

The 36th JSME & The 13th ASME Program

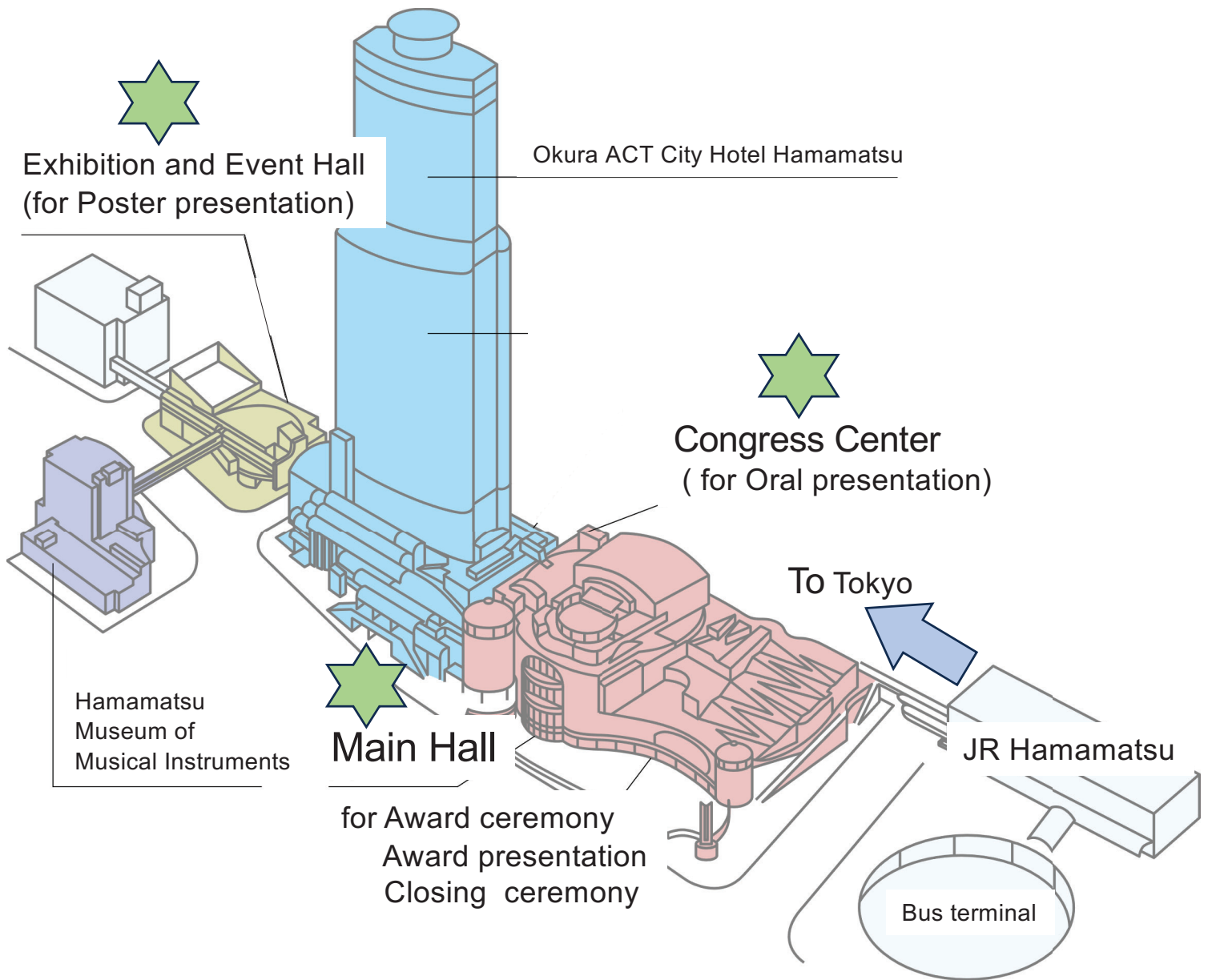


Date 28th - 30th November 2023

Venue Hamamatsu, Japan
Hamamatsu ACT Congress Center

Organizer : Japanese Society of Microbial Ecology

Co-organizer : Research Institute of Green Science and Technology, Shizuoka University



Reception (Mein Schloss)

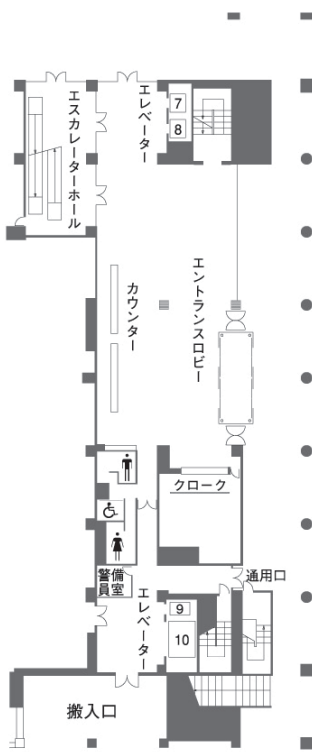


JR
Hamamatsu St.

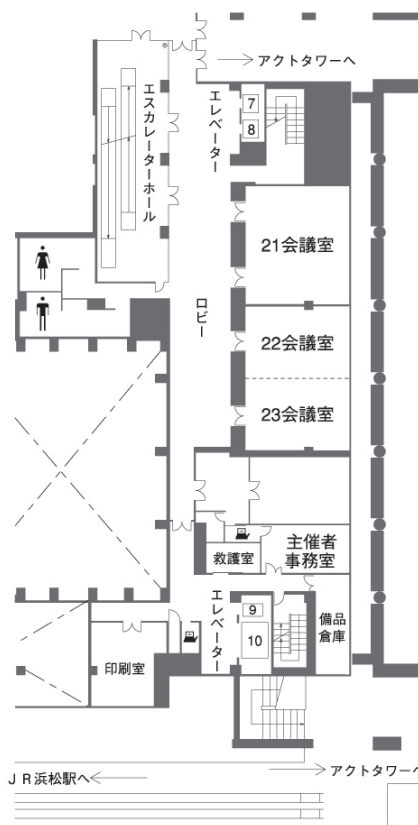
Exhibition Hall
(for poster presentation)

Congress Center
(for oral presentation)

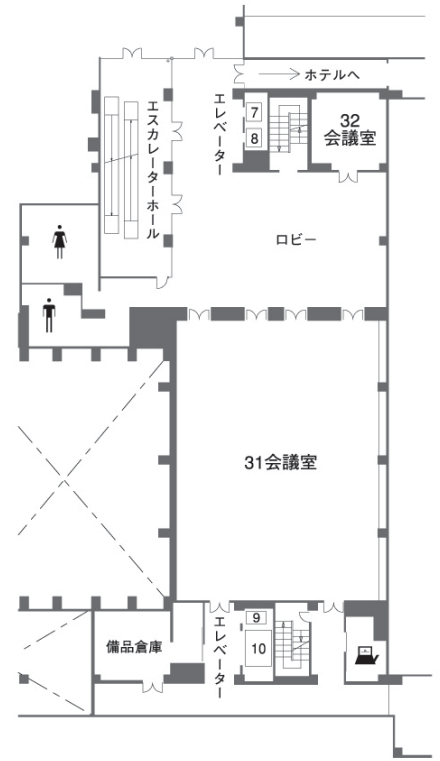
Main Hall
(for Award reception, Award presentation
Closing reception)



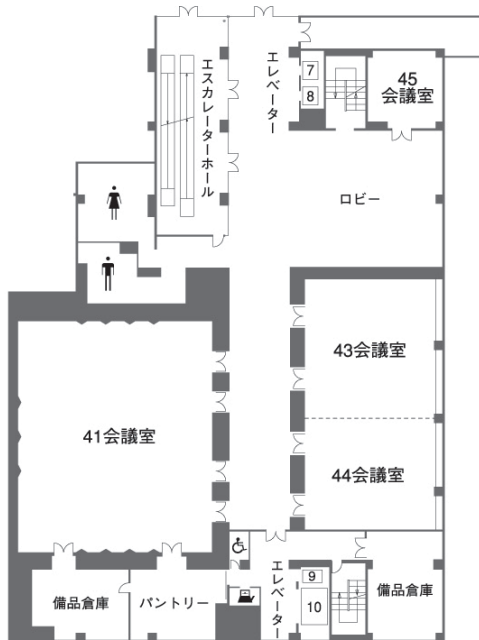
Ground Floor



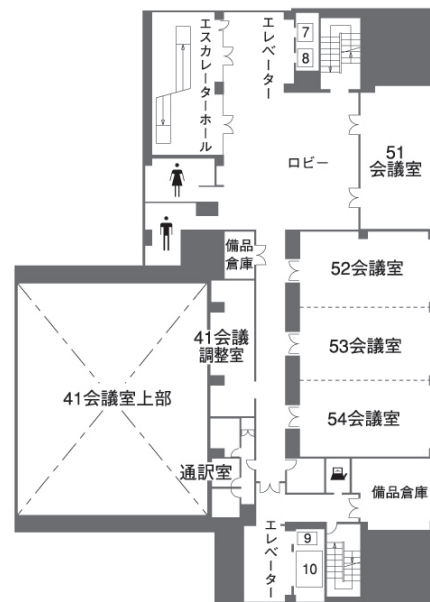
2nd Floor



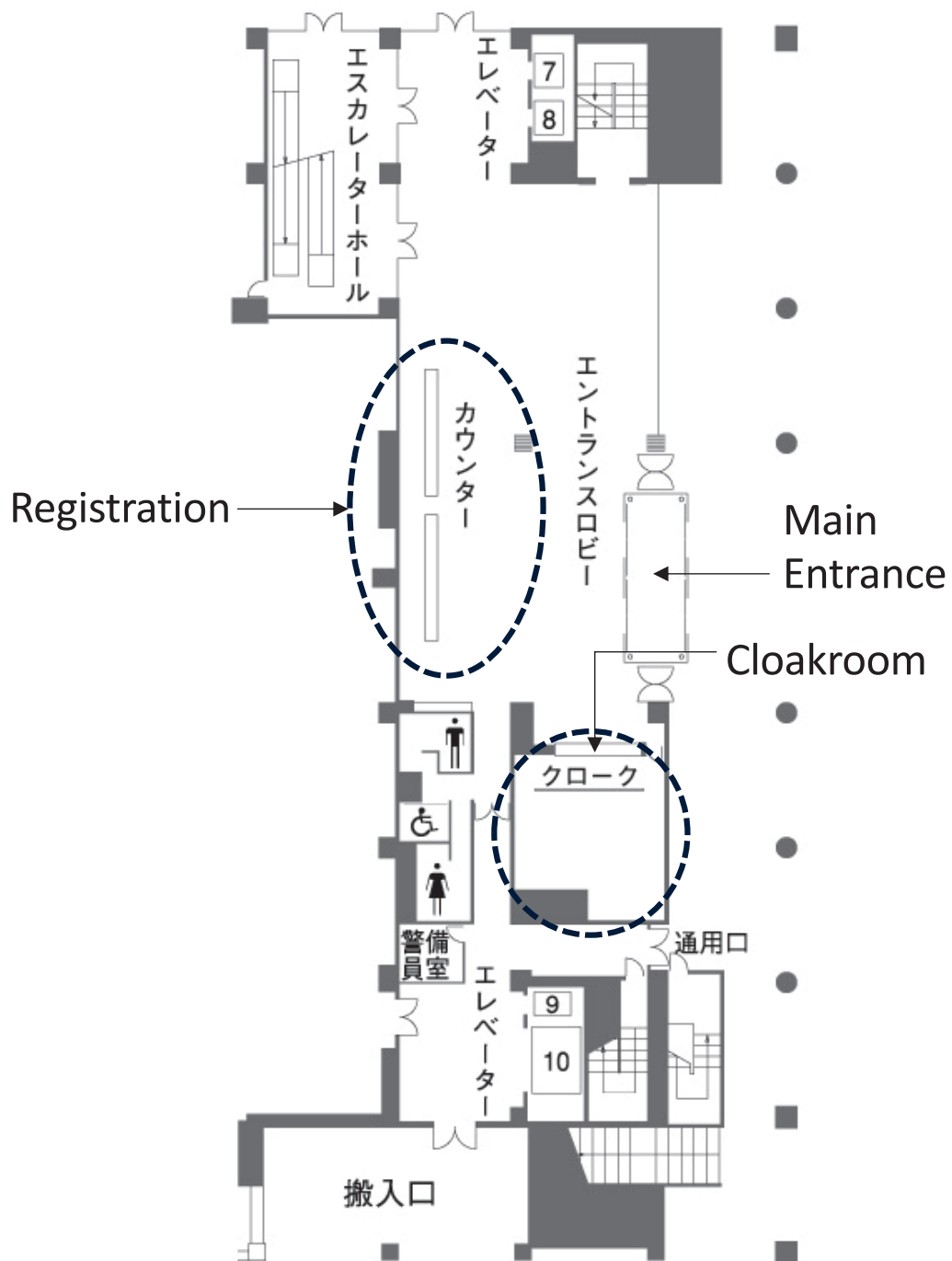
3rd Floor



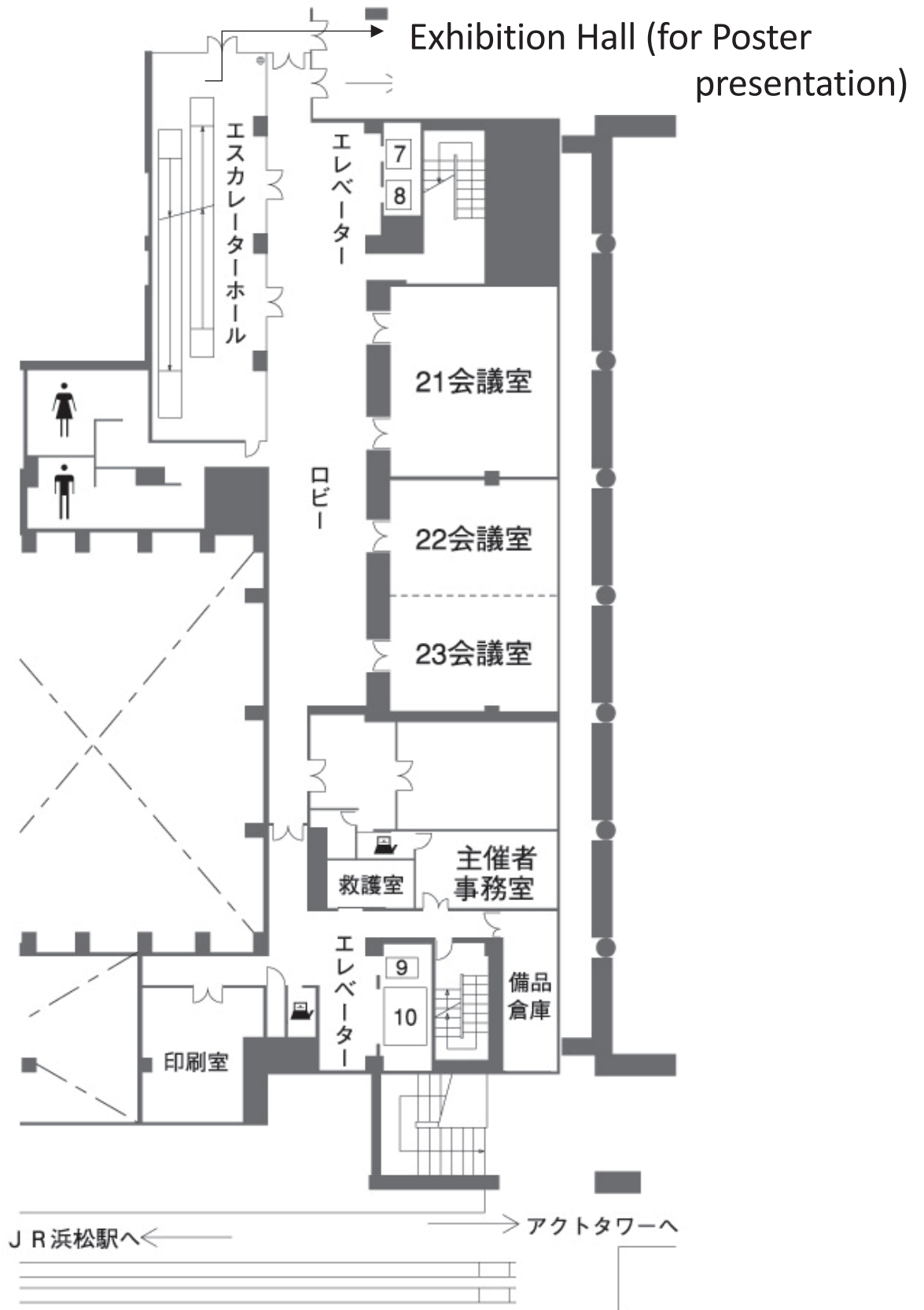
4th Floor



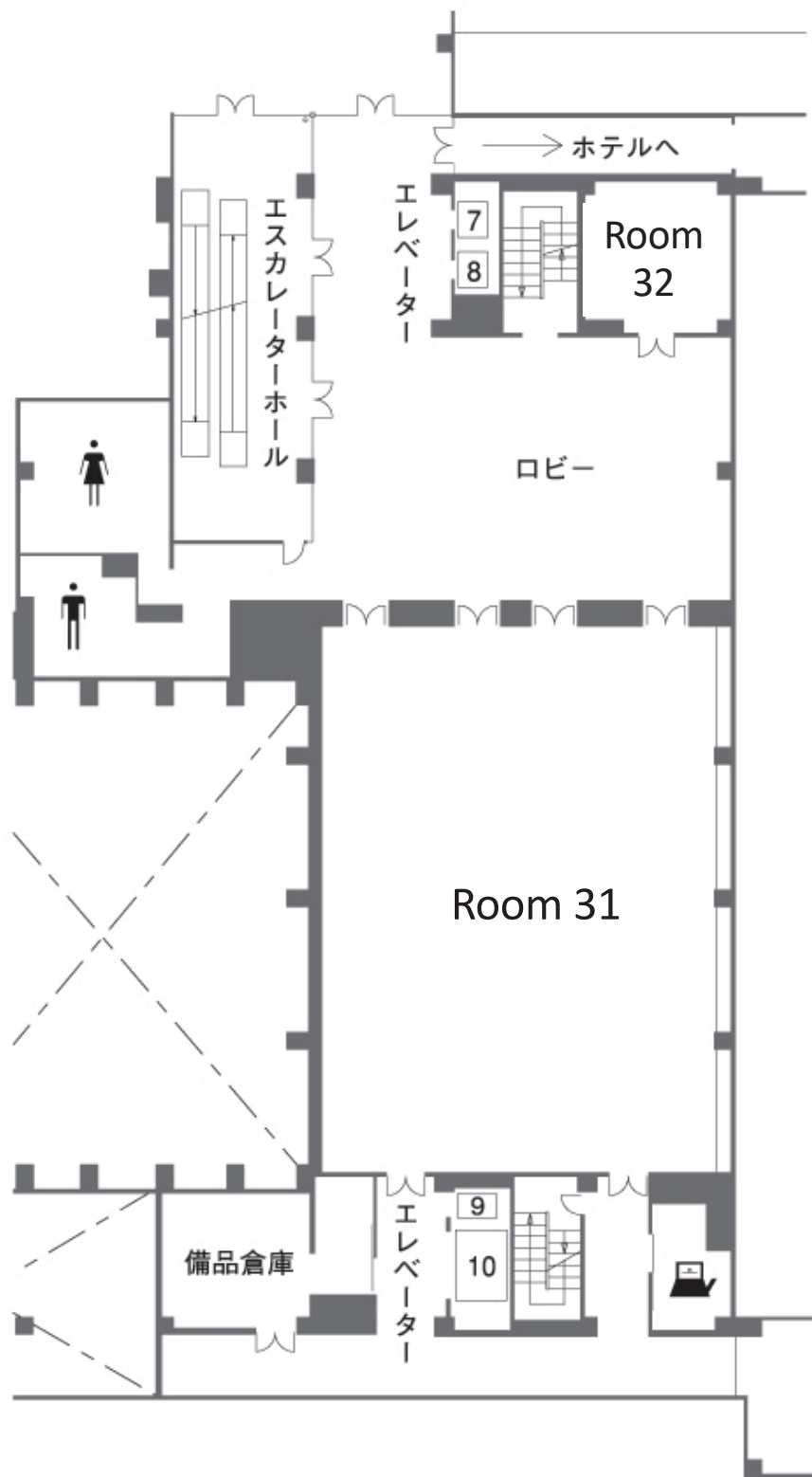
5th Floor



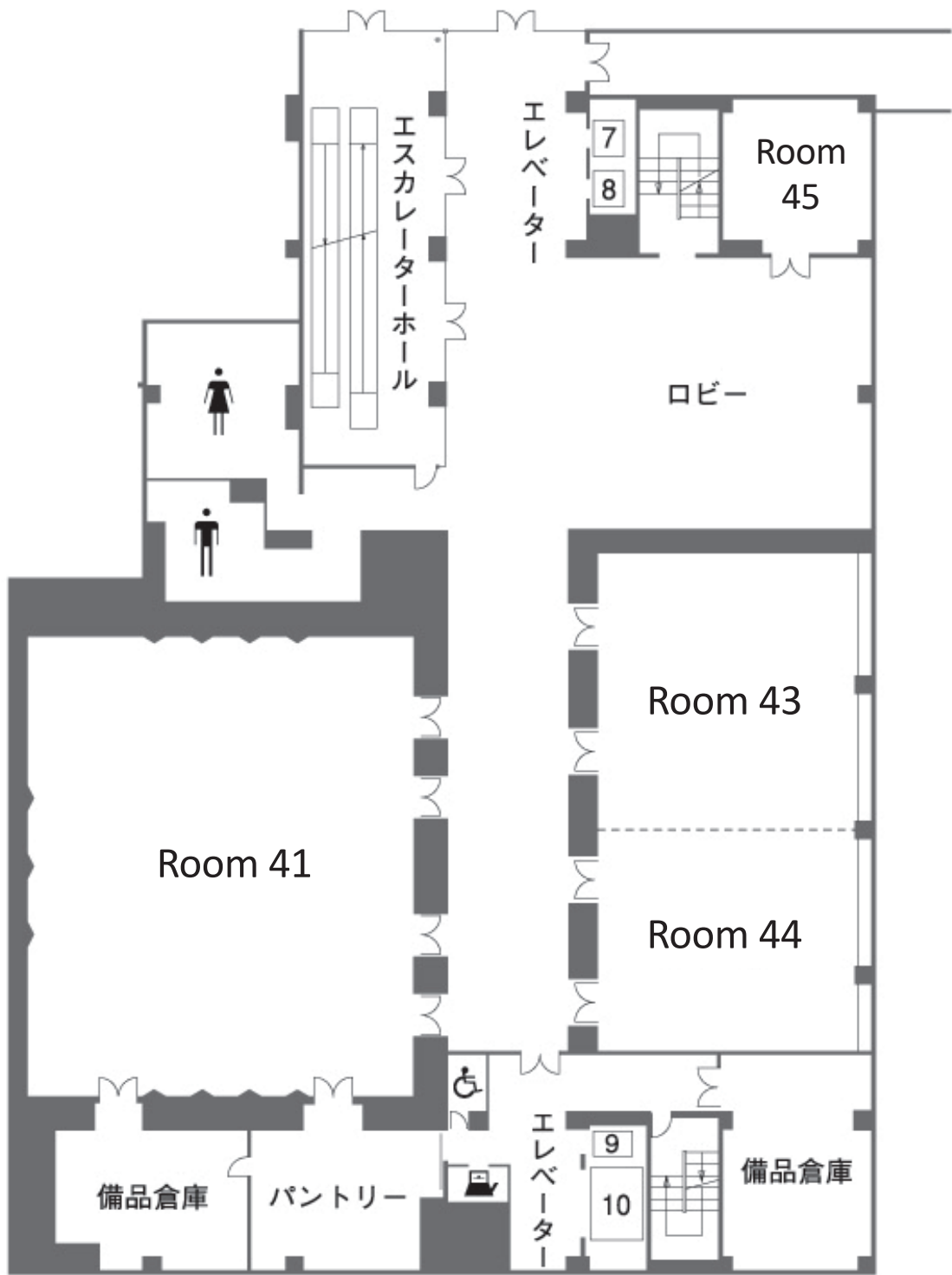
Ground Floor



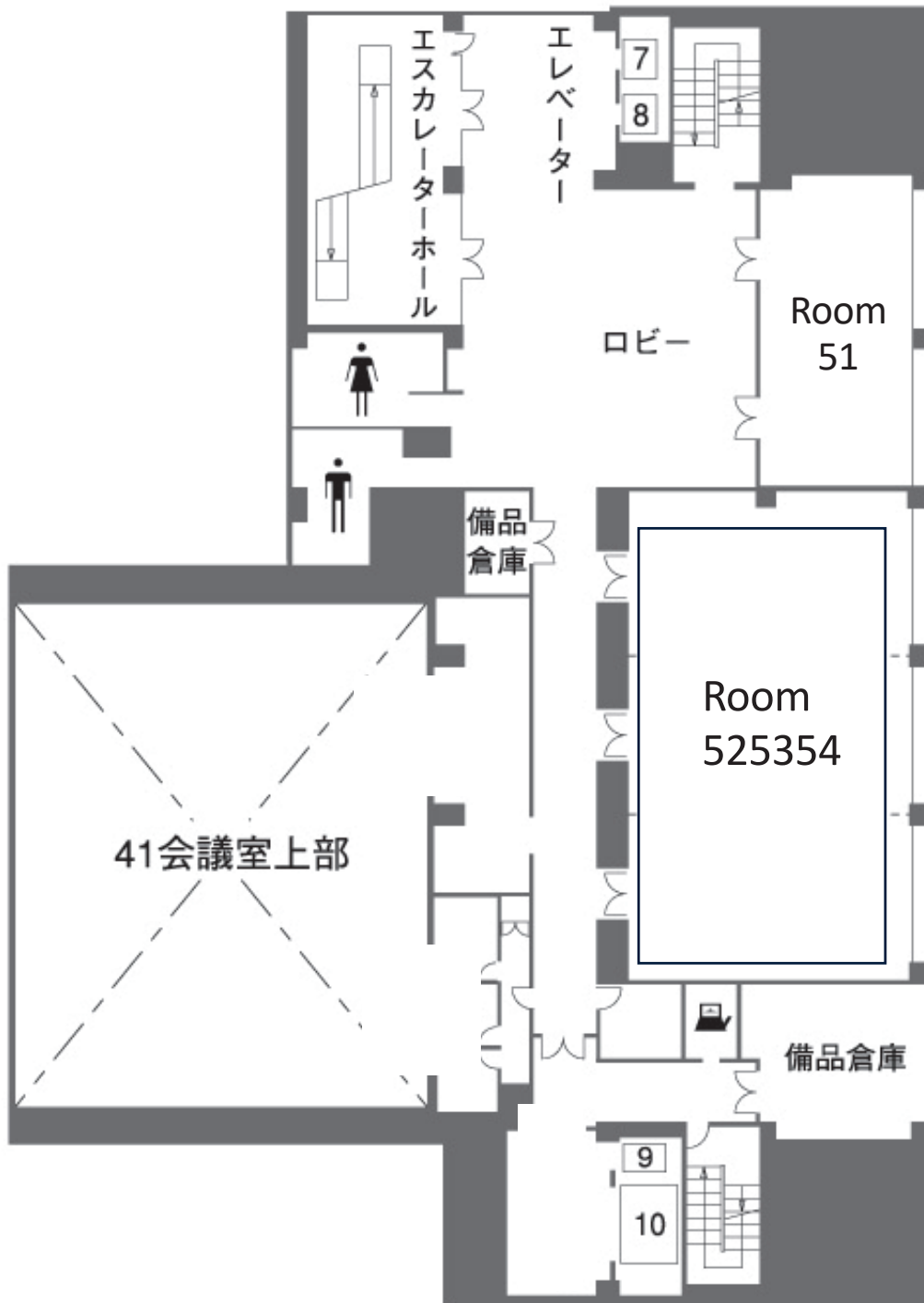
2nd Floor



3rd Floor



4th Floor



5th Floor

Time Schedule of the 36th JSME & the 13th ASME in Hamamatsu, Japan

Tuesday, November 28, Day 1

3F	4F	4F	4F	4F	5F	Exhibition and Event Hall
Room 31	Room 41	Room 43	Room 44	Room 52-53-54		
Opening 9:00~ Presentations 9:30~						
9:00						
10:00	ASME oral presentation	ASME oral presentation	ASME oral presentation	Oral Presentations	Oral Presentations	9:00~ Poster Posting
11:00	ASME oral presentation	ASME oral presentation	ASME oral presentation	Oral Presentations	Oral Presentations	
12:00	On-chipBiotechnologies AS ONE CORPORATION Luncheon Seminars 11:30-12:30	Bioengineering Lab. Co., Ltd. +PacBio Japan Luncheon Seminars 11:30-12:30	Lunch Break			
13:00						Poster Presentation First half 12:45-13:45
14:00						Communication Time
15:00						Poster Presentation Second half 14:15-15:15
Break time						
16:00	Symposium 15:30-18:00 Current Trends in Plasmid Ecology	ASME Session 15:30-18:00 Biotechnology and applied microbiology Host-microbe and microbe- microbe interactions, plant associated microbial ecology	Symposium 15:30-18:00 Metabolite Analysis to Capture the "Linkage" of Microbial Ecosystems: Past and Future	Break room	Symposium 15:30-18:00 Major Microbial Transitions: From the origin of life to the origin of the domains	Poster Posting
17:00						17:00 Close
18:00	Break time					
19:00	Free Meeting 18:15-19:45 Ecology, physiology and evolution of CPR bacteria and DPANN archaea	Free Meeting 18:15-19:45 Hot Topics of Hot Microbiome	Free Meeting 18:15-19:45 JSME Envrirus Meeting 2023 ~Lightning Talks by Young Scientists~	Break room	Free Meeting 18:15-19:45 Exploring, Observing, and Appreciating Microbial Motility	
20:00						

