

28th. November

Room 31

Soil and terrestrial ecosystem

9:30 - 9:45 1_31_O-a01 **Bacterial communities in the mucilage of water shield (*Brasenia schreberi*)**

*Kazumori Mise (1), Makoto Abe (2), Hideomi Itoh (1), Kazutaka Takeshita (2)
(1) Bioprod. Res. Inst., AIST Hokkaido, (2) Fac. Biores. Sci., Akita Pref. Univ.

9:45 - 10:00 1_31_O-a02 **Elucidation of colonization pattern and plant growth promoting function of *Pseudomonas* sp. L105**

*Manami Maeda(1), Moeri Yoshimura(1), Kenji Sakai(1), Mugihito Oshiro(1), Yukihiro Tashiro(1)
(1) Graduate School of Bioresources and Environmental Sciences, Kyushu University

10:00 - 10:15 1_31_O-a03 **Large-scale collection of uncultured microbial genomes from environmental soils**

*Tatsuya Saeki(1), Taruho Endoh(1), Kazuma Kamata(1),
Tetsuro Kawano-Sugaya(1), Koji Arikawa(1), Masahito Hosokawa(1,2,3,4,5)

(1)bitBiome, Inc., (2)Department of Life Science and Medical Bioscience, Waseda University,
(3)Research Organization for Nano and Life Innovation, Waseda University,
(4)Institute for Advanced Research of Biosystem Dynamics,
Waseda Research Institute for Science and Engineering,
(5)Computational Bio Big-Data Open Innovation Laboratory, National Institute
of Advanced Industrial Science and Technology

10:15 - 10:30 **Break time**

10:30 - 10:45 1_31_O-a04 **Elucidation of the mechanism of phosphorus availability in soil by microorganisms and its application**

*Kerui Guo (1), Yuta Kojima (2), Takashi Kunito (2), Shigeto Otsuka (1), (3)
(1) Graduate School of Agricultural and Life Sciences, The University of Tokyo;
(2) Faculty of Science, Shinshu University; (3) CRIIM, The University of Tokyo

10:45 - 11:00 1_31_O-a05 **Exploring the differences between bacteria that utilize and do not utilize low molecular weight carbon sources amended to soil**

Mayuko Abe (1), Shunsuke Iwata (1), Kazumori Mise (2), *Shigeto Otsuka (1), (3)
(1) Graduate School of Agricultural and Life Sciences, The University of Tokyo;
(2) Bioproduction Research Institute, AIST; (3) CRIIM, The University of Tokyo

11:00 - 11:15 1_31_O-a06 **Unearthing electroautotrophic bacterial process driving in-situ treatment of Manganese(II)-containing mine drainage**

*Miho Watanabe(1), Sereyroith Tum(2), Taiki Katayama(2), Obey Gotore(1), Kunihiro Okano(1),
Shinji Matsumoto(2), Soichiro Sato(3), Tetsuo Yasutaka(2) and Naoyuki Miyata(1)

(1) Akita Prefectural University, (2) Research Institute for Geo-Resources and Environment,
Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology,
(3) Resources and Environment Department, Japan Groundwater Development Co., Ltd.

11:15 - 11:30 **Break time**

11:30

**Luncheon Seminar
11:30-12:30**

**On-chipBiotechnologies
AS ONE CORPORATION**

12:30

12:30 - 12:45

Break time • Let's move to Exhibition and Event Hall!

12:45

Poster session@Exhibition and Event Hall

12:45-13:45 First Half

13:45-14:15 Communication Time

14:15-15:15 Second Half

15:15

15:15 - 15:30

Break time • Let's move to Symposium!

15:30

Symposium

15:30 - 18:00

Current Trends in Plasmid Ecology

Masaki Shintani (Shizuoka University) • Kouhei Kishida (Tohoku University)

Cosponsor : Creative Base Creative Base on Food and Bio-industry, Shizuoka University

Shizuoka UnShizuoka University Graduate Student Auditing

1_31_S-p01 Unlocking the Secrets of Plasmid Ecology

*Masaki (Masa) Shintani(1,2,3,4)

(1)Graduate School of Integrated Science and Technology, Shizuoka University,

(2)Graduate School of Science and Technology, Shizuoka University,

(3)Research Institute of Green Science and Technology, Shizuoka University,

(4)Japan Collection of Microorganisms, RIKEN BioResource Research Center)

1_31_S-p02 The Mechanism of Bacterial Conjugation and Its Ecological Role

Kouhei Kishida

Grad. Sch. of Life Sciences, Tohoku Univ.

1_31_S-p03 Adaptation system to light environment via plasmid shuffling

*Keita Miyake (1), Tomonori Kashimoto (2), Chikahiro Matsumoto (2), Ryosuke Hasama (3), Mayuko Sato (3), Kiminori Toyooka (3), Yu Kanesaki (5), Wataru Iwasaki (1), Rei Narikawa (4)

(1) Graduate School of Frontier Sciences, The University of Tokyo, (2) Department of Biological Science, Faculty of Science, Shizuoka University, (3) RIKEN Center for Sustainable Resource Science,

(4) Department of Biological Sciences, Graduate School of Science, Tokyo Metropolitan University,

(5) Research Institute of Green Science and Technology, Shizuoka University

1_31_S-p04 Revisiting knowledge of AMR bacteria and plasmids

Masato SUZUKI

AMR Res. Ctr., Nat. Inst. Infect. Dis.

1_31_S-p05 Conjugative transfer of antibiotic resistance genes in activated sludge

*Mamoru Oshiki (1), Kosuke Higuchi (1), Kiko Ohara (1), Satoshi Okabe (1)

(1) Faculty of Engineering, Hokkaido University

18:00

18:00 - 18:15

Break time

18:15

Free meeting
18:15 - 19:45
Ecology, physiology and evolution of
CPR bacteria and DPANN archaea

Shingo Kato (RIKEN-BRC, JCM) · Shino Suzuki (JAXA)

1_31_W-p01 A proposal for symbiotic mechanism of a DPANN archaeon

*Shingo Kato
RIKEN-BRC, JCM

1_31_W-p02 Establishment of novel DPANN coculture systems from acidic hot springs

*Hiroyuki Sakai (1,2), Hiromi Omokawa (2), Koichi Nakamura (2), Kiyomasa Takami (2), Satoshi Nakagawa (3,4,5), Takuro Nunoura (6), Moriya Ohkuma (1), Norio Kurosawa (2)

(1) JCM, RIKEN BRC, (2) Fac. of Sci. and Eng., Soka Univ., (3) Grad. Sch. of Agri., Kyoto Univ., (4) ExCELLS, NINS, (5) X-star, JAMSTEC, (6) CeBN, JAMSTEC

1_31_W-p03 Protein glycosylation in DPANN archaea and their host archaea.

*Satoshi Nakagawa(1,2,3), Shigeru Shimamura(2), Yoshiaki Takamatsu(1), Hiroyuki Sakai(4), Shingo Kato(4), Shigeki Sawayama(1), Hirokazu Yagi(3,5), Maho Yagi(3,5), Saeko Yanaka(3,5), Koichi Kato(3,5), Ken Takai(2)

(1)Graduate School of Agriculture, Kyoto University, (2)X-star, Japan Agency for Marine-Earth Science and Technology, (3)ExCELLS, National Institute of Natural Sciences, (4)JCM, RIKEN BioResource Research Center, (5)Graduate School of Pharmaceutical Sciences, Nagoya City University

1_31_W-p04 Rock-hosted lifestyle of enigmatic DPANN archaea unveiled by genome-resolved meta-omics

*Yohey Suzuki(1)
(1) Grad. Sch. of Sci., Univ. Tokyo

1_31_W-p05 Exploring Ribosomal Evolutionary Scenarios through the Analysis of CPR Bacteria

*Kazuaki Amikura(1), Shun'ichi Ishii(2), Yoshihiro Shimizu(3), Shino Suzuki(1,4)
(1)JAXA/ISAS, (2)JAMSTEC X-STAR, (3)RIKEN BDR, (4)RIKEN CPR

19:45

28th. November

Room 41

Soil and terrestrial ecosystem

9:30 - 9:45 1_41_O-a01 **Attenuation of methane oxidation by nitrogen availability in Arctic tundra soils**

*Jaehyun Lee (1), Hojeong Kang (1)

School of Civil and Environmental Engineering, Yonsei University, Seoul, South Korea

9:45 - 10:00 1_41_O-a02 **Microbial succession during leaf degradation of the giant fern *Angiopteris lygodiiifolia* as model for microbial litter degradation in tropical/subtropical environment**

*Roland Kirschner (1), Yu-Wei Yeh (1), Yao-Moan Huang (2)

(1) School of Forestry and Resource Conservation, National Taiwan University, Taipei, 10617, Taiwan, (2) Taiwan Forestry Research Institute, Zhongzheng Distr., 10079 Taipei City, Taiwan

10:00 - 10:15 1_41_O-a03 **Cascade effects of forest thinning on microbial functional genes of various tree species and multiple decomposition time series: Insights from deadwood decomposition in tropical forest**

*David Anderson (1), Yu-Ting Wu (2)

(1) Department of Tropical Agriculture and International Cooperation (DTAIC), National Pingtung University of Science and Technology, Pingtung 91201, Taiwan, ROC, (2) Department of Forestry, National Pingtung University of Science and Technology, Pingtung 91201, Taiwan, ROC, (3) Department of Biomedical Science and Environmental Biology, Kaohsiung Medical University, Kaohsiung 80708, Taiwan, ROC

10:15 - 10:30 **Break time**

10:30 - 10:45 1_41_O-a04 **Biodegradation of PBAT mulch film by an elite fungal strain *Purpureocillium lilacinum* BA1S isolated from farmland soil**

Wei-Sung Tseng (1), Min-Jia Lee (1), Jin-An Wu (2), Shin-Liang Kuo(2), Sheng-Lung Chang(2), Shu-Juan Huang(2), *Chi-Te Liu (1) (3) (4)

(1)Institute of Biotechnology, National Taiwan University, Taiwan, (2)Material and Chemical Research Laboratories, Industrial Technology Research Institute, Taiwan, (3)Department of Agricultural Chemistry, National Taiwan University, Taiwan, (4)Agricultural Biotechnology Research Center, Academia Sinica, Taiwan

Aquatic ecosystems

10:45 - 11:00 1_41_O-a05 **Inconspicuous but indispensable: Phenanthrene biodegradation by *Sagittula* that represented a minor population in a phenanthrene-enriched marine bacterial consortium**

*Jiro F. Mori (1), Mayuko Abe (1), Go Kayama (1), Robert A. Kanaly (1)

(1) Grad. Sch. Nanobiosci., Yokohama City Univ.

