September 10, 2025

Titles in bold indicate presentations by the winners of this year's SBJ Excellent Student Award (Hishou Award).

Time	No.	Title	Author (Affiliation) ○=Indicates the presenter

Award Ceremony, Award Lectures (Society Award, Achievement Award, Technical Award)

Room S Deneb Hall (9:30–11:50)

9:30 Opening Remarks by the SBJ President

9:35 KSBB President's Speech

9:40 Distinguished Members Presentation

9:50 Award Presentation

10:35 1A-Sa01 〈**Society Award**〉 Chair: **Yoji Hata**

Biotechnological research on the advanced utilization of biomolecules and biological functions

……○Hiroyuki Honda (Grad. Sch. Eng., Nagoya Univ.)

11:05 1A-Sa02 〈**Achievement Award**〉 Chair: **Hideki Aoyagi**

Development of next-generation metabolomics technologies

……○Takeshi Bamba (Med. Inst. Bioreg., Kyushu Univ.)

11:30 1A-Sa03 〈**Technical Award**〉 Chair: **Satoshi Yoshida**

Development and commercialization of a versatile homogeneous immunoassay using switch enzymes

……○Tetsuya Kitaguchi [1], Bo Zhu [1], Yukihiko Yamasaki [2] ([1] CLS, Science Tokyo, [2] BDL)

Award Lectures (Encouragement Award [Eda Award, Saito Award, Terui Award], Award Lectures [Young Asian Biotechnologist Prize])

Room N Floor 8 805（13:30–13:50）

13:30 1A-Np01 〈**Encouragement Award (Eda Award)**〉 Chair: **Takaomi Yasuhara**

Studies on beneficial compounds produced by acetic acid bacteria and koji fungus

……○Naoki Akasaka (Div. Biol. Sci., NAIST)

Room G Floor 6 603（14:40–15:00）

14:40 1A-Gp01 〈**Encouragement Award (Saito Award)**〉 Chair: **Kohsuke Honda**

Development of technology for large-scale collection of genetic information from uncultured microbes

……○Masahito Hosokawa [1,2,3,4]

([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Org. Nano Life Innov., Waseda Univ., [3] Inst. Adv. Res. Biosyst. Dyn., Waseda Res. Inst. Sci. Eng., Waseda Univ., [4] bitBiome)

Room P Floor 9 905（15:50–16:10）

15:50 1A-Pp01 〈**Encouragement Award (Terui Award)**〉 Chair: **Masamichi Kamihira**

Studies on the mechanism of outer membrane vesicle production in *Escherichia coli* and its engineering application

····· ○Yoshihiro Ojima (Grad. Sch. Eng., Osaka Metro. Univ.)

Room K Floor 7 704（14:06–14:26）

14:06 1A-Kp01 〈**Young Asian Biotechnologist Prize**〉 Chair: **Hideo Nakano**

Construction and characteristics analysis of microbial cell factories for production of bio-chemicals

····· ○Zhiwen Wang [1,2] ([1] Coll. Life Sci., Ningxia Univ., P.R. China, [2] Sch. Syn. Biol. BioM., Tianjin Univ., P.R. China)

Oral Presentations

Room A Floor 5 501 (13:30–16:50)

【Enzymology, Enzyme】

13:30 1Ap01 Enzyme cycling method using hypoxanthineguanine phosphoribosyltransferase: a highly sensitive assay for pyrophosphate

····· Shigeru Ueda [1], Yoshiaki Yasutake [3], Tatsuya Hirata [2], Takehiko Sahara [3], ○Shin-ichi Sakasegawa [3] ([1] JCCLS, [2] Asahi Kasei Pharma Corp., [3] BPRI, AIST)

13:42 1Ap02 **Analysis of the evolutionary dynamics of polyphosphate kinase 2 identified promiscuous and highly active enzymes for practical applications**

····· ○Ryusei Matsumoto [1], Takayoshi Watanabe [2], Eishin Yamazaki [1], Ako Kagawa [2], Liam M. Longo [2], Tomoaki Matsuura [2] ([1] Sch. Life Sci. Technol, Science Tokyo, [2] Science Tokyo)

13:54 1Ap03 Structural diversification of terpenoid compounds using drimenol synthase

····· ○Kotoha Hiroyama [1,2], Keisuke Fujiyama [2], Hiroshi Takagi [2], Naoko Morita [2], Nhu Ngoc Quynh Vo [2], Yu Zheng [2], Tetsuya Yamamoto [1], Shunji Takahashi [1,2] ([1] Grad. Sch. Eng., Tokyo Denki Univ., [2] CSRS, RIKENS)

14:06 1Ap04 Development of an efficient synthesis method for Tyr-Pro, which acts as an agonist for adiponectin receptor 1

····· ○Kurumi Hoshi [1], Shin Suzuki [2], Kuniki Kino [1,2] ([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Inst. Sci. Eng., Waseda Univ.)

14:18 1Ap05 Research and development of enzymatic synthesis of long-chain fatty acid amides

····· ○Riku Goto [1], Shin Suzuki [2], Kuniki Kino [1,2] ([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Inst. Sci. Eng., Waseda)

14:30 Break

14:40 1Ap06 Selective production of alpha-glucosylglycerol by using glucosyl transfer enzyme (XgtA) derived from *Xanthomonas campestris* WU-9701

····· ○Kanon Suzuki [1], Wei Cao [1], Kaito Tamura [1], Yoshitaka Ishii [2], Kohtaro Kirimura [1,2] ([1] Dept. Appl. Chem., Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Inst. Sci. Eng., Waseda Univ.)

14:52 1Ap07 Improvement of the thermostability of AgaX, a beta-agarase derived from *Cellvibrio* sp. WU-0601, by genetic engineering

····· ○Kaito Tamura [1], Yoshitaka Ishii [2], Kohtaro Kirimura [1,2] ([1] Dept. Appl. Chem, Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Waseda Univ.Res. Inst. Sci. Eng.)

15:04 1Ap08 Identification of a sulfatase involved in ulvan degradation in ulvan-utilizer *Vibrio* species
····· Ryoma Kuninobu, Manaka Okada, Nami Kikuchi, Maya Nagae, ○Kouhei Ohnishi
(Fac. Agric. Agric. Sci. Prog., Kochi Univ.)

15:16 1Ap09 Screening, analysis and application of glycosyltransferase of phloroglucinol
····· ○Ryosuke Kojima [1], Michiki Takeuchi [1], Toshiyuki Shibata [3], Makoto Ueda [2], Jun Ogawa [2], Koichi Kuroda [1]
([1] Grad. Sch. Sci. Technol., Kyoto Inst. Technol., [2] Grad. Sch. Agric., Kyoto Univ., [3] Global. Environ. Educ. Res. Center., Mie Univ.)

15:28 1Ap10 Production of rare sugars using recombinant polyol dehydrogenase from *Klebsiella pneumoniae* 40b
····· ○Mayu Matsumoto [1], Naho Yamamoto [1], Susumu Mochizuki [2,3], Akihide Yoshihara [2,3]
([1] Grad. Sch. Agric., Kagawa Univ., [2] Fac. Agric., Kagawa Univ., [3] Inst. Rare Sugar Res. Educ., Kagawa Univ.)

15:40 Break

15:50 1Ap11 Search for enzymes that degrade Nigeran-oligosaccharides from *Enterococcus faecalis*
····· ○Yuri Minamiyama, Takuro Sekaryou, Toki Taira, Keiko Uechi (Fac. Agric., Univ. Ryukyus)

16:02 1Ap12 Structure-based mutational analysis reveals the structural basis for the substrate degradation mode of *Bc*Xyn26A, a novel exo-type beta-1,3-xylanase from human gut bacterium
····· ○Kotone Yamamoto, Sanae Hori, Fumiyoshi Okazaki (Grad. Sch. Bioresour., Mie Univ.)

16:14 1Ap13 Functional analysis of the non-catalytic domain of ExoChi: Involvement in soluble expression and enzymatic activity
····· ○Akito Tsuchi [1], Jiro Arima [2] ([1] Grad. Sch. Tottori Univ, [2] Fac. Agric., Tottori Univ)

16:26 1Ap14 Enzymatic properties of bacterial lambda-carrageenase
····· ○Masahiro Kurakake, Kaito Nishiuchi, Hikari Okada, Masaya Ota
(Fac. Life Sci. Biotechnol., Fukuyama Univ.)

16:38 1Ap15 Synergistic activation of L-lactate oxidase via mutagenesis and liquid-liquid phase separation
····· ○Toya Yoshida [1], Tomoto Ura [1], Tsutomu Mikawa [2], Kentaro Shiraki [1]
([1] Grad. Sch. Pure Appl. Sci., Univ. Tsukuba, [2] BDR, RIKEN)

Room B Floor 5 503 (13:30–16:50)

【Antibody Engineering; Proteins】

13:30 1Bp01 Label-free separation of B cells by dielectrophoresis for the effective production of hybridoma cells
····· ○Yushi Isozaki [1,2], Kasumi Konishi [1], Masato Suzuki [1,2], Tomoyuki Yasukawa [1,2]
([1] Grad. Sch. Sci., Univ. Hyogo., [2] AMERI. Univ. Hyogo)

13:42 1Bp02 Analysis of intestinal bacteria-binding monoclonal antibodies (mAbs) derived from rabbit single B cells
····· ○Khairil Anwar, Daffa Sean Adinegoro, Kihara Monami, Teruyo Ojima-Kato, Hideo Nakano
(Grad. Sch. Bioagric. Sci., Nagoya Univ.)

13:54 1Bp03 **〈Topics〉**
Selection of a VHH scaffold for monomerization of aggregation-prone short-CDR3 antibodies and its application in Phage Display
····· ○Yuto Watanabe, Sakiya Kawada, Tomoyuki Ito, Hikaru Nakazawa, Mitsuo Umetsu
(Grad. Sch. Eng., Tohoku Univ.)

14:06 1Bp04 Analysis of antigen density-dependent binding of multivalent tandem VHH antibodies
····· ○Keisuke Sugimoto, Suwandi Onggono, Ning Lin, Tetsuya Kadonosono
(Sch. Life Sci. Technol, Science Tokyo)

14:18 1Bp05 Development of CA9-targeting VHH antibodies by in silico CDR redesign
····· ○Koki Kamijo, Yuma Ishiwata, Kotaro Miyamoto, Tetsuya Kadonosono
(Sch. Life Sci. Technol, Science Tokyo)

14:30 Break

14:40 1Bp06 Design and oriented-immobilization of Ig-binging domain-fused rabbit scFvs
····· ○Shogo Ito, Yoichi Kumada, Jun-ichi Horiuchi (Grad. Sch. Sci. Technol., Kyoto Inst. Technol.)

14:52 1Bp07 Development of a sensitive lateral-flow immunoassay using recombinant rabbit single-chain variable fragments fused with the nitrocellulose-binding protein
····· ○Minh Ngoc Nguyen [1], Fuki Yokoyama [1], Makoto Nita [1], Ryosuke Mukai [1], Jun-Ichi Horiuchi [2], Yoichi Kumada [2]
([1] Grad. Sch. Sci. Technol., Kyoto Inst. Technol., [2] Kyoto Inst. Technol.)

15:04 1Bp08 Modification of single-chain fragment variables (scFv) using DNA aptamers and photoreactive G4 ligands
····· ○Rina Hamasaki, Mai Hamasaki, Hiina Seino, Masayuki Tera, Kazuo Nagasawa, Kazunori Ikebukuro, Ryutaro Asano
(Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

15:16 1Bp09 Development of protein variants with specific binding to interleukin-33
····· ○Yoshihide Makino [1,2], Akitoshi Takashima [1], Tamotsu Kanai [1,2]
([1] Fac. Eng., Toyama Pref. Univ., [2] Biotechnol. Res. Center, Toyama Pref. Univ.)

15:28 1Bp10 Selection of human interleukin-31 affinity clones from protein mutant libraries
····· ○Akito Morishita [1], Yoshihide Makino [1,2], Tamotsu Kanai [1,2] ([1] Grad. Sch. Eng., Toyama Pref. Univ., [2] Biotechnol. Res. Center, Toyama Pref. Univ.)

15:40 Break

15:50 1Bp11 Machine learning analysis of autoantibody profiles for predict immunotherapy efficacy
····· ○Ai Miyamoto [1], Takeru Mori [1], Tomoko Honjo [1], Kadoaki Ohashi [2], Tadahiro Kuribayashi [2], Junichiro Futami [1]
([1] Grad. Sch. ISEHS., Okayama Univ., [2] Grad. Sch. Med. Dent. Pharm, Sci., Okayama Univ.)

16:02 1Bp12 **〈Topics〉**
Autoantibody spark responses predict cancer immunotherapy response in lung cancer patients
····· ○Takeru Mori [1], Mio Kitagawa [2], Tomokazu Hasegawa [2], Masanori Someya [2], Takaaki Tsuchiya [2], Toshio Gocho [2], Tomoko Honjo [1], Mirei Date [1], Mariko Morii [1], Ai Miyamoto [1], Junichiro Futami [1]
([1] Grad. Sch. ISEHS., Okayama Univ., [2] Sch. Med., Sapporo Medical Univ.)

16:14 1Bp13 Development of immunoassay methods based on protein disulfide chemistry
····· ○Ryui Sakaguchi, Ai Miyamoto, Tomoko Honjo, Junichiro Futami
(Grad. Sch. ISEHS., Okayama Univ.)

16:26 1Bp14 Methodology development for the analysis of human-derived cell-surface autoantibodies
····· ○Rikako Kutsuma, Kana Miyao, Mirei Date, Ai Miyamoto, Tomoko Honjo, Junichiro Futami
(Grad. Sch. ISEHS., Okayama Univ.)

16:38 1Bp15 Development of a novel target binding molecule from SD1 domain of a thermostable protease Islandisin
····· ○Rina Tanaka [1], Chukwuebuka Ononugbo [2], Noriko Yamano-Adachi [2], Takeshi Omasa [2], Yuichi Koga [1,2]
([1] Grad. Prog. Eng. Okayama Univ. Sci., [2] Grad. Sch. Eng. UOsaka.)

Room C Floor 5 505 (13:30–16:50)

【Enzymology, Enzyme】

13:30 1Cp01 Comprehensive substrate profiling of epidermal transglutaminase
····· ○Riko Okazaki [1], Munkhbat Narmandakh [1], Kalhari Munaweera [1], Maurizio Camagna [1], Kiyotaka Hitomi [2], Hideo Nakano [1], Damnjanovic Jasmina [1]
([1] Grad. Sch. Bioagric., Sci., Nagoya Univ., [2] Grad. Sch. Pharm. Sci., Nagoya Univ.)

13:42 1Cp02 Exploration of aldoxime dehydratases which catalyze new-to-nature radical ring-opening reaction of cycloketone oximes and elucidation of its function
····· ○Haruka Nishiwaki, Keiji Endo, Shunsuke Kato, Takashi Hayashi (Grad. Sch. Eng., Univ. Osaka)

13:54 1Cp03 Relief of feedback inhibition of lysine biosynthetic enzymes by a phage-assisted continuous evolution
····· ○Daisuke Yonemoto, Teppei Niide, Takuya Matsumoto, Mao Oota, Yoshihiro Toya, Hiroshi Shimizu
(Grad. Sch. IST, Univ. Osaka)

14:06 1Cp04 Selection and evaluation of amino acid sequences contributing to the activation of microbial transglutaminase zymogen
····· ○Taisei Koga [1], Kensei Orita [1], Tomoyuki Ito [2], Mitsuo Umetsu [2], Noriho Kamiya [1,3]
([1] Grad. Sch. Eng., Kyushu Univ., [2] Grad. Sch. Eng., Tohoku Univ., [3] CFC, Kyushu Univ.)

14:18 1Cp05 Synthesis of Cyclic Imine Using Whole Cell Catalyst
····· ○Daichi Funato [1], Akua Sugimoto [1], Citra Hardiyanti [2], Koichi Mitsukura [1], Toyokazu Yoshida [1]
([1] Grad. Sch. Nat. Sci. Tech. Eng., Gifu Univ., [2] Grad. Sch. Eng., Gifu Univ.)

14:30 Break

14:40 1Cp06 Temperature characterization of alcohol dehydrogenase from a bacterium capable of growth over a wide temperature range
····· ○Yu Sato [1], Suzuka Honda [2], Yuki Maeta [2]
([1] RC-TMR, Yamaguchi Univ., [2] Fac. Agric., Yamaguchi Univ.)

14:52 1Cp07 Identification of the lipoic acid biosynthesis system in hyperthermophilic archaea
····· ○Takaaki Sato [1,4], Jian-qiang Jin [1], Shin-ichi Hachisuka [2], Tsuyoshi Fujiwara [3], Haruyuki Atomi [1,4]
([1] Grad. Sch. Eng., Kyoto Univ., [2] Grad. Sch. Eng., Hokkaido Univ., [3] Fac. Eng., Kyoto Univ., [4] Integr. Res. Center for Carbon Negative Sci., Kyoto Univ.)

15:04 1Cp08 Elucidation of structural determinants contributing to enhanced enzymatic activity of a PQQ-dependent aldose dehydrogenase from a hyperthermophilic bacterium
····· ○Miku Maeno [1], Haruhiko Sakuraba [2], Tsutomu Mikawa [3], Toshihisa Ohshima [4], Takenori Satomura [5]
([1] Grad. Sch. Eng. Fukui Univ., [2] Fac. Agric., Kagawa Univ., [3] IMS, RIKEN, [4] Fac. Eng., Osaka Inst. Technol., [5] Fukui Univ. Technol.)

15:16 1Cp09 Substrate-binding analysis of chitinases and LPMOs from a moderately thermophilic actinomycete
····· ○Ayano Sasaki, Jiro Arima (Fac. Agric., Tottori Univ.)

15:28 1Cp10 Substituent Effects on the Enantioselectivity of Engineered Alcohol Dehydrogenase-Catalyzed Reductions of Diphenyl Ketones
····· ○Zhongyao Tang [1], Tejada Guillermo German Otarola [1,2], Koesoema Afifa Ayu [1], Tomoko Matsuda [1]
([1] Sch. Life Sci. Technol, Science Tokyo, [2] Dept. Organic Inorganic Chem, Univ. Alcala)

15:40 Break

15:50 1Cp11 Kinetic analysis of Zn and Mn-substituted G173A mutant creatininase from *Pseudomonas putida*
····· ○Atsuu Naitou [1], Akira Oyabu [2], Yugo Tateyama [1], Yosiaki Nisiya [1], Kiyosi Ito [3], Yositaka Nakajima [1]
([1] Fac. Sci. Eng., Setsunan Univ., [2] Grad. Sch. Sci. Eng., Setsunan Univ., [3] Fac. pharm. Sci., Setsunan Univ.)

16:02 1Cp12 Kinetic analysis of Zn and Mn-substituted G173N mutant Creatininase from *Pseudomonas putida*

……○Tomoya Tanaka[1], Akira Oyabu[2], Yugo Tateyama[1], Yoshiaki Nishiya[1], Kiyoshi Ito[3], Yoshitaka Nakajima[1]

([1] Fac. Sci. Eng., Setsunan Univ., [2] Grad. Sch. Sci. Eng., Setsunan Univ., [3] Fac. Pharm. Sci., Setsunan Univ.)

16:14 1Cp13 Characterization of phenylalanine ammonia-lyase involved in veratryl alcohol biosynthesis in white-rot fungi

……○Yuki Yoshida, Keita Kurose, Link Hamajima, Reini Mori, Hiroyuki Kato, Masashi Kato, Motoyuki Shimizu

(Grad. Sch. Agric., Meijo Univ.)

16:26 1Cp14 Functional and structural analysis of a decarboxylative vanillate 1-hydroxylase from the white-rot fungus *Phanerochaete chrysosporium*

…… ○Reini Mori, Hiromitsu Suzuki, Masashi Kato, Motoyuki Shimizu (Grad. Sch. Agric., Meijo Univ.)

16:38 1Cp15 Search for Novel Isoprene Synthases from *Bacillus subtilis* focusing on bifunctional enzymes

…… ○Shogo Iwakata[1], Eisuke Tasaki[1], Kazutake Hirooka[2], Daijiro Ueda[1], Tsutomu Sato[1]

([1] Grad. Sch. Sci. Technol., Niigata Univ., [2] Fac. Life Sci. Biotechnol., Fukuyama Univ.)

Room D Floor 5 506 (13:30–16:26)

【Proteins; Plant Cell / Tissue Engineering】

13:30 1Dp01 Thermal refolding and activity recovery of a hyperthermophilic enzyme

…… Kazuha Maekawa[2], ○Daigo Fujisaki[1], Yuri Ishii[1,2], Shinsuke Fujiwara[1,2]

([1] Sch. Biol. Environ. Sci., Kwansei Gakuin Univ., [2] Grad. Sch. Sci. Technol., Kwansei Gakuin Univ.)

13:42 1Dp02 Applications of sbtilisin-like serine protease from a hyperthermophilic archaeon *Thermococcus kodakaraensis* KOD1

……○Tatsuya Yokoyama[1], Akikazu Sakudou[2], Hirotomo Komori[3], Yoshifumi Jahana[3], Yuka Oda[3], Yuichi Koga[1]

([1] Grad. Prog.Eng.Okayama Univ. Sci., [2] Vet. Okayama Univ. Sci., [3] Saraya Co. Ltd.)

13:54 1Dp03 Functional and Structural Analysis of Degradative Enzymes Derived from Thermophilic Compost Metagenomes

…… ○Naoya Noguchi[1], Keiichi Noguchi[1], Ryo Iizuka[2], Koki Hata[1]

([1] Grad. Sch. Eng., Tokyo Univ. Agric. Technol., [2] Grad. Sch. Sci., Univ. Tokyo)

14:06 1Dp04 Recombinant expression of the capsid protein from *Aeropyrum pernix* bacilliform virus 1 in *Escherichia coli* and its self-assembly into virus-like particles

…… ○Takenori Satomura[1], Sawa Hirota[4], Ryusei Seto[1], Shinji Sugihara[1], Haruhiko Sakuraba[3], Toshihisa Ohshima[2]

([1] Grad. Sch. Eng. Fukui Univ., [2] Fac. Eng., Osaka Inst. Technol., [3] Fac. Agric., Kagawa Univ., [4] Fac. Eng., Fukui Univ.)

14:18 1Dp05 Generation of the pGKE141 vector that directs inducible expression in the thermophile *Geobacillus thermodenitrificans* K1041 but negligible expression in *Escherichia coli*

……○Masaki Murakami[1], Takashi Ohshiro[2,3], Hirokazu Suzuki[2,3]

([1] Dept. Eng., Grad. Sch. Sust. Sci., Tottori Univ., [2] Fac. Eng., Tottori Univ., [3] GSC, Tottori Univ.)

14:30 Break

14:40 1Dp06 〈**Topics**〉 Selective aggregation and magnetic recovery of precious metals using multi-functional proteins

…… ○Hotaka Ueda, Kazunori Nakashima, Sayaka Imamura, Chikara Takano

(Grad. Sch. Eng., Hokkaido Univ.)

14:52 1Dp07 Development of a recombinant protein production system in *Nicotiana benthamiana* hairy root culture
····· ○Naoya Murakami [1,2], Hiroyuki Kajiura [2,3], Ryo Misaki [2,3], Kazuhito Fujiyama [2,3]
([1] Grad. Sch. Eng., Univ. Osaka, [2] ICBiotech, Univ. Osaka, [3] OTRI, Osaka Univ.)

15:04 1Dp08 Structural and functional analysis of glutamate receptors in cyanobacteria
····· ○Haoyu Zhang [1], Masaru Tsujii [1], Ellen Tanudjaja [1], Haruto Shimizukawa [1], Tadaomi Furuta [2], Shingo Kaneko [3], Hirotaka Sugiura [3], Fumihito Arai [3], Yasuhiro Ishimaru [1], Nobuyuki Uozumi [1]
([1] Grad. Sch. Eng., Tohoku Univ., [2] Sch. Life Sci. Technol, Science Tokyo, [3] Grad. Sch. Eng., Univ. Tokyo)

15:16 1Dp09 Organ-specific analysis of *N*-glycan structures in *Arabidopsis thaliana*
····· ○Takumi Sugishima [1,2], Hiroyuki Kajiura [2,3], Ryo Misaki [2,3], Kazuhito Fujiyama [2,3]
([1] Grad. Sch. Eng., Univ. Osaka, [2] ICBiotech, Univ. Osaka, [3] OTRI, Osaka Univ.)

15:28 1Dp10 An electron spin resonance study of extracellular nucleotides signaling in plants
····· ○Tomoko Kagenishi, Masaaki Konishi (Kitami Inst. Technol.)

15:40 Break

15:50 1Dp11 Engineering Rice Suspension Cells for High-Level Secretion of the Antimicrobial Protein Lysostaphin
·····○Takuto Yahara, Gaku Watarai, Arisa Otawara, Sou Shimoda, Hiroshi Yoneyama, Yukihiro Ito
(Grad. Sch. Agric. Sci., Tohoku Univ.)

16:02 1Dp12 Bioproduction of glycyrrhizin using Tsukuba System in tobacco leaves
·····○Much Z. Fanani [1], Kenji Miura [2], Hikaru Seki [1,3]
([1] Dept. Biotechnol., Grad. Sch. Eng., Univ. Osaka, [2] T-PIRC, Univ. Tsukuba, [3] OTRI, Univ. Osaka)

16:14 1Dp13 Verification of the usefulness of *hise1* mutant of *Arabidopsis* thaliana as a host for terpene production
·····○Yuki Kato [1], Fanani Muchammad [1], Takashi Shimada [3], Hikaru Seki [1,2]
([1] Grad. Sch. Eng., Univ. Osaka, [2] OTRI, Osaka Univ., [3] Grad. Sch. Horticul., Chiba Univ.)

Room E Floor 6 601 (13:30–16:50)

【Metabolic Engineering】

13:30 1Ep01 Analysis of gene in levansucrase-deficient strain of cellulose-producing acetic acid bacteria
·····Riku Yamashita [1], Minenosuke Mastutani [2], Morio Ishikawa [3], Naoya Kataoka [1], Kazunobu Matsushita [1], Toshiharu Yakushi [1], ○Naoto Tonouchi [4]
([1] Fac. Agric., Yamaguchi Univ., [2] Fac. Bio-Ind., Tokyo Univ. Agric., [3] Fac. Appl. Biosci., Tokyo Univ. Agric., [4] Bio-Polymer research)

13:42 1Ep02 Inhibition of biofilm formation in *Pseudomonas aeruginosa* by the secretions of the *Bacillus* sp. isolate
····· ○Ryosuke Konishi, Shobu Hachimata, Miho Sasaki, Yoshinobu Matsumura
(Fac. Chem. Mater. Bioeng., Kansai Univ.)

13:54 1Ep03 **Metabolic pathway analysis of *Acinetobacter* sp. Tol 5 assimilating non-sugar substrates**
····· ○Shori Inoue [1], Shogo Yoshimoto [1], Yuki Ohara [1], Kanako Tokiyoshi [2], Taisei Naobayashi [2], Teppei Niide [3], Hiroshi Shimizu [3], Yoshihiro Toya [3], Yuji Tsugawa [2], Katsutoshi Hori [1]
([1] Grad. Sch. Eng., Nagoya Univ., [2] Grad. Sch. Eng., Tokyo Univ. Agric. Technol., [3] Grad. Sch. IST, Univ. Osaka)

14:06 1Ep04 Effects of serine metabolism on cell morphology and organic solvent tolerance in *Kocuria rhizophila* DC2201
····· ○Hiroshi Toda [1,2], Yuri Tago [1], Tamotsu Kanai [1,2] ([1] Fac. Eng., Toyama Pref. Univ., [2] Biotechnol. Res. Center, Toyama Pref. Univ.)

14:18 1Ep05 Effects of mitochondrial engineering on organic acid production in *Aspergillus oryzae*

……◯Tomohiro Suzuki [1], Sho Motosako [1], Baihaqqi Fahmi [1], Satoshi Wakai [1,2], Yutaro Mori [1], Prihardi Kahar [1], Chiaki Ogino [1]

([1] Grad. Sch. Eng, Kobe Univ., [2] JAMSTEC)

14:30 Break

14:40 1Ep06 Optimization of medium composition for the genetic engineered strains overexpressing *cexA* derived from *Aspergillus tubingensis* WU-2223L

……◯Yuuki Irie [1], Kazuki Oga [1], Isato Yoshioka [2,3], Kohtaro Kirimura [2]

([1] Dept. Appl. Chem., Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Inst. Sci. Eng., Waseda Univ., [3] MMRC, Chiba Univ.)

14:52 1Ep07 Genes affecting lipid composition change in oleaginous yeast

……◯Ryuto Masui [1,2], Hiroyuki Kajiura [2,3], Ryo Misaki [2,3], Kazuhito Fujiyama [2,3]

([1] Grad. Sch. Eng., Univ. Osaka, [2] ICBiotech, Univ. Osaka, [3] OTRI, Osaka Univ.)

15:04 1Ep08 Molecular mechanism for cell response and tolerance against cytotoxicity of formaldehyde in the budding yeast

……◯Yuichiro Ikagawa [1], Akihito Takeuchi [2], Motohiro Tani [1,2,3], Masaya Shimada [1,2,3,4], Tomoyuki Nakagawa [1,2,3,4]

([1] United Grad. Sch. Agric. Sci., Gifu Univ., [2] Grad. Sch. Nat. Sci. Tech., Gifu Univ., [3] Fac. Appl. Biol. Sci., Gifu Univ., [4] PFRC. Gifu Univ.)

15:16 1Ep09 Enhancing lactic acid tolerance in yeast via point and structural mutations

…… ◯Satsuki Uemura, Ryosuke Yamada, Takuya Matsumoto, Hiroyasu Ogino

(Grad. Sch. Eng., Osaka Metro. Univ.)

15:28 1Ep10 Cellular Responses of the C_1 Yeast *Komagataella phaffii* to High Methanol Environments

……◯Kyohei Tsuchiyama [1], Hao-Liang Cai [3], Junzhang Zhu [3], Nobuyuki Okahashi [4], Fumio Matsuda [4], Motohiro Tani [1,2,3], Masaya Shimada [1,2,3,5], Tomoyuki Nakagawa [1,2,3,5]

([1] Grad. Sch. Nat. Sci. Tech., Gifu Univ., [2] Fac. Appl. Biol. Sci., Gifu Univ., [3] United Grad. Sch. Agric. Sci., Gifu Univ., [4] Grad. Sch. IST, Univ. Osaka, [5] PFRC, Gifu Univ.)

15:40 Break

15:50 1Ep11 Metabolic engineering of *Saccharomyces cerevisiae* to improve ethanol production from alginate and mannitol derived from macroalgae

…… ◯Rikuto Amaike, Tatsuya Maekawa, Kouichi Kuroda

(Grad. Sch. Sci. Technol., Kyoto Inst. Technol.)

16:02 1Ep12 Utilization of yeast peroxisome for bioproduction

…… ◯Ryosuke Mitsui, Tomokazu Shirai, Akihiko Kondo (CSRS, RIKENS)

16:14 1Ep13 Development of a high-throughput analytical method for metabolites in yeast culture supernatants using PESI-MS

……◯Takeo Taniguchi [1], Nobuyuki Okahashi [1], Prihardi Kahar [2], Takanari Hattori [3], Hidenori Takahashi [3], Chiaki Ogino [2], Fumio Matsuda [1]

([1] Grad. Sch. IST, Univ. Osaka, [2] EGBRC, Kobe Univ.,, [3] Shimadzu Corp.)

16:26 1Ep14 Development of time-resolved ^{13}C-metabolic flux analysis of *Saccharomyces cerevisiae*

……◯Haruki Inoue [1], Ryo Ishikawa [1], Nobuyuki Okahashi [1,2,3], Fumio Matsuda [1,2,3]

([1] Grad. Sch. IST, Univ. Osaka, [2] OTRI, Osaka Univ., [3] Omics. Innov. Res. Lab, Osaka Univ. Shimadzu Corp)

16:38 1Ep15 Construction of a genome-scale metabolic model for CHL-YN cells: Determination of key parameters

……◯Masahiro Yamazaki [1,2,3], Hirotaka Kuroda [1,2,3], Noriko Yamano-Adachi [1,4], Takeshi Omasa [1,4]

([1] Grad. Sch. Eng., UOsaka, [2] Shimadzu Corp., [3] Shimadzu Analytical Innovation Research Lab., [4] OTRI., UOsaka)

Room F Floor 6 602 (13:30–16:50)

【Fermentation Physiology, Fermentation Technology; Metabolic Engineering】

13:30 1Fp01 Strain construction and culture-condition optimization for squalene production by *Corynebacterium glutamicum*

……○Yurina Onoue [1], Takafumi Shimizu [2], Masayuki Inui [1,2] ([1] NAIST,BIO, [2] RITE)

13:42 1Fp02 Construction of low-CO_2 emitting *Streptomyces lividans* and efficient production of alpha-ketoglutarate

……Kentaro Nakazawa [1], Tsuzumi Oka [1], Shogo Yamamoto [2], Nobuyoshi Ishii [2], ○Yota Tsuge [1,3]

([1] Grad. Sch. Nat. Sci. Technol., Kanazawa Univ., [2] Nagase & Co., Ltd, [3] InFiniti, Kanazawa Univ.)

