

The 97th Annual Meeting of Japanese Society for Bacteriology

General Meeting

Thursday, August 8 13:00–15:00
Room 1 (Conference Hall)

Award Lecture

Thursday, August 8 13:00–15:00
Room 1 (Conference Hall)

Mechanism and origin of class Mollicutes motility

○Makoto Miyata (Graduate Sch. Science, Osaka Metropolitan University)

Special Lecture

SL Challenge to infectious diseases from the point of view of chemistry

Wednesday, August 7 9:00–11:30
Room 1 (Conference Hall)

Chair: Shinichi Yokota (Sapporo Medical University)

SL-1

Medicinal chemistry based on natural product for the discovery of novel antimicrobial leads

○Satoshi Ichikawa (Fac. Pharmaceutical Sciences, Hokkaido Univ.)

SL-2

A novel approach to combating antimicrobial drug-resistant bacteria using bacteriological analysis methods

○Toyotaka Sato^{1,2,3} (¹Lab. Veterinary Hygiene, Sch./Fac. Veterinary Medicine, Hokkaido Univ., ²Grad. Sch. Infectious Diseases, Hokkaido Univ., ³One Health Research Center, Hokkaido Univ.)

SL-3

The size and shape of glycan-presenting particles determine IL-12 production from mononuclear phagocytes and direction of acquired immunity

○Naoya Kojima (Dept. Applied Biochemistry, Tokai Univ.)

Presidential Symposium

PS Disseminating Bacteriology from Hokkaido

Friday, August 9 9:00–11:30
Room 1 (Conference Hall)

Conveners: Shinichi Yokota (Sapporo Medical University)
Hideaki Higashi (Hokkaido University)

PS-1

Our fungal research developed in Hokkaido with the One Health concept

○Takahito Toyotome^{1,2,3} (¹Dept. Vet. Med., Obihiro Univ. Agric. Vet. Med., ²Diagn. Cent. Anim. Health Food Saf., Obihiro Univ. Agric. Vet. Med., ³Med. Mycol. Res. Cent., Chiba Univ.)

PS-2

Molecular Bacteriological One Health Approach

○Tomoe Kitao, Hideaki Higashi (Div. Infect. and Immun., International Inst. for Zoonosis Control, Hokkaido Univ.)

PS-3

Accelerating infectious disease research from Asahikawa

○Hideki Hara (Dept. Infect. Dis., Asahikawa Med. Univ.)

PS-4

Intersection Pathways: Chronic Periodontitis, Cognitive Decline, and Emerging Therapeutic Frontiers

○Ji-Won Lee, Akira Hasebe (Microbiology, Dept. Oral Pathobiological Science, Fac. and Grad. Sch. Dental Medicine, Hokkaido Univ.)

PS-5

Functional Analysis of Botulinum Toxin: New Applications Emerging from Toxin Action

○Shin-Ichiro Miyashita, Yoshimasa Sagane (Dept. Food Aroma Cosme. Chem., Fac. Bio-ind., Tokyo NODAI)

PS-6

Characterization of three flagellins using the gene deletion mutants in *Treponema denticola*

○Chen-Hsuan Chiu, Keiji Nagano (Div. Microbiol, Sch. Dent., Health Sci. Univ. Hokkaido)

PS-7

One Health Approach from Veterinary Medicine to Antimicrobial Resistance

○Aiko Maeda¹, Toyotaka Sato^{2,3}, Kaho Okada², Akio Suzuki^{2,3}, Yusuke Komatsu², Motohiro Horiuchi^{2,3} (¹Lab. Vet. Hyg., Sch. Inf., Hokkaido Univ., ²Lab. Vet. Hyg., Sch. Vet., Hokkaido Univ., ³OHRC, Hokkaido Univ.)

PS-8

Secular changes in the serotype distribution of pediatric pneumococci in Hokkaido, 2011-2023

○Mitsuyo Kawaguchiya¹, Noriko Urushibara¹, Meiji Soe Aung¹, Masahiko Ito², Nobumichi Kobayashi¹ (¹Dept. Hygiene, Sapporo Med. Univ., Sch. Med., ²Sapporo Clinical Laboratory Inc.)

PS-9

Exploring mechanisms of intracellular adaptation of *Chlamydia trachomatis* by hypoxic culture

○Torahiko Okubo, Hiroyuki Yamaguchi (Fac. Health Sci, Hokkaido Univ.)

JKISM Joint Symposium

The 16th Japan-Korea International Symposium on Microbiology

JKISM-S1 Symposium 1

Friday, August 9 9:00–17:30
Room 4 (107+108)

Conveners: Tomoko Sumimoto (Tokushima University)
Eun-Kyeong Jo (Chungnam National University)

JKISM-S1-1

Metabolites from microbiota provide colonization resistance against *Candida albicans* in the gut

○Yoshiyuki Goto, Bonita McCuaig (Div. Mol. Immunol., MMRC., Chiba Univ.)

JKISM-S1-2

Resistance of hypervirulent *Klebsiella pneumoniae* to cathepsin B-mediated pyroptosis in murine macrophages

○Jin Kyung Kim¹, Hui-Jung Jung², Miri Hyun³, Ji Yeon Lee³, Jong-Hwan Park⁴, Seong-Il Suh², Won-Ki Baek², Hyun ah Kim³ (¹Keimyung Univ. Sch. Med., ²Dept. Microbiology, Keimyung Univ. Sch. Med., ³Dept. Infectious Diseases, Keimyung Univ. Sch. Med., ⁴College of Veterinary Med., Chonnam National Univ.)

JKISM-S1-3

Microcolony formation and pathogenicity in urinary tract cells of uropathogenic *Escherichia coli*

○Hidetada Hirakawa (Dept. Bacteriol., Sch. Med., Gunma Univ.)

JKISM-S1-4

Comparative proteomics reveals antiviral restriction factors associated with replicated HSV-1 DNA

○Eui Tae Kim¹, Joseph M. Dybas², Matthew D. Weitzman³ (¹Jeju National Univ. College of Med., ²The Children's Hospital of Philadelphia, ³Univ. Pennsylvania Sch. Med.)

JKISM-S1-5

The utility of silkworm models in the development of novel infectious disease therapeutics

○Hiroshi Hamamoto (Dept. Infect. Dis., Yamagata Univ. Fac. of Med.)

JKISM-S1-6

The gut microbe pair of *Oribacterium* sp. GMB0313 and *Ruminococcus* sp. GMB0270 provide complete protection against COVID-19 and Influenza

○Seong-Tshool Hong¹, Sura Kim¹, Hee-Suk Chae¹, Hea-Jong Chung² (¹Jeonbuk National Univ. Medical Sch., ²Korea Basic Science Inst.)

JKISM-S1-7

Whole genome sequence-based surveillance of enterohemorrhagic *Escherichia coli*

○Ken-ichi Lee (Dept. Bacteriol. 1, Natl. Inst. Infect. Dis.)

P3 Poster presentation

Friday, August 9 9:00–17:30
Room 4 (107+108)

Conveners: Hideki Fujii (Keio University)
Yong-Woo Jung (Korea University)

JKISM-2 Symposium 2

Friday, August 9 9:00–17:30
Room 4 (107+108)

Conveners: Yusuke Minato (Fujita Health University)
Joon Haeng Rhee (Chonnam National University)

JKISM-S2-1

Endoribonuclease: Regulator of pathogenicity in Gram-negative foodborne pathogen

○Minho Lee (Dept. Microbiology, College of Med., Hallym Univ.)

