The 96th Annual Meeting of Japanese Society for Bacteriology

General Meeting

Friday, March 17　13:35–15:35
Room 1 (Grand Hall)

Award Lecture

Friday, March 17　13:35–15:35
Room 1 (Grand Hall)

The molecular mode of action of bacterial toxins
◯Yasuhiko Horiguchi (Dept. Molecular Bacteriology, Research Institute for Microbial Diseases, Osaka Univ.)

Special Lecture

Friday, March 17　11:10–12:10
Room 1 (Grand Hall)

Chair: Tetsuya Iida (Osaka University)

SL
Cell density-dependent death triggered by viral palindromic DNA sequences
William P. Robins, Bradley T. Meader, Jonida Toska, ◯John J. Mekalanos (Dept. Microbiol., Harvard Medical Sch.)

Presidential Symposium

The order may be changed after the program is released

PS1　Research on microorganisms and infectious diseases using cutting-edge approaches

Thursday, March 16　9:10–11:40
Room 1 (Grand Hall)

Conveners: Tetsuya Iida (Osaka University)
Makoto Miyata (Osaka Metropolitan University)
Yumi Matsuoka (Osaka University)

PS1-1
Origin of motility suggested from *Spiroplasma* swimming reconstituted in synthetic bacterium
Hana Kiyama[1], Shigeyuki Kakizawa[2], Yuya Sasajima[1], Yu-hei Tahara[1], Daichi Takahashi[1], ◯Makoto Miyata[1] ([1]Grad. Sch. Sci., Osaka Metro. Univ., [2]Bio. Res. Inst., AIST)

PS1-2
Establishment and application of human norovirus propagation system using hiPSC-IECs
◯Shintaro Sato[1,2] ([1]Dept. Microbiol. Immunol., Sch. Pharm. Sci. Wakayama Medical Univ., [2]Dept. Virol., RIMD, Osaka Univ.)

PS1-3
Identification of novel mechanisms in S. aureus environmental adaptation by whole genome analysis
◯Yumi Matsuoka-Nakamura (iFReC, Osaka Univ.)

PS1-4
Biofilm and Sociomicrobiology
◯Nobuhiko Nomura[1,2], Masanori Toyofuku[1,2], Nozomu Obana[2,3] ([1]Faculty Life Environ. Sciences, Univ. Tsukuba, [2]MiCS, [3]Faculty Med., Univ. Tsukuba, [4]Transborder Med. Res. Cen., Univ. Tsukuba)

PS2　Driving large-scale group research projects

Saturday, March 18　9:10–11:40
Room 2 (Medium Hall)

Conveners: Tetsuya Iida (Osaka University)
Takaaki Akaike (Tohoku University)

PS2-1
Cool Earth via Microbes: Mitigation of greenhouse gas emissions from agricultural lands
◯Kiwamu Minamisawa (Grad. Sch. Life Sci., Tohoku Univ.)

PS2-2
Toward the realization of a society free from the threat of pandemics
◯Yoshiharu Matsuura[1,2] ([1]Center for Infectious Disease Education and Research, Osaka Univ., [2]Research Institute for Microbial Diseases, Osaka Univ.)

PS2-3
Post-Koch ecology toward diviersity, function, and ecology of microorganisms
◯Naoki Takaya[1,2] ([1]Life Environment. Sci., Univ. Tsukuba, [2]Microbiol. Res. Center Sus, Univ. Tsukuba)

PS2-4
Perspective for a new era of redox biology quickly expending worldwide via three scientific kingdoms
◯Takaaki Akaike (Dept. of Environ. Med. Mol. Toxicol., Tohoku Univ. Grad. Sch. Med.)

Research Presentations by Junior High School and High School Students

JRS Research presentations by junior high school and high school students

Saturday, March 18 8:40–11:45
Room 3 (407)

Conveners: Chikara Kaito (Okayama University)
Yasuhiko Matsumoto (Meiji Pharmaceutical University)

JRS-1
Search for yeast with high plastic-degrading ability
◯Hina Saito, Yuki Iwata, Riku Sasaki (Akita Senior High School)

JRS-2
Do filamentous fungus on a leaf surface decompose biodegradable plastic?
◯Kotarou Araya, Saki Ootsuka, Suzuka Moriya, Yuki Miyazaki (Hokkaido Asahikawanishi High School)

JRS-3
Cultivation of Methanogens from Mud in Puddy with Sodium Acetate
◯Yuuri Sato, Ami Tsuto, Maiko Takahashi, Yuuna Imura, Ayaka Oba (Miyagi Prefectural Furukawa Reimei High School)

JRS-4
Endophytic Bacteria Obtained from the Knot of Oak in the Schoolyard
◯Honoka Okawa, Jinichirou Osaki, Nanoha Ito, Kasumi Matsumoto (Miyagi Prefectural Furukawa Reimei High School)

JRS-5
Study on the isolation and nitrogen fixation conditions of Azotobacter spp.
◯Kasumi Suzuki, Arisa Kawahara, Runa Shibata (Meijo Univ. Senior High School)

JRS-6
Antibacterial effect of naturally occurring ingredients
◯Riko Matsufune, Sakura Mita, Asuka Momiji (Kanagawa Prefectural Atsugi High School)

JRS-7
Antibacterial action of plant
◯Haruka Katsu (Meijo Univ. Senior High School)

JRS-8
Antibacterial Effect of Mask Spray on Oral Bacteria by Paper Disk Method
◯Aisei Takeuchi, Syuto Kawaguchi (Yamamurakokusai High School)

JRS-9
Anti-Mold Function by Photocatalyst with Titanium Oxide
◯Yuka Yoshimitsu, Juri Kanaya, Momoka Sawada, Tsubasa Osugi (Komatsu High School)

JRS-10
The study about slime mold's feed sensing
◯Taiyo Okayama, Mao Sunayama, Yuko Nakamura, Yujiro Honda, Masanobu Waraya (Komatsu High School)

JRS-11
Yeast damage in frozen storage
◯Shogo Ogata, Miyu Kawasaki, Hana Naito, Konosuke Sakashita, Haruna Nakano (Mie Prefectural Kuwana High School)

JRS-12
Study on decomposition of polylactic acid in water using EM bacteria
◯Koki Mizutani (Meijo Univ. Senior High School)

JRS-13
Skin Care with Bitter Chocolate (Sun Protection)
◯Hana Shiota (Yamamurakokusai High School)

JRS-14
Fructooligosaccharides Increase Relative Abundance of Gut Microbiota Producing Short Chain Fatty Acids
◯Nanako Kaneko (Yamamurakokusai High School)

Wakate Colosseum for Bacteriology

WCB Joint Symposium: Wakate Colosseum for Bacteriology —Young bacteriological research for the future—

Saturday, March 18 13:10–15:10
Room 3 (407)

Conveners: Ryo Ozuru (Fukuoka University)
Satoshi Shibata (Tottori University)
Yuki Wakabayashi (Osaka Institute of Public Health)

WCB-1
Whole genome cloning of unculturable bacteria in budding yeast
◯Masaki Mizutani[1], Kaori Miyakoshi[1], Ryuichi Koga[1], Takema Fukatsu[1,2,3], Shigeyuki Kakizawa[1] ([1]Bioproduct. Res. Inst., AIST., [2]Dept. Bio. Sci., Grad. Sch. Sci., Univ. Tokyo, [3]Grad. Sch. Life. Environ. Sci., Univ. Tsukuba)

WCB-2

Interaction between *Bordetella bronchiseptica* and *Acanthamoeba* as a transient host in the natural environment

◯Dendi Krisna Nugraha[1], Takashi Nishida[1], Yuki Tamaki[1], Yukihiro Hiramatsu[1], Hiroyuki Yamaguchi[2], Yasuhiko Horiguchi[1,3] ([1]Dept. Mol. Bact., RIMD, Osaka Univ., [2]Fac. Health Sci., Hokkaido Univ., [3]CiDER, Osaka Univ.)

WCB-3

Establishment of an antibacterial capsid construction method using Pseudomonas aeruginosa phage

◯Tomofumi Kawaguchi, Shinya Watanabe, Yi Liu, Xin-Ee Tan, Longzhu Cui (Div. Bacteriol., Dept. Infect. Immunity, Sch. Med., Jichi Med. Univ.)

WCB-4

Genome sequencing of adapted laboratory-evolved strains isolated from genome-reduced E.coli

◯Yuto Kotaka[1,3], Masayuki Hashimoto[2], Ken-ichi Lee[3], Jun-ichi Kato[1] ([1]Dept. Biol. Sci., Sch. Sci., Tokyo Metropolitan Univ., [2]Natl. Cheng Kung Univ., Inst. Mol. Med., [3]Dept. Bacteriol. 1, Natl. Inst. Infect. Dis.)