11:00 - 11:15 1_41_O-a06 **Frequency and diversity of chemical interactions in marine invertebrate- derived bacteria**

*Dana Ulanova, Yuta Matsubara, Tetsuya Sakurai
Graduate School of Integrated Arts and Science, Kochi University

11:15 - 11:30 **Break time**

11:30 **Luncheon Seminar**
11:30-12:30

12:30 **Bioengineering Lab Co. Ltd. + PacBio Japan**

12:30 - 12:45 **Break time • Let's move to Exhibition and Event Hall!**

12:45 **Poster session@Exhibition and Event Hall**
12:45-13:45 First Half
13:45-14:15 Communication Time
14:15-15:15 Second Half

15:15 - 15:30 **Break time • Let's move to Symposium!**

15:30 **ASME Session Symposium**
15:30 - 18:00

15:30 - 16:20 **Biotechnology and applied microbiology**

1_41_S-p01 **Microbial Communities in Traditional Homes: Implications for Human Health and Well-Being**

*So Fujiyoshi (1)
(1) The IDEC Institute, Hiroshima University

1_41_S-p02 **Wastewater-based epidemiology using monitoring human pathogenic viruses and bacteria in municipal wastewater**

Joonhong Park(1), Jayeon Kim1, Subin Kim(1), Geuk-Tae Kim(2)
(1)Department of Civil and Environmental Engineering, Yonsei University, Shizuoka University,
(2)Department of Bio-environmental Science, Dongguk University

16:20 - 18:00 **Host-microbe and microbe-microbe interactions, plant associated microbial ecology**

1_41_S-p03 **Soil microbiota regulates pest prosperity**

*Hideomi Itoh (1)
1)Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology

1_41_S-p04 **Synergistic phenol degradation in association with microalgae and bacteria for enhanced carbon neutrality**

Minkee Cho (1), Jaai Kim (1), Do Hyeon Gwon (2), Soo Hong Kim (2),
Daeseung Kyung (3), *Hyokwan Bae (1)

(1) Department of Civil, Urban, Earth and Environmental Engineering,
Ulsan National Institute of Science and Technology,
(2) SGR Tech Co. Ltd.,

(3) School of Civil and Environmental Engineering, University of Ulsan

1_41_S-p05 **Tripartite successive response within the holobiont to Tripartite successive response within the holobiont to the daily temperature fluctuations**

Yunli Eric Hsieh (1), (2), (3), Chih-Ying Lu (4), (5), (6), Po-Yu Liu (7), Jia-Min Kao (8),
Sung-Yin Yang (9), Chien-Yi Wu (8), Jing-Wen Michelle Wong (8), *Shan-Hua Yang (8)

(1) Sys. Bio. Math. Mod., Max Planck Inst. Mol. Plant Physio., Germany,
(2) Biodi. Res. Cen., Academia Sinica, Taiwan, (3) Dep. Post-Bac. Med., NSYSU, Taiwan,
(4) Inst. Fish. Sci., NTU, Taiwan, (5) Dep. Aqu. Bio., NCYU, Taiwan

1_41_S-p06 **Lactate production and utilization by human commensal anaerobic bacteria and the mechanisms of species-specific mutualistic interactions**

*Shir-Ly Huang (1), Shi-Min Zhang (2), Duong Nguyet Anh (1)

(1) Institute of Microbiology and Immunology, National Yang Ming Chiao Tung University, Taipei,
Taiwan,

(2) Program in Molecular Medicine, National Yang Ming Chiao Tung University, Taipei, Taiwan

18:00

18:00 - 18:15

Break time

18:15

Free meeting
18:15 - 19:45
Hot Topics of Hot Microbiome

Yu Nakajima (JAMSTEC)

1_41_W-p01 **Introduction of Hot Microbiome**

*Yu Nakajima

Japan Agency of Marine-Earth Science and Technology (JAMSTEC)

1_41_W-p02 **History and recent progress of microbiological studies on Nakabusa hot springs, Nagano, Japan.**

*Shigeru Kawai

JAMSTEC

1_41_W-p03 **Examination of Fe-rich hot springs as an analogue site of Earth's early Ocean**

*Yuya Tsukamoto

JCM-BRC, RIKEN

1_41_W-p04 Coexistence system and invasion conditions of hot spring microbial ecosystems: a fusion of mathematics x experiment

*Daiki Kumakura (1,2)

(1) Grad, Sch. of Life Sci., Hokkaido Univ., (2) iTHEMS, RIKEN

1_41_W-p05 Uncultured DPANN archaea hidden in high-temperature hot springs

*Katsunori Yanagawa (1), Shingo Kato (2)

(1) University of Kitakyushu, (2) Riken JCM

19:45

28th. November

Room 43

Symbiosis, interaction, theory

9:30 - 9:45 1_43_O-a01 **Studying the role of teleost skin microbiome and its interactions with the environment and host skin using ex vivo skin explant model**

*Liang-Chun Wang, Yu-Che Chiu, Li-Hsuan Chen, Ru-Fang Siao

Department of Marine Biotechnology and Resources, National Sun Yat-sen University,
Kaohsiung, Taiwan

9:45 - 10:00 1_43_O-a02 **Mitigation of nitrous oxide (N₂O) emissions by soybean *Bradyrhizobium***

*Fernandes Siqueira Arthur(1), Manabu Itakura(1), Kaori Kakizaki(1), Tomoko Sakai(1),
Kiwamu Minamisawa(1)

(1)Graduate School of Life Sciences, Tohoku University

Genomics, molecular biology

10:00 - 10:15 1_43_O-a03 **Exploring Microbial Communities and Their Functional Potential in Biofloc Aquaculture**

*Meora Rajeev (1,2), Ilsuk Jung (1), Innam Kang (1), and Jang-Cheon Cho (1)

(1) Department of Biological Sciences, Inha University, Incheon, Republic of Korea,
(2) Institute for Specialized Teaching and Research, Inha University, Incheon, Republic of Korea

10:15 - 10:30 Break time

Phylogeny and taxonomy

10:30 - 10:45 1_43_O-a04 **Exploring a novel predatory bacterium with gliding motility isolated from the West Sea of Korea**

*Neak Muhammad (1,2), Forbes Avila (1,2), Song-Gun kim (1,2)

1 Biological Resource center/Korean collection for type culture, Korea Research Institute of
Bioscience and Biotechnology, jeonbuk 56212, Republic of Korea 2 University of Science and
Technology (UST), Daejeon 34113, Republic of Korea

Physiology, metabolism

10:45 - 11:00 1_43_O-a05 **Characterization of *Dehalococcoides mccartyi* strain NIT-OBY that dechlorinate 1,3-Dichloropropene to completely non-toxic Propene**

*Atsuhiko Yano (1), Yuta Fujii (2), Naoko Yoshida (1)

(1) Dept. Civil Eng. Nitech, (2) OBAYASHI CORP.

11:00 - 11:15 1_43_O-a06 **Characterization of Endozoicomonas in dddD gene-mediated dimethylsulfoniopropionate (DMSP) metabolisms using omics approaches**

*Sen-Lin Tang

Biodiversity Research Center, Academia Sinica, Taiwan

11:15 - 11:30 **Break time**

11:30

Lunch Break

12:30

12:30 - 12:45 **Break time · Let's move to Exhibition and Event Hall!**

12:45

Poster session@Exhibition and Event Hall

12:45-13:45 First Half

13:45-14:15 Communication Time

14:15-15:15 Second Half

15:15

15:15 - 15:30 **Break time · Let's move to Symposium!**

15:30

Symposium

15:30 - 18:00

Metabolite Analysis to Capture the "Linkage" of Microbial Ecosystems: Past and Future

Kenshi Suzuki (Univ. Tokyo) · Hidehiro Ishizawa (Univ. Hyogo)
Yuki SOMA (Kyushu Univ.) · Mikiyasu Sakanaka (Kyoto Univ.)

Supported by ACT-X "Environments and Biotechnology", JST Strategic Basic Research Programs
Cosponsor JSME, Soico-Microbiology Research Group

1_43_S-p01 **The assembly and functioning principle of microbial community**

*Kenshi Suzuki

Grad. Sch. of Agri. Life Sci., Univ. of Tokyo

1_43_S-p02 **Single-genome sequencing of environmental bacteria and phages to elucidate their functions**

*Yohei Nishikawa(1,2)

(1) CBBB-OIL, AIST-Waseda Univ., (2) Res. Org. Nano Life Innov., Waseda Univ.

1_43_S-p03 **Intestinal metabolites that support symbiosis between bifidobacteria and humans**

*Mikiyasu Sakanaka

Graduate School of Biostudies, Kyoto University

1_43_S-p04 **Comprehensive analysis of microbial metabolites and integration with genome data**

*Nobuyuki Okahashi
Grad. Sch of Info. Sci. Tech., Osaka Univ.

1_43_S-p05 **Unraveling microbial interspecies interactions within a synthetic plant microbiome**

*Hidehiro Ishizawa
Grad. Sch. of Eng., Univ. Hyogo

1_43_S-p06 **Synthetic biology approaches to microbial ecology**

*Yuki SOMA
Fac. Agric. Kyushu Univ.

1_43_S-p07 **On the evolvability and ecological impact of microbial metabolic hierarchies**

*Sotaro Takano(1,2)

18:00

1) Bioproduction Research Institute, AIST, (2) Research Center for Macromolecules and Biomaterials

18:00 - 18:15

Break time

18:15

Free meeting
18:15 - 19:45
JSME Envirus Meeting 2023
~Lightning Talks by Young Scientists~

Ryota Wagatsuma (Waseda University), Kento Tominaga (The University of Tokyo),
Michiko Takahashi (Kochi University), Yuto Chiba (Meiji University)

19:45

28th. November

Room 44

Extreme environment

9:30 - 9:45 1_44_O-a01 **Measuring microbial growth and metabolic processes at high hydrostatic pressure and temperature using a novel cultivation system**
*Yuki Morono(1), Fumiaki Mori(1), Akira Ijiri(1, 2), Tomoya Nishimura(1,3), Taisuke Wakamatsu(3), Nozomi Katsuki(3,4)
(1)KCC, JAMSTEC, (2)Kobe Univ., (3)Kochi Univ., (4)Univ. Tsukuba

9:45 - 10:00 1_44_O-a02 **Microbial Assembly and Adaptation in Deep Subseafloor Sediment**
*Tatsuhiko Hoshino(1), Hideyuki Doi(2), Takehiko Ito(3)
(1)KCC, JAMSTEC, (2)Grad. Sch. Inform, Kyoto Univ., (3)Sch. Life Sci. Tech, Tokyo Tech.

10:00 - 10:15 1_44_O-a03 **Impacts of groundwater pumping on subterranean microbial community in deep aquifer**
*Shinsei Iso(1), Yu Sato(2), Hiroyuki Kimura(1,3)
(1)Grad. Sch. Integ. Sci. Tech., Shizuoka Univ., (2)Yamaguchi Univ., (3)Res. Inst. Green Sci. Tech., Shizuoka Univ.