JKISM-S2-2

Deciphering Bacterial Survival Strategies through Phage Defense System Analysis

○Kotaro Kiga¹, Aa Haeruman Azam¹, Shinjiro Ojima¹, Kotaro Chihara¹, Kohei Kondo², Wenhan Nie¹, Azumi Tamura¹, Wakana Yamashita¹, Yoshimasa Takahashi¹, Koichi Watashi¹ (¹Res. Cent. Drug Vaccine Dev., Natl. Inst. Infect. Dis., ²AMR Res. Cent., Natl. Inst. Infect. Dis.)

JKISM-S2-3

Targeting Mycobacterial AcpM: A New Approach to Modulate Host-Pathogen Interaction in Tuberculosis

○Seungwha Paik (Chungnam National Univ. College of Med.)

JKISM-S2-4

Host adaptation and virulence mechanisms of *Vibrio parahaemolyticus*

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

JKISM-S2-5

***Toxoplasma gondii* macrophage migration inhibitory factor shows anti-*Mycobacterium tuberculosis* potential via AZIN1/STAT1 interaction**

○Chul-Su Yang (Dept. Medicinal and Life Science, Hanyang Univ.)

JKISM-S2-6

Heterogeneity in Bacterial pathogenesis

○Yukihiro Akeda^{1,2} (¹Dept. Bacteriol I, NIID, ²RIMD, Osaka Univ.)

JKISM-S2-7

Enterohemorrhagic *Escherichia coli* Shiga toxins are not just cytotoxins

○Moo-Seung Lee, Kyung-Soo Lee (Korea Research Inst. Bioscience and Biotechnology/Univ. Science and Technology)

Research Presentations by Junior High School and High School Students

JRS Research presentations by junior high school and high school students

Thursday, August 8 9:00–11:00
Room 3 (Mid-sized Hall 1/2)

Conveners: Takahito Toyotome (Obihiro University of Agriculture and Veterinary Medicine)
Masaya Yamaguchi (Osaka University)

JRS-1

Analysis of bacteria of used masks: Toward the reuse of non-woven fabric masks

○Naotaro Oda¹, Takashi Abe², Shingo Maruyama², Anna Wakui^{2,3}, Takuichi Sato² (¹Ikarashi Junior High School, Niigata City, ²Div. Clin. Chem., Niigata Univ. Grad. Sch. Health Sci., ³Dept. Med. Technol., Niigata Univ. Health Welfare)

JRS-2

Soil bacteria population surveys and gram staining for bacterial identification

○Itika Sinjyo, ○Miyu Teruya, ○Sano Sato, ○Miku Yagi, ○Mizuki Nakama (Okinawa Prefectural Kyuyo Senior High School)

JRS-3

Sterilization effect of familiar things

○Yukie Yamasaki, ○Kasumi Iwamoto, ○Saki Kagami (Kumamoto Prefectural Kumamoto Kita High School)

JRS-4

Exploration of the antimicrobial substances derived from plants

○Ryouma Yamaguchi, Fumika Azuma, Takuma Higaki, Jinta Minami (Osaka Prefectural Kishiwada High School)

JRS-5

Relationship between UV wavelength and Hsp production in *E.coli*

○Yusei Maeba, ○Kosuke Akagi, ○Wako Okano, ○Takuma Takemoto, ○Runa Matsuo (Hyogo Prefectural Kobe High School)

Wakate Colosseum for Bacteriology

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

Friday, August 9 13:00–15:00
Room 2 (Mid-sized Hall 1/2)

Conveners: Ryo Ozuru (Fukuoka University)
Ryo Nagasawa (Aichi Medical University)
Yuki Wakabayashi (Osaka Institute of Public Health)

WCB-1

The strategies of *Salmonella* for evading from host immune system and antibiotics

○Uki Kimura¹, Karen Saiki¹, Nobuhiro Matsuyama¹, Akiko Takaya², Koji Tokoyoda¹ (¹Div. Immunol., Grad. Sch. Med. Sci., Tottori Univ., ²Dept. Infect. Ctrl. Sci., Grad. Sch. Pharm. Sci., Chiba Univ.)

WCB-2

The Mode of action of tick defensin (persulcatusin) against *Staphylococcus aureus*

○So Shimoda, Tomoya Watanabe, Ryuta Tobe, Hiroshi Yoneyama (Dept. Animal Microbiol., Grad. Sch. Agri. Sci., Tohoku Univ.)

WCB-3

Regulon and response factors of the two-component system PmrAB of *Acinetobacter baumannii*

○Noriteru Yamada¹, Go Kamoshida^{1,2}, Tsukasa Shiraiishi³, Daiki Yamaguchi¹, Masahiro Fujimuro¹, Shin-ichi Yokota³, Kinnosuke Yahiro¹ (¹Kyoto Pharm. Univ., ²Meiji Pharm. Univ., ³Sapporo Med. Univ.)

WCB-4

Non-deacetylated poly-N-acetylglucosamine-hyperproducing *S. aureus* autoaggregates upon vortexing

○Shoko Kutsuno¹, Ikue Hayashi², Liansheng Yu^{1,3}, Sakuo Yamada⁴, Junzo Hisatsune^{1,3}, Motoyuki Sugai^{1,3} (¹Antimicrob. Resist. Res. Ctr., Natl. Inst. Infect. Dis., ²Dept. Bacteriol., Biomed. Health Sci., Hiroshima Univ., ³Dept. Antimicrob. Resist., Biomed. Health. Sci., Hiroshima Univ., ⁴Dept. Med. Technol., Fac. Health. Sci. Technol., Kawasaki Univ. Med. Welf.)

WCB-5

Effect of deletion of type 3 fimbriae transcriptional regulator MrkH in *Klebsiella* on low susceptibility to carbapenems

○Natsuki Yamanaka¹, Hiroki Takahashi², Akiko Takaya¹ (¹Dept. Infect. Cont. Sci., Grad. Sch. Pharm. Sci., Chiba Univ., ²Med. Mycol. Res. Cent., Chiba Univ.)

WCB-6

Investigation of age-related changes in the lung on the severity of pneumococcal infection

○Momoko Kobayashi (Grad. Sch. Dent., Osaka Univ.)

WCB-7

Water flow navigates the long journey of surface-associated bacteria living in hot springs

○Naoki Uemura¹, Naoya Chiba², Masatada Tamakoshi², Daisuke Nakane¹ (¹Dept. Eng. Sci., UEC., ²Dept. Mol. Biol., TUPLS)

Symposium

S1 Unveiling untapped areas of horizontal gene transfer

Wednesday, August 7 9:00–11:30
Room 2 (Mid-sized Hall 1/2)

Conveners: Masato Suzuki (National Institute of Infectious Diseases)
Masaki Shintani (Shizuoka University)

Supported by: Ohsumi Frontier Science Foundation

S1-1

Insights into Conjugative Transfer Mechanisms from the Structure of Type IV Secretion Systems

○Kouhei Kishida (Dept. Life Science, Tohoku Univ.)

S1-2

Enterococcal Linear Plasmids and the Spread of Antimicrobial Resistance Genes

○Yusuke Hashimoto¹, Haruyoshi Tomita^{1,2} (¹Dept. Bacteriol., Grad. Sch. Med., Gunma Univ., ²Lab. Bacteriol. Drug Resist., Grad. Sch. Med., Gunma Univ.)

S1-3

SE: a new class of mobile DNA element nesting in Gammaproteobacteria

○Hirokazu Yano (AMR-RC, NIID)

S1-4

Structural mechanism of bridge RNA-guided recombination

○Hiroshi Nishimasu (RCAST, The Univ. Tokyo)

S1-5

Deciphering Bacterial Survival Strategies through Phage Defense System Analysis

○Kotaro Kiga¹, Aa Haeruman Azam¹, Shinjiro Ojima¹, Kotaro Chihara¹, Kohei Kondo², Wenhan Nie¹, Azumi Tamura¹, Wakana Yamashita¹, Yoshimasa Takahashi¹, Koichi Watashi¹ (¹Res. Cent. Drug Vaccine Dev., Natl. Inst. Infect. Dis., ²AMR Res. Cent., Natl. Inst. Infect. Dis.)

