4 15:00-15:30**  
Antimicrobial Activity of *Bacillus licheniformis* Isolated From Korean Traditional Food Sources against Porcine Enteropathogenic Bacteria  
Ho-Seong Cho, Chonbuk National University

**S7**

## Host-Fungal Pathogen Interactions

May 1 (Thu.), Room 322

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Chair: Won Hee Jung, Chung-Ang University

**S7-1 13:30-14:00**

Development of System-wide Functional Analysis Platform for Pathogenicity Genes in The Rice Blast Fungus

Sook-Young Park, Seoul National University

**S7-2 14:00-14:30**

Population Structure of the Plant Pathogenic Fungus *Fusarium graminearum* in Korea

Jungkwan Lee, Dong-A University

**S7-3 14:30-15:00**

Copper Homeostasis as a Virulence Factor in Systemic Infection by The Human Fungal Pathogen *Cryptococcus neoformans*

Chen Ding, Northeastern University, China

**S7-4 15:00-15:30**

*Candida* Infection and Antifungal Drug Resistance

Mi-Kyung Lee, Chung-Ang University

**S8**

## New Approaches in Understanding of Microbial Pathogenesis

May 1 (Thu.), Room 324

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Chair: Dong Wook Kim, Hanyang University

**S8-1 16:15-16:45**

Investigating *Salmonella* Pathogenesis for The Development of Targeted Intervention Strategies

Bradley L. Bearson, National Laboratory for Agriculture and the Environment, USA

**S8-2 16:45-17:15**

Structural and Biophysical Insights into Flagellin-mediated Activation of TLR5 Signaling

Sung-il Yoon, Kangwon National University

**S8-3 17:15-17:45**

FoxP3+ Tregs, PD-1 and CTLA4: Negative Immune Regulatory Pathways in Patients with Chronic HIV and/or HCV Infection

Hyosun Cho, Duksung Women's University

**S8-4 17:45-18:15**

Tumor Cell Modulation by Mucosa-associated *Escherichia coli* as an Internal Exosome via Macrophage Inhibitory Cytokine 1

Yuseok Moon, Pusan National University



**S9**

**Novel Concepts in Gene Expression System**

May 1 (Thu.), Room 323

Chair: Eung-Soo Kim, Inha University

**S9-1 16:15-16:45**

Proof of Concept Trials for Functional Overexpression and High Throughput Assay of Proteins  
Geun-Joong Kim, Chonnam National University

**S9-2 16:45-17:15**

Incorporation of Unnatural Amino Acids into Proteins in *Escherichia coli* and Their Applications  
Hyungdon Yun, Konkuk University

**S9-3 17:15-17:45**

New Strategy for Enhancing Heterologous Protein Expression through the Alternating N-terminal Codons  
Jong Hyun Choi, Korea Research Institute of Bioscience and Biotechnology

**S9-4 17:45-18:15**

Strategy to Overexpress a Large Biosynthetic Gene Cluster in *Streptomyces* Species  
Eung-Soo Kim, Inha University

**S10**

**Structural Microbiology and Pathogenesis**

May 2 (Fri.), Room 324

Co-organized by Systems & Synthetic Agrobiotech Center

Chair: Myung Hee Kim, Korea Research Institute of Bioscience and Biotechnology

**S10-1 09:00-09:30**

Crystal Structures of Bifunctional Penicillin-Binding Protein 4 from *Listeria monocytogenes*  
Yeon-Gil Kim, Pohang University of Science and Technology

**S10-2 09:30-10:00**

Structural Basis for The Recognition of Peptidoglycan Tripeptide by *Helicobacter pylori* Csd4, a D,L-carboxypeptidase Controlling The Helical Cell Shape  
Byung Il Lee, Research Institute National Cancer Center

Chair: Sun-Shin Cha, Korea Institute of Ocean Science and Technology

**S10-3 10:00-10:30**

Structure and Function of Fungal Zn Finger Transcription Factor in Sterol Homeostasis and Antifungal Resistance  
Young Jun Im, Chonnam National University

**S10-4 10:30-11:00**

Dxo1, a Novel Eukaryotic Enzyme with Both Decapping and 5'-3' Exoribonuclease Activity  
Jeong Ho Chang, Kyungpook National University

**S11**

**Molecular Epidemiology and Control of Enteric Virus**

May 2 (Fri.), Room 322

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*Chair:* Jin Hyun Ahn, Sungkyunkwan University School of Medicine