WCB-5

Theoretical analysis of plasmid fixation condition under antibiotic addition

◯Daiki Kumakura[1,2] ([1]Grad. Life Sci., Hokkaido Univ., [2]iTHEMS, RIKEN)

WCB-6

Parasitic lifestyle and genome evolution of novel endosymbiotic clostridia of cellulolytic protists

◯Kazuki Takahashi[1], Hirokazu Kuwahara[1], Yutaro Horikawa[1], Kazuki Izawa[1], Tatsuya Inagaki[1], Masahiro Yuki[2], Moriya Ohkuma[2], Yuichi Hongoh[1,2] ([1]Dept. Life Sci. Eng., Tokyo Tech., [2]JCM, RIKEN BRC)

WCB-7

Isolation of bacteriophages by segregation into micro-sized water-in-oil droplets

◯Miu Hoshino[1,2], Yuri Ota[2,3], Tetsushi Suyama[2], Yuji Morishita[3], Satoshi Tsuneda[4], Naohiro Noda[1,2,4] ([1]Dept. CBMS, Grad. Sch. Frontier Sci., Tokyo Univ., [2]BMRI, AIST, [3]On-chip Biotechnologies Co., Ltd, [4]Dept. Life Sci. Med. Biosci., Grad. Sch. Adv. Sci. Eng., Waseda Univ.)

Symposium

S1 Current status and prospects of biological defense research

Thursday, March 16 9:10–11:40
Room 2 (Medium Hall)

Conveners: Ichiro Nakagawa (Kyoto University)
Yuki Kinjyo (The Jikei University School of Medicine)

Co-host: Japanese Society for Host Defense Research

S1-1

Cholesterol metabolism associated with the innate immune response against viral infection

◯Hiroyuki Oshiumi (Dept. Immuol. Fac. Sci. Kumamoto Univ.)

S1-2

Mechanism of mycobacterial zinc metalloprotease (Zmp) 1-mediated suppression of IL-1β production

◯Goro Matsuzaki[1,2], Giichi Takaesu[1,2] ([1]Mol. Microbiol. Group, TBRC, Univ. Ryukyus, [2]Dept. Biodefense, Grad. Sch. Med., Univ. Ryukyus)

S1-3

Neural control of gut homeostasis through regulation of the microbiota and pathogens in *Drosophila*

◯Shoichiro Kurata (Grad. Sch. Pharmaceu. Sci. Tohoku Univ.)

S1-4

Rab GTPases network regulates intracellular membrane trafficking and bacterial infection

◯Takashi Nozawa, Kazunori Murase, Ichiro Nakagawa (Dept. Microbiol., Grad. Sch. Med., Kyoto Univ.)

S1-5

Innate and acquired immune responses against mycobacterial lipids

◯Sho Yamasaki (Dept. Mol. Immunol., RIMD/IFReC, Osaka Univ.)

S2　Frontrunners in basic research and practice of One Health

Thursday, March 16　9:10–11:40
Room 3 (407)

Conveners: Hitomi Mimuro (Oita University)
Atsushi Iguchi (University of Miyazaki)

Co-host: Research Center for GLOBAL and LOCAL Infectious Diseases (RCGLID), Oita University, The Center for Animal Diseases Control (CADIC), University of Miyazaki

S2-1
Drug-resistant strains of human pathogenic fungi in the agricultural environment
◯Daisuke Hagiwara[1,2] ([1]Fac. Env. Life Sci., Univ. Tsukuba, [2]MiCS, Univ. Tsukuba)

S2-2
Human pathogenesis developed through animal adaptations in *Escherichia* species
◯Yoshitoshi Ogura (Div. Microbiol., Dept. Infect. Med., Kurume Univ. Sch. Med.)

S2-3
Transmission and spread of antimicrobial-resistant bacteria in wildlife and the natural environment
◯Tetsuo Asai (Dept. Appl. Vet. Sci., Unit. Grad. Sch. Vet. Med., Gifu Univ.)

S2-4
Surveillance of antimicrobial resistant bacteria based on One Health approach in Vietnam
◯Ikuro Kasuga (RCAST, UTokyo)

S2-5
Prion Disease Research Today
◯Ryuichiro Atarashi (Dept. Inf. Dis., Fac. Med., Univ. Miyazaki)

S2-6
Rabies and its prevention from One Health
◯Akira Nishizono (Dept. Microbiol., Sch. Med., Oita Univ.)

S3　The endless war: Phages vs Bacteria

Thursday, March 16　9:10–11:40
Room 4 (408)

Conveners: Kotaro Kiga (National Institute of Infectious Diseases)
Hiroki Ando (Gifu University・Astellas Pharma)

Co-host: Japanese Society for Phage Therapy

S3-1
The arms race between bacteria and their phages
◯Yuichi Otsuka (Grad. Sch. Science and Engineering, Saitama Univ.)

S3-2
Endless battle between phage and bacteria: discovery of bacterial defense system and phage anti-defense system
◯Aa Haeruman Azam[1], Kohei Kondo[1,2], Tomohiro Nakamura[1,3], Shinjiro Ojima[1], Azumi Tamura[1,4], Wakana Yamashita[1,5], Koichi Watashi[1], Yoshimasa Takahashi[1], Longzhu Cui[6], Kotaro Kiga[1,6] ([1]Research Center for Drug and Vaccine Development, The National Institute of Infectious Disease, [2]Antimicrobial Resistance Research Center, The National Institute of Infectious Disease, [3]Lab. Veterinary Biochemistry, Dept. Veterinary Medicine, Rakuno Gakuen Univ., [4]Dept. Computational Biology and Medical Sciences, Grad. Sch. Frontier Science, The Univ. of Tokyo, [5]Sch. Advanced Science and Engineering, Dept. Life Science and Medical Bioscience, Waseda Univ., [6]Div. Infection and Immunity, Dept. Bacteriology, Jichi Medical Univ.)

S3-3
Implications for bacterial evolution of giant phages with uracil-containing DNA genomes
◯Jumpei Uchiyama[1], Iyo Uchiyama[1], Kazuyoshi Gotoh[1], Yumiko Yamamoto[1], Shigenobu Matsuzaki[2], Osamu Matsushita[1] ([1]Dept. Bacteriol., Grad. Sch. Med. Dent. Pharm. Sci., Okayama Univ., [2]Kochi Gakuen Univ.)

S3-4
Development of new modalities for drug discovery against bacterial infections
◯Longzhu Cui (Bacteriology, Sch. Med., Jichi Medical Univ.)

S3-5
Synthetic engineering and biological containment of bacteriophages
◯Shoichi Mitsunaka[1,2], Hiroki Ando[1,2,3,4] ([1]Dept. Microbiol., Grad. Sch. Med., Gifu Univ., [2]Phage Biologics, Grad. Sch. Med., Gifu Univ., [3]G-CHAIN, Gifu Univ., [4]VU-EPHT, DA, Astellas Pharma)

S3-6

Phage search for prevention and treatment of oral infections

○Miki Kawada-Matsuo[1,2], Hitoshi Komatsuzawa[1,2] ([1]Dept. Bacteriol., Grad. Sch. Biomed. & Health Sci., Hiroshima Univ., [2]Project Research Ctr., Nosocomial Infectious Diseases, Hiroshima Univ.)

S4 Novel strategies for antimicrobial drug discovery and their molecular basis

Thursday, March 16 13:20–15:50
Room 1 (Grand Hall)

Conveners: Masato Suzuki (National Institute of Infectious Diseases)
Yoshihiko Hoshino (National Institute of Infectious Diseases)

Supported by: Japan Agency for Medical Research and Development

S4-1

Development of antimicrobial adjuvants targeting gram-negative bacterial pathogens

○Aki Hirabayashi[1], Asaomi Kuwae[2], Akio Abe[2], Keigo Shibayama[3], Masato Suzuki[1] ([1]AMR Res. Ctr., NIID, [2]Lab. Bact. Infect., Grad. Sch. Infect. Cont. Sci., Kitasato Univ., [3]Dept. Bacteriol., Grad. Sch. Med., Nagoya Univ.)