S2 Animal microflora research: a challenge to One Health

Wednesday, August 7 9:00–11:30
Room 3 (Mid-sized Hall 1/2)

Conveners: Jumpei Uchiyama (Okayama University)
Masahiro Kusumoto (National Agriculture and Food Research Organization)

Co-sponsorship: Microbiology Subcommittee, Japanese Society of Veterinary Science

Supported by: Nominal sponsorship: Japan Society of One Health Sciences

S2-1

A new road to pet health care: Checking health by gut microbiota

○Ayaka Shima, Kai Ataka, Hirotaka Ishida, Murzabaev Marsel (Anicom Pafe Inc.)

S2-2

Current status and perspective of fecal microbiota transplantation in companion animals

○Keitaro Ohmori (Tokyo Univ. of Agriculture and Technology)

S2-3

Intestinal environment and feeding habits of rabbits

○Kiyonori Kawasaki (Fac. Ag., Kagawa Univ.)

S2-4

Impact of gut microbiota on productivity in pigs

○Ryo Inoue (Lab. Anim. Sci., Setsunan Univ.)

S2-5**Commercial potential for application of uterine microbiota analysis in dairy cows**

○Takuya Yagisawa¹, Jumpei Uchiyama², Seiji Katagiri³
(¹Hokkaido Agric. Mut. Aid Assoc., ²Okayama Univ., ³Hokkaido Univ.)

S3 New trends in "self- and non-self-recognition" recognition in host-pathogen interactions

Wednesday, August 7 13:00–15:30
Room 1 (Conference Hall)

Conveners: Michinaga Ogawa (National Institute of Infectious Diseases)
Takashi Nozawa (Kyoto University)

S3-1**Analysis of Pneumolysin-dependent membrane disruption by pneumococcal sialidase NanaA**

○Sayaka Shizukuishi, Michinaga Ogawa, Yukihiro Akeda
(Bacteriol. I, Nat. Inst. Infect. Dis.)

S3-2**Outer membrane vesicles of Escherichia coli relay inflammatory responses to exosomes of macrophage**

○Mayuko Oka¹, Risa Imamiya², Akari Shinohara², Takehiro Yamaguchi³, Yasuhiko Horiguchi⁴ (¹Food Hyg. Env. Health, Grad. Sch. Life Env. Sci., Kyoto Pref. Univ., ²Food Hyg. Env. Health, Facul. Life Env. Sci., Kyoto Pref. Univ., ³Dep. Bacteriol. I, Nat. Inst. Infect. Dis., ⁴Dep. Mol. Bacteriol., Res. Inst. Microb. Dis. Osaka Univ.)

S3-3**The mechanism of macrophage cell death-inducing by Salmonella T3SS-2**

○Takeshi Haneda (Lab. Microbiology., Sch. Pharm., Kitasato Univ.)

S3-4**The Bsv locus contributes to the pathogenicity of Burkholderia pseudomallei**

○Takashi Nishida¹, Yukihiro Hiramatsu¹, Dendi Krisna Nugraha¹, Yasuhiko Horiguchi^{1,2} (¹Dept. Mol. Bact., RIMD, Osaka Univ., ²CiDER, Osaka Univ.)

S3-5**A new single-cell RNA-seq approach to analyze interaction of Salmonella to host immune system**

○Hirota Hiyoshi¹, Mohamad Al Kadi², Maika Yamashita², Daisuke Okuzaki², Toshio Kodama¹ (¹Dept. Bacteriol., NEKKEN., Nagasaki Univ., ²Hum. Immunol., iFRc, Osaka Univ.)

S3-6**Stress granules regulate the KEAP1-NRF2 activation during Group A Streptococcus infection**

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

S4 The cutting edge of genome microbiology research

Wednesday, August 7 13:00–15:30
Room 2 (Mid-sized Hall 1/2)

Conveners: Yoshitoshi Ogura (Kurume University School of Medicine)
Taku Oshima (Toyama Prefectural University)

Supported by: Society of Genome Microbiology, Japan

S4-1**Gene silencing in bacteria**

○Taku Oshima (Dept. Biotech., Toyama Pref. Univ.)

S4-2**Novel enzymes and pathways in archaea**

○Yuta Michimori, Haruyuki Atomi (Dept. Synth. Chem. Biol. Chem., Grad. Sch. Eng., Kyoto Univ.)

S4-3**Large-scale MAG-based analysis of microbial diversity**

○Hiroshi Mori (Dept. Informatics, National Inst. Genetics)

S4-4**Evolutionary strategies for the recovery of growth loss due to genome reduction**

○Bei-Wen Ying (Inst. Life Environ. Sci., Univ. Tsukuba)

S4-5**Nucleoid-associated proteins in Pseudomonas: from structure to function**

○Chiho Suzuki-Minakuchi^{1,2} (¹AgTECH, Grad. Sch. Agric. Life Sci., UTokyo, ²CRIIM, UTokyo)

S5 New insights in exacerbation mechanisms of infection

Wednesday, August 7 13:00–15:30
Room 3 (Mid-sized Hall 1/2)

Conveners: Hideki Hara (Asahikawa Medical University)
Yumi Matsuoka (Osaka University)

S5-1**Exacerbation mechanism of Acinetobacter infection through Gsdmd-mediated membrane rupture**

○Yasuyuki Matsuda¹, Hajime Yamauchi¹, Go Kamoshida², Tsukasa Shiraishi³, Shin-ichi Yokota³, Hideki Hara¹ (¹Dept. Infect. Dis., Div. Microbiol. Immunochem., Asahikawa Med. Univ., ²Dept. Microbiol. Infect. Control Sci., Kyoto Pharm. Univ., ³Dept. Microbiol., Sch. Med., Sapporo Med. Univ.)

S5-2**Genome-wide screening of *Pseudomonas aeruginosa* genes required to evade neutrophils in the lung**

○Yoshinari Nakatsuka^{1,2}, Gabriel Nunez² (¹Dept. Respir. Med, Grad. Sch. Med., Kyoto Univ., ²Dept. Path., Univ. Michigan)

S5-3**Severe respiratory infections caused by Gas6/Axl axis**

○Takehiko Shibata (Dept. Microbiol., Sch. Med., Tokyo Med. Univ.)

S5-4**Enhanced bacterial pathogenicity through iron acquisition mechanisms and host defense mechanisms**

○Kei Sakamoto (Dept. Microbiol. Immunol., Grad. Sch. Med., Yamguchi Univ.)

S5-5**Impact of Staphylococcal Agr quorum-sensing system on atopic dermatitis and systemic infection**

○Yumi Matsuoka-Nakamura (Cutaneous Allergy and Host Defense. IFRc., Osaka Univ.)

S6 How does systems biology based on the multivariate analysis of omics contribute to bacteriology?

Thursday, August 8 9:00–11:30

Room 1 (Conference Hall)

Conveners: Yasufumi Hikichi (Kochi University)

Tepei Morita (Keio University)

S6-1**Dissection of immune signaling statuses of *Arabidopsis thaliana* upon *Pseudomonas* infection**

○Masanao Sato¹, Tatsuya Nobori² (¹Applied Mol. Entomol., Research Fac. Agri., Hokkaido Univ., ²Plant Biol. Lab, Salk Inst.)

S6-2**Infection strategy switching in a plant pathogenic bacterium under high humidity**

○Akira Mine (Grad. Sch. Agri., Kyoto Univ.)

S6-3**Virulence mechanisms executed majorly by quorum sensing in *Ralstonia pseudosolanacearum* strain OE1-1**

○Masayuki Tsuzuki (Fac. Agric. and Marine Sci., Kochi Univ.)