13:54 1Fp03 High-Cell-Density Autotrophic Cultivation of the Hydrogen-Oxidizing Bacterium *Ralstonia eutropha* using Low-Hydrogen-Content Gas

……○Yuki Miyahara, Chih-Ting Wang, Takeharu Tsuge (Sch. Mater. Chem. Technol., Science Tokyo)

14:06 1Fp04 Analysis of the mechanism of oxygen tolerance improved by introduction of hydrogenase into the strictly anaerobe *Moorella thermoacetica*

……○Shuto Tsuruda [1], Hayato Ishida [1], Junya Kato [2], Tatsuya Fujii [2], Setsu Kato [1], Yoshiteru Aoi [1], Yutaka Nakashimada [1]

([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] AIST)

14:18 1Fp05 Fermentation characteristics of ethanol-producing mutant strain of thermophilic homoacetobacterium *Moorella thermoacetica* under syngas conditions

……○Yuichi Kuwada [1], Junya Kato [2], Tatsuya Fujii [2], Setsu Kato [1], Yoshiteru Aoi [1], Yutaka Nakashimada [1]

([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] AIST)

14:30 Break

14:40 1Fp06 Exploration and evaluation for enhancement of ATP synthesis in *Moorella thrmoacetica* using flux balance analysis

……○Yoshiki Shinto [1], Junya Kato [2], Tatsuya Fujii [2], Masahiro Watanabe [2], Yusuke Nakamichi [2], Yoshiteru Aoi [1], Setsu Kato [1], Yutaka Nakashimada [1]

([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] AIST)

14:52 1Fp07 Introduction of Heterologous *phaC* gene into Purple Non-Sulfer Bacteria for PHBH Production

……○Kako Miura [1], Kenya Tanaka [1,2,3], Akihiko Kondo [1,2,4,5], Tomohisa Hasunuma [1,2,4,5]

([1] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [2] EGBRC, Kobe Univ.,, [3] Grad. Sch. Eng. Sci., Univ. Osaka, [4] CSRS, RIKENS, [5] Fac. Eng., Kobe Univ.)

15:04 1Fp08 PhaB-independent PHB biosynthesis in the thermophilic hydrogen-oxidizing bacterium *Hydrogenophilus thermoluteolus*

……○Kotaro Yoda, Masafumi Kameya, Hiroyuki Arai (Grad. Sch. Agric. Life Sci., Univ. Tokyo)

15:16 1Fp09 Metabolic Engineering of *Ralstonia eutropha* Strain 1F2 for Polyhydroxyalkanoate Copolymer Biosynthesis Using Fructose and Carbon Dioxide

……○Chih-Ting Wang, Ramamoorthi M Sivashankari, Yuki Miyahara, Takeharu Tsuge (Sch. Mater. Chem. Technol., Science Tokyo)

15:28 1Fp10 Biosynthesis of polyhydroxyalkanoate from 6-aminohexanoic acid using recombinant *Cupriavidus necator*

……○Yusuke Saito [1], Dai-ichiro Kato [2], Miwa Yamada [1,3]

([1] United Grad. Sch. Agric. Sci., Iwate Univ., [2] Grad. Sch. Sci. Eng., Kagoshima Univ., [3] Dept. Biolog. Chem. Food sci., Iwate Univ.)

15:40 Break

15:50 1Fp11 Development of high-production for hydroxytyrosol using *Corynebacterium glutamicum*

……○Yukino Terazawa [1], Norimasa Kashiwagi [2], Masayuki Inui [1,2] ([1] Div. Biol. Sci., NAIST, [2] RITE)

16:02 1Fp12 Dopamine production using *Corynebacterium glutamicum*

……○Yuuna Ikeda, Mayo Horita, Tsutomu Tanaka (Grad. Sch. Eng, Kobe Univ.)

16:14 1Fp13 Production of *trans*-urocanate using *Corynebacterium ammoniagenes*
····· ○Takumi Watanabe, Masahiro Maeda, Yuji Aso (Grad. Sch. Sci. Technol., Kyoto Inst. Technol.)

16:26 1Fp14 Production of beta-carotene from methanol by multiple gene integration into the rDNA locus of *Komagataella phaffii*
····· ○Yoshifumi Inoue, Ryosuke Yamada, Takuya Matsumoto, Hiroyasu Ogino
(Grad. Sch. Eng., Osaka Metro. Univ.)

16:38 1Fp15 Production of triacetic acid lactone and esters from oil using *Yarrowia lipolytica*
····· ○Yuta Miwa, Ayumi Koshiba, Tsutomu Tanaka (Grad. Sch. Eng, Kobe Univ.)

Room G Floor 6 603 (13:30–16:50)

【Fermentation Physiology, Fermentation Technology】

13:30 1Gp01 Biofermentation in preventive medicine through antioxidant ability of LAB-fermented herbal extract
····· ○Natsumi Iwamoto, Narandalai Danshiitsoodol, Masafumi Noda, Masanori Sugiyama
(Grad. Sch. Biomed. Health. Sci., Hiroshima Univ.)

13:42 1Gp02 Atractylodes Japonica Rhizome extract fermented with a plant-derived lactic acid bacteria improves the wheat gliadin-induced food allergic reaction in mice
····· Qingmiao Ma, ○Masafumi Noda, Narandalai Danshiitsoodol, Masanori Sugiyama
(Grad. Sch. Biomed. Health Sci., Hiroshima Univ.)

13:54 1Gp03 Exploratory research into prevention and treatment of allergies using plant lactic acid bacteria fermentation technology
····· ○Masaki Yokota, Masafumi Noda, Narandalai Danshiitsoodol, Masanori Sugiyama
(Grad. Sch. Med. Sci., Hiroshima Univ.)

14:06 1Gp04 The herbal extract fermentation of plant derived lactic acid bacteria and its application in neuroprotective effects
····· ○Narandalai Danshiitsoodol, Masafumi Noda, Masanori Sugiyama
(Grad. Sch. Biomed. Health. Sci., Hiroshima Univ.)

14:18 1Gp05 Antibiofilm activity of medicinal herbal extract fermented with plant-derived lactic acid bacteria
····· ○Aimin Li, Masafumi Noda, Masanori Sugiyama (Grad. Sch. Integr. Med. Sci, Hiroshima Univ.)

14:30 Break

14:40 1A-Gp01 **〈Encouragement Award (Saito Award)〉** Chair: **Kohsuke Honda**
Development of technology for large-scale collection of genetic information from uncultured microbes
····· ○Masahito Hosokawa [1,2,3,4]
([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Org. Nano Life Innov., Waseda Univ., [3] Inst. Adv. Res. Biosyst. Dyn., Waseda Res. Inst. Sci. Eng., Waseda Univ., [4] bitBiome)

15:04 1Gp08 Effect of filamentous fungal growth in white mold cheese on the production of bioactive polyamines
····· ○Nonno Ogawa [1], Yuri Ishii [1,2], Shinsuke Fujiwara [1,2]
([1] Grad. Sch. Sci. Technol., Kwansei Gakuin Univ., [2] Sci. Biol. Environ. Sci., Kwansei Gakuin Univ.)

15:16 1Gp09 Mechanism of structural stability of the Leucine-responsive regulatory protein (Lrp) across a broad pH range in acetic acid bacteria
····· ○Yuri Ishii [1,2], Yuya Tanakura [2], Shinsuke Fujiwara [1,2]
([1] Sch. Biol. Environ. Sci., Kwansei Gakuin Univ., [2] Grad. Sch. Sci. Technol., Kwansei Gakuin Univ.)

15:28 1Gp10 A unique N-terminal charged extension in GroES from acetic acid bacteria
····· ○Ouki Yamada [1], Aulia Rahmayuliana Princessa [2], Yuri Ishii [1,2], Hiroyuki Toh [1,2], Akiko Kainuma [3], Shinsuke Fujiwara [1,2]
([1] Sch. Biol. Environ. Sci., Kwansei Gakuin Univ., [2] Grad. Sch. Sci. Technol., Kwansei Gakuin Univ., [3] Fac. Health and Nutr., Tokyo Seiei Col.)

15:40 Break

15:50 1Gp11 Study on fermentation process for maltobionic acid with acetic acid bacteria
····· ○Machika Takeuchi [1], Chihiro Morishima [2], Yui Kono [2], Yoshitaka Ano [1,2]
([1] Grad. Sch. Agric., Ehime Univ., [2] Fac. Agric., Ehime Univ.)

16:02 1Gp12 Development of *Escherichia coli*-acetic acid bacterium co-culture system for the production of isobutyrate from glucose
····· ○Kanade Mabuchi [1], Naoya Kataoka [2,3], Kazunobu Matushita [3,4], Toshiharu Yakushi [2,3]
([1] Grad. Sch. Sci. Technol. Innov., Yamaguchi Univ., [2] Org. Res. Initiatives, Yamaguchi Univ., [3] RCTMR, Yamaguchi Univ., [4] Fac. Agric., Yamaguchi Univ.)

16:14 1Gp13 **〈Topics〉**
Control of bioprocess with Complex Microbial Engineering: Estimation of fermentation behaviors using metabolic models in continuous meta-fermentation
····· ○Tomonori Koga [1], Kanta Kajimoto [1], Hirokuni Miyamooto [2,3,4], Hiroyuki Hamada [1], Kenji Sakai [1], Mugihito Oshiro [1], Yukihiro Tashiro [1]
([1] Grad. Sch. Bioresour. Bioenviron. Sci., Kyushu Univ., [2] Fac. Horticul., Chiba Univ., [3] IMS, RIKEN, [4] Sermas co., ltd.)

16:26 1Gp14 Enhanced butanol production from sweet sorghum juice using co-culture methods
····· ○Chalida Daengbussadee, Lakkana Laopaiboon, Pattana Laopaiboon
(Dept. Biotechnol., Fac. Technol., Khon Kaen Univ., Khon Kaen, Thailand)

16:38 1Gp15 Enhanced ethanol production from sweet sorghum juice using wet spent yeast hydrolysate as a low-cost nitrogen supplement
····· ○Rattanaporn Phongsri, Thanawat Thanapornsin, Pattana Laopaiboon, Lakkana Laopaiboon
(Dept. Biotechnol., Fac. Technol., Khon Kaen Univ., Khon Kaen, Thailand)

Room H Floor 6 607 (13:30–16:50)

【Taxonomy, Phylogenetics; Genetic Engineering】

13:30 1Hp01 Finding genes involved in intracellular pH homeostasis in acidic environment in focusing on ATPase genes
····· ○Sakumi Teranaka [1,3], Hiroko Fukuda [1,3], Masahiro Mizuno [1,3], Mikio Nakazima [4], Hirotada Mori [2,3], Masakazu Kataoka [2,3]
([1] Grad. Sch. Sci. Technol., Shinshu Univ., [2] Eng. Fac. Eng., Shinshu Univ., [3] RCAM., Shinshu Univ., [4] freelance)

13:42 1Hp02 Comprehensive identification of recipient genes involved in RP4 conjugative transfer
····· ○Yoshihiro Murata [1], Taiki Kanzaki [1], Masahiro Mizuno [1,3], Mikio Nakajima [4], Hirotada Mori [2,3], Masakazu Kataoka [2,3]
([1] Grad. Sch. Sci. Technol., Shinshu Univ., [2] Eng. Fac. Eng., Shinshu Univ., [3] RCAM., Shinshu Univ., [4] freelance)

13:54 1Hp03 Isoration and characterization of halotolerant acidophilic iron-oxidizing bacteria
····· ○Hirohide Takashima, Michiko Nemoto, Takashi Tamura, Tadayoshi Kanao
(Grad. Sch. Environ. Life Sci., Okayama Univ.)

14:06 1Hp04 Physiological functions of genes related to prykerimine metabolism conserved in the yeast *Saccharomyces cerevisiae* under stress conditions

……○Kazuaki Harada [1], Ayuki Hamaguchi [1], Ichiyo Kamenaga [2], Masato Tanaka [2], Hisataka Taguchi [1], Yu Sasano [1]
([1] Grad. Sch. Eng., Sojo Univ., [2] Fac. Biotechnol. Life Sci., Sojo Univ.)

14:18 1Hp05 Physiological analysis of Pulcherriminic acid production genes in basidiomycete yeasts

……○Ayuki Hamaguchi, Hisataka Taguchi, Yu Sasano (Grad. Sch. Eng., Sojo Univ.)

14:30 Break

14:40 1Hp06 Diversity and functional analysis of acylhomoserine lactone-degrading genes in *Bacillus thuringiensis* through comparative genome analysis

……○Tomohiro Morohoshi [1], Kanna Ueno [1], Waka Arai [1], Nobutaka Someya [2]
([1] Grad. Sch. Reg. Devel. Creativity, Utsunomiya Univ., [2] NARO)

14:52 1Hp07 Analysis of *Agrobacterium*genes for catabolism of the monolignol compound *p*-coumaryl alcohol

……○Katsunori Suzuki [1,2], Kazuya Kiyokawa [1,2] ([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] Genome edit. innovation Ctr. Hiroshima Univ.)

15:04 1Hp08 Withdrawn

15:16 1Hp09 Development of the LOBSTERS plasmid series for genome editing in budding yeast and its application to multiplex genome editing

……○Satoshi Okada [1,2], Emiko Kusumoto [2], Takashi Ito [2] ([1] Yasuda Women's Univ., Fac. Sci. & Eng., [2] Kyushu Univ. Grad. Sch. Med. Sci.)

15:28 1Hp10 Development of a markerless mutant generation method for the thermophilic hydrogen producing bacterium *Hydrogenophilus thermoluteolus* using the Cre-*loxP* system

……○Hiroyuki Arai, Yoriko Mawatari, Masafumi Kameya (Grad. Sch. Agric. Life Sci., Univ. Tokyo)

15:40 Break

15:50 1Hp11 Regulation of the expression level of the arrestin-like protein CreD by the transcription factor CreA and the deubiquitinating enzyme CreB in *Aspergillus oryzae*

……○Mizuki Tanaka [1], Shoki Fujita [2], Tetsuya Hiramoto [2], Yasuaki Kawarasaki [3], Takahiro Shintani [2], Youhei Yamagata [1], Katsuya Gomi [2]
([1] Grad. Sch. Agric., Tokyo Univ. Agric. Technol., [2] Grad. Sch. Agric. Sci., Tohoku Univ., [3] Sch. Food Nutr. Sci., Univ. Shizuoka.)

16:02 1Hp12 **〈Topics〉**
Functional evaluation of an inducible gene expression system in *Aspergillus oryzae*

……○Masaki Yokoyama [1], Katsuya Gomi [1,2], Takahiro Shintani [1] ([1] Grad. Sch. Agric. Sci., Tohoku Univ., [2] Fujiwara Techno-Art Co., Ltd)

16:14 1Hp13 Analysis of the relationship between microtubule and tubulin mRNA dynamics in *Aspergillus oryzae*

……○Keishu Kawatomi [1], Kaoru Takegawa [2], Yujiro Higuchi [2]
([1] Grad. Sch. Bioresour. Bioenviron. Sci., Kyushu Univ., [2] Grad. Sch. Agric., Kyushu Univ.)

16:26 1Hp14 Generation of the deletion strains, by genome editing technique, in relation to the mycotoxin biosynthesis gene clusters in the citric acid-hyperproducer *Aspergillus lacticoffeatus* WU-2020

……○Kazuki Oga [1], Isato Yoshioka [1,2], Hiroyuki Nakagawa [3], Kohtaro Kirimura [1]
([1] Dept. Appl. Chem., Fac. Sci. Eng, Waseda Univ, [2] MMRC, Chiba Univ., [3] NARO)

16:38 1Hp15 Construction of multiple gene disruptions for alpha-1,3-glucan synthases using marker recycling in *Aspergillus luchuensis*

……○Makiko Kikuchi [1], Harutaka Shimoji [2], Tae Abe [2], Zikian Tokashiki [3], Silai Zhang [3], Katsuya Gomi [3], Hirohide Toyama [2,4], Osamu Mizutani [2,4]
([1] United Grad. Sch. Agric. Sci., Kagoshima Univ., [2] Grad. Univ. of the Ryukyus Agri, [3] Grad. Sch. Agric. Sci., Tohoku Univ., [4] Fac. Agric., Univ. Ryukyus)

Room I Floor 6 608 (13:30–16:50)

【Cell and Tissue Engineering】

13:30 1Ip01 Development of titanium particles-loaded mesenchymal stem cell aggregates for application in aneurysm embolization and regeneration

·····◯Lupeng Teng [1,2], Soichiro Fukushima [3,4], Makoto Koizumi [5], Yunyang Zhang [1,2], Minami Hasegawa-Ogawa [4], Hirotaka James Okano [4], Takao Ohki [3], Ryosuke Iwai [2]
([1] Grad. Sci. Tech., Okayama Univ. Sci., [2] Inst. Front. Sci. Tech., Okayama Univ. Sci., [3] Div. Vasc. Surg., Dept. Surg., The Jikei Univ. Med., [4] Div. Regen. Med., Res. Ctr. Med. Sci., The Jikei Univ. Med., [5] Lab. Anim. Fac., Res. Ctr. Med. Sci., The Jikei Univ. Med.)

13:42 1Ip02 Development of scaffold-free skeletal muscle-like tissue using cell aggregation technology: improving breaking strength by co-culture tendon cells

····· ◯Keisuke Shiono [1], Ryosuke Iwai [2], Takeshi Moriwaki [1] ([1] Grad.Sch.Sci.Eng.,Hirosaki Univ., [2] Inst.Front.Sci.Tech.,Okayama Univ.sci.)

13:54 1Ip03 Hydrogel encapsulation of engineered hepatic cells as bioartificial livers

····· ◯Silas Habimana, Hiroyuki Kitano, Yoshinori Kawabe, Nana Shirakigawa, Masamichi Kamihira (Grad. Sch. Eng., Kyushu Univ.)

14:06 1Ip04 Construction of high-viability cartilage tissues via intracellular metabolic regulation and evaluation using mesenchymal stem cells

····· ◯Rui Zhang, Keita Kanki (Fac. Eng., Okayama Univ. Sci.)

14:18 1Ip05 Three-dimensional culture of liver cells utilizing microparticle-connected hydrogel sponges

····· ◯Shin Ozawa, Chihiro Adachi, Rie Utoh, Masumi Yamada (Grad. Sch. Sci. Eng., Chiba Univ.)

14:30 Break

14:40 1Ip06 Evaluation of cancer-cell derived migrasomes captured by peptide-modified substrates on angiogenesis

····· ◯Yuka Iwasaki, Shogo Saito, Mina Okochi (Sch. Mater. Chem. Technol., Science Tokyo)

14:52 1Ip07 Development of a generation method for osmotically induced migrasomes and their characterization

····· ◯Koki Yoshikawa, Shogo Saito, Mina Okochi (Sch. Mater. Chem. Technol., Science Tokyo)

15:04 1Ip08 In vitro intestinal model with bacterium beads and seesaw culture for drug screening

·····◯Mioto Nishino, Naoya Ito, Toshihiro Usui, Junji Fukuda (Grad. Sch. Eng., Yokohama Natl. Univ.)

15:16 1Ip09 Construction of skeletal muscle tissue model containing endogenous mesenchymal stromal cells and proteomic analysis

····· ◯Kenshin Ishida [1], Itsuki Fujii [1], Tomoya Takase [1], Hirokazu Akiyama [1], So-ichiro Fukada [2], Akiyoshi Uezumi [3], Hiroyuki Honda [1], Kazunori Shimizu [1]
([1] Grad. Sch. Eng., Nagoya Univ., [2] Grad. Sch. Pharm. Sci., Univ. Osaka, [3] Med. Inst. Bioreg., Kyushu Univ.)

15:28 1Ip10 Establishment of a muscle atrophy evaluation system using aged human serum and human skeletal muscle MPS, and the evaluation of quercetin

····· ◯Akitoshi Nagai [1,2], Hisanori Tokuda [1], Takayuki Izumo [1], Yoshihiro Nakao [1], Hiroyuki Honda [2], Kazunori Shimizu [2]
([1] Suntory Wellness Ltd., [2] Grad. Sch. Eng., Nagoya Univ.)

15:40 Break

15:50 1Ip11 〈**Topics**〉
Understanding hair growth promoting effects of serotonin using hair follicle organoids

····· ◯Tatsuto Kageyama [1,2], Junji Fukuda [1,2] ([1] KISTEC, [2] Grad. Sch. Eng., Yokohama Natl. Univ.)

16:02 1Ip12 Cell rejuvenation by partial reprogramming for hair regenerative medicine

·····◯Ayaka Nanmo [1], Tatsuto Kageyama [1,2,3], Atsushi Suzuki [1,2], Junji Fukuda [1,2,3]
([1] Inst. Adv. Sci., Yokohama Natl. Univ., [2] Grad. Sch. Eng., Yokohama Natl. Univ., [3] KISTEC)

16:14 1Ip13 Mesenchymal stem cells cultured on the photosensitizer-immobilized glass plate
……◯Masayuki Hara, Hideki Mori (Grad. Sch. Sci., Osaka Metro. Univ.)

16:26 1Ip14 Development of peptide-functionalized interface design technology for cell control to prevent adhesion
…… ◯Shunsuke Ito [1], Takumi Taga [1], Tatsuo Takagi [1], Kenjiro Tanaka [1], Kota Watanabe [3], Hiroyuki Imanaka [3], Ryuji Kato [1,2]
([1] Grad. Sch. Pharm. Sci., Nagoya Univ., [2] Int. of Nano-Life-Syst., Nagoya Univ., [3] Grad. Sch. Environ. Life Sci., Okayama Univ.)

16:38 1Ip15 Development of a liquid liver: encapsulation of metabolic enzymes into red blood cells and evaluation of their activity
……◯Nobuhiko Kojima (Grad. Sch. Nanobiosci., Yokohama City Univ.)

Room J Floor 6 610 (13:30–16:38)

【Biosynthesis, Natural Organic Chemistry; Glycoengineering】

13:30 1Jp01 Development of a drug discovery platform based on biosynthetic system of natural cyclic peptides
……◯Shinta Ijichi [1], Shotaro Hoshino [1], Alexander A. Vinogradov [2], Yuki Goto [3,4], Hiroaki Suga [4], Hiroyasu Onaka [1]
([1] Grad. Sch. Life Sci., Gakushuin Univ., [2] NUS, [3] Grad. Sch. Sci., Kyoto Univ., [4] Grad. Sch. Sci., Univ. Tokyo)

13:42 1Jp02 **〈Topics〉**
Exploration of the cryptic bioactivity in peptide natural products by enhancement of cell membrane permeability
……◯Kohei Kaneda, Kaito Suzuki, Tomoya Ogura, Fumihito Hasebe, Chitose Maruyama, Yoshimitsu Hamano
(Grad. Sch. Biosci. Biotec., Fukui Pref. Univ.)

13:54 1Jp03 Study on the biosynthsis of Streptolidine lactam (SLL) found in Streptothricin-related compounds
…… ◯Kotone Yasuhara [1], Yasushi Ogasawara [2], Fumihito Hasebe [1], Tohru Dairi [2], Yoshimitsu Hamano [1], Chitose Maruyama [1]
([1] Grad. Sch. Biosci. Biotec., Fukui Pref. Univ., [2] Grad. Sch. Eng., Hokkaido Univ.)

14:06 1Jp04 Study on the biosynthetic mechanism of beta-homolysine found in resormycin
……◯Kazuma Sasaki [1], Yasushi Ogasawara [2], Kazuya Yamanaka [3], Masayuki Igarashi [4], Fumihito Hasebe [1], Tohru Dairi [2], Yoshimitsu Hamano [1], Chitose Maruyama [1]
([1] Grad. Sch. Biosci. Biotec., Fukui Pref. Univ.,, [2] Grad. Sch. Eng., Hokkaido Univ., [3] Fac. Chem. Mater. Bioeng., Kansai Univ., [4] Institute of Microbial Chemistry, BIKAKEN)

14:18 1Jp05 Investigation of interaction regions between homocysteine synthase and sulfur carrier protein in *Streptomyces albulus*
…… ◯Maria Igarashi, Chitose Maruyama, Yoshimitsu Hamano, Fumihito Hasebe
(Grad. Sch. Biosci. Biotec., Fukui Pref. Univ.)

14:30 Break

14:40 1Jp06 Lysine source for epsilon-poly-L-lysine biosynthesis depends on diaminopimelate pathway during its production in *Streptomyces albulus*
……◯Daisuke Shimada, Chitose Maruyama, Yoshimitsu Hamano, Fumihito Hasebe
(Grad. Sch. Biosci. Biotec., Fukui Pref. Univ.)

14:52 1Jp07 Investigation of overlapping methionine biosynthetic pathways in *Streptomyces fradiae* NBRC12773
……◯Souma Yoshida, Chitose Maruyama, Yoshimitsu Hamano, Fumihito Hasebe
(Grad. Sch. Biosci. Biotec., Fukui Pref. Univ.)

15:04 1Jp08 Biosynthetic pathway of antibiotic Alaremycin
····· Yuki Noto, Hikaru Mori, Jun Kawaguchi, Mio Okui, ○Noritaka Iwai, Masaaki Wachi (Sch. Life Sci. Technol, Science Tokyo)

15:16 1Jp09 Molecular function of the 4-monosubstituted butenolide molecules from Indonesia actinomycetes
····· ○Sho Ogaki [1], Rukman Muslimin [1], Alimuddin Ali [2], Sisun Choi [3], Eung-Soo Kim [3], Kenji Arakawa [1] ([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] Makassar State Univ., [3] Dept. Biol., Sci. Bioeng., Inha Univ.)

15:28 1Jp10 Extractive fermentation and polymerization for integrated production of biobased polymers
····· ○Yuji Aso, Ikumi Kinoshita (Grad. Sch. Sci. Technol., Kyoto Inst. Technol.)

15:40 Break

15:50 1Jp11 Search for Itaconic Acid Analogues producing bacteria using Photoclic reaction and Fluorous tag method
····· ○Yuka Kawahara, Ayano Sudo, Yuji Aso (Grad. Sch. Sci. Technol., Kyoto Inst. Technol.)

16:02 1Jp12 Production of IgGs in sialylated glycan-deficient Chinese hamster lung cells
····· ○Motoki Okuyama [1], Anajao Amihan Leana [1], Ryo Misaki [2,3], Hiroyuki Kajiura [2,3], Kazuhito Fujiyama [2,3] ([1] Grad. Sch. Eng., Univ. Osaka, [2] ICBiotech, Univ. Osaka, [3] OTRI, Osaka Univ.)

16:14 1Jp13 Effect of glycosylation inhibition on the Hepatitis B Virus infection
····· ○Taisei Kawakami [1], Ryo Misaki [2,3], Hiroyuki Kajiura [2,3], Kazuhito Fujiyama [2,3] ([1] Grad. Sch. Eng., Univ. Osaka, [2] ICBiotech, Univ. Osaka, [3] OTRI, Osaka Univ.)

16:26 1Jp14 Regulation of glycosylation in cultured mammalian cells via installation of glycosyltransferases
····· ○Rina Fujita [1], Seigo Tateo [2], Sachiko Kondo [1,2], Hirokazu Yagi [1,2], Maho Yagi [1,2], Koichi Kato [1,2] ([1] Grad. Sch. Pharm. Sci., Nagoya City Univ., [2] ExCELLS, Natl. Inst. Nat. Sci.)

Room K Floor 7 704 (14:40–16:50)

【Environmental Technology, Wastewater Treatment】

14:06 1A-Kp01 〈**Young Asian Biotechnologist Prize**〉 Chair: **Hideo Nakano**
Construction and characteristics analysis of microbial cell factories for production of bio-chemicals
····· ○Zhiwen Wang [1,2] ([1] Coll. Life Sci., Ningxia Univ., P.R. China, [2] Sch. Syn. Biol. BioM., Tianjin Univ., P.R. China)

14:30 Break

14:40 1Kp06 Effect of culture temperature on specific growth rates of Individual nitrifying bacteria in bacterial consortia
····· ○Ichiro Suzuki [1], Masaki Takato [1], Mizuki Hosono [2], Hikaru Horiike [1], Minoru Takeda [1] ([1] Grad. Sch. Eng. Sci., Yokohama Natl. Univ., [2] Fac. Eng. Sci., Yokohama Natl. Univ.)

14:52 1Kp07 Control of bioprocess with complex microbial engineering: Evaluation of the effect of organic matter sources on ATAD process
····· ○Rin Hatano, Min Zhang, Mugihito Oshiro, Yukihiro Tashiro (Grad. Sch. Bioresour. Bioenviron. Sci., Kyushu Univ.)

15:04 1Kp08 Biotreatment of raw wastewater by a microalgae-bacteria consortium
····· ○Yuma Yamamoto [1], Kei Motomura [2], Hiroyuki Ayano [2], Tamotsu Ushiyama [2], Ryo Nagao [1,3] ([1] Grad. Sch. Integr. Sci. Technol., Shizuoka Univ., [2] Kurita Water Ind. Ltd., [3] Fac. Agric., Shizuoka Univ.)

15:16 1Kp09 Development of micro-low temperature activate sludge system
····· ○Masaaki Konishi [1], Mika Kasai [1], Tetsuya Nakamura [2] ([1] Kitami Inst. Technol., [2] Kitami City)

15:28 1Kp10 Biotreatment of raw wastewater from a seafood processing facility and biomass production by a microalgae-bacteria consortium

……○Ryoken Kaga [1], Sota Yokoyama [2], Hideyuki Adachi [3], Atsushi Kubo [4], Kazuki Nimura [5], Yuu Hirose [2], Ryo Nagao [1,6]

([1] Grad. Sch. Integr. Sci. Technol., Shizuoka Univ., [2] Grad. Sch. Eng., Toyohashi Univ. Technol., [3] Euglena Co., Ltd., [4] Fac. Sci., Shizuoka Univ., [5] Shizuoka Prefectural Res. Inst. of Fishery and Ocean, [6] Fac. Agric., Shizuoka Univ.)

15:40 Break

15:50 1Kp11 Treatment and Power Generation of Molasses Wastewater Using Microbial Fuel Cells

…… ○Kengo Inoue [1], Miyuki Nagamine [1], Tomoya Sawaki [2] ([1] Fac. Agric., Univ. Miyazaki, [2] TAKASAGO Int. Corp.)

16:02 1Kp12 Phylogenetic analysis of phosphite-oxidizing chemoautotrophic bacteria for elucidating evolutionary diversity

…… ○Takafumi Yamanaka [1], Thi Thuy Linh Cao [2], Takenori Ishida [1], Takeshi Ikeda [1], Hisakage Funabashi [1], Akio Kuroda [1], Ryuichi Hirota [1]

([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] RISE, Hiroshima Univ)

16:14 1Kp13 Effect of plastic particles in soil on the growth of radish

…… ○Noboru Takiguchi [1], Nao Nakajima [2] ([1] Inst. Sci. Eng., Kanazawa Univ., [2] Grad. Sch. Nat. Sci. Technol., Kanazawa Univ.)

16:26 1Kp14 Investigation of factors affecting lytic activity of bacteriophage in soil and modification of soil microbiota

……○Suguru Izumo [1], Tomoki Tanaka [1], Hiroaki Iwaki [2], Kenji Okano [2]

([1] Grad. Sch. Sci. Eng., Kansai Univ., [2] Fac. Chem. Mater. Bioeng., Kansai Univ.)

16:38 1Kp15 〈**Topics**〉

Development of a fully automated airborne asbestos measurement system using a fluorescent bioprobe

…… ○Tomoki Nishimura [1], Kenichirou Kaga [2], Takenori Ishida [1], Kyoka Ichikawa [1], Takeshi Ikeda [1], Hisakage Funabashi [1], Ryuichi Hirota [1], Akio Kuroda [1]

([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] DKK-TOA Corp.)

Room L Floor 7 710 (13:30–16:50)

【Biomass, Bioresource and Energy Engineering】

13:30 1Lp01 Development of marine bacterium *Cobetia* sp. IU 189733JP01 (5-11-6-3) strains that highly accumulate polyhydroxyalkanoate

…… ○Ryuhi Araya [1], Shuta Tanabe [1], Takuma Ishida [1], Yuki Umebayashi [2], Sung-Jin Kawai [2], Hiroaki Suzuki [2], Miwa Yamada [1]

([1] Dept. Biolog. Chem. Food sci. Iwate Univ., [2] New Field Pioneering Div. Toyota Boshoku Co.)

13:42 1Lp02 Biosynthesis of polyhydroxyalkanoate block copolymers by amino acid-fed cultivation of *Ralstonia eutropha* expressing sequence-regulating PHA synthase

…… ○Shizuru Ishihara [1], Izumi Orita [1], Ken'ichiro Matsumoto [2], Toshiaki Fukui [1]

([1] Science Tokyo, [2] Grad. Sch. Eng., Hokkaido Univ.)