Wednesday, November 29, Day 2

3F	4F	4F	4F	5F	Exhibition and Event Hall	
Room 31	Room 41	Room 43	Room 44	Room 52-53-54		
Opening 8:30~ Presentations 9:00~						
Oral Presentations	Young Scientist Multidisciplinary	Rising to the challenge: Young scientists in JSME	Oral Presentations	Oral Presentations	9:00~ Poster Posting	
Break time						
Oral Presentations	Young Scientists Multidisciplinary	Rising to the challenge: Young scientists in JSME	Oral Presentations	Oral Presentations		
11:45 - 12:45 Branch meeting JSME Committee for the Promotion of Diversity and Career Development	11:45 - 12:45 Branch meeting Educational Outreach Working Group	Break room	Break room	11:45 - 12:45 Branch meeting Environmental Virus Research Community		
Break time						
Break time						
Oral Presentations	Young Scientist Multidisciplinary	Rising to the challenge: Young scientists in JSME	Oral Presentations	Oral Presentations		
Break time						
Oral Presentations	Young Scientists Multidisciplinary	ASME oral presentation	Oral Presentations	Oral Presentations		
Break time						
17:00 Close						
Poster Presentation First half 13:00-14:00						
Communication Time						
Poster Presentation Second half 14:15-15:15						
Poster Removal						
High School Student Poster Presentations 13:00-14:30						
Award Ceremony 15:00~						
Poster Removal						
17:00 Close						
Reception@Mein Schloss 18:30~20:15 (https://www.mein Schloss.jp/) Details to be announced						

Thursday, November 30, Day 3

	3F	4F	4F	4F	5F	
Room 31	Room 41	Room 43	Room 44	Room 52-53-54	Main Hall	
Symposium 9:30-12:00	ASME Session 9:30-12:00 Microbial ecology in marine, fresh water, and terrestrial systems	Symposium 9:30-12:00 Recent advances in cultivation, metagenomics, and taxonomic code (SeqCode)	Break room	Symposium 9:30-12:00 Electromicrobiology opens the door for future: Exploration, Synthetic genomics, and Application	construction	
Cool Earth via Microbes -Research Frontiers in Mitigation of N2O Emission-	Microbial ecology in extreme environment and geomicrobiology					
Opening 9:00~ Presentations 9:30~						
Lunch Break						
Award Ceremony 13:00-13:40 Award Lecture 13:50-15:50 Closing Ceremony 15:50-16:00 (Venue: Main Hall)						

Award Lecture

30th Nov. 13:50-15:50 @ Main Hall

● The 1st JSME Award

kiwamu MINAMISAWA (Tohoku Univ.)

● The 9th Honorable Award

tomoyuki HORI (AIST)

● The 1st Young Scientists' Prize

kyohei KURODA (AIST)

yu NAKAJIMA (JAMSTEC)

satoshi HIRAOKA (JAMSTEC)

● 2022 M&E Best Paper Award

Phenolic Acids Induce Nod Factor Production in
Lotus japonicus—*Mesorhizobium* Symbiosis

Masayuki Shimamura, Takashi Kumaki, Shun Hashimoto, Kazuhiko Saeki,
Shin-ichi Ayabe, Atsushi Higashitani, Tomoyoshi Akashi, Shusei Sato, Toshio Aoki

Microbes and Environments 37(1), EM21094 (2022)

Oral presentation

● Explanation about presentation

e.g.) 1_31_O-a01

1 : 28th Nov., 2: 29th Nov., 3 : 30th Nov.

31 : Room 31、 41 : Room 41、 42 : Room 42
43 : Room 43、 5 : Room 525354

O : oral presentation

a : am、 p : pm

● Time Total: 14 min

10 min presentation + 4 min discussion

8 min.....1 bell, 10 min.....2 bells, 14 min.....3 bells

● Caution

Use your PC on your presentation, please.

Confirm the connection of projector (HDMI) and your PC by 10 min before your presentation on break time, please.

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), Yoshiki 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-Jiuan 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), Ilnam 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

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

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)
(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!

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

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), Nouhak 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 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!
		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**

Environment 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

Poster presentation

● Explanation about presentation

e.g.) **P264-A P**

Slot

A	: 28th first,	29th first
B	: 28th first,	29th second
C	: 28th second,	29th first
D	: 28th second,	29th second

Review Slot

E : Early career Scientists

P : Ph. D. course

U : Master, Bachelor course

● Date of presentation

28th Nov.

First : 12:45-13:45, Second : 14:15-15:15

29th Nov.

First : 13:00-14:00, Second : 14:15-15:15

Poster

Aquatic Ecosystems

Virus

P001-A	P014-B	P015-A	P028-B	P029-A	P042-B	P043-A	P056-B
P002-D	P013-C	P016-D	P027-C	P030-D	P041-C	P044-D	P055-C
P003-A	P012-B	P017-A	P026-B	P031-A	P040-B	P045-A	P054-B
P004-D	P011-C	P018-D	P025-C	P032-D	P039-C	P046-D	P053-C
P005-A	P010-B	P019-A	P024-B	P033-A	P038-B	P047-A	P052-B
P006-D	P009-C	P020-D	P023-C	P034-D	P037-C	P048-D	P051-C
P007-A	P008-B	P021-A	P022-B	P035-A	P036-B	P049-A	P050-B

Physiology, Metabolism

P262.5-A	P250.5-B	P250-A	P237-B	P236-A	P223-B	P222-A	P209-B	P208-A	P195-B
P262-D	P251-C	P249-D	P238-C	P235-D	P224-C	P221-D	P210-C	P207-D	P196-C
P261-A	P252-B	P248-A	P239-B	P234-A	P225-B	P220-A	P211-B	P206-A	P197-B
P260-D	P253-C	P247-D	P240-C	P233-D	P226-C	P219-D	P212-C	P205-D	P198-C
P259-A	P254-B	P246-A	P241-B	P232-A	P227-B	P218-A	P213-B	P204-A	P199-B
P258-D	P255-C	P245-D	P242-C	P231-D	P228-C	P217-D	P214-C	P203-D	P200-C
P257-A	P256-B	P244-A	P243-B	P230-A	P229-B	P216-A	P215-B	P202-A	P201-B

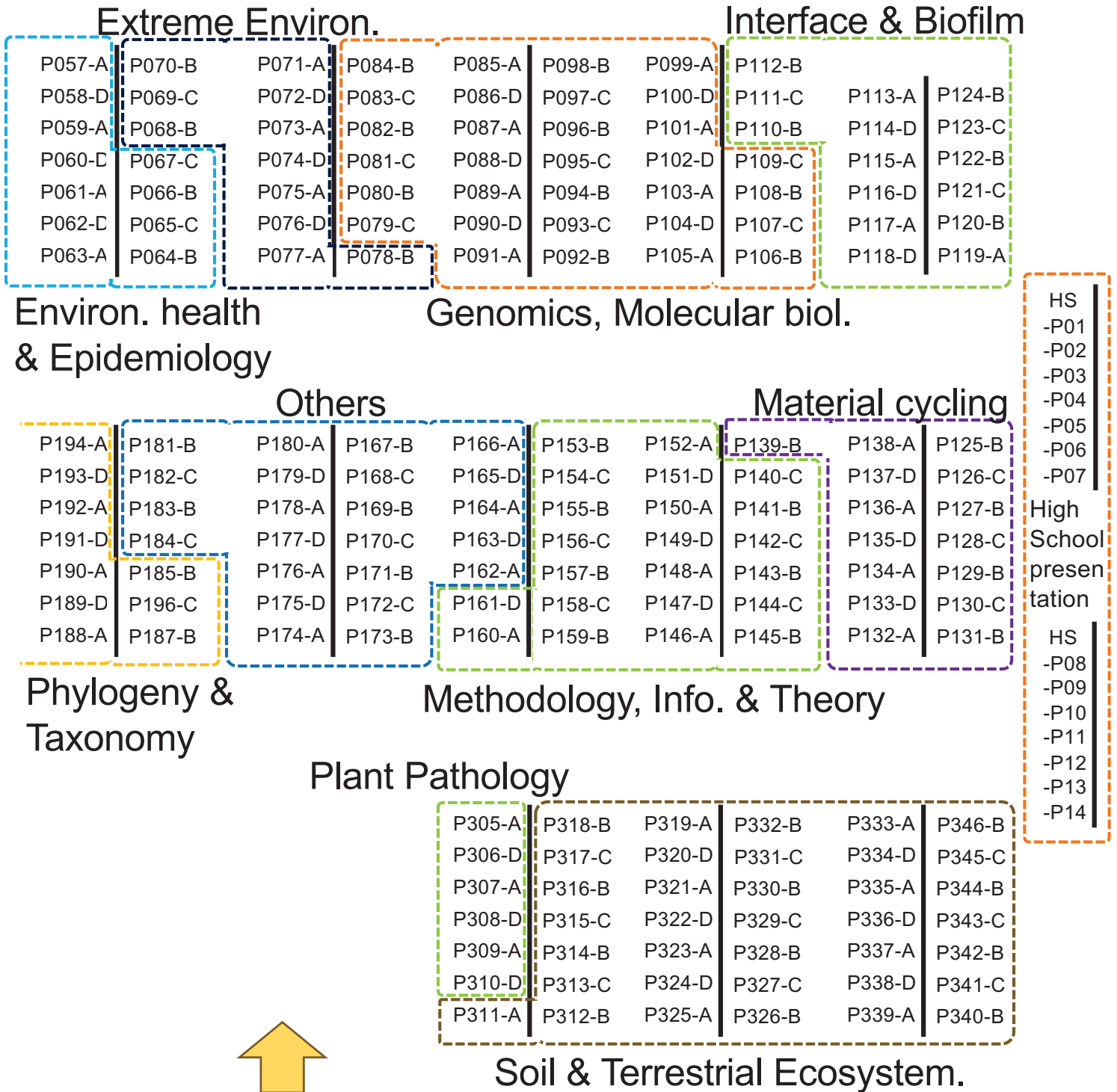
Symbiosis, Interaction, Theory

P263-A	P276-B	P277-A	P290-B	P291-A	P304-B
P264-D	P275-C	P278-D	P289-C	P292-D	P303-C
P265-A	P274-B	P279-A	P288-B	P293-A	P302-B
P266-D	P273-C	P280-D	P287-C	P294-D	P301-C
P267-A	P272-B	P281-A	P286-B	P295-A	P300-B
P268-D	P271-C	P282-D	P285-C	P296-D	P299-C
P269-A	P270-B	P283-A	P284-B	P297-A	P298-B



Entrance

Map



Entrance

To Oral presentation rooms

Aquatic ecosystems

Poster # Review slot

- P001-A **Characteristics of genus *Flavobacterium* dominant in freshwater and their contribution to nitrogen cycling**
*Keiji Watanabe (1), Shusuke Takemine (1), Yusuke Ogata (2), Wataru Suda (2)
(1) Center for Env. Sci. in Saitama, (2) RIKEN IMS
- P002-D U **Carbonate minerals formed on the surface of cementitious materials derived from marine bacteria and their functions**
*Hana Suzuki(1), Yugo Nojima(1), Toshiro Yamanaka(1), Keisuke Takahashi(4), Hiroko Makita(1),(2),(3)
(1)Tokyo University of Marine Science and Technology,(2)Japan Agency for Marine-Earth Science and Technology,
(3)Kanagawa Institute of Technology,(4)Mitsubishi UBE Cement Corporation
- P003-A U **Genomic and Physiological Characterization of Two Hydrogenogenic Carbon Monoxide (CO) Oxidizers Isolated from a Freshwater Sediment**
*Jota Suzuki (1), Yoshinari Imaura (1), Shiho Nishida (1), Ryoma Kamikawa(1), Takashi Yoshida (1)
(1) Grad. Sch. of Agri., Univ. Kyoto
- P004-D P **Survey of hydrogeogenic carbon monoxide utilizers from the bottom of Lake Biwa**
*Shiho Nishida (1), Jota Suzuki (1), Masao Inoue (2), Ryoma Kamikawa (1), Takashi Yoshida (1)
(1) Laboratory of Marine Microbiology, Graduate School of Agriculture, Kyoto University, (2) R GIRO, Ritsumeikan University
- P005-A **Evaluation of biodegradability of biodegradable plastics in anaerobic marine sediments**
Kyohei Kuroda (1), Kyosuke Yamamoto (1), Rino Isshiki (1), Riho Tokizawa (1), Chisato Shiiba (1), Naoko Yamano (2),
Shodai Hino (2), Atsuyoshi Nakayama (2), Erika Usui (3), Takamasa Miura (3), Hideyuki Tamaki (1), *Takashi Narihiro (1)
(1) Bioproduction Research Institute, AIST, (2) Biomedical Research Institute, AIST, (3) NBRC, NITE
- P006-D **The biogeochemical behavior of arsenate and dimethyl arsenate affects methane production in wetlands**
So-Jeong Kim¹, Gi-Yong Jung¹, Ji-Hyun Park², Young-Soo Han²
¹Mineral Resources Division, Korea Institute of Geoscience and Mineral Resources,
¹Department of Environmental and IT Engineering, Chungnam National University
- P007-A **Identification of degrading microorganisms in accelerated tests to evaluate marine biodegradability of biodegradable plastics**
*Kyosuke Yamamoto (1), Kyohei Kuroda (1), Rino Isshiki (1), Riho Tokizawa (1), Chisato Shiiba (1),
Atsuyoshi Nakayama (2), Shodai Hino (2), Shoko Yamano (2), Erika Usui (3), Tomoyo Miyakawa (3),
Takamasa Miura (3), Hideyuki Tamaki (1), Takashi Narihiro (0)
(1) BPRI, AIST, (2) BMRI, AIST, (3) NBRC, NITE
- P008-B E **Ecological significance of intrinsically disordered proteins in marine bacteria**
*Kento Tominaga(1), Yuki Nishimura(1), Kimiho Omae(1), Yosuke Nishimura(2),(3),
Susumu Yoshizawa(1),(2),(4), Wataru Iwasaki(1), (2), (4)
(1)Graduate School of Frontier Sciences, the University of Tokyo, (2)Atmosphere and Ocean Research Institute,
the University of Tokyo, (3)Japan Agency for Marine-Earth Science and Technology, (4)CRIIM, the University of Tokyo
- P009-C **Protozoan grazing on magnetotactic bacteria affects intracellular and extracellular iron contents**
Yusuke Seki(1), Yukako Eguchi(2), *Azuma Taoka(1, 3)
(1) Institute of Science and Engineering, Kanazawa University, (2) Institute for Promotion of Diversity and Inclusion,
Kanazawa University, (3) Nano Life Science Institute (WPI-NanoLSI), Kanazawa University
- P010-B U **Effects of magnetotactic bacteria predation on microbial community**
*Mizuki Fukui (1), Yoshinobu Ikeda (1), Azuma Taoka (1), (2)
(1) Institute of Science and Engineering, Kanazawa University, (2) Nano Life Science Institute (WPI-NanoLSI), Kanazawa University
- P011-C **Microbial community and kinetic properties of nitrifying microbes in spring water**
*Saem Han(1), Man-Young Jung(1),(2)
(1)Interdisciplinary Graduate Program in Advance Convergence Technology and Science, Jeju National University,
(2)Department of Biology Education, Jeju National University

- P022-B P **Discovery and genome analysis of the novel bacteria dominating epidermis and tube feet bacterial flora of *Scotoplanes* sp.**
 *Yu Yoshida(1), Yosuke Nishimura(2), Hajime Itoh(3), Masumi Hasegawa-Takano(4), Tsuyoshi Takano(5), Yasuhiro Gotoh(6), Takehiko Itoh(7), Tetsuya Hayashi(6), Susumu Yoshizawa(1,3)
 (1)Graduate School of Frontier Sciences, The University of Tokyo, (2)Research Center for Bioscience and Nanoscience, Japan Agency for Marine-Earth Science and Technology, (3)Atmosphere and Ocean Research Institute, The University of Tokyo, (4)Institute for Extra-cutting-edge Science and Technology Avant-garde Research, Japan Agency for Marine-Earth Science and Technology, (5)Meguro Parasitological Museum, (6)Department of Bacteriology, Faculty of Medical Sciences, Kyushu University, (7)School of Life Science and Technology, Tokyo Institute of Technology
- P023-C P **Investigation of field-based reductive dechlorination rate using selected target genes of *Dehalococcoides* and non-obligate organohalide respiring bacteria**
 *Hyunsu Kim (1)(2), Hyunsoo Lim (3), Joonhong Park (3), Keunje Yoo (1)
 (1)Department of Environmental Engineering, Korea Maritime and Ocean University, Busan, Republic of Korea, (2) Interdisciplinary Major of Ocean Renewable Energy Engineering, Korea Maritime and Ocean University, Busan, Republic of Korea, (3) Department of Civil and Environmental Engineering, Yonsei University, Seoul, Republic of Korea
- P024-B U **Quantitative Monitoring of Seasonal Bacterial Community Shifts in Sewer Using High-Throughput Sequencing**
 *Rahman Md Mizanur (1), Kazuaki Matsui (1)
 (1) Grad. Sch. of Sci. Eng., Univ. Kindai
- P025-C U **Attempt to detect virus-infected cells in microalgae using a hyperspectral camera**
 *Sayaka Kubo(1), Hiroaki Takebe(1), Haruna Hiromoto(2), Daichi Morimoto(2), Keizo Nagasaki(2), Ryoma Kamikawa(1), Takashi Yoshida(1)
 (1) Graduate School of Agriculture, Kyoto University, (2) Faculty of Agriculture and Marine Science, Kochi University
- P026-B U **Move to P041-C**
- P027-C U **Relationship between distribution of eukaryotic microalgae belonging to Rappephyceae and environmental factors**
 Akari Miyaura (1), Takashi Yoshida (1), Ryoma Kamikawa (1)
 (1) Grad. Sch. of Agri., Univ. Kyoto
- P028-B P **The effect of land use differences on Particle-associated and Free-living microbial communities in river water in Eastern Hokkaido.**
 *Tadashi Ookami (1), Shunsuke Matsuoka (2), Ryunosuke Tateno (2)
 (1) Graduate School of Agriculture, Kyoto University, (2) Field Science Education and Research Center, Kyoto University
- P029-A U **Discovery of A Periodically Occurring Dominant Green Alga in Osaka Bay**
 *Saki Yurioka(1), Kento Tominaga(2), Keigo Yamamoto(3), Ryoma Kamikawa(1), Takashi Yoshida(1)
 (1)Graduate School of Agriculture, Kyoto University, (2)Graduate School of Frontier Sciences, Tokyo University, (3) Research Institute of Environment, Agriculture and Fisheries, Osaka Prefecture
- P030-D P **Comparative genome analysis of the marine OM43 clade bacteria isolated from the coastal seas of Korea and the Antarctic Peninsula**
 *Mirae Kim (1), Innam Kang (2), Jang-Cheon Cho (1)
 (1) Dept. of Bio. Sci. and Bioeng., Inha Univ. Incheon, (2) Dep of Bio. Sci., Cent. for Mol. and Cell Bio., Inha Univ. Incheon
- P031-A **A dsRNA-based metagenomic analysis provides insights into unexplored multipartite RNA virus genomes in marine environments**
 *Mitsuhiro Yoshida (1), Yoshihiro Takaki (2), Syun-ichi Urayama (3,4), Yosuke Nishimura (1), Takuro Nunoura (1)
 (1) Research Center for Bioscience and Nanoscience (CeBN), Japan Agency for Marine Science and Technology (JAMSTEC), (2) Super-cutting-edge Grand and Advanced Research (SUGAR) Program, JAMSTEC, (3) Department of Life and Environmental Sciences, Laboratory of Fungal Interaction and Molecular Biology, University of Tsukuba, (4) Microbiology Research Center for Sustainability (MiCS), University of Tsukuba

- P032-D P **Identification of a novel antimicrobial peptide from the coral *Acropora digitifera* and evaluation of its activity against *Vibrio* spp.**
*Kako Aoyama (1,2), Masahiko Okai (3), Nobuhiro Ogawa (2), Riko Fukumaru (3), Masami Ishida (3), Koji Inoue (1,2), Toshiyuki Takagi (2)
(1) Graduate School of Frontier Sciences, The University of Tokyo, (2) Atmosphere and Ocean Research Institute, The University of Tokyo, (3) Department of Ocean Sciences, Tokyo University of Marine Science and Technology
- P033-A U **Microbial community dynamics and metagenomic analysis during the start-up phase of an artificial saltwater aquarium**
*Kaho Mori(1,2), Yosuke Nishimura(3), Yuya Tsukamoto(4), Youta Sugai(2), Satoshi Sudo(6), Minoru Ijichi(5), Yuka Iwahashi(6), Susumu Yoshizawa(1,2)
(1) Grad. Sch. of Front. Sci., Univ. Tokyo, (2) AORI, Univ. Tokyo, (3) CeBN, JAMSTEC, (4) BRC, RIKEN, (5) Grad. Sch. of Sci., Univ. Tokyo Metro., (6) SEA LIFE Nagoya
- P034-D U **Analysis of growth promotion of seagrass (*Thalassia hemprichii*) by IAA-producing bacteria**
*Ushio Yokoyama(1), Yuki Tsuchiya(1),(2), Tatsunori Nakagawa(1),(2), Reiji Takahashi(1),(2)
(1)Graduate School of Bioresource Sciences, Nihon University, (2) College of Bioresource Sciences, Nihon University
- P035-A U **Meta-omics-based estimation of ecophysiological characteristics in a Dominant Picophytoplankton in Osaka Bay**
*Keishiro Sano (1), Mao Matsumoto (1), Keigo Yamamoto (2), Ryoma Kamikawa (1), Takashi Yoshida (1)
(1) Graduate School of Agriculture, Kyoto University, (2) Research Institute of Environment, Agriculture and Fisheries, Osaka Prefecture
- P036-B E **Phylogenetics of a green alga specialized to gill legs of a branchiopod**
*Eiichiro Ono(1), Tomohiro Ohsugi(2), Jun Murata(2), Hiromi Toyonaga(2), Takeshi Negoro(3), Taisuke Ohtsuka(3)
(1) Grad. Sch. Agri., Osaka Metrop. Univ., (2) Bioorg. Res. Inst., Suntory Found. for Life Sci., (3) Lake Biwa Museum
- P037-C P **Investigation of Cultivable Bacterial Diversity in Shallow Aquifers through Dilution-to-Extinction Culturing**
*Sumin Kim(1), Suhyun Kim(1), Ilnam Kang(1), Jang-Cheon Cho(1)
(1)Department of Biological Sciences, Inha University
- P038-B **Intraspecific variation of SmDNAV infecting marine fungoid protists (Thraustochytrids)**
*Yoshitake Takao(1), Seitaro Koremura(1), Yumi Murakoshi(1)
(1) Mar. Sci. and Tech., Fukui Pref. Univ.
- P039-C U **Seasonal dynamics of a dominant archaeal lineage Marine Group II Euryarchaeota in Osaka Bay**
*Kenta Mitsunami(1), Shuto Ashizawa(2), Keigo Yamamoto(3), Takashi Yoshida(4)
(1),(2),(4)Graduate School of Agriculture, Kyoto University, (3)Research Institute of Environment, Agriculture and Fisheries, Osaka Prefecture
- P040-B P **Seasonal dynamics of microbial community responsible for carbon monoxide oxidation in Osaka Bay, Japan**
*Yoshinari Imaura (1), Keigo Yamamoto (2), Ryoma Kamikawa (1), Takashi Yoshida (1)
(1) Graduate School of Agriculture, Kyoto University, (2) Research Institute of Environment, Agriculture and Fisheries, Osaka Prefecture
- P041-C **Establishment of microbial electrolysis cell for culturing of nitrate reducing iron oxidizing bacteria**
*Otoya Suzuki(1), Hodaka Horiuchi(1), Akifumi Hosoda(2)
(1)Graduate School of Agriculture, Meijo University, (2)Faculty of Agriculture, Meijo University
- P042-B U **Effects of excessive ammonia on skin and its microbiome of striped catfish (*Pangasianodon hypophthalmus*)**
*Yu-Che Chiu (1), Jian-Lin Chen (1), Liang-Chun Wang (1)
(1) Department of Marine Biotechnology and Resources, National Sun Yat-sen University, Taiwan
- P043-A U **Physiological and ecology characteristics of coexisting bacteria of the haptophyte *Pavlovurina ranunculiformis* NIES-3900**
*Sai Koide (1), Masanobu Kawachi (2), Takashi Yoshida (1), Ryoma Kamikawa (1)
(1) Graduate School of Agriculture, Kyoto University, (2) National Institute for Environmental Studies
- P044-D P **Exploring the polysaccharide degradation ability of Verrucomicrobiota bacteria in seafoam**
*Can Huang (1), Yoko Kobayashi (1), Koji Hamasaki (1)
(1) AORI., Univ. Tokyo