10:15 - 10:30 Break time

10:30 - 10:45 1_44_O-a04 **Comparative microbial community analysis of rock samples from Higashi-Aogashima Knoll Caldera**
*Satoshi Wakai(1), Shimpei Aikawa(2), Junji Torimoto(3), Jun-ichiro Ishibashi(4), Yutaro Takaya(3,5,6), Tatsuo Nozaki(3,7,8)
(1)X-star, JAMSTEC, (2)JIRCUS, (3)MRU, JAMSTEC, (4)KOBEC, Kobe Univ., (5)Dep. Sys. Innov., Univ. Tokyo, (6)Waseda Univ., (7)Front. Res. Cent. Ener. Resour., Univ. Tokyo, (8)Grad. Sch. Sci., Kobe Univ.

10:45 - 11:00 1_44_O-a05 **Meta-omics analysis for a methanogenic toluene-degrading microbial community enriched from a deep subsurface oil reservoir**
*Hiroki Kawamoto(1,2), Masaru K. Nobu(2,3), Masanori Kaneko(4), Satoshi Furota(4), Kenta Asahina(4), Satoshi Tamazawa(4), Konomi Suda(4), Haruo Maed(4), Susumu Sakata(4), Yoichi Kamagata(2), Daisuke Mayumi(4), Hideyuki Tamaki(2,5)
(1)Grad. Sch. Sci. Tech., Univ. Tsukuba, (2)Bioprod. Res. Inst., AIST, (3)X-star, JAMSTEC, (4)GSJ, AIST, (5) Fac. Life Environ. Sci., Univ. Tsukuba

11:00 - 11:15 1_44_O-a06 **Study on Microbial Community Structure in Concrete**
*Atsushi Teramoto(1), China Kuratomi(1)
(1)Graduate School of Advanced Science and Engineering, Hiroshima University

11:15 - 11:30 Break time

11:30

Lunch Break

12:30

12:30 - 12:45 Break time - Let's move to Exhibition and Event Hall!

12:45

Poster session@Exhibition and Event Hall

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15:15

15:15 - 15:30

Break time • Let's move to Symposium!

15:30

Break room

18:00

18:00 - 18:15

Break time

18:15

Break room

19:45

28th. November

Room 525354

Phylogeny and taxonomy

9:30 - 9:45 1_5_O-a01 **Isolation of Kuravirus-like phages from domestic wastewater treatment plants and their phylogenetic analysis**

*Yugo Fujii (1), Steven Batinovic (2), Kaho Motoyama (3), Yilin Wen (3), Tadashi Nittami (2)

(1) Graduate School of Engineering Science, Yokohama National University,
(2) Division of Materials Science and Chemical Engineering, Yokohama National University,
(3) Department of Chemistry, Chemical Engineering and Life Science, Yokohama National University

9:45 - 10:00 1_5_O-a02 **Characterization of *Vallitalea longa* isolated from marine sediment**

*Shiori Hirano (1), Koji Mori (2), Moriyuki Hamada (2), Ryo Matsumoto (3), Takeshi Kobayashi (1)

(1) Graduate School of Marine Science and Technology,
Tokyo University of Marine Science and Technology,
(2) NITE Biological Resource Center (NBRC), National Institute of Technology and Evaluation (NITE),
(3) Organization for the Strategic Coordination of Research and Intellectual Properties, Meiji University

10:00 - 10:15 1_5_O-a03 **Novel strict anaerobes isolated from marine sediments in Tokyo Bay**

*Takashi Minamitsuji (1), Shiori Hirano (1), Koji Mori (2), Moriyuki Hamada (2), Takeshi Kobayashi (1)

(1) Graduate School of Marine Science and Technology,
Tokyo University of Marine Science and Technology,
(2) NITE Biological Resource Center (NBRC), National Institute of Technology and Evaluation (NITE)

10:15 - 10:30 Break time

10:30 - 10:45 1_5_O-a04 **Isolation strategy for acid-tolerant/acidophilic comammox ~2. Obtaining comammox batch culture in inorganic medium~**

Sota Nakamura (1), Takashi Mitsuboshi (1), Tatsuo Sumino (2), Yuichi Suwa (1), Hirotsugu Fujitani (1)
) Department of Biological Sciences, Chuo University, (2) Department of Engineering, Toyo University

10:45 - 11:00 1_5_O-a05 ***Methylosinus endotrunci* sp. nov., a methane-oxidizing bacterium isolated from an internal tree trunk**

*Atsuya Endo (1), Mikitoshi Harada (1), Rina Shinjo (1), Fumika Oe (1), Takeshi Watanabe (1),
Daniel Epron (2), Susumu Asakawa (1)

(1) Grad. Sch. of Bioagri. Sci., Univ. Nagoya, (2) Grad. Sch. of Agri., Univ. Kyoto

11:00 - 11:15 1_5_O-a06 **Changes in the fatty acid synthesis pathway due to the acquisition of diatom predation ability in the labyrinthulean protists, *Aplanochytrium* spp.**

*Kotaro Hashimoto (1), Eri Yamada (2), Yohei Ishibashi (3), Makoto Ito (3), Hiroyuki Imai (2,4),
Daisuke Honda (2,4)

(1) Graduate School of Natural Science and Technology, Konan University,
(2) Department of Biology, Faculty of Science and Engineering, Konan University,
(3) Department of Bioscience and Biotechnology, Faculty of Agriculture, Kyushu University,
(4) Institute for Integrative Neurobiology, Konan University

11:15 - 11:30 Break time

11:30

Lunch Break

12:30

12:30 - 12:45

Break time · Let's move to Exhibition and Event Hall!

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15:15

15:15 - 15:30

Break time · Let's move to Symposium!

15:30

Symposium

15:30 - 18:00

Major Microbial Transitions: From the origin of life to the origin of the domains

Shawn E. McGlynn (Tokyo Inst. Technol)

1_5_S-p01 Unusual Carbon Fixation Pathways in the Serpentinized Ecosystem

*Shino Suzuki (1,2,3)

(1)ISAS/JAXA, (2)CPR/RIKEN, (3)X-star/JAMSTEC

1_5_S-p02 Directionality of CO₂ Fixation Pathways in the Presence of Other Carbon Sources

*Yoko Chiba (1,2)

(1)CSRS, RIKEN, (2)Fac. Life. Environ. Sci. Tsukuba Univ.

1_5_S-p03 Assimilation of CO₂ in Hyperthermophilic and Heterotrophic Bacteria Revealed by ¹³C Tracer-Based Metabolomics Using CE-MS

*Yuto Fukuyama(1), Shigeru Shimamura(2), Tomomi Sumida(1), Yoko Chiba(3), Hisato Chikaraishi(4), Haruyuki Atomi(5), Takuro Nunoura(1)

(1)CeBN, JAMSTEC, (2)X-star, JAMSTEC, (3)CSRS, RIKEN, (4)Inst. of Low Temp. Sci., Hokkaido Univ., (5)Grad. Sch. of Eng., Kyoto Univ.

1_5_S-p04 Adaptive Metabolic Evolution: Converging on Ecological Redox Niches

*Mayumi Seto

Faculty of Science, Nara Women's University

18:00

18:00 - 18:15

Break time

18:15

Workshop
18:15 - 19:45
**Exploring, Observing,
and Appreciating Microbial Motility**

Daisuke Nakane (The University of Electro-Communications), Yoshitomo Kikuchi (AIST)

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

**1_5_W-p01 Swimming ability and flagellar motility of the colonial volvocine alga
*Pleodorina starrii***

*Azusa Kage (1), Kohei Takahashi (2), Hisayoshi Nozaki (2),
Tetsuya Higashiyama (2), Shoji A. Baba (3), Takayuki Nishizaka (1)

(1) Department of Physics, Gakushuin University, (2) Department of Biological Sciences, Graduate
School of Science, The University of Tokyo, (3) Department of Biology, Ochanomizu University

**1_5_W-p02 Bacterial characteristics and survival strategies of non-*Helicobacter*
pylori *Helicobacter* species infecting the human stomach**

*Emiko Rimbara

Bacteriology II, National Institute of Infectious Diseases

**1_5_W-p03 Swimming motility of helical bacteria reconstructed in a minimal
genome bacterium JCVI-syn3B**

*Hana Kiyama (1), Shigeyuki Kakizawa (2), Daichi Takahashi (1), Makoto Miyata (1,3)

(1) Grad. Sch. of Sci., Osaka Metropolitan Univ., (2) Bioproduction Res. inst., AIST,
(3) OCARINA, Osaka Metropolitan Univ.

1_5_W-p04 Can “behavioral ecology” be applied to microorganisms?

*Hiroyuki Shimoji

Faculty of Agriculture, University of the Ryukyus

19:45

29th. November

Room 31

Symbiosis, interaction, theory

9:00 - 9:15 2_31_O-a01 **Estimation of microbial community structure using real data**

Kei Tokita

Grad. Sch. of Info., Nagoya Univ.

9:15 - 9:30 2_31_O-a02 **Modeling of antibiotic-induced perturbation in gut microbiome**

*Rie Maskawa(1), Lena Takayasu(2), Hideki Takayasu(1), Wataru Suda(2), Misako Takayasu(1)

(1) School of Computing, Tokyo Institute of Technology,

(2) Center for Integrative Medical Sciences, RIKEN

9:30 - 9:45 2_31_O-a03 **Finding syntrophic relationships in microbial communities by statistical correlation of abundance in diverse environments**

Shigeru Kawai (1), Shawn E. McGlynn (2), *Katsumi Matsuura (2,3)

(1) JAMSTEC, (2) ELSI, Tokyo Institute of Technology, (3) Inst. Early Metabolic Evolution

9:45 - 10:00 2_31_O-a04 **Advantages of Microbial Complex Systems in Microbial Methanation**

*Kohei Ikeura (1), Makoto Kawano (2), Minako Terao (2), Kota Ichikawa (3),

Hiroyuki Hutamata (3), (4), Hiroyuki Kimura (1), (4)

(1) Graduate School of Integrated Science and Technology, Department of Science, Geosciences Course, Shizuoka University, (2) Yokogawa Electric Corporation,

(3) Graduate School of Integrated Science and Technology, Department of Engineering, Applied Chemistry and Biochemical Engineering Course, Shizuoka University,

(4) Research Institute of Green Science and Technology, Shizuoka University

10:00 - 10:15 2_31_O-a05 **Construction and analysis of efficient propionate degrading process in microbial fuel cells**

*Kota Ichikawa (1), Hiroyuki Kimura (1,2,3), Yosuke Tashiro (1,2), Hiroyuki Futamata (1,2,3)

(1) Grad. Sch. Integr.Sci.Technol., Univ Shizuoka, (2) Grad. Sch. Sci. Technol., Univ. Shizuoka,