S4-2

Derivatization and development of potent anti-mycobacterial agents by the next-generation technique

○Haruo Ikeda (Technology Research Association for Next Generation Natural Products Chemistry)

S4-3

Development of a new screening method targeting intracellular NTM

○Hanako Fukano[1], Kentaro Yamamoto[1], Yasuhiko Matsumoto[2], Yoshihiko Hoshino[1] ([1]Dept. Mycobacteriol, Leprosy Research Center, National Institute of Infectious Diseases, [2]Dept. Microbiol., Meiji Pharmaceutical Univ.)

S4-4

The gut microbiota as a novel modality to overcome infectious diseases

○Yun-Gi Kim (Res. Ctr. Drug Disc., Fac. Pharm., Keio Univ.)

S4-5

Development of novel therapies for dysbiosis-related diseases

○Satoshi Uematsu[1,2] ([1]Dept. Imm. & Gen., Grad. Sch. Med., Osaka Metropolitan Univ., [2]Div. Metagenome Med., IMS., U Tokyo)

S5 Front line of food poisoning research

Thursday, March 16 13:20–15:50
Room 2 (Medium Hall)

Conveners: Shinji Yamasaki (Osaka Metropolitan University)
Takao Kawai (Osaka Institute of Public Health)

Co-host: Japanese Society of Food Microbiology

S5-1

Norovirus Infection: current and future prospects

○Naomi Sakon (Dept. Microbiol. Osaka Institute of Public Health)

S5-2

An emerging foodborne bacterial pathogen, *Escherichia albertii*

○Yukiko Hara-Kudo, Sakura Arai, Shouhei Hirose (Div. Microbiol., NIHS)

S5-3

Characterization of enterohemorrhagic *E. coli* isolated from severe cases

○Sunao Iyoda, Ken-ichi Lee (Dept. Bacteriol. I, Nat. Inst. Infec. Dis.)

S5-4

Molecular epidemiology of *Staphylococcus argenteus*, an emerging foodborne pathogen

○Yuki Wakabayashi (Div. Microbiol., Osaka Inst. Pub. Health)

S5-5

Toward regulation of *Campylobacter* food poisoning

○Hiroshi Asakura[1], Hiromi Nakamura[2], Jun Kawase[3], Takehisa Chuma[4] ([1]Div. Biomed. Food Res., Nath. Inst. Health Sci., [2]Dept. Microbiol., Osaka Inst. Public Health, [3]Dept. Bacteriol., Shimane Pref. Inst. Public Health Environ. Sci., [4]Dept. Vet. Public Health, Kagoshima Univ.)

S6 Health from “inner outside”: Contribution and application of bacteria in foods and digestive tract to health

Thursday, March 16 13:20–15:50
Room 3 (407)

Conveners: Akira Hasebe (Hokkaido University)
Hitoshi Komatsuzawa (Hiroshima University)

Co-host: The Japan Society for Bioscience, Biotechnology, and Agrochemistry

S6-1

Next-generation lipid-mediator (HYA) produced by gut microorganisms

○Shigenobu Kishino (Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)

S6-2

Effect of *Lacticaseibacillus paracasei* Shirota on stress and stress-associated sleep disturbance

◯Kazunori Suda (Food Res. Dept., Yakult Central Institute)

S6-3

Characterization and applications of bacteriocins produced by lactic acid bacteria

◯Takeshi Zendo (Dept. Biosci. Biotechnol., Fac. Agr., Kyushu Univ.)

S6-4

Understanding the relationship between dietary nutrition and health from bacteriology

◯Koji Hosomi (Lab. Vaccine Materials, NIBIOHN)

S6-5

Regulation of gut microbiota and prevention of metabolic disorders by androgens

◯Naoki Harada (Dept. Appl. Biol. Chem., Grad. Sch. Agric., Osaka Metrop. Univ.)

S7 Reports from oversea bases: The fight against infectious diseases on site

Thursday, March 16 13:20–15:50
Room 4 (408)

Conveners: Yukako Fujinaga (Kanazawa University)
Toshihiko Suzuki (Tokyo Medical and Dental University)

S7-1

International collaborative research on infectious diseases in the Philippines

◯Hitoshi Oshitani (Dept. Virology, Tohoku Univ. Grad. Sch. Medicine)

S7-2

Investigation of SARS-CoV-2 in Indonesia

◯Yasuko Mori (Div. Clinical Virology, Grad. Sch. Med., Kobe Univ.)

S7-3

Japan and Myanmar Joint Research Project on Influenza and Other Respiratory Virus Infections

◯Reiko Saito (Div. International Health, Grad. Sch. Medical and Dental Sciences, Niigata Univ.)

S7-4

Translational Research Collaboration on Infectious Diseases in Democratic Republic of the Congo

◯Yasutoshi Kido (Dept. Virology & Parasitol., Grd. Sch. Med., Osaka Met. Univ.)

S7-5

Advanced collaborative research in infectious diseases in Ghana

◯Toshihiko Suzuki (Dept. Bacterial Pathogenesis, Grad. Sch. Med, Dent. Sci., Tokyo Med. Dent. Univ.)

S8 Microbial mysteries uncovered by innovative imaging technology

Friday, March 17 8:30–11:00
Room 1 (Grand Hall)

Conveners: Shinya Sugimoto (The Jikei University School of Medicine)
Azuma Taoka (Kanazawa University)

S8-1

Development and applications of iCBiofilm for live-cell and dynamic imaging of biofilms

◯Shinya Sugimoto[1,2], Yuki Kinjo[1,2] ([1]Dept. Bacteriol., Jikei Univ. Sch. Med., [2]Jikei Center for Biofilm Sci. Techcnol., Jikei Univ. Sch. Med.)

S8-2

Spatial-metabolic interaction between bacteria and fungi

◯Norio Takeshita (MiCS, Univ. Tsukuba)

S8-3

Bacterial growth, competition, and antibiotic resistance in structured habitats

◯Yuichi Wakamoto (Grad. Sch. Arts and Sci., Univ. of Tokyo)

S8-4

Observation of gut-bacteria ecosystem using Cryo-TEM and liquid-phase electron microscopy ASEM

◯Chikara Sato[1,2,3,4], Mari Sato[1,4], Masami Naya[1], Keiko Sato[5], Shinya Sugimoto[6] ([1]Natl. Inst. Adv. Indust. Sci. Tech., [2]SIGMA, Tsukuba Univ., [3]Biol. Sci., Aoyama Gakuin Univ., [4]Div. Microbiol., Nihon Univ. Sch. Med., [5]Dept. Front. Oral Sci., Nagasaki Univ., [6]Dept. Bacteriol., Jikei Univ. Sch. Med.)

S8-5

Visualizations of living bacterial cell surfaces using high-speed atomic force microscopy

◯Azuma Taoka[1,2] ([1]Fac. Biol. Sci. and Tech., Kanazawa Univ., [2]WPI-Nano Life Sci. Inst., Kanazawa Univ.)

S9　Synthetic Genome Organism; Science and its safety

Friday, March 17　8:30–11:00
Room 2 (Medium Hall)

Conveners: Itaru Yanagihara (Osaka Women's and Children's Hospital)
Akiko Takaya (Chiba University)

Supported by: Japan Agency for Medical Research and Development

Sponsored by: Asahi Kasei Pharma Corporation, Yakult Honsha Co., Ltd., AZBIO CORP., YUYAMA Medical & Scientific Co., LTD.

S9-1
Genome Synthesis in Synthetic Biology: Issues and Perspectives
◯Kazuhito Tabata (Dept. App. Chem., The Univ. of Tokyo)

S9-2
Technological advancements in genome synthesis
◯Masayuki Su'etsugu (Dept. Life Science, Rikkyo Univ.)

S9-3
Bacteria with synthetic genome and their biosafety
◯Shigeyuki Kakizawa (AIST)

S9-4
How risk and benefit viewpoints affect social acceptance of synthetic biology, and genome synthesis
◯Daisuke Kiga (Dept. Elect. Eng. and Biosci., Waseda Univ.)

S9-5
Initiatives for the Safe Use of Synthetic Genome Bacteria
◯Itaru Yanagihara (Dept. Dev. Med., Osaka Women's and Children's Hospital)

Panel discussion
◯Yasuhiko Horiguchi (Osaka Univ.)