- P045-A P **“Diatom-Microbe Co-Cultivation Method” for isolating taxonomically novel microbes.**
 Yosuke Morishita(1), Hideyuki Tamaki(2), Daisuke Inoue(3), Tadashi Toyama(1),
 Kazuhiro Mori(1), Yoichi Kamagata(2), Yasuhiro Tanaka(4)
 (1)Grad. Sch. Eng., Univ. of Yamanashi, (2)BRI, AIST, (3)Grad. Sch. Eng., Osaka Univ.,
 (4)Grad. Sch. Life Environ. Sci., Univ. of Yamanashi
- P046-D U **Infection process of the virus HaV infecting the marine bloom-forming eukaryotic microalgae *Heterosigma akashiwo***
 *Takumi Takemura(1), Haruna Hiromoto(2), Keizo Nagasaki(2), Ryoma Kamikawa(1), Takashi Yoshida(1)
 (1)Grad. Sch of Agri., Univ. Kyoto (2) Grad. Sch. of Agri and Marine Sci., Univ. Kochi
- P047-A P **Analysis of the morphological changes of cyanobacteria in the co-culture with predatory protist**
 *Narumi Toda, Ryosuke Yoshida, Akio Kuroda, Ryuichi Hirota
 Unit of Biotechnology, Division of Biological and Life Sciences, Graduate School of Integrated Sciences for Life,
 Hiroshima University
- P048-D **Plastisphere formations on single-use plastics at a coastal seafloor and a deep-sea floor**
 *Hiroyuki Kashima (1), Shun'ichi Ishii (1), Yoshiyuki Ishitani (1), Yuriko Nagano (2),
 Ryota Nakajima (2), Noriyuki Isobe (3), Hidetaka Nomaki (1)
 (1) X-star, JAMSTEC, (2) RIGC, JAMSTEC, (3) MRU, JAMSTEC
- P049-A **Enrichment of dehalorespiring bacteria that can dechlorinated trichloroethene to ethene in groundwater mixed with seawater.**
 Yohei Tsuji1, Daisuke Komatsu2, Naoko Yoshida1
 (1Nagoya Institute of Technology, 2Shimizu Corporation)
- P050-B E **Effects of re-oxygenation of coastal hypoxia on the sediment chemolithoautotrophic microbial community and activity**
 *Fumiaki Mori (1), Tomo Aoyagi (2), Tomoyuki Hori (2), Yuki Morono (1), Minoru Wada (3)
 (1)Kochi Institute for Core Sample Research, JAMSTEC, (2) Environmental Management Research Institute, AIST,
 (3) Grad. Sch. Fish. & Env. Sci., Nagasaki Univ.
- P051-C **Evaluation Methodology of Degradability of Biodegradable Plastics in Marine Environments by Addition of a Defined Microbial Consortium**
 *Shun Tsuboi (1), Erika Usui (1), Rieko Kasaishi (1), Takamasa Miura (1), Yoko Kusuya (1), Kei Kamino (1)
 (1) NBRC, NITE
- P052-B **Bacterial Communities in Volcanic Stream Ecosystems**
 H. Kishi (1), A. Morishita (2), M. Yuki (3), M. Shimizu (3), M. Ohkuma (3), T. Iwata (2), * S. Noda (1)
 (1)College of Science, Ibaraki University, (2)Faculty of Life and Environmental Science, University of Yamanashi,
 (3)BRC JCM RIKEN
- P053-C **Transmission of a novel beta-lactamase gene blaGMA-1 among aquaculture environmental bacteria**
 *Lisa Nonaka (1), Keiko Yano (1), Honoka Sato (1), Maki Nakabeppu (1), Karin Nakamura (1),
 Riko Yamanaka (1), Miku Matsuzaka (1), Reika Sakamoto (1), Ken-ichi Yano (2), Hirokazu Yano (3)
 (1)Fac. of Hum. Life Sci., Shokei Univ., (2)Inst. of Ind. Nanomaterials, Kumamoto Univ, (3)AMR Ctr., NIID

Virus

- P054-B E **Uniquely evolved RNA virus replication enzyme, “divided” RdRp: distribution and diversity in the environment.**
*Yuto Chiba(1)(2), Yosuke Nishimura (2)
(1) School of Agriculture, Meiji University, (2)CeBN, JAMSTEC
- P055-C P **Analysis of depth related Inter- and Intra-species genomic diversity of marine viruses in Suruga Bay through single-virus genomics**
*Ryota Wagatsuma (1-2), Yohei Nishikawa (2-3), Masahito Hosokawa (1-4), Akinobu Kimura (1-2), Katsuhiko Mineta (2-3,6), Kana Jitsuno (1-2), Yuto Hiraki (1-2), Tomokazu Suzuki (5), Kenichi Kobayashi (5), Kazutoshi Okamoto (5-6), Haruko Takeyama (1-4)
(1) Grad. Sch. Adv. Sci. Eng., Waseda Univ., (2) CBBB-OIL, AIST-Waseda Univ., (3) Res. Org. Nano Life Innov., Waseda Univ., (4) Inst. Adv. Res. Biosyst. Dynam., Waseda Res. Inst. Sci. Eng., (5) Shizuoka Prefectural Res. Inst. of Fish. AND Ocean, (6) MaOI Institute
- P056-B P **Characterization and Classification of Newly Isolated *Salmonella* -infecting Phage SLAM_phiST1N3 in *Cornellvirus* Genus from Fecal of Weaning Pig**
Youbin Choi*(1), Min-Jin Kwak*(1), Juyoung Eor*(1), Daye Mun(1), Woongji Lee(1), Anna Kang(1), Jeongkuk Park(1), Hyejin Choi(1), Daniel Junpyo Lee(1), Seon-hui Son(1), Younghoon Kim(1)*
Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Science, Seoul National University, Seoul 08826, Republic of Korea

Environmental health and epidemiology

- P057-A E **Species diversity and antimicrobial resistance profiles of non-aureus staphylococci in poultry slaughterhouses in Korea**
Ji Hyun Lim(1), *Gi Yong Lee(1), Ji Heon Park(1), and Soo-Jin Yang(1)
(1) College of Vet. Med., Seoul National Univ., Seoul, Korea
- P058-D
- P059-A E **Enhanced Biodegradation of Plastic Waste through the combined action of Deep Eutectic Solvent (DES) Pretreatment and Bioaugmentation**
Saowaluk Krainara (1,2), Avnish Nitin Mistry (2,5), Chawanan Malee (3), Chutima Chavananikul (4), Onruthai Pinyakong (2,5), Wanchai Assavalapsakul (2), Somrudee Meprasert Jitpraphai (2,6), Boonlue Kachenchart (3), Ekawan Luepromchai (2,5)
(1) Department of Environmental Health and Technology, School of Public Health, Walailak University, Nakhon Si Thammarat, Thailand.
(2) Center of Excellence in Microbial Technology for Marine Pollution Treatment (MITMaPT), Department of Microbiology, Faculty of Science, Chulalongkorn University, Bangkok, Thailand.
(3) Faculty of Environment and Resource Studies, Mahidol University, Nakhon Pathom, Thailand.
(4) International Program in Hazardous Substance and Environmental Management (IP-HSM), Graduate School, Chulalongkorn University, Bangkok, Thailand.
(5) Center of Excellence on Hazardous Substance Management (HSM), Chulalongkorn University, Bangkok, Thailand.
(6) Department of Marine Sciences, Faculty of Science, Chulalongkorn University, Bangkok, Thailand.
- P060-D P **Changes in the sputum microbiome of patients with COPD following infection with COVID-19**
Bo Yun Choi¹, Jieun Kang², Sei Won Lee³, and Woo Jun Sul^{1*}
(1)Department of Systems Biotechnology, Chung-Ang University, Anseong, Gyeonggi-do, Republic of Korea,
(2) Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, Inje University College of Medicine, Ilsan Paik Hospital, Goyang, Republic of Korea, (3) Department of Pulmonary and Critical Care Medicine, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea
- P061-A U **Metagenomic analyses of microbial communities in long-range transported bioaerosols collected at the Asian dust source (Gobi Desert) and arrival (Osaka city) areas**
*Hiroki Miyata (1), Yasunori Kurosaki (2), Yua Fujiwara (1), Teruya Maki (1)
(1) Grad. Sch. of Science and Engineering, Univ. Kindai,(2) Arid Land Research Center, Univ. Tottori
- P062-D P **Molecular surveillance of the genus *Helicobacter* with high prevalence from two streams with various wastewater pollution in Taiwan**
Xuan-Di Cao (1), Jung-Sheng Chen (2), * Chien-Sen Liao (3)
(1) Institute of Biotechnology and Chemical Engineering, I-Shou University, (2) Department of Medical Research, E-Da Hospital, (3) Department of Medical Science & Biotechnology, I-Shou University.
- P063-A U **Distribution of Antibiotic-Resistant Genes and Microbial Community of Greenhouse Soil in South Korea by Using High-Throughput qPCR**
*Seunggyun Han(1), Raan Shin(1), Changhu Kang(2), Hanseob Shin(3), Hor-gil Hur(1)
(1) Sch. of Eart. and Envi., Gwangju, (2) Hea. and Env. Res. Ins., Gwangju (3) Sta. Hyg. Lab., Univ. Iowa
- P064-B U **Conjugal transfer of an IncP-1 plasmid carrying multidrug resistance genes: the frequencies of the horizontal and vertical gene transfer and the host range in activated sludge**
*Kiko Ohara (1), Kosuke Higuchi (1), Satoshi Okabe (1), Mamoru Oshiki (1)
(1) Grad. Sch. of Eng.
- P065-C U **Prevalence of ARGs and Antibiotic Susceptibility Patterns among *Bradyrhizobium* spp. Isolated from South Korea**
*Raan Shin(1), Seunggyun Han(1), Hor-gil Hur(2)
(1) Sch. of Eart. and Envi., Gwangju, (2) Sch. of Eart. and Envi., Gwangju

P066-B U **Detection and analysis of the environmental microorganisms in toilets**

*Jieruyi Weng(1), Bei-Wen Ying(1)

(1) School of Life and Environmental Sciences, University of Tsukuba

P067-C U **Study of Anti-obesity Effect from Lactic Acid Bacteria**

Ayub Hina¹, Thi My Tien Truong^{1,2}, Inhae Kang^{1,2}, Man-Young Jung^{1,3*}

¹ Interdisciplinary Graduate Program in Advanced Convergence Technology and Science,
Jeju National University, Jeju 63243, Korea

² Department of Food Science and Nutrition, Jeju National University

³ Department of Biology Education, Jeju National University

Extreme environment

- P068-B U **Functional genes and metabolic activity of methanogens in deep aquifers associated with the accretionary prism.**
*Shinnosuke Shimizu(1), Shinsei Iso(1), Hiroyuki Kimura(1),(2)
(1)Graduate School of Integrated Science and Technology, Shizuoka University,
(2)Institute of Green Science and Technology, Shizuoka University
- P069-C **Survival strategy of uncultured DPANN archaea OYS group in high-temperature hot spring**
*Yudai Usui(1), Hiroki Goto(1), Katsunori Yanagawa(1)
Grad. Sch. of Eng and Env., Univ. Kitakyushu
- P070-B P **Survival Strategies of Submarine Microorganisms by Attachment to Diatom Fossils**
*Tomoya Nishimura(1),(2), Fumiaki Mori(2), Takeshi Terada(3), Minoru Ikehara(4), Yuki Morono(2)
(1)Graduate School of Integrated Arts and Sciences, Kochi University,
(2)Kochi Institute for Core Sample Research, Japan Agency for Earth-Marine Science and Technology (JAMSTEC),
(3)Marine Works Japan,(4)Marine Core Research Institute, Kochi University
- P071-A U **Characterization of the mechanism of aluminum resistance in the aluminum-tolerant bacterium, *Acidocella aluminidurans* strain AI46**
*Takanari Yasuda(1), Ayaka Sakuma(1), Tomoko Aizawa(2), Makoto Urai(1)
(1)Department of Chemistry for Life Sciences and Agriculture, Tokyo University of Agriculture,
(2)Department of Bioscience, Nihon University
- P072-D U **Characterization of aluminum tolerance mechanisms in bacteria belonging to the genus, *Acidocella***
*Ayaka Sakuma(1), Takanari Yasuda(1), Tomoko Aizawa(2), Makoto Urai(1)
(1)Department of Chemistry for Life Sciences and Agriculture, Tokyo University of Agriculture,
(2)Department of Bioscience, Nihon University
- P073-A **Characterization of novel filamentous ssDNA viruses infecting chemolithoautotrophic *Nitratiruptor***
Yukari Yoshida-Takashima (1), Mitsuhiro Yoshida (2), Yoshihiro Takaki (1), Takuro Nunoura (2), Ken Takai (1)
(1) JAMSTEC, X-Star, (2) JAMSTEC, CeBN
- P074-D U **Prokaryotic and eukaryotic community structures of the hyper-saline Lake in East Antarctica**
*Kaori Iiyama(1), Daisaku Taguchi(1), Akinori Kawamata(2), Satoshi Imura(3), (4), Hiroyuki D. Sakai(5) and Norio Kurosawa(1)
(1)Graduate School of Science and Engineering, Soka University, (2)Ehime Prefectural Science Museum,
(3)National Institute of Polar Research, (4)Graduate Institute for Advanced Studies, SOKENDAI,
(5)Riken BioResource Research Center
- P075-A P **Analysis of microbiomes in radiation-contaminated water from the torus room of the Fukushima Daiichi Nuclear Power Station**
*Tomoro Warashina (1, 2), Asako Sato (1), Hiroshi Hinai (3), Nurislam Nurislam (4), Elena Shagimardanova (4),
Hiroshi Mori (5), Satoshi Tamaki (1), Motofumi Saito (1, 2), Yukihiro Sanada (3), Yoshito Sasaki (3), Kozue Shimada (3),
Yuma Dotsuta (3), Kitagaki Toru (3), Shigenori Maruyama (6), Oleg Gusev (4, 5), Issay Narumi (8),
Ken Kurokawa (6), Teppei Morita (1), Toshikazu Ebisuzaki (9), Akihiko Nishimura (3), Yoshikazu Koma (3), Akio Kanai (1, 2)
(1) Institute for Advanced Biosciences, Keio University,
(2) Systems Biology Program, Graduate School of Media and Governance, Keio University,
(3) Japan Atomic Energy Agency, (4) Institute of Fundamental Biology and Medicine,
(5) Graduate School of Medicine, Juntendo University,
(6) Genome Evolution Laboratory, Department of Informatics, National Institute of Genetics,
(7) Earth-Life Science Institute, Tokyo Institute of Technology,
(8)Faculty of Life Sciences, Toyo University, (9)Computational Astrophysics Laboratory, RIKEN
- P076-D **Global-scale metagenomic survey of bacterial communities on glaciers**
*Takumi Murakami (1,2), Takahiro Segawa (3), Hiroshi Mori (2), Yuichi Hongoh (1), Nozomu Takeuchi (4)
(1) School of Life Science and Technology, Tokyo Institute of Technology, (2) Department of Informatics, National Institute of Genetics, (3) Center for Life Science Research, University of Yamanashi, (4) Graduate School of Science, Chiba University

P077-A U **Microbial community structures in the lakes in the coastal area of East Antarctica**

*Daisaku Taguchi (1), Akinori Kawamata (2), Makiko Kosugi (3), Satoshi Imura (4,5), Norio Kurosawa (1)

(1) Graduate School of Science and Engineering, Soka University, (2) Ehime Prefectural Science Museum, (3) National Institute for Basic Biology, (4) National Institute of Polar Research, (5) Graduate Institute for Advanced Studies, SOKENDAI

P078-B **An exploratory approach with RNA-Seq for elucidate the mechanism of withstanding pressure of a hyperpiezophilic bacterium, *Colwellia marinimaniae* MTCD1T strain**

*Masataka Kusube(1), Shota Une(1)

(1)National Institute of Technology, Wakayama College

Genomics, molecularGenomics, molecular biology

- P079-C **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
- P080-B U **Elucidation of the dynamics of hair and scalp bacteriota throughout the year**
*Ai Wakabayashi(1), Azusa Yamada(1), Kyoka Matsuo(1), Mugihito Oshiro(1), Yukihiro Tashiro(1)
(1)Graduate School of Bioresource and Bioenvironmental Sciences, Kyusyu University
- P081-C E **Relationship of metabolic diversity and divergence date amongst prokaryotes revealed by constructing a large-scale genome phylogenetic tree**
*Arisa Nishihara(1), Moriya Ohkuma(1), Masaru Konishi Nobu(2)
(1)JCM, RIKEN-BRC, (2) X-star, JAMSTEC
- P082-B **Optimizing the eDNA-based protocols in molecular analysis**
Hyewon Hong(1)*, Jin Lee(1), Dukki Han(1)
(1)Department of Marine Bioscience, Gangneung-Wonju National University, Gangneung 25457, Republic of Korea
- P083-C P **Unraveling Stress Response Mechanisms via *Salmonella enterica* MazF Cleavage Sequences**
Takuma Okabe (1,2), Rie Aoi (1,2), Akiko Yokota (2), Hiroko Tamiya-Ishitsuka (2), Yunong Jiang (2,3), Satoshi Tsuneda (1), Naohiro Noda (1,2,4)
(1) Dept. Life Sci. & Med. Biosci., Waseda Univ., (2) Biomed. Res. Inst., Natl. Inst. of Adv. Ind. Sci. & Tech. (AIST), (3) Grad. Sch. of Compr. Hum. Sci., Univ. of Tsukuba, (4) SIGMA, Univ. of Tsukuba
- P084-B E **The contrapositive network highlighted the evolution of transporters through salinity-dependent coupled ions switching.**
*Kimiho Omae (1), Yuki Nishimura (1), Kento Tominaga (1), Motoyuki Hattori (2), Wataru Iwasaki (1,3,4)
(1) Grad. Sch. Front. Sci., Univ Tokyo, (2) Sch Life Sci, Fudan Univ, (3) AORI, Univ Tokyo, (4) CRIIM, Univ Tokyo
- P085-A **Influence of NaCl supplement on CLSI protocol**
Lee Jin
Department of Marine Bioscience, Gangneung-Wonju National University, Gangneung 25457, Republic of Korea
- P086-D U **Characterization of different types of esterases identified from soil bacteria**
Saki Takasugi*, Takashi Ano, Masahiro Okanami
Graduate School of Biology-Oriented Science and Technology, Kindai University
Graduate School of Biology-Oriented Science and Technology, Kindai University
- P087-A **Phylogenetic analysis and temporal changes of *Clostridium perfringens* isolated from the feces of an eagle owl (*Bubo bubo*) at Kamine Zoo, Hitachi, Japan.**
*Koshiro Sato(1), Shun Satomi(1), Takashi Narihiro(2), Koji Uetsuka(1)
(1)Graduate School of Agriculture, Ibaraki University, (2)Bioproduction Research Institute, AIST
- P088-D **Genome analysis of *Aequorivita nionensis* VBW088T, a carotenoid-producing marine bacterium isolated from a shallow water hydrothermal vent**
*Hyeryeon Gyeong(1), Myung-Ji Seo(2)
(1)Division of Bioengineering, Incheon National University, Incheon 22012, Republic of Korea,
(2)Research Center for Bio Materials & Process Development, Incheon National University, Incheon 22012, Republic of Korea,
(3)Department of Bioengineering and Nano-Bioengineering, Incheon National University, Incheon 22012, Republic of Korea
- P089-A U **A putative novel PAH-degrading gene cluster discovered on a plasmid of the marine bacterial genus *Sagittula***
*Mayuko Abe (1), Go Kayama (1), Robert A. Kanaly (1), Jiro F. Mori (1)
(1) Grad. Sch. Nanobiosci., Yokohama City Univ.
- P090-D P **Genomic analyses for predicting plasmid transconjugants**
*Maho Tokuda(1), Shunta Tsuruga(2), So Maeda(3), Rin Yamazaki(3), Kazuhide Kimbara(1),(2),(3), Masaki Shintani(1),(2),(3),(4)
(1)Grad. Sch. Shizuoka Univ., (2)Grad. Sch. of Integ. Shizuoka Univ., (3)Fac. Eng. Shizuoka Univ., (4)Res. Green Shizuoka Univ.

- P091-A E **Temporal Evolution and Forces Shaping Bacterial Populations in Cultured Soil Consortia**
*Leonardo Stari(1), Hiromi Kato(1), Yoshiyuki Ohtsubo(1), Yuji Nagata(1)
(1)Graduate School of Life Sciences, Tohoku University
- P092-B U **Single-cell analysis revealed the original hosts of PromA plasmids**
*Suzuka Kawakita (1, 2), Yukie Yamamoto (1, 2), Yuri Ota (2), Tetsushi Suyama (2),
Naohiro Noda (2), Kazuhide Kimbara (1), Masaki Shintani (1,3)
(1) Graduate School of Integrated Science and Technology, Shizuoka University, (2) Biomedical Research Institute, AIST,
(3) Research Institute of Green Science and Technology, Shizuoka University
- P093-C **Discovery of phage tail-like nanostructures associated with a host stress response and implication of their ecological impact.**
*Toshiki Nagakubo(1),(2), Tatsuya Nishiyama(3), Shumpei Asamizu(4),(5), Tatsuya Yamamoto(1),
Manami Kato(4),(6), Nobuhiko Nomura(1),(2),(7), Masanori Toyofuku(1),(2), Hiroyasu Onaka(4),(8)
(1)Life and Environ. Sci., Univ. Tsukuba, (2)MiCS, Univ. Tsukuba, (3)College of Biores. Sci., Nihon Univ., (4)Grad. Agri. and Life
Sci., Univ. Tokyo, (5)EGBRC, Kobe Univ., (6)IAB, Keio Univ., (7)TARA center, Univ. Tsukuba, (8)Facul. Sci., Gakushuin Univ.
- P094-B P **Calcium carbonate formation and antibacterial activity of *Bacillus altitudinis* B6 for repairing concrete cracks**
*Jihyeon Min, Yongjun Son, Woojun Park
Science and Ecological Engineering, Korea University, Republic of Korea
- P095-C **Discovery of novel β -N-acetylgalactosamine-targeting glycosidases using deep-sea metagenomic analysis**
*Tomomi Sumida (1), Satoshi Hiraoka (1), Keiko Usui (1), Shinya Fushinobu (2), Takuro Nunoura (1)
(1) Research Center for Bioscience and Nanoscience, JAMSTEC,
(2) Graduate School of Agricultural and Life Sciences, The University of Tokyo
- P096-B U **Cyanobacterial plasmid replication mechanism and conservation of CyRepA1 protein**
*Minori Sakata (1), Tomohiro Aoyagi (1), Kaori Nimura-Matsune (1), Alena Kaltenbrunner (2),
Wolfgang Hess (2), Satoru Watanabe (1)
(1) Department of Bioscience, Tokyo University of Agriculture,
(2) Genetics and Experimental Bioinformatics Group, Faculty of Biology, University of Freiburg
- P097-C **Cancel**
- P098-B U **Influence of amyloid protein on the conjugative transfer of plasmid.**
*Hiroki Shirai (1), Yosuke Tashiro (1), Kazuhide Kimbara (1), Masaki Shintani (1), (2)
(1) Grad. Sch. Integr. Shizuoka Univ., (2) Shizuoka Univ. RIGST
- P099-A U **Identification of the factors involved in temperature sensitivity of PromA plasmids**
*Tomohiro Shiraki (1), Maho Tokuda (2), Kazuhide Kimbara (1), Masaki Shintani (1), (2), (3)
(1)Graduate School of Integrated Science and Technology, Shizuoka Univ., (2)Graduate School of Science and Technology,
Shizuoka Univ., (3)Shizuoka Univ. Research Institute of Green Science and Technology
- P100-D P **Integrative Analysis of Multi-omics for Extracellular Vesicles from *Limosilactobacillus fermentum***
Hyejin Choi*(1),Min-Jin Kwak*(1),Juyoung Eor*(1), Daye Mun(1), Woongji Lee(1), Anna Kang(1),
Jeongkuk Park(1), You-Bin Choi(1), Daniel Junpyo Lee(1), Seon-hui Son(1), YounghoonKim(1)*
1Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Science,
Seoul National University, Seoul 08826, Republic of Korea
- P101-A P **The distribution and visualization of the morphology of microbial dark matter Patescibacteria in activated sludge**
*Naoki Fujii(1), Kaho Yamada(2), Noriatsu Ozaki(1), Akiyoshi Ohashi(1), Tomonori Kindaichi(1)
(1) Grad. Sch. of Adv. Science and Eng., Univ. Hiroshima, (2) Sch. of Eng., Univ. Hiroshima

- P102-D U **The mechanism how oxygen causes higher transconjugant frequency of plasmids.**
 *Isana Nogami (1), Kazuhide Kimbara (2), Hiroyuki Futamata (1), (2), Masaki Shintani (1), (2)
 (1) Graduate School of Integrated Science and Technology, Shizuoka University,
 (2) Reserch Institute of Green Science and Technology, Shizuoka University
- P103-A P **Loss of periplasmic chaperones, DegP, misdelivers distinct cellular component to the THP-1 macrophages**
 *Bitnara Kim (1), Woojun Park (1)
 (1) Laboratory of Molecular Environmental Microbiology, Department of Environmental Science and Ecological Engineering,
 Korea University, Seoul 02841, Republic of Korea
- P104-D U **How the plasmids can be replicated and maintained in the hosts**
 *Shunta Tsuruga(1), Honoka Umeki (1), Haruhi Kamijo (1), Maho Tokuda (2),
 Kazuhide Kimbara(1),(2), Masaki Shintani(1),(2),(3)
 (1) Grad. Sch. Integr. Shizuoka Univ., (2) Grad. Sch. Shizuoka Univ., (3) Shizuoka Univ. RIGST
- P105-A U **Identification of factors that confer distinct conjugation frequency to the novel IncP/P-1 group plasmid**
 *Haruhi Kamijo(1), Honoka Umeki(1), Tsuruga Shunta(1), Maho Tokuda(2), Kazuhide Kimbara(1,2), Masaki Shintani(1,2,3)
 (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
- P106-B U **Roles of stringent signal, ppGpp, in membrane remodeling and antibiotic resistance of *Acinetobacter baumannii***
 *Sunyong Han(1), Woojun Park(1)
 (1) Laboratory of Molecular Environmental Microbiology, Department of Environmental Science and Ecological Engineering,
 Korea University, Seoul 02841, Republic of Korea
- P107-C U **Membrane vesicle-mediated DNA transfer of Pf4 prophage in *Pseudomonas aeruginosa***
 *Haruki Okumura(1), Satoshi Takenawa(2), Soutarou Takano(2), Mizuki Kanno(3)
 Hiroyuki Futamata(1),(3),(4), Akihiro Okamoto(2), Yosuke Tashiro(1),(3)
 (1)Graduate School of Integrated Science and Technology, Shizuoka University, (2) NIMS WPI-MANA, (3)Graduate School of
 Science and Technology, Shizuoka University, (4)Research Institute of Green Science and Technology, Shizuoka University
- P108-B **Analysis of changes in gut and systemic microbiome by chemotherapy in CD34 humanized mouse-based pancreatic cancer model**
 Inha Yoo(1), Jeong Kwon Jang(2), Eunsung Jun(1,2)
 1Department of Convergence Medicine, Asan Medical Center - University of Ulsan, Seoul, Republic of Korea,
 2Biomedical Center, Asan Medical Center - University of Ulsan, Seoul, Korea, Republic of Korea.
- P109-C U **Comparison of Genotype and Antibiotic Resistance Patterns of *mcr-1* Positive *E. coli* Isolated from Rivers and Wastewater Treatment Plants in South Korea**
 *Geon Choi (1), Hokyung Song (2), Tatsuya Unno (2)
 (1) Department of Environmental and Biological Chemistry, Chungbuk National University, Seowon-Gu,
 Cheongju 28644, Republic of Korea, (2) Department of Biological Sciences and Biotechnology,
 Chungbuk National University, Seowon-Gu, Cheongju 28644, Republic of Korea