13:54 1Lp03 Biosynthesis of (*R*)-3-hydroxybutyrate by *Ralstonia eutropha* strains engineered for short-chain-acyl-CoA metabolisms

…… ○Nozomi Miyoshi, Tomohiro Tamai, Izumi Orita, Toshiaki Fukui

(Sch. Life Sci. Technol, Science Tokyo)

14:06 1Lp04 Biosynthesis of poly((*R*)-3-hydroxybutyrate-*co*-4-hydroxybutyrate) from sugars and CO_2 by *Ralstonia eutropha* equipped with novel 4HB-CoA-supplying pathway

Kai Hee Huong, Izumi Orita, ○Toshiaki Fukui (Sch. Life Sci. Technol, Science Tokyo)

14:18 1Lp05 Effects of overexpression of carbonic anhydrase on biosynthesis of polyhydroxyalkanoates containing 3-hydroxyhexanoate unit from CO_2 by engineered *Ralstonia eutropha*

○Koki Ueda, Gabriele Di Stadio, Izumi Orita, Toshiaki Fukui (Sch. Life Sci. Technol, Science Tokyo)

14:30 Break

14:40 1Lp06 Evaluation of growth characteristics of high temperature and high CO_2 tolerant Chlorellaceae microalgae strain MK201 and attempt to establish genome editing system

○Shotaro Ishida[1], Ayaka Morimura[1], Shuhei Yasumoto[1], Toshiya Muranaka[2], Hikaru Seki[1,2]
([1] Grad. Sch. Eng., Univ. Osaka, [2] OTRI, Osaka Univ.)

14:52 1Lp07 Two-phase production of pure all-trans retinal from agricultural wastes by metabolically engineered *Corynebacterium glutamicum*

○Wenhui Hao[1], Yoko Hirono[2], Kiyotaka Hara[2], Yota Tsuge[1]
([1] Front. Sci. Init., Kanazawa Univ, [2] Sch. Food Nutr. Sci., Univ. Shizuoka.)

15:04 1Lp08 Improvement of ligninolytic activity in the hyper lignin-degrading fungus *Phanerochaete sordida* YK-624

○Yuna Nagano[1], Akiko Ono[3,4], Hirokazu Kawagishi[2,4], Hirofumi Hirai[3,4,5]
([1] Grad. Sch. Integr. Sci. Technol., Shizuoka Univ., [2] Fac. Agric., Shizuoka Univ., [3] Fac. Glb. interdiscip. Sci. Innov., Shizuoka Univ., [4] Res. Inst. for Mushroom Sci., Shizuoka Univ., [5] Res. Inst. Green Sci. Technol., Shizuoka Univ.)

15:16 1Lp09 Evaluation of metabolic processes inhibiting selective vanillate production from a variety of aromatic mixtures

○Kazuma Ikeda[1], Naoya Kodama[1], Zen Ookawa[2], Yudai Higuchi[3], Naofumi Kamimura[2], Eiji Masai[2], Tomonori Sonoki[3]
([1] Grad. Sch. Life Sci., Hirosaki Univ., [2] Dept. Mater. Sci. Bioeng., Nagaoka Univ. Technol., [3] Fac. Agric. Life Sci., Hirosaki Univ.)

15:28 1Lp10 An engineered *Pseudomonas* sp. NGC7 for selective vanillate production from sugarcane bagasse lignin-derived aromatic compounds

○Kanami Muraki[1], Yuki Hashiba[2], Yudai Higuchi[2], Takuya Yoshikawa[3], Akihiro Yoshida[4], Naofumi Kamimura[5], Eiji Masai[5], Tomonori Sonoki[2]
([1] Grad. Sch. Agric. Life Sci., Hirosaki Univ., [2] Fac. Agric. Life Sci., Hirosaki Univ., [3] Div. Environ. Agric. Eng., Obihiro Univ. Agric. Vet. Med., [4] Inst. Regional Innovation, Hirosaki Univ., [5] Dept. Mater. Sci. Bioeng., Nagaoka Univ. Technol.)

15:40 Break

15:50 1Lp11 Identification of the enzyme responsible for 2-phenoxyacetophenone conversion in an *Acinetobacter* strain and analysis of its substrate specificity

○Chisako Takiyama[1], Hirari Nakagawa[1], Takafumi Hashimoto[1], Hiroshi Habe[2], Toshiki Furuya[1]
([1] Fac. Sci. Tec., Tokyo Univ. Sci., [2] EMRI, AIST)

16:02 1Lp12 Improvement of yeast for bio-ethanol production of second-generation and optimization of fermentation process

○Nobuhiro Ishida[1], Toru Onishi[1], Nobuhiko Muramoto[1], Hirokazu Kikuta[2], Noriko Yasutani[2]
([1] Toyota Cent. R&D Labs. Inc., [2] Toyota Motor Corp.)

16:14 1Lp13 〈**Topics**〉
Search and identification of a novel gene involved in thermotolerance in the yeast *Kluyveromyces marxianus*

○Akinori Matsushika, Toshihiro Suzuki, Tamotsu Hoshino (AIST)

16:26 1Lp14 Analysis of a gene related to high temperature tolerance in thermotolerant yeast and enhancement of stress tolerance through molecular breeding

……◯Yuzuki Niino [1], Hiroto Onishi [1], Daisuke Moriguchi [1], Mamoru Yamada [2,3], Akinori Matsushika [1]
([1] Grad. Sch. Syst. Eng., Kindai Univ., [2] Grad. Sch. Sci. Tech., Yamaguchi Univ., [3] TMR, Yamaguchi Univ.)

16:38 1Lp15 Genomic analysis toward identification of aggregation factors in the oleaginous diatom *Navicula pelliculosa*

…… ◯Rintaro Onda, Hikaru Tago, Kosuke Kataoka, Tsuyoshi Tanaka
(Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

Room M Floor 7 711 (13:30–16:50)

【Food Science, Food Technology】

13:30 1Mp01 Effect of plant oil supplementation in culture media on cordycepin production in Cordyceps militaris fruiting body

……◯Ryoya Ueko [1], Shintaro Oka [2], Masahiro Nogawa [2] ([1] Grad. Sch. Sci. Technol., Shinshu Univ., [2] Fac. Textile Sci. Technol., Shinshu Univ.)

13:42 1Mp02 Effect of Dry Heat Treatment on the Physicochemical Properties of Unripe Banana Flour

…… ◯Nialmas Samuela, Wascharin Udchumpisai, Yuree Wandee (Sch. Bioresour. Technol., KMUTT)

13:54 1Mp03 Characteristics of milk-soymilk mixed curds prepared with protease

…… ◯Honoka Katono, Shigeki Yoshida (Grad. Sch. Life Environ. Sci., Univ. Tsukuba)

14:06 1Mp04 Structural study of a soluble polysaccharide with immunostimulatory activity from broccoli compared with other polysaccharides from Brassicaceae

…… ◯Kohei Yamada, Shigeki Yoshida (Grad. Sch. Life Environ. Sci., Univ. Tsukuba)

14:18 1Mp05 Development of new gellable base materials using poly-guluronic acid derived from alginic acid

……◯Erika Maki, Shigeki Yoshida (Grad. Sch. Life Environ. Sci., Univ. Tsukuba)

14:30 Break

14:40 1Mp06 Reduction of astringency and evaluation of physiological activities of new compounds produced by enzymatic glycosylation of oleuropein

…… ◯Yiqian Zhang, Yujia Zhang, Shigeki Yoshida (Grad. Sch. Life Environ. Sci., Univ. Tsukuba)

14:52 1Mp07 Functional Properties of Dextrin Derived from Octenyl Succinic Anhydride Cassava Starch via Alkaline Hydrogen Peroxide Thermal Treatment

…… ◯Wascharin Udchumpisai, Nialmas Samuela, Yuree Wandee (Sch. Bioresour. Technol., KMUTT)

15:04 1Mp08 Macrophage response induced by water-soluble beta-glucan nanoparticles: Rapid activation and anti-inflammatory effects triggered by solubilization

……◯Yasushi Nishida, Kazuya Koumoto (FIRST, Konan Univ.)

15:16 1Mp09 Effect of polysaccharide chain branching in bata glucan nanoparticles on the inclusion and release of guest molecules

…… ◯Nami Kohama, Masaya Miwa, Kazuya Koumoto (FIRST, Konan Univ.)

15:28 1Mp10 Evaluation of cellular response of beta-glucan encapsulated with active ingredients for food and cosmetics

……◯Saaya Ogaki, Shoma Kannan, Kazuya Koumoto (FIRST, Konan Univ.)

15:40 Break

15:50 1Mp11 Screening of functional materials by Kobe University Library of Functional Food Ingredients (KULFFI)

…… ◯Daisuke Sasaki [1,2], Yasushi Matsuki [3], Akihiko Kondo [1,2]
([1] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [2] Bacchus Bio innovation Co., Ltd, [3] Digital Bio & Life Science Research Park, Kobe Univ.)

16:02 1Mp12 Metabolic profiling of mango fruits

……○Risa Komemoto [1], Tetsuya Matsukawa [1,2,3], Kosuke Shimizu [2], Rena Sugioka [3], Shin'ichiro Kajiyama [1,3]

([1] Grad. Sch. Biology-Oriented Sci. Technol., Kindai Univ., [2] Experiment Farm, Kindai Univ., [3] Biology-Oriented Sci. Technol., Kindai Univ.)

16:14 1Mp13 Exploring non-destructive methods for predicting banana quality using metabolomics

……○Sayaka Togami [1], Eiichiro Fukusaki [1,2,3], Masahiro Furuno [1,2,3], Takumi Oishi [1]

([1] Grad. Sch. Eng., Univ. Osaka, [2] Industrial Biotechnology Initiative Division, Institute for Open and Transdisciplinary Research Initiatives, Osaka Univ, , [3] Osaka University Shimadzu Omics Innovation Research Laboratories))

16:26 1Mp14 Metabolomics-based investigation of compounds correlating sensory profiles of strawberry

……○Yuri Yoshiyama [1], Eiichiro Fukusaki [1,2,3], Taichiro Fujimura [4], Masahiro Furuno [1,2,3]

([1] Grad. Sch. Eng., Univ. Osaka, [2] OTRI, Osaka Univ., [3] Univ. Osaka and Shimadzu Anal. Innov. Res. Lab., [4] Dept. Food and Nutrition, Tezukayama Univ.)

16:38 1Mp15 Metabolite profiling for investigating sensory metabolites in Lablab beans with various colors

……○Isni Nasrifah [1,5], Allan Soffan [6], Azis Boing Sitanggang [4], Eiichiro Fukusaki [1,2,3], Sastia Prama Putri [1,2]

([1] Dept. Biotechnol., Grad. Sch. Eng., Univ. Osaka, [2] Ind. Biotechnol. Div., Inst. Open Transdiscip. Res. Initiatives, Univ. Osaka, [3] Univ. Osaka. Shimadzu Omics Innov. Res. lab., Univ. Osaka, [4] Dept. of Food Sci. and Technol., Faculty of Agric. Eng. and Technol., IPB Univ., [5] Natl. Res. and Innov. Agency, Res. Organization for Agric. and Food, [6] Agrotechnology Innov. Center Gadjah Mada Univ.)

Room N Floor 8 805 (13:54–16:50)

【Brewing, Brewing Technology】

13:30 1A-Np01 〈**Encouragement Award (Eda Award)**〉 Chair: **Takaomi Yasuhara**

Studies on beneficial compounds produced by acetic acid bacteria and koji fungus

……○Naoki Akasaka (Div. Biol. Sci., NAIST)

13:54 1Np03 Effect of cultivar and cultivation region of sake rice on brown rice shape and white rice shape control

……Asuka Hirayoshi [1], Ayaka Kinoshita [1], ○Kazuhiro Iwashita [1,2] ([1] NRIB, [2] Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

14:06 1Np04 Multi-variable analysis covering major Japanese sake rice cultivars was performed under controlled process of sake making

……○Zen Sumida [1,2], Ayaka Kinoshita [2], Yuko Komatsu [2], Asuka Hirayoshi [2], Kazuhiro Iwashita [1,2]

([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] NRIB)

14:18 1Np05 Brewing characteristics of *Aspergillus oryzae* isolated from nature in Saga

……○Kazutaka Sawada [1], Chinatsu Ito [2], Riho Nishimura [2], Genta Kobayashi [2], Masatoshi Goto [2]

([1] Ind. Technol. Ctr. Saga, [2] Fac. Agric., Saga Univ.)

14:30 Break

14:40 1Np06 New method for identifying *Aspergillus oryzae* and characterization of *A. oryzae* isolated from the environment

……○Kanae Sakai, Ken-Ichi Kusumoto (Grad. Sch. Eng., Univ. Osaka)

14:52 1Np07 Microbial bioconversion of wine pomace constituents by *Aspergillus* solid-state fermentation

……◯Shogo Matsui [1], Miyuki Oka [2], Ayaka Fujita [2], Tsuyoshi Miyake [3], Kazunari Ito [3], Yuka Tanino [3], Hayato Takeuchi [3], Hideyuki Yamashita [4], Koji Hirano [5], Natsuki Fukano [1,6], Tadashi Hara [1,6], Teruhiko Nitoda [1,2], Hiroshi Kanzaki [1,2]

([1] Grad. Sch. Environ. Life Nat. Sci. Technol., Okayama Univ., [2] Sch. Agric., Okayama Univ., [3] Ind. Technol. Center Okayama Pref., [4] Higuchi Matsunosuke Shoten Co., Ltd., [5] Kajitsu Kobo, [6] Fujiwara Techno-Art Co., Ltd)

15:04 1Np08 Microbial conversion of corn gluten meal constituents through *Aspergillus* solid state fermentation using an airflow-type rotary solid-state fermenter for laboratory use

…… Tadashi Hara [1,2], Natsuki Fukano [1,2], Satoko Seno [2], ◯Jirayu Jitpakdee [1,2], Tsuyoshi Miyake [3], Kazunari Ito [3], Yuka Tanino [3], Hayato Takeuchi [3], Hideyuki Yamashita [4], Teruhiko Nitoda [1], Hiroshi Kanzaki [1]

([1] Grad. Sch. Environ. Life Nat. Sci. Technol., Okayama Univ., [2] Fujiwara Techno-Art Co., Ltd, [3] Ind. Technol. Center Okayama Pref., [4] Higuchi Matsunosuke Shoten Co., Ltd.)

15:16 1Np09 Transcriptome analysis and enzyme activities of the rice Koji fermentation under red light illumination

…… ◯Satoshi Suzuki [1], Masao Nakamura [1], Takashi Inaoka [1], Ken-Ichi Kusumoto [2]

([1] NFRI, [2] Grad. Sch. Eng., Univ. Osaka)

15:28 1Np10 Comprehensive analysis of gene expression dynamics of Aspergillus oryzae under solid-phase culture conditions

……◯Shota Wada [1], Daisaku Hasebe [2], Takaaki Kojima [1]

([1] Grad. Sch. Agric., Meijo Univ., [2] Fac. Agric., Meijo Univ.)

15:40 Break

15:50 1Np11 Investigation of expression conditions of phenolic acid decarboxylase from *Aspergillus luchuensis*

…… Kazuki Ura [1], Rina Yokota [2], Aya Matsuo [2], Shusaku Yoshida [3], Toki Taira [3], Jun Yoshikawa [1,2], Kenji Maehashi [1,2], ◯Mayumi Maeda [2]

([1] Grad. Sch. Appl. Biosci, Tokyo Univ. Agric., [2] Fac. Appl. Biosci., Tokyo Univ. Agric., [3] Fac. Agric., Univ. Ryukyus)

16:02 1Np12 Study on high production of 4-vinylguaiacol in *Aspergillus luchuensis*

…… ◯Rinka Inoue [1], Tomomi Yajima [2], Toki Taira [3], Jun Yoshikawa [1,2], Kenji Maehashi [1,2], Mayumi Maeda [2]

([1] Grad. Sch. Appl. Biosci., Tokyo Univ. Agric., [2] Fac. Appl. Biosci., Tokyo Univ. Agric., [3] Fac. Agric., Univ. Ryukyus)

16:14 1Np13 Impact of genome-edited *sC* gene deletion on enzyme activities and mycelial growth in barley koji fermented with white or yellow koji fungi

…… ◯Takefumi Karashima, Yusuke Imoto, Akihiro Nakamura, Hideki Hokazono, Hideharu Takashita

(Sanwa Shurui Co., Ltd)

16:26 1Np14 Disruption of a thermostable protease gene in *Aspergillus oryzae* via genome editing

…… ◯Taro Matsuoka [1], Ken Oda [2], Kazuhiro Iwashita [2], Jun Watanabe [1]

([1] Yamasa Corp., [2] NRIB)

16:38 1Np15 Identification of Ditryptoleucine biosynthetic genes in *Aspergillus oryzae*

……◯Chisato Murakawa [1], Yuta Shimizu [1], Gen-ya Arakawa [1,2], Hitoshi Shindo [1,2], Masafumi Tokuoka [1,2]

([1] Grad. Sch. Agric., Tokyo Univ. Agric., [2] Fac. Appl. Biosci., Tokyo Univ. Agric.)

Room O Floor 8 806 (13:30–16:50)

【Biochemical Engineering; Cell Culture Engineering】

13:30 1Op01 Identification of toluene degradation genes in *Acinetobacter* sp. Tol 5
·····◯Maiko Hattori [1], Shogo Yoshimoto [1], Shori Inoue [1], Yuki Ohara [2], Katsutoshi Hori [1]
([1] Grad. Sch. Eng., Nagoya Univ., [2] Friend Microbe Inc.)

13:42 1Op02 Desiccation tolerance of Gram-negative bacteria
····· ◯Hayata Yamada, Shori Inoue, Shogo Yoshimoto, Katsutoshi Hori (Grad. Sch. Eng., Nagoya Univ.)

13:54 1Op03 Proteomic analysis of Acinetobacter sp. Tol 5 on different growth substrates
····· ◯Shotaro Yamagishi, Shori Inoue, Shogo Yoshimoto, Katsutoshi Hori
(Grad. Sch. Eng., Nagoya Univ.)

14:06 1Op04 Antifungal activity of poly(gamma-L-diaminobutyric acid): effects on stress response signaling pathways in *Saccharomyces cerevisiae*
·····◯Akira Aramoto [1], Maho Sasaki [1], Amane Tanimura [1], Munenori Takehara [1], Yoshiharu Inoue [2]
([1] Dept. Mater. Sci., Grad. Sch. Eng., Univ. Shiga Pref.,
[2] Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)

14:18 1Op05 Enzymatic degradation of nylon with long alkyl chains using hydrolase NylC
·····◯Yukino Teraoka, Yutaro Mori, Prihardi Kahar, Chiaki Ogino (Grad. Sch. Eng, Kobe Univ.)

14:30 Break

14:40 1Op06 The research of the hydrogen-dependent CO_2 reductase (HDCR) expression in *Escherichia coli*
····· ◯Mikako Ueda, Chiaki Ogino, Prihardi Kahar, Yutaro Mori (Grad. Sch. Eng, Kobe Univ.)

14:52 1Op07 Activity enhancement of methanol dehydrogenase and hexulose phosphate synthase through enzyme engineering approaches
····· ◯Shoma Katsura [1], Prihardi Kahar [2], Yutaro Mori [1], Chiaki Ogino [1,2]
([1] Grad. Sch. Eng, Kobe Univ., [2] EGBRC, Kobe Univ.,)

15:04 1Op08 Development of a Heterologous Gene Expression System in Type II Methanotroph *Methylosinus trichosporium* OB3b
·····◯Gele Bai, Kosei Yoshimori, Wataru Shiina, Hidehiro Ito, Toshiaki Kamachi
(Sch. Life Sci. Technol, Science Tokyo)

15:16 1Op09 Mechanism of Glycerol-Induced Growth Inhibition of *Methylosinus trichosporium* OB3b in the presence of Lanthanides
·····◯Hidehiro Ito, Wataru Shina, Motoki Tateiri, Toshiaki Kamachi
(Sch. Life Sci. Technol, Science Tokyo)

15:28 1Op10 Multi-omics analysis of fermentation of *Aspergillus oryzae* hyphal dispersion strain
····· ◯Shunya Susukida [1], Kiyoaki Muto [1], Ken Miyazawa [1], Akira Yoshimi [2,3],
Toshitaka Kumagai [4], Yoshikazu Kato [5], Keietsu Abe [1]
([1] Grad. Sch. Pharm., Tohoku Univ., [2] Grad. Sch. Glob. Environ. Stud., Kyoto Univ.,
[3] Grad. Sch. Agric., Kyoto Univ., [4] Fermlab Inc., [5] SATAKE MultiMix Corp.)

15:40 Break

15:50 1Op11 Improved hyphal dispersion strain of *Aspergillus oryzae* for reduced culture viscosity in the liquid fermentation
·····◯Shengling Xiao [1], Shunya Susukida [1], Kiyoaki Muto [1], Ken Miyazawa [1],
Akira Yoshimi [2,3], Keietsu Abe [1]
([1] Grad. Sch. Agric. Sci., Tohoku Univ., [2] Grad. Sch. Glob. Environ. Stud., Kyoto Univ.,
[3] Grad. Sch. Agric., Kyoto Univ.)

16:02 1Op12 Comparing the growth of different microalgae species on substrate surface culture for biomass production
·····◯Yui Toyoshima [1], Yessy Velina [2], Ko Yoshimura [1], Hideaki Miyashita [2]
([1] Nippon Steel Corp., [2] Grad. Sch. Hum. Environ. Stud., Kyoto Univ.)

16:14 1Op13 Key gene in cyanobacterial morphogenesis identified from the elongation phenomenon of rod-shaped cyanobacteria
……○Narumi Toda [1], Satoru Watanabe [2], Takenori Ishida [1], Takeshi Ikeda [1], Hisakage Funabashi [1], Akio Kuroda [1], Ryuichi Hirota [1]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] Dept. Biosci., Tokyo Univ. Agric.)

16:26 1Op14 Analysis of cyanobacterial response and mutation induction mechanisms under grazing stress conditions
……○Hana Nagashima, Narumi Toda, Takenori Ishida, Takeshi Ikeda, Hisakage Funabashi, Akio Kuroda, Ryuichi Hirota
(Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

16:38 1Op15 Involvement of a biotin transporter homolog in cell morphogenesis in cyanobacteria
…… ○Yoshihiro Manago, Narumi Toda, Takenori Ishida, Takeshi Ikeda, Hisakage Funabashi, Akio Kuroda, Ryuichi Hirota
(Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

Room P Floor 9 905 (13:30–16:50)

【Biochemical Engineering】

13:30 1Pp01 Metabolomics analysis of IgG-producing Chinese hamster lung (CHL)-YN cells under elevated CO_2 concentration
…… ○Passaraporn Theeraseematham [1], Noriko Yamano-Adachi [1,2], Takeshi Omasa [1,2]
([1] Dept. Biotechnol., Grad. Sch. Eng., UOsaka, [2] OTRI, UOsaka)

13:42 1Pp02 Identification of membrane curvature sensing RNA using artificial curved biological membrane materials
…… ○Sohyun Kim, Masayoshi Tanaka (Sch. Mater. Chem. Technol., Science Tokyo)

13:54 1Pp03 〈**Topics**〉
Biofilm Manipulation on Cultured Cell Sheets Using a Liquid Drawing Technique
……○Mai Miyauchi [1], Hidetaka Taniguti [1], Ippei Inoue [2], Masayoshi Tanaka [1]
([1] Sch. Mater. Chem. Technol., Science Tokyo, [2] Suntory Global Innovation Center Ltd.)

14:06 1Pp04 Development of an Efficient Induction Method for Skeletal Muscle Differentiation from Human iPS Cells via Regulation of Cell-ECM Adhesion Factors
……○Xi Yuan [1], Masanobu Horie [2], Yuuichi Tsunoyama [1,2] ([1] Grad. Sch. Hum. Environ., Kyoto Univ., [2] RI. Center., Kyoto Univ.)

14:18 1Pp05 Corn gluten meal-based basal medium for bovine myoblast cell culture
……○Koki Otsuka [1], Hikaru Kushima [1], Sohgo Wakabayashi [1], Kazuaki Ninomiya [2]
([1] Grad. Sch. Nat. Sci. Technol., Kanazawa Univ., [2] Ints. Frontier Sci. Initiative, Kanazawa Univ.)

14:30 Break

14:40 1Pp06 Serum-free, chemically defined, and inexpensive medium for the culture of bovine myoblast
…… ○Kiri Onishi [1], Yusuke Matsubara [1], Kazuaki Ninomiya [2]
([1] Grad. Sch. Nat. Sci. Technol., Kanazawa Univ., [2] Ints. Frontier Sci. Initiative, Kanazawa Univ.)

14:52 1Pp07 Culture of bovine myoblast using edible and fibrous scaffold
……○Mana Sugimori [1], Akira Katagiri [1], Kazuaki Ninomiya [2]
([1] Grad. Sch. Nat. Sci. Technol., Kanazawa Univ., [2] Ints. Frontier Sci. Initiative, Kanazawa Univ.)

15:04 1Pp08 Fabrication of scaffold-free 3D bovine muscle tissue based on fusion of bovine myoblast and fibroblast spheroid
……○Honoka Koshida [1], Tsubasa Shimizu [1], Yukito Nakagami [1], Kazuaki Ninomiya [2]
([1] Grad. Sch. Nat. Sci. Technol., Kanazawa Univ., [2] Ints. Frontier Sci. Initiative, Kanazawa Univ.)

15:16 1Pp09 Evaluation of hair growth promoting effects mediated by oxytocin signaling
····· ○Yunan Takimoto [1], Tatsuto Kageyama [1,2], Junji Fukuda [1,2] ([1] Grad. Sch. Eng., Yokohama Natl. Univ., [2] KISTEC)

15:28 1Pp10 Intracellular immunostaining without cell permeabilizaion
····· ○Satoshi Yamaguchi, Yuki Umeda, Shinya Yamahira (SANKEN Osaka U.)

15:40 Break

15:50 1A-Pp01 **〈Encouragement Award (Terui Award)〉** Chair: **Masamichi Kamihira**
Studies on the mechanism of outer membrane vesicle production in *Escherichia coli* and its engineering application
····· ○Yoshihiro Ojima (Grad. Sch. Eng., Osaka Metro. Univ.)

16:14 1Pp13 Evaluation of the effects of imidazole dipeptides on myotube contraction using AI-based image analysis
····· ○HyeonJun Choe [1], Minami Yamamoto [2], Makoto Masuhara [2], Sho Kataoka [2], Masamichi Kamihira [1,2]
([1] Grad. Sch. Syst. Life Sci., Kyushu Univ., [2] Grad. Sch. Eng., Kyushu Univ.)

16:26 1Pp14 Exploration of inverse curvature sensing proteins using solid supported lipid bilayers
····· ○Takumi Komikawa [1], Rikuto Kawakami [1], Kunanon Chattrairat [2], Takao Yasui [2], Tatsuya Niwa [2], Hideki Taguchi [2], Masayoshi Tanaka [1]
([1] Sch. Mater. Chem. Technol., Science Tokyo, [2] Sch. Life Sci. Technol, Science Tokyo)

16:38 1Pp15 Exploration of membrane curvature sensing proteins from the endoplasmic reticulum using spherical supported lipid bilayer
····· ○Rikuto Kawakami [1], Takumi Komikawa [1], Tatsuya Niwa [2], Hideki Taguchi [2], Masayoshi Tanaka [1]
([1] Sch. Mater. Chem. Technol., Science Tokyo, [2] Sch. Life Sci. Technol, Science Tokyo)

Room Q Floor 9 907 (13:30–16:50)

【Cell Culture Engineering】

13:30 1Qp01 Development of a quantitative measurement method for microbial populations targeting uncultivated microorganisms growing in microdroplet cultures
····· ○Yumi Shimomura [1], Rikuta Suzuki [1], Akina Yamamoto [1], Setsu Kato [1], Yutaka Nakashimada [1,2], Yoshiteru Aoi [1,2]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] S-CNC, Hiroshima Univ.)

13:42 1Qp02 Innovative method for cultivation and discovery of uncultivated microorganisms possessing target function: validation by evaluating antimicrobial activity
····· ○Una Niiyama [1], Yumi Shimomura [1], Setsu Kato [1], Yutaka Nakashimada [1,2], Yoshiteru Aoi [1,2]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] S-CNC, Hiroshima Univ.)

13:54 1Qp03 Innovative method for cultivation and discovery of uncultivated microorganisms possessing target function: validation by evaluating target enzyme activity
····· ○Yuya Muto [1], Yumi Shimomura [1], Setsu Kato [1], Yutaka Nakashimada [1,2], Yoshiteru Aoi [1,2], Rikuta Suzuki [1]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] S-CNC , Hiroshima Univ.)

14:06 1Qp04 Enhancement of cultivation efficiency of environmental microorganisms using a high-density droplet cultivation method
····· ○Tomoki Iwashita, Manabu Kanno, Hideyuki Tamaki (BPRC, AIST)

14:18 1Qp05 Establishment of a method for massively parallel evaluation of the effect of a microbial inoculant on each soil microbe using water-in-oil droplets

……◯Sumire Kobayashi [1,2], Miu Hoshino [1,2], Akira Sasaki [2], Masamune Morita [2], Satoko Matsukura [2], Satoshi Tsuneda [3], Naohiro Noda [1,2,3,4]

([1] Grad. Sch. Front. Sci., Univ. Tokyo, [2] Mol. Biosyst. Res. Inst., AIST, [3] Sch. Adv. Sci. Eng., Waseda Univ., [4] Cell. Mol. Biotechnol. Res. Inst., AIST)

14:30 Break

14:40 1Qp06 Development of a Droplet Screening platform using Solid-substrates for *Aspergillus oryzae*

……◯Yusuke Kishida, Akihiro Nakamura, Yosuke Shida, Wataru Ogasawara (Nagaoka Univ. Technol.)

14:52 1Qp07 Construction of a simplified intestinal mimetic co-culture system integrating a mucin layer

…… ◯Yoshihiro Umehara [1], Hideki Aoyagi [2] ([1] Doctoral Program Life Agric. Sci., Univ. Tsukuba, [2] Inst. Life Environ. Sci., Univ. Tsukuba)

15:04 1Qp08 Spatio-Temporal Analysis of Gut Bacterial Community with Anaerobic Microfluidic Device

…… ◯Keisuke Nomura [1], Nobuhiko Nomura [2,3], Nozomu Obana [3,4], Andrew Utada [2,3]

([1] Grad. Sch. Sci. Tech., Univ. Tsukuba, [2] Dep. Life Enviro. Sci., Univ. Tsukuba, [3] MiCS, [4] Inst. Med. Sci., Univ. Tsukuba)

15:16 1Qp09 Microplate for cultivation without shaking: microbial cultivation using the high oxygen permability cell culture plate of InnoCell™

…… ◯Ryota Fujii (Mitsui Chemicals, Inc.)

15:28 1Qp10 Static liquid culture of microorganisms using TPX film bags

…… ◯Yuki Naka [1], Koki Nagata [2], Kotaro Matsumoto [1], Kenji Ito [2,3], Motomu Akita [2,3]

([1] Grad. Sch. Biology-Oriented Sci. Technol., Kindai Univ., [2] Fac. Biology-Oriented Sci. Technol., Kindai Univ., [3] Cell Film Lab. CO., LTD)

15:40 Break

15:50 1Qp11 Analysis of the effects of anaerobic shaking culture on the behavior of bacteria and bacterial community and its application

…… ◯Kenta Shimada [1], Masato Takahashi [1,2], Hideki Aoyagi [1,2]

([1] Grad. Sch. Deg. P. Agro-Bioresour. Sci. Technol., Univ. Tsukuba, [2] Inst. Life Environ. Sci., Univ. Tsukuba)

16:02 1Qp12 Analysis of the effect of food colorants on the physiological activities of intestinal bacteria (part 2)

…… ◯Reika Momoi [1], Hideki Aoyagi [1,2]

([1] Grad. Sch. Deg. P. Agro-Bioresour. Sci. Technol., Univ. Tsukuba, [2] Inst. Life Environ. Sci., Univ. Tsukuba)

16:14 1Qp13 Analysis of Factors That Inhibit Colony Formation in Solid-State Cultures of *Escherichia coli* Mutant Strains

…… ◯Jin Sakamoto [1], Tetsuaki Tsuchido [1], Ryoko Asada [1,2]

([1] Microorganisms Cntr. Res. Ctr., Osaka Metro. Univ., [2] Grad. Sch. Eng., Osaka Metro. Univ.)

16:26 1Qp14 Antibacterial activity of the bacteriocin produced by lactic acid bacterium isolated from fermented mare's milk

…… ◯Naohiko Taga, Mikoto Horinouchi (Sch. Agric., Tokai Univ.)

16:38 1Qp15 Impact of sound-induced vibration on yeast alcoholic fermentation

…… ◯Shino Yokohata, Hiroharu Tokuda (Fac. Appl. Biosci., Tokyo Univ. Agric.)

Luncheon Seminars（12:10–13:10）

Room N Floor 8 805

1L-N SHIMADZU CORPORATION

Room P Floor 9 905

1L-P Nova Biomedical K.K.