(3) Research Institute of Green Science and Technology, Shizuoka University

10:15 - 10:30 **Break time**

10:30 - 10:45 2_31_O-a06 **Factors that influence predatory activity in activated sludge microbial community**

*Yuya Sato (1), Tomohiro Inaba (1), Hiroshi Habe (1)

(1) EMRI, AIST

10:45 - 11:00 2_31_O-a07 **Indigenous soybean bradyrhizobial flora and novel *nosZ*-possessing *Bradyrhizobium* species in Japan**

*Manabu Itakura (1), Kaori Kakizaki (1), Tomoko Sakai (1),

Fernandes Siqueira Arthur (1), Sawa Hara (2), Kiwamu Minamisawa (1)

(1) Grad. Sch. of Life Sci., Tohoku Univ., (2) NARO

11:00 - 11:15 2_31_O-a08 **Effect of rhizobial inoculation on soil bacterial communities**

*Hiromi Kato(1), Yuichi Aoki(2), Manabu Itakura(1), Masaru Bamba(1), Rota Wagai(3),
Shusei Sato(1), Kiwamu Minamisawa(1)

(1)Graduate School of Life Sciences, Tohoku University,
(2)Tohoku Medical Megabank Organization, Tohoku University, (3)NARO

11:15 - 11:30 2_31_O-a09 **Agricultural management and soil origin rather than plant genetic trait shapes the soybean rhizosphere bacterial and fungal communities**

*Dominic V. A. Agyekum (1), Khondoker. M. G. Dastogeer (2), Shin Okazaki (1,3)

(1) Utd. Grad. Sch. of Agric., Tokyo Univ. of Agric. and Tech.,
(2) Dept. of Plant Path., Bangladesh Agric. Univ.,
(3) Inst. of Glob. Innov. Res., Tokyo Univ. of Agric. and Tech.

11:30 - 11:45 **Break time**

11:45

Branch meeting

11:45 - 12:45

Career Pathways & Networking Roundtable for Young Scientists

JSME Committee for the Promotion of Diversity and Career Development

12:45

12:45 - 13:00 **Break time - Let's move to Exhibition and Event Hall!**

13:00

Poster session@Exhibition and Event Hall

13:00 - 14:00	First Half	13:00 - 14:30	High School Student presentation
14:00 - 14:15	Communication Time	15:00 - 15:15	High school student award ceremony
14:15 - 15:15	Second Half		

15:15

15:15 - 15:30 **Break time - Let's move to oral session!**

15:30 - 15:45 2_31_O-p01 **Mechanism of microbiota organization in rhizosphere synthetic community**

*Momoka Yorinaga (1), Mahiro Toda (1), Tomoki Nishioka (2), Takuya Suzaki (1),
Hideyuki Tamaki (2), Norio Takeshita (1)

(1) Univ. Tsukuba, (2) AIST

15:45 - 16:00 2_31_O-p02 **Identification and characterization of *N*-acylhomoserine lactone-degrading bacteria in bark compost**

*Tomohiro Morohoshi (1), Toshiyuki Nikata (1), Naotake Konno (2), Tomohiro Suzuki (3)

(1) Dept. Fundam. Eng., Utsunomiya Univ., (2) Dept. Appl. Biol. Chem., Utsunomiya Univ.,
(3) Cent. Biosci. Res. Edu., Utsunomiya Univ.

16:00 - 16:15 2_31_O-p03 **Bacterial Community Analysis of Water Yam (*Dioscorea alata* L.) Under Different Water Condition**

*Shunta Kihara(1), Kosuke Yamamoto(2), Yuh Shiwa(2), Hidehiko Kikuno(3),
Minenosuke Matsutani(4), Hironobu Shiwachi(5)

- (1) Department of International Agricultural Development, Graduate School of International Food and Agricultural Studies, Tokyo University of Agriculture,
(2) Department of Molecular Microbiology, Tokyo University of Agriculture,
(3) Miyako Subtropical Training and Research Farm, Tokyo University of Agriculture,
(4) NODAI Genome Research Center, Tokyo University of Agriculture,
(5) Department of International Agricultural Development, Tokyo university of Agriculture

16:15 - 16:30 2_31_O-p04 **Pseudo-vertical transmission of bacterial symbiont via feces in an ant**

*Akari Nishina(1), Rio Yamashita(1), Yusuke Ishizuka(1), Yu Matsuura(2),
Hideomi Itoh(3), Yoshitomo Kikuchi(3), Hiroyuki Shimoji(4)

- (1) Sch. of Bio. Env. Sci., Kwansei Gakuin Univ, (2) TBRC, Univ. of Ryukyus,
(3) BPRI, AIST, (4) Agri. Univ. Ryukyus

16:30 - 16:45 2_31_O-p05 **Identification of the toxin producing bacterium from the marine sponge genus *Mycale*, and analysis of its transmission mode**

*Masaki Fujita (1), Yuji Ise (2), Masashi Fukuoka (3), Nobutada Kimura (4), Kazutoshi Yoshitake (5),
Akihiro Ninomiya (5), Shigeki Matsunaga (5), Ryuichi Sakai (1), Takada Kentaro(6)

- (1) Grad. Sch.I of Fish. Sci., Hokkaido Univ., (2) The Kuroshio Bio. Res. Inst.,
(3) Grad. Sch. of Sci., Nagoya Univ., (4) Bioprod. Res. Inst., AIST,
(5) Grad. Sch. of Agri. Sci., The Univ. Tokyo, (6) Sch. of Mar. Biosci., Kitasato Univ.

16:45 - 17:00

Break time

Interface and Biofilm

17:00 - 17:15 2_31_O-p06 **Spatiotemporal virulence gene expression on three-dimensionally organized oral biofilms**

*Dongyeop Kim (1), Hyun Koo (2)

- (1) Department of Preventive Dentistry, School of Dentistry and Institute of Oral Bioscience, Jeonbuk National University, (2) Biofilm Research Labs, Center for Innovation & Precision Dentistry, School of Dental Medicine, University of Pennsylvania

17:15 - 17:30 2_31_O-p07 **Screening for biofilm inhibitors from microorganisms isolated from Antarctic snow petrel nesting sites**

Hayato Kinoshita (1), Towa Hamamoto (1), Siddiqa Ayesha (1),
Shohei Hayashi (2), *Hiroyuki Azakami (1, 3)

- (1) Fac. Agri, Yamaguchi Univ., (2) Fac. Life Environ. Sci., Shimane Univ.,
(3) Res. Center Thermotolerant Microb. Resouc., Yamaguchi Univ.

17:30 - 17:45 2_31_O-p08 **Seeking the factors causing an inconstant biodegradation of biodegradable plastics under the experimental system with seawater and marine sediment**

*Tetsuhiro Watano (1)(5), Takafumi Kamitani (1), Miki Takii (1), Takamasa Miura (2),
Kimihito Itoga (3), Shogo Uematsu (4), Kazuhiro Umezawa (5), Yukinori Tani (5)

- (1) Shizuoka Environment and Hygiene Institute, (2) NITE·NBRC, (3) Yahata Bussan Co., Ltd.,
(4) Uematsu Technical Office, (5) University of Shizuoka

17:45 - 18:00

18:00 - 18:30

Let's move to Reception!

18:30

Reception@Mein Schloss

20:15

29th. November

Room 41

Young Scientist Multidisciplinary

9:00 - 9:15 2_41_O-a01 **Tera base hot spring metagenomes illuminate novel and diverse microbiomes in the Japanese subsurface**

*Yu Sato (1), Yu Nakajima (2), Satoshi Ohkubo (3), Miho Hirai (2), Kenji Okano (4), Hiroyuki Kimura (5), Kohsuke Honda (6,7), Masaru K. Nobu (2), Hideyuki Tamaki (8), Ken Takai (2)

(1) ORI, Yamaguchi Univ., (2) X-Star, JAMSTEC (3) Grad. Sch. of Life Sci., Tohoku Univ., (4) Dep. of Life Sci. and Tech., Fac. of Chem., Materials and Bioeng., Kansai Univ., (5) RIGST, Shizuoka Univ., (6) ICBiotech, Osaka Univ., (7) OTIR, Osaka Univ., (8) Bioprod. Res. Inst., AIST

9:15 - 9:30 2_41_O-a02 **Molecular-Level Insights into Arsenic Biotransformation in Extremophilic Microorganisms (*Cyanidiales*)**

Yen-Lin Cho (1)*, Yu-Hsien Chen (1), Nhu Anh Thi Than (1), Yu-Ting Liu (1,2)

(1) Department of Soil and Environmental Sciences, National Chung Hsing University, Taiwan,
(2) Innovation and Development Center of Sustainable Agriculture, National Chung Hsing University, Taiwan

9:30 - 9:45 2_41_O-a03 **Cultivation and genomic insights into marine bacteria of the SAR202 clade**

*Yeonjung Lim (1),(2), Ji-Hui Seo (1), Stephen J. Giovannoni (3), Innam Kang (2), and Jang-Cheon Cho (1)

(1) Department of Biological Sciences and Bioengineering, Inha University, Incheon 22212, Republic of Korea,
(2) Center for Molecular and Cell Biology, Inha University, Incheon 22212, Republic of Korea,
(3) Department of Microbiology, Oregon State University, Corvallis, OR 97331, USA

9:45 - 10:00 2_41_O-a04 **N₂O-dependent anoxic growth of methanotrophs**

*Awala Samuel Imisi (1), Gwak Joo-Han (1), and Sung-Keun Rhee (1)

(1) Department of Biological Sciences and Biotechnology, Chungbuk National University, 1 Chungdae-ro, Seowon-Gu, Cheongju 28644, Republic of Korea

10:00 - 10:15 2_41_O-a05 **The tripartite interaction of *Arabidopsis thaliana*, *Pseudomonas aeruginosa*, and *Colletotrichum tofieldiae* is governed by nutrient condition**

*Yuniar Devi Utami (1), Kei Hiruma (1)

(1) Grad. Sch. of Arts Sci., Univ. Tokyo

10:15 - 10:30

Break time

10:30 - 10:45 2_41_O-a06 **Persistence of antibiotic resistance from animal agricultural effluents to surface water revealed by genome-centric metagenomics**

*Jin Ju Kim (1), Hoon Je Seong (1,2), Timothy A. Johnson (3),
Chang-Jun Cha (1), Woo Jun Sul (1), Jong-Chan Chae (4)

(1) Department of Systems Biotechnology, Chung-Ang University, Anseong, Republic of Korea,
(2) Korean Medicine Data Division, Korea Institute of Oriental Medicine, Daejeon, Republic of Korea,
(3) Department of Animal Sciences, Purdue University, West Lafayette, United States,
(4) Division of Biotechnology, Jeonbuk National University, Iksan, Republic of Korea