Interface and Biofilm Interface and Biofilm

- P110-B U **Biofilm formation ability of marine microorganisms on cementitious material surfaces and their functions**
*Yugo Nojima(1), Hana Suzuki(1), Seitaro Koremura(1), Masaki Sampei(1), Ryotaro Miki(1), Keisuke Takahashi(4), Toshiro Yamanaka(1), Takafumi Kasaya(2), Hiroko Makita(1),(2),(3)
(1)Tokyo University of Marine Science and Technology, (2)Japan Agency for Marine-Earth Science and Technology, (3)Kanagawa Institute of Technology, (4)Mitsubishi UBE Cement Corporation
- P111-C U **Analysis of persister-like cells toward several lethal stimuli - comparison between liquid culture-derived cells and biofilm-derived cells**
*Tsubasa Nasu (1), Hirona Ikeda (1), Sumio Maeda (1), (2)
(1) Dept. of Food Sci., Grad. Sch. of Humanities and Sci., Nara Women's Univ., (2) Faculty of Human Life and Env., Nara Women's Univ.
- P112-B P **Analysis of Intestinal Bacterial Colonization and Biofilm Formation with Intestinal Mucus Layer Mimetic System**
*Keisuke Nomura (1), Nobuhiko Nomura (2)(3), Nozomu Obana (4), Andrew Utada (2)(3)
(1) Grad. Sch. Sci. Tech., Univ. of Tsukuba, (2) Department of Life and Environmental Sciences, Univ. of Tsukuba, (3) Microbiology research center for sustainability (MiCS), (4) Institute of Medicine and Medical Sciences, Univ. of Tsukuba
- P113-A U **Production control of biodemulsifier focusing on quorum sensing in *Acinetobacter calcoaceticus***
Maho Kobayashi (1), Norihiro Kato (2), Eri Nasuno (2)
(1) Graduate School of Regional Development and Creativity, Utsunomiya University, (2) School of Engineering, Utsunomiya University
- P114-D U **Membrane fouling characteristics of a gelatinous colony-forming bacterium *Novosphingobium* sp. strain IK01 isolated from a gelatinous biofilm on a sewage treatment MBR membrane**
*Tomoya Ikarashi (1), Takahiro Watari (1), Takashi Yamaguchi (1), Masashi Hatamoto (1)
(1) Grad. Sch. of Eng., Nagaoka Univ. of Tech.
- P115-A U **Analysis and elucidation of SOS response induction in *Pseudomonas aeruginosa* biofilms**
*Mio Unoki(1), Mayumi Yano(1), Toru Isawa(1), Masanori Toyofuku(2),(3), Nobuhiko Nomura(2),(3)
(1)Grad. Sch. Life Environ. Sci., Univ. Tsukuba, (2)Fac. Life Environ. Sci., Univ. Tsukuba, (3)MiCS, Univ. Tsukuba
- P116-D E **Functional analysis of the sulfated polysaccharide in the bloom-like biofilms of the freshwater cyanobacterium *Synechocystis* sp. PCC 6803 and its label-free imaging with mid-infrared photothermal microscopy**
*Kaisei Maeda (1), Ryo Kato (2), (3), Taka-aki Yano (2), (3), Takuo Tanaka (2), (3), Kan Tanaka (1)
(1) Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, (2) Institute of Post-LED Photonics, Tokushima University, (3) RIKEN
- P117-A U **Electron Transfer Controls Spatial Metabolic Dynamics in Biofilms**
*Hiromasa Tongu (1), Masanori Toyofuku (2)(3), Nobuhiko Nomura (2)(3), Yoshihide Tokunou (2)(4)
(1) Degree Programs in Life and Earth Sciences, University of Tsukuba, (2) Faculty of Life and Environmental Sciences, University of Tsukuba, (3) Microbiology Research Center for Sustainability, University of Tsukuba, (4) National Institute for Materials Science
- P118-D U **Investigation of Mechanism of Forming Composite Biofilms by *Staphylococcus epidermidis* and *Cutibacterium acnes***
Tao Wenzhi
College of Agro-Biological Resource Science, School of Life and Environmental Science, University of Tsukuba
- P119-A U **Isolation and characterization of a novel *Geobacter* sp. 60473 with high electrochemical activity**
*Tomoka Harada(1), Yohei Yamada(2), Atsushi Kouzuma(1), Kazuya Watanabe(1)
(1)Tokyo University of Pharmacy and Life Science, (2)Seiko Epson Corporation
- P120-B U **Water flow triggers adhesion of gliding bacteria to solid surfaces**
*Motomu Araki (1), Naoki Uemura (1), Daisuke Nakane (1)
(1) University of Electro-Communication Department of Engineering Science
- P121-C U **Quorum sensing trigger membrane vesicle formation in *Streptococcus mutans*.**
*Tamami Ito(1), Chika Yamamoto(1), Ryo Nagasawa(1), Nozomu Obana(2)(4), Nobuhiko Nomura(3)(4), Masanori Toyofuku(3)(4)
(1) Grad. Sch. of Sci. Tech., Univ. of Tsukuba, (2) Faculty of Med., Univ. of Tsukuba, (3) Life and Environ. Sci., Univ. of Tsukuba, (4) MiCS, Univ. of Tsukuba

- P122-B U **Evaluation of Anti-fouling Paints for Ship Using Next Generation DNA Sequencing**
Loo Chuan Shen(1), Hamada Masako (1), Toshihiko Eki (1), Yuu Hirose(1)
Department of Applied Chemistry and Life Science, Toyohashi University
- P123-C E **Microbiome niche and succession processes on different plastsphere inferred from polymer degradation experiments**
*Daiki Yokoyama(1)(2), Yuuri Tsuboi(1), Jun Kikuchi(1)(2)(3)
(1) RIKEN CSRS, (2) Graduate School of Medical Life Science, Yokohama City University,
(3) Graduate School of Bioagricultural Sciences, Nagoya University
- P124-B U **Analysis of bacterial behavior in microfluidic channels with controllable oxygen concentration**
Haruka Minato (1) , Keisuke Nomura (2) , Nobuhiko Nomura (3) (4) , Nozomu Obana (5) (6) , Andrew Utada (3) (4)
(1) Agro Biological Resource Sciences, Univ. of Tsukuba, (2) Degree Program in Life and Agricultural Sciences, Univ. of Tsukuba, (3) Department of Life and Environmental Sciences, Univ. of Tsukuba, (4) Microbiology research center for

Material cycling

- P125-B U **An attempt at enrichment cultivation of anaerobic microorganisms relevant to p-toluic acid degradation and elucidation of the degradation mechanism**
*Takeo Sekiguchi(1),(2), Maho Takai(2),(3), Yuki Nakaya(3), Yasuhiro Kumaki(4), Yuki Ohnishi(5), Tomoyasu Aizawa(5), Hisashi Satoh(3), Takashi Narihiro(2), Kyohei Kuroda(2)
(1) Faculty of Engineering, Hokkaido University, (2) Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), (3) Graduate school of Engineering, Hokkaido University, (4) Graduate school of Science, Hokkaido University, (5) Faculty of Advanced Life Science, Hokkaido University
- P126-C U **Biotransformation of antimony and Fe(III) oxyhydroxide by microbial consortium associated with mine tailing soil**
Tsuyoshi Hokimoto (1), Daisuke Yamashita (1), Satoshi Mitsunobu (2), Natsuko Hamamura (1, 3)
(1) Graduate School of Systems, Life, Sciences, Kyushu University, (2) Graduate School of Agriculture, Ehime University, (3) Faculty of Science, Kyusyu University
- P127-B **Sequential cooperation of esterase derived from a cultured yeast and indigenous microbial community accelerates the degradation of a biodegradable polyester film in cultivated soil**
Shun Tsuboi (1), *Yuko Takada Hoshino (1), Kimiko Yamamoto-Tamura (1), Hirohide Uenishi (2), Natsuki Omae (3), Tomotake Morita (3), Yuka Sameshima-Yamashita (1), Hiroko Kitamoto (1), Ayaka W. Kishimoto-Mo (1)
(1) Institute for Agro-Environmental Sciences, NARO, (2) Institute of Agrobiological Sciences, NARO, (3) Research Institute for Sustainable Chemistry, AIST
- P128-C U **Elucidation of aerobic p-toluic acid degrading microorganisms in a DHS reactor treating purified terephthalate-manufacturing wastewater treatment**
*Maho Takai (1)(2), Yuki Nakaya (1), Hisashi Satoh (1), Tomoyasu Aizawa (3), Yuki Ohnishi (3), Yasuhiro Kumaki (4), Takashi Narihiro (2), Kyohei Kuroda (2)
(1) Graduate School of Engineering, Hokkaido University, (2)Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology, (3)Faculty of Advanced Life Science, Hokkaido University, (4)Graduate School of Science and Technology, Hokkaido University
- P129-B E **Metagenomic analysis of the dissimilatory phosphite oxidation enrichment culture derived from Lake Hamana sediment**
*Linh Thi Thuy Cao (1), Takafumi Yamanaka (1), Akio Kuroda (1), Ryuichi Hirota (1)
(1) Gra. Sch. of Int. Sci. for Life, Univ. Hiroshima
- P130-C P **Effect of cell size of riverine microbes on dissolved organic matter degradation**
*Yuji Takaki(1), Koji Suzuki(1,2), Youhei Yamashita(1,2)
(1)Graduate School of Environmental Science, Hokkaido University, (2)Faculty of Environmental Earth Science, Hokkaido University
- P131-B **Metagenomic characterization of novel electroactive microorganisms enriched from stibnite mine wastewater**
*Natsuko Hamamura (1), Hiroyuki Kashima (2), Satoshi Mitsunobu (3)
(1)Facult. Sci., Kyusyu Univ., (2) SUGAR, JAMSTEC, (3) Grad. Sch. Ag., Ehime Univ.
- P132-A U **Electrochemical NH₃ regeneration using NO₃-/NO₂- reductases as biocatalysts**
*Nichika Takahashi (1), Mamoru Oshiki (2), Satoshi Okabe (2)
(1) Graduate School of Engineering, Hokkaido University, (2) Faculty of Engineering, Hokkaido University
- P133-D U **Molecular ecological analysis of microbial communities regarding nitrogen-cycle within lake sediment in Lake Kasumigaura (Lake Kitaura)**
*Takeshi Shoda(1), Reiji Ohtake(1), Miku Hayakawa(2), Yong Guo(1), Midori, Sakoda(1)(2), Ryoji Nakazato(3), Tomoyasu Nisizawa(1)(2)(3)(4)
(1) College of Agriculture Ibaraki University, (2) Graduate school of Agriculture, Ibaraki University, (3) GLEC, Ibaraki University, (4) CRERC, Ibaraki University
- P134-A U **Electrochemical observation on Membrane vesicles of *Shewanella oneidensis* MR-1**
*Thomas Kouyou Savage(1), Masanori Toyofuku(2),(3), Nobuhiko Nomura(2),(3), Yoshihide Tokunou(2),(4)
(1)Degree Programs in Life and Earth Sciences, University of Tsukuba, (2)Faculty of Life and Environmental Sciences, University of Tsukuba,, (3)Microbiology Research Center for Sustainability, University of Tsukuba, (4)National Institute for Materials Science

- P135-D U **Novel methanol-tolerant *Cupriavidus necator* strain KK10 produces P(3HB-co-3HV) from biodiesel waste glycerol and levulinic acid**
*Miho Nagai, Jiro F. Mori, Robert A. Kanaly
Grad. Sch. of Nanobiosci., Yokohama City Univ.
- P136-A **Changes in bacterial and fungal communities during cow manure composting under low-temperature environment**
*Dai Hanajima(1), Takeki Maeda(2), Tomo Aoyagi(3), Tomoyuki Hori(3)
(1) Hokkaido Agricultural Research Center, NARO, (2) Faculty of agriculture, Iwate University,
(3) Environmental Management Research Institute, AIST
- P137-D **N₂O-reducing bacteria isolated from Andosol**
*Satoshi Ohkubo, Manabu Itakura, Arthur Fernandes Siqueira, Hiromi Kato, Shusei Sato, Masaru Bamba, Kiwamu Minamisawa
Graduate School of Life Sciences, Tohoku University
- P138-A **Studies on Silage Production from the Sweet Potato Waste Discarded in the Dry Sweet Potato Manufacturing Process - Effects of Okara Addition on Lactic Acid Fermentation**
*Nobuo Kaku (1), Yoshimi Otaki (1), Ryoji Shinozaki (2), Atsuko Ueki (1), Katsuji Ueki (1)
(1) Fac. of Agri., Yamagata Univ., (2) Ecohightech Corp. Co., LTD.
- P139-B U **Isolation and characterization of Polyhydroxybutyrate-degrading bacteria from marine sediment.**
*Hana Sato (1), Natsumi Saito (2), Kyoko Kubo (2)
(1)Course of Applied Chemistry, Department of Advanced Engineering, National Institute of Technology, Tsuruoka College,
(2) Department of Creative Engineering, National Institute of Technology, Tsuruoka College

Methodology, Informatics, and theory

- P140-C **Cultivation of the uncultured requiring microbial interactions for their growth by Gel-Micro-Droplet (GMD) aggregated cultivation**
*Yumi Shimomura (1), Akina Yamamoto (1), Rikuta Suzuki (1), Setsu Kato (1), Yutaka Nakashimada (1), Yoshiteru Aoi (1)
(1) Grad. Sch. Integr. Sci. Life, Hiroshima Univ.
- P141-B **Genomic information analysis to extract and visualize sets of genes involved in target gene function**
Tomoyuki Kosaka (1), Minenosuke Matsutani (2)
(1) RCTMR, Yamaguchi University, (2) Nodai Genome Research Center, Tokyo University of Agriculture
- P142-C E **An attempt to discriminate prokaryotic domains at the single cell level in a non-destructive, non-staining manner using Raman microscopy**
*Nanako Kanno (1), Shingo Kato (3), Takashi Itoh (3), Moriya Ohkuma (3),
Nodoka Oda (2), Tatsuya Ohtani (2), Shinsuke Shigeto (1,2)
(1) Sch. Sci., Kwansei Gakuin Univ., (2) Grad. Sch. Sci. Technol., Kwansei Gakuin Univ., (3) RIKEN BRC
- P143-B U **Flow cytometric single-cell classification in different metabolic states of microbiome using machine learning models**
In Jae Jeong (1), Young Jun Bae (1), Musun Lee (1), *Tae Kwon Lee (1)
(1) Department of Environmental & Energy Engineering, Yonsei University, Republic of Korea
- P144-C U **Bac2Feature: Web interface to predict bacterial traits from 16S rRNA gene phylogeny.**
*Masaki Fujiyoshi (1), Takao K Suzuki (1), Matsui Motomu (1), Wataru Iwasaki (1)
(1) Graduate School of Frontier Sciences, The University of Tokyo
- P145-B P **Development of single-cell morphological imaging gene analysis**
*Sota Ihara(1),(2), Hiroki Ida(3), Akihiro Okamoto(2),(4),(5)
(1) Graduate School of Science and Technology, University of Tsukuba, (2) Research Center for Macromolecules and Biomaterials, National Institute for Materials Science (NIMS), (3) Graduate School of Engineering, Nagoya University, (4) Graduate School of Chemical Sciences and Engineering, Hokkaido University, (5) Graduate School of Life and Environmental Sciences, University of Tsukuba
- P146-A **Enhancing RNA Virus Discovery: Performance and Pipeline Updates in NeoRdRp 2.0**
*Shoichi Sakaguchi (1), Takashi Nakano (1), So Nakagawa (2)
(1) Department of Medicine, Osaka Medical and Pharmaceutical University,
(2) Department of Molecular Life Science, Tokai University School of Medicine
- P147-D U **Development of an Integrated Database for Bacterial Ecologies, Taxonomies, and Genomic Functions Leveraging Large-Scale Shotgun Metagenomic Data.**
*Mio Matsumoto(1), Koichi Higashi(2), Shino Suzuki(3), Ken Kurokawa(1),(2)
(1)SOKENDAI, (2)NIG, (3)ISAS
- P148-A U **Anode biomass rather than soluble organic matter is fuel for electricity production in microbial fuel cell at longer hydraulic retention time**
*Fumichika Tanaka (1) , Li Xie (1) , Naoko Yoshida (1)
(1) Grad. Sch. of Eng., Nagoya Institute of Technology
- P149-D P **Is "HELPER" necessary for growing uncultivable microorganisms? Revealing by microdroplet based microbial cultivation methods**
*Rikuta Suzuki (1), Yumi Shimomura (1), Tomonori Kindaichi (2), Akiyoshi Ohashi (2),
Setsu Kato (1), Yutaka Nakashimada (1), Yoshiteru Aoi (1,3)
(1) Grad. Sch. of Int. Sci. for Life, Hiroshima Univ., (2) Grad. Sch. of Adv. Sci. and Eng., Hiroshima Univ.,
(3) Seto Inland Sea CN Research Center
- P150-A P **Approaches for attaining purified bacterial fractions from environmental samples**
*Jaeyoung Yu (1), Abdullah Adham Zulmajdi (1), Marika Kawahisa (1), Aya Kinoshita (1), Tetsushi Mori (1)
(1) Graduate School of Engineering, Tokyo University of Agriculture and Technology

- P151-D U **Cell-penetrating peptides as an alternative approach for genetic manipulation of useful microbes**
*Sen Moritani(1), Tatsuru Okazaki(1), Tetsushi Mori(1)
(1)Graduate School of Engineering, Tokyo University of Agriculture and Technology
- P152-A P **Membrane permeability of cell-penetrating peptide among phylogenetically distinct gram-negative bacteria**
*Ernest Christian Chandra (1), Yugo Kawabuchi (1), Shota Ohashi (1), Tetsushi Mori (1)
(1) Graduate School of Engineering, Tokyo University of Agriculture and Technology
- P153-B **Detection of filamentous bacteria in activated sludge flocs and their relationship to floc morphology and settleability characteristics through quantitative image analysis**
*Uthpala Kaushalya (1), Yuki Nakaya (1), Hisashi Satoh (1)
(1) Division of Environmental Engineering, Graduate School of Engineering, Hokkaido University, Japan
- P154-C **The development of a simple, rapid, and low-cost DNA library preparation method (SolidAct: Sequential reaction consisting of Oligo DNA Ligation and DNA Amplification in a Closed Tube method) for NGS-based amplicon sequencing.**
*Shinya Kurata (1) , Usan Lee (1) , Mayu Okamoto (1) , Akiyoshi Hanawa (1), Kohei Ichikawa (1), Toshiaki Kato (1), Yoichi Kamagata (2)
(1)NIPPON STEEL Eco-Tech Corporation, (2) Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan
- P155-B U **Development of a droplet co-culture technique using signal transducers**
*Shuichi Kadomoto (1)(2), Satoko Matsukura (2), Yoshiyuki Suzuki (3), Hideyuki Tamaki (4), Wataru Ogasawara (3), Naohiro Noda (2)
(1) Materials Science and Bioengineering, Nagaoka University of Technology, (2) Biomedical Research Institute, AIST, (3) Science of Technology Innovation, Nagaoka University of Technology, (4) Bioproduction Research Institute, AIST
- P156-C U **Detection of membrane vesicle-producing bacteria in microbial populations using probes sensing highly curved membranes.**
*Itsuki Oono(1), Yusuke Sato(2), Maho Tokuda(3), Masaki Shintani(1,3,4,5), Moriya Ohkuma(4), Hiroyuki Futamata(1,3,5), Yosuke Tashiro(1,3)
(1) Graduate School of Integrated Science and Technology, Shizuoka University, (2) Graduate School of Science, Tohoku University, (3) Graduate School of Science and Technology, Shizuoka University, (4) BRC-JCM, RIKEN, (5) Research Institute of Green Science and Technology, Shizuoka University
- P157-B U **Development of a Nucleic acid Manipulation Approach Using Cell-penetrating Peptides against Actinomycetes**
*Natsumi Taka(1), Jaeyoung Yu(1), Okazaki Tatsuru(1), Tetsushi Mori(1)
(1)Graduate School of Engineering, Tokyo University of Agriculture and Technology
- P158-C **Fluorometric assay for phenol oxidase in soils and its controlling variables**
*Jungin Kim (1), Hojeong Kang (1)
(1) School of Civil and Environmental Engineering, Yonsei University, Seoul, Republic of Korea
- P159-B P **The Sensor of Dielectric Property of Water Molecules at 65-GHz Band Enables Rapid Bacterial Testing**
*Yoshihisa Yamashige (1), Shojiro Kikuchi (2), Siyao Chen (1), Ryosuke Hosoki (3), Masahiko Harata (3), Yuichi Ogawa (1)
(1) Grad. Sch. of Agri., Kyoto Univ., (2) Ins. for Adv. Med. Sci., Hyogo Med. Univ., (3) Grad. Sch. of Agri., Tohoku Univ.
- P160-A **Decoding the host-gut microbiota crosstalk by developing an automated sample collection platform for use in high-resolution time series analysis**
Hiroaki Masuoka (1), Rina Kurokawa (1), Lena Takayasu (1), Rie Maskawa (2), Tanzila Islam (2), Hideki Takayasu (2), Misako Takayasu (2), *Wataru Suda (1)
(1) Center for Integrative Medical Sciences, RIKEN, (2) School of Computing, Tokyo Institute of Technology
- P161-D P **Advanced Human Skin Microbiome Analysis Using Modified Microbial DNA Extraction Method**
*Rina Kurokawa(1,2), Hiroaki Masuoka(1), Wataru Suda(1)
(1) IMS, RIKEN, (2) Grad. Sch. Adv. Sci. and Eng., Waseda Univ

Others

- P162-A E **Adaptive Laboratory Evolution of Minimal Genome Bacterium to Low Temperature**
*Masaki Mizutani(1), Minoru Moriyama(1), Ryuichi Koga(1), Takema Fukatsu(1,2,3), Shigeyuki Kakizawa(1)
(1)Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology, (2)Department of Biological Sciences, The University of Tokyo, (3)Graduate School of Life and Environmental Sciences, University of Tsukuba
- P163-D U **Exploring polymeric organic matter-degrading microorganisms inhabiting recycled aggregates**
*Haruka Shimada (1), Genki Maruoka (1), Shiori Shinbori (2), Toshitaka Uechi (2),
Shuhei Mitsutani (2), Katsuji Fukumoto (2), Hiroko Makita (1)
(1) Tokyo University of Marine Science and Technology, (2) OBAYASHI ROAD CORPORATION
- P164-A **Optimizing a 1600 L-Scale Air Cathode Microbial Fuel Cell System and Utilizing Recovered Electricity to Enhance Wastewater Treatment**
Li Xie(1), *Toshiyuki Yagi(1), Fumichika Tanaka(1), Kyo Ikeru(1), Naoko Yoshida(1)
(1) Nagoya Institute of Technology
- P165-D U **Structural characterization of cell surface polysaccharides from the pathogenic fungus, *Candida auris***
*Takuma Akutsu(1), Masahiro Abe(2), Ken Kikuchi(3), Yoshitsugu Miyazaki(2), Makoto Urai(1)
(1)Department of Chemistry for Life Sciences and Agriculture, Tokyo University of Agriculture, (2)Department of Fungal Infection, National Institute of Infectious Diseases, (3)Department of Infectious Diseases, Tokyo Women's Medical University
- P166-A E **Membrane-Vesicle-Mediated Interbacterial Communication Activates Silent Secondary Metabolite Production**
*Aya Yoshimura, Rio Saeki, Ryusuke Nakada, Shota Tomimoto, Toshiyuki Wakimoto
Faculty of Pharmaceutical Sciences, Hokkaido University
- P167-B **ANTIMICROBIAL ACTIVITY OF BACILLUS STRAINS PRODUCING ANTIMICROBIAL PEPTIDES ISOLATED FROM DIFFERENT NATURAL SOURCES**
*Ji Yeon Kang, Ha Jeong Jang, and Chul Won Lee
Department of Chemistry, Chonnam National University, Gwangju 61186, Republic of Korea
- P168-C P **Oxidation and reduction of nitrite with Mn oxides under anoxic conditions**
*Chen Yangbo(1), Hiromi Kambara(3), Shuji Matsushita(1), Aoi Yoshiteru(2),
Tomonori Kindaichi(1), Noriatsu Ozaki(1), Akiyoshi Ohashi(1)
(1) Graduate School of Advanced Science and Engineering, Hiroshima University,
(2) Graduate School of Integrated Sciences for Life, Hiroshima University, (3)JAMSTEC
- P169-B P **Analysis of FAD covalent binding mechanism of succinate dehydrogenases in Gram-positive bacteria by heterologous expression**
*Yusuke Shiota (1), Tomoyuki Kosaka (2)
(1) Graduate School of Science and Technology for Innovation, Yamaguchi University, (2) RCTMR, Yamaguchi University
- P170-C E **Identification of Active Methane Production Pathways and their Syntrophic Bacterial in Anaerobic Membrane Bioreactor Treating Low-Strength Wastewater**
* Minjoo Lee(1), Keunje Yoo(2), Young-Min Ko(1), Seunga Kim(1), Moojae Song(1), Kyung-Geun Song(3), Joonhong Park(1)
(1)School of Civil and Environmental Engineering, Yonsei University, Republic of Korea,
(2)Department of Environmental Engineering, Korea Maritime and Ocean University, Republic of Korea,
(3)Center for Water Resource Cycle Research, Korea Institute of Science and Technology (KIST), Republic of Korea
- P171-B E **Novel methanotrophic *Mycobacterium* strain MM-1 cultivated at elevated ammonia concentration**
*Hiromi Kambara (1,2), Shuji Matsushita (3), Yoshiteru Aoi (4), Tomonori Kindaichi (2),
Noriatsu Ozaki (2), Hiroyuki Imachi (1), Akiyoshi Ohashi (2)
(1) X-star, JAMSTEC, (2) Dept. Civil Env. Eng., Grad. Sch. Adv. Sci. Eng., Hiroshima Univ.,
(3) Agricultural Technology Research Center, Hiroshima Prefectural Technology Research Institute,
(4) Program of Biotechnology, Grad. Sch. of Integr. Sci. Life, Hiroshima Univ.
- P172-C U **Diversity and functional analysis of S-layer proteins of *Lactobacillus crispatus* isolated from chicken feces.**
*Aya Misaki(1), Kenji Yokota(1) Akinobu Kajikawa(1)
(1)Graduate School of Applied Bioscience, Tokyo university of Agriculture

- P173-B E **Investigating the Use of Audible Sound to Stimulate Microbial Gene Expression and Communities for Partial Nitrification in Municipal Wastewater Treatment**
 Jihyun Kim(1), Hyeonkyeong Lee(1), Minjoo Lee(1), Hyunsoo Lim(1), Joonhong Park(1)
 (1)School of Civil and Environmental Engineering, Yonsei University, Republic of Korea
- P174-A P **Size Distribution and Potential Pathogens of Culturable Airborne *Clostridium* spp. in Toyama, Central Japan**
 *Makoto Seki (1), Reika Iwamoto (1), Kenken Ko (2), So Fujiyoshi (2), Fumito Maruyama (2), Yukihiro Furusawa (3), Shigehiro Kagaya (1), Akihiro Sakatoku (1), Shogo Nakamura (1), Daisuke Tanaka (1)
 (1) University of Toyama, (2) Hiroshima University, (3) Toyama Prefectural University
- P175-D E **The origin and evolution of methanogenesis and Archaea are intertwined**
 *Ran Mei(1,3), Masanori Kaneko(2), Hiroyuki Imachi(3), Masaru K. Nobu(1,3)
 (1)Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology, (2)Institute for Geo-Resources and Environment, Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology, (3)Institute for Extra-cutting-edge Science and Technology Avant-garde Research (X-star), Japan Agency for Marine-Earth Science and Technology
- P176-A P **Immunoregulatory Effects of Bovine Colostrum-derived Extracellular Vesicles: Enhancing *Akkermansia* and β -hydroxybutyrate to Alleviate DSS-induced Colitis**
 *Daye Mun(1), Min-Jin Kwak (1), Juyoung Eor (1), Hyejin Choi (1), Woongji Lee (1), Anna Kang (1), Jeongkuk Park (1), You-Bin Choi (1), Daniel Junpyo Lee (1), Seon-hui Son (1), Younghoon Kim (1)
 (1) Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Science, Seoul National University, Seoul 08826, Republic of Korea
- P177-D **Practical application study of methanation using microbial communities**
 *Makoto Kawano (1), Takayuki Suzuki (2), Minako Terao (1), Hiroyuki Kimura (2), (3)
 (1) Yokogawa Electric Corporation, (2) Dept. of Geosciences, Faculty of Science, Shizuoka Univ., (3) Research Institute of Green Science and Technology, Shizuoka Univ.
- P178-A E **A simple effective cultivation method for isolating diverse and novel endophytes inhabiting *Dendrobium* roots**
 *Tomoki Nishioka (1), Hideyuki Tamaki (1, 2)
 (1) Bioproduction Research Institute, AIST, (2) Life and Environ. Sci., Univ. Tsukuba
- P179-D P **Evaluation of *Fusarium venenatum*-based edible mycoprotein as a potential alternative protein for animal feeds.**
 *Daniel Junpyo Lee (1), Anna Kang (1), Daye Mun (1), Woongji Lee (1), Hye Jin Choi (1), Jeongkuk Park (1), You Bin Choi (1), Seon-hui Son (1), Ju Young Eor (1), Min-Jin Kwak (1), Younghoon Kim (1)
 (1) Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Science, Seoul National University, Seoul 08826, Republic of Korea
- P180-A U **Spatiotemporal Dynamics of Airborne *Clostridium* spp. in the Noto Peninsula, Central Japan**
 *Reika Iwamoto (1), Makoto Seki (1), Ning Tang (2), Atsushi Matsuki (2), Nobuo Suzuki (2), Jun Noda (3), Akihiro Sakatoku (1), Shogo Nakamura (1), Daisuke Tanaka (1)
 (1) University of Toyama, (2) Kanazawa University, (3) Rakuno Gakuen University
- P181-B P **Impact of Electrical Cultivation to Promote Bacterial Survival in Waste Sewage Sludge**
 *Shotaro TOYA(1), Yoshiyuki TAKATSUJI(1), Tetsuya HARUYAMA(1), Toshinari MAEDA(1)
 (1) School Life Sci. Systems Eng., Kyushu Inst. Technol.
- P182-C U **Performance Evaluation of Microbial Fuel Cells (MFC) using Inexpensive and Tough Ceramic Separators in Actual Wastewater**
 *Miki AOKI(1), Toshiyuki YAGI(1), Kyou IKERU(1), and Naoko YOSHIDA(1)
 (1) Nagoya Institute of Technology, Civil and Environmental Engineering, Aichi
- P183-B U **Optimization of in vivo observation of bacterial membrane vesicles using bioluminescence resonance energy transfer**
 *Mayu Kimoto (1), Chitose Oneyama (2), Hiroyuki Futamata (1), (3), Ryoma Nakao (4), Yosuke Tashiro (1)
 (1) Graduate School of Integrated Science and Technology, Shizuoka University, (2) Division of Cancer Cell Regulation, Aichi Cancer Center Research Institute, (3) Research Institute of Green Science and Technology, Shizuoka University, (4) Department of Bacteriology I, National Institute of Infectious Diseases