September 11, 2025

Titles in bold indicate presentations by the winners of this year's SBJ Excellent Student Award (Hishou Award).

Time	No.	Title	Author (Affiliation) ◯=Indicates the presenter

Award Lectures (Young Scientist Award)

Room B Floor 5 503（15:50–16:35）

15:50 2A-Bp01 〈**Young Scientist Award**〉 Chair: **Hideki Aoyagi**

Discovery of novel antibiotics from nematode symbionts

……◯Yu Imai (Inst. Aqu a Regen. , Shinshu Univ.)

16:05 2A-Bp02 〈**Young Scientist Award**〉 Chair: **Yoji Hata**

Metabolic engineering for a versatile platform to synthesize chorismate derivatives

…… ◯Shuhei Noda [1,2] ([1] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [2] Jpn. Sci. Technol. Agen.)

16:20 2A-Bp03 〈**Young Scientist Award**〉

Study of the principle of intracellular glycolytic enzyme assembly and its application

…… ◯Natsuko Miura (Grad. Sch. Agric., Osaka Metro. Univ.)

TSB Invited Lectures

Room L Floor 7 710（15:50–16:14）

15:50 2Lp01 〈**Invited Lecture**〉 Chair: **Eiji Sakuradani**

Upcycling rambutan peel into high-value bioactive compounds and cellulose-based materials

…… ◯Prakit Sukyai, Selorm Torgbo (Dept. Biotechnol, Fact. Agro-Ind, Kasetsart Univ)

Room M Floor 7 711（17:00–17:24）

17:00 2Mp06 〈**Invited Lecture**〉 Chair: **Mitsuo Umetsu**

Bacteriophages, an alternative for controlling Salmonella in swine production

……◯Rujikan Nasanit [1], Napakhwan Imklin [1], Pattaraporn Sriprasong [1], Narut Thanantong [2]

([1] Dept. Biotechnol., Fac. Eng. Ind. Tech., Silpakorn Univ.,

[2] Dept. Farm Res. Prod. Med., Fac. Vet. Med., Kasetsart Univ.)

Symposium

Room A Floor 5 501 (9:30–11:30)

KSBB-BEST-SBJ Joint Symposium Session 1: A Safe and Peaceful Daily Life Supported by Point of Care Testing

9:30 Opening Remarks
..... Hisakage Funabashi

9:35 2S-Aa01 〈**Invited Lecture**〉 Chair: **Hisakage Funabashi**
Leveraging cell-free synthetic biology to advance accessible and adaptable bioassays
..... ○Dong-Myung Kim (Chungnam National University, Korea)

9:55 2S-Aa02 〈**Invited Lecture**〉 Chair: **Dong-Myung Kim**
Highly pure intact exosomes for precision medicine
..... ○Jong Wook Hong (Dept. of Bionano Engineering, Grad. Sch., Hanyang Univ., Korea)

10:15 2S-Aa03 〈**Invited Lecture**〉 Chair: **Jong Wook Hong**
Microfluidic technology for investigating epigenetic regulation in breast cancer
..... ○Yuan-Pang Hsieh [1,2], Chang Lu [2] ([1] Natl. Taiwan Univ. of Sci. and Technol., [2] Virginia Tech)

10:35 Break

10:45 2S-Aa04 〈**Invited Lecture**〉 Chair: **Yuan-Pang Hsieh**
Aptamer selection for diagnosis and therapy of colorectal cancer
..... ○Ki Soo Park (Dept. of Biolog. Eng., Konkuk Univ.)
Chair: **Ki Soo Park**

11:05 2S-Aa05 Spraying DNA-based biosensing molecules for POCT: a new approach to solid surface detection
..... ○Hisakage Funabashi (Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

11:25 Closing Remarks
..... Hideo Nakano

Room A Floor 5 501 (13:30–15:30)

KSBB-BEST-SBJ Joint Symposium Session 2: Shaping the Future of Bioengineering with AI and Information Science

13:30 Opening Remarks
..... Mitsuo Umetsu

13:35 2S-Ap01 〈**Invited Lecture**〉 Chair: **Mitsuo Umetsu**
Economic index-guided development of biofoundry workflow for synthetic biology at the SKy Biofoundry
..... ○Han Min Woo [1,2] ([1] Sungkyunkwan University (SKKU), Rep. Korea, [2] SKy Biofoundry, Sungkyunkwan University)

13:55 2S-Ap02 〈**Invited Lecture**〉 Chair: **Han Min Woo**
Synthetic *Vibrio* cell factories for accelerated biorefineries
..... ○Hyun Gyu Lim (Div. Biol. Sci. Bioeng., Inha University)

14:15 2S-Ap03 〈**Invited Lecture**〉 Chair: **Hyun Gyu Lim**
Microalgae biotechnology: perspective views in artificial intelligence-driven and prediction models
..... ○Kuan Shiong Khoo
(Algae Bioseparation Research Laboratory, Department of Chemical Engineering and Materials Science, Yuan Ze University, Taoyuan, Taiwan)

14:35 Break

14:45 2S-Ap04 〈**Invited Lecture**〉 Chair: **Kuan Shiong Khoo**
AI-C. elegans drug discovery & development platform
……◯Shin Sik Choi [1,2] ([1] Myongji Univ., Korea, [2] elegslab Inc.)
Chair: **Shin Sik Choi**

15:05 2S-Ap05 Acceleration of protein engineering pioneered by Machine-learning
……◯Mitsuo Umetsu (Grad. Sch. Eng., Tohoku Univ.)

15:25 Closing Remarks
……Mitsuo Umetsu

Room B Floor 5 503 (9:30–11:30)

New Frontier of Medical+Bioengineering

9:30 Opening Remarks
……Tamotsu Zako
Chair: **Tamotsu Zako**

9:31 2S-Ba01 Advancing 3D Bioprinting through Novel Materials and Process Engineering
……◯Shinji Sakai (Grad. Sch. Eng. Sci., Univ. Osaka)

9:53 2S-Ba02 Breakthrough with the world's first sterilization technology using Peroxynitric acid ($HOONO_2$) that achieves both safety and high sterilizing power
……◯Katsuhisa Kitano [1], Satoshi Ikawa [2] ([1] Grad. Sch. Eng., Univ. Osaka, [2] ORIST)
Chair: **Shinji Sakai**

10:18 2S-Ba03 Development of silk materials for preventing post-operative adhesion
……◯Yusuke Kambe (NIAS)

10:43 2S-Ba04 Bacteria-mediated transcendent cancer therapy
……◯Eijiro Miyako (Sch. Mater. Sci., JAIST)

11:08 2S-Ba05 Controlling the site-specific labeling of antibody by genetically-fused protein-crosslinking enzymes
……◯Noriho Kamiya [1,2] ([1] Grad. Sch. Eng., Kyushu Univ., [2] CFC, Kyushu Univ.)

11:29 Closing Remarks
……Noriho Kamiya

Room B Floor 5 503 (13:30–15:30)

Career Symposium for PhD Students and Postdoctoral Fellows —The Future Awaits after Obtaining PhD—

13:30 Opening Remarks
……Kei Kanie
Chair: **Kei Kanie**

13:35 2S-Bp01 My career path: from doctorate to entrepreneurship and making Japan as No.1 again
……◯Ryo Matsumoto (KYOTO-iCAP)

13:50 2S-Bp02 Becoming Who You Want to Be in 10 Years
……◯Nana Shirakigawa (Grad. Sch. Eng., Kyushu Univ.)
Chair: **Natsuko Miura**

14:05 2S-Bp03 From synthetic biology to coral reef research: insights gained from the cross-disciplinary approach
……◯Toshiyuki Takagi (AORI, UTokyo)

14:20 2S-Bp04 Utilization of Ph.D. in industry - case of bioinformatics researcher working in pharmaceutical company
……◯Masaya Fujitani (Shionogi Co., Ltd.)

14:35 2S-Bp05 Supporting cutting-edge research: your career as a URA
……◯Ai Kametaka [1,2] ([1] Grad. Sch. Sci, Tohoku Univ., [2] RMC, Tohoku Univ.)

Chair: **Kei Kanie, Natsuko Miura**

14:50 General Discussion
…… All Speakers

15:25 Closing Remarks
…… Natsuko Miura

Room C Floor 5 505 (9:30–11:30)

Current Status of Developing Microbial Cell Factories Based on Synthetic Biology

9:30 Opening Remarks
……Takaaki Sato

Chair: **Yoshihiro Toya**

9:32 2S-Ca01 Engineering protein status in *Escherichia coli* to enhance chemicals production
…… ◯Liu Liming (Sch. Biotechnol. Key Lab. Ind. Biotechnol. MOE, Jiangnan Univ.)

9:57 2S-Ca02 Non-native pathway engineering of carbon dioxide assimilation in *Escherichia coli* Nissle 1917
…… ◯Sefli Sri Wahyu Effendi, I-Son Ng (Dept. Chem. Eng., Natl. Cheng Kung Univ.)

10:22 Break

Chair: **Takao Ohashi**

10:32 2S-Ca03 Smart fermentation: engineering and scaling yeast for high-value molecule production
……◯Leonardo Rios Solis (University College London / Biochemical Engineering Department)

Chair: **Takaaki Sato**

10:57 2S-Ca04 Exploring the metabolic potential of acetogenic bacteria for advancing anaerobic gas fermentation
……◯Junya Kato (AIST)

11:22 Closing Remarks
……Yoshihiro Toya

Room C Floor 5 505 (13:30–15:30)

Advancing Manufacturing Through Solid-State Fermentation

13:30 Opening Remarks
…… Hiroshi Kanzaki

Chair: **Tadashi Hara**

13:32 2S-Cp01 Current situation and future prospects of Solid-State Fermenter development
…… ◯Masahiro Kariyama (Fujiwara Techno-Art Co., Ltd)

13:52 2S-Cp02 Enzyme production by koji (solid-state) fermentation
…… ◯Koji Mito (Amano Enzyme)

14:12 2S-Cp03 Referring bio-production from the perspective of traditional Japanese fermentation technology (solid-state fermentation)
…… ◯Katsuya Gomi [1,2] ([1] Grad. Sch. Agric. Sci., Tohoku Univ., [2] Fujiwara Techno-Art Co., Ltd)

14:32 2S-Cp04 Functional enhancement of local plant resources through solid-state fermentation with *Koji* mold
····· ○Hiroshi Kanzaki (Grad. Sch. Environ. Life Nat Sci. Technol., Okayama Univ.)
Chair: **Hiroshi Kanzaki**

14:52 Panel Discussion
····· Masahiro Kariyama , Koji Mito , Katusya Gomi , Hiroshi Kanzaki , Hideyuki Yamashita

Room E Floor 6 601 (9:30–11:30)

Frontline of Standardization for the Cell Manufacturing Industry

Chair: **Ryuji Kato**

9:30 2S-Ea01 Standardrization and utilization for regenerative medicine industry
·····○Tetsunori Matsumoto (Shiseido Co., Ltd.)
Chair: **Ikuo Kawauchi**

9:50 2S-Ea02 Cell manufacturing process management system: JIS Q 2101
·····○Ryuji Kato (Grad. Sch. Pharm. Sci., Nagoya Univ.)

10:10 2S-Ea03 Standard for cellular morphological analysis －ISO24479－
·····○Yoshiko Nomi (Chiyoda Corp.)

10:30 2S-Ea04 International standardization of tumorigenicity tests for cell therapy products
·····○Satoshi Yasuda (Natl. Inst. Health. Sci.)
Chair: **Ryuji Kato**

10:50 2S-Ea05 International standardization for extracellular vesicles
····· ○Ikuo Kawauchi (FUJIFILM Holdings Corp.)

11:10 Panel Discussoin

Room E Floor 6 601 (13:30–15:30)

Understanding of Natural Products through Their Unique Structures, Biosynthetic Machineries, and Biological Function

13:30 Opening Remarks
····· Kenji Arakawa

13:34 2S-Ep01 Discovery of a novel methionine biosynthetic route in *Streptomyces*
·····○Fumihito Hasebe, Chitose Maruyama, Yoshimitsu Hamano
(Grad. Sch. Biosci. Biotec., Fukui Pref. Univ.)

14:02 2S-Ep02 Synthetic biology-based strain engineering for high-titer and simplified production of natural products
·····○Hahk-Soo Kang (Sch. of Adv. Biotechnol., Konkuk University, Seoul, South Korea)

14:30 2S-Ep03 Engineering of biosynthetic enzymes to synthesize bioactive compounds
····· ○Hiroyuki Morita (INM, Univ. Toyama)

14:58 2S-Ep04 Unlocking cryptic BGCs from marine sponge-associated Streptomyces
····· ○Eung-Soo Kim (Inha University, Incheon, Korea)

15:26 Closing Remarks
····· Yoshimitsu Hamano

Room F Floor 6 602 (9:30–11:30)

Frontiers of Interdisciplinary Research for Social Implementation of Bioproduction

9:30 Opening Remarks
..... Nobuyuki Okahashi

Chair: **Nobuyuki Okahashi**

9:32 2S-Fa01 Introduction of the microbiology team in GteX initiative
..... ◯Kohsuke Honda [1,2] ([1] ICBiotech, Univ. Osaka, [2] OTRI, Osaka Univ.)

9:42 2S-Fa02 Development of Self-Growing Artificial Cells and Ultra-Parallel Protein Printing Technology
..... ◯Yoshihiro Minagawa, Hiroyuki Noji (Grad. Sch. Eng., Univ. Tokyo)

10:07 2S-Fa03 Development of technology designing translatable proteins
..... ◯Teruyo Kato (Grad. Sch. Bioagric., Sci., Nagoya Univ.)

Chair: **Teruyo Kato**

10:23 2S-Fa04 Engineering *E. coli* translation system for next-generation biomanufacturing
..... ◯Wataru Aoki (Grad. Sch. Eng., Univ. Osaka)

10:48 2S-Fa05 Challenges for genome editing technologies towards limitless modification of microbes
..... ◯Keiji Nishida (EGBRC, Kobe Univ.,)

11:13 2S-Fa06 Metabolic pathway prototyping using high-throughput mass spectrometry
..... ◯Nobuyuki Okahashi (Grad. Sch. IST, Univ. Osaka)

11:29 Closing Remarks
..... Teruyo Kato

Room F Floor 6 602 (13:30–15:30)

Innovative Biotechnology That Opens New Horizons in Bioengineering

13:30 Opening Remarks
..... Wataru Aoki

Chair: **Masaharu Somiya**

13:33 2S-Fp01 TIGR-Tas: Modular RNA-guided systems with Nop domain-containing proteins
..... ◯Makoto Saito (RIKEN PRI)

13:52 2S-Fp02 Development of Novel Exosome-Hijacking Drug Delivery System for Nucleic Acid Medicine
..... ◯Asako Yamayoshi (Sch. Life Sci. Technol, Science Tokyo)

14:11 2S-Fp03 Towards arbitrary modification of intracellular space
..... ◯Hideki Nakamura [1,2,3] ([1] Hakubi Center, Kyoto Univ., [2] Grad. Sch. Eng., Kyoto Univ., [3] JST PRESTO)

Chair: **Keisuke Motone**

14:30 2S-Fp04 Nanopore-based single-molecule detection for microRNA analysis
..... ◯Nanami Takeuchi, Ryuji Kawano (Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

Chair: **Wataru Aoki**

14:49 2S-Fp05 Nanopore proteomics: multifaceted analysis of protein sequence, structure, and post-translational modifications
..... ◯Keisuke Motone (Grad. Sch. Eng., Univ. Osaka)

15:08 2S-Fp06 Computational design and applications of membrane fusion proteins
..... ◯Masaharu Somiya (SANKEN, The University of Osaka)

15:27 Closing Remarks
..... Masaharu Somiya

Room G Floor 6 603 (9:30–11:30)

Technological Innovation for Promoting DX in Biotechnology

Chair: **Fumio Matsuda**

9:30 2S-Ga01 Development of metabolome analysis technologies to promote digital transformation
……◯Takeshi Bamba (Med. Inst. Bioreg., Kyushu Univ.)

Chair: **Susumu Uchiyama**

10:00 2S-Ga02 Latest cryo-focused ion beam technology for life science: High-precision processing and 3D observation of frozen biological samples
…… ◯Rintaro Kawano, Naoki Hosogi, Hideki Matsushima, Chikako Nakayama, Noriaki Mizuno (JEOL Ltd.)

10:30 2S-Ga03 Metabolomic data sharing and utilization by user communities
…… ◯Fumio Matsuda (Grad. Sch. IST, Univ. Osaka)

Chair: **Takeshi Bamba**

11:00 2S-Ga04 Analysis of organic acids and inorganic salts in culture media by IC or IC-MS and automation of enzyme analysis using the Gallery discrete autoanalyzer
…… ◯Mayuko Sato (Thermo Fisher Scientific Inc.)

Room G Floor 6 603 (13:30–15:30)

Evolution of Cell Manufacturing Engineering for the Development of Cell Industry —Technology Required for Mass Suspension Culture to Acquire International Competitiveness—

Chair: **Katsuhiko Kida**

13:30 2S-Gp01 Changes in cell behaviour due to differences in stirring methods
…… ◯Masanobu Horie [1], Ryuzu Narita [2], Kouji Mitsuya [2], Yukiko Kimura [2], Teruhisa Koyasu [2], Koji Miura [2]
([1] RI, Kyoto Univ., [2] MITO Co., Ltd.)

Chair: **Masanobu Horie**

13:50 2S-Gp02 Fluid mechanics for cell culture
…… ◯Susumu Goto, Daiki Watanabe (Grad. Sch. Eng. Sci., Univ. Osaka)

Chair: **Katsuhiko Kida**

14:10 2S-Gp03 Achievements and challenges of large-scale suspension culture from a CDMO perspective
……◯Ryo Sakakibara (Minaris Advanced Therapies Co., Ltd.)

Chair: **Masanobu Horie**

14:30 2S-Gp04 Study on supression of microcarrier aggregation in mesenchymal stem cell culture using FCeM(R) Advance-CR Preparation Kit
…… ◯Katsuhiko Kida, Daisuke Hatanaka (Nissan Chemical Corp.)

Chair: **Ryuji Kato**

14:50 2S-Gp05 The Importance of CDMOs for the Industrialization of Regenerative Medicine and Cellular Therapy and the METI Strategy
…… ◯Yasuhiro Ieki (Ministry of Economy, Trade and Industry Government of Japan)

Room K Floor 7 704 (9:30–11:30)

Challenges of Young Researchers: Manufacturing Based on Environments and Biotechnology

9:30 Introduction
..... Nobuhiko Nomura

9:33 Introduction of Symposium Presenters
..... Atsushi Usami

Chair: **Atsushi Usami**

9:39 2S-Ka01 Chemistry-driven Discovery of Microbial Enzymes
..... ○Shunsuke Kato (Grad. Sch. Eng., Univ. Osaka)

9:57 2S-Ka02 Genome mining directed to the discovery of bioactive secondary metabolites
..... ○Aya Yoshimura (Grad. Sch. Pharm. Sci., Hokkaido Univ.)

10:15 2S-Ka03 Development of Manufacturing Technology Inspired by Plant Enzymes
..... ○Yuma Shisaka (CSRS, RIKENS)

Chair: **Shunsuke Kato**

10:33 2S-Ka04 Improving the Efficiency of Enzyme Engineering via Database-Driven Approaches
..... ○Teppei Niide (Grad. Sch. IST, Univ. Osaka)

10:51 2S-Ka05 Quantitative monitoring technique for protein-protein interactions triggered by plant hormones
..... ○Kotaro Nishiyama (Sch. Agric., Meiji Univ.)

11:09 2S-Ka06 Bioproduction using insect biological functions
..... ○Atsushi Usami (WPI-ITbM, Nagoya Univ.)

11:27 Summary
..... Shunsuke Kato

Room K Floor 7 704 (13:30–15:30)

A Challenge of Young Researchers: Analysis and Application of Unique Protein Functions

13:30 Introduction
..... Nobuhiko Nomura

13:33 Introduction of Symposium Presenters
..... Kenya Tanaka

Chair: **Eiichiro Takamura**

13:36 2S-Kp01 Insights into Redox Regulation through a Comprehensive Analysis of Protein Disulfide Potentials
..... ○Kenya Tanaka (EGBRC, Kobe Univ.,)

13:54 2S-Kp02 Optogenetic manipulation of cellular function with multi-step switching
..... ○Yuhei Goto (Grad. Sch. Biostud., Kyoto Univ.)

14:12 2S-Kp03 A New Perspective on Selenoproteins from Environmental Microorganisms
..... ○Masao Inoue [1,2] ([1] R-GIRO, Ritsumeikan Univ., [2] Coll. Life Sci., Ritsumeikan Univ.)

Chair: **Kenya Tanaka**

14:30 2S-Kp04 Structure-specific functions of cryoprotective molecules and development of biopreservation techniques
..... ○Masahiro Kuramochi [1,2] ([1] Coll. Eng., Ibaraki Univ., [2] Grad. Sch. Front. Sci., Univ. Tokyo)

14:48 2S-Kp05 C-type cytochromes facilitate directional respiratory electron transport along chains of bacterial cells
..... ○Yoshihide Tokunou [1,2], Hiromasa Tongu [1], Mei Koshimizu [1], Kana Higuchi [1], Masanori Toyofuku [1], Nobuhiko Nomura [1]
([1] Univ. Tsukuba, [2] NIMS)

15:06 2S-Kp06 Establishment of molecular design guidelines for direct electron transfer-type enzymes for bioelectronic device applications
……◯Takamura Eiichiro (Carbon, Univ. Fukui)

15:24 Summary
……Eiichiro Takamura

Room N Floor 8 805 (9:30–11:30)

Current Status and Future Prospects of DX, Mechanization, and Automation to Accelerate the Development of Bio-Derived Products

9:30 Opening Remarks
……Eiji Nagamori
Chair: **Eiji Nagamori**

9:32 2S-Na01 Development of microbial bioprocesses by AI-assisted medium composion optimization
……◯Masaaki Konishi (Kitami Inst. Technol.)

9:50 2S-Na02 Analytical measurement, automation, and AI technologies for biomanufacturing
……◯Toru Ezure (Shimadzu Corp.)

10:08 2S-Na03 Challenges and Prospects of Automation at Various Scales in the Field of Biotechnology
……◯Takaaki Horinouchi (BDR, RIKEN)
Chair: **Takaaki Horinouchi**

10:26 2S-Na04 Digital transformation in biopharmaceutical safety
……◯Tomoko Matsuda [1,2,3], Norichika Ogata [1,2,3], Sochi Ogbonna [2,3], Noriko Yamano-Adachi [2,3,4], Takeshi Omasa [2,3,4]
([1] Nihon BioData Corporation, [2] Grad. Sch. Eng., UOsaka, [3] MAB, [4] OTRI, UOsaka)

10:44 2S-Na05 Initiatives to Promote the Utilization of Data-Driven Systems in the Biological Sciences
……◯Ryota Kikuchi [1,2] ([1] Nagoy Univ., ISEE, [2] DoerResearch, Inc.)

11:02 2S-Na06 Development of a DX app that streamlines the collection and analysis of cultivation data and experimental optimization, and its future prospects
……◯Eiji Nagamori (Grad. Sch. Eng., Osaka Inst. Technol.)
Chair: **Eiji Nagamori**

11:20 General Discussion

11:28 Closing Remarks
……Takaaki Horinouchi

Room N Floor 8 805 (13:30–15:30)

Traditional Fermentation and Innovative Food Tech Bring New Possibilities for Food

13:30 Opening Remarks
……Jun Ogawa
Chair: **Haruko Takeyama**

13:32 2S-Np01 Health promotion through interaction between fermentation/gut microorganisms and foods
……◯Jun Ogawa (Grad. Sch. Agric., Kyoto Univ.)

13:50 2S-Np02 Development of innovative meat substitutes using koji mold
……◯Daisuke Hagiwara (KOJI labo Co., Ltd.)

Chair: **Daisuke Hagiwara**

14:08 2S-Np03 Development of a culture medium using food waste for the proliferation of cultured meat cells
..... ○Katsuhisa Sakaguchi (Fac. Sci. and Eng., Tokyo City Univ.)

14:26 2S-Np04 Production of cultured meat from duck liver-derived cells
..... ○Ikko Kawashima, Kazuhiro Kunimasa, Hiroaki Kondo (Integriculture Inc)

Chair: **Jun Ogawa**

14:44 2S-Np05 Novel food development pioneered by Raman analysis - visualization of intracellular behavior of secondary metabolites in microorganisms and food quality evaluation
..... ○Masahiro Ando (Res. Org. Nano Life Innov., Waseda Univ.)

15:02 2S-Np06 Egg for All: Shaping an Inclusive Future with Allergy-Reduced Eggs
..... ○Hiromasa Ono (PtBio Inc.)

15:20 General Discussion
..... Jun Ogawa

15:28 Closing Remarks
..... Haruko Takeyama

Room P Floor 9 905 (9:30–11:30)

New Developments in Brewed Foods

9:30 Opening Remarks
..... Tasuku Yamada

Chair: **Tasuku Yamada**

9:35 2S-Pa01 The power of koji: The attraction of fermented foods and future prospects
..... ○Akane Yamazaki (marukome)

Chair: **Akihiro Nakamura**

10:02 2S-Pa02 Soy sauce brewing and its development
..... ○Keiko Gomi (Kikkoman Corp.)

10:29 2S-Pa03 Development of sake with zero sugar and purine content
..... ○Kentaro Ide (Res. Inst., Gekkeikan Sake Co., Ltd.)

Chair: **Cho Sho**

10:56 2S-Pa04 New Developments in Research on the Health Functions of Acetic Acid
..... ○Joto Yoshimoto, Yuto Aoki (Mizkan Holdings Co. Ltd.)

11:23 Closing Remarks
..... Cho Sho

Room P Floor 9 905 (13:30–15:30)

Challenges and Prospects of Technological Innovations and Industry-Academia-Government Collaboration for Advancing Next-Generation Bio-Manufacturing

13:30 Opening Remarks
..... Shintaro Iwatani

Chair: **Takaomi Yasuhara**

13:32 2S-Pp01 Current state and expectations surrounding Bio-manufacturing
..... ○Tomohiro Ohishi (NEDO)

14:01 2S-Pp02 The challenges associated with cultivating a collaborative relationship between academia and industry in cases of culture medium optimization projects, and its attention
……◯Masaaki Konishi (Kitami Inst. Technol.)
Chair: **Masaaki Konishi**

14:30 2S-Pp03 Osaka Institute of Technology Bio-Manufacturing Laboratory: A support facility for shortening production process development times
……◯Eiji Nagamori (Grad. Sch. Eng., Osaka Inst. Technol.)

14:59 2S-Pp04 Development of technology for autonomous optimization of culture conditions by AI
……◯Tetsushi Kawai (Chitose Laboratory Corp.)

15:28 Closing Remarks
…… Masaaki Konishi

Oral Presentations

Room A Floor 5 501 (15:50–18:00)

【Enzymology, Enzyme】

15:50 2Ap01 Heterologous expression and biochemical characterization of lipolytic enzymes from xerophilic *Aspergillus* molds
…… ◯Shinji Takenaka[1], Kokone Sunagawa[2], Yukihiro Kimura[1], Jun-ichi Matsumoto[3], Mikiharu Doi[3]
([1] Grad. Sch. Agric., Kobe Univ., [2] Fac. Agric., Kobe Univ., [3] Marutomo Co., Ltd.)

16:02 2Ap02 Characterization of *O*-methyltransferases responsible for the metabolism of methoxyphenols in xerophilic *Aspergillus* molds
……◯Arisa Fujita[1], Shinji Takenaka[1], Yukihiro Kimura[1], Junichi Matsumoto[2], Mikiharu Doi[2]
([1] Grad. Sch. Agric., Kobe Univ., [2] Marutomo Co., Ltd.)

16:14 2Ap03 Characterization of flavonoid *O*-methyltransferases involved in the polymethoxyflavone biosynthesis from *Citrus tachibana*
……◯Tomoya Kuwahara[1], Takao Ohashi[2], Masao Tsuduki[1], Masataka Ohashi[1]
([1] Nara Pref. Inst. Indust. Dev., [2] Grad. Sch. Sci. Eng., Setsunan Univ.)

16:26 2Ap04 Lipase/Esterase activity-based droplet screening from environmental samples
…… ◯Aoi Unno, Akihiro Nakamura, Yoshiyuki Suzuki, Yosuke Shida, Wataru Ogasarawa
(Nagaoka Univ. Technol.)

16:38 2Ap05 Substrate specificity of CYP107J1 from *Bacillus subtilis*
…… ◯Hideki Kato[1], Takafumi Hashimoto[1], Stephen G. Bell[2], Toshiki Furuya[1]
([1] Fac. Sci. Technol., Tokyo Univ. Sci., [2] Adelaide Univ.)

16:50 Break

17:00 2Ap06 Development of a purification system for nascent ribosomes to study *in vitro* ribosome biogenesis
……◯Yuishin Kosaka[1], Akira Ito[2], Keisuke Motone[1], Wataru Aoki[1]
([1] Grad. Sch. Eng., Univ. Osaka, [2] TechnoPro, Inc. TechnoPro R&D Company)

17:12 2Ap07 Characterization of in vitro ribosome biogenesis using quantitative proteomics
…… ◯Chisato Nishizawa[1,2], Shunsuke Aburaya[3], Yuishin Kosaka[1], Wataru Aoki[1]
([1] Grad. Sch. Eng., Univ. Osaka, [2] JSPS, [3] Med. Inst. Bioreg., Kyushu Univ.)

17:24 2Ap08 〈**Topics**〉
Enhancement of polypropylene degradation activity by *in vitro* artificial metabolic reaction
…… ◯Itsuki Hoshi, Takehiro Tiba, Daisuke Sugimori (Fac. Symbio. Syst. Sci., Fukushima Univ.)

17:36 2Ap09 Enhancement of nitrile rubber degradation activity by *in vitro* artificial metabolic reaction
…… ◯Daisuke Sugimori, Takehiro Chiba (Fac. Symbio. Syst. Sci., Fukushima Univ.)

17:48 2Ap10 Localization and gene prediction of polyethylene-degrading enzyme from *Serratia* sp. strain S1
……◯Atsushi Hoshi, Takehiro Chiba, Daisuke Sugimori (Fac. Symbio. Syst. Sci., Fukushima Univ.)

Room B Floor 5 503 (15:50–16:35)

Award Lectures (Young Scientist Award)

15:50 2A-Bp01 〈**Young Scientist Award**〉 Chair: **Hideki Aoyagi**
Discovery of novel antibiotics from nematode symbionts
……◯Yu Imai (Inst. Aqu a Regen. , Shinshu Univ.)

16:05 2A-Bp02 〈**Young Scientist Award**〉 Chair: **Yoji Hata**
Metabolic engineering for a versatile platform to synthesize chorismate derivatives
…… ◯Shuhei Noda [1,2] ([1] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [2] Jpn. Sci. Technol. Agen.)

16:20 2A-Bp03 〈**Young Scientist Award**〉
Study of the principle of intracellular glycolytic enzyme assembly and its application
…… ◯Natsuko Miura (Grad. Sch. Agric., Osaka Metro. Univ.)

Room B Floor 5 503 (17:00–18:00)

【Proteins】

17:00 2Bp06 Genetic analysis, purification and mode of action of aureocin GZ10, a novel two-peptide lantibiotic produced by *Staphylococcus aureus* 10
…… ◯Ghoson Daba [1,2], Takeshi Zendo [1] ([1] Grad. Sch. Agric., Kyushu Univ., [2] Dept. Chem. Natural and Microbial products, National Research Centre, Egypt.)

17:12 2Bp07 Heterologous expression of multihaem proteins using *Shewanella oneidensis* MR-1
…… ◯Mamoru Oshiki, Sayaka Itasaka, Satoshi Okabe (Grad. Sch. Eng., Hokkaido Univ.)

17:24 2Bp08 Activity evaluation of 11 beta-Hydroxysteroid Dehydrogenase Type 2 expressed in *Escherichia coli*
……◯Hiroki Kaieda, Takenori Isida, Takeshi Ikeda, Ryuichi Hirota, Akio Kuroda, Hisakage Funabashi (Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

17:36 2Bp09 Optimization of tyrosine crosslinking reaction toward molecular spinning of nanofiber proteins
…… ◯Yuki Yokoe [1], Rio Sugimoto [1], Kosuke Minamihata [2], Shogo Yoshimoto [3], Kastutoshi Hori [3], Noriho Kamiya [2,4], Masahito Ishikawa [1] ([1] Grad. Sch. Biosci., Nagahama Inst. Bio-Sci. Technol., [2] Grad. Sch. Eng., Kyushu Univ., [3] Grad. Sch. Eng., Nagoya Univ., [4] CFC, Kyushu Univ.)

17:48 2Bp10 Controlled aggregation of artificial cells via antigen-nanobody interactions
…… ◯Rio Sugimoto [1], Yuki Yokoe [1], Shogo Yoshimoto [2], Katsutoshi Hori [2], Masahito Ishikawa [1] ([1] Grad. Sch. Biosci., Nagahama Inst. Bio-Sci. Technol., [2] Grad. Sch. Eng., Nagoya Univ.)