10:45 - 11:00 2_41_O-a07 **Discerning the dissemination mechanisms of antibiotic resistance genes of ESBL-producing *E. coli* through whole genome sequencing**

Hokyung Song (1), Sunwoo Lee (2), Yujin Jeong (2), Tatsuya Unno (1)

(1) Department of Biological Sciences and Biotechnology, Chungbuk National University, Seowon-Gu, Cheongju 28644, Republic of Korea, (2) Faculty of Biotechnology, College of Applied Life Sciences, Jeju National University, Jeju, 63243, Korea

11:00 - 11:15 2_41_O-a08 **Medium chain length Polyhydroxyalkanoate(mcl-PHA) production using organic acid by engineered *Pseudomonas* species**

*Jong-Min Jeon(1), Kyeong-Keun Oh(2), Jeong-Jun Yoon(1)

(1)Green & Sustainable Materials R&D Department, Korea Institute of Industrial Technology(KITECH), Cheonan 31056, Republic of Korea, (2)Department of Chemical Engineering, Dankook University, Yongin 16890, Republic of Korea

11:15 - 11:30 2_41_O-a09 **Urease-producing bacteria immobilization by using 3D bioprinting technology to remove urea and heavy metals from water**

*Pei-Hsun Wu (1), Cheng-Chun Shih (1), Chang-Ping Yu (1)

(1) Grad. Inst. Environ. Eng., NTU, Taiwan

11:30 - 11:45 **Break time**

11:45

Branch meeting

11:45 - 12:45

Discussion on outreach activity of JSME in diversified society

Educational Outreach Working Group

12:45

12:45 - 13:00 **Break time · Let's move to Exhibition and Event Hall!**

13:00

Poster session@Exhibition and Event Hall

13:00 - 14:00 **First Half**

13:00 - 14:30 **High School Student presentation**

14:00 - 14:15 **Communication Time**

15:00 - 15:15 **High school student award ceremony**

14:15 - 15:15 **Second Half**

15:15

15:15 - 15:30 **Break time · Let's move to oral session!**

Young Scientist Multidisciplinary

- 15:30 - 15:45 2_41_O-p01 **Biofilm dispersion factors induce membrane vesicle production in *Pseudomonas aeruginosa***
*Mizuki Kanno (1), Hiroyuki Futamata (1),(2),(3), Yosuke Tashiro (1),(2)
(1) Grad. Sch. of Sci. Tech., Univ. Shizuoka, (2) Res. Inst. Green Sci. Tech., Univ. Shizuoka,
(3) Grad. Sch. of Intgr. Sci. Tech., Univ. Shizuoka
- 15:45 - 16:00 2_41_O-p02 **Biphasic Interactions in Coexisting Microorganisms: Contrasting Dynamics in Dormant and Active States**
*Soo Bin Kim (1), Eun Sun Lyou (1), So Hee Park (1), Jinsook Kim (1) and Tae Kwon Lee (1)
(1) Department of Environmental and Energy Engineering, Yonsei University, Wonju, Republic of Korea
- 16:00 - 16:15 2_41_O-p03 **Species-specific mutualistic metabolites cross-feeding between lactic acid probiotics and *Veillonella dispar***
*Shi-Min Zhang¹, Jia-He Hung², Tran Ngoc Yen³, Shir-Ly Huang³
(1) Program in Molecular Medicine, National Yang Ming Chiao Tung University, Taipei, Taiwan
(2) School of Medicine, National Yang Ming Chiao Tung University, Taipei, Taiwan
(3) Institute of Microbiology and Immunology, National Yang Ming Chiao Tung University, Taipei, Taiwan
- 16:15 - 16:30 2_41_O-p04 **Symbiotic bacteria break through narrow passage by flagellar wrapping**
*Aoba Yoshioka(1), Tetsuo Kan(2), Kazutaka Takeshita(3), Hirofumi Wada(4), Yoshitomo Kikuchi(5), Daisuke Nakane(1)
(1)Eng. Sci., UEC., (2)Mech. and Int. Sys. Eng., UEC., (3)Fac. Biores. Sci. Akita Pref Univ., (4)Phys. Sci. Ritsumeikan Univ., (5)BPRI, AIST.
- 16:30 - 16:45 2_41_O-p05 **The effects of the deficiency of lipopolysaccharides structure for *Pseudomonas nitroreducens* TX1 grown in ethoxylated surfactants**
*Po-Chun Tsai (1), Chen-Yen Wu (2), Tran Ngoc Thang (3), Ting-Huan Shih (4), Shir-Ly Huang (5)
(1) Institute of Microbiology and Immunology, National Yang Ming Chiao Tung University, Taipei, Taiwan
- 16:45 - 17:00 Break time
- 17:00 - 17:15 2_41_O-p06 **In-vitro, in-vivo, and in-silico assessments of antiviral capabilities and mechanisms of selected embryophyte and macrophyte herbs**
*Diaiti Zure (1), Hsion-Wen David Kuo (1), Aleksandra Drizo (2)
(1) Department of Environmental Science and Engineering,
(2) Sustainability Science and Management Program, Tunghai University, Taiwan
- 17:15 - 17:30 2_41_O-p07 **Minimal Media Inference by Metabolic Network Expansion**
*Hayate Hirai(1,2), Harrison B. Smith(2,3), Shawn Erin McGlynn(2,3,4)
(1) Dept. of Life Science and Technology, Tokyo Institute of Technology,
(2) Earth-Life Science Institute, Tokyo Institute of Technology,
(3) Blue Marble Space Institute of Science, (4) Center for Sustainable Resource Science, RIKEN

17:30 - 17:45 2_41_O-p08 **Expanding the eco-collection of methane-oxidizing bacterial isolates from rice roots**

*Fumika OE (1), Rina Shinjo (1), Sachiko Masuda (2), Arisa Shibata (2),
Ken Shirasu (2), Shun Hashimoto (3), Hisayuki Mitsui (3),
Shusei Sato (3), Takeshi Watanabe (1), Susumu Asakawa (1)

(1) Graduate School of Bioagricultural Sciences, Nagoya University, (2) Center for Sustainable Resource Science, RIKEN, (3) Graduate School of Life Sciences, Tohoku University

17:45 - 18:00 2_41_O-p09 **Unveiling the potential biological control agents for root-knot nematode management in serpentine soils**

*Kai-wen Cheng (1), Hiran. A. Ariyawansa (1), Jiue-in Yang (2)

Dept of Plant Pathology and Microbiology, National Taiwan Univ (1),
Dept of Nematology, Univ of California, Riverside (2)

18:00 - 18:30

Let's move to Reception!

18:30

Reception@Mein Schloss

20:15

29th. November

Room 43

Rising to the challenge: Young scientists in JSME

9:00 - 9:15 2_43_O-a01 **Combined molecular and stable isotopic analyses reveal the microbial nitrogen cycle in the deep-sea sediments**

*Kanae Kobayashi (1), Akiko Makabe (1), Masahito Shigemitsu (2), Satoshi Hiraoka (3),
Miwako Tsuda (4), Masayuki Miyazaki (1), Tomomi Sumida (3),
Hidetaka Nomaki (1), Takuro Nunoura (3), Shinsuke Kawagucci (2)

(1) X-star, JAMSTEC, (2) RIGC, JAMSTEC, (3) MRU, JAMSTEC, (4) SIP-PT, JAMSTEC

9:15 - 9:30 2_43_O-a02 **Cancel**

9:30 - 9:45 2_43_O-a03 **Characterization of the Global Ecological Traits of Marine *Chloroflexi* Using Metagenomic Big Data**

*Chunqi Jiang (1), Yosuke Nishimura (2), Susumu Yoshizawa (1)

(1) Atmosphere and Ocean Research Institute, The University of Tokyo, (2) Research Centre for Bioscience and Nanoscience, Japan Agency for Marine-Earth Science and Technology

9:45 - 10:00 2_43_O-a04 **Alterations of symbiotic gut microbes by urbanization**

*Hiroaki Masuoka (1), Yuki Mizuno (2), Mihoko Kibe (2), Satoko Kosaka (2),
Sae Sekiya (2), Kazumi Natsuhara (3), Kazuhiro Hirayama (4), Nounhak Inthavong (5),
Sengchanh Kounnavong (5), Shinsuke Tomita (6), Masahiro Umezaki (2), Wataru Suda (1)

(1) IMS, RIKEN, (2) Grad. Sch. of Med., Univ. Tokyo, (3) Fac. of Nurse, Toho Univ,
(4) Grad. Sch. of Agri., Univ. Tokyo, (5) Lao TPHI, (6) Grad. Sch. of Env., Nagoya Univ.

10:00 - 10:15 2_43_O-a05 **Genomic adaptations to temperature extremes: a case study of methanogenesis**

*Paula Prondzinsky (1, 2), Sakae Toyoda (3), Shawn McGlynn (2)

(1) Institute for Extra-cutting-edge Science and Technology Avant-garde Research (X-star), Japan Agency for Marine-Earth Science and Technology, (2) Earth-Life Science Institute, Tokyo Institute of Technology, (3) Department of Chemical Science and Engineering, Tokyo Institute of Technology

10:15 - 10:30 Break time

10:30 - 10:45 2_43_O-a06 **Water flow navigates the long journey of surface-associated bacteria living in hot springs**

*Naoki Uemura (1), Naoya Chiba (2), Masatada Tamakoshi (2), Daisuke Nakane (1)

(1) Dept. Eng. Sci., UEC, (2) Dept. Mol. Biol., TUPLS

10:45 - 11:00 2_43_O-a07 **Analysis of the relationship between soil power generation capacity, bacterial communities, and soil properties in Japan**

*Zihan Yue(1),Kun Yuan (1),Mayuko Seki(1),Michiko Yasuda(1),Shin-ichiro Agake (1),
Keisuke Matsumura(1),Naohisa Okita(1),Wako Naoi (1),Katsuhiko Naoi(1),
Shin Okazaki(1),Haruo Tanaka (1),Soh Sugihara(1),Naoko Ohkama-Ohtsu(1)

(1) Tokyo University of Agriculture and Technology

11:00 - 11:15 2_43_O-a08 **Evaluation of Purified Bacterial Exopolysaccharide as Biostimulant Agent Improving Plant Growth Under Abiotic Stress**

*Aoudi Yosra (1), Shin-ichiro Agake (2), Safiullah Habibi (3),
Michiko Yasuda (4), Naoko Ohkama-Ohtsu (5)

(1) United Graduate School of Agriculture, Tokyo University of Agriculture and Technology,
(2) Institute of Global Innovation Research,
(3) Institute of Agriculture, Tokyo University of Agriculture and Technology

11:15 - 11:30 2_43_O-a09 **Exploring a novel glycine biosynthesis pathway in *Thermodesulfatator indicus*, a thermophilic sulfate-reducing bacterium using isotopomer analysis.**

*Tomoyuki Wakashima(1), (2), Yuto Fukuyama(3), Shigeru Shimamura(4),
Nao Tsunematsu(1), Takuro Nunoura(3), Yoko Chiba(1), (5)

(1)CSRS, RIKEN, (2)Grad. Sch. of Sci. Tech., Univ. Tsukuba, (3)CeBN, JAMSTEC,
(4)SUGAR, JAMSTEC, (5)Inst. of Life. Environ. Sci., Univ. Tsukuba

11:30 - 11:45

Break time

11:45

Break room

12:45

12:45 - 13:00

Break time • Let's move to Exhibition and Event Hall!