P184-C

Mixed culture resource recovery from glycerin pitch: extracellular polymeric substances (EPS) production, microbial communities and EPS as bio-flocculant

Wai Lun Ng (1), Li Wan Yoon (1), *Adeline Seak May Chua (2)

(1) School of Engineering, Faculty of Innovation and Technology, Taylor's University, Malaysia, (2) Sustainable Process Engineering Center (SPEC), Department of Chemical Engineering, Faculty of Engineering, Universiti Malaya, Malaysia

Phylogeny and taxonomy

- P185-B **An anaerobic bacterium belonging to the family *Gottschalkiaceae*, isolated from a xenic culture of an anaerobic protist**
*Ryuji Kondo (1), Takafumi Kataoka (1)
(1) Deprt. Mar. Sci. and Tech., Fukui Prefectural Univ.
- P186-C **Morphology and ultrastructure of marine bacterivorous bicosoecid *Hirugamonas aperieos* gen. et sp. nov.**
Tatsuya Kishikami, Marina Ota, Kasumi Ishida, Kazumasa Yamada, *Takafumi Kataoka
Faculty of Marine Science and Technology, Fukui Prefectural University
- P187-B U **Isolation and characterization of electrochemically active bacteria from an anaerobic digester**
Daichi Yoshizu(1), Miyu Tsuchiya(2), Atsushi Kouzuma(1), Kazuya Watanabe(1)
(1) Tokyo University of Pharmacy and Life Sciences, (2)J &T Recycling Corporation
- P188-A U **Evaluation of Canine Gut Microbiome at Different Ages: A Culturomics Approach**
*Hyunok Doo (1), Jinok Kwak (1), Sheena Kim (1), Yejin Choi (1), Juyoun Kang (1), Eun Sol Kim (1), Gi Beom Keum (1),
Srinivas Pandey (1), Sumin Ryu (1), Ki Hyun Kim (2), Seongsoo Hwang (2), Min-Jin Kwak (3), Jin Ho Cho (4),
Minho Song (5), Min Kyu Kim (5), Il Whan Kim (6), and †Hyeun Bum Kim (1)
(1) Department of Animal Resources Science, Dankook University, (2) Animal Welfare Research Team,
National Institute of Animal Science, RDA, (3) Department of Agricultural Biotechnology and Research Institute of
Agriculture and Life Science, (4) Division of Food and Animal Science, Chungbuk National University,
(5) Division of Animal and Dairy Science, Chungnam National University, (6) V1bio Inc
- P189-D U **Phylogenetic analysis and physiological-biochemical characterization of *Acidovorax* sp. FG27 that does not use glucose as a nutrient source**
*Ryujiro Yokota (1), Takashi Ano (1), Masahiro Okanami (1)
(1) Graduate School of Biology-Oriented Science and Technology, Kindai University
- P190-A U **Isolation and analysis of microbial strains SJ36 and AB25 that don't use glucose as a growth substrate**
*Sosuke Maeno(1), Takashi Ano(1), Masahiro Okanami(1)
(1)Graduate School of Biology-Oriented Science and Technology, Kindai University
- P191-D U **Characterization of a sulfur disproportionater representing a novel family in the order *Dissulfuribacterales* isolated from a hot spring microbial mat**
*Shu Murai, Tomohiro Watanabe, Manabu Fukui
Institute of Low Temperature Science, Hokkaido University
- P192-A U **Study on a novel bacterium strain B102 of the phylum *Actinomycetota* isolated from soil in the Shirakami Mountains**
*Sae Onodera, Akio Tonouchi
Grad. Sch. Agric. Life Sci., Hirosaki Univ.
- P193-D U **Exploring the Gut Microbial Diversity of Beagle Dogs Using Metagenomics**
*Jinok Kwak (1), Hyunok Doo (1), Sheena Kim (1), Yejin Choi (1), Juyoun Kang (1), Eun Sol Kim (1), Gi Beom Keum (1),
Srinivas Pandey (1), Sumin Ryu (1), Ki Hyun Kim (2), Seongsoo Hwang (2), Min-Jin Kwak (3), Jin Ho Cho (4),
Minho Song (5), Min Kyu Kim (5), Il Whan Kim (6), and †Hyeun Bum Kim (1)
(1) Department of Animal Resources Science, Dankook University, (2) Animal Welfare Research Team, National Institute of
Animal Science, RDA, (3) Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Science,
(4) Division of Food and Animal Science, Chungbuk National University,
(5) Division of Animal and Dairy Science, Chungnam National University, (6) V1bio Inc
- P194-A U **Taxonomic study of the class *Cyanidiophyceae* (Rhodophyta) inhabiting acid hot springs in Japan**
Kazuki Achiwa (1), Hiroyuki D. Sakai (2), Norio Kurosawa1
(1) Graduate School of Science and Engineering, Soka University, (2) RIKEN BioResource Research Center
- P195-B **Phylogenetic analysis of *Clostridium perfringens* strains isolated from the feces of a tiger (*Panthera tigris*), a lion (*Panthera leo*), and a jaguar (*Panthera onca*) reared at Kamine Zoo, Hitachi, Japan.**
*Shun Satomi(1), Koshiro Sato(1), Takashi Narihiro(2), Koji Uetsuka(1)
(1)Graduate School of Agriculture, Ibaraki University, (2)Bioproduction Research Institute, AIST

P196-C U **Phylogeny and physiology of an acid-tolerant ammonia-oxidizing bacterium *Nitrosospira* coexisting in comammox enrichment**
*Rikako Miyata (1), Takashi Mitsuboshi (1), Tatsuo Sumino (2), Yuichi Suwa (1), Hirotsugu Fujitani (1)
(1) Department of Biological Sciences, Chuo University, (2) Department of Engineering, Toyo University

P197-B U **Diversity and host specificity of lactic acid bacteria in the termite gut**
*K. Abe(1), M. Yuki(2), M. Shimizu(2), M. Ohkuma(2), S. Noda(1)
(1) College of Science, Ibaraki University, (2)BRC/JCM, RIKEN

Physiology, metabolism

- P198-C E **Effects and significance of cell-cell growth individuality in ammonia-oxidizing bacteria**
*Rino Isshiki(1), Hirotsugu Fujitani(2), Satoshi Tsuneda(3)
(1) BPRI, AIST, (2) Fac. Sci. Eng., Chuo Univ., (3) Sch. Adv. Sci. Eng., Waseda Univ.
- P199-B **Enhancing Codegradation of Trichloroethylene and Toluene through Intermittent Micro-Oxygenation in Anaerobic Consortia**
*Jer-Horng Wu, Wei-Yu Chen
Dep. Environ. Eng., Nat. Cheng Kung Univ. Taiwan
- P200-C U **Construction and application of inorganic polyphosphate-accumulating mutant of *Pseudomonas***
*Wataru Takahashi (1), Tomohiro Morohoshi (1)
(1) Grad. Sch. Reg. Devel. Creativity, Utsunomiya Univ.
- P201-B U **Degradation of biodegradable plastics by the genus *Microbacterium***
*Asuka Taniguchi (1), Tomohiro Morohoshi (1)
(1) Grad. Sch. Reg. Devel. Creativity, Utsunomiya Univ.
- P202-A P **Effects of Gelling Agents & Toxic Metabolites upon Microbial Colony Formation on Solid Medium.**
*Zhiwei Peng (1), Setsu Kato (1), Yutaka Nakashimada (1), Yoshiteru Aoi (1)
(1) Graduate School of Integrated Science for Life, Hiroshima University
- P203-D E **Single-cell genomics of fiber-adherent microbes in the rumen of cows**
*Shuhei Takizawa, Miho Fujimori, Takumi Shinkai
Institute of Livestock and Grassland Science, National Agriculture and Food Research Organization
- P204-A E **The signature microbial population of non-alcoholic steatohepatitis and its application in novel diagnosis method**
Min-Jin Kwak¹, Daniel Junpyo Lee (1), Anna Kang (1), Daye Mun (1), Woongji Lee (1), Hye Jin Choi (1), Jeongkuk Park (1), You Bin Choi (1), Seon-hui Son (1), Ju Young Eor (1), Younghoon Kim (1)
(1) Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Science, Seoul National University, Seoul 08826, Republic of Korea
- P205-D U **Why does *Nitrospira* thrive in variety of environments but resist growing in the laboratory?**
*Shino Sakamuki (1), Shingo Sadahiro (2), Kohei Maeno (2), Setsu Kato (2), Yutaka Nakashimada (2), Yoshiteru Aoi (2)
(1) School of Engineering, Hiroshima University, (2) Graduate School of Integrated Sciences for Life, Hiroshima University
- P206-A U **Bacterial morphological changes controlled by prophage**
*Jun Harada (1), Shusaku Kanematsu(1), Nobuhiko nomura (2), Masanori Toyofuku (2)
(1) Grad. Sch. Life Environ. Sci., Univ. Tsukuba, (2)Mics., Univ Tsukuba
- P207-D **SP70, an RpoH Homologue Discovered in the Carbon-Starvation Response of the Aerobic Photosynthetic Bacterium *Roseateles depolymerans*, Contributes to Heat and Photooxidative Stresses Tolerances.**
*Tetsushi Suyama(1), Nanako Kanno(2), Satoko Matsukura(1), Kotaro Chihara(1,3), Naohiro Noda(1,3), Satoshi Hanada(2)
(1) Biomed. Res. Inst., Natl. Inst. of Adv. Ind. Sci. and Tech. [AIST], (2) Grad. Sch. of Sci., Tokyo Metropol. Univ., (3) Fac. of Sci. and Eng., Waseda Univ.
- P208-A E **Physiological effects of sesaminol administration to mice with chronic alcohol intake**
*Daiki Oikawa (1), Hideo Ohira (2), Yuichi Aoki (3), Kunio Kiyomoto (4), Toru Nakayama (5)
(1) Grad. Sch. of Biost., Kyoto Univ., (2) Fac. of Nutr., Kobe Gakuin Univ., (3) ToMMo, Tohoku Univ., (4) Kiyomoto Co., Ltd., (5) Grad. Sch. of Eng., Tohoku Univ.
- P209-B E **The potential pathway of nitrous oxide conversion by chemoautotrophic nitrogen oxidizers**
*Hui-Ping Chuang(1), Wei-Ju Wu(2), Pin-Chen Chen(3)
(1)Sustainable Environment Research Laboratories, National Cheng Kung University, Tainan, Taiwan;
(2)Bachelor Degree Program in Orchid Industry Application, Chang Jung Christian University,
(3)Department of Forestry and Natural Resources, National Chiayi University
- P210-C **Perturbation-response relation and network topology in metabolic networks**
Takashi Okada
Institute for Life and Medical Sciences, Kyoto University (1)

- P211-B U **Individual-level phenotypic heterogeneity in ammonia-oxidizing bacteria revealed by single-cell observation.**
*Shuto Ikeda (1), Hirotsugu Fujitani (2), Satoshi Tsuneda (1)
(1) Department of Life Science and Medical Bioscience, Faculty of Advanced Science and Engineering, Waseda University,
(2) Department of Biological Sciences, Faculty of Science and Engineering, Chuo University
- P212-C P **Probiotics improved weight loss in obese canines and restructured the gut microbiome by altering energy metabolism**
*Anna Kang (1), Daye Mun (1), Woongji Lee (1), Hye Jin Choi (1), Jeongkuk Park (1), You Bin Choi (1), Daniel Junpyo Lee (1),
Seon-hui Son (1), Min-Jin Kwak (1), Juyoung Eor (1), Jungwoo Yang (2), Sangnam Oh (3), Younghoon Kim (1)
(1) Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Science,
Seoul National University, Seoul 08826, Republic of Korea, (2) Ildong Bioscience, Pyeongtaek 17957, Republic of Korea
(3) Department of Functional Food and Biotechnology, Jeonju University, Jeonju 55069, Republic of Korea
- P213-B **Genetic and physiological characterization of iron-reducing filamentous fungi under hypoxic conditions**
*Fumihiro Kojima(1), Rikuto Sugimoto(1), Yūki Yokoi(1), Nanami Matsuoka(1), Akifumi Hosoda(2)
(1)Grad. Sch. of Agri., Univ. Meijo, (2)Fac. of Agri., Univ. Meijo
- P214-C E **Characterization of *Corallococcus* sp. strains KH5-1 and NO1, novel *Myxobacterium* isolated from activated sludge**
*Shun Tomita(1), Ryosuke Nakai(1), Kyohei Kuroda(1), Hazuki Kurashita(1, 2),
Masashi Hatamoto(2), Takashi Yamaguchi(2), Takashi Narihiro(1)
(1)Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST),
(2)Department of science of technology innovation, Nagaoka University of Technology
- P215-B P **Interaction between *Cupriavidus-Sphingobium* sp. bacterial strains**
*Hirano Shoko (1), Xiong Zhiyu (1), Sakogawa Sayaka (1), Kato Hiromi (1), Ohtsubo Yoshiyuki (1), Nagata Yuji (1)
(1) Grad. Sch. of Life Sci., Tohoku Univ.
- P216-A P **The molecular profiling of commensal *Lactobacillus* in post-weaning piglets following supplementation with multi-strain probiotics**
Woongji Lee*(1), Min-Jin Kwak*(1),Juyoung Eor*(1), Daye Mun(1), Hyejin Choi(1), Anna Kang(1),
Jeongkuk Park(1), You-Bin Choi(1), Daniel Junpyo Lee(1), Seon-hui Son(1), Younghoon Kim(1)*
(1)Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Science,
Seoul National University, Seoul 08826, Republic of Korea)
- P217-D U **Membrane vesicles from *Shewanella oneidensis* MR-1 promote respiration of *Pseudomonas aeruginosa* PAO1**
*Riku Takeda (1), Masanori Toyofuku (2, 3), Nobuhiko Nomura (2, 3), Yoshihide Tokunou (2, 4)
(1) Grad. Sch. Sci. Tech., Univ. Tsukuba, (2) Dept. Life Env. Sci., Univ. Tsukuba, (3) MiCS, Univ. Tsukuba, (4) NIMS
- P218-A P ***Acetobacter* symbionts contribute to blue light tolerance in *Drosophila***
*Yuta Takada(1), Wakako Ikeda-Ohtsubo(1), Naoyuki Fuse(2), Masatoshi Hori(1)
(1)Graduate School of Agricultural, Tohoku University (2)Graduate School of Pharmaceutical Sciences, Tohoku University
- P219-D **Characterization of motile *Latilactobacillus curvatus* isolated from animal guts**
*Yuya Nagata(1), Kenji Yokota(1), Akinobu Kajikawa(1)
(1)Graduate School of Applied Bioscience, Tokyo university of Agriculture
- P220-A U **Reverse genetic analysis to elucidate the significance that streptomycetes produce chitinases of different evolutionary origins**
*Kubota Keisuke(1), Akihiro Saito(2)
(1)Graduate School of Science and Technology, Shizuoka Institute of Science and Technology (SIST),
(2)Faculty of Science and Technology, SIST
- P221-D P **Laboratory observation of electrosynthetic growth of a bacterium collected from a deep-sea hydrothermal field**
Hinako Masukawa(1, 2), Runa Kobayashi(2, 3), Yuki Morono(4), Motoo Ito(4), Masafumi Kameya(1, 5),
Ken Takai(2), Hiroyuki Arai(1, 5), Masahiro Yamamoto(2, 3)
(1) Department of Biotechnology, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan,
(2) Institute for Extra-cutting-edge Science and Technology Avant-garde Research (X-star), Japan Agency for Marine-Earth
Science and Technology (JAMSTEC), Japan, (3) Department of Life and Environmental System Science, Graduate School of
Nanobioscience, Yokohama City University, Japan, (4) Kochi Institute for Core Sample Research, JAMSTEC, Japan,
(5) CRIM, Univ. Tokyo, Japan

- P222-A U **Simultaneous nitrite oxidation-nitrate reduction in anammox bacteria**
*Seiya Kawasaki (1), Mamoru Oshiki (1), Satoshi Okabe (1)
(1) Graduate School of Engineering, Hokkaido University
- P223-B U **Instability of Awakening from Dormancy in *Nitrospira*, known for resisting isolation from environments**
*Kohei Maeno(1), Shingo Sadahiro(1), Yutaka Nakashimada(1), Setsu Kato(1), Yoshiteru Aoi(1)
(1)Graduate School of Integrated Sciences for Life, Hiroshima University
- P224-C P **Application of LC-ESI-HRMS metabolomics to study the cooperative bacterial biotransformation of a model asphaltene**
Miharu Sakai, Jiro F. Mori, Robert A. Kanaly
Grad. Sch. of Nanobiosci., Yokohama City Univ.
- P225-B U **Why do fastidious microorganisms grow on the diluted medium?**
*Nanami Hiramatsu (1), Chiho Murakami (1), Yuka Fujii (1), Karin Handa (1), Saki Ishii (1),
Arowu R. Tanaka (1), Yuichiro Sato (1), Kinjiro Morimoto (1)
(1) Faculty of Pharmacy, Yasuda Woman's University
- P226-C **Exploration of tetramethylammonium hydroxide degradation genes by genome and transcriptome analysis in novel methanogen, strain NY-STAYD.**
*Akinori Iguchi(1), Toshio Yamaguchi(1), Ryo Kayamori(1), Saori Hori(1), Toru Shigematsu(1),
Yasuyuki Takemura(2), Masataka Aoki(3), Kazuaki Syutsubo(3),(4)
(1) Niigata Univ. Pharm. Med. Life Sci., (2) Nat. Inst. Technol., Wakayama Col., (3) NIES, (4) UTokyo
- P227-B U **A novel nitrite-oxidizing *Nitrobacter* sp. strain A67 isolated from agricultural soil adapts to moderately acidic pH**
*Ayano Kaneko (1), Yuta Endo (1), Takuya Ninomiya (1), Megumi Kuroiwa (1), Hirotsugu Fujitani (1), Yuichi Suwa (1)
(1) Department of Biological Sciences, Chuo University
- P228-C U **Identification of bacterial surface stress-related factors that trigger multilamellar outer vesicle formation**
*Erika Suzuki (1), Yuhei O Tahara (2), Makoto Miyata (2), Hiroyuki Futamata (1), 3, Yosuke Tashiro (1)
(1) Graduate School of Integrated Science and Technology, Shizuoka University, (2) Graduate School of Science, Osaka Metropolitan University, (3) Research Institute of Green Science and Technology, Shizuoka University
- P229-B U **Identification of *n*-alkane degrading enzymes in *Rhodococcus qingshengii* N9T-4**
*Yuka Sato(1), Nobuhiro Obi(1), Kazuhide Kimbara(1), Nobuyuki Yoshida(1), Masaki Shintani(1),(2)
(1)Graduate School of Integrated Science and Technology, Shizuoka University,
(2)Reserch Institute of Green Science and Technology, Shizuoka University
- P230-A U **The elucidation of siderophore-producing mechanisms in *Saprtobacteria* sp. YH-1 and YH-2**
*Rena Ohya (1), Chiho Murakami (1), Arowu R. Tanaka (1), Yuichiro Sato (1),
Yoshiteru Aoi (2), Masaki J. Fujita (3), Kinjiro Morimoto (1)
(1) Fac. of Phar., Yasuda-Woman's Univ., (2) Grad. Sch. of Int. Sci. for Life, Hiroshima Univ.
(3) Grad. Sch. of Mar. Sci., Hokkaido Univ.
- P231-D U ***Rhodococcus* sp. LC-2 mechanism for degrading lumichrome**
*Daichi Shiota (1), Yuki Doi (1)(2), Naoki Takaya (1)(2)
(1) Institute of Life and Environmental Sciences, University of Tsukuba,
(2) Microbiology Research Center for Sustainability, University of Tsukuba
- P232-A P **Study of Nitrogenous Gas Compound, NO and N₂O, Produced by Ammonia-Oxidizing Microbes**
Yun Ji Choi(1) and Man-Young Jung(1),(2)
(1)Interdisciplinary Graduate Program in Advance Convergence Technology and Science,
(2)Department of Biology Education, Jeju National University, 102 Jejudaehak-ro, Jeju-si, Jeju-do, Republic of Korea
- P233-D **High resolution analysis of denitrification fluxes by a novel ¹⁵N,¹⁸O tracer method**
*Megumi Kuroiwa(1), Yuichi Suwa(2), Kohei Oba(1), Akihiko Terada(1), Keisuke Koba(3)
(1) Tokyo Univ. Agr. & Technol., (2) Chuo Univ., (3) Kyoto Univ.
- P234-A U **Molecular mechanism of iodate respiration by *Pseudomonas* sp. SCT**
*Nana Katori (1), Takuma Kubo (1), Seigo Amachi (1)
(1) Graduate School of Horticulture, Chiba University

- P235-D U **Nitrate promotes the growth and viability of human anaerobic commensal *Veillonella dispar* in lactate-deficient environments via utilization of specific amino acids**
 *Jia-He Hung (1), Shi-Min Zhang (2), Shir-Ly Huang (3)
 (1) School of Medicine, National Yang Ming Chiao Tung University,
 (2) Program in Molecular Medicine, National Yang Ming Chiao Tung University,
 (3) Institute of Microbiology and Immunology, National Yang Ming Chiao Tung University
- P236-A U **Effect of chlorite dismutase-like proteins on iodate respiration by *Pseudomonas* sp. strain SCT**
 *Haruna Kuge (1), Amachi Seigo(2)
 (1)Faculty of Horticulture, Chiba University, (2)Graduate School of Horticulture, Chiba University
- P237-B U **Distinct N₂O production dynamics by cluster 7 ammonia-oxidizing bacterial isolates from partial nitrifying bioreactors: Genomic and physiological insights**
 *Akito Oishi (1), Satoru Ono (1), Toshikazu Suenaga (2), Hirotsugu Fujitani (3),
 Yuichi Suwa (3), Megumi Kuroiwa (1), Akihiko Terada (1)
 (1)Tokyo Univ. Agr. & Technol., (2) Hiroshima Univ., (3) Chuo Univ.
- P238-C U **The ROS generation and cell elongation caused by electron-beam irradiation of microbial cells**
 Junya Katai (1), Yuta Nagano (1), Tetsuo Narumi (1), Masaki Shintani (1), Yosuke Tashiro (1),
 Wataru Inami (2), Yoshihide Kawata (2), Fumihiro Sassa (3), Hiroyuki Futamata (1), (4)
 (1) Department of Applied Chemistry and Biochemical Engineering, Graduate School of Engineering, Shizuoka University,
 Shizuoka University, (2) Research Institute of Electronics, Shizuoka University, (3) Department of Electronics Faculty of
 Information Science and Electrical Engineering, (4) Research Institution of Green Science and Technology, Shizuoka University
- P239-B U **Biodegradation of Poly(butylene adipate-co-terephthalate)(PBAT) mulch film by elite fungal strain *Purpureocillium lilacinum* BA1S isolated from farmland.**
 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
- P240-C E **Cultivation of anaerobic dead cell scavenger**
 *Yuga Hirakata (1), Masaru K. Nobu (2), Ran Mei (2), Kana Morinaga (1), Hideyuki Tamaki (1),
 Xian-ying Meng (1), Takahiro Watari (3), Masashi Hatamoto (3), Takashi Yamaguchi (3,4)
 (1) Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), (2) Institute for
 Extra-Cutting-Edge Science and Technology Avant-Garde Research (X-star), Japan Agency for Marine-Earth Science and
 Technology (JAMSTEC), (3) Department of Civil and Environmental Systems Engineering, Nagaoka University of Technology,
 (4) Department of Science of Technology Innovation, Nagaoka University of Technology
- P241-B P **Syntrophic sulfur compound exchange between anoxygenic photosynthetic bacteria and respiratory bacteria for anaerobic benzoate degradation**
 *Miao He (1), Shin-ichi Nishitani (1), Toko Hisano (1), Shin Haruta (1)
 (1) Department of Biological Sciences, Tokyo Metropolitan University
- P242-C **Screening of microorganisms catabolizing sesame- or pepper-derived metabolites**
 *Takuto Kumano(1,2), Pu Jian(1), Yoshiteru Hashimoto(1,2), Michihiko Kobayashi(1,2,3)
 (1) Agro-Biological Resource Sciences, University of Tsukuba, (2) MICS University of Tsukuba, (3) QiLS University of Tsukuba
- P243-B P **Microbial activity analysis in South Atlantic marine sediments**
 *Mako Takada(1,2), Shu Ying Wee(3), Jason B. Sylvan(3), Susumu Yoshizawa(1,2), Yuki morono(4)
 (1)Grad. Sch. Front. Sci., UTokyo, (2)AORI, UTokyo, (3)Texas A&M University, (4)JAMSTEC
- P244-A U **Identification and Analysis of Antioxidant Metabolites Produced by Bacterial Strains Isolated from Fermented Foods and Soil**
 *Ha Jeong Jang, Ji Yeon Kang, Chul Won Lee
 Department of Chemistry, Chonnam National University, Gwangju 61186, Republic of Korea
- P245-D U **Elucidation of oxygen tolerance mechanisms in anammox bacteria**
 *Keishi Nukada(1), Mamoru Oshiki(1), Satoshi Okabe(1)
 (1)Hokkaido Univ. Faculty Eng.