**S11-1 09:00-09:30**

Management Strategy of Norovirus in South Korea  
In-Sun Joo, National Institute of Food and Drug Safety Evaluation

**S11-2 09:30-10:00**

Public Health Impact of Human Noroviruses  
Jan Vinjé, Centers for Disease Control and Prevention, USA

**S11-3 10:00-10:30**

Norovirus: The Main Target for Food Safety and Control  
GwangPyo Ko, Seoul National University

**S11-4 10:30-11:00**

Antiviral Activity and Its Mechanism of Ginsenosides against Norovirus Surrogates  
Changsun Choi, Chung-Ang University

**S12**

**Microbial and Toxicological Burdens in Biomaterials : How to Measure and Remove?**

May 2 (Fri.), Room 324

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*Chair:* In Seop Kim, Hannam University

**S12-1 11:00-11:30**

Nonclinical Safety Research and Related Matters for Drug Development  
Tarumoto Yasuo, Genia

**S12-2 11:30-12:00**

Virological Safety Aspects of Biopharmaceuticals Produced in Mammalian Cell Cultures  
In Seop Kim, Hannam University

**S12-3 12:00-12:30**

What Testings Should be Done to Confirm The Safety of Biologics such as Gene Medicines?  
Jae-Gyun Jeong, ViroMed Co., Ltd.

**S12-4 12:30-13:00**

Toxicology Tests of Microbial and Agrochemical Pesticides  
Heon Ju Lee, Korea Human Resource Development Institute For Health & Welfare

**S13**

**Animal Gut Microbiome**

May 2 (Fri.), Room 323

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Chair: Woojun Park, Korea University

**S13-1 11:00-11:30**

Gut Microbiota of *Tenebrio molitor* and Their Responses to Environmental Changes  
Woojun Park, Korea University

**S13-2 11:30-12:00**

Change of Gut Bacterial Communities Based on Evolution of Animal Host Species  
Jin-Woo Bae, Kyung Hee University

**S13-3 12:00-12:30**

Genetic Basis for Intestinal Colonization by Gut Microbes Revealed by a Metagenomic Screen  
Sang Sun Yoon, Yonsei University

**S13-4 12:30-13:00**

The Biological Functions of Novel Symbiotic Factors in *Riptortus-Burkholderia* Symbiotic System  
Bok Luel Lee, Pusan National University

**S14**

**Molecular and Cellular Biology of Yeast**

May 2 (Fri.), Room 322

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Chair: Won-Ki Huh, Seoul National University

**S14-1 11:00-11:30**

Nst1 Functions as an Adapting Protein to Mediates a Crosstalk of Cell Wall Integrity and HOG MAPK Pathways in Response to Heat Stress in Budding Yeast *Saccharomyces cerevisiae*  
Kiwon Song, Yonsei University

**S14-2 11:30-12:00**

Control of Gene Induction Kinetics by Set3 HDAC and Overlapping Non-coding RNA Transcription  
TaeSoo Kim, Ewha Womans University

**S14-3 12:00-12:30**

The Sec62/Sec63 Translocon Mediates Topogenesis of Membrane Proteins  
Hyun Kim, Seoul National University

**S14-4 12:30-13:00**

Multistep Functions of Dna2 Nuclease in DNA Double-strand Break Repair by Homologous Recombination  
Woo-Hyun Chung, Duksung Women's University

**S15**

**Lactic Acid Bacteria and Human Health**

May 2 (Fri.), Room 324

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*Sponsored by Korea Yakult*

*Chair: Ju-Hoon Lee, Kyung Hee University*

**S15-1 15:30-16:00**

Lactic Acid Bacteria: An Overview of Beneficial Effects  
Dong-Hyun Kim, Kyung Hee University

**S15-2 16:00-16:30**

Analysis of Human Milk Oligosaccharides and Their Utilization by *Bifidobacterium*  
Jaehan Kim, Chungnam National University

*Chair: Dong-Hyun Kim, Kyung Hee University*

**S15-3 16:30-17:00**

Comparative and Functional Genomic Analysis of Bifidobacteria Reveals Its Genomic Adaptation into Human Intestinal Habitat  
Ju-Hoon Lee, Kyung Hee University