Room C Floor 5 505 (15:50–18:00)

【Proteins】

15:50 2Cp01 〈**Topics**〉
Sequence-to-function deep learning framework for fluorescent immunosensor engineering
……◯Bo Zhu, Akihito Inoue, Keisuke Mizutani, Ken Kobayashi, Takanobu Yasuda, Tetsuya Kitaguchi (Science Tokyo)

16:02 2Cp02 Design and application of enzyme switches for homogeneous immunosensors
…… ◯Cheng Qian [1], Ryosuke Noma [1], Shuntaro Chiba [3], Takanobu Yasuda [2], Bo Zhu [2], Mitsunori Ikeguchi [3], Tetsuya Kitaguchi [2]
([1] Sch. Life Sci. Technol, Science Tokyo, [2] CLS, Science Tokyo, [3] R-CCS, RIKEN)

16:14 2Cp03 Augmentation of the Binding Affinity of Low-Molecular-Weight Ligands via a Dextran-Based Scaffold System
…… ◯Karin Fukuda, Ai Miyamoto, Tomoko Honjo, Junichiro Futami (Grad. Sch. ISEHS., Okayama Univ.)

16:26 2Cp04 Improving the cytotoxicity of T-cell engaging antibodies using machine learning
…… Kohei Ito [1], ◯Tomoyuki Ito [1], Aruto Sugiyama [1], Ryo Tanno [1], Hikaru Nakazawa [1], Mitsuo Umetsu [1,2]
([1] Grad. Sch. Eng., Tohoku Univ., [2] AIP, RIKEN)

16:38 2Cp05 De Novo Design and Validation of Mini-Proteins Targeting GFP Binding
……◯Shinzan Okada, Koreyoshi Imamura, Hiroyuki Imanaka (Grad. Sch. Environ. Life Sci., Okayama Univ.)

16:50 Break

17:00 2Cp06 The interaction between BamA and BamD in OMP assembly is modulated by the intrinsically disordered region at the N-terminus of BamE
……◯Yuki Maruno [1,2], Edward Germany [1,3], Yukari Nakajima [1], Rei Ohyama [4], Yukihiko Masumura [4], Takuya Shiota [1]
([1] Front. Sci. Res. Center., Univ. Miyazaki, [2] Interdiscip. Grad. Sch. Agric. Eng., Univ. Miyazaki, [3] Nectagen, Inc., [4] Fac. Med., Univ. Miyazaki)

17:12 2Cp07 Influence of the Translation-Enhancing peptide on the ribosomal stalling induced by arrest peptide
…… ◯Yuma Nishikawa, Hideo Nakano, Teruyo Kato (Grad. Sch. Bioagric., Sci., Nagoya Univ.)

17:24 2Cp08 Protein function switch using molecular cross-linking by arsenite
…… ◯Kojiro Shimizu [1], Yusuke Yamaguchi [2], Atsuyuki Ito [3], Satoshi Ogasawara [3], Takeshi Murata [3], Shigeko Kawai-Noma [4]
([1] Grad. Sch. Sci. Eng., Chiba Univ., [2] Dept. Applied Chem. Biotech. Chiba Univ, [3] Grad. Sch Sci. Chiba Univ., [4] Grad. Sch. Eng., Chiba Univ.)

17:36 2Cp09 Validation of a Protein Engineering Strategy for Hyperthermophilic Proteins Using ProteinMPNN
……◯Toya Sasaki, Koreyoshi Imamura, Hiroyuki Imanaka (Grad. Sch. Environ. Life Sci., Okayama Univ.)

17:48 2Cp10 Development of a circular mRNA-based *in vitro* protein display method for directed evolution
……◯Miki Nosaka, Tadao Oikawa, Kazuya Yamanaka (Grad. Sch. Sci. Eng., Kansai Univ.)

Room D Floor 5 506 (15:50–18:00)

【Plant Cell / Tissue Engineering】

15:50 2Dp01 〈**Topics**〉
Effects of biochar application on hop cultivation
····· Toshiko Kutsukake, Riko Imahori, Tetsu Sugimura, ○Hiroyuki Yoshimoto
(Institute for Future Beverages, Kirin Holdings Co., Ltd.)

16:02 2Dp02 Integrated spatiotemporal analysis of the soybean nodule symbiosis system
····· ○Yuho Tani [1], Hiroko Matsunaga [2], Chika So [1], Haruko Takeyama [1,2,3]
([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Org. Nano Life Innov., Waseda Univ.,
[3] Inst. Adv. Res. Biosyst. Dynam., Waseda Res. Inst. Sci. Eng., Waseda Univ.)

16:14 2Dp03 Performance of a plant microbial fuel cell using salt-tolerant plants
····· ○Jaehun Kim, Jeongwook Jo, Yejin Kim, Hyungjoo Kim
(Dept. Biological Eng., Konkuk Univ.)

16:26 2Dp04 Creation of Non-Toxic Potatoes Lacking Steroidal Glycoalkaloids through *16DOX* Knockout Using CRISPR/Cas9
····· ○Yoshinori Tokita [1], Shuhei Yasumoto [1], Toshiya Muranaka [2], Hikaru Seki [1,2]
([1] Grad. Sch. Eng., Univ. Osaka, [2] OTRI, Osaka Univ.)

16:38 2Dp05 Creation of genome-edited potatoes with improved resistance to bacterial wilt
····· ○Fuyue Cai [1], Yuka Yoshimatsu [1], Takuya Bando [2], Fuko Iwata [1], Yuki Yamase [1],
Shuhei Yasumoto [1], Toshiya Muranaka [3], Akinori Kiba [2], Hikaru Seki [1,3]
([1] Grad. Sch. Eng., Univ. Osaka, [2] Fac. Agric. Marine Sci., Kochi Univ., [3] OTRI, Osaka Univ.)

16:50 Break

17:00 2Dp06 Functional analysis of the transcription factors regulating the content of saponin, a health function component in soybean
····· ○Anju Matsumoto [1], Haruka Morita [1], Haruki Nishimura [1], Yuhei Okamoto [1], Misako Kitamura [1],
Keita Tamura [1,2], Hidemasa Bono [2,3], Toshiya Muranaka [4], Hikaru Seki [1,4]
([1] Grad. Sch. Eng., Univ. Osaka, [2] Genome Editing Innovation Center, Hiroshima Univ.,
[3] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [4] OTRI, Osaka Univ.)

17:12 2Dp07 Investigating the potential metabolon in the biosynthetic pathway of a natural sweetener glycyrrhizin from licorice
····· ○Ruizhen He [1], Soo Yeon Chung [1], Toshiyuki Waki [2], Toshiya Muranaka [3], Hikaru Seki [1,3]
([1] Grad. Sch. Eng., Univ. Osaka, [2] Grad. Sch. Eng., Tohoku Univ., [3] OTRI, Osaka Univ.)

17:24 2Dp08 Analysis of lipid synthesis related genes in *Nannochloropsis oceanica*
····· ○Ji Zhang, Yuhao Zhuang, Makoto Fujie (Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

17:36 2Dp09 〈**Topics**〉
Efficient breeding using genome editing and machine learning
····· ○Hitoshi Koyano, Takeshi Kuroha, Hitoshi Yoshida (NARO)

17:48 2Dp10 Inductance-based soil moisture measurement system for plant cultivation
····· ○Ye Jin Kim, Jeong Wook Jo, Jae Hun Kim, Hyung Joo Kim
(Dept. Biological Eng., Konkuk Univ.)

Room E Floor 6 601 (15:50–17:48)

【Biomedical Engineering】

15:50 2Ep01 Development of an artificial intelligence system for identification of cancer vessel formation in immunohistochemical image
····· ○Tomoyasu Sugiyama [1], Masayoshi Fujisawa [2], Kouichiro Doi [1], Hiroyuki Kameda [3], Tomonari Kasai [4], Toshiaki Ohara [2]
([1] Sch. Biosci. Biotechnol., Tokyo Univ. Technol., [2] Grad. Sch. Med. Dent. Pharm, Sci., Okayama Univ., [3] Sch. Comp. Sci., Tokyo Univ. Technol., [4] Grad. Sch. Pharm. Sci., Nagoya Univ.)

16:02 2Ep02 Monitoring in vivo transcription with synthetic serum markers
····· ○Sho Watanabe, Szablowski Jerzy (Department of Bioengineering, Rice University)

16:14 2Ep03 Cancer hyperthermia using Herceptin-conjugated magnetic nanoparticles
····· ○Teruya Ishige, Masahiro Kaneko, Akira Ito (Grad. Sch. Eng., Nagoya Univ.)

16:26 2Ep04 Development of nanoparticles using antibody modification method with Spytag-Spycatcher system
····· ○Tsubasa Matsuzawa, Mai Ishida, Winda Tasia, Yutaro Mori, Prihardi Kahar, Chiaki Ogino
(Grad. Sch. Eng, Kobe Univ.)

16:38 2Ep05 Evaluation of combination between ascorbic acid and TiOx as radiosensitizing effect
····· ○Mai Ishida, Tsubasa Matsuzawa, Winda Tasia, Yutaro Mori, Prihardi Kahar, Chiaki Ogino
(Fac. Eng., Kobe Univ.)

16:50 Break

17:00 2Ep06 **〈Topics〉**
Bladder cancer hyperthermia using magnetic nanoparticles loaded with immune checkpoint inhibitors
····· ○Rintaro Saito [1], Masahiro Kaneko [1], Masakazu Gonda [2], Noriyasu Kawai [2], Akira Ito [1]
([1] Grad. Sch. Eng., Nagoya Univ., [2] Grad. Sch. Med., Nagoya city Univ.)

17:12 2Ep07 Liver Nanowarming using Phospholipid Polymers
····· ○Natsumi Takizawa [1], Haruto Yano [1], Masaru Matsuda [2], Yoichiro Sawada [2], Yukiko Hishida [2], Masahiro Kaneko [1], Akira Ito [1]
([1] Grad. Sch. Eng., Nagoya Univ., [2] NOF Corp.)

17:24 2Ep08 Development of a Microcavity Array-based platform for drug sensitivity evaluation in cancer organoids
····· ○Issei Kojima [1], Haru Yamamoto [2], Tatsuya Usui [2], Daigo Azakami [2], Tsuyoshi Tanaka [1], Tomoko Yoshino [1]
([1] Grad. Sch. Eng., Tokyo Univ. Agric. Technol., [2] Grad. Sch. Agric., Tokyo Univ. Agric. Technol.)

17:36 2Ep09 Investigation of the alterations in nanoparticle transport behavior due to cancer invasion and its application to the diagnosis of breast cancer metastasis
····· ○Haruka Ono, Huanyu Zhang, Noriko Nakamura, Seiichi Ohta (Grad. Sch. Eng., Univ. Tokyo)

Room F Floor 6 602 (15:50–18:00)

【Metabolic Engineering】

15:50 2Fp01 Serine Production Via Tetrahydrofolate Cycle Using an Engineered *Escherichia coli*
····· ○Tatsumi Imada, Keitaro Tatsumi, Kyoka Mizuta, Kinuka Isshiki, Hiroshi Shimizu, Yoshihiro Toya
(Grad. Sch. IST, Univ. Osaka)

16:02 2Fp02 Engineering *E. coli* for enhanced use of the reverse glyoxylate shunt to increase acetyl-CoA supply
……○Haruka Teraki, Tatsumi Imada, Kenta Miyoshi, Teppei Niide, Hiroshi Shimizu, Yoshihiro Toya (Grad. Sch. IST, Univ. Osaka)

16:14 2Fp03 Conversion of acetate to acetone by light-driven ATP generation using rhodopsin
…… Yuma Kobayashi [1], Yoko Hirono-Hara [2], Fumio Matsuda [1], Jun Ishii [3], Kiyotaka Y. Hara [2], Hiroshi Shimizu [1], ○Yoshihiro Toya [1] ([1] Grad. Sch. IST, Univ. Osaka, [2] Grad. Sch. Nutr. Env. Sci., Univ. Shizuoka, [3] Grad. Sch. Sci. Technol. Innov., Kobe Univ.)

16:26 2Fp04 Evaluating metabolic phenotype of *Escherichia coli* based on the transcription factor activity
……○Ryosuke Horiba, Hiroshi Shimizu, Yoshihiro Toya (Grad. Sch. IST, Univ. Osaka)

16:38 2Fp05 **〈Topics〉**
Identification of the rate-limiting step in succinate-producing *Escherichia coli* strain by constructing kinetic models of metabolism using small amount of measured data
……○Tomoyuki Takeya [1], Teppei Niide [2], Miwa Sato [1], Kiyoto Ito [1], Hiroshi Shimizu [2], Yoshihiro Toya [2] ([1] Hitachi, Ltd., [2] Grad. Sch. IST, Univ. Osaka)

16:50 Break

17:00 2Fp06 Modulating metabolite production processes of *E. coli* with an orthogonal translation system
……○Riko Kusumi [1], Yuishin Kosaka [1], Takashi Sugita [2], Keisuke Kobayashi [2], Keisuke Motone [1], Wataru Aoki [1] ([1] Grad. Sch. Eng., Univ. Osaka, [2] TechnoPro, Inc.)

17:12 2Fp07 Isoprenol production by co-culture of two *Escherichia coli* strains to eliminate competition for sugar utilization
…… ○Soichiro Hirai [1], Manami Murakami [1], Yoko Hirono [3], Fumio Matsuda [1], Jun Ishii [2], Kiyotaka Hara [3], Yoshihiro Toya [1], Hiroshi Shimizu [1] ([1] Grad. Sch. IST, Univ. Osaka, [2] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [3] Grad. Sch. Nutr. Env. Sci., Univ. Shizuoka)

17:24 2Fp08 Control of bacterial ratio in synthetic microbial consortium through Ile and Lys cross-feeding
…… ○Mitsuki Tomura [1], Tomoya Noma [1], Hiroyuki Hamada [2], Kenshi Suzuki [2], Taizo Hanai [2] ([1] Grad. Sch. Bioresour. Bioenviron. Sci., Kyushu Univ., [2] Grad. Sch. Agric., Kyushu Univ.)

17:36 2Fp09 Engineering an artificial Lux System to expand its utility as a tool for gene expression control
……○Rin Soma [1], Akito Shiotani [1], Natsuki Asada [1], Jun Kadowaki [1], Jung Ain [1], Hiroyuki Hamada [2], Kenshi Suzuki [2], Taizo Hanai [2] ([1] Grad. Sch. Bioresour. Bioenviron. Sci., Kyushu Univ., [2] Grad. Sch. Agric., Kyushu Univ.)

17:48 2Fp10 **Species-specific microbiome engineering using bacteriophages to control the function of microbiomes**
……○Tomoki Tanaka [1], Hiroaki Iwaki [2], Kenji Okano [2] ([1] Grad. Sch. Sci. Eng., Kansai Univ., [2] Fac. Chem. Mater. Bioeng., Kansai Univ.)

Room G Floor 6 603 (15:50–18:00)

【Fermentation Physiology, Fermentation Technology】

15:50 2Gp01 Co-culture of yeast and lactic acid bacteria for flavor improvement in bread making
…… ○Karin Komai, Kazuhiro Hamada, Yoshihiro Ojima, Masayuki Azuma (Grad. Sch. Eng., Osaka Metro. Univ.)

16:02 2Gp02 Maltotriose utilization and fermentation ability of wild yeasts for the ale-brewing
····· ○Maya Sakai [1], Alla Amenan Victorine [1], Saori Aoyama [2], Kentaro Hisamatsu [3], Yoshinori Sawai [3], Akihiro Yoshimura [3], Masaya Shimada [1,4,5], Tomoyuki Nakagawa [1,4,5]
([1] Grad. Sch. Sci. technol., Gifu Univ., [2] Kamo-norin High school., [3] Gifu. Food. Sci. Res. Inst., [4] Fac. Appl. Biol. Sci., Gifu Univ., [5] PFRC. Gifu Univ.)

16:14 2Gp03 Identification and analysis of yeast gene deletion strains with excellent fermentation repression at low temperatures
·····○Taishi Hamasaki, Kazuhiro Hamada, Yoshihiro Ojima, Masayuki Azuma
(Grad. Sch. Eng., Osaka Metro. Univ.)

16:26 2Gp04 A mutation of *HOM6* improves sulfur metabolism in *Saccharomyces cerevisiae*
····· ○Shogo Kakoi [1], Akira Nishimura [2], Hiroyuki Senjyu [1], Takuya Asai [1], Takahiro Akashi [1]
([1] Hakutsuru Sake Brewing Co., Ltd., [2] United Grad. Sch. Agric. Sci., Iwate Univ.)

16:38 2Gp05 A Pilot Investigation into the Impact of *HOG1* Gene Deletion on Glucose Fermentation in *Saccharomyces cerevisiae*
·····○Nunthaphan Vikromvarasiri [1], Ryosuke Mitsui [1], Takashi Hisasawa [3], Akihiko Kondo [1,2], Tomokazu Shirai [1]
([1] CSRS, RIKENS, [2] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [3] Sch. Life Sci. Technol, Science Tokyo)

16:50 Break

17:00 2Gp06 Metabolic analysis of ethanol production mechanism of the Crabtree-negative yeast *Komagataella phaffii*
····· ○Genki Sato, Nobuyuki Okahashi, Fumio Matsuda (Grad. Sch. IST, Univ. Osaka)

17:12 2Gp07 Development of a continuous culture process with controlled dimorphism of *Mucor circinelloides*
····· ○Maki Moriwaki (Grad. Sch. Sci. Eng., Univ. Toyama)

17:24 2Gp08 Study on the regulation of cell aggregation and its potential applications in *Aurantiochytrium* sp.
·····○Yusuke Hashima [1], Kenshi Watanabe [1], Keisuke Matsuyama [2], Tsunehiro Aki [1]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] Nagase & Co., Ltd)

17:36 2Gp09 Production of biologically active sclerotiorin with interface fermentor
·····○Fuka Kumazaki, Riko Murakami, Shinobu Oda
(Genome Biotechnol. Lab., Kanazawa Inst. Technol.)

17:48 2Gp10 Production of natural aroma compound with a large-scale interface fermentor
····· ○Shinobu Oda, Fuka Kumazaki, Kenta Kurano, Moe Nishikawa
(Genome Biotechnol. Lab., Kanazawa Inst. Technol.)

Room H Floor 6 607 (15:50–18:00)

【Genetic Engineering】

15:50 2Hp01 〈**Topics**〉
Improvement of reverse transcriptase for activity control of Prime editing
····· ○Ken Sugiyama, Tetsushi Sakuma (Grad. Sch. Agric., Kyoto Univ.)

16:02 2Hp02 Withdrawn

16:14 2Hp03 Engineering rhamnose-inducible T7 expression systems in *Bacillus subtilis* by modifying the RhaR transcription factor regulating these systems
·····○Kazutake Hirooka (Fac. Life Sci. Biotechnol., Fukuyama Univ.)

16:26 2Hp04 Precise Differentiation of GABAergic and Glutamatergic Neurons from Induced Mature Neurons via a CRISPR/dCas9 activation system
·····○Chao-Yang Chang [1], Yi-Chen Li [2], I-Chi Lee [3], Mei-Hwa Lee [4], Hung-Yin Lin [1]
([1] Natl Univ. Kaohsiung, [2] Feng Chia Univ, [3] Natl Univ. Tsing Hua, [4] I-Shou Univ)

16:38 2Hp05 Construction of the *Aspergillus oryzae* strain producing high-level of kojic acid using the method based on CRISPR/Cas9-mediated multicopy integration
····· ○Sohta Sagara [1], Silai Zhang [1], Katsuya Gomi [1,2], Takahiro Shintani [1]
([1] Grad. Sch. Agric. Sci., Tohoku Univ., [2] Fujiwara Techno-Art Co., Ltd)

16:50 Break

17:00 2Hp06 Development of a protein nuclear delivery system allowing for transformation independent genetic manipulation in fungi
····· ○Rikuto Sasaki [1], Ai Shimizu [1], Yoshimitsu Hamano [2], Tadao Oikawa [1], Kazuya Yamanaka [1]
([1] Grad. Sch. Sci. Eng., Kansai Univ., [2] Grad. Sch. Biosci. Biotec., Fukui Pref. Univ.)

17:12 2Hp07 Development of a CRISPR/dCas9a system for the differentiation of Cardiomyocytes
····· ○I-Yun Chen [1], Kai-Hsi Liu [2], Mei-Hwa Lee [3], Hung-Yin Lin [1]
([1] Natl Univ. Kaohsiung, [2] Zuoying Armed Forces General Hosp., [3] I-Shou Univ.)

17:24 2Hp08 Development of mutation-independent methods for comprehensive SARS-CoV-2 genome sequencing
····· ○Hiroko Matsunaga [1], Chia-Ling Lin [2], Koki Numakura [2,4], Tadaki Suzuki [4], Haruko Takeyama [1,2,3]
([1] Res. Org. Nano Life Innov., Waseda Univ., [2] Grad. Sch. Adv. Sci. Eng., Waseda Univ.,
[3] Inst. Adv. Res. Biosyst. Dynam., Waseda Res. Inst. Sci. Eng., Waseda Univ., [4] Dept. Pathol., NIID)

17:36 2Hp09 Novel single-molecule display approach for transglutaminase evolution
····· ○Lalu Unsunnidhal, Edeline Luisia, Hideo Nakano, Jasmina Damnjanovic
(Grad. Sch. Bioagric. Sci., Nagoya Univ.)

17:48 2Hp10 Innovative microalgal biotechnology for carbon capture, utilization, and stress resilience
····· ○I-Son Ng (National Cheng Kung University, Taiwan)

Room I Floor 6 608 (15:50–18:00)

【Cell and Tissue Engineering】

15:50 2Ip01 Development of data augmentation technology using single-cell morphology and its application to machine learning
····· ○Sorachi Katayama [1], Kazue Kimura [1], Kenjiro Tanaka [1], Ryuji Kato [1,2]
([1] Grad. Sch. Pharm. Sci., Nagoya Univ., [2] Nano-Life System, Nagoya Univ.)

16:02 2Ip02 Development of a non-destructive quality evaluation method for 3D cell constructs using near-infrared light scattering analysis
····· ○Ryunosuke Kobayashi [1], Ren Sakai [1], Kenjiro Tanaka [1], Yoko Igarashi [2],
Hiroshi Suganuma [2], Ryuji Kato [1,3]
([1] Grad. Sch. Pharm. Sci., Nagoya Univ., [2] Sumitomo Electric Ind., Ltd.,
[3] Inst. of Nano-Life-Syst., Nagoya Univ.)

16:14 2Ip03 **〈Topics〉**
Micromanipulation robotics-based spatial analysis of cell phenotypes in spheroids
····· ○Kenjiro Tanaka [1], Ren Sakai [1], Ryota Nakajima [2], Hiroyuki Sagayama [2],
Shinji Hasegawa [2], Nobuaki Tanaka [2], Satoshi Ozaki [2], Ryuji Kato [1,3]
([1] Grad. Sch. Pharm. Sci., Nagoya Univ., [2] NSK Ltd.,
[3] Inst. nano-life-systems, inst. Innovation for future society, nagoya univ.)

16:26 2Ip04 Investigation of a method for transferring cerebral capillary endothelial cells using gelatin/calcium alginate mixed gels
····· ○Hideki Mori, Koki Nishi, Kae Shimogama, Towako Takashiro, Masayuki Hara
(Grad. Sch. Sci., Osaka Metro. Univ.)

16:38 2Ip05 Cre/loxP-mediated targeted integration platform for generating CHO cell lines with ultra-high antibody production

……◯Feiyang Zheng [1], Binbin Ying [2], Yuki Amamoto [1], Yoshinori Kawabe [2], Masamichi Kamihira [1,2]
([1] MAB, [2] Grad. Sch. Eng., Kyushu Univ.)

16:50 Break

17:00 2Ip06 Development of non-invasive evaluation method for microcarrier culture using image analysis

…… ◯Wakana Matsuda [1,2], Hiroaki Takeuchi [1], Kenjiro Tanaka [1], Hiroyuki Matsuda [2], Uichi Koshimizu [2], Ryuji Kato [1,3]
([1] Grad. Sch. Pharm. Sci., Nagoya Univ., [2] ZACROS Corp., [3] Inst. of Nano-Life-Syst., Nagoya Univ.)

17:12 2Ip07 Development of an image-based screening platform using deep learning for high-producing CHO cells

……◯Shuang Liang [1], Feiyang Zheng [2], Makoto Masuhara [3], Yoshinori Kawabe [3], Masamichi Kamihira [1,2,3]
([1] Grad. Sch. Syst. Life Sci., Kyushu Univ., [2] MAB, [3] Grad. Sch. Eng., Kyushu Univ.)

17:24 2Ip08 Development of a Glycation Degree and Cell Assay System for Anti-Glycation

……◯Ryoya Yamamoto [1], Takuji Yamada [2], Eisaku Oikawa [3], Yuto Takemoto [4], Ryuji Kato [5], Kei Kanie [1,2]
([1] Grad. Syst. Eng. Sci., Kindai Univ., [2] Fac. Eng., Kindai Univ., [3] Kure Natl. Coll. Technol., [4] Quastella Corp., [5] Grad. Sch. Pharm. Sci., Nagoya Univ.)

17:36 2Ip09 Near-infrared imaging-based analysis of spheroids for enhancing cell-based artificial blood vessels manufacturing

…… ◯Ren Sakai [1], Kenjiro Tanaka [1], Yudai Miyazaki [3], Yoko Igarashi [2], Yasuto Kishii [3], Hiroshi Suganuma [2], Shizuka Akieda [3], Ryuji Kato [1,4]
([1] Grad. Sch. Pharm. Sci., Nagoya Univ., [2] Sumitomo Electric Industries, Ltd., [3] Cyfuse Biomedical K.K., [4] Nano-Life System, Nagoya University)

17:48 2Ip10 Development of cultured leather

…… ◯Himari Sasaki, Katsuhisa Sakaguchi (Dept.Med.Eng.,Tokyo City Univ.)

Room J Floor 6 610 (15:50–18:00)

【Biosynthesis, Natural Organic Chemistry】

15:50 2Jp01 Antifungal activities and mechanisms of pomegranate extract and its constituent punicalagin

…… Hitomi Ninomiya [1], ◯Tetsuya Kinoshita [1], Moe Manbo [3], Masaki Mine [3], Hideki Kurotaki [3], Akira Ogita [1,2], Kazuyori Matsumoto [3], Ken-ichi Fujita [1]
([1] Grad. Sch. Sci., Osaka Metro. Univ., [2] Res. Center Urban Health Sports, Osaka Metro. Univ., [3] Adv. Technol. Res. Center, Okuno Chemical Ind.)

16:02 2Jp02 Change in ATP production with addition of microtubule polymerization inhibitors in *Saccharomyces cerevisiae*

……◯Wakae Murata [1,2], Akira Ogita [2,3], Ken-ichi Fujita [2]
([1] Yonago Natl. Coll. Technol., [2] Grad. Sch. Sci., Osaka Metro. Univ., [3] Res. Center. Urban Health Sports, Osaka Metro. Univ.)

16:14 2Jp03 Silica biomineralization by marine cyanobacteria

…… ◯Takeshi Ikeda [1,2], Yukie Hoshino [3], Takenori Ishida [1], Hisakage Funabashi [1], Ryuichi Hirota [1], Akio Kuroda [1]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] PRESTO, JST, [3] Fac. Eng., Hiroshima Univ.)

16:26 2Jp04 Elucidation of suppression mechanism against oxidative stress by Trametes versicolor extract in PC12 cells

…… ◯Masaki Miura, Maki Moriwaki (Grad. Sch. Sci. Eng., Univ. Toyama)

16:38 2Jp05 Confirmation of PQQ production in *Saccharomyces* and other yeasts
····· ○Hirohide Toyama, Moeri Gushi, Osamu Mizutani (Fac. Agric., Univ. Ryukyus)

16:50 Break

17:00 2Jp06 Selection and breeding of high trans-aconitic acid sorghum as a resource crop
····· ○Yutaka Tamaru [1,2], Takeshi Obayashi [3], Atsushi Okazawa [4]
([1] Tohoku Univ. GXT, [2] Grad. Sch. Eng., Tohoku Univ., [3] Grad. Sch. Info. Sci., Tohoku Univ., [4] Grad. Sch. Agric., Osaka Metro. Univ.)

17:12 2Jp07 Glucosylation position affects the stability of hydroxytyrosol glucosides
····· ○Hiroyuki Ohashi [1], Daisuke Koma [1], Takashi Ohmoto [1], Takao Ohashi [2], Yasuharu Satoh [4], Ryo Misake [3], Hayato Yamanaka [1]
([1] ORIST, [2] Fac. Sci. Eng., Setsunan Univ., [3] ICBiotech, Univ. Osaka, [4] Grad. Sch. Eng., Hokkaido Univ.)

17:24 2Jp08 Studies on the synthesis of novel polyamine-based biopolymers
····· ○Nagiho Murakami [1], Takenori Ishida [1], Hisakage Funabashi [1], Ryuichi Hirota [1], Akio Kuroda [1], Takeshi Ikeda [1,2]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] PRESTO, JST)

17:36 2Jp09 Isolation, structural elucidation, biosynthetic investigation, and biological activity of secondary metabolites in marine actinomycetes isolated from mangrove and coral reefs in Cebu, Philippines
····· ○Mary Hannah Rose Padayao [1], Rukman Muslimin [1], Sho Ogaki [1], Carl Raymond Consuegra [2], Reyna Marie Therese Sanchez [2], Jonie Yee [2], Paul John Geraldino [2], Sisun Choi [3], Eung-Soo Kim [3], Kenji Arakawa [1]
([1] Grad. Sch. Integr., Hiroshima Univ., [2] Dept. Biol., Univ. San Carlos., [3] Dept. Biol. Sci. Bioeng., Inha Univ.)

17:48 2Jp10 *Seco*-macrotetrolides, products through stereo- and regio-selective hydrolysis of macrotetrolides in the Indonesian *Streptomyces* strains
····· ○Rukman Muslimin [1], Alimuddin Ali [2], Sho Ogaki [1], Nurjannah [2], Ummu Kalsum Alam [3], Sisun Choi [3], Eung-Soo Kim [3], Kenji Arakawa [1]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] Dept. Bio., Makassar State Univ., [3] Dept. Bio. Sci. Bioeng., Inha Univ.)

Room K Floor 7 704 (15:50–18:00)

【Bioremediation】

15:50 2Kp01 Growth and potential for nitrogen fixation in *Klebsiella* sp. RD in the presence of ammonia gas
····· ○Tatsumi Yoshimichi, Keiji Kiyosi, Akihiro Yamamoto, Yuichi Saeki, Naoto Yoshida (Grad. Sch. Agric., Univ. Miyazaki.)

16:02 2Kp02 Development of a novel screening method for environmental pollutant-degrading bacteria using bacteriophage
····· ○Madoka Kashiki [1], Hiroaki Iwaki [2], Kenji Okano [2] ([1] Grad. Sch. Sci. Eng., Kansai Univ., [2] Fac. Chem. Mater. Bioeng., Kansai Univ.)

16:14 2Kp03 Degradation of PFAS by the hyper lignin-degrading fungus *Phanerochaete sordida* YK-624 and ligninolytic enzymes
····· ○Wonhi Park [1], Ryoto Nakahashi [2], Akiko Ono [3,4], Hirokazu Kawagishi [2,4], Hirofumi Hirai [3,4,5]
([1] Grad. Sch. Sci. Technol. Shizuoka Univ., [2] Fac. Agric., Shizuoka Univ., [3] Fac. Glb. interdiscip. Sci. Innov., Shizuoka Univ., [4] Res. Inst. for Mushroom Sci., Shizuoka Univ., [5] Res. Inst. Green Sci. Technol., Shizuoka Univ.)

16:26 2Kp04 Functional analysis of a difluoroacetic acid-degrading enzyme
·····○Izumi Kawaguchi [1], Chiho Minakuchi [1,2], Kenshi Suzuki [1,3], Felipe Vejarano [1], Takeaki Tezuka [1,2], Naoki Sunagawa [1,2], Hirofumi Hara [1,2], Kanako Inoo [4], Yuu Mizote [4], Shiina Yasugami [4], Yoshito Tanaka [4], Masahiro Higashi [4], Yousuke Kishikawa [4], Kazunori Okada [1], Hideaki Nojiri [1,2]
([1] Grad. Sch. Agric. Life Sci., Univ. Tokyo, [2] CRIIM, Univ. Tokyo, [3] Grad. Sch. Agric., Kyushu Univ., [4] Daikin Industries, Ltd.)

16:38 2Kp05 Removal of acetaminophen by aerial microalgae
·····○Akihiro Tsuchiya, Katsuhiko Fujii, Nobuhiro Aburai (Grad. Sch. Eng. Kogakuin Univ.)