P246-A U **Artificial mediator enhances extracellular electron uptake in *Sporomusa sphaeroides***

*Kota Honjo(1), Takashi Fujikawa(2), Sota Ihara(2),(3), Yuki Iwasaki(4), Akihiro Okamoto(2),(5),(6) Zenichiro Kimura(4)

(1)Advanced Courses, National Institute of Technology, Kure College,

(2)Research Center for Macromolecules and Biomaterials, National Institute for Materials Science (NIMS),

(3)Graduate School of Science and Technology, University of Tsukuba,

(4)Department of Environmental and Civil Engineering, National Institute of Technology, Kure College,

(5)Graduate School of Chemical Sciences and Engineering, Hokkaido University,

(6)Graduate School of Life and Environmental Sciences, University of Tsukuba

Symbiosis, interaction, theory

- P247-D U **Characterization of quorum-sensing system in plant pathogenic bacterium, *Burkholderia plantarii***
*Ami Sugawara (1), Kazumi Takita (1), Nobutaka Someya (2), Tomohiro Morohoshi (1)
(1) Grad. Sch. Reg. Devel. Creativity, Utsunomiya University, (2) NARO
- P248-A P **Slug pathogenic nematodes have diverse symbiotic bacteria in their gut**
*Kanata Ichiishi (1), Ayaka Sato (1), Natsumi Kanzaki (2), Ryoji Shinya (1)
(1)Sch. of Agri., Meiji Univ., (2)Kansai Res. Ctr., FFPRI
- P249-D **Bacterial volatile organic compounds affect plant growth promotion**
Ryo Kanbayashi(1), Ayaka Yasuda(1), Manato Umezu(1), Momoko Hayashi(1), *Yasuyuki Kawaharada(1)
(1) Faculty of Agriculture, Iwate University
- P250-A U **Morphology and genome analysis of Alphaproteobacteria, specifically attached to other bacteria species**
*Takato Saito(1), Satoshi Murooka(1), Katsura Igai(1), Kazuki Takahashi(1),
Tomoyuki Sato(2), Takumi Murakami(1), Moriya Ohkuma(2), Yuichi Hongoh(1,2)
(1) Graduate School of Life Science and Technology, Tokyo Institute of Technology, (2) RIKEN BioResource Research Center
- P250.5-B U **Influence of Rhizobia on Synthetic Communities**
*Yuina Nomura(1), Momoka Yorinaga(1), Tomoki Nishioka(2), Hideyuki Tamaki(2), Takuya Suzaki(1), Norio Takeshita(1)
(1)Univ. Tsukuba, (2)AIST
- P251-C U **Ecology and genomes of *Mycoplasmata* associated with protists in the termite gut**
*Nao Sugiyama(1) Kazuki Takahashi(1), Kenjiro Seki(1), Yutaro Horikawa(1), Tomoyuki Sato(2),
Hirokazu Kuwahara(1), Takumi Murakami(1), 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
- P252-B U **Discovery and SAG/MAG analysis of novel *Deferribacterota* species associated with protists in the guts of termites and *Cryptocercus cockroaches***
*Naoya Maruoka (1), Rinpei Kudo (1), Katsura Igai (1), Masahiro Yuki (2),
Michiru Shimizu (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
- P253-C **N₂O-reducing *Bacillaceae* strain possessing clade II *nosZ* isolated from red clover nodule**
*Nadia Aliyatul Izzah (1), Chisato Hayama (2) and Reiko Sameshima (3)
(1) Graduate School of Integrated Science and Technology, Shizuoka University,
(2) Faculty of Agriculture, Shizuoka University, (3) Academic Institute, Shizuoka University
- P254-B P **Estimation of CPR hosts based on horizontal gene transfers identified by high-quality genomes**
*Yuna Nakagawa (1), Yuki Nishimura (1), Kimiho Omae (1), Kento Tominaga (1), Sachiko Masuda (2),
Arisa Shibata (2), Ken Shirasu (2), Wataru Iwasaki (1)
(1) Grad. Sch. of Fro. Sci., Univ. Tokyo, (2) CSRS, RIKEN
- P255-C P **Analysis of the symbiotic mechanism between the termite intestinal protist *Mixotricha paradoxa* and two cell-surface symbiotic bacteria**
*Jieyang Fu(1), Yiting Liu(1), Katsura Igai(1), Hirokazu Kuwahara(1), Kumiko Kihara(1),
Takumi Murakami (1), 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
- P256-B **Uncovering plant microbiomes using long-read metagenomic sequencing**
*Sachiko Masuda a, Pamela Gan a, Yuya Kiguchi bcd, Mizue Anda b, Kazuhiro Sasaki e,
Arisa Shibata a, Wataru Iwasaki b, Wataru Suda d and Ken Shirasu a,f
a RIKEN Center for Sustainable Resource Science b Graduate School of Frontier Sciences, The University of Tokyo
c Graduate School of Advanced Science and Engineering, Waseda University d RIKEN Center for Integrative Medical Sciences
e Graduate School of Agricultural and Life Sciences, The University of Tokyo f Graduate School of Science, The University of Tokyo

- P257-A U **Identification of genes involved in membrane vesicle in formation *Paracoccus denitrificans***
 *Yusei Suzuki (1), Nomura Nobuhiko (2), (3), Masanori Toyofuku (2), (3)
 (1) University of Tsukuba, Department of Biology, School of Life and Environmental Studies,
 (2) University of Tsukuba, Life and Environment, (3) University of Tsukuba, MiCS
- P258-D U **Single-cell genomics of dominant *Betaproteobacteria* in the termite gut**
 *Yudai Itagaki(1), Kazuki Takahashi(1), Masahiro Yuki(2), Michiru Shimizu(2),
 Takumi Murakami(1), Moriya Ohkuma(2), Yuichi Hongoh(1),(2)
 (1)Graduate School of Life Science and Technology, Tokyo Institute of Technology, (2)RIKEN BioResource Research Center
- P259-A U **Discovery and genome analysis of endosymbiotic *Planctomycetota* associated with protists in the termite gut.**
 *Sho Osuka(1), Kazuki Takahashi(1), Katsura Igai(1), Masahiro Yuki(1), Michiru Shimizu(1),
 Hirokazu Kuwahara(1), Takumi Murakami(1), Moriya Okuma(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
- P260-D U **Genome-wide screen for discovering cell-cell communication molecules in fission yeast**
 *Ryotaro Yoshizumi(1), (2), Shunichi Miura(1), Akihisa Matsuyama(1), (2), Yoko Yashiroda(2),
 Minoru Yoshida(1), (2), (3), Shinichi Nishimura(1), (3), (4)
 (1) Graduate School of Agricultural and Life Sciences, The University of Tokyo, (2) RIKEN CSRS, (3) Collaborative Research
 Institute for Innovative Microbiology, The University of Tokyo, (4) Graduate School of Integrated Science for Life, Hiroshima
 University
- P261-A U **Discovery of a unique activity of diaphorin on bacteria and exploration of its action mechanism**
 *Rena Takasu (1), Nozomu Tanabe (1), Yuka Yasuda (1), Takashi Izu (1), Yasuhiro Kamei (2),
 Maki Kondo (2), Yuu Hirose (1), Atsushi Nakabachi (1),(3)
 (1) Graduate School of Engineering, Toyohashi University of Technology, (2) National Institute for Basic Biology,
 (3) Research Center for Agrotechnology and Biotechnology, Toyohashi University of Technology
- P262-D P **Role of *Malassezia* in Regulating *Staphylococcus* species in Skin Microbiome Composition**
 *Eun Sun Lyou (1) and Tae Kwon Lee (1)
 (1) Department of Environmental Engineering, Yonsei University, Wonju
- P262.5-A U **Key populations and mechanisms for mitigating the ammonium inhibition in anaerobic digestion by
 augmenting tolerant microbial consortia**
 *Shintaro Nagao(1), Ziyan Li(1), Daisuke Inoue(1), Michihiko Ike(1)
 (1) Grad. Sch. of Eng., Univ. Osaka
- P263-A **Effects of different plant cell wall constituent substrates on termite gut microbiota**
 Gaku Tokuda (1), Reiko Sekine (1)
 (1) TBRC, Univ. Ryukyus
- P264-D P **Cell-to-cell communication induces a prophage in *Pseudomonas aeruginosa***
 *Ayaka Uehara(1), Susumu Yoshizawa(2), Kazuhiro Kogure(2), Nobuhiko Nomura(3)(4), Masanori Toyofuku(3)(4)
 (1)Grad. Sch. of Sci. Tech., Univ. Tsukuba, (2)AORI, Univ. Tokyo, (3)Fac. Life and Env. Sci, Univ. Tsukuba,(4)MiCS, Univ. Tsukuba
- P265-A **Evaluation of biological activity of diaphorin on various bacterial species**
 *Takashi Izu (1), Rena Takasu (1), Atsushi Nakabachi (1), (2)
 (1) Graduate School of Engineering, Toyohashi University of Technology,
 (2) Research Center for Agrotechnology and Biotechnology, Toyohashi University of Technology
- P266-D **Microbiome analysis of the Japanese knotweed psyllid *Aphalara itadori* and its relatives**
 *Kiyosuke Nishino (1), Hiromitsu Inoue (2), Yuu Hirose (1), Atsushi Nakabachi (1), (3)
 (1) Graduate School of Engineering, Toyohashi University of Technology, (2) Institute for Plant Protection, National Agriculture
 and Food Research Organization, (3) Research Center for Agrotechnology and Biotechnology, Toyohashi University of
 Technology
- P267-A U **Changes of the structure of duckweed microbiome using obligate predatory bacteria, *Bacteriovorax* sp. HI3
 and *Bdellovibrio* sp. BIS2**
 *Tomomi Sugiyama(1), So Nakamura(1), Hidehiro Ishizawa(2), Daisuke Inoue(1), Michihiko Ike(1)
 (1)Grad. Sch. of Eng., Osaka Univ., (2)Grad. Sch. of Eng., Univ. Hyogo

- P268-D **Microbiome analysis of six psyllid species of the family Carsemaridae**
*Junnosuke Maruyama (1), Hiromitsu Inoue (2), Yuu Hirose (1), Atsushi Nakabachi (1),(3)
(1)Graduate School of Engineering, Toyohashi University of Technology, (2)Institute for Plant Protection, National Agriculture and Food Research Organization, (3)Research Center for Agrotechnology and Biotechnology, Toyohashi University of Technology
- P269-A U **Characterization of bacterial metabolites inducing colony morphology changes in heterologous bacteria**
*Hokuto Murata(1), Tomoko Aizawa(2), Makoto Urai(1)
(1)Department of Chemistry for Life Sciences and Agriculture, Tokyo University of Agriculture, (2)Department of Bioscience, Nihon University
- P270-B U **Isolation and Identification of Plant Growth-Promoting Rhizobacteria that can reduce Salt Stress in Plants derived from *Salicornia europaea***
*Yuto Fuke (1), Takahiko Koizumi (1), Hiromasa Saitoh (1), Kosuke Yamamoto (1)
(1) Grad. School of Life Sci., Tokyo Univ. of Agr
- P271-C P **Investigating the Effects of a Microbial Gut Symbiont on Brain Development of Leguminous Pest *Riptortus pedestris***
*Antoine-Olivier Lirette(1,2), Hiroyuki Morimura (2), Yoshitomo Kikuchi (2)
(1)Graduate School of Agriculture, Hokkaido University, (2)National Institute of Advanced Industrial Science and Technology (AIST)
- P272-B **A novel bacterium, *Mangrovibacterium* sp. strain Z1-71, isolated from the terrestrial subsurface environment and its co-cultivation with a methanogenic archaeon ~ How do they produce methane? ~**
*Akio Ueno(1), Kiyoshi Sato(1), Shuji Tamamura(1), Takuma Murakami(1), Hidenori Inomata(1), Satoshi Tamazawa(1), Yuki Amano(2), Kazuya Miyakawa(2), Takeshi Naganuma(3), Toshifumi Igarashi(1,4,5)
(1)H-RISE, (2)JAEA, (3)Hiroshima University, (4)Asahikawa College KOSEN, (5)Hokkaido University
- P273-C U **Whole genome analysis of dual bacterial symbionts in the mulberry psyllid *Anomoneura mori***
*Yuka Yasuda (1), Hiromitsu Inoue (2), Yuu Hirose (1), Atsushi Nakabachi (1),(3)
(1) Department of Applied Chemistry and Life Science, Toyohashi University of Technology, (2) Institute for Plant Protection, National Agriculture and Food Research Organization, (3) Research Center for Agrotechnology and Biotechnology, Toyohashi University of Technology
- P274-B U **Move to P258-D**
- P275-C U **Plant growth-promoting bacterium Y132 has diverse effects on the growth of duckweed.**
*Tomoya Nozaki(1), Shogo Ito(2), Makoto Kashima(3), Tokitaka Oyama(2), Takashi Ano(1), Masahiro Okanami(1)
(1)Graduate School of Biology-Oriented Science and Technology, Kindai Univ, (2)Graduate School of Science, Kyoto Univ, (3)Faculty of Science, Toho Univ.
- P276-B **Identification of essential bacterial genes in insect-microbe symbiosis**
*Kazutaka Takeshita (1)
(1) Fac. of Bioresour. Sci., Akita Pref. Univ.
- P277-A P **Unique cross-domain symbiosis between *Candidatus* Patescibacteria/ candidate phyla radiation (CPR) and methanogens**
*Meri Nakajima(1),(2), Ryosuke Nakai(2), Yuga Hirakata(2), Shuka Kagemasa(3), Kengo Kubota(4),(5), Taro Q.P. Noguchi(6), Kyosuke Yamamoto(2), Hisashi Satoh(1), Masaru K. Nobu(2), (7), Takashi Narihiro(2), Kyohei Kuroda(2)
(1)Graduate School of Engineering, Hokkaido University, (2)National Institute of Advanced Industrial Science and Technology (AIST), (3)National Institute of Technology, Anan College, (4)Graduate School of Engineering, Tohoku University, (5)Graduate School of Environmental Studies, Tohoku University, (6)National Institute of Technology, Miyakonjo College, (7)Japan Agency for Marine-Earth Science and Technology
- P278-D P **Characterization of Symbiotic Nodulation Phenotypes of the Genera *Vigna*, and Glycine regulated by *Bradyrhizobium* Type III Secretion System**
*Jannat Mahbubah(1), Yasuyuki Kawaharada((1),(2))
(1)The United Grad. Sch. of Agri. Sci. , Iwate Uni., (2)Fac. of Agri., Iwate Uni.

- P291-A U **Complementation of incomplete metabolisms enable functional homeostasis in complex microbial systems**
 *Rei Ikeda (1), Masahiro Honjo (2), Nobuhiro Takahashi (1), Reika Mimoto (3), Yasuhisa Saito (4), Takashi Okada (5), Motohiko Kimura (1), Yosuke Tashiro (1), Hiroyuki Futamata (1,2,6)
 (1) Grad. Sch. Integr. Sci. Technol., Shizuoka Univ., (2) Grad. Sch. Sci. Technol. Shizuoka Univ., (3) Fac. Eng. Shizuoka Univ., (4) Grad. Sch. Sci. Eng. Shimane Univ., (5) Inst. Med. Biol. Kyoto Univ., (6) Res. Inst. Green Sci. Technol., Shizuoka Univ.
- P292-D **Violacein production and its ecological advantages in a barley-root isolate, *Duganella* sp. R57**
 *Katsumoto Kishiro (1), Akio Tani (1)
 (1) Institute of Plant Science and Resources, Okayama University
- P293-A **The influence of the soil-like fractal structures on the microbial growth**
 *Manami Ito (1,2), Ayaka Itani (3), Masayuki Yamamura(1), Masahiro Takinoue (1), Norio Takeshita (3)
 (1) Tokyo Institute of Technology, (2) NTT Space Environment and Energy Laboratories, (3) University of Tsukuba
- P294-D U **Diversity and N₂O uptake of endophytic bacteria of red clover in Finland**
 *Hinata Komazawa(1), Hem Raj Bhattarai(2), Narasinha Shurpali(2), Reiko Sameshima-Saito(3)
 (1)Graduate School of Integrated Science and Technology, Shizuoka University, (2)Production systems, Natural Resources Institute Finland, (3)Academic Institute, Shizuoka University
- P295-A U **A Minority Population of Non-dye-decolorizing bacterium enhances the Activity of Azo Dye-decolorizing bacterium**
 *Koki Ozaki(1), Yuta Oike(1), Kohei Iwata(2), Tsukasa Ito(1)
 (1)Grad. Sch. of Sci. Eng., Gunma Univ., (2)Fac. of Sci. Eng., Gunma Univ.
- P296-D U **Analysis of Emergence Mechanism of Alkaliphilic bacteria emerging after High-light culture of Spirulina.**
 *Haruka Komagata(1),Yutaka Sakamaki(1),Sayuri Uchida(2),Makoto Urai(2),Yu Kanesaki(3),Kei Asai(1),Satoru Watanabe(1)
 (1)Faculty of Life Sciences, Tokyo University of Agriculture,(2)Department of Chemistry for Life Sciences and Agriculture, Faculty of Life Sciences, Tokyo University,(3)Shizuoka Instrumental Analysis Center, Shizuoka University
- P297-A U **Characterization of formaldehyde-degrading *Pseudomonas* sp. UF1 isolated from activated sludge and application to industrial wastewater treatment**
 *Koki Toguchi (1), Maho Kobayashi (2), Minato Kodera (2), Atsuya Seki (2), Hidenori Kofune (3), Yasushi Hongo (3), Norihiro Kato (2), Eri Nasuno (2)
 (1) Sch. of Eng., Utsunomiya Univ., (2) Grad. Sch. of Regional Development and Creativity, Utsunomiya Univ., (3) AION Co., Ltd.
- P298-B U **Analysis of metabolites that enable coexistence of different microbes.**
 Nobuhiro Takahashi (1), Abd Rahman Jabir Mohd Din (2), Yosuke Tashiro (1),(3), Hiroyuki Futamata (1),(3),(4)
 (1) Graduate School of Integrated Science and Technology, Shizuoka University, (2) Innovation Centre in Agritechology for Advanced Bioprocess, UTM Pagoh Research Center, (3) Graduate School of Science and Technology, Shizuoka University, (4) Research Institution of Green Science and Technology, Shizuoka University
- P299-C **Unraveling Cooperative Dynamics of Comammox *Nitrospira* and Anammox Bacteria in Hypoxia Reactor for Enhanced Ammonium Removal**
 *Yung-Hsien Shao(1), Huei-Wen Chen(1), Jer-Horng Wu (1)
 (1)Department of Environmental Engineering, National Cheng Kung University, Taiwan
- P300-B U **Alternative stable state of bacterial communities in aquaculture tanks under disturbing events**
 *Genta Shima (1), Hirokazu Toju (2)
 (1) Grad. Sch. of Science, Kyoto Univ. (2) Grad. Sch. of Biostudies, Kyoto Univ.
- P301-C P **Comprehensive Analysis of the Symbiotic Microbiome of Fagaceae Seed Parasitic Insects**
 *Kazuné Hirata(1), Toju Hirokazu(2)
 (1)CER, Kyoto Univ. (2)Grad. Sch. of Biostudies, Kyoto Univ.
- P302-B **Elucidation of the functional and evolutionary aspects of quorum sensing in *Roseomonas* species eavesdropping on other bacterial talk through the signaling molecules**
 *Eri Nasuno (1), Ayano Tashiro (2), Norihiro Kato(1)
 (1) Grad. Sch. of Regional Development and Creativity, Utsunomiya Univ., (2) Sch. of Eng., Utsunomiya Univ.
- P303-C U **Unique swimming style of *Helicobacter pylori* in thin and narrow environments**
 *Sarara Yokohama (1), Emiko rinnbara (2), Aoba Yoshioka (1), Yoshiki Shimada (3), Tetsuro Kan (3), Tsuyoshi Kennri (2), Daisuke Nakane (1)
 1)Eng. Sci., UEC., (2) Dept. Bactriol II, NIID., (3)Mech. and Int. Sys. Eng., UEC.

- P304-B P **Mathematical modeling predicted microbial interactions in dynamic coexistence of competing bacteria under the chemostat conditions**
- *Masahiro Honjo(1), Kenshi Suzuki(2), Yasuhisa Saito(3), Kazuhiro Takeda(4), Motohiko Kimura(5), Hidehiro Ishizawa(5), Yosuke Tashiro(4), Hiroyuki Futamata(1),(4),(6)
- (1)Grad. Sch. of Sci. and Technol., Shizuoka Univ., (2)Dept. of Biotechnol., Grad. Sch. of Agri. and Life Sci., The Univ. of Tokyo, (3)Dept. of Math., Shimane Univ., (4)Grad. Sch. of Integr. Sci. and Technol., Shizuoka Univ., (5)Sch. of Eng. and Grad. Sch. of Eng., Univ. of Hyogo, (6)Green res. Inst., Shizuoka Univ.

Plant pathology

- P305-A U **Search for novel inhibitory compounds against the rice blast fungus by co-cultivation of endophytic fungus isolated from wild mushrooms**
- *Takuma Hirooka(1), Masatoshi Ino(2), Makoto Ueno(1,2)
- (1) Grad. Sch. of Nat. Sci. Tec., Univ. Shimane, (2) Uni. Grad. Sch. of Agri. Sci., Univ. Tottori
- P306-D P **Comparative analysis of two quorum sensing-systems in plant pathogen, *Burkholderia gladioli***
- *Kazumi Takita(1), Nobutaka Someya(2), Tomohiro Morohoshi(1)
- (1) Grad. Sch. of Reg. Dev. and Creat., Univ. Utsunomiya, (2) Inst. for Plant Prot., Natl. Agri. and Food Res. Org. (NARO)
- P307-A U **Characterization of quorum sensing-regulating genes in *Pseudomonas syringae* complex**
- *Jin Suzuki (1), Nobutaka Someya (2), Tomohiro Morohoshi (1)
- (1) Grad. Sch. Reg. Devel. Creativity, Utsunomiya Univ., (2) NARO
- P308-D **Simple 3D bioprinting fabrication and evaluation: A case study of ucase-producing bacteria**
- Cheng-Chun Shih (1), Pei-Hsun Wu (1), *Chang-Ping Yu (1)
- (1) Grad. Inst. Environ. Eng., NTU, Taiwan
- P309-A U **Development of a new soil disinfection method using medium-chain fatty acid produced by *Clostridium* sp. strain E801**
- *Chiharu Suzuki (1), Ayaka Mitsui (2), Toshiyuki Usami (1), Noriaki Momma (3), Seigo Amachi (1)
- (1) Grad. Sch. of Hort., Univ. Chiba, (2) Sch. of Hort., Univ. Chiba, (3) Inst. for Hort. Plant Breed.
- P310-D **Towards unravelling phytoalexin functions in plant-bacterial interactions**
- Saki Nakakoji(1), Haruka Tachibana(1), Kaoru Nakagawa(2), Koji Okuda(2), Eriko Betsuyaku(1), Mizuki Iwamoto(3), Shunsuke Masuo(4,5), *Shigeyuki Betsuyaku(1)
- (1)Faculty of Agriculture, Ryukoku University, (2)Shimadzu Corporation, (3)Graduate School of Life and Environmental Sciences, University of Tsukuba, (4)Faculty of Life and Environmental Sciences, University of Tsukuba, (5)Microbiology Research Center for Sustainability, University of Tsukuba

Soil and terrestrial ecosystem

- P311-A P **Functional assessment of plant growth-promoting rhizobacterial consortia based on combined analysis of single-cell genomics and metagenomics**
*Masako Kifushi(1)(2), Yohei Nishikawa(2)(3), Masahito Hosokawa(1)(2)(3)(4), Shinji Nakaoka(5), Toyoaki Anai(6), Haruko Takeyama(1)(2)(3)(4)
(1) Grad. Sch. Adv. Sci. Eng., Waseda Univ., (2) CBBB-OIL, AIST-Waseda Univ., (3) Res. Org. Nano Life Innov., Waseda Univ., (4) Inst. Adv. Res. Biosyst. Dyn., Waseda Res. Inst. Sci. Eng., Waseda Univ., (5) Grad. Sch. Life Sci., Hokkaido Univ., (6) Fac. Agric., Kyushu Univ.
- P312-B **Leaf litter nitrogen-fixing communities in Japanese cedar plantations: diversity and its response to environmental factors**
*Nobuhiko Shigyo
Forestry and Forest Products Research Institute
- P313-C **The long term monitoring of airborne bacterial population in South Korea**
So-Yeon Jeong*, Chi Won Lee, Ji Won Lee, and Tae Gwan Kim
Department of Microbiology, Pusan National University
- P314-B U **Isolation of autotrophic arsenic/iron-oxidizing bacteria**
Omasa Masaki(1), Kato Singo(2), Hamamura Natsuko(3), Mitsunobu Satoshi(1)
(1)Univ. Ehime, (2)RIKEN, (3)Univ. Kyushu
- P315-C U **Isolation of heterotrophic arsenic/iron-oxidizing bacteria**
Kentaro Ueda(1), Masaki Omasa(1), Shingo Kato(2), Natsuko Hamamura(3), Satoshi Mitsunobu(1)
(1)Ehime Univ., (2)RIKEN, (3)Kyushu Univ.
- P316-B E **Impact of Organic Farming Duration on Soil Carbon Storage: Mediating Role of Soil Microbial Community Stabilization**
Bo Ram Kang (1), Young Jun Bae (1), Soundarya Rajapitamahuni (1), So Hee Park (1), Jinsook Kim (1) and Tae Kwon Lee (1)
(1) Yonsei University, Wonju
- P317-C **Shotgun metagenomic analysis of microbial community structure and metabolism in the agricultural field after anaerobic soil infestation**
*Soichirou Satoh (1), Yasuhiro Kato (2), Yusei Shigematsu (1), Gento Tsuji (1), Kenji Umemura (2)
(1) Graduate School of Life and Environmental Sciences, Kyoto Prefectural University, (2) Agricultural Central Research Center, Inochio Holdings Inc.
- P318-B U **Dynamics of bacterial communities and antifungal activity of responded bacteria against sweet potato foot rot disease pathogen *Diaporthe destruens* in different soil amendments**
*Zin Mar Soe (1), Sakura Kihara (2), Daisuke Fukahori (1), Masao Sakai (3), Masayuki Nakamura (3), Daisuke Ueno (4), Makoto Ikenaga (3)
(1) Graduate school of agriculture, forestry and fisheries, Kagoshima University, (2) Faculty of agriculture, Kagoshima University, (3) Research field in agriculture, agriculture fisheries and veterinary medicine area, Kagoshima University, (4) Faculty of agriculture, Saga University
- P319-A E **The first DATA paper of microbial diversity in Taiwan: The diversity of cultivable endophytic fungi of the sand coast plant *Ipomoea pes-caprae* in Taiwan**
Yu-Hung Yeh*, Roland Krischner
School of Forestry and Resource Conservation, National Taiwan University, Taipei City, 10617, Taiwan
- P320-D U **Characterization of an iron-oxidizing bacterium in *Gallionellaceae* isolated from rice roots**
*Yuki Ishikawa (1), Kouhei Osuga (2), Fumika Hata (2), Maika Ito (2), Susumu Asakawa (1), Takeshi Watanabe (1)
(1) Grad. Sch. of Bioagric. Sci. Univ. Nagoya, (2) Sch. of Agric. Sci. Univ. Nagoya
- P321-A E **Isolation and characterization of ammonia-oxidizing bacteria (AOB) belonging to γ -proteobacteria and a nitrite-oxidizing bacteria (NOB) from tea field soils**
*Luciano Nobuhiro Aoyagi (1), Yong Wang (1), Tsubasa Ohbayashi (1), Shintaro Hara (1), Toshihiro Aono (1), Yuhei Hirono (2), Hideto Takami (3), Kanako Tago (1), Masahito Hayatsu (1)
(1) NIAES, NARO Tsukuba, Ibaraki, Japan. (2) NIFTS, NARO Shimada Shizuoka, Japan. (3) JAMSTEC, Kanagawa, Japan