S10　Frontiers of Microbial Bioinformatics

Friday, March 17　8:30–11:00
Room 3 (407)

Conveners: Hiroki Takahashi (Chiba University)
Hiroshi Mori (National Institute of Genetics)

S10-1
Development of a database for microbial growth media (TogoMedium) and its application
◯Shuichi Kawashima, Toshiaki Katayama, Shinobu Okamoto (DBCLS, DS, ROIS)

S10-2
Microbial risk information database ~Aiming for safe and appropriate use of microorganisms
◯Natsuko Ichikawa, Syoko Ohji, Seiha Miyazawa, Masumi Fujita, Aya Uohara, Ryosuke Nakatani, Mika Yamamoto, Akane Kimura, Nobuyuki Fujita, Shinichiro Kato (Biological Resource Center, National Institute of Technology and Evaluation)

S10-3
Development of an integrated microbiome database: Microbiome Datahub
◯Hiroshi Mori[1], Takatomo Fujisawa[1], Koichi Higashi[1], Yasukazu Nakamura[1], Takuji Yamada[2], Motomu Matsui[3], Ikuo Uchiyama[4] ([1]Dept. Informatics, NIG, [2]Dept. Life Sci. Tech., Tokyo Tech., [3]Grad. Sch. Front. Sci., Univ. Tokyo, [4]NIBB)

S10-4
Functional visualization for genome and metagenomic data
◯Takuji Yamada (Tokyo Institute of Technology)

S10-5
Bioinformatics to reveal rules behind bacterial genomes
◯Wataru Iwasaki[1,2,3,4,5] ([1]Dept. Integrated Biosci., Grad. Sch. Frontier Sci., UTokyo, [2]Dept. Biol. Sci., Grad. Sch. Sci., UTokyo., [3]Atmos. Ocean Res. Inst., UTokyo, [4]Inst. Quant. Biosci., UTokyo, [5]Collab. Res. Inst. Innovative Microb., UTokyo)

S11　New concepts of regulation of gene expression in bacteria

Friday, March 17　8:30–11:00
Room 4 (408)

Conveners: Masatoshi Miyakoshi (University of Tsukuba)
Teppei Morita (Keio University)

S11-1
Post-transcriptional regulation by mRNA-derived small RNAs in *Enterobacteriaceae*
◯Masatoshi Miyakoshi (Dept. Biomed. Sci., Fac. Med., Univ. Tsukuba)

S11-2
***Bordetella pertussis* mechanosensing upregulates small RNA contributing to bacterial colonization**
◯Yukihiro Hiramatsu[1], Takashi Nishida[1], Dendi Krisna Nugraha[1], Yasuhiko Horiguchi[1,2] ([1]Dept. Mol. Bact., RIMD, Osaka Univ., [2]CiDER, Osaka Univ.)

S11-3
Global profiling of RNA-protein complexes in bacteria
◯Kotaro Chihara[1], Joerg Vogel[1,2] ([1]Helmholtz Inst. RNA-Based Infect. Res. (HIRI), Helmholtz Cent. Infect. Res. (HZI), [2]Inst. Mol. Infect. Biol. (IMIB), Univ. Wuerzburg)

S11-4

RNA binding protein CspD disrupts RNA structural elements that modulate transcription termination

○Teppei Morita[1,2] ([1]Inst. Adv. Biosci., Keio Univ., [2]Grad. Sch. Media & Governance, Keio Univ.)

S11-5

Translation arrest-mediated gene regulation in *Vibrio* species

○Eiji Ishii[1], Shigeaki Matsuda[1], Tetsuya Iida[1,2], Yoshinori Akiyama[3], Hiroyuki Mori[3] ([1]RIMD, Osaka Univ., [2]CiDER, Osaka Univ., [3]LiMe, Kyoto Univ.)

S11-6

Antibiotic resistance mediated by ribosome-associated ABCF ATPase

○Hiraku Takada[1,2], Gemma C Atkinson[2], Vasili Hauryliuk[2] ([1]Fac. Life Sci., Kyoto Sangyo Univ., [2]Dept. Exp. Med. Sci., Lund Univ.)

S12 Challenges in antibacterial drug development —How can bacteriologists make crucial contributions to drug discoveries?—

Saturday, March 18 9:10–11:40
Room 1 (Grand Hall)

Conveners: Yusuke Minato (Fujita Health University)
Hidetada Hirakawa (Gunma University)

S12-1

Novel tools for bacteriologists to develop new antimicrobials

○Yusuke Minato (Dept. Microbiol., Sch. Med., Fujita Health Univ.)

S12-2

Advancing Japan's innovation for global health - GHIT's catalytic role

○Kei Katsuno (Investment Strategy & Business Development, Global Health Innovative Technology Fund)

S12-3

Antimicrobial potency of adsorbents

○Hidetada Hirakawa[1], Haruyoshi Tomita[1,2] ([1]Dept. Bacteriol., Sch. Med., Gunma. Univ., [2]Lab. Drug Resist., Sch. Med., Gunma Univ.)

S12-4

Exploring of new drug targets utilizing bioactive natural products

○Masayoshi Arai (Grad. Sch. Pharma. Sci., Osaka Univ.)

S12-5

Importance of basic research in antimicrobial drug discovery

○Miki Takemura (Laboratory for Drug Discovery and Disease Research, SHIONOGI & CO., LTD.)

S13 Bacteriology by the numbers

Saturday, March 18 9:10–11:40
Room 4 (408)

Conveners: Shuichi Nakamura (Tohoku University)
Andrew S. Utada (University of Tsukuba)

S13-1

How fast? How flexible? Numbers gain our interest in bacteriology

○Shuichi Nakamura (Dept. Appl. Phys., Grad. Sch. Eng., Tohoku Univ.)

S13-2

Seeing is believing: Making Agglutination Tests from Qualitative to Quantitative with Deep Learning

○Ryo Ozuru[1], Risa Nakano[2], Yuji Oyamada[2], Satoshi Miyahara[3], Michinobu Yoshimura[1], Kenji Hiromatsu[1] ([1]Dept. Microbiol. Immunol., Fac. Med., Fukuoka Univ., [2]Dept. EECS., Fac. Eng., Tottori Univ., [3]Dept. Microbiol., Sch. Med., UOEH)

S13-3

Finding unexpected host target molecules of Shiga toxin from Enterohemorrhagic *Escherichia coli*

○Fumiko Obata[1], Ryo Ozuru[2], Jun Fujii[1] ([1]Div. Bacteriol, Dept. Microbiol. Immunol., Sch. Med. Fac. Med., Tottori Univ., [2]Dept. Microbiol. Immunol., Fac. Med., Fukuoka Univ.)

S13-4

Holographic microscopy and artificial intelligence for the study of bacterial motility

Sam A. Matthews[1,2], Carlos Coelho[1], Erick E. Rodriguez Salas[1], Emma E. Brock[1], Victoria J. Hodge[2], James A. Walker[2], ○Laurence G. Wilson[1] ([1]Sch. Physics, Engineering and Technology, Univ. York, [2]Dept. Computer Science, Univ. York)

S13-5

Looking at populations as they exist as composites of metabolically unique individuals

○Shawn Erin McGlynn[1,2,3] ([1]Earth Life Science Inst., Tokyo Inst. Technology, [2]Center for Sustainable Resource Science, RIKEN, [3]Blue Marble Space Inst. Science)

S13-6

Biofilms on High Fat Diets Cooperate to Stay Fit

○Andrew S. Utada (Dept. Life and Environmental Sciences & MiCS, Univ. Tsukuba)

Workshop

W1　Evolving pneumococcus: diagnosis, pathogenesis and next generation vaccine

Thursday, March 16　16:00–18:00
Room 1 (Grand Hall)

Conveners: Kazunori Oishi (Toyama Institute of Health)
Masaya Yamaguchi (Osaka University)

W1-1
What we learned from invasive pneumococcal disease surveillance in adults, Japan
◯Kazunori Oishi (Dept. Bacteriol. Toyama Institute of Health)

W1-2
Bacterial transcytosis and invasion of *Streptococcus pneumoniae* across the host cells
◯Jun-ichi Kanatani, Emi Maenishi, Kosuke Tamura, Junko Isobe, Kazunori Oishi (Dept. Bacteriol., Toyama Institute of Health)

W1-3
Prospects for identification of *Streptococcus pneumoniae* by genome analysis technology
◯Bin Chang (Dept. Bacteriol. I, NIID)

W1-4
Elucidating the effects of age-related changes in host responses on pneumococcal infections
◯Masaya Yamaguchi (Bioinform. Res. Unit, Osaka Univ. Grad. Sch. Dent.)