16:50 Break

17:00 2Kp06 Molecular cloning of 4,4-dihydroxy-alpha-methylstilbene dioxygenases in the bisphenol A degrading bacterium, Sphingomonas bisphenolicum strain AO1
·····○Yuki Urakubo, Yoshinobu Matsumura, Miho Sasaki (Fac. Chem. Mater. Bioeng., Kansai Univ.)

17:12 2Kp07 Effect of Phosphate Supplementation on Cadmium Stress and Accumulation in Thai Candida sp.
·····○Pongsanat Pongcharoen [1], Wittaya Tawong [1], Kawee Sujipuli [1], Kumrop Ratanasut [1], Thanita Boonsrangsom [1], Siriwat Kucharoenphaibul [2]
([1] Dept. Agric. Sci., Fac. Agric. Nat. Resour. & Environ., Naresuan Univ., [2] Dept. Microbiol. & Parasitol., Fac. Med. Sci., Naresuan Univ.)

17:24 2Kp08 Development of acid mine drainage treatment process using acid tolerant bacteria
·····○Chikara Takano, Sohei Iwama, Satoru Kawasaki, Kazunori Nakashima (Grad. Sch. Eng., Hokkaido Univ.)

17:36 2Kp09 Basic study for greening of deposit site in the mine with plant-bacteria interaction
·····○Yurika Kimoto, Chikara Takano, Kazunori Nakashima (Grad. Sch. Eng., Hokkaido Univ.)

17:48 2Kp10 A study on the removal of cesium by the cesium-accumulating bacterium *Rhodococcus* sp. RD011135
·····○Kanato Noriyasu [1], Hidenori Hayasi [1,2] ([1] Grad. Sch. Eng., Maebashi Inst. Technol., [2] Fac. Eng., Maebashi Ins. Technol.)

Room L Floor 7 710 (15:50–18:00)

【Biomass, Bioresource and Energy Engineering】

15:50 2Lp01 **〈Invited Lecture〉** Chair: **Eiji Sakuradani**
Upcycling rambutan peel into high-value bioactive compounds and cellulose-based materials
·····○Prakit Sukyai, Selorm Torgbo (Dept. Biotechnol, Fact. Agro-Ind, Kasetsart Univ)

16:14 2Lp03 Application of betaine-based aqueous two-phase systems for the extraction and recovery of high-value components from biomass
·····○Asumi Nishioka, Takuma Nakai, Kazuya Koumoto (FIRST, Konan Univ.)

16:26 2Lp04 High heavy metal ion adsorption capacity of sulfate-modified yeast and selective adsorption of rare earth ions
·····○Moena Amano [1], Kokoro Yamada [1], Yuta Enomoto [2], Yoshihiro Ojima [1], Hideki Azuma [1], Koichi Igarashi [1], Masayuki Azuma [1]
([1] Grad. Sch. Eng., Osaka Metro. Univ., [2] Fac. Eng., Osaka Metro. Univ.)

16:38 2Lp05 Creation of a novel all-solid-state DEFC and search for a catalytic electrode suitable for immobilization of enzymes
·····○Shinnosuke Sakane, Yusuke Takahashi, Hitoki Semizo, Yasumitsu Matsuo (Grad. Sch. Sci. Eng., Setsunan Univ.)

16:50 Break

17:00 2Lp06 Hydration structure and proton conduction in amino acid peptides with different side chains
……◯Naoko Washio, Hitoki Semizo, Yamato Ohgishi, Yasumitsu Matsuo
(Grad. Sch. Sci. Eng., Setsunan Univ.)

17:12 2Lp07 Dimensionality of proton conduction in dipeptide crystals and creation of high proton conductors using genetic recombination
……◯Hitoki Semizo, Naoko Washio, Yamato Ohgishi, Hitoshi Nishimura, Yasumitsu Matsuo
(Grad. Sch. Sci. Eng., Setsunan Univ.)

17:24 2Lp08 Potential of *Cellulomonas fimi* as an electricity-generating microorganism
……◯Naoto Hirose, Iori Kazama, Yuji Aso, Hitomi Ohara
(Grad. Sch. Sci. Technol., Kyoto Inst. Technol.)

17:36 2Lp09 Analysis of a novel hydrogen production pathway of an aerobic hydrogen-producing white-rot fungus *Trametes versicolor* K-41
……◯Sakurako Kojima [1], Akiko Ono [2,3], Hirokazu Kawagishi [3,4], Hirofumi Hirai [2,3,5]
([1] Grad. Sch. Integr. Sci. Technol., Shizuoka Univ., [2] Fac. Glb. interdiscip. Sci. Innov., Shizuoka Univ.,
[3] Res. Inst. for Mushroom Sci., Shizuoka Univ., [4] Fac. Agric., Shizuoka Univ.,
[5] Res. Inst. Green Sci. Technol., Shizuoka Univ.)

17:48 2Lp10 Isolation of thermophilic hydrogen-producing bacteria from hot springs in Toyama Prefecture
……◯Tamotsu Kanai [1,2], Yuzuki Uonomi [1], Kanji Furukawa [1], Daichi Tanaka [1]
([1] Fac. Eng., Toyama Pref. Univ., [2] Biotechnol. Res. Center, Toyama Pref. Univ.)

Room M Floor 7 711 (15:50–18:00)

【Food Science, Food Technology】

15:50 2Mp01 Production of Umami Compound gamma-EVG via Degradative Fermentation of Spent Coffee Grounds
……◯Satoshi Tokunaga [1], Hirofumi Shimada [1], Kenji Matsuda [1], Naotaka Kameya [2],
Satsuki Yamaryo [2], Toshikazu Sugimoto [1]
([1] FERMENSTATION Co., Ltd., [2] Human Metabolome Technologies, Inc.)

16:02 2Mp02 Withdrawn

16:14 2Mp03 Analysis of functional ingredients of fermented products of defatted *Moringa* seeds by *Aspergillus oryzae* (defatted *Moringa* koji)
……◯Hiroshi Oyama [1], Arisa Sekiguchi [1], Hideyuki Aoki [2], Tomoko Mori [2], Yoshie Ueno [3]
([1] Grad. Sch. Sci. Eng., Setsunan Univ., [2] Ikeda Food Res., [3] Kyoto Women's Univ.)

16:26 2Mp04 Extraction and Characterization of Pectic Oligosaccharide-Containing Fractions from Orange Pomace via Thermal Oxidative Degradation
……◯Yuree Wandee, Wascharin Udchumpisai (Sch. Bioresour. Technol., KMUTT)

16:38 2Mp05 Functional characterization of eggshell membrane hydrolysate produced by lactic acid bacteria
……◯Shogo Kinoshita, Yukihiro Kimura, Shinji Takenaka (Kobe Univ. Grad. Sch. of Agric.)

16:50 Break

17:00 2Mp06 **〈Invited Lecture〉** Chair: **Mitsuo Umetsu**

Bacteriophages, an alternative for controlling Salmonella in swine production
……◯Rujikan Nasanit [1], Napakhwan Imklin [1], Pattaraporn Sriprasong [1], Narut Thanantong [2]
([1] Dept. Biotechnol., Fac. Eng. Ind. Tech., Silpakorn Univ.,
[2] Dept. Farm Res. Prod. Med., Fac. Vet. Med., Kasetsart Univ.)

17:24 2Mp08 〈**Topics**〉
Real-time detection of food contaminant bacteria by single cell innate fluorescent signature analysis
····· ○Hajime Torisawa [1], Yiyun Zhang [1], Hitomi Kuroyanagi [2], Hirofumi Sakoda [2], Naoko Kamisaki [2], Chigusa Okano [3], Yutaka Yawata [3,4]
([1] Grad. Sch. Life Environ. Sci., Univ. Tsukuba, [2] Prima Meat Packers, LTD., [3] Inst. Life Environ. Sci., Univ. Tsukuba, [4] MiCS., Inst. Adv. Res., Univ. Tsukuba)

17:36 2Mp09 Influence of Negative Resistance Behavior in Oxygen-Based Plasma-Based Ion Implantation on Microbial Inactivation
····· ○Kohaku Osugi, Takeshi Tanaka, Mao Ushida, Yohta Tsukamoto, Koji Kakugawa (Grad. Sch. Sci., Hiroshima Inst. Technol.)

17:48 2Mp10 Development of sterilizable hollow fiber membrane module for food and bioprocess applications
····· ○Ryusuke Kishida, Kentaro Kobayashi, Satoko Hatahira, Yoichiro Kozaki, Shun Shimura, Shinichi Minegishi (Toray Industries, Inc.)

Room N Floor 8 805 (15:50–18:00)

【Brewing, Brewing Technology】

15:50 2Np01 Examination of high-pressure processing conditions for efficient component extraction
·····Mizuho Kobayashi, Wakana Motoda, Kakeru Takano, ○Kazuki Nomura (Genome Biotechnol. Lab., Kanazawa Inst. Technol.)

16:02 2Np02 Analyses of the soybean structural changes during the soy sauce brewing by the synchrotron X-ray CT at SPring-8
····· ○Yusaku Nakagaki [1], Norihiro Magishi [1], Yoshimasa Urushihara [2], Yasushi Kagoshima [3], Yuki Takayama [4], Masafumi Hidaka [5]
([1] Higashimaru Shoyu Co., Ltd, [2] JASRI, [3] Grad. Sch. Sci., Univ. Hyogo., [4] SRIS., Tohoku Univ., [5] Grad. Sch. Agric. Sci., Tohoku Univ.)

16:14 2Np03 Antihypertensive effects and angiotensin-converting enzyme inhibitors of of awamori lees
····· Shusaku Yoshida [1], Ryuko Ohnishi [1], Choryo Uema [2], Yuichi Nodake [3], Keiko Uechi [1], ○Toki Taira [1]
([1] Fac. Agric., Univ. Ryukyus, [2] Ishikawa Distillery Inc., [3] Fac. Chem. Biochem., Kanagawa Univ.)

16:26 2Np04 Statistical analysis of producing conditions that may affect the concentration of 5 − aminolevulinic acid in mead
·····○Kei Sasaki (Coll. Agric., Tamagawa Univ.)

16:38 2Np05 Erythritol in soybean koji and miso, and gene expression involved in its production in *Aspergillus oryzae*
····· ○Rei Hirayama [1], Momoka Hukuda [1], Mayumi Maeda [2], Kenji Maehashi [1,2], Jun Yoshikawa [1,2]
([1] Grad. Sch. Appl. Biosci., Tokyo Univ. Agric., [2] Fac. Appl. Biosci., Tokyo Univ. Agric.)

16:50 Break

17:00 2Np06 Study on the mechanisms of sorbic acid action on yeast cells
····· Koharu Sekimoto, Shoei Tanaka, Yuki Namekata, Haruka Yoshiyama, ○Shingo Izawa (Sch. Sci. Technol., Kyoto Inst. Technol.)

17:12 2Np07 Ethanol-induced translation repression is mitigated by temperature reduction
·····○Yutaka Funahashi, Shingo Izawa (Grad. Sch. Sci. Technol., Kyoto Inst. Technol.)

17:24 2Np08 Comprehensive transcriptional analysis of *EHL* gene mutant of sake yeast strain
····· ○Kazuko Tomonaga [1], Keita Aoki [2], Sk Rahul [3], Kota Watanabe [1], Toshimori Kadokura [1], Shunichi Nakayama [1]
([1] Fac. Appl. Biosci., Tokyo Univ. Agric., [2] Res. Inst., Tokyo Univ. Agric., [3] Genome Res. Center, Tokyo Univ. Agric.)

17:36 2Np09 **〈Topics〉**
Impact of Using Low-Glutelin Rice 'Shunyo' on Yeast Gene Expression During Sake Brewing
····· ○Taisei Yuyama [1,2], Naoki Akasaka [1], Daisuke Watanabe [1] ([1] Div. Biol. Sci., NAIST, [2] Iida Co., Ltd.)

17:48 2Np10 Simultaneous determination of urea and ethyl carbamate in sake brewed with ornithine overproducing sake yeast
····· ○Masataka Ohashi [1], Hiroshi Takagi [2] ([1] Nara Pref. Inst. Ind. Dev., [2] Institute for Research Initiatives. NAIST)

Room O Floor 8 806 (15:50–18:00)

【Biosensing and Analytical Chemistry; Sensors and Monitoring Devices】

15:50 2Op01 Development of a simultaneous analytical method for sugars, organic acids, and ethanol in the brewing of Japanese sake for evaluating yeast fermentation characteristics
····· ○Atsushi Hashigami [1], Tohru Asano [2], Taichi Yoshinaka [2], Kentarou Hirano [2], Hideyuki Yamashita [3], Yoshiro Hoki [4], Tomotaka Doi [4], Daisuke Kozaki [1]
([1] Grad. Sch. Integr. Arts Sci., Kochi Univ., [2] Tsukasabotan Sake Brewing Co., Ltd., [3] Higuchi Matsunosuke Shoten Co., Ltd., [4] Kochi Prefectural Industrial Technology Center)

16:02 2Op02 Nucleic acid probes and cell chip technology based cell diagnostic system
····· ○Hajime Shigeto, Shohei Yamamura (Health Res. Inst., AIST)

16:14 2Op03 Construction of a polymer sensing/identification system using peptide arrays
····· ○Yuki Tano, Toshiki Sawada, Shogo Saito, Masayoshi Tanaka, Mina Okochi, Takeshi Serizawa
(Sch. Mater. Chem. Technol., Science Tokyo)

16:26 2Op04 Synthesis of epitope-imprinted polymer-coated electrodes for electrochemical determination of isocitrate dehydrogenase in malignant glioma
····· ○Ya-Ju Chang [1], Mei-Hwa Lee [2], Hung-Yin Lin [1] ([1] Natl Univ. Kaohsiung, [2] I-Shou Univ.)

16:38 2Op05 A dual-biomarker electrochemiluminescence platform for monitoring microRNA-222 and parathyroid hormone in thyroid-related disorders
····· ○Chi-Hsien Liu [1], Muhammad Faizan [1], Punklahan Nutthawadee [1,2], Paiboon Sreearunothai [2]
([1] Dept. Chem. Mat. Eng., Chang Gung Univ., Taiwan, [2] SIIT, Thammasat Univ., Thailand)

16:50 Break

17:00 2Op06 **〈Topics〉**
Olfactory receptor-based approach to suppress perception of real odors
····· ○Yosuke Fukutani [1], Reina Kanemaki [1,2], Kahori Kishigami [2], Mei Saito [1]
([1] Grad. Sch. Eng., Tokyo Univ. Agric. Technol., [2] R & D Division, S.T. Corporation)

17:12 2Op07 Development of general viable bacterial cells counting method using the electrochemical properties of MTT
····· ○Hikaru Ikeda [1], Hayato Fujimura [1], Takumi Nakamura [1], Kanta Sako [1], Masashi Fujita [2], Hiroshi Shiigi [1]
([1] Grad. Sch. Eng., Osaka Metro. Univ., [2] E. C. Frontier Co., LTD.)

17:24 2Op08 Electrochemical sensing of TGF-beta1 using epitope-imprinted electrodes
····· ○Sin-Cheng Su [1], Mei-Hwa Lee [2], Hung-Yin Lin [1] ([1] Natl. Univ. Kaohsiung, [2] I-Shou Univ.)

17:36 2Op09 Single-Bacterium Analysis for Membrane Vesicle Production Using NanoFlow iMM

····· ○Tsumugi Sakakibara [1], Fumiaki Yokoyama [2], Yuya Murakami [1], Yosuke Tashiro [1]
([1] Grad. Sch. Integr. Sci. Technol., Shizuoka Univ., [2] Grad. Sch. Sci., Univ. Tokyo)

17:48 2Op10 **〈Topics〉**
Possibility of ordered antigen recognition mediated by functionally equivalent Fab arms in a monoclonal antibody found by electron density topography

····· ○Takashi Matsumoto [1], Akimi Sato [2], Takuma Kozono [2], Ryo Kitamura [1], Takashi Sato [1], Tomokazu Hasegawa [1], Hiroyuki Kanda [1], Takashi Tonozuka [2], Atsushi Nishikawa [2]
([1] Rigaku Corp., [2] Tokyo University of Agriculture and Technology)

Room P Floor 9 905 (15:50–18:00)

【Biochemical Engineering】

15:50 2Pp01 Studies on infection of entomopathogenic fungi through the cuticle of silkworm larvae

····· ○Sota Inagaki [1], Chisato Shibata [2], Keito Takayanagi [2], Hiroki Uehara [2], Konomi Nishimura [1], Enoch Y Park [2], Tatsuya Kato [1,2,3]
([1] Grad. Sch. Integr. Sci. Technol., Shizuoka Univ., [2] Fac. Agric., Shizuoka Univ., [3] Res. Inst. Green Sci. Technol., Shizuoka Univ.)

16:02 2Pp02 **〈Topics〉**
Lineage and functional analysis of isoflavone-responsive bacteria in the soybean rhizosphere

····· ○Kodai Sakuma [1], Masako Kifushi [1], Yohei Nishikawa [2,3], Masahito Hosokawa [1,2,4], Toyoaki Anai [5], Akifumi Sugiyama [6], Haruko Takeyama [1,2,4]
([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Org. Nano Life Innov., Waseda Univ., [3] Biomanufacturing Proc. Res. Center, AIST., [4] Inst. Adv. Res. Biosyst. Dynam., Waseda Res. Inst. Sci. Eng., Waseda Univ., [5] Grad. Sch. Agric., Kyushu Univ., [6] RISH, Kyoto Univ.)

16:14 2Pp03 Development of submerged culture condition for high ergothioneine production using *Pleurotus citrinopileatus*

····· ○Naruyuki Maruoka, Yusuke Imoto, Akihiro Nakamura, Hideki Hokazono, Hideharu Takashita
(Sanwa Shurui Co., Ltd)

16:26 2Pp04 Microbial Strategies for Sustainable Agriculture: Probiotic Applications of Endophytic Microorganisms

····· ○Chiharu Akimoto-Tomiyama, Riku Watanabe, Yoshiyuki Sagehashi, Yusuke Kouzai (NARO)

16:38 2Pp05 Preparation of gold nanoparticles using lactic acid bacteria and their potential application for removal of AGEs

····· Eri Yoshikawa [1], Sharad Bhatnagar [2], ○Yumi Ueda [3], Manami Morioka [3], Hideki Aoyagi [1,2,3]
([1] Grad. Sch. Deg. P. Agro-Bioresour. Sci. Technol., Univ. Tsukuba, [2] Inst. Life Environ. Sci., Univ. Tsukuba, [3] Coll. Agro-Bio. Resour. Sci., Univ. Tsukuba)

16:50 Break

17:00 2Pp06 Analysis of the characteristics of endotoxins in simulated intestinal fluid and its application

····· Momoka Imamura [1], ○Nozomi Aiba [2], Hideki Aoyagi [1,2,3]
([1] Grad. Sch. Deg. P. Agro-Bioresour. Sci. Technol., Univ. Tsukuba, [2] Coll. Agro-Bio. Resour. Sci., Univ. Tsukuba, [3] Inst. Life Environ. Sci., Univ. Tsukuba)

17:12 2Pp07 Analysis of the characteristics of *Horonis diphone* feces and their effect on the growth of indigenous skin bacteria (part 2)

Manami Saito [1], ○Kyoka Kobayashi [2], Yumi Ueda [2], Hideki Aoyagi [1,2,3]
([1] Grad. Sch. Deg. P. Agro-Bioresour. Sci. Technol., Univ. Tsukuba, [2] Coll. Agro-Bio. Resour. Sci., Univ. Tsukuba, [3] Inst. Life Environ. Sci., Univ. Tsukuba)

17:24 2Pp08 Enrichment of soy protein-derived peptides that decrease pancreatic lipase activity using heat-treated porous silica gel

○Yusuke Ishii, Yuta Matsunaga, Hirokazu Akiyama, Kazunori Shimizu, Hiroyuki Honda
(Grad. Sch. Eng., Nagoya Univ.)

17:36 2Pp09 Development of a hybrid biosafety strategy based on toxin/anti-toxin system regulation and phosphite dependency

○Seigo Masaki, Takenori Ishida, Takeshi Ikeda, Hisakage Funabashi, Akio Kuroda, Ryuichi Hirota
(Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

17:48 2Pp10 Liquid Drawing Technology for Three-dimensional microbial cultivation

○Hidetaka Taniguchi [1], Mai Miyauchi [1], Ippei Inoue [2], Masayoshi Tanaka [1]
([1] Sch. Mater. Chem. Technol., Science Tokyo, [2] Suntory Global Innovation Center Ltd.)

Room Q Floor 9 907 (15:50–18:00)

【Bioprocess Engineering; Cell Culture Engineering】

15:50 2Qp01 Characterization of powder properties of bacterial culture fluid via spray freeze granulation drying

○Shinya Kawaguchi [1], Ryoei Yoshino [1], Nana Kawamura [1], Masashi Ueki [2], Masayuki Onodera [3]
([1] PRECI CO., LTD., [2] glycometabolic biochemistry lab, PRI, RIKEN, [3] Niigata Inst. Technol.)

16:02 2Qp02 Development of the fermentation medium optimization technique with deep learning and multi-objective optimization

○Kazuki Watanabe, Tomoko Kagenishi, Masaaki Konishi (Kitami Inst. Technol.)

16:14 2Qp03 Investigation of the Effects of Medium Reagent Impurities on Escherichia coli Phenotypes Using ICP-MS

○Yuki Soma [1,2], Kohsuke Naka [3], Masatomo Takahashi [1], Yoshihiro Izumi [1], Takeshi Bamba [1]
([1] Med. Inst. Bioreg., Kyushu Univ., [2] BPRI, AIST, [3] Shimadzu Corp.)

16:26 2Qp04 Effects of medium components on protein production in hyphae-dispersed strain of *Aspergillus oryzae*

○Yuki Niikawa [1], Makoto Fujisawa [1], Shunya Susukida [2], Soma Araki [2], Shengling Xiao [2], Hironobu Amimoto [3], Yasuhiro Baba [1], Yoshikazu Kato [4], Takeaki Taniguchi [5], Keietsu Abe [2], Eiji Nagamori [3], Hirofumi Horiguchi [1]
([1] Godo Shusei Co., Ltd., [2] Grad. Sch. Agric. Sci., Tohoku Univ., [3] Grad. Sch. Eng., Osaka Inst. Technol., [4] SATAKE MultiMix Corp., [5] BPRI, AIST)

16:38 2Qp05 Optimization of culture conditions for a growth of mycelial dispersal strain of *Aspergillus oryzae* using design of experiments

○Kodai Hirata [1], Hironobu Amimoto [1], Yasuhiro Baba [2], Hideki Oda [1], Shunya Susukida [3], Hirofumi Horiguchi [2], Keietsu Abe [3], Eiji Nagamori [1]
([1] Grad. Sch. Eng., Osaka Inst. Technol., [2] Godo Shusei Co., Ltd., [3] Grad. Sch. Agric. Sci., Tohoku Univ.)

16:50 Break

17:00 2Qp06 Exploration of fed-batch culture conditions for the oil-producing yeast *Lipomyces starkeyi* using the design of experiments

……◯Minato Tahara [1], Hiroto Tanaka [1], Satoshi Ara [2], Rikako Sato [3], Hiroaki Takaku [3], Eiji Nagamori [1]

([1] Grad. Sch. Eng., Osaka Inst. Technol., [2] Fuji Oil Co., Ltd., [3] Fac. Appl. Life Sci., Niigata Univ. Pharm. Appl. Life Sci.)

17:12 2Qp07 Quality control of flask culture by real-time measurement of dissolved oxygen (DO) concentration

…… ◯Hironobu Amimoto [1], Noriaki Kogushi [2], Yoichi Ishikawa [2], Eiji Nagamori [1]

([1] Grad. Sch. Eng., Osaka Inst. Technol., [2] ABLE Corporation)

17:24 2Qp08 Analysis of rocking motion in L-shaped culture vessels as a model in submerged shaking culture

…… ◯Masato Takahashi [1], Akiko Kaneko [2], Hideki Aoyagi [1]

([1] Inst. Life Environ. Sci., Univ. Tsukuba, [2] Inst. Syst. Info. Eng., Univ. Tsukuba)

17:36 2Qp09 Effect of scale-up cultivation of psychrophilic bacterium *Shewanella livingstonensis* on enzyme expression and growth

…… ◯Taku Matsumoto, Naofumi Yamada, Akiko Hida, Junichi Kato, Takahisa Tajima

(Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

17:48 2Qp10 Characterization of cultures with *Ralstonia eutropha* using MAXBLEND® reactor

……◯Yoshiro Ikeya [1], Koichiro Onishi [1], Aya Tanaka [1], Prihardi Kahar [2], Chiaki Ogino [2], Shouji Morinaga [1]

([1] Sumitomo Heavy Ind. Process Equipment Co.,Ltd., [2] Grad. Sch. Eng, Kobe Univ.)

Luncheon Seminars（12:00–13:00）

Room G Floor 6 603

2L-G Tosoh Corporation

Room K Floor 7 704

2L-K Bacchus Bio Innovation Co., Ltd.

Room N Floor 8 805

2L-N bitBiome, Inc.

Room P Floor 9 905

2L-P SANWA SHURUI Co., Ltd.

Corporate Research Seminars for Students（16:30–18:30）

Floor 4 Cafe

SBJ-JAIMA Collaborative Pitch and Networking（17:00–20:30）

Floor 4 Theater Room, Floor 2 Leaf Garden

General meeting and social gathering of Young Researchers Committee for Biotechnology（18:20–20:30）

Floor 2 Leaf Garden

September 12, 2025

Titles in bold indicate presentations by the winners of this year's SBJ Excellent Student Award (Hishou Award).

Time	No.	Title	Author (Affiliation) ◯=Indicates the presenter

Symposium

Room A Floor 5 501 (9:30–11:30)

Biotechnology for the Future: Social Acceptance, Implementation, and Co-Creation

9:30 ····· Ryuichi Hirota

Chair: **Daisuke Kiga**

9:32 3S-Aa01 Barriers to social implementation of bio-industries: A case study of the microalgae industry
····· ◯Junpei Nomura (Inst. Microalgal Technol.)

9:50 3S-Aa02 Social Implementation of Genome Editing and Bio-DX
····· ◯Keisuke Okuhara [1,2,3] ([1] PtBio Inc., [2] Genome Editing Innovation center, Hiroshima Univ., [3] Bio-DX org.)

10:08 3S-Aa03 Advanced utilization of genetically modified microorganisms and biosafety
····· ◯Ryuichi Hirota (Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

Chair: **Ryuichi Hirota**

10:26 3S-Aa04 Education on social implementation and safety in the international student competition for synthetic biology
····· ◯Daisuke Kiga (Sch. Adv. Sci. Eng., Waseda Univ.)

10:44 3S-Aa05 Technology Governance for Thriving Bioeconomy - ELSI and RRI
····· ◯Makiko Matsuo (the University of Tokyo)

11:02 3S-Aa06 Citizen science: Shaping research together with the public
····· ◯Satoshi Ohkubo (Grad. Sch. Life Sci., Tohoku Univ.)

Chair: **Ryuichi Hirota, Daisuke Kiga**

11:20 Panel Discussion
····· All Speakers

Room B Floor 5 503 (9:30–11:30)

Integrating Biotechnologies for Efficient and Comprehensive Research in Biological and Pharmaceutical Sciences

9:30 Opening Remarks
····· Tomoya Maeda

Chair: **Tomoya Maeda**

9:32 3S-Ba01 Profiling the microbiota of wild animals through high-throughput single-cell analysis
····· ◯Jianshi Jin (IOZ, CAS, China)

9:52 3S-Ba02 The structure and function of eukaryotic genomes at the single-cell level
····· ◯Dong Xing (BIOPIC)

10:12 3S-Ba03 Attomolar-sensitive biochemical analyses via 3D single-molecule fluorescence imaging
……◯Sooyeon Kim (iCeMS, Kyoto Univ.)

10:32 Break

Chair: **Tomoya Maeda**

10:35 3S-Ba04 Pluripotent stem cell differentiation guided by live-cell image-based machine learning
……◯Yang Zhao [1], Xiaochun Yang [2] ([1] Inst. of Adv. Clin. Med., Peking Univ., China, [2] Inst. of Mol. Med., Peking Univ., China)

10:55 3S-Ba05 A GPCR - G protein -beta-arrestin megacomplex induced by an allosteric modulator
……Guodong He [1], Qinxin Sun [1], Xinyu Xu [1], Fang Kong [2], Shuhao Zhang [1], Kexin Ye [3], Xiaoou Sun [1], Xin Chen [3], Chuangye Yan [2], ◯Xiangyu Liu [1] ([1] Sch. Pharm. Sci., Tsinghua University, [2] Sch. Life. Sci., Tsinghua University, [3] Sch. Pharm. Changzhou University)

11:15 3S-Ba06 High-Throughput Laboratory Evolution to Combat Bacterial Drug Resistance
……◯Tomoya Maeda [1,2] ([1] Grad. Sch. Agric., Hokkaido Univ., [2] BDR, RIKEN)

11:28 Closing Remarks
……Tomoya Maeda

Room C Floor 5 505 (9:30–11:30)

Microbial Interactions: Survival Strategies of Actinomycetes as Soil Microbes in Their Ecosystem

9:30 Opening Remarks
…… Hiroyasu Onaka

Chair: **Hiroyasu Onaka**

9:32 3S-Ca01 Microbial interactions mediated by virus-like nano-machines
…… ◯Toshiki Nagakubo (Univ. Tsukuba)

9:54 3S-Ca02 Bacterial communication through membrane vesicles and secondary metabolites
……◯Aya Yoshimura (Grad. Sch. Pharm. Sci., Hokkaido Univ.)

10:16 3S-Ca03 Do actinomycetes differentiate in response to organic substances in soil? A survival strategy through branching responses to redox-active compounds
……◯Shumpei Asamizu (EGBRC, Kobe Univ.,)

10:38 Break

Chair: **Hiroyasu Onaka**

10:43 3S-Ca04 Host-pathogen crosstalk as a chemical trigger: Immune stress-induced biosynthesis of natural products
…… ◯Midori Arai (Keio Univ.)

11:05 3S-Ca05 Mechanism of activation of secondary metabolism in actinomycetes by microbial communication
…… ◯Hiroyasu Onaka (Faculty of Science, Gakushuin Univ.)

11:27 Closing Remarks
…… Hiroyasu Onaka

Room E Floor 6 601 (9:30–11:30)

Cutting-Edge Technology of Glycoengineering and Its Industrial Development

9:30 Opening Remarks
Ryo Misaki
Chair: **Ryo Misaki**

9:35 3S-Ea01 New application of carbohydrate analysis using mass spectrometry
◯Kenichi Toyoda, Hirotaka Kuroda, Mayu Okajima, Takashi Suzuki, Toru Ezure
(Shimadzu Corp, Analytical & Measuring Instruments Division)
Chair: **Daisuke Koma**

10:00 3S-Ea02 Microbial production of flavonoid glycosides from medicinal plants
◯Takao Ohashi (Fac. Sci. Eng., Setsunan Univ.)

10:20 3S-Ea03 Research and Development of Glycosylation from a Business Perspective
◯Masashi Shimizu (Micro Bio Factory Co., Ltd.)
Chair: **Takao Ohashi**

10:45 3S-Ea04 Modulation of glycoside properties through *in vitro* glycoengineering and its application in drug development
◯Ryo Misaki (ICBiotech, Univ. Osaka)

11:05 3S-Ea05 Evaluation of the association between human milk oligosaccharides in breast milk and infant neurodevelopmental outcomes in a Japanese cohort
◯Keigo Sato (Meiji Co., Ltd.)

Room F Floor 6 602 (9:30–11:30)

Advancing Nanotechnology by Learning from Phages

9:30 Opening Remarks
Masanori Toyofuku
Chair: **Masanori Toyofuku**

9:35 3S-Fa01 Rebooting and Harnessing Designer Phages
◯Hiroki Ando (Arrowsmith Inc.)

10:00 3S-Fa02 Phage X Droplets: ~Streamlining bacteriophage screening~
◯Miu Hoshino[1,2], Yuri Ota[2,4], Tetsushi Suyama[2], Satoshi Tsuneda[3], Naohiro Noda[1,2]
([1] Grad. Sch. Fro. Sci., Tokyo Univ., [2] Biomed. Res. Inst., AIST,
[3] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [4] On-chip Biotechnologies)

10:25 Break
Chair: **Kosuke Honda**

10:30 3S-Fa03 Biocontrol mechanisms of *Allorhizobium vitis* VAR03-1 against grapevine crown gall disease: tailocin production and root colonization dynamics
◯Yoshiteru Noutoshi (Fac. Agric., Okayama Univ.)

10:55 3S-Fa04 Functional versatility of phage tail-like protein translocation systems in bacteria
◯Toshiki Nagakubo (Univ. Tsukuba)

11:20 Closing Remarks
Kosuke Honda

Room G Floor 6 603 (9:30–11:30)

Biotechnological Approach to the Symbiotic Complex

9:30 Opening Remarks
…… Atsushi Okazawa
Chair: **Atsushi Okazawa**

9:33 3S-Ga01 Understanding bacterial chemotaxis in plant-microbe interactions and its application
…… ○Akiko Hida (Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)
Chair: **Yu Imai**

9:56 3S-Ga02 Understanding the ecology and function of *Drosophila*-associated yeasts and bacteria
…… ○Yukako Hattori [1,2] ([1] Hakubi Center, Kyoto Univ., [2] Grad. Sch. Biostud., Kyoto Univ.)