13:00

Poster session@Exhibition and Event Hall

13:00 - 14:00 First Half

13:00 - 14:30 High School Student presentation

14:00 - 14:15 Communication Time

15:00 - 15:15 High school student award ceremony

14:15 - 15:15 Second Half

15:15

15:15 - 15:30

Break time • Let's move to oral session!

Rising to the challenge: Young scientists in JSME

15:30 - 15:45 2_43_O-p01 **Analysis of a two-component system of *Ideonella sakaiensis* expressed during PET degradation**

*Arora Nandakumar(1), Akiyo Takayama(1), Min Fey Chek (1), Shosuke Yoshida(1)

(1)Graduate School of Biological Sciences, Nara Institute of Science and Technology (NAIST)

15:45 - 16:00 2_43_O-p02 **Accumulation of nitrogen oxide intermediates during aerobic denitrification modulates the evolutionary potential of microbial populations**

Kohei Takahashi(1,2), Mamoru Oshiki(3), Chujin Ruan(2), Kana Morinaga(4), Masanori Toyofuku(5,6), Nobuhiko Nomura(5,6), and David R. Johnson(2,7)

(1)Graduate School of Sciences and Technologies, University of Tsukuba, (2)Department of Environmental Microbiology, Swiss Federal Institute of Aquatic Science and Technology (Eawag), (3)Division of Environmental Engineering, Faculty of Engineering, Hokkaido University, (4)Bioproduction Research Institute, National Institute of Advanced and Industrial Science and Technology (AIST), (5)Faculty of Life and Environmental Sciences, University of Tsukuba, Tsukuba, (6)Microbiology Research Center for Sustainability, University of Tsukuba, Tsukuba, (7)Institute of Ecology and Evolution, University of Bern

16:00 - 16:15 2_43_O-p03 **Ecology and physiology of endonuclear alphaproteobacterial symbionts (order *Holosporales*) infecting termite gut protists.**

*Kong Suet Kei (1), Katsura Igai (1), Kazuki Takahashi (1), Satoshi Murooka (1), Hirokazu Kuwahara (1), Tomoyuki Sato (2), Moriya Ohkuma (2), Yuichi Hongoh (1,2)

(1) School of Life Science and Technology, Tokyo Institute of Technology, (2) Japan Collection of Microorganisms, RIKEN BioResource Center

16:15 - 16:30 2_43_O-p04 **Discovery and evolution of obligately-intracellular parasites belonging to the class Clostridia**

*Kazuki Takahashi (1), Hirokazu Kuwahara (1), Yutaro Horikawa (1), Kazuki Izawa (1), Daiki Kato (1), Tatsuya Inagaki (1), Masahiro Yuki (2), Moriya Ohkuma (2), Yuichi Hongoh (1), (2)

(1) Graduate School of Life Science and Technology, Tokyo Institute of Technology, (2) Japan Collection of Microorganisms, RIKEN BioResource Research Center

16:30 - 16:45 2_43_O-p05 **Bacterial Community Structures and Antibiotic-Resistant Genes of Chlorinated Reclaimed Water Discharged from Municipal Wastewater Treatment Plants (WWTPs) to the Urban Rivers**

*Mohomed Shayan(1), Yuki Nakaya(1), Hisashi Satoh(1)

(1)Department of Environmental Engineering, Graduate School of Engineering, Hokkaido University, Japan

16:45 - 17:00 Break time

Others

17:00 - 17:15 2_43_O-p06 **Post-treatment of microbial fuel cell (MFC)-treated effluent by zeolite adsorption and microbial photosynthesis**

*Que Nguyen Ho (1), Toshiyuki Yagi (1), Ikeyu Kyo (1), Naoko Yoshida (1)

(1) Department of Civil Engineering, Nagoya Institute of Technology, Nagoya, Japan

17:15 - 17:45 2_43_O-p07 **Biotechnology of *Dehalococcoides* species**

*Lorenz Adrian (1,2)

(1) Helmholtz Centre for Environmental Research – UFZ, Leipzig, Germany, (2) Technische Universität Berlin, Institute for Biotechnology, Berlin, Germany

17:45 - 18:00 2_43_O-p08 **Unveiling electric syntrophy in methanogenic systems: Anaerobic sulfide oxidation to S⁰ coupled with CO₂-reducing methanogenesis**

Heejung Jung (1), Hyeonjung Yu (2), *Changsoo Lee (3, 4)

(1) Department of Chemical Engineering, Columbia University, USA, (2) Geologic Environment Research Division, Korea Institute of Geoscience and Mineral Resources, Republic of Korea, (3) Department of Civil, Urban, Earth, and Environmental Engineering, Ulsan National Institute of Science and Technology, Republic of Korea, (4) Graduate School of Carbon Neutrality, Ulsan National Institute of Science and Technology, Republic of Korea

18:00 - 18:30

Let's move to Reception!

18:30

Reception@Mein Schloss

20:15

29th. November

Room 44

Environmental health and epidemiology

- 9:00 - 9:15 2_44_O-a01 **Prevalence of antibiotic resistance genes in East Antarctic seabirds**
*Takahiro Segawa(1), Akinori Takahashi(2), Nobuo Kokubun(2), Satoshi Ishii(3)
(1)Univ. Yamanashi, (2)Nat. Inst. Polar Res., (3)Univ. Minnesota
- 9:15 - 9:30 2_44_O-a02 **Wastewater-based epidemiology using monitoring SARS-CoV2 virus in municipal wastewater treatment plants to explore the determinants, occurrence and distribution of COVID-19 in wastewater collection areas**
Subin Kim*(1), Jayun Kim(1), Myeonho Park(1), Sangkyun Kim(1), Seongsoo Park(2), Keugtae Kim(2), Eung-Roh Park(3), Joonhong Park(1)
(1)Department of Civil and Environmental Engineering, Yonsei University, (2)Department of Biological and Environmental Science, Dongguk University, (3)Water Supply and Sewerage Research Division, Environmental Infrastructure Research Department, National Institute of Environmental Research, South Korea

Genomics, molecular biology

- 9:30 - 9:45 2_44_O-a03 **Analysis of bacterial and fungal community structures attached to human scalp skin and hair**
*Kyoka Matsuo(1), Kenji Sakai(1), Yukihiro Tashiro(1)
(1)Grad. Sch. Bioresour. Bioenviron. Sci., Kyushu Univ.
- 9:45 - 10:00 2_44_O-a04 **Unprecedented phylogenetic diversity of the carbon monoxide-utilizing prokaryotes and their divergent carbon monoxide metabolisms in the human gut microbiome**
*Yuka A Katayama(1), Ryoma Kamikawa(1), Takashi Yoshida(1)
(1)Grad. Sch. Agri., Kyoto Univ.
- 10:00 - 10:15 2_44_O-a05 **Transposition route and host range of a new mobile DNA element group SE**
*Hirokazu Yano(1,2), Desmila Idola(1), Hiroshi Mori(3), Yuji Nagata(1), Lisa Nonaka(4)
(1)Tohoku Univ., (2)Nat. Inst. Infectious Diseases, (3)Nat. Insti. Genetics, (4)Shokei Univ.

Other

- 10:30 - 10:45 2_44_O-a06 **Extracellular electron mediating function observed in proteinaceous materials and their common structure**
*Arata Katayama(1,2), Tingting Hu(1,2), Shigeki Hara(1,2), Yoshiko Yamada(1,2), Takuya Kasai(2,3), Akimura Asanuma(4), Masanao Watanabe(4), Tsunenori Kameda(5)
(1)InFuS, Nagoya Univ., (2)IMaSS, Nagoya Univ., (3)Present address: AIST, (4)Kowa Research Laboratories for Advanced Science, (5)Silk Materials Res. G., NARO

10:45 - 11:00 2_44_O-a07 **Microorganisms involved in increasing power generation in plant microbial fuel cells (PMFC)**
 Takamichi Nakamura(1), Jun-ichi Ohtsuka(2), Katsuya Tasaki(3), Midori Onozato(4), Hiroyuki Akita(1)
 (1)Tech. Res. Insti., Hazama Ando Corp., (2)Green Display Co., Ltd.,
 (3)Nisoul Co., Ltd., (4)Innov. Dept., Hazama Ando Corp.

11:00 - 11:15 2_44_O-a08 **Microbial community analysis of organic waste treatment environments and artificially controlled culture systems**
 *Hajime Morimoto(1), Suno Nishiyama(1)
 (1)Komham Inc.

11:15 - 11:30 2_44_O-a09 **Study on sterilization of the skin resident bacteria using microplasma**
 *Taoto Kato(1), Jaroslav Kristof(2)(3), Kazuo Shimizu(1)(2)(3)
 (1)Grad. Sch. of Integ. Sci. Tech., Shizuoka Univ., (2)Organization for Innovation and Social Collaboration, Shizuoka Univ.,(3)Hamamatsu University School of Medicine Preeminent Medical Photonics Education & Research Center

11:30 - 11:45	Break time						
11:45	Break room						
12:45							
12:45 - 13:00	Break time • Let's move to Exhibition and Event Hall!						
13:00	Poster session@Exhibition and Event Hall <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">13:00 - 14:00 First Half</td> <td style="width: 50%;">13:00 - 14:30 High School Student presentation</td> </tr> <tr> <td>14:00 - 14:15 Communication Time</td> <td>15:00 - 15:15 High school student award ceremony</td> </tr> <tr> <td>14:15 - 15:15 Second Half</td> <td></td> </tr> </table>	13:00 - 14:00 First Half	13:00 - 14:30 High School Student presentation	14:00 - 14:15 Communication Time	15:00 - 15:15 High school student award ceremony	14:15 - 15:15 Second Half	
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14:00 - 14:15 Communication Time		15:00 - 15:15 High school student award ceremony					
14:15 - 15:15 Second Half							
15:15							
15:15 - 15:30	Break time • Let's move to oral session!						
Others							

15:30 - 15:45 2_44_O-p01 **Integrated Effects of Single and Co-inoculation of Plant Growth-Promoting Rhizobacteria isolates from Afghanistan on Their Physiological Characteristics in vitro and Their Influence on Rice Growth**
 *Safiullah Habibi (1), Tadashi Yokoyama (2), Mohammad Daud Haidari (3), Akihiro Torii (4), Michiko Yasuda (5), Naoko Ohkama-Ohtsu (6)
 (1) Fac. of Agri., Tokyo Univ. Agri. Tech., (2) Inst. of Glob. Innov. Res., Tokyo Univ. Agri. Tech.,
 (3) Fac. Of Agri., Kabul Univ., (4) Fac. of Agri., Tokyo Univ. Agri. Tech.,
 (5) Fac. of Agri., Tokyo Univ. Agri. Tech., (6) Inst. of Agri., Tokyo Univ. Agri. Tech.