W1-5
Protective effects of bivalent recombinant fusion proteins of PspA against pneumococcal infection
◯Yuki Kinjo[1], Hiroki Nakayama[2], Yuka Koizumi[2], Eisuke Kuroda[3], Bin Chang[4], Koji Hayashizaki[1], Shiro Takekawa[2], Yukihiro Akeda[3], Kazunori Oishi[5] ([1]Dept. Bacteriol., Jikei Univ. Sch. Med., [2]Res. Found. Microb. Dis. Osaka Univ., [3]Res. Inst. Microb. Dis., Osaka Univ., [4]Dept. Bacteriol. I, Nat. Inst. Infect. Dis., [5]Toyama Inst. Health)

W2　Bacterial drill tanks pushing forward infection and symbiosis

Thursday, March 16　16:00–18:00
Room 2 (Medium Hall)

Conveners: Daisuke Nakane (The University of Electro-Communications)
Yoshitomo Kikuchi (National Institute of Advanced Industrial Science and Technology)

Co-host: Grant-in-Aid for Transformative Research Areas (B) The reason why microbes are moving

W2-1
Importance of bacterial motility in the establishment of symbiosis
◯Yoshitomo Kikuchi (BPRI, AIST)

W2-2
Bacterial flagella wrapping allows movement through narrow spaces within the host environments
◯Daisuke Nakane (Dept. Eng. Sci., UEC)

W2-3
Understanding the bacterial drilling motility from the physical interaction with environment
◯Hirofumi Wada, Takuro Kataoka (Dept. Phys. Ritsumeikan Univ.)

W2-4
Microfluidic Devices for Analyzing Bacterial Behavior
◯Tetsuo Kan (Dept. Mechanical and Intelligent Systems Engineering, Grad. Sch. Informatics and Engineering, The Univ. of Electro-Communications)

W2-5
Environmentally friendly robots degraded by microorganisms
◯Jun Shintake (Univ. Electro-Comn.)

W3　Selected from general presentations 1: Taxonomy / Epidemiology /Infectious diseases

Thursday, March 16　16:00–18:00
Room 3 (407)

Conveners: Yujiro Hirose (Osaka University)
Atsushi Hinenoya (Osaka Prefecture University)

W3-1/P1-002
Identification of *Vibrio parahaemolyticus* pandemic marker based on whole-genome sequencing
◯Masatomo Morita[1], Toshio Kodama[2], Kazuhisa Okada[3], Hidemasa Izumiya[1], Eiji Arakawa[1], Tetsuya Iida[3], Yukihiro Akeda[1] ([1]Dept. Bacteriol. I, NIID., [2]Inst. Trop. Med., Nagasaki Univ., [3]RIMD, Osaka Univ.)

W3-2/P1-026

COPMAN: A method for automated and sensitive detection of DNA/RNA of various pathogens in wastewater

◯Yuka Katayama[1], Shin Hayase[1], Yoshinori Ando[1], Tomohiro Kuroita[1,2], Kazuya Okada[1], Ryo Iwamoto[1,2], Toru Yanagimoto[1], Tomohiko Okuda[1], Masaaki Kitajima[3], Yusaku Masago[1] ([1]Shionogi & Co., Ltd., [2]AdvanSentinel Inc., [3]Fac. Eng., Hokkaido Univ.)

W3-3/P1-032

Longitudinal alterations of the gut microbiota and mycobiota on COVID-19 severity

◯Daisuke Motooka[1], Yuichi Maeda[2,3], Hiroya Oki[1], Kentaro Tanaka[1], Eri Igashira[3], Haruhiko Hirata[3], Hiroshi Kida[4], Atsushi Kumanogoh[3], Shota Nakamura[1], Kiyoshi Takeda[2] ([1]Dept. Infect. Metagenomics, RIMD, Osaka Univ., [2]Lab. Immune Regulation, Grad. Sch. Medicine, Osaka Univ., [3]Dept. Resp. Med., Grad. Sch. Medicine, Osaka Univ., [4]National Hospital Organization Osaka Toneyama Medical Center)

W3-4/P1-001

Four new microbes isolated from feces of Parkinson's disease patients

◯Kyohei Sekiguchi[1], Tomonari Hamaguchi[3], Mikako Ito[3], Hiroshi Nishiwaki[3], Jun Ueyama[2], Kinji Ohno[3], Masaaki Hirayama[2] ([1]Dept. Comprehensive Health Sci., Sch. Med., Nagoya Univ., [2]Dept. Omics Medical Sci., Sch. Med., Nagoya Univ., [3]Dev. Neurogenetics., Sch. Med., Nagoya Univ.)

W3-5/P1-004

Database construction of streptococcal toxic shock syndrome-causing bacteria

◯Tohru Akiyama[1], Rumi Okuno[2], Masaya Yamaguchi[3], Yujiro Hirose[3], Masayuki Oono[3], Tadayoshi Ikebe[4] ([1]Nat. Cent. Global Health Med., [2]Tokyo Meto. Inst. Pub. Heal., [3]Osaka Univ. Grad. Sch. Dentis., [4]Nat. Inst. Infect. Dis.)

W3-6/P1-024

O antigen identification by MALDI-MS

◯Shogo Urakami, Hiroshi Hinou (Grad. Sch. Life. Sci., Hokkaido Univ.)

W3-7/P1-025

CRISPR-Cas12a system for carbapenemase gene detection of multidrug-resistant *Acinetobacter*

◯Misaki Koga[1], Satoshi Nishida[1], Shigeru Nagakawa[1], Takane Ueda[1], Yoshinori Sato[1], Yasuo Ono[1,2], Yusuke Yoshino[1] ([1]Dept. Microbiol. Immunol., Sch. Med., Teikyo Univ., [2]Fac. Health. Med. Sci. Teikyo Heisei Univ.)

W3-8/P1-003

Genomic comparison of Enterotoxigenic *Escherichia coli* and discovery of novel pathogenic plasmids

◯Daichi Morita[1], Asuka Takeda[1], Miwako Yamamoto[2], Miyuki Kanda[1], Yuki Yamamoto[1], Takanori Kumagai[1], Hidetoshi Tahara[1], Fumito Maruyama[3], Teruo Kuroda[1] ([1]Grad. Sch. Bio. Heal. Sci., Hiroshima Univ., [2]Hiroshima City Inst. of Public Heal., [3]The IDEC Institute, Hiroshima Univ.)

W4 Selected from general presentations 2: Ecology / Genetics / Genomics / Biotechnology

Thursday, March 16 16:00–18:00
Room 4 (408)

Conveners: Yoshitoshi Ogura (Kurume University)
Shinji Takai (Kitasato University)

W4-1/P1-088

Environmental adaptation through temperature-responsive gene regulation in Clostridium perfringens

◯Ryosuke Fukuda[1], Nozomu Obana[2,3], Nobuhiko Nomura[3,4] ([1]Grad. Agro Bio. Sci. Tech., Univ. Tsukuba, [2]TMRC, Fac. Medicine, Univ. Tsukuba, [3]MiCS, Univ. Tsukuba, [4]Fac. Life Environ. Sci., Univ. Tsukuba)

W4-2/P1-095

Effect of expression induction and protein degradation tags on gene expression noise

◯Asako Kitai[1], Yuichi Wakamoto[2,3,4], Miki Umetani[2,3,4] ([1]Col. Arts and Sci., Univ. Tokyo, [2]Dept. Basic Sci., Grad. Sch. Arts and Sci., Univ. Tokyo, [3]Res. Ctr. Complex Syst. Biol., Univ. Tokyo, [4]UBI., Univ. Tokyo)

W4-3/P1-078

Nucleoid structure of antibiotic-stressed *Escherichia coli*

◯Miki Umetani[1], Yuichi Wakamoto[1,2,3] ([1]Dept. Basic Sci., Grad. Sch. Arts and Sci., Univ. Tokyo, [2]Res. Ctr. Complex Syst. Biol., Univ. Tokyo, [3]UBI, Univ. Tokyo)

W4-4/P1-084

Natural transformation mediates transfer of SCCmec in Staphylococcus aureus biofilms

◯Mais Maree[1], Thuy Le Thi Nguyen[2], Ryosuke L. Ohniwa[1], Masato Higashide[3], Tarek Msadek[4], Kazuya Morikawa[1] ([1]Fac. Med., Univ Tsukuba., [2]Biotechnology Centre of Ho Chi Minh City, [3]Kotobiken Medical Laboratories, Inc., [4]Institut Pasteur, Universite Paris Cite, CNRS UMR6047, Biology of Gram-Positive Pathogens, Dept. Microbiology)

W4-5/P1-097

Manipulation of mega-sized bacterial chromosomes in vitro

◯Hironobu Fujita, Ayane Osaku, Takahito Mukai, Masayuki Su'etsugu (Dept. Life Science, Coll. of Sci., Rikkyo Univ.)