10:19 3S-Ga03 Exploration and application of marine natural product biosynthetic enzymes
…… ○Toshiyuki Wakimoto (Grad. Sch. Pharm. Sci., Hokkaido Univ.)
Chair: **Hideki Aoyagi**

10:42 3S-Ga04 Development of a microbial knockout technique for understanding and cotrolling the function of the microbiotme
…… ○Kenji Okano (Fac. Chem. Mater. Bioeng., Kansai Univ.)
Chair: **Hideki Aoyagi, Atsushi Okazawa, Yu Imai**

11:05 Panel Discussion
…… All Speakers

Room K Floor 7 704 (9:30–11:30)

Time to Learn About Basics and Up-to-Date Technologies of Genome Editing —-Engineering Various Organisms and Applying Them in Industry—

9:30 Opening Remarks
…… Takashi Nakanishi
Chair: **Takashi Nakanishi**

9:32 3S-Ka01 General remarks on genome editing and its trends in the technology development and industrial implementation
…… ○Tetsushi Sakuma (Grad. Sch. Agric., Kyoto Univ.)
Chair: **Kei Kanie**

10:05 3S-Ka02 Engineering enzyme-producing microbes: Harnessing genome editing and lab automation for Novonesis Biosolution
…… ○Takashi Nakanishi (Novozymes Japan Co., Ltd.)

10:30 3S-Ka03 Applied research on allergen-reduced eggs using genome editing technology －Towards realizing a world free from egg allergy constraints－
…… ○Daisuke Kodama (Kewpie Corp.)
Chair: **Tetsushi Sakuma**

10:59 3S-Ka04 Frontiers in Microalgal Cell Engineering Based on Gene Expression Control and Targeted Genome Manipulation
…… ○Yoshinori Kawabe (Dept. Chem. Eng., Fac. Eng., Kyushu Univ.)

11:28 Closing Remarks
…… Tetsushi Sakuma

Room N Floor 8 805 (9:30–11:30)

Novel Bioconversion Systems Leading to Circular Economy

9:30 Opening Remarks
……Yasuyoshi Sakai , Takashi Narihiro
Chair: **Takashi Narihiro**

9:33 3S-Na01 H_2-driven reduction of CO_2 to formate using bacterial plasma membranes
…… ○Ki-Seok Yoon [1,2] ([1] I2CNER, Kyushu Univ., [2] Grad. Sch. Eng., Kyushu Univ.)

9:56 3S-Na02 Current status, issues, and prospects for bioproduction from methane
…… ○Hiroya Yurimoto [1], Yasuyoshi Sakai [2] ([1] Grad. Sch. Agric., Kyoto Univ., [2] GSAIS, Kyoto Univ.)

10:19 3S-Na03 Biomanufacturing using chemically synthesized non-natural sugars as substrates
…… ○Hiroaki Nishijima, Shuji Nakanishi (Grad. Sch. Eng. Sci., Univ. Osaka)
Chair: **Yutaka Tamaru**

10:42 3S-Na04 Utilization of marine purple photosynthetic bacterium as a sustainable nitrogen fertilizer for plant production
…… ○Keiji Numata (Grad. Sch. Eng., Kyoto Univ.)

11:05 3S-Na05 Study on CO_2-concentrating mechanism of marine microalgae
…… ○Yoshihisa Hirakawa (Univ. Tsukuba)

11:28 Closing Remarks
…… Yutaka Tamaru

Room P Floor 9 905 (9:30–11:30)

Contribution of Bioengineering to Food Issues in Japan

Opening Remarks
……Satoshi Yoshida
Chair: **Satoshi Yoshida**

9:30 3S-Pa01 From food security to nutrition security: the historical background and global vision
……○Asuka Kuwabara (JST CRDS)
Chair: **Takaomi Yasuhara**

10:00 3S-Pa02 Examples of overseas startups tackling food challenges and the organisations, governments and academic institutions supporting them
…… ○Yuji Sakamoto (Japan Bioindustry Association)
Chair: **Shintaro Iwatani**

10:30 3S-Pa03 Sustainable Agriculture: A Vertical Farming Startup's Approach
…… ○Masaharu Suzuki (Oishii)
Chair: **Satoshi Yoshida**

11:00 3S-Pa04 Food security and salmon aquaculture technology development in the japanese fishery industry
……○Akira Takeshita (Nagasaki University)

Closing Remarks
……Satoshi Yoshida

Oral Presentations

Room A Floor 5 501 (13:30–16:50)

【Enzymology, Enzyme】

13:30 3Ap01 *In silico* Enzyme Screening of a Ancestral-Type Sortase E
……◯Ryoma Koshiba, Yui Kawamura, Taichi Chisuga, Shogo Nakano
(Grad. Sch. Integr. Pharm. Nutr. Sci., Univ. Shizuoka)

13:42 3Ap02 *In silico* Enzyme Function Partitioning by Integrating Enzyme Sequence Clustering and Ancestral Sequence Reconstruction
……◯Shoryu Fujita, Taiti Tisuga, Shogo Nakano (Grad. Sch. Integr. Pharm. Nutr. Sci., Univ. Shizuoka)

13:54 3Ap03 *In silico* screening of novel polyamide4-degrading enzyme and heterologous expression of candidate gene
……◯Yui Narita [1], Yusuke Saito [2], Miwa Yamada [1] ([1] Dept. Biolog. Chem. Food sci. Iwate Univ., [2] United Grad. Sch. Agric. Sci., Iwate Univ.)

14:06 3Ap04 SpyRing-mediated cyclization of TEV protease, guided by AlphaFold, improves thermostability
……◯Tadashi Nakai [1,2,3], Yota Nakai [4], Naoki Takami [2], Emi Nakai [1,2], Toshihide Okajima [5]
([1] Fac. Environ. Stud., Hiroshima Inst. Technol., [2] Fac. Life Sci., Hiroshima Inst. Technol., [3] Grad. Sch. Sci. Eng., Hiroshima Inst. Technol., [4] Hiroshima Univ. Senior High Sch., [5] SANKEN, Univ. Osaka)

14:18 3Ap05 Design of a pyridoxal 5'-phosphate-dependent oxidase variant library based on structural analysis, docking and machine learning
……◯Noriyuki Shioura, Christopher J. Vavricka (Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

14:30 Break

14:40 3Ap06 Prediction of enzyme functions and rational design of enzyme variants using protein 3D structure-based graphs
……◯Satoshi Yuzawa, Christopher.J Vavricka (Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

14:52 3Ap07 Docking analysis and characterization of hippurate highly active amidohydrolase homologous proteins
……◯Yoshiaki Nishiya [1,2], Takuya Okusako [2], Shun Kakiba [1], Kazuki Yagura [3], Kenta Tatsumi [3]
([1] Sci. Eng., Setsunan Univ., [2] Grad. Sch. Sci. Eng., Setsunan Univ., [3] Nipro Corp.)

15:04 3Ap08 Production and Purification of Enzymes from Fungal Isolates in Takakura Compost
……◯Michael Fildy, Athaya Nawatra, Darrell Deniel, Gabriel Victorya, Madeline Tandibrata, Adinda Kadar, Riahna Kembaren
(Department of Biotechnology, School of Life-Sciences, Indonesia International Institute for Life-Sciences.)

15:16 3Ap09 Towards the development of the structure-based ENzyme Selection and Optimization (ENSO) system
……◯Christopher J. Vavricka (Tokyo Univ. Agric. Technol.)

15:28 3Ap10 Chemo-enzymatic synthesis of an antidiabetic agent remogliflozin etabonate
……◯Yu Izawa [1], Takuya Yamaguchi [1,2], Yasuo Kato [1,2] ([1] Grad. Sch. Eng., Toyama Pref. Univ., [2] Biotechnol. Res. Center, Toyama Pref. Univ.)

15:40 Break

15:50 3Ap11 Development of 2,5-diketopiperazine synthesis method using L-amino acid ligase
……◯Kanako Murakami [1], Shin Suzuki [2], Kuniki Kino [1,2] ([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Inst. Sci. Eng., Waseda Univ.)

16:02 3Ap12 Development of the selective synthesis method for hetero-tripeptides using L-amino acid ligase
……◯Minami Inagaki [1], Shin Suzuki [2], Kuniki Kino [1,2] ([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Inst. Sci. Eng., Waseda Univ.)

16:14 3Ap13 Development of a selective synthetic method for heterotripeptides using the adenylation domain from NRPS
……◯Yuta Hibino [1], Risako Nagata [1], Shin Suzuki [1,2], Kuniki Kino [1,2]
([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Inst. Sci. Eng., Waseda Univ.)

16:26 3Ap14 Discovery of D-lysyl-D-lysine ligase encoded in the genome of *Nitrosomonas* strains
……◯Asuka Yamamoto, Tadao Oikawa, Kazuya Yamanaka (Grad. Sch. Sci. Eng., Kansai Univ.)

16:38 3Ap15 Discovery of a novel ADP-dependent phosphite dehydrogenase catalyzing unusual substrate-level phosphorylation
…… ◯Gamal Nasser Abdel-Hady [1,2], Takafumi Yamanaka [1], Akio Kuroda [1], Ryuichi Hirota [1]
([1] Unit of Biotechnology, Division of Biological and Life Sciences, Graduate School of Integrated Sciences for Life, Hiroshima University, Hiroshima, Japan, [2] Department of Genetics, Faculty of Agriculture, Minia University, Minia, Egypt)

Room B Floor 5 503 (13:30–16:50)

【Proteins】

13:30 3Bp01 The specific adsorption of polyesterase CutL1 to the Langmuir film of hydrophobin RolA derived from the fungus *Aspergillus oryzae* reveals the mechanism of promotion of solid polymer degradation
……◯Shuma Iio [1], Nao Takahashi [1], Yuki Terauchi [2], Takumi Tanaka [1], Akira Yoshimi [3,4], Masaya Mitsuishi [5], Hiroshi Yabu [6], Keietsu Abe [1]
([1] Grad. Sch. Agric. Sci., Tohoku Univ., [2] RCTMR, Yamaguchi Univ., [3] Grad. Sch. Agric., Kyoto Univ., [4] Grad. Sch. Glob. Environ. Stud., Kyoto Univ., [5] Grad. Sch. Eng., Tohoku Univ., [6] AIMR, Tohoku Univ.)

13:42 3Bp02 Functional and structural analysis of sHsp from *Synechococcus* sp. NKBG15041c
……◯Wakaba Naka [1], Mima Ogawa [1], Ken Morishima [2], Rintaro Inoue [2], Masaaki Sugiyama [2], Masafumi Yohda [1], Akiyo Yamada [1]
([1] Grad. Sch. Eng., Tokyo Univ. Agric. Technol., [2] Inst. Integr. Radiat. Nucl. Sci., Kyoto Univ.)

13:54 3Bp03 Functional and structural analysis of c32.05 protein derived from *Synechococcus* sp. NKBG 15041c
…… ◯Manaka Uehara [1], Akiyo Yamada [1], Masahumi Yohda [1], Masaaki Sugiyama [2], Rintaro Inoue [2], Ken Morijima [2]
([1] Grad. Sch. Agric., Tokyo Univ. Agric. Technol., [2] Kyoto University Institute for Integrated Radiation and Nuclear Science)

14:06 3Bp04 Study on red proteins produced by *Halomonas* sp. KM-1
…… ◯Taito Tsukimata [1], Akinori Ando [1], Mikio Kojima [1], Shohei Katsuya [2], Jun Tsubota [2], Jun Ogawa [1]
([1] Grad. Sch. Agric., Kyoto Univ., [2] Osaka Gas Co., Ltd.)

14:18 3Bp05 Comparison of chitin-binding ability of CPR proteins at different stages of expression during the elytra formation of Japanese rhinoceros beetle, *Trypoxylus dichotomus*
……◯Kodai Kimura [1], Mikito Moriya [1], Satoshi Murata [1], David Kisailus [2], Astushi Arakaki [1]
([1] Grad. Sch. Eng., Tokyo Univ. Agric. Technol., [2] Dept. Materials Sci Eng., Univ. California at Irvine, USA)

14:30 Break

14:40 3Bp06 Functional enhancement of magnetosome-membrane receptor complexes through co-expression of human intramembrane chaperones
……◯Kanata Yuasa, Ryoto Tomoe, Tomoko Yoshino (Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

14:52 3Bp07 Development of selective labeling and isolation methods for gut bacteria using the cell wall-specific recognition domain of the phage-derived enzyme endolysin
…… ◯Norina Hamada [1], Hideto Tochikura [2], Kazuki Takahashi [2], Chikakoo Sakanashi [2], Haruko Takeyama [1,2,3], Masahito Hosokawa [1,2,3]
([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Org. Nano Life Innov., Waseda Univ., [3] Inst. Adv. Res. Biosyst. Dyn., Waseda Res. Inst. Sci. Eng., Waseda Univ.)

15:04 3Bp08 Application of chaperonins as protein-based carriers for DDS
····· ○Hiromi Yoda [1,3], Mayaka Negi [2], Mizuho Takano [2], Ayumi Koike-Takeshita [1,2,3]
([1] Biomed. Res. Ctr., Kanagawa Inst. Technol.,
[2] Dept. Appl. Chemi. Biosci., Grad. Sch. Eng., Kanagawa Inst. Technol.,
[3] Dept. Appl. Chem. Biosci., Kanagawa Inst. Technol.)

15:16 3Bp09 Protein-functionalized Liposomal Drug Formulations Designed by Site-Specific Protein Conjugation Based on a Spontaneous Covalent Bond Formation System
····· ○Kazuki Uchida [1], Manuel Nagel [2], Sofia Sueldo [2], Yoshirou Kawaguchi [1],
Rie Wakabayashi [1], Masahiro Goto [1,3], Noriho Kamiya [1,3]
([1] Grad. Sch. Eng., Kyushu Univ., [2] Dept. Chem., Mainz Univ., [3] CFC, Kyushu Univ.)

15:28 3Bp10 Molecular design of artificial lipidated proteins for the surface modification of extracellular vesicles
·····○Nozomu Ogushi, Kazuki Uchida, Yoshirou Kawaguchi, Rie Wakabayashi,
Masahiro Goto, Noriho Kamiya
(Grad. Sch. Eng., Kyushu Univ.)

15:40 Break

15:50 3Bp11 Development of novel antifungal agents using fibrous proteins as transport carriers for chitinase
····· ○Ayasa Nagatani [1], Shogo Yoshimoto [2], Toki Taira [3], Katsutoshi Hori [2], Noriho Kamiya [1,4]
([1] Grad. Sch. Eng., Kyushu Univ., [2] Grad. Sch. Eng., Nagoya Inst. Technol., [3] Fac. Agric., Univ. Ryukyus,
[4] CFC, Kyushu Univ.)

16:02 3Bp12 **Development of a novel fusion enzyme with antibody-binding domain for the preparation of antibody-drug conjugates**
····· ○Riko Nishioka [1], Koki Murozono [1], Yoshirou Kawaguchi [1], Michio Kimura [1], Noriho Kamiya [1,2]
([1] Grad. Sch. Eng., Kyushu Univ., [2] CFC, Kyushu Univ.)

16:14 3Bp13 Design method of artificial ubiquitin ligase equipped with auto-ubiquitination capability
····· Rui Hayashida, Takashi Tadokoro, ○Kazuhide Miyamoto (Sanyo-Onoda City Univ.)

16:26 3Bp14 How are proteins introduced into yeast cells using polyethylene glycol and C18-phospholipid?
····· ○Ayaka Kakee, Yuki Terauchi, Hisashi Hoshida, Rinji Akada (Fac. Eng., Yamaguchi Univ.)

16:38 3Bp15 New His-Tags designed to eliminate the inhibitory effect on protein secretion
····· ○Miwa Ninomiya [1], Yuki Terauchi [2], Hisashi Hoshida [1,2], Rinji Akada [1,2]
([1] Grad. Sch. Sci. Technol. Innov., Yamaguchi Univ., [2] YU-RC TMR)

Room C Floor 5 505 (13:30–16:50)

【Enzymology, Enzyme】

13:30 3Cp01 Electrocatalysis of Membrane-Bound Enzymes Incapsulated in Bacterial Membrane Vesicles
·····○ThomasKouyou Savage [1], Masanori Toyofuku [2,3], Nobuhiko Nomura [2,3], Yoshihide Tokunou [2,4]
([1] Life Earth Sci., Univ. Tsukuba, [2] Grad. Sch. Life Environ. Sci., Univ. Tsukuba,
[3] MiCS Univ. Tsukuba, [4] NIMS)

13:42 3Cp02 Development of a Bacterial Luciferase for use as an aldehyde sensor
····· ○Keita Mimura [1], Yuuki Hayashi [1,2,3] ([1] Grad. Sch. Arts Sci., Univ. Tokyo,
[2] Environ. Sci. Center, Univ. Tokyo, [3] Collaborative Res. Inst. for Innovative Microbiology, Univ. Tokyo)

13:54 3Cp03 Improvement and selection of Blh by retinal production in *Escherichia coli*
····· ○Sae Amemiya [1], Kosuke Goto [2], Yoshimoto Saito [2], Yoko Hirono-Hara [1,3], Fumio Matsuda [4],
Yoshihiro Toya [4], Jun Ishii [5], Takashi Gojobori [2,6], Kiyotaka Hara [1]
([1] Grad. Sch. Integr. Pharm. Nutr. Sci., Univ. Shizuoka, [2] MaOI Inst., [3] 396bio Co., Ltd.,
[4] Grad. Sch. IST, Univ. Osaka, [5] EGBRC, Kobe Univ.,, [6] National Cheng Kung Univ.)

14:06 3Cp04 Development of a Phenylalanine Detection Platform Using Immobilized Enzymes with Cellulose-Binding Domains

····· ○Yoshino Kanou, Madoka Hanaguruma, Kouki Hisatsune, Shigekazu Yano, Tatsuro Kijima (Grad. Sch. Sci. Eng. Yamagata Univ.)

14:18 3Cp05 Application of racemization of amino acid esters using organic catalysts in a microaqueous organic media combined with dynamic kinetic resolution using Alcalase

·····○Kazuki Aoyagi [1], Hayato Suzuki [2], Sakura Kudo [1], Shigekazu Yano [1], Tatsuro Kijima [1] ([1] Grad. Sch. Sci. Eng. Yamagata Univ., [2] Fac. Eng., Yamagata Univ.)

14:30 Break

14:40 3Cp06 〈**Topics**〉

Development of alpha-amylase optimized for Japanese laundry

····· ○Takahiro Hioki, Mao Shaku, Mika Terai, Akihito Kawahara, Fumikazu Takahashi (Kao Corp.)

14:52 3Cp07 Site-directed mutagenesis in the active site of the enzyme that converts ferulic acid to vanillin

····· ○Aoi Hirono [1], Takafumi Hashimoto [1], Kuniki Kino [2], Shuichi Hirose [3], Shimpei Ushio [3], Toshiki Furuya [1] ([1] Fac. Sci. Tec., Tokyo Univ. Sci., [2] Sch. Adv. Sci. Eng., Waseda Univ., [3] NAGASE & CO., LTD.)

15:04 3Cp08 Enhancing the ratio of caproic acid to ethyl ester by rational engineering of Long chain acyl-CoA synthetase of Saccharomyces cerevisiae

·····○Ryuki Shishikura, Hiroyuki Senjyu, Takuya Asai, Takahiro Akashi (Hakutsuru Sake Brewing Co., Ltd.)

15:16 3Cp09 Functional analysis of a *S*-adenosylmethionine-insensitive methylenetetrahydrofolate reductase identified in methionine-accumulating yeast mutants

·····○Shota Isogai [1], Akira Nishimura [2], Akiko Inoue [1], Shino Sonohara [3], Takashi Tsugukuni [3], Hiroshi Takagi [1] ([1] IRI, NAIST, [2] Fac. Agric., Iwate Univ., [3] Plant Bio, Musashi Seimitsu Industry Co., Ltd.)

15:28 3Cp10 Biosynthesis of new block copolymer including 3-hydroxyoctanoate

·····○Ayumi Tonosaki [1], Thi Hien Phan [1], Shin-ichi Hachisuka [2], Hiroshi Kikukawa [2], Ken'ichiro Matsumoto [2] ([1] Grad. Sch. Chem. Sci. Eng., Hokkaido Univ., [2] Grad. Sch. Eng., Hokkaido Univ.)

15:40 Break

15:50 3Cp11 Enzymatic comparative analysis of xylanase derived in *Aspergillus oryzae*

·····○Juno Nishio [1], Yuusuke Nakamichi [2], Tomohiko Matsuzawa [1] ([1] Grad. Sch. Agric., Kagawa Univ, [2] AIST)

16:02 3Cp12 Intraspecific diversity analysis of carbohydrate degradation regulatory mechanisms in *Aspergillus oryzae*

·····○Shimma Fujiwa [1], Ryousuke Kataoka [2], Kazuhiro Iwashita [3], Tomohiko Matsuzawa [1] ([1] Grad. Sch. Agric., Kagawa Univ., [2] NRIB, [3] Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

16:14 3Cp13 Analysis of enzymatic properties and expression patterns of fucosidases in *Aspergillus oryzae*

····· ○Naoki Shimada [1], Masakazu Ishikawa [2], Kaoru Matsumoto [2], Tomohiko Matsuzawa [1] ([1] Grad. Sch. Agric., Kagawa Univ., [2] Bioinformatics)

16:26 3Cp14 Effects of N-linked glycans and the N-terminal propeptide on the structural stability and folding of prolyl endopeptidase derived from *Aspergillus niger*

·····○Iori Sanada [1], Keita Tatsumi [1], Seiju Yamada [2], Mamiko Yano [1], Kazufumi Takano [1], Hiroyoshi Matsumura [2], Ryo Uehara [2], Shun-ichi Tanaka [1] ([1] Grad. Sch., Life Environ. Sci., Kyoto Pref. Univ., [2] Grad. Sch. Life Sci., Ritsumeikan Univ.)

16:38 3Cp15 Production of PET-degrading enzyme LC-cutinase using Aspergillus oryzae

····· ○Takehiko Todokoro [1], Kentaro Ide [1], Emi Kawano [2], Hiroko Tsutsumi [1], Shosuke Yoshida [2], Hiroki Ishida [1] ([1] Res. Inst., Gekkeikan Sake Co., Ltd., [2] Div. Biol. Sci., NAIST)

Room D Floor 5 506 (13:30–16:26)

【Bioinformatics; Systems Biology; Biosensing and Analytical Chemistry】

13:30 3Dp01 Evaluating the metabolic flux distribution of *Acinetobacter* sp. Tol 5 grown on organic acids by ^{13}C-metabolic flux analysis

……○Erina Miyamoto [1], Tatsumi Imada [1], Haruka Teraki [1], Teppei Niide [1], Shori Inoue [2], Kanako Tokiyoshi [3], Taisei Naobayashi [3], Shogo Yoshimoto [2], Hiroshi Tsugawa [3], Katsutoshi Hori [2], Yoshihiro Toya [1], Hiroshi Shimizu [1]
([1] Grad. Sch. IST, Univ. Osaka, [2] Grad. Sch. Eng., Nagoya Univ., [3] Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

13:42 3Dp02 Analysis of the relationship between hyphal morphology and enzyme productivity of *Aspergillus oryzae* using deep learning

……○Haruto Motomura, Ayaka Itani, Norio Takeshita (Grad. Sch. Life Environ. Sci., Univ. Tsukuba)

13:54 3Dp03 Single-cell genome analysis of rhizosphere bacteria involved in soybean black root rot disease

……○Takeru Ochi [1], Yohei Nishikawa [2,3], Masako Kifushi [1], Ryota Wagatsuma [3], Takashi Sato [4], Haruko Takeyama [1,3,5]
([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Biomanufacturing Proc. Res. Center, AIST., [3] Res. Org. Nano Life Innov., Waseda Univ., [4] Grad. Sch. Bioresour. Sci., Akita Pref. Univ., [5] Inst. Adv. Res. Biosyst. Dynam., Waseda Univ.)

14:06 3Dp04 Comprehensive search for intracellular pH regulation genes in Bacillus subtilis by using Colony-live system

……○Takeru Kurakawa [1,3], Mikio Nakajima [3,4], Atsuya Uchigaki [1,3], Masahiro Mizuno [1,3], Hirotada Mori [2,3], Masakazu Kataoka [2,3]
([1] Grad. Sch. Sci. Technol., Shinshu Univ., [2] Eng. Fac. Eng., Shinshu Univ., [3] RCAM., Shinshu Univ, [4] freelance)

14:18 3Dp05 A method for analyzing microbial growth stages and strain differences based on metabolite analysis using Raman spectroscopy

……○Kento Hasegawa [1], Masahiro Ando [2], Haruko Takeyama [1,2,3]
([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Org. Nano Life Innov., Waseda Univ., [3] Inst. Adv. Res. Biosyst. Dynam., Waseda Res. Inst. Sci. Eng., Waseda Univ.)

14:30 Break

14:40 3Dp06 Quantitative comparison of Niacinamide concentrations in cosmetic products

……○Seigo Iwama [1], Johan Hariwitonang [3], Yuto Hirano [1], Nao Fujiyama [1], Hiroshi Kitagaki [2]
([1] Grad. Adv. Hea. Sci., Sasa Univ., [2] Fac. Agric., Saga Univ., [3] Grad. Agric., Saga Univ.)

14:52 3Dp07 Development of a novel biosensor for bacterial detection by fusion of SA-ISFET and immunoassay

……○Naohiro Tomari [1], Yoshihiro Yamamoto [1], Yoshiaki Nishiya [2], Yuuka Kitawaki [3], Yumi Takagi [4], Toshio Tani [5]
([1] Kyoto Munic. Inst. Ind. Technol. Cult., [2] Grad. Sch. Sci. Eng., Setsunan Univ., [3] Sasaki Chemical Co., Ltd., [4] MABEL Inc., [5] Bio-X Inc.)

15:04 3Dp08 Development of bio-fluorometric gas sensor using nicotinoprotein carveol dehydrogenase

……○Kentaro Yazaki [1], Houcheng Xue [1], Kurea Ikegai [1], Mao Fukushi [1], Ryutaro Asano [1], Kazunori Ikebukuro [1], Kenta Iitani [2], Kenta Ichikawa [2], Kohji Mitsubayashi [2], Wakako Tsugawa [1]
([1] Grad. Sch. Eng., Tokyo Univ. Agric. Technol., [2] Inst. of Biomaterials and Bioeng., Inst. of Science Tokyo)

15:16 3Dp09 Analysis of fatty acid derivatives by gas chromatography − photoionization mass spectrometry

……○Yasuharu Satoh [1], Yusuke Takata [2], Tomohiko Hirose [3], Seiko Oka [3]
([1] Grad. Sch. Eng., Hokkaido Univ., [2] Grad. Sch. Agric., Hokkaido Univ., [3] I^3, Hokkaido Univ.)

15:28 3Dp10 A highly sensitive virus detection system harnessing enzymes, antibodies, and DNA aptamers and its application to the visualization of virus-contaminated spots

……◯Daimei Miura [1], Kaori Tsukakoshi [2], Satomi Asai [3], Wakako Tsugawa [1], Koji Sode [4], Kazunori Ikebukuro [1], Ryutaro Asano [1]

([1] Grad. Sch. Eng., Tokyo Univ. Agric. Technol., [2] Fac. Sci., Tokyo Univ. Sci., [3] Sch. Med., Tokai Univ., [4] Joint Dept. Biomed. Eng., Univ. North Carolina and North Carolina State Univ.)

15:40 Break

15:50 3Dp11 Detection of thermophiles using a rapid microorganism testing system with a signaling probe-based DNA microarray

…… ◯Chika Maemura [1,2], Hidetoshi Aoki [1], Yuko Hirakawa [1,2], Tomoyuki Taguchi [1]

([1] Yokogawa Electric Corp., [2] Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

16:02 3Dp12 Evaluation of structural annotation by unified-HILIC/AEX retention time prediction

……◯Taihei Torigoe [1], Masatomo Takahashi [1,2], Omidreza Heravizadeh [2], Kazuki Ikeda [1], Kohta Nakatani [3], Takeshi Bamba [1,2], Yoshihiro Izumi [1,2]

([1] Med. Inst. Bioreg., Kyushu Univ., [2] Grad. Sch. Syst. Life Sci., Kyushu Univ., [3] Grad. Sch. Med. Den. Sci., Niigata Univ.)

16:14 3Dp13 Establishment of a novel evaluation method for Antifungal activity against Biofilm-forming microorganisms

……◯Misaki Muramoto, Gentoku Murakawa, Shinobu Oda

(Genome Biotechnol. Lab., Kanazawa Inst. Technol.)

Room E Floor 6 601 (13:30–16:50)

【Metabolic Engineering】

13:30 3Ep01 Engineered Escherichia coli for dopamine therapy by multiple gene expression regulation system

…… ◯Koko Nakata [1], Tomohiro Nawata [1], Ryunosuke Sano [1], Towa Takahashi [2], Toshiki Saito [1], Shunsuke Takahashi [2]

([1] Grad. Sch. Sci. Eng. Tokyo Denki Univ., [2] Sch. Sci. Eng. Tokyo Denki Univ.)

13:42 3Ep02 2,5-pyridinedicarboxylic acid production using nitrogen metabolism

…… ◯Akinobu Katano [1], Shuhei Noda [2], Tsutomu Tanaka [1] ([1] Grad. Sch. Eng, Kobe Univ., [2] Grad. Sch. Sci. Technol. Innov., Kobe Univ.)

13:54 3Ep03 *p*-Amino/nitrophenylalanine production with *Escherichia coli*

…… ◯Ayana Mori [1], Yutaro Mori [1], Shuhei Noda [2], Tsutomu Tanaka [1]

([1] Grad. Sch. Eng, Kobe Univ., [2] Grad. Sch. Sci. Technol. Innov., Kobe Univ.)

14:06 3Ep04 Development of a violacein high-producing strain of Escherichia coli with OGAB method

……◯Tsukasa Hatai [1], Takahiro Bamba [2], Tomohisa Hasunuma [1,2,3]

([1] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [2] EGBRC, Kobe Univ.,, [3] CSRS, RIKENS)

14:18 3Ep05 Microbial production of abiotic metalloporphyrinoids by new biosynthetic pathway directed toward diversification of enzyme cofactors

……◯Shunsuke Konishi, Shunsuke Kato, Takashi Hayashi (Grad. Sch. Eng., Univ. Osaka)

14:30 Break

14:40 3Ep06 Development of a biosynthetic platform for structural diversification of prenylated orsellinic acid

……◯Itsuki Tomita [1], Takahiro Bamba [2], Tomohisa Hasunuma [1,2,3]

([1] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [2] EGBRC, Kobe Univ.,, [3] CSRS, RIKENS)

14:52 3Ep07 Menaquinone production in genetically engineered E. coli

Jomkwan Jumpathong [1], Ikuhisa Nishida [2], Tomohiro Kaino [1], ○Makoto Kawamukai [1]

([1] Life & Env. Sci., Shimane Univ., [2] Sakeology Cent., Niigata Univ.)

15:04 3Ep08 Construction of an E. coli platform for flavonoids production

○Takafumi Shintani [1], Gen Kaneko [1], Takaaki Ito [1], Christopher Sarmales-Murga [1], Akira Nakagawa [1], Hiromichi Minami [1,2]

([1] Fermelanta Inc., [2] Res. Inst. Bioresour. Biotechnol., Ishikawa Pref. Univ.)

15:16 3Ep09 Fermentative production of reticuline using engineered *Escherichia coli*

○Yoshiaki Tarutani [1], Hiroto Shibata [1], Sumamal Rosenberg [1], Yoshihisa Ikeda [1], Kakeru Narumi [1], Takafumi Shintani [1], Akira Nakagawa [1], Hiromichi Minami [1,2]

([1] Fermelanta, Inc., [2] Res. Inst. Bioresour. Biotechnol., Ishikawa Pref. Univ.)

15:28 3Ep10 Construction of lycopene-producing E.coli strains using the GPP platform

○So Motoyoshi [1], Makoto Kobayashi [1], Tomoyo Ida [1], Yuki Hara [1], Takafumi Shintani [1], Akira Nakagawa [1], Hiromichi Minami [1,2]

([1] Fermelanta, Inc., [2] Res. Inst. Bioresour. Biotechnol., Ishikawa Pref. Univ.)

15:40 Break

15:50 3Ep11 Production of non-native functional polysaccharides by *E. coli*

○Frederic Yu-Hsiao Chen [1], Tomoki Chino [1], Takafumi Shintani [1], Akira Nakagawa [1], Hiromichi Minami [1,2]

([1] Fermelanta, Inc., [2] Res. Inst. Bioresour. Biotechnol., Ishikawa Pref. Univ.)