Virus

- 15:45 - 16:00 2_44_O-p02 **Transcriptome of virophage reflects its infection to APMV**
Jingjie Chen (1), Hiroyuki Hikida (1), Hiroyuki Ogata (1)
(1)Bioinformatics Center, Institute for Chemical Research, Univ. Kyoto
- 16:00 - 16:15 2_44_O-p03 **Exploring the diversity and dynamics of giant viruses in a deep lake through long-read metagenomics**
*Liwen Zhang(1), Lingjie Meng(2), Yue Fang(1), Hiroyuki Ogata(2), Yusuke Okazaki(2)
1)Graduate School of Science, Kyoto University; 2) Institute for Chemical Research, Kyoto University
- 16:15 - 16:30 2_44_O-p04 **Discovery of Endogenous Giant Virus in Arbuscular Mycorrhizal Fungi: Implications of a dsDNA Virus Infection in Fungi**
Hongda Zhao, Ruixuan Zhang, Junyi Wu, Lingjie Meng, Yusuke Okazaki, Hiroyuki Hikida, Hiroyuki Ogata
Bioinformatics Center, Institute for Chemical Research, Kyoto University
- 16:30 - 16:45 2_44_O-p05 **Effects of expression of medusavirus histone H1 on host cell nucleus and infection cycle**
*Kana Yamamoto(1), Masaharu Takemura(1)
(1)Grad. Sch. Sci., Tokyo Univ. of Sci.
- 16:45 - 17:00 **Break time**
- 17:00 - 17:15 2_44_O-p06 **Effect of DNA methyltransferase encoded by *Helicobacter pylori* on the infection efficiency of bacteriophage KHP30**
*Michiko Takahashi(1), Satoshi Hiraoka(2), Rikako Shibagaki(1), Hiromichi Maeda(1), Satoru Seo(2), Shigenobu Matsuzaki(3)
(1)Kochi Med. Sch., Kochi Univ., (2)CeBN, JAMSTEC, (3)Fac. Health Sci., Kochi Gakuen Univ.
- 17:15 - 17:30 2_44_O-p07 **Exploring Giant Virus Isolation and Seasonal Patterns in Brackish River Coastal Regions**
*Motohiro Akashi(1), Masaharu Takemura(2), Seiichi Suzuki(1)
(1)Fac. Sci. Tech., Seikei Univ, (2)Lab. Bio., Inst. Arts Sci., Tokyo Univ. of Sci.
- 17:30 - 17:45 2_44_O-p08 **Virus resistance of a bloom-forming raphidophyte *Heterosigma akashi***
*Haruna Hiromoto(1), Daichi Morimoto(1), Yusaku Funaoka(1), Michiko Takahashi(1), Keizo Nagasaki(1)
(1)Kochi Univ.
- 17:45 - 18:00 2_44_O-p09 **Interaction between mimiviruses highlights a barrier for genetic exchanges between viruses**
*Hiroyuki Hikida(1), Hiroyuki Ogata(1)
(1)Inst. Chem. Res., Kyoto Univ.
- 18:00 - 18:30 **Let's move to Reception!**

18:30

Reception@Mein Schloss

20:15

29th. November

Room 525354

Physiology, metabolism

9:00 - 9:15 2_5_O-a01 **Iodate reduction by marine aerobic bacteria**

*Ken Kine (1), Seigo Amachi (1)
(1) Grad. Sch. of Hort., Univ. Chiba

9:15 - 9:30 2_5_O-a02 **Identification of bromate-reducing enzyme in *Shewanella* sp. M-Br**

*Natsuki Takahashi (1), Seigo Amachi (1)
(1) Grad. Sch. of Hort., Univ. Chiba

9:30 - 9:45 2_5_O-a03 **Isolation of a novel dissimilatory vanadate [V(V)]-reducing bacterium**

*Riyu Sakakura (1), Shigeki Yamamura (2), Seigo Amachi (1)
(1) Grad. Sch. of Hort., Univ. Chiba, (2) Natl. Inst. for Environ. Stud.

9:45 - 10:00 2_5_O-a04 **Comprehensive analysis of proteins expressed by the fermentative bacterium *Pelosinus* sp. strain IPA-1 in the presence of arsenate**

*Haruka Matsuo (1), Shigeki Yamamura (2), Masashi Kuroda (3), Seigo Amachi (4)
(1) Fac. of Hort., Univ. Chiba, (2) Natl. Inst. for Environ. Stud.,
(3) Fac. of Soc. and Environ. Stud., Univ. Tokoha, (4) Grad. Sch. of Hort., Univ. Chiba

10:00 - 10:15 2_5_O-a05 **Different gene expression between high and low temperatures of a nitrite-oxidizing bacterium *Nitrobacter* sp. strain CN101**

*Yuki Shiraishi (1), Yuichi Suwa (1), Hirotsugu Fujitani (1)
(1) Department of Biological Sciences, Chuo University

10:15 - 10:30 **Break time**

10:30 - 10:45 2_5_O-a06 **Light-driven iron oxidation by an enriched *Chloroflexota* phototroph**

*Jackson M. Tsuji (1,2), Teruhiko Kashiwabara (3), Masaru K. Nobu (1), Hiroyuki Imachi (1),
Tomohiro Watanabe (2), Manabu Fukui (2)
(1) X-star, JAMSTEC, (2) Inst. of Low Temp. Sci., Hokkaido Univ.,
(3) Res. Inst. for Marine Resources Utilization, JAMSTEC

10:45 - 11:00 2_5_O-a07 **Plant growth regulation by bacterial volatile organic compounds**

Jun Murata, Tsukiho Osawa, Hiromi Toyonaga, Mika Nobuhara, Shoko Mori, and Takehiro Watanabe
Suntory Foundation for Life Sciences

Material cycling Part 1

11:00 - 11:15 2_5_O-a08 **Characterization of chemoautotrophic bacteria that grow by dissimilatory phosphite oxidation**

*Takafumi Yamanaka (1), Cao Thi Thuy Linh (1), Akio Kuroda (1), Ryuichi Hirota (1)
(1) Grad. Sch. of Int. Sci for Life, Univ. Hiroshima

11:15 - 11:30 2_5_O-a09 **High pressure cultivation of a methanogenic archaeon reveals its ecophysiological trait in deep subsurface environments**

*Taiki Katayama (1), Hideyoshi Yoshioka (1)
(1) AIST

11:30 - 11:45 Break time

11:45

Branch meeting

11:45 - 12:45

**Viruses always go beyond our imagination!
Let's enjoy this together**

Environmen Environmental Virus Research Community

12:45

Supported by Post-Koch Ecology

12:45 - 13:00 Break time • Let's move to Exhibition and Event Hall!

13:00

Poster session@Exhibition and Event Hall

13:00 - 14:00 First Half

13:00 - 14:30 High School Student presentation

14:00 - 14:15 Communication Time

15:00 - 15:15 High school student award ceremony

14:15 - 15:15 Second Half

15:15

15:15 - 15:30 Break time • Let's move to oral session!

Methodology, informatics and theory

15:30 - 15:45 2_5_O-p01 **The development of a high-throughput CAS assay**

*Chiho Murakami (1), Arowu Tanaka (1), Yuichiro Sato (1), Kinjiro Morimoto (1)
(1) Fac. Phar. Yasuda-Woman's Univ.

Aquatic ecosystems

15:45 - 16:00 2_5_O-p02 **Seasonal abundance variation of groundwater microbiome dominated by phylum *Patescibacteria***

*Yuki Nishimura (1), Kimiho Omae (1), Kento Tominaga (1), Sachiko Masuda (2), Arisa Shibata (1), Sachiko Masuda (2), Ken Shirasu (2), Wataru Iwasaki (1, 3, 4)
(1) Grad. Sch. of Front. Sci., Univ. Tokyo, (2) CSRS, RIKEN,
(3) AORI, Univ. Tokyo, (4) CRIIM, Univ. Tokyo

16:00 - 16:15 2_5_O-p03 **Methane metabolism and methanotrophic bacterial community in the hypolimnion of the north basin of Lake Biwa**

*Tohru Ikeya (1), Masayuki Itoh (2), Ken'ichi Osaka (3)
(1) CER, Kyoto Univ., (2) Sch. Hum. Sci. & Env., Univ. Hyogo, (3) Sch. Env. Sci. Univ. Shiga Pref.

16:15 - 16:30 2_5_O-p04 **Diversity and physiological functions of sub-cuticular bacteria in intertidal brittle stars**

*Keisuke Kawano (1), Hiroyuki Morimura (2), Yoshitomo Kikuchi (2), Shigeki Sawayama (1), Satoshi Nakagawa (1,3,4)

(1) Grad. Sch. of Agri., Kyoto University, (2) AIST, (3) JAMSTEC, (4) ExCELLS

16:30 - 16:45 2_5_O-p05 **Characterization of the marine bacterial isolate that passes through 0.1- μ m pore-sized filters**

*Haruo Yamaguchi (1), Kazumasa Yamada (2)

(1) Kochi Univ., (2) Fukui Pref. Univ.