- P322-D U **Metagenomic analysis and culture isolation of airborne microorganisms in bioaerosols of the Akiyoshi-do**
*Ayano Hirao (1), Yoshiro Ishihara (2), Keiichiro Hara (2), Teruya Maki (1)
(1) Grad. Sch. of Science and Engineering, Univ. Kinki, (2) Faculty of Science, Univ. Fukuoka
- P323-A P **Microbial consortia in paddy soil generating ammonium from inorganic nitrogen compounds**
*Chao-Nan Wang(1), Yoko Masuda(1,2), Keishi Senoo(1,2)
(1)Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Tokyo, Japan; (2)Collaborative Research Institute for Innovative Microbiology, The University of Tokyo, Tokyo, Japan
- P324-D U **Vitamin B12 content and bacterial community structure in a chitin-treated agricultural field soil**
*Nakamura Miki(1), Hideo Dohra(2,3), Ryota Moriuchi(2), Akihiro Saito(1,4)
(1)Grad. Sch. of Sci. Technol., Shizuoka Inst. Sci. Technol.(SIST), (2)Shizuoka Instr. Anal. Ctr, Shizuoka Univ., (3)Dept. Sci., Gradu. Sch. of Integr. Sci. Technol., Shizuoka Univ., (4)Dept. Mater. Life Sci., SIST
- P325-A ***Lysobacter auxotrophicus* sp. nov., a methionine/vitamin B12-auxotrophic chitinolytic bacterium isolated from chitin-treated upland soil**
*Akihiro Saito (1), Hideo Dohra (2,3), Moriyuki Hamada (4), Ryota Moriuchi (2), Yohei Kotsuchibashi (1), Koji Mori (4)
(1) Shizuoka Inst. Sci. Technol., (2) Shizuoka Instr. Anal. Ctr, Shizuoka Univ., (3) Grad. Sch. Integ. Sci. Technol., Shizuoka Univ. (4) NBRC
- P326-B U **Ecological Functions of a Volatile Molecule Produced by an Isopod-Intestinal Bacteria.**
*Masahito Kataoka (1), Toshiki Nagakubo (2),(3), Nobuhiko Nomura (2),(3),(4), Makoto Ueno(5), Masanori Toyofuku(2),(3)
(1) College of Biological Sciences, University of Tsukuba, (2) Institute of Life and Environmental Sciences, University of Tsukuba, (3) Microbiology Research Center for Sustainability, University of Tsukuba, (4) Life Science Center for Survival Dynamics, Tsukuba Advanced Research Alliance, University of Tsukuba, (5) Faculty of Life and Environmental Sciences, Shimane University
- P327-C U **Studies on a nematode-predatory basidiomycete fungus inhabiting the Shirakami Mountains**
*Shino Tamayama (1), Aoi Yamaguchi (1), Yuki Hasegawa (2), Hayato Maeda (2), Chisato Ushida (1), Akio Tonouchi (1)
(1) Grad. Sch. Agric. Life Sci., Hirosaki Univ., (2) Fac. Agric. Life Sci., Hirosaki Univ.
- P328-B P **Bacterium isolated from soil participating in mineral weathering by secreting gluconic acid and acetic acid**
*Shaohan WU(1), Yugo KATO(1), Michio SUZUKI(1)
(1) Graduate School of Agricultural and Life Sciences, The University of Tokyo
- P329-C U **Competitive Inhibition of Ammonia-Oxidizing Microorganisms in Co-culture System**
*Seongwook Kim (1), Man-Young Jung (1) (2)
(1) Interdisciplinary Graduate Program in Advance Convergence Technology and Science, Jeju National University, Jeju 63243, Korea, (2) Department of Biology Education, Jeju National University, Jeju 63243, Korea
- P330-B U **Obtaining laboratory cultures of acid-tolerant comammox bacteria from arable soil**
*Hinano Furuya (1), Hiritsugu Fujitani (1), Yuichi Suwa (1)
(1) Department of Biological Sciences, Chuo University
- P331-C U **Enriching acid-tolerant nitrite-oxidizing bacteria from acidic soil**
*Rina Murata (1), Mayu Kikuchi (1), Hirotsugu Fujitani (1), Yuichi Suwa (1)
(1) Department of Biological Sciences, Chuo University
- P332-B **Single cell genomics analysis of single soil aggregate**
*Emi Matsumura (1), Hiromi Kato (1), (2), Koji Ito (1), Tsubasa Ohbayashi (1), Satoshi Mitsunobu (3), Tatsuya Saeki (4), Soichiro Tsuda (4), Kiwamu Minamisawa (2), Rota Wagai (1)
(1)NIAES, NARO, (2) Grad. Sch. of Life Sci., Tohoku Univ., (3) Grad. Sch. of Agri., Ehime Univ., (4) bitBiome Inc.
- P333-A U **Recovering of Ammonia Oxidation activity by Methane Supplementation in High Copper Contaminated Environment**
*Min-Ju Kang (1), Miye Kwon (2), Man-Young Jung (1),(3)
(1) Interdisciplinary Graduate Program in Advance Convergence Technology and Science, Jeju National University, (2) Biodiversity Research Institute, Jeju Technopark, (3) Department of Biology Education, Jeju National University
- P334-D U **Microbial community structure analysis of mycosphere soil bacteria fractionated based on cell density**
*Hiromu Itagaki (1), Takeshi Chokai (1), Hayate Takahashi (1), Satoshi Hattori (1), (2)
(1) Grad. Sch. of Agri., Univ. Yamagata, (2) Fac. of Agri., Univ. Yamagata

- P335-A U **Correlation between cell density and bacteria in the rhizosphere soils of Urticaceae plant**
*Hayate Takahashi (1), Hiromu Itagaki (1), Takeshi Chokai (1), Satoshi Hattori (1), (2)
(1) Grad. Sch. of Agri., Univ. Yamagata, (2) Fac. of Agri., Univ. Yamagata
- P336-D U **Selective separation of rhizosphere bacteria via density gradient centrifugation**
*Takeshi Chokai(1), Hayate Takahashi(1), Hiromu Itagaki(1), Satoshi Hattori(1),(2)
(1)Grad. Sch. of Agri., Univ. Yamagata, (2)Fac. of Agri., Univ. Yamagata
- P337-A U **Comparative analysis of culture-enriched bacterial communities obtained from conventional culture and floating filter cultivation**
*Sora Sawaguchi (1), Chisato Kikuchi (1), Sakura Kurosawa (2), Eiko Yokota (2), Satoshi Hattori (1), (2)
(1) Grad. Sch. of Agri., Univ. Yamagata, (2) Fac. of Agri., Univ. Yamagata
- P338-D **Effects of Long-Term Organic Matter Application on the Presence of Plant Growth-Promoting Bacteria (PGPB) in Soil Communities of Oil Palm Plantation**
*Fandi Hidayat (1,2), Rizki Desika Putri Pane (2), Fadilla Sapalina (2), Eka Listia (2), Tomonori Koga (1), Winarna (2), M. Edwin Syahputra Lubis (2), Mugihito Oshiro (1), Kenji Sakai (1), Sri Nuryani Hidayah Utami (3), Yukihiko Tashiro (1)
(1) Graduate School of Bioresources and Bioenvironmental Science, Kyushu University,
(2) Indonesian Oil Palm Research Institute, (3) Faculty of Agriculture, Gadjah Mada University
- P339-A P **Factors influencing the assembly of root-associated microbiomes under the forest**
Noguchi Mikihiro (1), Toju Hirokazu (2)
(1)Cent. for Eco. Res., Kyoto, (2)Grad. Sch. of Bio., Kyoto
- P340-B U **An attempt to determine gross N₂O emission rate from soil using ¹⁵N-labeled N₂O**
*Chihiro Shimizu (1), Yuri Ohtomo (1), Megumi Kuroiwa (2), Hirotsugu Fujitani (1), Shin-ichi Tokuda (3), Masahito Hayatsu (4), Kanako Tago (4), Yuichi Suwa (1)
(1) Department of Biological Sciences, Chuo University,
(2) Department of Chemical Engineering, Tokyo University of Agriculture and Technology,
(3) Central Region Agricultural Research Center, National Agriculture and Food Research Organization (NARO),
(4) Institute for Agro-Environmental Sciences, NARO
- P341-C **Unraveling the agarwood-inducing fungi in Taiwan**
Yeh, Yu-Wei*, Kirschner, Roland
School of Forestry and Resource Conservation, National Taiwan University, Taipei City, 10617, Taiwan
- P342-B **Elucidation of rice varieties and rhizosphere microbiota adapted to organic cultivation**
Chihiro Tokiwa (1), Rumi Kaita (1), Khondoker Dastogeer (2), Kosuke Jonouchi (1), Hiroko Maeda (1), Izumi Arakawa (1), Akiko Yoshida (1), Michiko Yasuda (1), *Shin Okazaki (1)
(1)Tokyo U. of Agri. and Tech., (2)Bangladesh U. of Agri.
- P343-C E **Unveiling the Microbial Landscape of Japanese Soils through a Citizen Science Approach**
*Yuichi Aoki (1,2), Satoshi Ohkubo (3), Hiromi Kato (3), Shusei Sato (3), Masaru Bamba (3), Miho Kikuchi (3), Kiwamu Minamisawa (3)
(1) ToMMo, Tohoku Univ., (2) Grad. Sch. Info. Sci., Tohoku Univ., (3) Grad. Sch. Life Sci., Tohoku Univ.
- P344-B **CH₄ Flux and Microbial Activities along the Thaw Gradient in a Changing Landscape of Northern Norway**
*Jeongeun Yun (1), Inge Althuizen (2), Anja Greschkowiak (3), Hanna Lee (3), Hojeong Kang (1)
(1) School of Civil & Environmental Engineering, Yonsei University, Seoul, Republic of Korea (2) Norwegian Research Centre, Bergen, Norway, (3) Norwegian University of Science and Technology, Trondheim, Norway
- P345-C U **Influence of Incubation Time on Gross Nitrification Rates of arable soil**
*Yuri Ohtomo(1), Megumi Kuroiwa(2), Hirotsugu Fujitani(1), Shin-ichi Tokuda(3), Masahito Hayatsu(4), Kanako Tago(4), Yuichi Suwa(1)
(1)Department of Biological Sciences, Chuo University, (2)Department of Chemical Engineering, Tokyo University of Agriculture and Technology, (3) Central Region Agricultural Research Center, National Agriculture and Food Research Organization (NARO), (4) Institute for Agro-Environmental Sciences, NARO
- P346-B P **Impacts of earthworm invasion on activities of soil nitrification in a northern hardwood forest in Minnesota, USA**
*Takamitsu Ohigashi (1), Kyungsoo Yoo (2), Yoshitaka Uchida (3), Satoshi Ishii (2)
(1) Grad. Sch. of Global Food Resources, Hokkaido Univ., (2) Dep. of Soil Water and Climate, Univ. Minnesota, (3) Research Faculty of Agri., Hokkaido Univ.

微量液滴—微生物培養システム

MMC

デモ対応可能



全自動での微生物培養とスクリーニングが可能

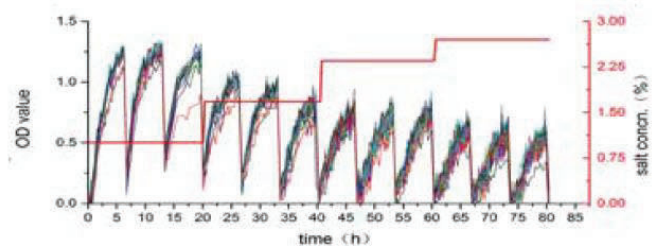
特徴



- ✓ マイクロフルイディクス技術とドロップレットを融合したテクノロジー
- ✓ 培養・サンプルング・OD 蛍光測定 継代培養・スクリーニングの全工程を自動化
- ✓ 最大 200 個の液滴の並列培養が可能
- ✓ 15 日または 100 世代の長期培養が可能
- ✓ 濃度勾配をつけたスクリーニング因子の添加

アプリケーション

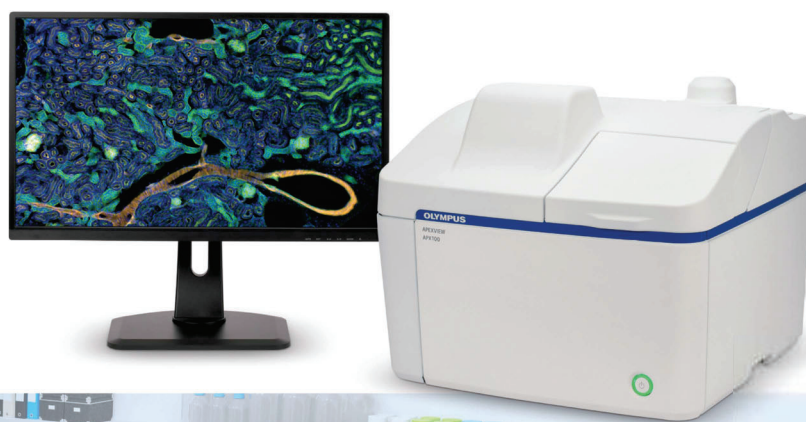
- ✓ 成長曲線の取得
- ✓ 菌の適応進化のシュミレーション
- ✓ 油脂産生酵母のスクリーニング



高 NaCl 濃度へ大腸菌が適応進化していく過程をシュミレーション

デジタルイメージングシステム APX100 研究品質を向上させるデジタルイメージングシステム

顕微鏡イメージングに最適化された光学系、
直感的なユーザーインターフェイス、AI、
一連のスマート機能で
構築されたAPX100は、
使いやすさと高画質を
同時に実現します。



簡単な操作で
効率的な
イメージング

Exceptional Imaging
Made Easy

効率的でも
妥協のない
高画質

効率的かつ
効果的な
データ管理

株式会社エビデント

〒163-0910 東京都新宿区西新宿2-3-1 新宿モノリス 【お問い合わせ】お客様相談センター 0120-58-0414
EvidentScientific.com www.olympus-lifescience.com/ja/contact-us

OLYMPUS

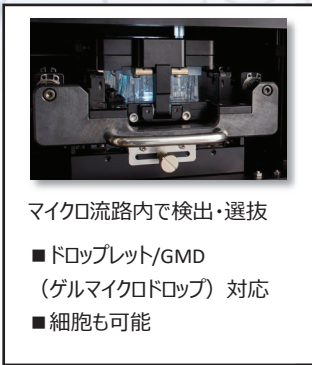
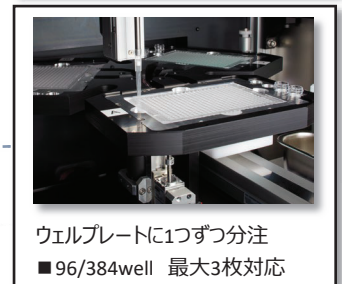
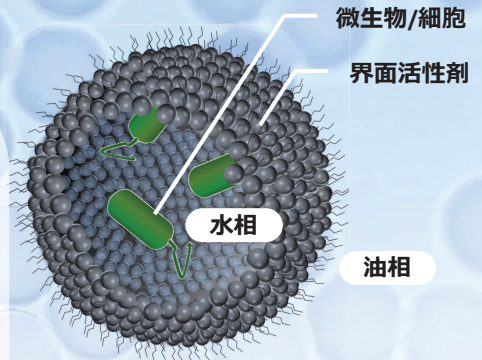
従来の1000倍のスループット! 細胞/微生物スクリーニング装置



Droplet - 油中水滴エマルジョン -

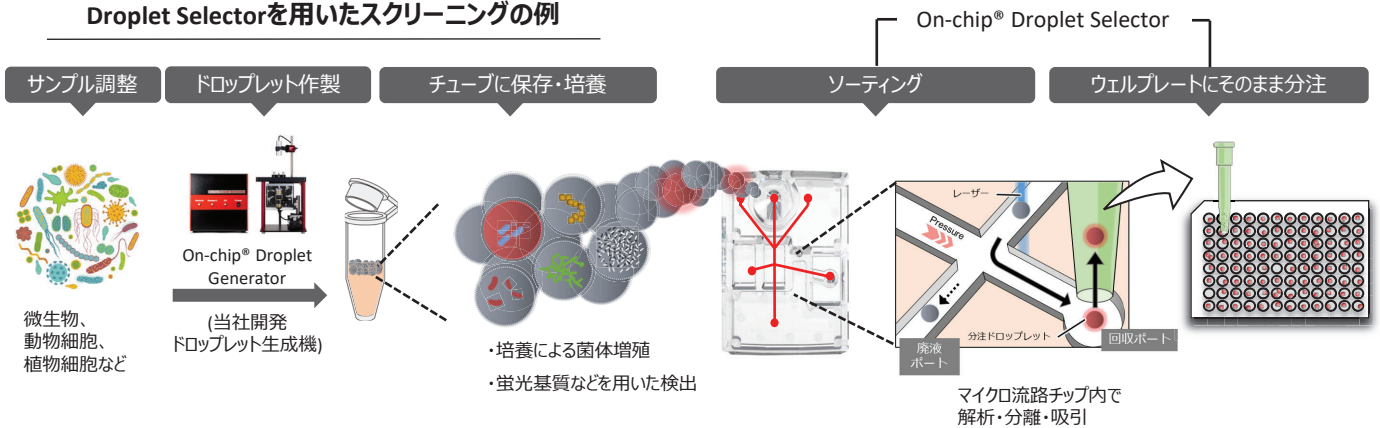
油中に分散し、界面活性剤により安定化した微小な水滴。
細胞や微生物を1つずつ封入・培養することが可能です。
しかし、大量のドロップレットを高速で解析・分離・プレーティング
を行う技術がありませんでした。

当社はマイクロ流路中の分離技術によって、ドロップレットを
解析、分離、シングルプレーティングできる新製品
On-chip® Droplet Selectorを開発しました。



On-chip Droplet Selector

Droplet Selectorを用いたスクリーニングの例



従来技術の1000倍のスループットで以下が可能となります。

- ① 活性に基づいた微生物探索・育種 (嫌気下も可)
- ② 1細胞や共培養系での細胞スクリーニング
- ③ 抗体産生細胞のスクリーニング
- ④ ゲノム編集した細胞のクローニング



子どもたちの受け継ぐ地球が、
美しい星でありますように。

人と地球のために。オルガノは、水がもつ可能性と向き合い、
クリーンで快適な未来を育むお手伝いをしています。

水が活きる。水で変える。 **オルガノ**

オルガノ株式会社 〒136-8631 東京都江東区新砂1丁目2番8号 TEL(03) 5635-5100 FAX(03) 3699-7030 www.organo.co.jp

研究開発
支援企業として、
「産・学・官・医」を
支えています。

株式会社カークは、「創造と努力」
「誠実と感謝」の企業理念のもと、
試薬、分析機器、検査薬、工業薬品などの
販売を通して社会に貢献しています。
研究開発支援企業として
あらゆるニーズにお応えいたします。

 **株式会社 カーク**

〒460-0002 名古屋市中区丸の内3-8-5 (本社)
TEL 〃〃052-971-6533(代)
<https://www.cahc.co.jp>





Think Safety

日本の医療の安全を追求します。

Argyle™ Fukuroi

Argyle™ Fukuroiは、静岡県袋井市にある袋井R&Dセンター、袋井工場に開発・製造を由来する製品のブランドです。

袋井工場では1974年の竣工以来、数多くの製品を製造し

日本の医療の現場にお届けしてまいりました。

国内の医療従事者の声を反映し、日本の患者さんに適した製品設計で

日本の医療の安全を追求します。



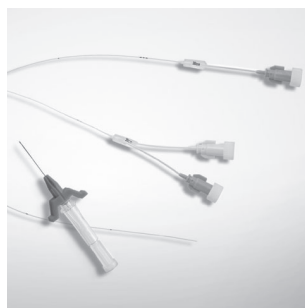
Argyle™ Fukuroi
SMAC プラス

医療機器承認番号：21900BZX00953000



Argyle™ Fukuroi
PICC キット

医療機器承認番号：21900BZX00862000



Argyle™ Fukuroi
PI カテーテル キット

医療機器承認番号：20700BZZ01224000



Argyle™ Fukuroi
マイクロニードル ポート

医療機器承認番号：22600BZX00459000

お問い合わせ先
カーディナルヘルス株式会社
TEL 0120-917-205
cardinalhealth.jp



©2023 Cardinal Health. All rights Reserved. CARDINAL HEALTH, Cardinal Healthロゴ, ARGYLEはCardinal Healthの商標又は登録商標です。



CardinalHealth™



QIAcuity One



QIAcuity デジタル PCR システム

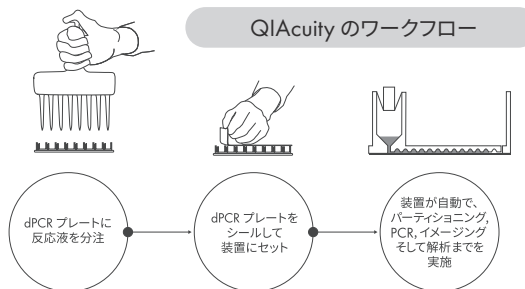
高速、多サンプル測定、再現性

- 高い定量精度と再現性
- 迅速なワークフロー (サンプルをアプライしてから結果まで 2 時間以内)
- 最大 5 波長のマルチプレックス機能
- 目的のアプリケーションに応じた豊富な試薬をラインナップ
- 21 CFR Part 11 対応

標的微生物の
絶対定量による
種の多様性評価



QIAcuity デジタル PCR システムラインナップ



アプリケーション例



希少変異検出
dPCR LNA Mutation Assays



病原体検出
dPCR Microbial DNA Detection Assays



コピー数多型 (CNV)
dPCR Copy Number Assays



遺伝子発現
QuantiNova LNA PCR Assays



miRNA 検出
miRCURY LNA miRNA PCR Assays



細胞治療・遺伝子治療
AAV Gene Therapy Assays



下水試験
QIAcuity OneStep Advanced Probe Kit



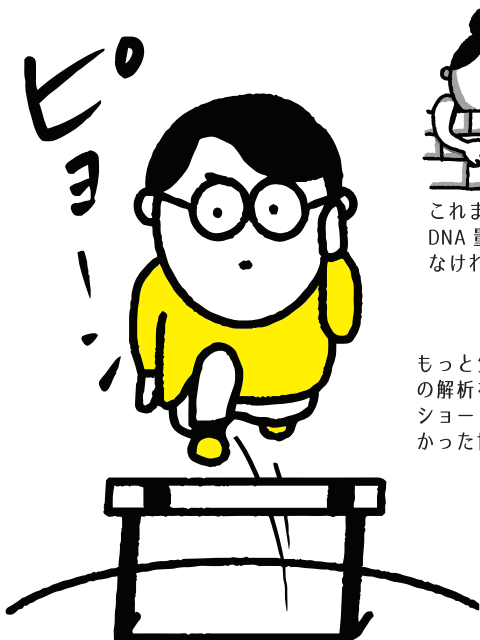
リキッドバイオプシー
dPCR LNA Mutation Assays
dPCR CNV Probe Assays



遺伝子組換え作物の検出
dPCR Copy Number Assays

Trademarks: QIAGEN®, Sample to Insight®, QIAcuity™ (QIAGEN Group). 2303033 08/2023 © 2023 QIAGEN, all rights reserved.

ロングリードシーケンサーを用いた遺伝子解析のハードルを下げます！



これまでは、コスト的にも、DNA 量的にも高い壁を越えなければならなかった。

もっと気軽にロングリードの解析を！
ショートリードでは見えなかった世界が見えてくる。

コストを大幅ダウン

2023 年登場の最新機種 Revio を早速導入しました。Revio はランニングコストを抑えられるため、解析費用を下げる事が可能になりました！

ゲノム解析に必要な DNA 量が 4 μg から 200 ng に！

PCR を行う微量 DNA 用のライブラリー調製方法が、生物技研のゲノム解析の標準になります。これまで微量 DNA 対応は有償のオプションでしたので、原核生物で 40,000 円、真核生物 50,000 円の追加費用が不要となり、実質的な大幅値下げです。
もちろん、PCR フリーの対応も可能です（追加料金不要、減額もありません）。

PacBio® Revio / Sequel IIe ゲノム解析の新価格

微量 DNA 用の
ライブラリー調製
(PCR あり) が標準に！

解析対象の目安 or プラン	取得データ量	価格 (税別)	納期	納品形態	
原核生物	ゲノムサイズ 10 Mb 以下	200 Mb			
		1~3 サンプル ご依頼の場合	120,000 円 / サンプル <small>120,000 円 + 40,000 円 (微量 DNA 対応) ↓</small>	35 営業日	ダウンロード (4 GB を超える 場合は記録媒 体に変更とな ります)
		4~7 サンプル ご依頼の場合	110,000 円 / サンプル		
	8 サンプル以上 ご依頼の場合	100,000 円 / サンプル			
真核生物	ゲノムサイズ 50 Mb 以下	1 Gb			
			200,000 円 + 50,000 円 (微量 DNA 対応) ↓ 150,000 円 / サンプル	35 営業日	記録媒体
	ゲノムサイズ 100 Mb 以下	2 Gb	300,000 円 + 50,000 円 (微量 DNA 対応) ↓ 225,000 円 / サンプル		
	ゲノムサイズ 100-300 Mb	6 Gb	500,000 円 + 50,000 円 (微量 DNA 対応) ↓ 375,000 円 / サンプル		
ゲノムサイズ 300 Mb-1 Gb	20 Gb	New! 525,000 円 / サンプル			
1 セル占有プラン ^{※1}	15 Gb 程度 ↓ 50 Gb 程度 ^{※2}				
		700,000 円 + 50,000 円 (微量 DNA 対応) ↓ 800,000 円 / セル	2 セルまで 35 営業日		

原核生物の
ゲノム解析のみ
アセンブルまで
含まれます

2023.09
値下げ

※1 取得データ量は、ゲノムサイズの 20 倍が目安です。ゲノムサイズに応じて複数セルでのシーケンシング解析が必要になります。
※2 Revio を導入したばかりのため、取得データ量の目安は変更になる可能性があります。最新情報は弊社 HP をご覧ください。
また、サンプルに依存するため、データ保証はできません。

ウェルやマイクロチューブ等の小径容器に最適！
Rタイプは室温以下に冷却可能。多検体処理に。

恒温振とう培養機

MBR-022R/K

本体価格 ¥330,000/¥330,000



タイテックのNewブランド
【ネクスト】

- 低騒音で安定した本体。狭い棚上にも複数台設置可能。従来機より騒音値50%以上軽減。
- ペルチェで却可能なRタイプ、加熱専用のKタイプ
- 使用温度
+15℃～+60℃ (R)
室温+7℃～+60℃ (K)
- ウェルプレートなら2個、マイクロチューブラックなら2個架



◀ラックを用いた
積み重ね例



アルミブロック恒温槽

CTU-R/DTU-R

本体価格 ¥265,000/¥165,000 (ブロック別売)



タイテックのNewブランド
【ネクスト】



- ペルチェで冷却可能なCTU-R、加熱専用DTU-R
- 使用温度範囲
0℃～+105℃ (CTU-R)
室温+5℃～+105℃ (DTU-R)



別売ハーフ/フルブロックの
組合せで多種の容器に対応可能！

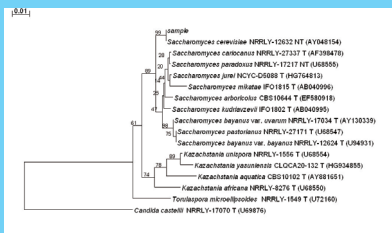
マイクロチューブや遠沈管を加熱冷却
+105℃まで。冷却可能タイプはフロンフリー。

タイテック株式会社 販売サービス部 <http://TAITEC.net/>



〒343-0822 埼玉県越谷市西方2693-1 TEL: 048-988-8359 FAX: 048-988-8362 Email: senden@taitec.org

微生物同定試験・微生物群集構造解析の受託



DNA塩基配列解析



カビ形態観察

微生物同定試験

DNA塩基配列解析・分子系統解析

- 簡易同定や論文投稿などを前提とした分子系統解析など幅広いニーズに対応
- 細菌、酵母、カビ(糸状菌)に対応

生理・生化学的性状試験

- 形態観察、コロニー性状、各種炭素源の資化性や発酵性などの性状試験
- 遺伝子解析の追加試験として実施することで帰属種・近縁種との比較考察が可能
- 嫌気性菌や放線菌にも対応

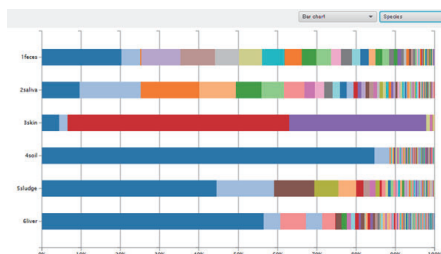
微生物群集構造解析

アンプリコンシーケンス解析

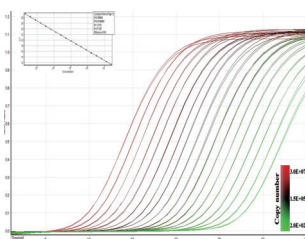
- 界～種レベルの帰属分類群の推定が可能
- 検体を送るだけでデータ解析まで対応
- 多様性解析などの二次解析にも対応

リアルタイム PCR 解析

- 微生物腐食に関わる鉄細菌や窒素循環に関わるアンモニア酸化細菌などの定量解析
- 特異プライマーの設計検討から対応可能



検体の菌叢が分かる



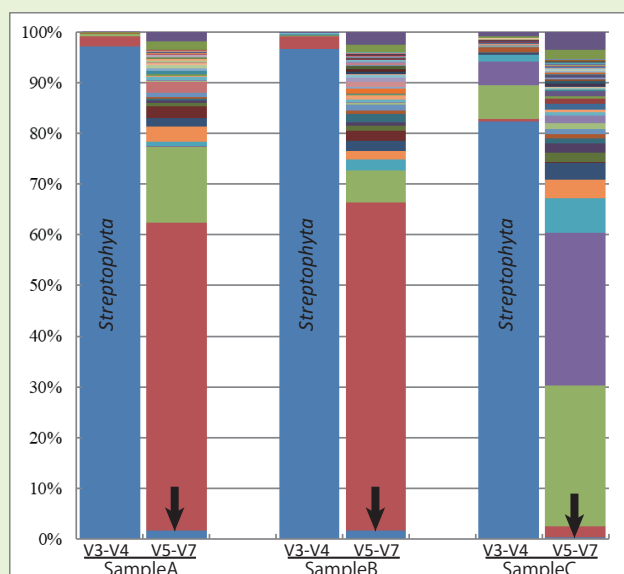
対象菌の定量ができる

技術情報

アンプリコンシーケンス解析用V5-V7領域プライマー

一部の発酵食品など植物由来のDNAが混入するサンプルの細菌叢解析では、葉緑体DNAがPCR増幅されることで、解析結果の殆どがStreptophyta(植物)で占めることがあります。そこで当社は、細菌叢解析でよく利用されるV3-V4領域プライマーセットの他に、葉緑体DNAがPCR増幅され難いプライマーセット(V5-V7領域プライマーセット)を新しく用意しました。

植物性発酵食品の細菌叢解析を実施したところ、V5-V7領域プライマーセットを使用した場合、Streptophytaの検出割合が数パーセント以下に抑制されることが確認されました。V5-V7領域プライマーセットを用いた細菌叢解析は、植物共生細菌の解析などで利用されています。



株式会社テクノスルガ・ラボ
TechnoSuruga Laboratory Co., Ltd.