S6-4**Host manipulation by plant microbiota, a complex system composed of various microorganisms**

Jana Hucklenbroich¹, Tomohisa Shimasaki², ○Ryohei Thomas Nakano² (¹Max Planck Inst. for Plant Breeding Research, ²Fac. Sci., Hokkaido Univ.)

S6-5**Stealth regulation by small RNAs and development of RNA-Seq based methods, vice versa**

○Tepei Morita^{1,2} (¹Inst. Adv. Biosci., Keio Univ., ²Grad. Sch. Media & Governance, Keio Univ.)

S6-6**Integrated stress responses to host defense and bacterial pathogenesis**

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

S7 Frontline researches of infectious diseases from the perspective of host defense

Thursday, August 8 9:00–11:30

Room 2 (Mid-sized Hall 1/2)

Conveners: Yuki Kinjo (The Jikei University School of Medicine)

Ichiro Nakagawa (Kyoto University)

Co-sponsorship: Federation of Microbiological Societies of Japan

Supported by: Japanese Society of Host Defense Research

S7-1**Regulation of immune response by mycobacteria through host lipid receptors**

○Hiromitsu Hara, Eiichi Iizasa (Dept. Immunol., Grad. Sch. Med. Dent. Sci., Kagoshima Univ.)

S7-2**Pathogenicity analysis of Shiga-toxigenic *Escherichia coli* toxin subtilase cytotoxin**

○Hiroyasu Tsutsuki (Dept. Microbiol., Grad. Sch. Med. Sci., Kumamoto Univ.)

S7-3**The mechanism of induction of antibody production by pneumococcal protein and glycolipid vaccine**

○Yuki Kinjo^{1,2}, Koji Hayashizaki^{1,2}, Yasuhiro Kamii¹, Akio Chiba^{1,2}, Yukihiro Akeda³, Kazunori Oishi⁴ (¹Dept. Bacteriol., Jikei Univ. Sch. Med., ²Jikei Center for Biofilm Sci. Technol., Jikei Univ. Sch. Med., ³Dept. Bacteriol. I, Nat. Inst. Infect. Dis., ⁴Toyama Inst. Health)

S7-4**Role of innate immune signals in severity of SARS-CoV-2 infection**

○Takeshi Ichinohe (Inst. Medical Science, The Univ. of Tokyo)

S7-5**Entry pathway of SARS-CoV-2 and host proteases**

○Makoto Takeda (Dept. Microbiol., The Univ. Tokyo)

S8 The 60th Anniversary of the U.S.-Japan Medical Cooperative Medical Sciences Program (USJCMSP): Toward Infectious Diseases Control by Breakthrough Research

Friday, August 9 9:00–11:30
Room 2 (Mid-sized Hall 1/2)

Conveners: Tetsuya Iida (Osaka University)
Sohkichi Matsumoto (Niigata University)

Co-sponsorship: U.S.-Japan Medical Cooperative Medical Sciences Program (USJCMSP)

S8-1

United States-Japan Cooperative Medical Sciences Program

○Tetsuya Iida (Dept. Bacterial Infect., Res. Inst. Microbial Dis., Osaka Univ.)

S8-2

Virulence tactics of *Vibrio parahaemolyticus* for enteric infection

○Shigeaki Matsuda^{1,2} (¹Dept. Bact. Infect., RIMD, Osaka Univ., ²CiDER, Osaka Univ.)

S8-3

Vaccine Science and Design for the 100days mission

○Ken Ishii (Div. Vaccine Science, The Inst. Medical Science, The Univ. of Tokyo (IMSUT))

S8-4

Development of a live attenuated markerless prophylactic vaccine for leishmaniasis

○Shinjiro Hamano (Dept. Parasitol., Inst. Trop. Med., Nagasaki Univ.)

S8-5

Intrinsically disordered histone-like protein that induces mycobacterial dormancy

○Akihito Nishiyama¹, Masahiro Shimizu^{2,3}, Noriyuki Kodera², Anna Savitskaya¹, Yuriko Ozeki¹, Kouta Mayanagi⁴, Takehiro Yamaguchi^{1,5}, Yoshitaka Tateishi¹, Sohkichi Matsumoto¹ (¹Dept. Bacteriol., Niigata Univ. Sch. Med., ²NanoLSI, Kanazawa Univ., ³Div. Quantum Beam Mater. Sci., Inst. Integr. Radiat. Nuclear Sci., Kyoto Univ., ⁴Med. Inst. Bioregul., Kyushu Univ., ⁵Dept. Pharmacol., Osaka Metro. Univ. Med. Sch.)

S8-6

Pursuing Clinical Microbiology Research for Infectious Disease Diagnosis and Treatment

○Miki Nagao (Dept. Clin. Lab. Med., Kyoto Univ.)

S9 Bench to Bedside/Bedside to Bench —Bridging the gap between clinical, laboratory, field and epidemiological research—

Friday, August 9 9:00–11:30
Room 3 (Mid-sized Hall 1/2)

Convener: Yukihiro Akeda (National Institute of Infectious Diseases)

S9-1

Clinical-Basic Collaborative Study to Elucidate the Pathogenesis of Severe Streptococcal Infection

○Norihiko Takemoto¹, Noriko Iwamoto², Sadako Yoshizawa³, Fukumi Nakamura⁴, Makoto Inada², Taketo Kubo², Hidetoshi Nomoto², Masami Kurokawa⁵, Ayano Motohashi⁵, Noriko Fuwa² (¹Dept. Infectious Diseases, Research Inst., NCGM, ²DCC, NCGM, ³Dept. Microbiol. Infect. Dis./Dept. Clin. Lab., Toho Univ. Sch. Med., ⁴Dept. Infect. Dis., Tokyo Metro. Bokutoh Hosp., ⁵Microbiol. Lab., Hospital, NCGM)

S9-2

Basic and clinical research on non-*H. pylori Helicobacter* species infecting the human stomach

○Emiko Rimbara (Dept. Bacteriol II, NIID)

S9-3

Heterogeneity in Bacterial pathogenesis

○Yukihiro Akeda^{1,2} (¹Dept. Bacteriol I, NIID, ²RIMD, Osaka Univ.)

S9-4

Molecular reason why gastric cancer patients are selected from *H. pylori*-infected patients

○Hitoshi Tsugawa (Div. Host Defense Mech., Tokai Univ. Sch. Med.)

S9-5

New medical development based on metagenomic analysis

○Kosuke Fujimoto^{1,2} (¹Dept. Immunol. Genom., Sch. Med., Osaka Met. Univ., ²Div. Metagenome Med., HGC, IMS, UTokyo)

Workshop

W1 New Frontiers in Research on Extracellular Vesicles

Wednesday, August 7 17:20–19:20
Room 1 (Conference Hall)

Conveners: Hitomi Mimuro (Oita University)
Kimihiro Abe (National Institute of Infectious Diseases)

Co-sponsorship: Research Center for GLOBAL and LOCAL Infectious Diseases, Oita University

W1-1 Biogenesis of membrane vesicles in Gram-positive bacteria

○Kimihiro Abe (Dept. Bacteriol. I, NIID)

W1-2 Unique mechanism for extracellular membrane vesicle production in a non-model bacterium

○Jun Kawamoto (Insti. for Chem. Res., Kyoto Univ.)

W1-3 A role of periodontopathic bacterial extracellular vesicles in noncommunicable disease progression

○Takehiro Yamaguchi¹, Masayuki Shiota², Ryoma Nakao¹, Kimihiro Abe¹, Yukihiko Akeda¹ (¹Dept. Microbiol. I, National Inst. Infectious Diseases, ²Dept. Molecular Biol. Med., Sch. Med., Osaka Metropolitan Univ.)