W4-6/P1-096
Engineered Phage Capsids for Cancer Cell Targeted Drug Delivery Application
◯Srivani Veeranarayanan[1], Kanate Thitiananpakorn[1], Takashi Sugano[1], Shinya Watanabe[1], Aa Haeruman Azam[2], Kotaro Kiga[2], Longzhu Cui[1] ([1]Div. Bacteriology, Dept. Infection & Immunol., Sch. Med., Jichi Med. Univ., [2]Research Center for Drug and Vaccine Development, National Institute of Infectious Diseases)

W4-7/P1-079
Application of Mathematical Models Based on Genomic Data to Predict Tuberculosis Cluster Infection
◯Yoshihiko Tanimoto[1], Kentaro Arikawa[1], Riyo Fujiyama[2], Ayako Ono[2], Minami Onishi[2], Aki Tamaru[3], Kaori Yamamoto[3], Shiomi Yoshida[4], Kenichi Ogita[5], Tomotada Iwamoto[1] ([1]Kobe Inst. Heal., [2]Pub. Heal. Mgmt. Ctr., Kobe City, [3]Osaka Inst. Pub. Heal., [4]NHO Kinki-chuo Chest Med. Ctr., [5]Hyogo Pref. Inst. Pub. Heal. Sci.)

W4-8/P1-046
Analysis of gut bacterial colonization and biofilm formation in an gut mucus layer mimetic system
◯Keisuke Nomura[1], Nobuhiko Nomura[2,3], Nozomu Obana[4,5], Andrew Utada[2,3] ([1]Dept. Agro-biol. Resour. Sci., Tsukuba Univ. Grad. Sch., [2]Dept. Life Environ., Tsukuba Univ., [3]Microbiol. Res. Ctr. Sustainability, [4]Dept. Med., Tsukuba Univ., [5]Transborder. Med. Res. Ctr.)

W5 The recent research of Salmonella in farm animals

Friday, March 17 15:45–17:45
Room 1 (Grand Hall)

Conveners: Masahiro Kusumoto (National Agriculture and Food Research Organization)
Masahiro Eguchi (National Agriculture and Food Research Organization)

W5-1
Genomic characterization of *Salmonella* Typhimurium isolated from farm animals in Japan
◯Nobuo Arai (Natl. Inst. Anim. Health, NARO)

W5-2
Avian salmonellosis: elucidation of a new aspect of the pathogenesis
◯Masashi Okamura (Lab. Vet. Microbiol., Div. Vet. Sci., Obihiro Univ. Agric. Vet. Med.)

W5-3
The mechanism of macrophage cell death-inducing by TS33-2 of *Salmonella* Typhimurium
◯Takeshi Haneda (Lab. Microbiol, Sch. Pharm. Kitasato Univ.)

W5-4
Identification of an antigen against *Salmonella* inducing CD8(+) T cell antigen-specific response
◯Momoko Nakayama (National Institute of Animal Health, NARO)

W6 Microorganisms; are our research and development resources that we use and protect for the future

Friday, March 17 15:45–17:45
Room 2 (Medium Hall)

Conveners: Kaori Tanaka (Gifu University)
Shoko Kawamoto (National Institute of Genetics)

Supported by: National BioResource Project (NBRP)

W6-1
NBRP Pathogenic Bacteria
◯Kaori Tanaka[1], Tetsuya Iida[2], Haruyoshi Tomita[3,4], Koichi Tanimoto[3,4], Masahiro Hayashi[1] ([1]Ctr. Conserv. Microb. Genetic Resource, Gifu Univ., [2]Pathogenic Microbes Repository Unit, Res. Inst. Microbial Dis., Osaka Univ., [3]Bacteriology, Gunma Univ., [4]Laboratory of Bacterial Drug Resistance, Gunma Univ.)

W6-2
Collection, preservation and distribution of pathogenic eukaryotic microorganisms
◯Takashi Yaguchi, Sayaka Ban (Med. Mycol. Res. Ctr., Chiba Univ.)

W6-3
General Microbial Resources Served from JCM
◯Moriya Ohkuma (JCM, RIKEN BioResource Research Center)

W6-4
Bioresources for basic and applied science of Escherichia coli and Bacillus subtilis
◯Hironori Niki, Koichiro Akiyama (Microb. Physiol. Lab., Natl. Inst. Genet.)

W6-5
The National BioResource Project "Information Center" for the effective resource utilization
◯Shoko Kawamoto (Dept. Informatics, Natl. Inst. Genet.)

W7 Selected from general presentations 3: Antimicrobial agents and resistance / Host defense

Friday, March 17 15:45–17:45
Room 3 (407)

Conveners: Shinichi Yokota (Sapporo Medical University)
Naoya Ohara (Okayama University)

W7-1/P2-153
Bacteriophage Therapy against Canine Clonic External Otitis with *Pseudomonas aeruginosa* Infection

◯Tomohiro Nakamura[1,2,3], Jumpei Fujiki[1], Keisuke Nakamura[1], Toshikazu Sakai[4], Tomohito Iwasaki[5], Hidetomo Iwano[1] ([1]Lab. Vet. Biochem., Sch. Vet. Med., Rakuno Gakuen Univ., [2]Ctr. Drug and Vaccine Dev., NIID, [3]Phage Therapy Inst., Waseda Univ., [4]Lab. Vet. Surgery, Sch. Vet. Med., Rakuno Gakuen Univ., [5]Lab. Appl. Biochem., Col. Food and Health, Rakuno Gakuen Univ.)

W7-2/P2-166
Virulent attenuation mechanism by acquisition of *mcr-1*-harboring plasmid into *Escherichia coli* ST131

◯Toyotaka Sato[1,2], Soh Yamamoto[2], Noriko Ogasawara[2], Masaru Usui[3], Noriyuki Nagano[4], Yohei Doi[5], Motohiro Horiuchi[1], Satoshi Takahashi[2], Shin-ichi Yokota[2], Yutaka Tamura[3] ([1]Lab. Vet. Hygiene./Infect. Dis./One Health Res. Cent., Hokkaido Univ., [2]Dept. Microb./, Sch. Med., Sapporo Univ., [3]Lab. Food Microb., Sch. Vet. Med., Rakuno Gakuen Univ., [4]Dept. Med. Sci., Grad. Sch. Med., Shinshu Univ., [5]Depart. Microb. and Infec. Dis., Sch. Med., Fujita Health Univ.)

W7-3/P2-167
A novel approach to the treatment of urinary tract infections caused by multidrug-resistant bacteria

◯Yuki Hoshiko[1], Takeshi Yamamoto[1], Miki Okuno[1], Toshinari Maeda[2], Yoshitoshi Ogura[1] ([1]Dept. Infect. Med., Kurume Univ. Sch. Med., [2]Dept. Biol. Func. Eng., Grad. Sch. Life Sci. Sys. Eng., Kyutech)

W7-4/P2-168
SOS response leads to antibiotic persistence in Pseudomonas aeruginosa biofilms

◯Mio Unoki[1], Mayumi Yano[2], Toru Isawa[2], Nobuhiko Nomura[3,4], Masanori Toyofuku[3,4] ([1]Coll. Agro-Biol. Resour. Sci., Sch. Life and Envron. Sci, Univ. Tsukuba, [2]Grad. Sch. Life Environ. Sci., Univ. Tsukuba, [3]Fac. Life Environ. Sci., Univ. Tsukuba, [4]MiCS, Univ., Tsukuba)

W7-5/P2-143
STING (Stimulator of interferon gene) regulates lysosomal degradation pathway

◯Junpei Iibushi, Takashi Nozawa, Ichiro Nakagawa (Dept. Microbiol., Grad. Sch. Med., Kyoto Univ.)

W7-6/P2-141
Co-evolution of bacteria and paired immune receptors in humans

◯Kouyuki Hirayasu[1], Gen Hasegawa[1], Yifan Li[1], Hisashi Arase[2,3], Masaya Yamaguchi[4], Shigetada Kawabata[5], Rikinari Hanayama[1] ([1]Adv. Prev. Med. Sci. Res. Cen., Kanazawa Univ., [2]Dept. Immunochem., RIMD, Osaka Univ., [3]Lab. Immunochem., IFReC, Osaka Univ., [4]Bioinform. Res. Unit, Osaka Univ. Grad. Sch. Dent., [5]Dept. Oral Mol. Microbiol., Osaka Univ. Grad. Sch. Dent.)