〒424-0065 静岡県静岡市清水区長崎388番地の1
Tel: 054-349-6155 / Email: tsl-contact@tecsrg.co.jp
<https://www.tecsrg.co.jp>

“はかる”技術で未来を創る



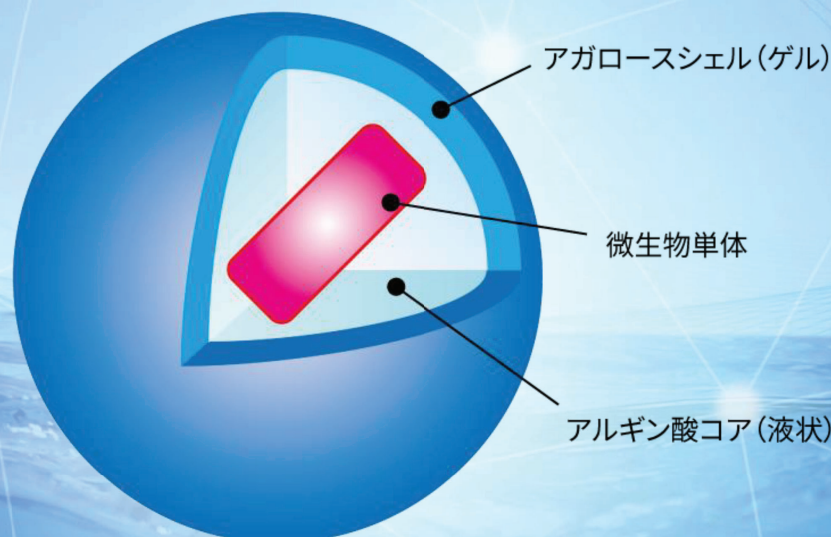
微生物 1 細胞全ゲノム解析用

AGM™ (アガロースゲル・マイクロカプセル)
試薬キット

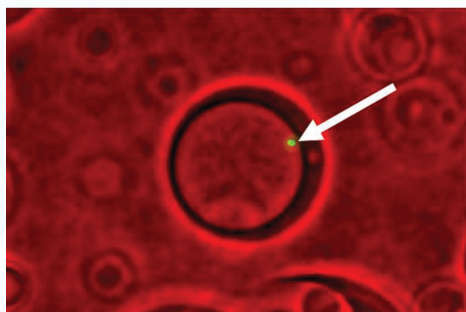


シングルセル解析・培養に革命を

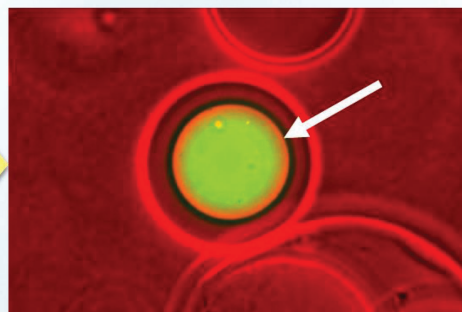
AGM (アガロースゲル・マイクロカプセル) は、アガロースゲルのシェルによる 1 細胞の包埋技術です。水系環境で利用でき、カプセル内での DNA 増幅ひいては細胞培養にも応用可能です。この理化学研究所の特許技術 (特許第7018685号) を AGM™ 試薬キットとして提供します。



大腸菌1細胞からのMDA反応によるDNA増幅



AGMに包埋された大腸菌1細胞(緑色)



AGM内でMDA反応後に増幅したDNA(緑色)

- 微量サンプルで 1 細胞全ゲノム解析を実現
- かつてない高いゲノムカバー率での DNA 増幅に寄与
- 高価な専用機器は不要。既存のラボ設備ですぐに実験可能

株式会社 東陽テクニカ ワン・テクノロジー・カンパニー

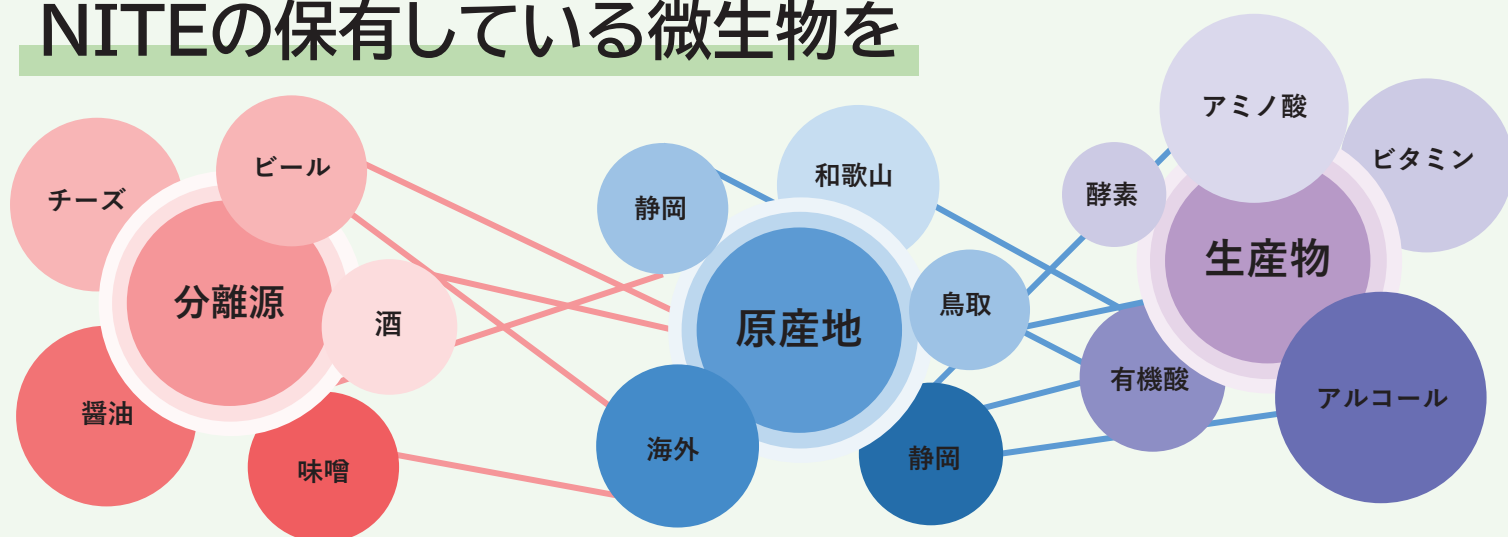
〒103-8284 東京都中央区八重洲1-1-6

TEL.03-3279-0771 E-Mail: agm-sales@toyo.co.jp



<https://www.toyo.co.jp/agm/>

NITEの保有している微生物を



気になるワードから探せます！

生物資源データ
プラットフォーム

DBRP

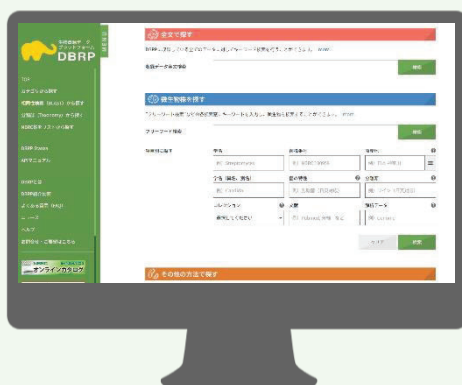
Data and Biological Resource Platform

無料

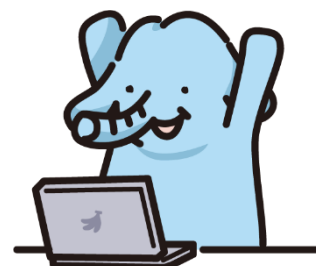
あいまい検索対応

日本語で検索可能

BLAST検索可能

DBRPで
検索！

お問合せ先

独立行政法人 製品評価技術基盤機構 (NITE)
バイオテクノロジーセンター (NBRC)〒151-0066 東京都渋谷区西原2-49-10
TEL.03-3481-1972 ✉ bio-dbrp@nite.go.jp

様々な環境に対応した微生物ゲノム解析サービス

環境微生物のゲノム解析を幅広くサポートします。論文投稿から製品化までお気軽にご連絡ください。

サービスの流れ ※部分的な委託も可能



2つのサービスプラン

生活空間の微生物調査「BIOTA Pack」

住空間の建築表面や素材、室内の空気の調査

その他の微生物調査

人・動物・植物・自然など幅広い環境の調査

※ 検体数によっては下記金額の限りではございません

アンプリコンシーケンス解析 (16S rRNA, 18S rRNA, ITS領域)

スタンダード解析 (3万円 / 1検体)	アドバンスド解析 (4.5万円 / 1検体)
実験計画立案 (30万円~/1案件)	

ショットガンメタゲノム シーケンス解析

スタンダード解析 (6万円 / 1検体)	アドバンスド解析 (8万円 / 1検体)
実験計画立案 (40万円~/1案件)	

全ゲノムシーケンス解析

スタンダード解析 (8万円 / 1検体)	アドバンスド解析 (12万円 / 1検体)
実験計画立案 (20万円~/1案件)	

文献調査・分析レポート (40万円~)

対象領域：微生物学、分子生物学、ゲノム科学、生化学の文献調査、図表表現方法の調査など

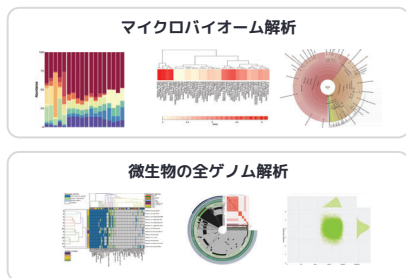
バイオインフォマティクスサポート

・解析ソフトウェアのハンズオンサポート ・解析手法のコンサルティング

BIOTAのコア技術

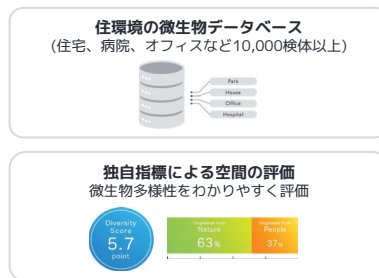
最先端のバイオインフォマティクス技術

独自の解析パイプラインを用いてバイオインフォマティクスによる解析をおこなっております。



独自のデータベースと評価指標

世界の住環境の微生物データを集めたデータベースと独自の評価指標で、住環境の微生物多様性を評価します。



解析実績の例 ※2022年度は4本の査読論文を出版

- 酒蔵のマイクロバイオーム
- めか床と皮膚常在菌の相互作用
- 都市と郊外における住居内の微生物多様性の比較
- 苔と土で構成された環境彫刻の微生物動態
- マウスの腸内細菌・口腔内細菌の組成と多様性

など

株式会社BIOTA (バイオタ)

東京都千代田区神田練堀町三番地 富士ソフト秋葉原ビル 12階
E-mail: info@biota.ne.jp HP: https://biota.city/

サービス詳細はこちら →





次世代シーケンスでは得られなかった情報を 正確なロングリードシーケンシングで大規模に

Revio システム

- 高精度 : 通常のNGSと同等以上の高精度
- ロングリード : ~20,000塩基程度の断片を解析
- ラージスケール : 1,300 ヒト HiFi ゲノム / 年
- 演算能力 : Google DeepConsensus 搭載
- ランニングコスト : 従来システムと比べGbあたり 1/3

高精度ロングリードシーケンス (HiFiシーケンス)

ゲノム解析

従来のNGSで得られる情報に加えて、構造多型、タンDEMリピート伸長や偽遺伝子など、これまでは解析困難な領域を含むすべてのバリエーションタイプに対して高い精度で解析が可能です。

RNA Isoform解析

断片化せず全長を読むことで、網羅的なアイソフォームや融合遺伝子の検出を可能にします。



価格:お問い合わせ

ショートリード全ゲノム解析¹

- 構造多型
- タンDEMリピート伸長
- メチル化
- ハプロタイプフェージング
- 一塩基多型 / small indels

HiFiシーケンス 全ゲノム解析^{2,3}

- 構造多型
- タンDEMリピート伸長
- メチル化
- ハプロタイプフェージング
- 一塩基多型 / small indels

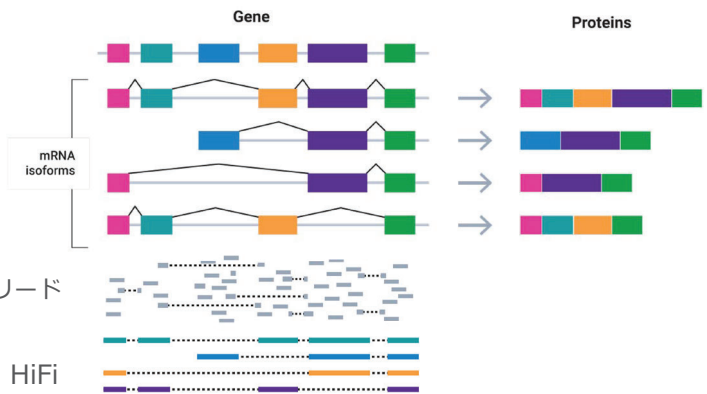
HiFiリードはアセンブリーなしで、転写産物の全長を読むことが出来るため、細胞アイソフォームの機能予測が可能です。



【お問合せ先】

PacBio Japan 合同会社

〒220-0012 神奈川県横浜市西区みなとみらい3-7-1
オーシャンゲートみなとみらい8階 Email: Info-JP@pacb.com



¹Byrska-Bishop et al. (2021) *bioRxiv* doi:10.1101/2021.02.06.430068
²Ebert et al. (2021) *Science* 372(6537):eabf7117
³Cohen et al. (2022) *Genetic Med.* doi:10.1016/j.jgim.2022.02.007

HAMAMATSU
PHOTON IS OUR BUSINESS

自分だけの
共焦点顕微鏡を
手軽に。

お手持ちの
顕微鏡に
取り付ける
だけ

廉価で
手のとどく
価格設定



MAICO は、お使いの倒立顕微鏡に取り付けるだけで共焦点蛍光イメージングが可能になるユニットです。実験室の机の上に置けるコンパクトなサイズで、手の届く価格で、共焦点蛍光イメージングができる環境を実現します。

マイコ
MAICOTM
MEMS CONFOCAL UNIT
MAICO® MEMS共焦点ユニット C15890シリーズ

究極の 微弱光定量イメージング

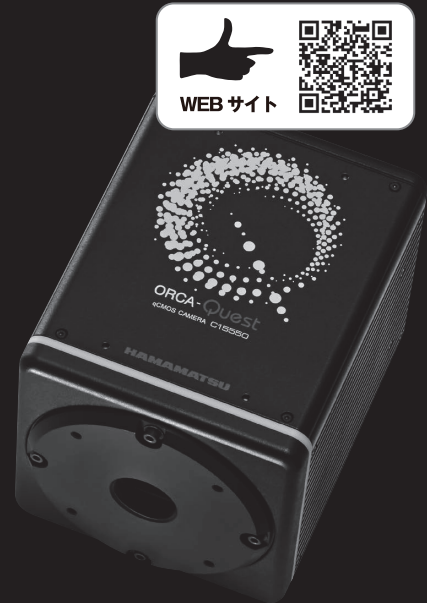
読み出しノイズ

0.27
electrons rms

低暗電流

0.006
electrons/pixel/s

ORCA®-Quest は、センサの構造からエレクトロニクスまでの最適化を図り、さらに最新の CMOS カスタムセンサの開発により、0.27 electrons rms という極限の低ノイズ性能を実現しました。また、0.006 electrons/pixel/s @-35℃という極めて低い暗電流を実現している ORCA®-Quest は、定量イメージング・分析に最適です。



オルカ クエスト
ORCA-Quest
qCMOS® カメラ C15550-20UP

詳細情報は、検索サイトから！

ORCA-Quest

ホトニクス MAICO

検索

浜松ホトニクス株式会社
www.hamamatsu.com

□システム営業推進部 〒431-3196 浜松市東区常光町812
TEL (053)431-0150 FAX (053)433-8031 E-Mail sales@sys.hpk.co.jp



微生物シングルセルゲノム解析サービス bit-MAP®

bitBiome 多様な微生物ゲノムの網羅的獲得を可能にする次世代技術

マイクロバイーム研究でこのようなお困りごとはありませんか？

- ✓ 同種間での機能や多様性を株レベルで比較したい
- ✓ 培養条件やバイアスを検討せずにできるだけ高品質な菌株ゲノムが欲しい
- ✓ 生物多様性が高いなどショットガンメタゲノム解析での解析が難しいサンプルがある
- ✓ メタゲノム解析では、機能や現象の理解に限界がある



bit-MAP®

- ✓ ゲノム・可動性因子（プラスミド・ファージ配列など）を株単位で獲得
- ✓ 培養不要プロセスにより多数の細菌ゲノムを一挙に獲得可
- ✓ 土壌をはじめ、メタゲノムで解析が難しいサンプル種も実績多数
- ✓ シングルセル由来のため、機能と菌名を紐づけた解析が可能

サービス概要

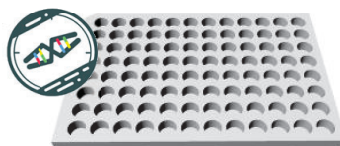
お打ち合わせ・サンプル送付



◆サンプル解析実績
 ヒト(糞便、皮膚、唾液、プラーク等)
 動物糞便・組織、土壌、温泉、下水、海水
 検体そのままもしくは細菌懸濁液で提供可

bit-MAP®
微生物シングルセルゲノム解析

1検体あたり**384個体**の
微生物を分取し、ゲノム解析

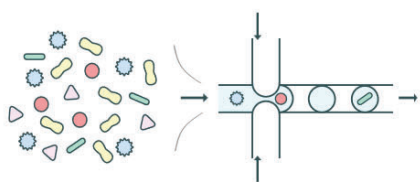


納品物

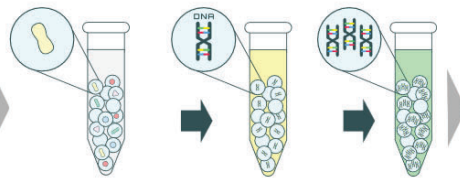
解析レポート
シーケンスデータ



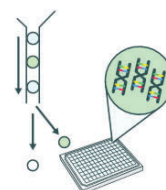
ゲルカプセル封入



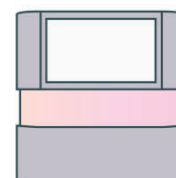
溶菌・DNA増幅



ソート



シーケンス・
ゲノム解析



bit-MAP®では、微小なカプセルに微生物を1細胞ごと閉じ込めて、細胞膜の破壊、DNAの抽出、増幅などの多段階の反応を精密に制御します。カプセル内部で正確に増幅されたDNAを個別に分析することで、微生物1つ1つのゲノム配列が解読されます。 Nishikawa et al. ISME commun. 2022, Chijiwa et al. Microbiome 2020

その他、メタゲノム解析・単離菌株ゲノム解析受託、バイオインフォマティクスなど各種解析もサポート！

bitBiomeの技術・サービス・協業にご関心がある方はこちらまで！

E-mail: service@bitbiome.co.jp

Web: <https://www.bitbiome.co.jp/>

〒162-0041 東京都新宿区早稲田鶴巻町513
早稲田大学121号館 415号室



お問合せ先



bitBiome

微生物同定用 rRNA シーケンス

微生物（バクテリア・カビ・酵母）の同定に用いられる rRNA 配列の解析

菌類を識別するために広く用いられている 16s / ITS / 26s rRNA 領域の配列を解析するため、菌株からの DNA 抽出・PCR 増幅・シーケンス・アセンブル・BLAST 検索までの包括的なサービスをご提供いたします。

1 菌株あたり **¥8,800** (税込)

- ◆ まとめて 10 菌株以上のご注文により割引価格で解析*1
- ◆ サンプルの到着・受付より **1~5 営業日** で結果報告*2*3
- ◆ サンプル送料は **無料***4

下記の 3 領域、4 種類のいずれかのプライマーセットで解析致します。
その他プライマーセットでの解析をご希望の場合はお気軽にご相談ください。

お問い合わせメールアドレス：customer@macrogen-japan.co.jp



お問い合わせフォーム

- バクテリア、カビ、酵母の解析が可能
- 下記のいずれかのプライマーセットでの解析となります。

16s rRNA 領域

- ・ PCR プライマー：27F/1492R
- ・ シーケンスプライマー：518F/800R



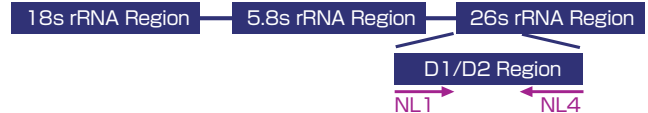
ITS rRNA 領域

- ・ ITS5/ITS4 または ITS1/ITS4



26s rRNA 領域

- ・ NL1/NL4



- *1 一度にご注文いただける菌株数に応じて価格を調整致します。お気軽にお問い合わせください。*2 サンプル到着・受付時間を 0 時間として起算。午後には到着のサンプルについては翌日受付になる場合がございます。菌株の状態や DNA 増幅が困難な場合、納期が遅れる場合がございます。
- *3 繁忙期は解析状況により納期が延長する場合がございます。1 回のご注文で解析するサンプルが 20 菌株を超える際は納期について事前にご相談ください。
- *4 必ず着払いでお送りください。元払いの場合、送料の負担は致しかねます。

PacBio Sequel II e 相乗りプラン

約 10kb-15kb の HiFi リードで高精度なゲノム配列構築が可能

ゲノムサイズが ~ 10Mb のバクテリア、カビなどの非モデル生物の De novo 解析に最適です。

- ◆ **すべて HiFi リード**でのシーケンス実施
- ◆ **全ゲノム解析 (WGS)** に対応
- ◆ 追加オプションでデータ解析 (Denovo Assembly など) 実施、対応可能

※サンプルの質に依存してシーケンスデータの取得量、平均リード長は変動する場合がございます。予めご了承ください。PacBio 解析についての詳細は下記のメールアドレスにご連絡ください。

お問い合わせメールアドレス：
ngs@macrogen-japan.co.jp

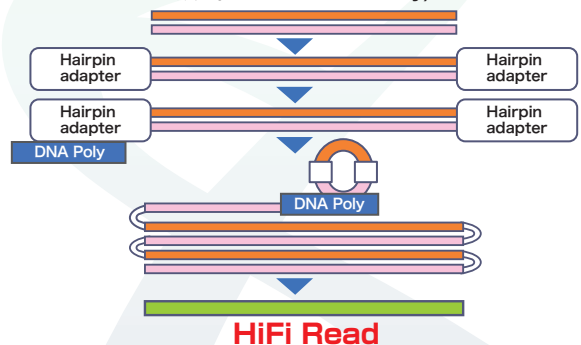


お問い合わせフォーム

【注意事項】希望販売価格は参考であり販売店からの販売価格と異なる場合がございます。記載の希望販売価格は 2023 年 9 月 1 日現在の価格です。記載のサービス仕様・価格等は予告なく変更する場合や取扱いを中止する場合がありますので、ご注文の際にご確認ください。

HiFi リード生成

- 高品質の 2 本鎖 DNA を SMRTbell ライブラリで調整
- プライマーをアニーリング、DNA ポリメラーゼを結合
- 環状 DNA をシーケンスし、コンセンサス配列を生成
- HiFi リード生成 (>99% accuracy)



Humanizing Genomics

macrogen
JAPAN

株式会社マクロジェン・ジャパン

本社・ゲノムセンター：
〒135-0064 東京都江東区青海 2-4-32 タイム 24 ビル 16F
TEL:03(5962)1124 FAX:03(5962)1128

イノベーションセンター：
〒103-0004 東京都中央区東日本橋 2-1-5 東日本橋セントラルプレイス 9F
TEL:03(5829)6058 (代) FAX:03(5829)6048

京都営業所：
〒600-8099 京都府京都市下京区仏光寺通烏丸東入上柳町 331 タカノハスクエア 4F
TEL:03(5962)1124(本社直通) FAX:03(5962)1128

Conference Organizing Committee

Chairman : hiroyuki FUTAMATA (Shizuoka Univ.)

Vice-Chairman : hiroyuki KIMURA (Shizuoka Univ.)

Members : natsuko Hamamura (Kyushu Univ.)

akihiro Saito (Shizuoka Institute of Science and Tech.)

yoshiteru AOI (Hiroshima Univ.)

reiko SAMESHIMA (Shizuoka Univ.)

masaki Shintani (Shizuoka Univ.)

yosuke TASHIRO (Shizuoka Univ.)

ryosuke NAKAI (AIST)

satomi AIBA (Shizuoka Univ.)

Special advisor : kazuhide KIMBARA (Shizuoka Univ.)

The 36th JSME & The 13th ASME
Hamamatsu conference
Program

Published in 2023. 28th Nov.

Published by The 36th JSME & The 13th ASME
Hamamatsu conference organizing committee

A part of the expenses for the conference is supported by Research
Institute of Green Science and Technology, Shizuoka University.