W1-4 MVs derived from *Clostridium botulinum* induce inflammatory responses and disrupt intestinal barrier

○Nobuhide Kobayashi¹, Kimihiro Abe^{2,3}, Sachiyo Akagi¹, Mayu Kitamura¹, Nobuhiko Nomura^{2,4}, Nozomu Obana^{4,5}, Yukako Fujinaga¹ (¹Dept. Bacteriol., Grad. Sch. Med., Kanazawa Univ., ²Fac. Life Environ. Sci., Univ. Tsukuba, ³Dept. Bacteriol. I, NIID, ⁴MiCS, Univ. Tsukuba, ⁵TMRC, Fac. Med., Univ. Tsukuba)

W1-5 Purification of *Pseudomonas aeruginosa* secretions that induce chemokines in macrophages

○Mayuko Oka¹, Akari Shinohara² (¹Food Hyg. Env. Health., Grad. Sch. Life Env. Sci., Kyoto Pref. Uni., ²Food Hyg. Env. Health., Fac. Life Env. Sci., Kyoto Pref. Univ.)

W1-6 *Klebsiella pneumoniae*-derived bacterial extracellular vesicles promote the bacterial translocation

○Hitoshi Tsugawa¹, Shogo Tsubaki¹, Rika Tanaka², Hiroyasu Tsutsuki³, Tomohiro Sawa³, Juntaro Matsuzaki⁴ (¹Div. Host Defense Mech., Tokai Univ. Sch. Med., ²Div. Host Defense Mech., Tokai Univ. Sch. Med., ³Dept. Microbiol., Kumamoto Univ., ⁴Div. Pharmacotherapeutics, Keio Univ., Fac. Pharm.)

W1-7 Clinical significance of bacterial microflora based on extracellular vesicles within blood

○Atsunari Kawashima¹, Kentaro Jingushi², Norio Nonomura¹ (¹Dept. Urology, Osaka Univ., Grad. Sch. Medicine, ²Lab Mol and Cell Phis, Osaka Univ., Grad. Sch. Pharmaceutical Sciences)

W1-8 OMV of intestinal bacteria cause inflammation and fibrosis in advanced liver cirrhosis

○Atsunori Tsuchiya¹, Kazuki Natsui¹, Mayuko Osada-Oka² (¹Div. Gastroenterology and Hepatology, Niigata Univ., ²Food Hyg. Env. Health., Grad. Sch. Life. Env. Sci., Kyoto Pref. Univ.)

W2 Selected from general presentations 1: Taxonomy / Epidemiology / Infectious diseases / Ecology

Wednesday, August 7 17:20–19:35
Room 2 (Mid-sized Hall 1/2)

Conveners: Yuki Kinjo (The Jikei University School of Medicine)
Hiroji Chibana (Chiba University)

W2-1/P1-035 Stomatal manipulation by leaf-inhabiting bacteria and its significance in plant health

○Rikako Hirata¹, Utami Yuniar Devi², Kei Hiruma², Akira Mine¹ (¹Grad. Sch. Agr., Kyoto Univ., ²Grad. Sch. Arts and Sci., Univ. Tokyo)

W2-2/P1-044 Multiple metagenomic analysis for the oral microbiome at a high resolution

○Masaya Yamaguchi^{1,2,3,4}, Toshihiro Uchihashi⁵, Shigetada Kawabata^{2,4} (¹Bioinform. Res. Unit, Osaka Univ. Grad. Sch. Dent., ²Dept. Microbiology, Osaka Univ. Grad. Sch. Dent., ³Bioinform. Cent., RIMD, Osaka Univ., ⁴CiDER, Osaka Univ., ⁵Dept. OMFS, Osaka Univ. Grad. Sch. Dent.)

W2-3/P1-017 Novel *Streptococcus* species forming extremely long chains isolated from the human oral cavity

○Masanori Saito, Noriko Shinozaki-Kuwahara, Tomomi Hashizume-Takizawa, Hidenobu Senpuku (Dept. Microbiol. Immunol., Sch. Dent., Matsudo, Nihon Univ.)

W2-4/P1-034 Comparative genomic analysis of long-term colonization of *Bifidobacterium longum* in the human gut

○Ayana Shinomiya^{1,2}, Tomoya Tsukimi¹, Tsubasa Watabe¹, Yuki Yoshida¹, Haruo Suzuki^{1,2}, Kumiko Kato³, Toshitaka Odamaki³, Mitsuhiko Sato⁴, Yoshitoshi Ogura⁵, Shinji Fukuda¹ (¹Inst. Adv. Biosci, Keio Univ., ²Fac. Environ. Info. Stud., Keio Univ., ³Innov. Res. Inst., Morinaga Milk Indust., ⁴Kazusa DNA Res. Inst., ⁵Kurume Univ. Sch. Med.)

W2-5/P1-032**Bile salt hydrolase degrades β -Lactam antibiotics and confers antibiotic resistance on *Lactobacillus***

○Hiroyuki Kusada, Hideyuki Tamaki (BPRI., Dept. Life Sci. Biotechnol., AIST)

W2-6/P1-036**Bacterial Olympics Achieved by Microfluidic Devices**

○Yoshiki Shimada¹, Aoba Yoshioka², Naoki Uemura², Daisuke Nakane², Tetsuo Kan¹ (¹Dept. Mech. and Int. Sys. Eng., UEC, ²Dept. Eng. Sci., UEC)

W2-7/P1-013**Molecular epidemiology of *stx2f* EHEC strains isolated from asymptomatic carriers**

○Ken Kikuchi¹, Yuko Arai¹, Ran Abe¹, Akio Noguchi², Ko-ichi Uno², Hiroshi Kaneko², Toshio Sato² (¹Dept. Infect. Dis., Tokyo Women's Med Univ, ²Japan Microbiological Institute)

W2-8/P2-171**National genomic surveillance of antimicrobial resistance in Japan: 1st phase of JARBS-GNR project**

Shizuo Kayama, ○Koji Yahara, Yo Sugawara, Sayoko Kawakami, Kohei Kondo, Hui Zuo, Shoko Kutsuno, Norikazu Kitamura, Aki Hirabayashi, Motoyuki Sugai (AMR Research Center, NIID)

W2-9/P1-029**Efficiency of transmission of *Helicobacter pylori* in an animal model of mother-to-child infection**

○Takako Osaki¹, Fuhito Hojo², Kentaro Oka³, Satoshi Kurata⁴, Motomichi Takahashi¹, Jiro Mitobe¹, Shigeru Kamiya^{1,3} (¹Dept. Infect. Dis., Kyorin Univ. Sch. Med., ²Inst. Lab. Animals, Grad. Sch. Med, Kyorin Univ., ³R&D Division, Miyarisan Pharmaceutical Co., Ltd., ⁴Div. Microbial., Dept. Med Technol., Fac. Health Sci., Kyorin Univ.)

W3 Selected from general presentations 2: Ecology / Physiology / Structural biology

Wednesday, August 7 17:20–19:20
Room 3 (Mid-sized Hall 1/2)

Conveners: Tomoko Sumitomo (Tokushima University)
Daisuke Nakane (The University of Electro-Communications)

W3-1/P1-058**A Gram-positive bacterium induces Quorum Sensing in a Gram-negative bacterium**

○Sui Sugimoto¹, Chikaho Sano¹, Toshiki Nagakubo^{2,3}, Nobuhiko Nomura^{2,3}, Masanori Toyofuku^{2,3} (¹Grad. Sch. Life Environ. Sci., Univ. Tsukuba, ²Fac. Life and Environ. Sci., Univ. Tsukuba, ³MiCS (Microbiology Research Center for Sustainability), Univ. Tsukuba)

W3-2/P1-065**Cell division defect in Group A *Streptococcus* caused by *E. coli*-derived extracellular vesicle**

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

W3-3/P1-057**Narrow space triggers flagellar wrapping of *Helicobacter pylori***

○Sarara Yokohama¹, Emiko Rimbara², Yoshiki Shimada³, Tetsuo Kan³, Tsuyoshi Kenri², Daisuke Nakane¹ (¹Dep. Eng. Sci., UEC, ²Dept. Bacteriol II, NIID, ³Dep. Mech. Intell. Syst., UEC)

W3-4/P1-071**Exploring Another Transition State of MFS-Type Drug Efflux Transporter MdfA in the Transport Cycle**

Satomi Inaba-Inoue^{1,2}, Toshio Moriya¹, ○Mikio Tanabe¹ (¹SBRC., IMSS, KEK, ²Fac. Adv. Life. Sci., Hokkaido Univ.)