W7-7/P2-147
Spatial mutiomics profiling characterize foamy macrophages within tuberculous granulomas

◯Shintaro Seto, Minako Hijikata, Naoto Keicho (Dept. Pathophysiol. Host Defense, RIT)

W7-8/P2-142
Innate immunity to microbial pathogens

◯Atsushi Miyashita[1], Yu Saito[2], Yukari Fujimoto[2], Kazuo Shinya[3], Kazuhisa Sekimizu[4] ([1]Teikyo Univ. Inst. Med. Mycol., [2]Keio Univ., [3]National Institute of Advanced Industrial Science and Technology, [4]Teikyo Univ.)

W8 Selected from general presentations 4: Pathogenicity

Friday, March 17 15:45–17:45
Room 4 (408)

Conveners: Hideaki Higashi (Hokkaido University)
Yukako Fujinaga (Kanazawa University)

W8-1/P2-110
***Legionella* co-opts a host v-SNARE using noncanonical ubiquitination**

◯Tomoe Kitao[1], Rina Iida[1], Tomoko Kubori[1,2], Hiroki Nagai[1,2] ([1]Dept. Microbiol., Grad. Sch. Med., Gifu Univ., [2]G-CHAIN, Gifu Univ.)

W8-2/P2-108
Reversible modification of mitochondrial ADP/ATP translocases by paired Legionella effector proteins

◯Tomoko Kubori[1], Junup Lee[2], Hyunmin Kim[2], Kohei Yamazaki[1], Masanari Nishikawa[1], Tomoe Kitao[1], Byung-Ha Oh[2], Hiroki Nagai[1] ([1]Dept. Microbiol., Grad. Sch. Med., Gifu Univ., [2]Dept. Biol. Sci., KAIST)

W8-3/P2-124
Vi capsular polysaccharide of *Salmonella* Typhi promotes macrophage phagocytosis by binding DC-SIGN

Lillian F. Zhang[1], Andreas J. Baumler[1], ◯Hirotaka Hiyoshi[1,2] ([1]Dept. Med. Microbiol. Immunol., UC Davis, [2]Dept. Bacteriol., NEKKEN, Nagasaki Univ.)

W8-4/P2-136
Co-infection with Streptococcus sp. and H. pylori enhances the risk of gastric carcinogenesis
○Hitoshi Tsugawa[1], Miwa Hirai[2], Takashi Ueda[2], Juntaro Matsuzaki[3], Hidekazu Suzuki[2] ([1]Div. Host Defense Mechanism., Sch. Med., Tokai Univ., [2]Div. Gastroenterol. and Hepatol., Sch. Med., Tokai Univ., [3]Div. Pharmacotherapeutics, Keio Univ. Fac. Pharmacy)

W8-5/P2-101
The membrane recognition mechanisms of colonization factors from Enterotoxigenic *Escherichia coli*
○Minato Iimori[1], Hiroya Oki[2], Tomoya Imai[3], Shigeaki Matsuda[2], Takuya Yoshida[4], Tadayasu Ohkubo[4,5], Tetsuya Iida[2,5], Shota Nakamura[2,5], Kazuki Kawahara[4,5] ([1]Sch. Pharm. Sci., Osaka Univ., [2]RIMD, Osaka Univ., [3]RISH, Kyoto Univ., [4]Grad. Sch. Pharm. Sci., Osaka Univ., [5]CiDER, Osaka Univ.)

W8-6/P2-109
Endogenous production and neurotoxicity of novel botulinum neurotoxin (BoNT/X) in a clinical isolate
○Takuhiro Matsumura, Sho Amatsu, Nobuhide Kobayashi, Yukako Fujinaga (Dept. Bacteriol., Sch. Med. Sci., Kanazawa Univ.)

W8-7/P2-123
Identification of a novel gene locus related to the pathogenicity of *Burkholderia pseudomallei*
○Takashi Nishida[1], Yukihiro Hiramatsu[1], Dendi Krisna Nugraha[1], Yasuhiko Horiguchi[1,2] ([1]Dept. Mol. Bact., RIMD, Osaka Univ., [2]CiDER, Osaka Univ.)

W8-8/P2-107
Molecular characteristics of novel 5-domain type cholesterol-dependent cytolysin, discoidinolysin
○Atsushi Tabata[1,2], Airi Matsumoto[2,3], Ai Fujimoto[2], Toshifumi Tomoyasu[1,2], Ayuko Takao[4], Hisashi Ohkuni[5], Hideaki Nagamune[1,2] ([1]Div. Biosci. & Bioind., Grad. Sch. Tech., Indust. & Soc. Sci., Tokushima Univ., [2]Dept. Biol. Sci. & Tech., Grad. Sch. Adv. Tech. & Sci., Tokushima Univ., [3]Dept. Oral Microbiol., Grad. Sch. Med. & Dent. Sci., Kagoshima Univ., [4]Dept. Oral Bacteriol., Tsurumi Univ., [5]Health Sci. Res. Inst. East Japan Co. Ltd.)

W9 Development of Infection model using bioresources

Saturday, March 18 13:10–15:10
Room 1 (Grand Hall)

Conveners: Takashi Shimizu (Yamaguchi University)
Chikara Kaito (Okayama University)

Co-host: NBRP Paramecium

W9-1
***Paramecium* as a host model for pathogenic bacteria**
○Kenta Watanabe (Dept. Vet Med., Yamaguchi Univ.)

W9-2
Understanding virulence of *Bacillus cereus* group of bacteria using silkworms
○Atmika Paudel[1,2], Hideaki Higashi[1] ([1]Div. Infection and Immunity, International Inst. Zoonosis Control, Hokkaido Univ., [2]GenEndeavor LLC.)

W9-3
Use of *Arabidopsis thaliana* as a bacterial infection model
○Chikara Kaito, Kazuya Ishikawa (Lab. Mol. Biol., Grad. Sch. Med. Dent. Pharm., Okayama Univ.)

W9-4
Probiotic evaluation and infection model system using C. elegans
○Eriko Kage-Nakadai (Dept. Nutr., Grad. Sch. Hum. Life Ecol., Osaka Metropol. Univ.)

W9-5
Physiological analysis of host glycan remodeling in bacterial infection using zebrafish model
○Kazuhiro Shiozaki, Mika Ishi (Div. Food Life Sci., Fac. Fish., Kagoshima Univ.)

W10 Fungal biology in the fermentation and infection; Let's look at unique research approach and their career paths

Saturday, March 18 13:10–15:10
Room 2 (Medium Hall)

Conveners: Keigo Ueno (National Institute of Infectious Diseases)
Ken Miyazawa (National Institute of Infectious Diseases)

Co-host: FMSJ

Supported by: JSMM

W10-1
Spatiotemporal expression dynamics of mRNA in multinuclear and multicellular *Aspergillus oryzae*
○Yujiro Higuchi (Dept. Biosci. Biotechnol., Fac. Agr., Kyushu Univ.)

W10-2
A secreted virulence effector protein of the biotrophic fungal plant pathogen Ustilago maydis
○Fumi Fukada[1,2], Nicole Rossel[2], Timo Glatter[2], Karin Muench[2], Petra Happel[2], Regine Kahmann[2] ([1]Inst. Plant Sci. Rec., Okayama Univ., [2]Dept. Organ. Inter., Max Planck Inst. for Terr. Microbiol.)

W10-3

Tool developments for the discovery of anti-dermatophyte compounds and target candidates

○Masaki Ishii[1,2] ([1]Dept. Mol. Cell Biol., Sch. Pharm. Musashino Univ., [2]Inst. Pharm. Musashino Univ.)

W10-4

Analysis of latent cryptococcal infection and reactivation using a novel mouse model

○Ko Sato, Kazuyoshi Kawakami (Dept. Med. Microbiol., Mycol. Immunol., Grad. Sch. Med., Tohoku Univ.)

W11 Selected from general presentations 5: Physiology / Structural biology /Others

Saturday, March 18 13:10–15:10
Room 4 (408)

Conveners: Hiroji Chibana (Chiba University)
Hitomi Mimuro (Oita University)

W11-1/P2-060

Small RNA delivery by extracellular vesicles in *Klebsiella pneumoniae*

○Shogo Tsubaki[1], Juntaro Matsuzaki[2], Yusuke Yoshioka[3], Takuma Araki[4], Hitoshi Tsugawa[1] ([1]Dept. Host Defense., Sch. Med., Tokai Univ., [2]Dept. Pharmacotherapeutics., Sch. Pharm., Keio Univ., [3]Dept. Mol. Cell. Med., Inst. Med., Tokyo Medical Univ., [4]Dept. Med. Sci. Coll. Office., Sch. Med., Tokai Univ.)