**S15-4 17:00-17:30**

Probiotics as an Immune Modulator for Hyper-immune Disorders  
Sin-Hyeog Im, Academy of Immunology and Microbiology (AIM), Institute for Basic Science (IBS)/ Pohang University of Science and Technology

## ■ ■ ■ Young Scientists' Sessions

**YS1**

### Young Scientists' Session 1

April 30 (Wed.), Room 322

Chair: Jung-Shin Lee, Kangwon National University

**YS1-1 14:30-14:42**

The Role of a Specific Hemagglutinin Residue as an Indicator of The Evolution Dynamics of Human Influenza A H1N1 Viruses

Jin Il Kim, Korea University

**YS1-2 14:42-14:54**

Inverse Regulation of Fe- and Ni-containing SOD Genes by a Fur Family Regulator Nur Through Small RNA Processed From 3'UTR of The *sodF* mRNA

Hae Mi Kim, Seoul National University

**YS1-3 14:54-15:06**

Characterization of Catalytic Functions of Bacterial CYP191A1

Sun-Ha Park, Korea Atomic Energy Research Institute

**YS1-4 15:06-15:18**

Identification of Colistin Resistance Mechanism Using Transcriptome Analysis in *Acinetobacter baumannii*

Young Kyoung Park, Sungkyunkwan University

**YS1-5 15:18-15:30**

HPr Antagonizes the Anti- $\sigma^{70}$  Activity of Rsd in *Escherichia coli*

Young-Ha Park, Seoul National University

**YS1-6 15:30-15:42**

Fitness of Plasmid Bearing *bla*<sub>CTX-M-15</sub> Gene in *Klebsiella pneumoniae*

Juyoun Shin, Sungkyunkwan University

**YS1-7 15:42-15:54**

Altered Gut Microbiota Composition Affects Mouse Susceptibility to *Vibrio cholerae* Infection

Mi Young Yoon, Yonsei University

**YS1-8 15:54-16:06**

Genomic Variations Between Colistin-susceptible and -resistant *Pseudomonas aeruginosa* Clinical Isolates and Their Effects on Colistin Resistance

Ji-Young Lee, Sungkyunkwan University

**YS1-9 16:06-16:18**

Tn7 Transposition: Importance of Protein-Protein Interactions Between TnsABCD

Ki Young Choi, Johns Hopkins University

**YS2**

**Young Scientists' Session 2**

May 1 (Thu.), Room 322

Chair: Won Hee Jung, Chung-Ang University

**YS2-1 16:15-16:27**

Characterization and *In Vitro* Inhibition Studies of *Bacillus anthracis* FtsZ: A Potential Antibacterial Target  
Hae-Chul Park, Animal and Plant Quarantine Agency

**YS2-2 16:27-16:39**

Induction of Apoptosis by a *Vibrio vulnificus* Metalloprotease  
Mi-Ae Lee, Sogang University

**YS2-3 16:39-16:51**

Translation of Leaderless Transcripts are Regulated by Non-coding RNAs in *Thermococcus onnurineus* NA1  
Bo-Rahm Lee, Korea Advanced Institute of Science and Technology

**YS2-4 16:51-17:03**

Inhibition of HCV Replication with HCV NS5B Specific RNA Aptamer  
Chang Ho Lee, Dankook University

**YS2-5 17:03-17:15**

Novel Na<sup>+</sup>-Dependent Respiration in Hyperthermophilic Archaeon, *Thermococcus onnurineus* NA1  
Jae Kyu Lim, Korea Institute of Ocean Science and Technology

**YS2-6 17:15-17:27**

Application of a New Cultivation Technology, I-tip, for Studying Microbial Diversity in Freshwater Sponges of Lake Baikal, Russia  
Dawoon Jung, Kangwon National University

**YS2-7 17:27-17:39**

Comparative Genomic and Transcriptomic Analyses of *Acinetobacter* and *Alishewanella* Species Adapted to Different Habitats  
Jaejoon Jung, Korea University

**YS2-8 17:39-17:51**

Genome-scale Probing of *In Vivo* Organization of Bacterial Transcription Initiation Complexes  
Suhjung Cho, Korea Advanced Institute of Science and Technology

**YS2-9 17:51-18:03**

RNA-mediated Regulation of Photosynthesis in *Synechocystis* sp. PCC6803  
Yoo-Bok Cho, Korea Advanced Institute of Science and Technology