W3-5/P1-069**Reconstitution of *Haloplasma contractile* cell wall in JCVI-syn3.0**

○Taishi Kasai¹, Shingo Kato², Daisuke Shiomi¹ (¹Dept. Life Sci., Col. Sci., Rikkyo Univ., ²JCM. BRC. RIKEN)

W3-6/P1-048**Extended *Vibrio cholerae* cultivation induces flagella genes mutation with prolonged culturability**

○Kazuhisa Okada, Amonrattana Roobthaisong, Shigeyuki Hamada (RCC-ERI, RIMD, Osaka Univ.)

W3-7/P1-072**Characterization of a novel pneumococcal ABC transporter involved in antibiotic efflux**

○Atsushi Taguchi^{1,4}, Junso Fujita², Mikio Tanabe³, Daisuke Takaya⁴, Kaori Fukuzawa⁴, Keiichi Namba², Kunihiko Nishino^{1,4} (¹SANKEN, Osaka Univ., ²Grad. Sch. Front. Biosci., Osaka Univ., ³SBRC, KEK, ⁴Grad. Sch. Pharm. Sci., Osaka Univ.)

W3-8/P1-047***Chlamydia trachomatis* favors hypoxia because it suppresses methionine-related metabolites**

○Hiroyuki Yamaguchi¹, Ruiyu Li¹, Saicheng Zhang¹, Sora Kuroiwa¹, Torahiko Okubo¹, Jeewan Thapa², Hideaki Higashi³ (¹Fac. Health Science, Hokkaido Univ., ²Div. Bioresources, Int. Inst. Zoonosis Ctr., Hokkaido Univ., ³Div. Infection and Immunity, Int. Inst. Zoonosis Ctr., Hokkaido Univ.)

W4 Bacteriology learnt from each case

Thursday, August 8 15:10–17:10
Room 1 (Conference Hall)

Conveners: Shinji Yamasaki (Osaka Metropolitan University)
Hiromi Nakamura (Osaka Institute of Public Health)

W4-1

A foodborne outbreak caused by EPEC O45:H15 and genomic characterization of the etiological agents

○Yuki Wakabayashi¹, Etsuko Saito², Kenichi Ogita², Tetsuya Harada¹, Takahiro Yamaguchi¹, Takao Kawai¹, Tomohiro Oshibe², Tetsuhiko Oooka² (¹Div. Microbiol., Osaka Inst. Pub. Health, ²Div. Infect. Dis., Hyogo Pref. Inst. Pub. Health Sci.)

W4-2

Campylobacter food poisoning caused by food and drink made with spring water

○Emiko Kitagawa¹, Saya Yuruzume¹, Mika Shiroza¹, Sachiko Nakamura¹, Hikari Kanno², Yukuhiko Asada², Megumi Kosaka², Mayumi Uesugi² (¹Ishikawa Pref. Inst. Public Health and Environ. Sci., ²Ishikawa Chuo Public Health Center of Ishikawa Pref.)

W4-3

Investigation of a *L. pneumophila* Outbreak at a Bath Facility Using WGS analysis

○Noriko Nakanishi, Ryohei Nomoto (Dept. Infec. Dis., Kobe Inst.)

W4-4

Nationwide spread of a *S. Oranienburg* clone caused a cluster of bacteremia cases in 2018 in Japan

○Tadasuke Ooka (Dept. Microbiol., Grad. Sch. Med. Dent. Sci., Kagoshima Univ.)

W4-5

Detection of prolonged excretion of *E. albertii* in stool of a child with gastroenteritis by qRT-PCR

○Shinji Yamasaki (Grad. Sch. Vet. Sci. Osaka Metropolitan Uni.)

W5 Understanding Biological Phenomena through the Molecular Physiology of Membrane Proteins

Thursday, August 8 15:10–17:10
Room 2 (Mid-sized Hall 1/2)

Conveners: Mikio Tanabe (KEK/High Energy Accelerator Research Organization)
Kunihiko Nishino (Osaka University)

W5-1

Identification of bacterial drug-resistant cells by deep learning in TEM images

○Mitsuko Hayashi-Nishino (SANKEN, Osaka Univ.)

W5-2

Implication of membrane protein properties in small RNA-mediated regulations

○Teppe Morita^{1,2} (¹Inst. Adv. Biosci., Keio Univ., ²Grad. Sch. Media & Governance, Keio Univ.)

W5-3

Gene mutations that enhance virulence and antibiotic resistance in *Escherichia coli*

○Chikara Kaito (Grad. Sch. Med. Dent. Pharm. Sci., Okayama Univ.)

W5-4

Assembly Mechanisms of β -Barrel Membrane Proteins in Outer Membrane of Gram-negative Bacteria

○Takuya Shiota¹, Yuki Maruno¹, Yuka Abiru², Daisuke Shiomi², Edward Germany¹, Nakajohn Thewasano¹ (¹Front. Sci. Res. Cent., Univ. of Miyazaki, ²Dept. Life Sci., Col. Sci., Rikkyo Univ.)

W5-5

Analysis of type IX secretion system in periodontal bacteria

○Mariko Naito, Takashi Tominaga, Momoko Ito, Hideharu Yukitake, Mikio Shoji, Koji Nakayama (Dept. Microbiol. Oral Infect., Nagasaki Univ. Grad. Sch. Biomedical Sci.)

W5-6

Novel insights into the interplay between botulinum toxin and gut mucous membrane

○Yukako Fujinaga (Dept. Bacteriol., Grad. Sch. Med. Sci., Kanazawa Univ.)

W6 Selected from general presentations 3: Genetics / Genomics / Biotechnology/ Ecology

Thursday, August 8 15:10–17:10
Room 3 (Mid-sized Hall 1/2)

Conveners: Tomomi Kuwahara (Kagawa University)
Hitomi Mimuro (Oita University)

W6-1/P2-088

The regulatory circuit for pathogenicity by read-through transcription in *Vibrio parahaemolyticus*

○Eiji Ishii^{1,2}, Dhira Saraswati Anggramukti¹, Andre Pratama¹, Mohamad Al Kadi³, Tetsuya Iida^{1,2}, Toshio Kodama⁴, Shigeaki Matsuda^{1,2} (¹Dept. Bac. Infect., RIMD, Osaka Univ., ²Cent. for Infect. Dis. Edu. Res., Osaka Univ., ³Hum. Immunol., IFREC, Osaka Univ., ⁴Dept. Bac., Inst. Trop. Med., Nagasaki Univ.)