16:45 - 17:00 **Break time**

17:00 - 17:15 2_5_O-p06 **Investigation of the ecological impact of diatom-predatory protists, *Aplanochytrium* spp. (Labyrinthulea), in the marine environment**

*Tomi Morimoto (1), Yoko Hamamoto (1), Takanori Shono (2), Mayumi Ueda (3), Akira Kuwata (4), Yukiko Taniuchi (4), Hiroshi Kuroda (4), Kazuaki Tadokoro (4), Yuki Tsujimura (3), Toshiki Miyaoka (1), Taichi Mogi (2), Ryosuke Nakai (5), Satoshi Nagai (6), Tomoko Matsumoto (7), Jun Kikuchi (7), Daiske Honda (2,8)

(1) Graduate School of Natural Science, Konan University, (2) Faculty of Science and Engineering, Konan University, (3) Research Institute Environment, Agriculture and Fisheries Osaka Prefecture, (4) Fisheries Resources Institute, (5) National Institute of Advanced Industrial Science and Technology, (6) Fisheries Technology Institute, (7) Institute of Physical and Chemical Research, (8) Konan University Institute for Integrative Neurobiology

17:15 - 17:30 2_5_O-p07 **Bacteria from skin mucus of fish can be used for biocontrol to suppress bacterial cold water disease of Ayu, *Plecoglossus altivelis***

*Mio Takeuchi (1), Takumi Tsujio (2), Taiki Katayama (3), Hiroaki Suetake (4), Erina Nagata (2)

(1) Biomedical Research Institute, AIST, (2) Faculty of Agriculture, Kindai University, (3) Institute for Geo-resources and Environments, AIST, (4) Faculty of Marine Science and Technology, Fukui Prefectural University

17:30 - 17:45 2_5_O-p08 **Towards an understanding of the ecology and evolution of giant viruses in mesopelagic layer**

*Wenwen Liu (1), Yusuke Okazaki (1), Hisashi Endo (1), Hiroyuki Ogata (1)

(1) Institute for Chemical Research, Kyoto University

Material cycling Part 2

17:45 - 18:00 2_5_O-p09 **Development of biological treatment process to convert nitrogen components in industrial wastewater into NH_4^+**

*Tomo Aoyagi(1), Akihiko Terada(2), Tomoyuki Hori(1)

(1) Environ Manag Res Inst, AIST, (2) Dep of Chem Eng, TUAT

18:00 - 18:30 **Let's move to Reception!**

18:30

Reception@Mein Schloss

20:15

30th. November

Room 31

9:30 - 12:00

Symposium

9:30 - 12:00

Cool Earth via Microbes –Research Frontiers in Mitigation of N₂O Emission–

Tsubasa Ohbayashi (Institute for Agro-Environmental Sciences, NARO)
Satoshi Ohkubo (Grad. Sch. of Life Sci., Tohoku Univ.)

Cosponsor: Cool Earth via dSOIL (Moonshot project)

3_31_S-a01 Diversity study of bacterial nitrifiers in agricultural soils and development of novel nitrification inhibitors

*Tsubasa Ohbayashi, Yong Wang, Luciano Nobuhiro Aoyagi,
Shintaro Hara, Kanako Tago, Masahito Hayatsu

Institute for Agro-Environmental Sciences, NARO

3_31_S-a02 Hybrid formation of nitrous oxide (N₂O) gas by nitrite reductase

*Mamoru Oshiki (1), Akito Kobayashi (1), Yuki Nakaya (1), Shohei Hattori (2),
Sakae Toyoda (3), Hisashi Satoh (1), Satoshi Okabe (1)

(1) Faculty of Engineering, Hokkaido University, (2) ICIER, Nanjing University,
(3) School of Materials and Chemical Technology, Tokyo Institute of Technology

3_31_S-a03 Reduction of N₂O emission using N₂O-reducing ability of soybean bradyrhizobia

*Manabu Itakura

Grad. Sch. of Life Sci., Tohoku Univ.

3_31_S-a04 Are complete denitrifying clade II *nosZ* N₂O-reducing bacteria promising candidates as N₂O sinks in wastewater bioreactors?

Akihiko Terada

Inst. Eng., Tokyo Univ. Agr. & Technol.

3_31_S-a05 Toward Mechanistic Understanding of Aerobic N₂O Reduction

Satoshi Ishii (1)

(1) BioTech. Inst., Univ. Minnesota

3_31_S-a06 Characterization of N₂O-reducing microbes based on single soil aggregate analysis

*Satoshi Mitsunobu(1), Rota Wagai(2), Hiroaki Shimada(3), Hiromi Kato(4), Koji Ito(2),
Kiwamu Minamisawa(4)

(1)Ehime Univ., (2)NARO, (3)Obihiro Univ. Agri. Vete. Med., (4)Tohoku Univ.

3_31_S-a07 **Exploration of N₂O-reducing soil microbes by Citizen Science**

*Satoshi Ohkubo(1), Yuichi Aoki(2, 3), Hiromi Kato(1), Shusei Sato(1),
Masaru Bamba(1), Miho Kikuchi(1), Kiwamu Minamisawa(1)

(1) Grad. Sch. of Life Sci., Tohoku Univ.,

(2) Tohoku Medical Megabank Organization, Tohoku University,

(3) Graduate School of Information Sciences, Tohoku University

12:00

Lunch time

Let's move to the Main Hall

13:00

~ Main Hall ~

Award Ceremony 13:00-13:40

Award Lecture 13:50-15:50

Closing Ceremony 15:50-16:00

16:00

30th. November

Room 41

9:30 - 12:00

ASME Session Symposium

9:30 - 12:00

9:30 - 10:45

Microbial ecology in marine, fresh water, and terrestrial systems

3_41_S-a01 High-resolution microbial eco-genomics in deep freshwater lakes

*Yusuke Okazaki (1)

(1) Institute for Chemical Research, Kyoto University

3_41_S-a02 Assessing Ecological Disturbances in Groundwater Systems: Insights from Microbial Community Structure and Phenotypic Profiling

Jin-Kyung Hong(1), Soo Bin Kim(1), Eun Sun Lyou(1), Jaeuk Youn(1), and Tae Kwon Lee(1)*

(1) Department of Environmental and Energy Engineering, Yonsei University,
Wonju 26493, Republic of Korea

3_41_S-a03 Community assembly processes of deadwood mycobiome in a tropical forest revealed by long-read third generation sequencing

*Yu-Ting Wu(1,2), Witoon Purahong(3), Li Ji(3,4)

(1) Department of Forestry, National Pingtung University
of Science and Technology, Pingtung

10:45 - 12:00

Microbial ecology in extreme environment and geomicrobiology

3_41_S-a04 Alteration of Soil Microbiome and Nitrogen Cycle by Earthworm Invasion in the Hardwood Forest of Northern Minnesota, USA

*Jeonghwan Jang (1), Satoshi Ishii (2)

(1) Division of Biotechnology and Advanced Institute of Environment and Bioscience,
Jeonbuk National University, Iksan, Jeonbuk 54596, Republic of Korea,
(2) BioTechnology Institute and Department of Soil, Water, and Climate,
University of Minnesota, St. Paul, MN 55108, USA

3_41_S-a05 How did life and photosynthesis co-evolve?

Arisa Nishihara (1), Yusuke Tsukatani (2), Chihiro Azai (3), *Masaru K. Nobu (4)

(1) Department of Life Science and Biotechnology, The National Institute of Advanced Industrial Science and Technology, (2) Biogeochemistry Research Center, Japan Agency for Marine-Earth Science and Technology, (3) Department of Life Sciences, Chuo University,
(4) Institute for Extra-Cutting-Edge Science and Technology Avant-Garde Research, Japan Agency for Marine-Earth Science and Technology

3_41_S-a06 **Using Nernst-Monod model to evaluate Shewanella decolorationis NTOU1 electrochemical kinetics: different precultural and carbon-felt-electrode -pretreatment methods**

*Shiue-Lin Li(1)

(1) Department of Environmental Science and Engineering, Tunghai University

12:00

Lunch time

Let's move to the Main Hall

13:00

~ Main Hall ~

Award Ceremony 13:00-13:40

Award Lecture 13:50-15:50

Closing Ceremony 15:50-16:00

16:00

30th. November

Room 43

9:30 - 12:00

Symposium

9:30 - 12:00

Recent advances in cultivation, metagenomics, and taxonomic code (SeqCode)

Yoichi Kamagata(AIST), Takuro Nunoura (JAMSTEC)

3_43_S-a01 **Recent advances in metagenomics, uncultured microbes and taxonomic code (SeqCode)**

*Yoichi Kamagata
AIST

3_43_S-a02 **Names of uncultivated microorganisms under International Code of Nomenclature of Prokaryotes**

*Takashi Itoh
RIKEN-BRC, JCM

3_43_S-a03 **What is SeqCode?**

*Takuro Nunoura
CeBN, JAMSTEC

3_43_S-a04 **Can we trust MAGs in public databases?**

*Yosuke Nishimura
CeBN, JAMSTEC

3_43_S-a05 **Unveiling the story: From the isolation of *Candidatus* phylum Atribacteria to the proposal and validation of phylum Atribacterota**

*Taiki Katayama
AIST

3_43_S-a06 **Troubles in naming the first validated DPANN archaeon**

*Shingo Kato
RIKEN-BRC, JCM

3_43_S-a07 **Can genomic information provide clues for culturing uncharted microorganisms?**

*Masaru K. Nobu
X-star, JAMSTEC

12:00

Lunch time

Let's move to the Main Hall

13:00

~ Main Hall ~

Award Ceremony 13:00-13:40

Award Lecture 13:50-15:50

Closing Ceremony 15:50-16:00

16:00

30th. November

Room 44

9:30 - 12:00

Break room

12:00

Lunch time

Let's move to the Main Hall

13:00

~ Main Hall ~

Award Ceremony 13:00-13:40

Award Lecture 13:50-15:50

Closing Ceremony 15:50-16:00

16:00

30th. November

Room 525354

9:30 - 12:00

Symposium

9:30 - 12:00

Electromicrobiology opens the door for future: Exploration, Synthetic genomics, and Application

Shun'ichi Ishii (JAMSTEC)

3_5_S-a01 What to do for microbial electrochemistry to be useful for our society

*Kazuya Watanabe

Tokyo University of Pharmacy and Life Sciences

3_5_S-a02 Comprehensive analysis of electroactive microorganisms inhabiting iron-rich chimneys in the bay of Satsuma-Iwo Jima

*Shun'ichi Ishii (1), Tatsuhiko Hoshino (1), Shino Suzuki (1, 2, 3), Shoichi Kiyokawa (4)

(1) JAMSTEC, X-STAR, (2) JAXA, ISAS, (3) RIKEN, CPR, (4) Kyushu Univ.

3_5_S-a03 Exploration for electro-microbial ecosystems in deep-sea hydrothermal fields

*Masahiro Yamamoto (1,2), Yoshifumi Kawada (3), Yoshihiro Takaki (1), Kosuke Shimoniida (1,2), Mariko Shitara (1,2), Akiko Tanizaki (1), Hiroyuki Kashima (1), Miho Hirai (1), Yutaro Takaya (4), Tatsuo Nozaki (3), Takafumi Kasaya (3), Ken Takai (1)

(1) X-star, JAMSTEC, (2) Grad. Sch. of Nanobioscience, Yokohama City Univ., (3) MRU, JAMSTEC, (4) Sch. of Eng., Univ. Tokyo

3_5_S-a04 Exploration of Novel Current-producing Microorganisms

*Kengo Inoue

Department of Biochemistry and Applied Biosciences, Faculty of Agriculture, University of Miyazaki

3_5_S-a05 Biotechnologies for carbon dioxide utilization using electric energy

*Souichiro Kato

BPRI, AIST

12:00

Lunch time

Let's move to the Main Hall

13:00

~ Main Hall ~

Award Ceremony 13:00-13:40

Award Lecture 13:50-15:50

Closing Ceremony 15:50-16:00

16:00