## ■■■ Graduate Students' Presentation Session

**GS**

### Graduate Students' Presentation Session

May 2 (Fri.), Room 323

Chair: Woojun Park, Korea University, Sang Sun Yoon, Yonsei University

**GS-1 09:00-09:10**

Multiple Resistance Mechanisms of High-level Fluoroquinolone Resistant *Aeromonas* sp. Strain C3 Isolated from Waste Water Treatment Plant  
Cung Nawl Thawng, Chung-Ang University

**GS-2 09:10-09:20**

Metabolic Pathway Analysis for Efficient Succinic Acid Production  
Won Jun Kim, Korea Advanced Institute of Science and Technology

**GS-3 09:20-09:30**

Quorum Sensing for Biofilm Formation and Oil Degradation in *Acinetobacter oleivorans* DR1  
Jisun Kim, Korea University

**GS-4 09:30-09:40**

Community Structure Analysis and Characterization of Soil Humic Substances-Degrading Bacteria from Cold Environments  
Ha Ju Park, Korea Polar Research Institute

**GS-5 09:40-09:50**

Development of Rapid One-Step Inactivation Tool and Engineering of *E. coli* to Produce Fumaric Acid  
Chan Woo Song, Korea Advanced Institute of Science and Technology

**GS-6 10:00-10:10**

Genetic Bases of Enhanced *Pseudomonas aeruginosa* Biofilm Development by Sub-Minimum Inhibitory Concentration Treatment of Antibiotics  
Keehoon Lee, Yonsei University

**GS-7 10:10-10:20**

Comparison of CO-dependent H<sub>2</sub> Production with Strong Promoters in *Thermococcus onnurineus* NA1  
Seong Hyuk Lee, Korea Institute of Ocean Science and Technology

**GS-8 10:20-10:30**

Characterization of Plasmid pEMB1 Harboring a  $\beta$ -Lactamase Gene and a Toxin-antitoxin System  
Hyo Jung Lee, Chung-Ang University

**GS-9 10:30-10:40**

Identification and Role of the DNA-Damage Response Two Component System, DrtR/S, in *Deinococcus radiodurans*

Seonghun Im, Korea Atomic Energy Research Institute

**GS-10 10:40-10:50**

Potassium Ion-Mediated Regulation of Biofilm Formation via Controlling Cellular Level of Sigma S

Yu-Sook Chung, Sogang University

**GS-11 10:40-10:50**

Metagenomic and Metatranscriptomic Analysis of Kimchi, a Traditional Korean Fermented Food

Ji Young Jung, Chung-Ang University

**GS-12 10:50-11:00**

*Staphylococcus aureus* Vesicles Modulate the Surface Hydrophobicity Which Inhibits Other ESKAPE Pathogens from Forming Biofilms

Hansol Im, Ulsan National Institute of Science and Technology



## ■■■ Technology Workshops

**TW1**

### Technology Workshop 1

April 30 (Wed.), Room 324

*Sponsored by Korea National Research Resource Center*

*Chair: Byung-Kwan Cho, Korea Advanced Institute of Science and Technology*

**TW1-1 14:30-14:50**

Next-generation Sequencing 기술의 원리와 응용

Yong-Joon Cho, ChunLab Inc.

**TW1-2 14:50-15:10**

Next-generation Sequencing 기술을 이용한 세균의 분류동정

Mincheol Kim, Korea Polar Research Institute

**TW1-3 15:10-15:30**

Genome Resequencing을 이용한 세균 적응진화연구

Byung-Kwan Cho, Korea Advanced Institute of Science and Technology

**TW1-4 15:30-15:50**

Transcriptome Analysis and Its Applications by Using Stranded/Differential RNA-sequencing Technologies

Bo-Rahm Lee, Korea Advanced Institute of Science and Technology

**TW1-5 15:50-16:10**

Principle and Application of ChIP-seq to Understand Transcriptional Regulation

Yoo-Bok Cho, Korea Advanced Institute of Science and Technology

**TW1-6 16:10-16:30**

Translatomic Analysis by Using Ribo-seq Technique

Yujin Jeong, Korea Advanced Institute of Science and Technology

**TW2**

**Technology Workshop 2**

May 2 (Fri.), Room 323

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*Sponsored by Korea National Research Resource Center*