W6-2/P2-077**Population genomics of the pathogenic fungus *Aspergillus fumigatus***

○Hiroki Takahashi¹, Xiaohui He¹, Yoko Kusuya², Daisuke Hagiwara^{1,3}, Takahito Toyotome^{1,4}, Teppei Arai¹, Cai Bian⁵, Masaki Nagayama¹, Saho Shibata¹, Akira Watanabe¹ (¹Med. Mycol. Res. Cent., Chiba Univ., ²NBRC, NITE, ³Life Env. Sci., Univ. of Tsukuba, ⁴Dept. Vet. Med., Obihiro Univ. A.V.M., ⁵BGI)

W6-3/P2-196**Novel Bacterial Production System: Achieving Endotoxin-Free Recombinant Bioactive Proteins**

○Go Kamoshida^{1,2}, Daiki Yamaguchi², Noriteru Yamada², Norihiko Takemoto³, Kinnosuke Yahiro², Yuji Morita¹ (¹Dept. Infect. Cont. Sci. Meiji Pharm. Univ., ²Lab. Microbiol. and Infect. Cont. Kyoto Pharm. Univ., ³Pathogenic Microbe Lab., Dept. Infect. Dis., NCGM)

W6-4/P2-087**The ABCF proteins in *Escherichia coli* alleviate "hard-to-translate" amino acid sequences**

○Yuhei Chadani¹, Eri Uemura², Hideki Taguchi² (¹Fac. Env., Life., Nat. Sci., and Tech., Okayama Univ., ²IIR, Tokyo Inst. of Tech.)

W6-5/P2-093**Systemic discovery of phage genes that inactivate bacterial immune systems**

○Shinjiro Ojima¹, Aa Haeruman Azam¹, Kohei Kondo², Kotaro Chihara¹, Azumi Tamura¹, Wakana Yamashita¹, Tomohiro Nakamura^{1,3}, Yoshimasa Takahashi¹, Koichi Watashi¹, Kotaro Kiga¹ (¹Res. Ctr. Drug Vaccine Dev., Natl. Inst. Infect. Dis., ²AMR Res. Ctr., Natl. Inst. Infect. Dis., ³Lab. Vet. Biochem. Dept. Vet. Med., Rakuno Gakuen Univ.)

W6-6/P2-127**Coordination of prophage and global regulator lead to high SEA production**

○Yusuke Sato¹, Junzo Hisatsune², Aziz Fatkhanuddin³, Nobuyuki Tatsukawa³, Mari Nakagawa-Shibata⁴, K. Hisaya Ono⁵, Ikunori Naito⁴, Katsuhiko Omoe⁴, Motoyuki Sugai² (¹Lab. Infect. Cont. and Immun., Sch. Vet. Med. Azabu Univ., ²Antimicro. Resist. Res. Center, NIID, ³Bacteriol., Hiroshima Grad. Univ., ⁴Lab. Food Safety, Sch. Vet. Med. Iwate Univ., ⁵Lab. Zoonosis, Sch. Vet. Med. Kitasato Univ.)

W6-7/P2-115**Exploring genes necessary for *Bordetella bronchiseptica* survival in *Acanthamoeba castellanii***

○Dendi Krisna Nugraha¹, Xingyan Ma¹, Hiroyuki Yamaguchi², Yasuhiko Horiguchi^{1,3} (¹Dept. Mol. Bact. RIMD, Osaka Univ., ²Fac. Health Sci. Hokkaido Univ., ³CiDER, Osaka Univ.)

W6-8/P2-116**Spatiotemporal microscopic analysis of the *Salmonella* Typhimurium invasion**

○Hiroaki Kubota¹, Togo Shimozawa², Kai Kobayashi¹, Morika Mitobe¹, Yasunori Suzuki³, Jun Suzuki¹, Kenji Sadamasu¹ (¹Dept. Microbiol., Tokyo Metr. Inst. Pub. Health, ²Sch. Sci., The Univ. Tokyo, ³Sch. Vet. Med., Kitasato Univ.)

W7 Drug Resistance Mechanisms and Survival Strategies of bacteria from Multiple Approaches

Friday, August 9 13:00–15:00
Room 1 (Conference Hall)

Conveners: Nozomu Obana (University of Tsukuba)
Hiraku Takada (Kyoto Sangyo University)

Co-sponsorship: JST-ACT-X

W7-1**Genome-encoded ABCF factors implicated in pathogenic Clostridial intrinsic antibiotic resistance**

○Nozomu Obana (Inst. Med., Univ. Tsukuba)

W7-2**Mechanism analysis of multidrug-resistant factor, ARE-ABCF and 23s rRNA modification enzyme**

○Hiraku Takada (Dept. Biotech., Fac. Eng., Toyama Prefectural Univ.)

W7-3**Distribution and Diversity of Antibiotic Resistance Genes in Public Metagenome Big Data**

○Yosuke Nishimura (JAMSTEC)

W7-4**Single-cell genome sequencing for analyzing the distribution of antibiotic resistance genes**

○Yohei Nishikawa^{1,2} (¹AIST-Waseda CBBB-OIL, ²Res. Org. Nano & Life Innov. Waseda Univ.)

W7-5**Electrical conduction as a bacterial energy conservation strategy linked with antibiotic resistance**

○Yoshihide Tokunou^{1,2}, Yugo Kogure³, Hiromasa Tongu³, Masanori Toyofuku^{1,4}, Nobuhiko Nomura^{1,4} (¹Dept. Life Environ. Sci., Univ. Tsukuba, ²NIMS, ³Deg. Prog. Life Earth Sci., Univ. Tsukuba, ⁴Microbiol. Res. Cent. Sus., Univ. Tsukuba)

W8 Selected from general presentations 4: Host defense / Pathogenicity

Friday, August 9 13:00–15:00
Room 2 (Mid-sized Hall 1/2)

Conveners: Manabu Ato (National Institute of Infectious Diseases)
Kinnosuke Yahiro (Kyoto Pharmaceutical University)

W8-1/P2-118

A role of *Aeromonas hydrophila* RtxA during necrotizing soft tissue infection

○Kohei Yamazaki, Kei Shiraishi, Saeko Takizawa, Takashige Kashimoto (Vet. Public Health, Kitasato Univ.)

W8-2/P2-119

Rop in enterohemorrhagic *Escherichia coli* enhances the general stress response via small RNAs

○Takeshi Shimizu¹, Shin Suzuki¹, Takashi Hamabata² (¹Dept. Mol. Infectiol., Grad. Sch. Med., Chiba Univ., ²Bacterial Infection, Reserach Inst., NCGHM)

W8-3/P2-137

E3 ligase SIAH1 mediates Streptolysin O ubiquitination for xenophagy against Group A Streptococcus

○Min Wu, Xin Hu, Junpei Iibushi, Atsuko Nozawa, Kazunori Murase, Takashi Nozawa, Ichiro Nakagawa (Dept. Microbiol., Grad. Sch. Med., Kyoto Univ.)

W8-4/P2-141

Periodontitis vaccine using three different bacterial outer membrane vesicles in canine model

○Ryoma Nakao¹, Takehiro Yamaguchi¹, Jun Saeki², Kimihiro Abe¹, Yukihiko Akeda¹, Tomoyo Nakamura³, Tomohiko Nishino³, Kazuyuki Ishihara⁴, Atsushi Jinno-Oue⁵, Satoshi Inoue¹ (¹Dept. Bacteriol. I, Natl. Inst. Infect. Dis., ²Dept. Ani. Sci., Teikyo Univ. Technol., ³Sch. Biosci. Biotechnol., Tokyo Univ. Technol., ⁴Dept. Microbiol., Tokyo Dent. Coll., ⁵Biores. Center, Gunma Univ.)

W8-5/P2-146

Recombinant MDP1 with post-translational modifications enhances IFN-gamma production by blood cells

○Yuriko Ozeki¹, Akihito Nishiyama¹, Yoshitaka Tateishi¹, Jun-ichi Maeyama², Sumiko Iho³, Toshiko Yamamoto², Daisuke Hayashi⁴, Saburo Yamamoto^{2,4}, Amina Kaboso Shaban¹, Sohkiichi Matsumoto¹ (¹Dept. Bact. Sch. Med., Niigata Univ., ²NIID, ³Pasteur Center, ⁴Japan BCG)

W8-6/P2-149

Metabolites from microbiota provide colonization resistance against *Candida albicans* in the gut

○Yoshiyuki Goto, Bonita McCuaig (Div. Mol. Immunol., MMRC., Chiba Univ.)

