

# 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 Technolog,(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 Kim<sup>1</sup>, Gi-Yong Jung<sup>1</sup>, Ji-Hyun Park<sup>2</sup>, Young-Soo Han<sup>2</sup>  
<sup>1</sup>Mineral Resources Division, Korea Institute of Geoscience and Mineral Resources,  
<sup>1</sup>Department 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)  
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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)  
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- 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)  
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- 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)  
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- 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 Metropol. 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), Innam 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)  
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 (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)  
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# 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) CBBDOIL, 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)\*
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# 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), Chawanana Malee (3), Chutima Chavananikul (4), Onruthai Pinyakong (2,5), Wanchai Assavalapsakul (2), Somrudee Meprasert Jitraphai (2,6), Boonlue Kachenchart (3), Ekawan Luepromchai (2,5)  
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(3) Faculty of Environment and Resource Studies, Mahidol University, Nakhon Pathom, Thailand.  
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(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 Choi<sup>1</sup>, Jieun Kang<sup>2</sup>, Sei Won Lee<sup>3</sup>, and Woo Jun Sul<sup>1\*</sup>  
(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**

\*Jieruiyi Weng(1), Bei-Wen Ying(1)

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

Ayub Hina<sup>1</sup>, Thi My Tien Truong<sup>1,2</sup>, Inhae Kang<sup>1,2</sup>, Man-Young Jung<sup>1,3\*</sup>

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<sup>2</sup> Department of Food Science and Nutrition, Jeju National University

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# 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)  
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(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), Yukihisa 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)  
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(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, 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  $\beta$ -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**  
\*Minoru 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

- 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 plastisphere 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 NH<sub>3</sub> regeneration using NO<sub>3</sub>-/NO<sub>2</sub>- 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) GLEEC, 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 **N<sub>2</sub>O-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., Kwansai Gakuin Univ., (2) Grad. Sch. Sci. Technol., Kwansai 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)  
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 (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), Yukihiko 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  $\beta$ -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) Dept. 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)  
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- 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**  
\*Shuheii 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 Kwak<sup>1</sup>, 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), Yûki 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 *Coralloccoccus* 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)\*  
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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),  
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- 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)  
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Nanobioscience, Yokohama City University, Japan, (4) Kochi Institute for Core Sample Research, JAMSTEC, Japan,  
(5) CRIIM, 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) Research Institute of Green Science and Technology, Shizuoka University
- P230-A U **The elucidation of siderophore-producing mechanisms in *Saprotobacteria* 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)  
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(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 N<sub>2</sub>O, 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 <sup>15</sup>N, <sup>18</sup>O 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 N<sub>2</sub>O 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)  
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 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)  
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 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)  
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 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)

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

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# 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 **N<sub>2</sub>O-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)  
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(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  
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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)  
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 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), Ziyang 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**  
 \*Kyosuke 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





- 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)  
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- P292-D U **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 U **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 N<sub>2</sub>O 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 Koderu (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 U **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 U **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), Toyooki Anai(6), Haruko Takeyama(1)(2)(3)(4)  
(1) Grad. Sch. Adv. Sci. Eng., Waseda Univ., (2) CBBDOIL, 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  $\gamma$ -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 Integ. 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 aggregat**  
\*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 Mikihito (1), Toju Hirokazu (2)  
 (1)Cent. for Eco. Res., Kyoto, (2)Grad. Sch. of Bio., Kyoto
- P340-B U **An attempt to determine gross N<sub>2</sub>O emission rate from soil using <sup>15</sup>N-labeled N<sub>2</sub>O**  
 \*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)  
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- 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 **CH<sub>4</sub> 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)  
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- 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)  
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