*Chair: Byung-Kwan Cho, Korea Advanced Institute of Science and Technology*

**TW2-1 15:30-15:50**

Introduction to Metabolomics: Methods, Protocols and Applications

Young-Sang Jung, Korea Basic Science Institute

**TW2-2 15:50-16:10**

Glycosylation 분석을 위한 질량분석기 원리와 응용

Kyoung-Soon Jang, Korea Basic Science Institute

**TW2-3 16:10-16:30**

Principle and Application of Bimolecular Fluorescence Complementation Assay for Protein-protein Interaction Study

Yong Bhum Song, Seoul National University

**TW2-4 16:30-16:50**

Synthetic Regulatory Small RNA for Fine-tuning Gene Expression and Its Application

Seung Min Yoo, Korea Advanced Institute of Science and Technology

**TW2-5 16:50-17:10**

The Principle and Application of RNA-guided Nuclease Based Genome Editing

Sooin Lee, Korea Advanced Institute of Science and Technology

**TW2-6 17:10-17:30**

Bio-Imaging: How to Make a Good Digital Image

Nuri Kim, Korea Advanced Institute of Science and Technology

■■■ Workshop

**W**

**ChunLab, Inc.**

May 1 (Thu.), Room 324

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*Chair: Byung-Yong Kim, ChunLab, Inc.*

**12:30-13:30**

RNA-Seq Analysis: Current Methods and Its Applications

Namil Kim, ChunLab, Inc.

# 제3회 미생물 탐구 페스티벌

## ■■■ The 3<sup>rd</sup> Microbiology Research Festival for High School Students

HS

### High School Students' Presentation Session

May 2 (Fri.), Room 322

Sponsored by R&D Center Maeil Dairies Co., Ltd.

좌장: 한양대학교 김동욱 교수

- 14:00-14:05**      **개회**
- HS-1**    **14:05-14:15**  
철세균을 이용한 토양박테리아의 성장을 저해하는 박테리오파지의 억제효과에 대하여  
양준용, 중산고등학교
- HS-2**    **14:15-14:25**  
기후 변화에 따른 토양의 온도변화가 항생제 내성 박테리아의 토양번식에 미치는 영향  
장서현, 세종과학고등학교
- HS-3**    **14:25-14:35**  
효모를 이용한 돌외 및 10종 천연물의 수명 및 노화에 미치는 영향 및 관련 기전 분석  
김재현, 개포고등학교
- HS-4**    **14:35-14:45**  
유분 환경에 따른 *Houttuynia cordata* 의 *Propionibacterium acnes* 성장 억제 효과 탐구  
김원휘, 송민호, 서울과학고등학교
- HS-5**    **14:45-14:55**  
후추의 피페리딘 성분의 박테리아의 면역 저하 반응유도에 의한 유해 박테리아(항생제 내성 대장균)의 억제 방안  
이동근, 신도림고등학교
- HS-6**    **14:55-15:05**  
폐식용유가 토양에 존재하는 토양박테리아와 유해세균의 증식에 미치는 영향에 대하여  
박지연, 동덕여자고등학교
- HS-7**    **15:05-15:15**  
세포벽을 손상시킨 토양박테리아를 이용한 토양의 방사성 스트론튬의 제거방안  
조지원, 은광여자고등학교

**HS-8 15:15-15:25**

저염 환경에 적합한 유산균 선발 및 이를 이용한 저염 김치 생산  
심지호, 배재고등학교

**HS-9 15:25-15:35**

정제당류 및 인공당류에 노출된 세균의 항생제 민감성 변화  
이가은, 아시아퍼시픽국제 외국인학교(APIS)

**HS-10 15:35-15:45**

다양한 식품군의 섭취에 따른 햄스터 장내 세균의 분포 변화  
이현정, 은광여자고등학교

**HS-11 15:45-15:55**

비타민 C의 세포증식 억제 효과를 이용한 박테리아의 항생제 내성발생의 감소방안 및 원리의 규명  
방민정, 박나현, 민족사관고등학교

**HS-12~HS-31**

포스터발표(14:00-16:00, 장소: 포스터 세션장 321호)

**SS**

**Special Lecture for High School Students**

May 2 (Fri.), Room 322

좌장: 서울대학교 천종식 교수

**SS 16:00-17:00**

진로탐색 특강: 과학자의 삶 '공부해서 무엇하나?'  
노정혜, 서울대학교