W8-7/P2-150

Diversity of Septu anti-phage defense system triggered by distinct phage components

○Kotaro Chihara¹, Kohei Kondo², Aa Haeruman Azam¹, Shinjiro Ojima¹, Yo Sugawara², Motoyuki Sugai², Yoshimasa Takahashi¹, Koichi Watashi¹, Kotaro Kiga¹ (¹Res. Cent. Drug Vaccine Dev., Natl. Inst. Infect. Dis., ²AMR Res. Cent., Natl. Inst. Infect. Dis.)

W8-8/P2-151

Transcription factor MafB regulates Mycobacterial infection in mice

○Haruka Hikichi^{1,2}, Hajime Nakamura¹, Shiho Omori¹, Shintaro Seto¹, Minako Hijikata¹, Naoto Keicho³ (¹Dept. Pathophysiology and Host Defense, RIT, JATA, ²Dept. Infection Research, Nagasaki Univ. Grad. Sch. Biomedical Sciences, ³The Research Inst. Tuberculosis, Japan Anti-Tuberculosis Association)

W9 Frontiers in bacterial research using diverse host organisms

Friday, August 9 15:10–17:10
Room 2 (Mid-sized Hall 1/2)

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

Co-sponsorship: NBRP Paramecium

W9-1

Investigation and analysis of novel virulence factors of *Legionella* using wild ciliates

○Torahiko Okubo, Hiroyuki Yamaguchi (Fac. Health Sci, Hokkaido Univ.)

W9-2

***Escherichia coli* genes responsible for growth in vegetable environments**

○Kazuya Ishikawa, Kazuyuki Furuta, Chikara Kaito (Grad. Sch. Med. Dent. Pharm., Okayama Univ.)

W9-3

Phyllogen: a unique bacterial effector, utilizing host proteasome in a ubiquitin independent manner

○Yugo Kitazawa¹, Nozomu Iwabuchi², Oki Matsumoto², Masato Suzuki², Momoka Sasano², Kensaku Maejima², Kenro Oshima³, Shigetou Namba², Yasuyuki Yamaji² (¹Grad Sch. Sci. Tech. Innov., Yamaguchi Univ., ²Grad. Sch. Agric. Life Sci., Tokyo Univ., ³Fac Biosci., Hosei Univ.)

W9-4

Silkworm models for *Francisella* infection

○Takashi Shimizu¹, Kenta Watanabe¹, Akihiko Uda², Masahisa Watarai¹ (¹Lab. Vet. Pub. Hlth., Jnt. Fac. Vet. Med., Yamaguchi Univ., ²Dept. Vet. Sci., NIID)

W9-5

The utility of silkworm models in the development of novel infectious disease therapeutics

○Hiroshi Hamamoto (Dept. Infect. Dis., Yamagata Univ. Fac. Med.)

W9-6

Evaluation of the virulence of live and killed *Streptococcus mutans* using a silkworm model

○Ryota Nomura (Dept. Pediatric Dentistry, Grad. Sch. Biomedical and Health Sciences, Hiroshima Univ.)

**W10 Selected from general presentations 5:
Antimicrobial agents and resistance**

Friday, August 9 15:10–17:10
Room 3 (Mid-sized Hall 1/2)

Conveners: Keigo Shibayama (Nagoya University)
Hitoshi Komatsuzawa (Hiroshima University)

W10-1/P2-185

Detection and genetic analysis of ESBL-producing *Escherichia coli* in retail chicken meat in Japan

○Shiori Yamamoto^{1,2}, Tatsuya Nakayama³, Yoshikazu Ishii⁴, Shizunobu Igimi⁵, Yumiko Okada² (¹Dept. Nutr. Diet., Kamakura Women's Univ., ²Div. Biomedical Food Res., Nat. Inst. Health Sci., ³Grad. Sch. Int. Sci. for Life, Hiroshima Univ., ⁴IDEC Inst., Hiroshima Univ., ⁵Res. Inst., Tokyo Univ. Agr.)

W10-2/P2-176

Glyceroglycolipid synthase overexpression leads to daptomycin resistance in Gram-positive bacteria

○Ryogo Yamamoto¹, Kazuya Ishikawa², Kazuyuki Furuta², Shin-ichi Miyoshi^{3,4}, Chikara Kaito² (¹Lab. Mol. Biol., Fac. Pharm., Okayama Univ., ²Lab. Mol. Biol., Grad. Sch. Med. Dent. Pharm., Okayama Univ., ³Grad. Sch. Med. Dent. Pharm., Okayama Univ., ⁴Collab. Res. Cent. Okayama Univ. Infect. Diseases. India)

W10-3/P2-167

Bioinformatic analysis of morphologies of antibiotic-resistant *Escherichia coli* cells

○Miki Ikebe^{1,2}, Kota Aoki¹, Mitsuko Hayashi-Nishino^{1,2,3}, Kunihiko Nishino^{1,2,4} (¹SANKEN, Osaka Univ., ²Grad. Sch. Pharm. Sci., Osaka Univ., ³AIRC-ISIR, Osaka Univ., ⁴CiDER, Osaka Univ.)

W10-4/P2-175

Fosfomycin resistance in *Escherichia coli* caused by functional deletion of *AckA* and *Pta*, *Fis*

○Hidetada Hirakawa¹, Ayako Takita¹, Yumika Sato¹, Yusuke Hashimoto¹, Suguru Hiramoto², Noriyasu Ohshima³, Yoji Minamishima³, Masami Murakami², Haruyoshi Tomita¹ (¹Dept. Bacteriol., Sch. Med., Gunma Univ., ²Dept. Clin. Lab. Med., Sch. Med., Gunma Univ., ³Dept. Biochem., Sch. Med., Gunma Univ.)

W10-5/P2-177

Phage Engineering for Overcoming Tmn Defense System

○Wakana Yamashita^{1,2}, Kotaro Chihara¹, Aa Haeruman Azam¹, Shinjiro Ojima¹, Azumi Tamura¹, Satoshi Tsuneda², Kotaro Kiga¹ (¹Res. Ctr. Drug Vaccine Dev., Natl. Inst. Infect. Dis., ²Dept. Life Sci. Med. Biosci., Grad. Sch. Adv. Sci. Eng., Waseda Univ.)

W10-6/P2-191

Proposal of Phage Therapy Based on Amino Acid Sequences of *Escherichia coli* Outer Membrane Protein C

○Kanata Nakatsuka¹, Riho Morikawa¹, Tomoyoshi Kaneko^{1,2}, Yoshifumi Aiba³, Kazuhiko Miyanaga^{2,3}, Longzhu Cui³, Yasunori Tanji², Satoshi Tsuneda^{1,2} (¹Dept. Life Sci. Med. Biosci., Sch. Adv. Sci. Eng., Waseda Univ., ²Phage Therapy Inst., Waseda Univ., ³Div. Bacteriol., Sch. Med., Jichi Med. Univ.)

W10-7/P2-160

Costruction of CRISPR-Cas13a antibacterial capsid for targeting Enterotoxigenic *Bacteroides fragilis*

○Mahmoud Arbaah, Thuy Nguyen, Yoshifumi Aiba, Shinya Watanabe, Kazuhiko Miyanaga, XinEe Tan, Kanate Thititanapakorn, Teppei Sasahara, Longzhu Cui (Div. Bacteriol., Sch. Med., Jichi Med. Univ.)