W11-2/P2-059

Analysis of chemotaxis to metabolites of intestinal bacteria in Vibrio parahaemolyticus

○Hiroyuki Terashima, Toshio Kodama (Dept. Bacteriol., Inst. Trop. Med. (NEKKEN), Nagasaki Univ.)

W11-3/P2-075

Biological Effects of Escherichia coli derived extracellular vesicles on Group A Streptococcus

○Yu Kawagishi, Kazunori Murase, Ichiro Nakagawa (Dept. Microbiol., Grad. Sch. Med., Kyoto Univ.)

W11-4/P2-061

Comparative transcriptomics for the infection mechanism of Ralstonia pseudosolanacearum strain OE1-1

○Masayuki Tsuzuki[1], Chika Takemura[1], Wakana Senuma[1], Yuki Terazawa[1], Sora Tateda[1], Yuri Abe[1], Akinori Kiba[1], Kouhei Ohnishi[1], Kenji Kai[2], Yasufumi Hikichi[1] ([1]Fac. Agric. Marine Sci., Kochi Univ., [2]Grad. Sch. Agric., Osaka Met. Univ.)

W11-5/P2-071

Role of the cytoplasmic ATPase complex in export switching of the flagellar protein export apparatus

○Tohru Minamino[1], Miki Kinoshita[1], Keiichi Namba[1,2] ([1]Grad. Sch. Front. Biosci., Osaka Univ., [2]SPring-8, RIKEN)

W11-6/P2-074

Phase separation of DNA via intrinsically disordered region of mycobacterial histone-like protein

○Akihito Nishiyama, Yoshimi Meguro, Riku Manabe, Shigetada Kato, Yuriko Ozeki, Yoshitaka Tateishi, Sohkichi Matsumoto (Dept. Bacteriol., Sch. Med., Niigata Univ.)

W11-7/P2-184

Comparison of analgesic effect between botulinum toxin A1 and A2 on cancer pain

○Manami Akeyoshi[1], Tomoko Kohda[2], Yasushi Torii[1] ([1]Grad. Sch. Tokyo Univ. of Agriculture, [2]Osaka Metropolitan Univ.)

W12 Operation and Research at the BSL4 facility

Saturday, March 18 15:30–17:30
Room 2 (Medium Hall)

Conveners: Toshio Kodama (Nagasaki University)
Mari Tohya (Juntendo University)

Co-host: The Japanese Society of Veterinary Science Microbiology Section

W12-1

Research on highly pathogenic viruses

○Wakako Furuyama (Dept. Virus Infection Dynamics, CCPID, Nagasaki Univ.)

W12-2

BSL4 laboratory in CSIRO, Australia and study for henipavirus

○Shumpei Watanabe (Okayama Univ. of Science)

W12-3

BSL4 facility in National Institute of Infectious Diseases

○Masayuki Shimojima (Dep. Virol. I, NIID)

W12-4

Nagasaki University BSL-4 facility

○Jiro Yasuda (CCPID, Nagasaki Univ.)

W13　Pathogenicity switches driven by genomic mutation and recombination

Saturday, March 18　15:30–17:30
Room 4 (408)

Conveners: Kohei Ogura (Kanazawa University)
Norihiko Takemoto (National Center of Global Health and Medicine)

W13-1
Mechanism of hyper-virulent mutation of *Streptococcus pyogenes*
◯Norihiko Takemoto[1], Noriko Iwamoto[2], Makoto Inada[2], Hidetoshi Nomoto[2], Ataru Moriya[3], Kazuhisa Mezaki[3], Masami Kurokawa[3] ([1]Dept. Infect. Dis., NCGM, [2]DCC, NCGM, [3]Clinical Laboratory, NCGM)

W13-2
Pathogenicity analysis of *Acinetobacter baumannii* experimentally evolved to mimic VAP pathology
◯Go Kamoshida (Dept. Microbiol. and Infect. Cont. Sci. Kyoto Pharm. Univ.)

W13-3
Pathogenic regulation and host adaptation mechanism of *Helicobacter pylori* by phase variation
◯Hitomi Mimuro (RCGLID, Oita Univ.)

W13-4
Development of Bacterial Coexistence Study —Toward the pump inhibitors which suppress pathogenicity—
◯Seiji Yamasaki[1,2,3] ([1]Dept. Bact. Coexist., Inst. Adv. Co-Creat. Stud., Osaka Univ., [2]Dept. Biomol. Sci. Regul., SANKEN, Osaka Univ., [3]Dept. Cell Biol., Grad. Sch. Pharm. Sci., Osaka Univ.)

W13-5
Sporulation-specific gene rearrangement in bacteria
◯Kimihiro Abe[1], Tsutomu Sato[2] ([1]Dept. Bacteriology I, NIID, [2]Hosei Univ.)

W13-6
Pathogenicity switch of *Staphylococcus caprae* colonized on human skins
◯Kohei Ogura[1], Hiroka Furuya[2], Natsuki Takahashi[1], Shigefumi Okamoto[1,2], Kazuhiro Ogai[3], Junko Sugama[4] ([1]Front. Sci. Init., Kanazawa Univ., [2]Dept. Clinic. Lab. Sci., Inst. Med, Pharm, Health Sci., Kanazawa Univ., [3]Al Cent., Inst. Med, Pharm, Health Sci., Kanazawa Univ., [4]Res. Cent. Implement. Nurs. Sci. Init., Research Prom. Headquat., Fujita Health Univ.)

Poster (P)

1. Taxonomy / Epidemiology /Infectious diseases -a. Phylogenetics, taxonomy and strain typing

P1-001/W3-4
Four new microbes isolated from feces of Parkinson's disease patients
◯Kyohei Sekiguchi[1], Tomonari Hamaguchi[3], Mikako Ito[3], Hiroshi Nishiwaki[3], Jun Ueyama[2], Kinji Ohno[3], Masaaki Hirayama[2] ([1]Dept. Comprehensive Health Sci., Sch. Med., Nagoya Univ., [2]Dept. Omics Medical Sci., Sch. Med., Nagoya Univ., [3]Dev. Neurogenetics., Sch. Med., Nagoya Univ.)

P1-002/W3-1
Identification of *Vibrio parahaemolyticus* pandemic marker based on whole-genome sequencing
◯Masatomo Morita[1], Toshio Kodama[2], Kazuhisa Okada[3], Hidemasa Izumiya[1], Eiji Arakawa[1], Tetsuya Iida[3], Yukihiro Akeda[1] ([1]Dept. Bacteriol. I, NIID., [2]Inst. Trop. Med., Nagasaki Univ., [3]RIMD, Osaka Univ.)

P1-003/W3-8
Genomic comparison of Enterotoxigenic *Escherichia coli* and discovery of novel pathogenic plasmids
◯Daichi Morita[1], Asuka Takeda[1], Miwako Yamamoto[2], Miyuki Kanda[1], Yuki Yamamoto[1], Takanori Kumagai[1], Hidetoshi Tahara[1], Fumito Maruyama[3], Teruo Kuroda[1] ([1]Grad. Sch. Bio. Heal. Sci., Hiroshima Univ., [2]Hiroshima City Inst. of Public Heal., [3]The IDEC Institute, Hiroshima Univ.)

P1-004/W3-5
Database construction of streptococcal toxic shock syndrome-causing bacteria
◯Tohru Akiyama[1], Rumi Okuno[2], Masaya Yamaguchi[3], Yujiro Hirose[3], Masayuki Oono[3], Tadayoshi Ikebe[4] ([1]Nat. Cent. Global Health Med., [2]Tokyo Meto. Inst. Pub. Heal., [3]Osaka Univ. Grad. Sch. Dentis., [4]Nat. Inst. Infect. Dis.)

P1-005
Genome-based, phenotypic and chemotaxonomic classification of *Faecalibacterium* strains
◯Mitsuo Sakamoto[1], Naomi Sakurai[1], Hiroki Tanno[2], Takao Iino[1], Moriya Ohkuma[1], Akihito Endo[2,3] ([1]RIKEN BRC-JCM, [2]Dept. Food, Aroma Cosmet. Chem., Facult. Bioindustry, Tokyo Univ. Agric., [3]Dept. Nutr. Sci. Food Saf., Facult. Appl. Biosci., Tokyo Univ. Agric.)

P1-006
***Sellimonas catena* sp. nov., isolated from human feces**
◯Atsushi Hisatomi, Moriya Ohkuma, Mitsuo Sakamoto (RIKEN BRC-JCM)