16:02 3Ep12 D-lactic acid production by *Escherichia coli* using chemically synthesized non-natural sugars

○Keisuke Hamaguchi [1], Hiroaki Nishijima [1], Rika Miyake [1], Hiro Tabata [1,2], Shuji Nakanishi [1]

([1] Grad. Sch. Eng. Sci., Univ. Osaka, [2] Presidential Endowed Chair for "Platinum Society", Univ. Tokyo)

16:14 3Ep13 Analysis of metabolic behavior and gene expression in a microbe efficiently utilizing chemically synthesized non-natural sugars

○Natsu Iwama [1], Hiroaki Nishijima [1], Hiro Tabata [1,2], Kensuke Igarashi [3], Souichiro Kato [1,3], Shuji Nakanishi [1]

([1] Grad. Sch. Eng. Sci., Univ. Osaka, [2] Presidential Endowed Chair for "Platinum Society", Univ. Tokyo, [3] BPRC, AIST)

16:26 3Ep14 Selective cultivation of target microorganisms using reduced phosphorus compounds as the phosphorus source

○Akari Miwa, Takenori Ishida, Takeshi Ikeda, Hisakage Funabashi, Akio Kuroda, Ryuichi Hirota

(Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

16:38 3Ep15 Enhancing the applicability of hypophosphite-dependent biocontainment strategy using the formate transporter FocA

○Naoki Momokawa [1], Takenori Ishida [1], Takeshi Ikeda [1], Kaori Nimura-Matsune [2], Hisakage Funabashi [1], Satoru Watanabe [2], Akio Kuroda [1], Ryuichi Hirota [1]

([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] Dept. Biosci., Tokyo Univ. Agric.)

Room F Floor 6 602 (13:30–16:38)

【Metabolic Engineering; Omics Technology】

13:30 3Fp01 Development of Glucose-secreting Cyanobacteria

····· ○Ayaka Tsuji[1], Kenya Tanaka[1], Yuichi Kato[2], Akihiko Kondo[3], Tomohisa Hasunuma[1,3,4,5]

([1] EGBRC, Kobe Univ.,, [2] Fac. Eng., Univ. Toyama, [3] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [4] Fac. Eng., Kobe Univ., [5] CSRS, RIKENS)

13:42 3Fp02 Photosynthetic production of glutamine by metabolic analysis-based engineering of *Synechococcus* sp.

····· ○Yuichi Kato[1], Ayaka Tsuji[2], Yuji Haraguchi[3], Tatsuya Shimizu[3], Akihiko Kondo[2,4,5], Tomohisa Hasunuma[2,4]

([1] Fac. Eng., Toyama Pref. Univ., [2] EGBRC, Kobe Univ.,, [3] Inst. Adv. Biomed. Eng. Sci., Tokyo Women's Med. Univ., [4] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [5] Grad. Sch. Eng, Kobe Univ.)

13:54 3Fp03 Analysis of lipid metabolism in prostaglandin-producing microalgae

····· ○Mayu Murakami, Miho Kikuchi, Kenta Sugiyama, Kosuke Kataoka, Tsuyoshi Tanaka

(Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

14:06 3Fp04 Transcriptional Dynamics of Host Bacteria Immediately After Plasmid Acquisition

····· ○Chihiro Liu[1], Mika Nishimura[2], Chiho Suzuki-Minakuchi[1,3], Kazunori Okada[1], Masahito Hosokawa[2,4,5], Hideaki Nojiri[1,3]

([1] Grad. Sch. Agric. Life Sci., Univ. Tokyo, [2] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [3] CRIIM, Univ. Tokyo, [4] Res. Org. Nano Life Innov., Waseda Univ, [5] Inst. Adv. Res. Biosyst. Dyn., Waseda Univ.)

14:18 3Fp05 Investigation of the effects of plasmid replication modules on host metabolism

····· ○Masaaki Hidaka[1], Chiho Suzuki-Minakuchi[1,2], Kenshi Suzuki[1,3], Kazunori Okada[1], Nobuyuki Okahashi[4], Hideaki Nojiri[1,2]

([1] Grad. Sch. Agric. Life Sci., Univ. Tokyo, [2] CRIIM, Univ. Tokyo, [3] Grad. Sch. Agric., Kyushu Univ., [4] Grad. Sch. IST, Univ. Osaka)

14:30 Break

14:40 3Fp06 Effects of the Circadian Clock on Lipid Metabolism in *Nannochloropsis*

····· ○Kosuke Suzuki[1], Kenya Tanaka[1,2,3], Tomohisa Hasunuma[1,2,4,5], Akihiko Kondo[1,2,4,5]

([1] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [2] EGBRC, [3] Grad. Sch. Eng. Sci., Univ. Osaka, [4] CSRS, RIKENS, [5] Grad. Sch. Eng, Kobe Univ.)

14:52 3Fp07 Enhanced membrane vesicles production by *Leuconostoc pseudomesenteroides* under aerobic cultivation

····· ○Hinako Inagaki[1], Mizuki Kanno[2], Hiroyuki Futamata[1,2,3], Yosuke Tashiro[1,2]

([1] Grad. Sch. Integr. Sci. Technol., Shizuoka Univ., [2] Grad. Sch. Sci. Technol. Shizuoka Univ., [3] Res. Inst. Green Sci. Technol., Shizuoka Univ.)

15:04 3Fp08 Evaluation of nonstarter lactic acid bacteria present in smear-ripened cheese as adjunct culture for quality preservation

····· ○Ryosuke Unno[1], Sakura Kamekura[2], Toshihiro Suzuki[1,2], Morio Ishikawa[1,2]

([1] Fac. Appl. Biosci., Tokyo Univ. Agric., [2] Grad. Sch. Appl. Biosci., Tokyo Univ. Agric.)

15:16 3Fp09 Prediction of internal conditions during beer fermentation process using exhaust gas components as explanatory variables

····· ○Keisuke Yamauchi[1], Eiichiro Fukusaki[1,2,3], Masahiro Furuno[1,2,3]

([1] Grad. Sch. Eng., Univ. Osaka, [2] OTRI, Osaka Univ., [3] Univ. Osaka and Shimadzu Anal. Innov. Res. Lab.)

15:28 3Fp10 Omics analysis of *Saccharomyces cerevisiae* under anaerobic stress

····· ○Tomoki Kitamura[1], Nobuyuki Okahashi[1,2,3], Fumio Matsuda[1,2,3]

([1] Grad. Sch. IST, Univ. Osaka, [2] OTRI, Osaka Univ., [3] Omics. Innov. Res. Lab, Osaka Univ. Shimadzu Corp)

15:40 Break

15:50 3Fp11 Development of a multi-mode HPLC analysis system for comprehensive and quantitative metabolite monitoring of culture media

……◯Kotaro Harada [1], Masatomo Takahashi [1], Shoji Shinadama [2], Keisuke Nakata [1], Kazuki Ikeda [1], Maiko Goto [1], Yuki Soma [3], Yoshihiro Hayakawa [2], Takeshi Bamba [1], Yoshihiro Izumi [1]
([1] Med. Inst. Bioreg., Kyushu Univ., [2] Shimadzu Corp., [3] BPRI, AIST)

16:02 3Fp12 Development of fundamental technologies for the acquisition of deep metabolomics big data to support biomanufacturing research

……◯Yoshihiro Izumi [1,2], Masatomo Takahashi [1,2], Yuki Soma [3], Kazuki Ikeda [1], Kohta Nakatani [1,4], Taihei Torigoe [1], Kosuke Hata [1], Nobuyuki Okahashi [5], Fumio Matsuda [5], Eiichiro Fukusaki [6], Takeshi Bamba [1,2]
([1] Med. Inst. Bioreg., Kyushu Univ., [2] Grad. Sch. Syst. Life Sci., Kyushu Univ., [3] BPRI, AIST, [4] Grad. Sch. Med. Den. Sci., Niigata Univ., [5] Grad. Sch. IST, Univ. Osaka, [6] Grad. Sch. Eng., Univ. Osaka)

16:14 3Fp13 Development of bacterial low input RNA-seq for comprehensive gene expression dynamics analysis of bacterial populations

……◯Mika Nishimura [1], Kazuki Takahashi [2], Kaori Aikawa [2], Tetsutaro Hayashi [3], Mariko Kuse [3], Itoshi Nikaido [3,4], Haruko Takeyama [1,2,5], Masahito Hosokawa [1,2,5]
([1] Grad. Sch. Adv. Sci. Eng., Waseda Univ., [2] Res. Org. Nano Life Innov., Waseda Univ., [3] BDR, RIKEN, [4] Med. Res. Inst., Science Tokyo,, [5] Inst. Adv. Res. Biosyst. Dynam., Waseda Res. Inst. Sci. Eng., Waseda Univ.)

16:26 3Fp14 Comparative metagenomic analysis of gut microbiota across Asian populations to understand its role as an interface between diet and host health

……◯Jiro Nakayama [1], Nurlisa Azmil [6], Takuto Akiba [6], Takuma Ogawa [6], Flyndon Dagalea [3], Donna Ramos [5], Shirchin Demberel [4], Endang Rahayu [2], Leslie Dalmacio [3]
([1] Grad. Sch. Agric., Kyushu Univ., [2] Fac. Agric., Univ. Gadjah Mada, [3] CoM., Univ. Philippines, Manila, [4] Inst. Vet. Med., Mongolian Univ. Life Sci., [5] Dept. Biotechnol., Visaya State Univ., [6] Grad. Sch. Bioresour. Bioenviron. Sci., Kyushu Univ.)

Room G Floor 6 603 (13:30–16:50)

【Fermentation Physiology, Fermentation Technology】

13:30 3Gp01 Screening and analysis of compounds produced by nematode symbionts that modulate microbial secondary metabolism

……◯Yu Imai [1], Sangkeun Son [2] ([1] Inst. Aqua Regen., Shinshu Univ., [2] Antimicrobial Discovery Ctr., Northeastern Univ.)

13:42 3Gp02 Functional analysis of a microbial enzyme involved in the conversion of quercetin to taxifolin

……◯Xinyang Liang [1], Yasushi Ohgo [2], Kensuke Yasui [2], Jun Ogawa [1], Shigenobu Kishino [1]
([1] Grad. Sch. Agric., Kyoto Univ., [2] Nisshin Pharma Inc.)

13:54 3Gp03 Identification and characterization of urolithin 9-dehydroxylase in *Enterocloster bolteae* DSM 15670^{T}

……◯Anno Katasho [1], Kanako Kumazawa [1], Hiroko Watanabe [1], Takanori Nakajima [2], Natsuno Chiba [2], Hiroaki Yamamoto [2], Jun Ogawa [1], Shigenobu Kishino [1]
([1] Grad. Sch. Agric., Kyoto Univ., [2] Daicel Corp.)

14:06 3Gp04 A novel approach for exploring genes involved in bacterial membrane vesicle production based on changes in cell density

……◯Atsuki Yamashita, Jun Kawamoto, Takuya Ogawa, Tatsuo Kurihara (Inst. Chem. Res., Kyoto Univ.)

14:18 3Gp05 Role of the phospholipid transporter LetB homolog in the production of extracellular membrane vesicles by *Shewanella vesiculosa* HM13

····· ○Hiromu Inoue [1], Jun Kawamoto [1], Takuya Ogawa [1], Chisato Nishizawa [2], Wataru Aoki [2], Tatsuo Kurihara [1]

([1] Inst. Chem. Res., Kyoto Univ., [2] Grad. Sch. Eng., Univ. Osaka)

14:30 Break

14:40 3Gp06 Screening of microorganisms for enzymatic production of sphingolipids

····· ○Hideaki Satani [1], Amelia Christina Atmowidjojo [1], Michiki Takeuchi [2], Jun Ogawa [1]

([1] Grad. Sch. Agric., Kyoto Univ., [2] Grad. Sch. Sci. Technol., Kyoto Inst. Technol.)

14:52 3Gp07 *cis*-9,*trans*-11 conjugated linoleic acid production using transformed *E. coli* with linoleic acid isomerase gene from *Paraclostridium bifermentans* JCM 1386^{T}

····· ○Juoying Chen [1], Kousuke Mihara [1], Masaaki Kawai [1], Hirokazu Kawaguchi [2], Erina Hiyama [2], Jun Ogawa [1], Shigenobu Kishino [1]

([1] Grad. Sch. Agric., Kyoto Univ., [2] JOYL)

15:04 3Gp08 Establishment of conjugated linoleic acid-production system by the isolated bacterium and its topical application for dermatitis model mice

····· ○Hiroki Kaneko [1], Naoto Yamamoto [2], Narito Asanuma [2] ([1] Grad. Sch. Agric., Meiji Univ., [2] Sch. Agric., Meiji Univ.)

15:16 3Gp09 Evaluation of potential probiotics derived from food-isolated lactic acid bacteria useful for putrescine production and the development of a mixed-bacterial system

····· ○Angeline Odilia, Nami Hamano, Keisuke Ushirodani, Ryotaro Hara, Jun Ogawa

(Grad. Sch. Agric., Kyoto Univ.)

15:28 3Gp10 Impacts of uracil, and *URA3* on growth and squalene production in oleaginous yeast *Yarrowia lipolytica* PO1f

····· Soyoka Takegawa [1], ○Shigeyuki Kawai [2] ([1] Fac. Bioresour. Environ. Sci., Ishikawa Pref. Univ., [2] Res. Inst. Bioresour. Biotechnol., Ishikawa Pref. Univ.)

15:40 Break

15:50 3Gp11 Characterization of acyltransferase in oleaginous yeast *Lipomyces starkeyi*

····· ○Yuzuki Kobayasi, Rikako Sato, Harutake Yamazaki, Hiroaki Takaku

(Fac. Appl. Life Sci., Niigata Univ. Pharm. Appl. Life Sci.)

16:02 3Gp12 Role of LsOil1p on lipid droplet formation in oleaginous yeast

····· ○Akari Machida, Rikako Sato, Harutake Yamazaki, Hiroaki Takaku

(Fac. Appl. Life Sci., Niigata Univ. Pharm. Appl. Life Sci.)

16:14 3Gp13 Evaluation of agmatine-producing activity and biochemical property of the metabolic enzyme responsible for agmatine biosynthesis in *Aspergillus* species

····· ○Naoki Akasaka, Adina Amy Reikanisuji, Jenna Hamaring Pinkan Kairupan, Daisuke Watanabe

(Div. Biol. Sci., NAIST)

16:26 3Gp14 Relationship between the spiny-like nigeran structures and Cell Wall Surface Layer of overexpressing strains of nigeran synthesis gene (nisA) in Aspergillus oryzae

····· ○Harutaka Shimoji [1], Makiko Kikuchi [4], Tae Abe [1], Kayo Yokota [1], Syusaku Yosida [3], Fuko Hirata [1], Keietu Abe [3], Hirohide Toyama [1,2], Keiko Uechi [1,2], Osamu Mizutani [1,2]

([1] Grad. Sch. Agric. Sci., Ryukyu Univ., [2] Fac. Agric., Univ. Ryukyus, [3] Grad. Sch. Agric. Sci., Tohoku Univ., [4] United Grad. Sch. Agric. Sci., Kagoshima Univ.)

16:38 3Gp15 Live cell imaging of ER stress by visualization of *bipA* mRNA in *Aspergillus oryzae*

····· Pakornswit Sathongdejwisit [2], Kaoru Takegawa [1], ○Yujiro Higuchi [1]

([1] Grad. Sch. Agric., Kyushu Univ., [2] Grad. Sch. Bioresour. Bioenviron. Sci., Kyushu Univ.)

Room H Floor 6 607 (13:30–16:26)

【Genetic Engineering】

13:30 3Hp01 Design principles for constructing strong inducible synthetic promoters in yeasts

……◯Masahiro Tominaga [1,2], Yoichiro Ito [1,2], Akihiko Kondo [1,2,3,4], Jun Ishii [1,2]
([1] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [2] EGBRC, Kobe Univ.,, [3] Fac. Eng., Kobe Univ., [4] CSRS, RIKENS)

13:42 3Hp02 Construction of a novel genome-wide gene-overexpression library and its application for antibody production in *Pichia pastoris*

…… ◯Yoichiro Ito [1,2], Masahiro Tominaga [1,2], Misa Ishigami [3], Noriko Hashiba [3], Akihiko Kondo [2,4,5], Jun Ishii [1,2]
([1] EGBRC, Kobe Univ.,, [2] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [3] TRAHED, [4] Grad. Sch. Eng, Kobe Univ., [5] CSRS, RIKENS)

13:54 3Hp03 Analysis for surviving cells appeared with induction of excision of centromeric DNA from a chromosome in *Saccharomyces cerevisiae*

····· ◯Hiroaki Matsuzaki, Yuma Nakamura, Sumire Shintani (Fac. Life Sci. Biotechnol., Fukuyama Univ.)

14:06 3Hp04 Evolutionary breeding of heterozygous yeasts by the TAQing system

…… ◯Satoshi Katahira, Akinori Ikeuchi, Risa Nakamura, Hidenori Tanaka, Nobuhiko Muramoto, Nobuhiro Ishida
(Toyota Cent. R&D Labs. Inc.)

14:18 3Hp05 **〈Topics〉**
Enhanced alcohol tolerance and isobutanol production by regulating nutrient starvation response in yeast

……◯Soya Maeda, Rio Miki, Kouichi Kuroda (Grad. Sch. Sci. Technol., Kyoto Inst. Technol.)

14:30 Break

14:40 3Hp06 Development of the basis for genetic analysis using a thermophilic methanogenic archaeon *Methanothermococcus okinawensis*

…… ◯Riku Aono [1], Sota Tanaka [1], Yuta Shinozuka [1], Madoka Kato [1], Masao Inoue [1,2], Anna Ochi [1], Hisaaki Mihara [1]
([1] Coll. Life Sci., Ritsumeikan Univ., [2] R-GIRO, Ritsumeikan Univ.)

14:52 3Hp07 Development of novel inducible promoters in *Thermus thermophilus*

…… ◯Haruki Omichi [1], Kentaro Miyazaki [2], Hiroya Tomita [2,3], Kohsuke Honda [2,3]
([1] Grad. Sch. Eng., Univ. Osaka, [2] ICBiotech, Osaka Univ., [3] OTRI, Osaka Univ.)

15:04 3Hp08 Low-cytotoxic and inexpensive transfection method for human cultured cells using cationic polymers and enhancer reagents

…… ◯Momoko Suyama [1], Yuki Terauchi [2], Hisashi Hoshida [1,2], Rinji Akada [1,2]
([1] Grad. Sch. Sci. Technol. Innov., Yamaguchi Univ, [2] YU-RC TMR)

15:16 3Hp09 Construction of replicative fungal plasmid vectors mobilizable by Agrobacterium

…… ◯Hidetoshi Fujii [1,2], kazuya Kiyokawa [3], Katsunori Suzuki [1,3], Takashi Yamamoto [1,3]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] KOBAYASHI Pharmaceutical Co.,Ltd., [3] Hiroshima University Genome Editing Innovation Center.)

15:28 3Hp10 **〈Topics〉**
Boosting microbial growth and protein production by increasing ribosomal RNA (rrn) operons

…… ◯Yuna Sato [1], Kenji Okano [2], Kohsuke Honda [3,4], Kentaro Miyazaki [4], Yu Sato [5]
([1] Grad. Sch. Sci. Tech. Innov., Yamaguchi Univ., [2] Fac. Chem. Mater. Bioeng., Kansai Univ., [3] OTRI, Osaka Univ., [4] ICBiotech, Univ. Osaka, [5] RC-TMR, Yamaguchi Univ.)

15:40 Break

15:50 3Hp11 Engineering Extremophile-Derived Cyclopropane Fatty Acid Synthases to Enhance Membrane Robustness and Polyhydroxyalkanoate Production in *Escherichia coli*

……○Tae-Rim Choi [1], Geeta Chhetri [1], Gayeon Hwang [1,2], Jong-Min Jeon [1], Sang-Hyoun Kim [2], Chang-Jun Cha [3], Yung-Hun Yang [4], Jung-Jun Yoon [1,3]
([1] Green Circ. R&D Dept. Korea Inst. Ind. Technol. (KITECH) Rep. Korea, [2] Sch. Civ. & Environ. Eng. Yonsei Univ. Rep. Korea, [3] Dept. Syst. Biotechnol. Chung-Ang Univ. Rep. Korea, [4] Dept. Biol. Eng. Konkuk Univ. Rep. Korea)

16:02 3Hp12 Bicistronic expression of two genes linked by short sequences: effects of genes and functionality in yeast cells

……○Reno Naka [1], Minami Osaki [1], Takashi Ohshiro [2,3], Hirokazu Suzuki [2,3]
([1] Dept. Eng., Grad. Sch. Sust. Sci., Tottori Univ., [2] Fac. Eng., Tottori Univ., [3] GSC, Tottori Univ.)

16:14 3Hp13 Analysis and application of transcriptional regulators involved in high-temperature glucose metabolism in *Escherichia coli*

…… ○Tomoyuki Kosaka [1], Juri Tanaka [2], Takeyuki Tamura [3]
([1] RCTMR, Yamaguchi Univ., [2] Fac. Agric., Yamaguchi Univ., [3] Inst. Chem. Res., Kyoto Univ.)

Room I Floor 6 608 (13:30–16:26)

【Cell and Tissue Engineering】

13:30 3Ip01 Analysis of intercellular junctions of vascular endothelial cells on UV cross-linked collagen gel

……○Honoka Kumabe, Masayuki Hara, Hideki Mori (Grad. Sch. Sci., Osaka Metro. Univ.)

13:42 3Ip02 **Elucidation of the cell death suppression mechanism by long-length cellulose nanofibers in stirred suspension culture**

…… ○Eiichiro Kaneko [1], Riku Furuse [1], Masashi Fujiwara [2], Hidenori Ando [3,4], Yasushi Sato [5], Tatsuhiro Ishida [3,4], Hirofumi Tani [6], Kenji Tajima [6]
([1] Grad. Sch. Chem. Sci. Eng., Hokkaido Univ., [2] WPI-ICReDD, Hokkaido Univ., [3] Inst. of Biomed. Sci., Tokushima Univ., [4] Innovative Research Center for Drug Delivery System, Institute of Biomed. Sci., Tokushima Univ., [5] Adv. Med. Eng. Center, Asahikawa Medical Univ., [6] Grad. Sch. Eng., Hokkaido Univ.)

13:54 3Ip03 Analysis of the effect of the number of initially seeded human iPS cells on cerebral organoid formation

…… ○Chika Hatakeyama, Masayuki Hara, Hideki Mori (Grad. Sch. Sci., Osaka Metro. Univ.)

14:06 3Ip04 The role of autophagy in human dermal papilla cells

…… ○Kouyou Ishikawa [1], Tatsuto Kageyama [1,2], Junji Fukuda [1,2] ([1] Grad. Sch. Eng., Yokohama Natl. Univ., [2] KISTEC)

14:18 3Ip05 In vitro Evaluation of the Immunosuppressive Potential of Wharton Jelly Mesenchymal Stem Cells and its Application to Type I diabetes

……○Keiya Deguchi, Junji Fukuda (Grad. Sch. Eng., Yokohama Natl. Univ.)

14:30 Break

14:40 3Ip06 Analysis of operational movements in cell culture

…… ○Kengo Momose [1], Ryoya Mori [2], Takeru Shiina [1], Kenjiro Tanaka [1], Tadayoshi Aoyama [2,3], Ryuji Kato [1,4]
([1] Grad. Sch. Pharm. Sci., Nagoya Univ., [2] Grad. Sch. Eng., Nagoya Univ., [3] Inst. Adv. Stud., Gifu Univ., [4] Nano life Syst. Inst., Nagoya Univ.)

14:52 3Ip07 Considering Three-dimensional Organization's Self-Growth in a Microfluidic Device
……○Kosuke Kiyota [1], Tetsutaro Kikuchi [2], Tatsuya Shimizu [2], Katsuhisa Sakaguchi [3]
([1] Grad. Sch. Integr. Sci. Eng., Tokyo City Univ.,
[2] Inst. Adv. Biomed. Eng. Sci., Tokyo Woman's Medical Univ., [3] Dept. Med. Eng., Tokyo City Univ.)

15:04 3Ip08 Analysis of transgenic chickens producing scFv-Fc into eggs
……Ryutaro Tsujii [1], Yuya Okuzaki [1], Yusuke Shimomura [1], Ayaka Nishino [1],
Masamichi Kamihira [2], ○Ken-ichi Nishijima [1]
([1] Grad. Sch. Bioagric., Sci., Nagoya Univ., [2] Grad. Sch. Eng., Kyushu Univ.)

15:16 3Ip09 Development of ECM nanofibrous scaffold for nerve tissue regeneration and growth factor signaling
……○Yasuhiro Ikegami, Hiroyuki Ijima (Grad. Sch. Eng., Kyushu Univ.)

15:28 3Ip10 Mechanical analysis of anti-chloride ion channel CLIC1 antibodies using AFM
……○Ayana Yamagishi [1,2], Kazuki Imai [1,2], Masumi Iijima [3], Chikashi Nakamura [1,2]
([1] Cell. Mol. Biotech. Res. Inst., AIST, [2] Grad. Sch. Eng., Tokyo Univ. Agric. Technol.,
[3] Fac. Appl. Biosci., Tokyo Univ. Agric.)

15:40 Break

15:50 3Ip11 Controlling proliferation and granulocytic differentiation of myeloid progenitors using CARs
……○Masahiro Kawahara [1,2,3], Kyoko Nakajima [2], Zhongchuzi Shen [3], Masashi Miura [2],
Hideto Nakabayashi [3]
([1] Sch. Adv. Eng., Kogakuin Univ., [2] NIBN, [3] Grad. Sch. Eng., Univ. Tokyo)

16:02 3Ip12 Cystine suppresses unsaturated carbonyl compounds-induced ferroptosis via glutathione synthesis
……○Tsunehito Higashi [1], Fumito Naganuma [2], Yosuke Mai [2], Takeo Yoshikawa [2]
([1] Fac. Vet. Med., Okayama Univ. Sci., [2] Grad. Sch. Med., Hokkaido Univ.)

16:14 3Ip13 scRNA-seq analysis for evaluating alterations in population heterogeneity in a progressive supranuclear palsy model
……○Yuta Taido [1], Mizuna Chiku [1], Koyo Tsujikawa [2], Kenjiro Tanaka [1],
Kentaro Sahashi [2,3], Masahisa Katsuno [2,3], Ryuji Kato [1,3]
([1] Grad. Sch. Pharm. Sci., Nagoya Univ., [2] Grad. Sch. Med., Nagoya Univ.,
[3] Inst. of Nano-Life-Syst., Nagoya Univ.)

Room J Floor 6 610 (13:30–16:38)

【Nucleic Acid Engineering; Peptide Engineering; Lipid Engineering】

13:30 3Jp01 Detection of indole and skatole in the air using DNA aptamer
……○Takeshi Tatsuta, Hatsune Tanaka, Yoshiki Shibazaki, Kazunori Ikebukuro,
Ryutaro Asano, Wakako Tsugawa
(Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

13:42 3Jp02 Modification of thermostable strand-displacing DNA polymerase and application to isothermal amplification
……○Koki Nishi [1], Itaru Yanagihara [2], Yukiko Nakura [2], Kiyoshi Yasukawa [3],
Yuri Ishii [1,4], Shinsuke Fujiwara [1,4]
([1] Grad. Sch. Sci. Technol., Kwansei Gakuin Univ., [2] Osaka Women's and Children's Hosp.,
[3] Grad. Sch. Agric., Kyoto Univ., [4] Sch. Biol. Environ. Sci., Kwansei Gakuin Univ.)

13:54 3Jp03 Branched-Chain Polyamine Beads for Sensitive Recovery and Detection of Low-Copy DNA
····· ◯Shinsuke Fujiwara [1,2], Emi Kawamori [1], Himari Aoki [2], Yukiko Nakura [3], Kiyosi Yasukawa [4], Yuri Ishii [1,2], Itaru Yanagihara [3]
([1] Sch. Biol. Environ. Sci., Kwansei Gakuin Univ., [2] Grad. Sch. Sci. Technol., Kwansei Gakuin Univ., [3] Osaka Women's & Children's Hosp., [4] Grad. Sch. Agric., Kyoto Univ.)

14:06 3Jp04 Development of mRNA synthesis with uniform polyA tail length
····· ◯Takato Ishikawa, Hirokazu Takahashi, Yoshiko Okamura
(Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

14:18 3Jp05 Controlled synthesis of Au nanoparticles inside liposomes using mineralization peptides
····· ◯Yuya Abe, Masayoshi Tanaka (Sch. Mater. Chem. Technol., Science Tokyo)

14:30 Break

14:40 3Jp06 Development of a purification method using peptide-Immobilized Columns targeting extracellular vesicles
····· ◯Takenori Ishida, Yuuki Mikami, Takeshi Ikeda, Hisakage Funabashi, Ryuichi Hirota, Akio Kuroda
(Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

14:52 3Jp07 Green synthesis of triangular gold nanoplates using truncated mineralization peptides
····· ◯Tomoya Ikuta, Masayoshi Tanaka (Sch. Mater. Chem. Technol., Science Tokyo)

15:04 3Jp08 Cyclization-mediated enhancement of stability and activity in short peptides derived from late embryogenesis abundant proteins
····· Yinghan Wu, ◯Shinya Ikeno (Grad. Sch. Life Sci. Syst. Eng., Kyushu Inst. Technol.)

15:16 3Jp09 Evaluation of antibacterial peptides using susceptibility testing of *E. coli* and ion current analysis
····· ◯Yuki Hagiri, Ryuji Kawano (Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)

15:28 3Jp10 Peptide probe design for molecular recognition of isovaleric acid
····· ◯Mina Okochi [1], Kae Senoo [1], Shogo Saito [1], Yukari Hataoka [2]
([1] Sch. Mater. Chem. Technol., Science Tokyo, [2] Shimadzu Corp.)

15:40 Break

15:50 3Jp11 Evaluation of lipid productivities in lipase gene-overexpressing strains from filamentous fungus *Fusarium* sp.
····· ◯Shiori Ikeda [1], Masahiro Ibaragi [1], Yume Shibata [1], Kanon Ego [2], Koichi Tamano [3], Takaiku Sakamoto [1,2,4], Eiji Sakuradani [1,2,4]
([1] Grad Sch. Sci. Technol. Ind., Tokushima Univ., [2] Fac. Biosci. Bioind., Tokushima Univ., [3] BPRI, AIST, [4] Grad. Sch. Biosci. Bioind, Tokushima Univ.)

16:02 3Jp12 Characterization of hypervesiculating *Shewanella oneidensis* delta *degQ* strain
····· ◯Naoki Akamatsu [1], Yoshihiro Ojima [1], Yuhei Tahara [1,2], Makoto Miyata [2], Masayuki Azuma [1]
([1] Grad. Sch. Eng., Osaka Metro. Univ., [2] Grad. Sch. Sci., Osaka Metro. Univ.)

16:14 3Jp13 Effects of seawater components and aerial phase conditions on lipid production in aerial microalga *Coccomyxa*
····· ◯Sarimu Ishiwatari, Katsuhiko Fujii, Nobuhiro Aburai (Grad. Sch. Eng. Kogakuin Univ.)

16:26 3Jp14 Search for strains of *Saccharomyces cerevisiae* with high production of extracellular vesicles
····· ◯Atsushi Tamura [1], Yoshihiro Ojima [1], Yuhei Tahara [1,2], Makoto Miyata [2], Masayuki Azuma [1]
([1] Grad. Sch. Eng., Osaka Metro. Univ., [2] Grad. Sch. Sci., Osaka Metro. Univ.)

Room K Floor 7 704 (13:30–15:40)

【Bioremediation; Environmental Technology, Wastewater Treatment】

13:30 3Kp01 Effect of biodegradation of polyhydroxyalkanoate on the chemical properties of soil
……◯Saki Goto, Taro Urase (Sch. Biosci. Biotechnol., Tokyo Univ. Technol.)

13:42 3Kp02 Enhancement of Polyhydroxybutyrate (PHB) Degradation by Adaptive Laboratory Evolution and Analysis of Gene Expression
…… ◯Young-Cheol Chang (Muroran Inst. Technol.)

13:54 3Kp03 〈**Topics**〉
Degradation behavior of biodegradable polyamide iNylon
……◯Maina Yonemura [1], Daiichiro Kato [1], Risa Yokoyama [1], Yukiko Yokogawa [1], Toshiaki Taniike [2], Yingjun An [3], Atsushi Takahara [3], Masayuki Kojima [4], Hiroyuki Shimanaka [4], Tatsuo Kaneko [5], Seiji Negoro [6]
([1] Kagoshima Univ., [2] JAIST, [3] Kyushu Univ, Research Center for Negative Emission Technologies, [4] Dainichiseika ColorChem mfg., [5] Jiangnan Univ., [6] Grad. Sch. Eng., Univ. Hyogo)

14:06 3Kp04 Biosynthesis of polyhydroxyalkanoate using recombinants of polyethylene-degrading microorganisms
…… ◯Keito Sugimori [1], Shiori Ujiie [1], Takahiro Chiba [2], Daisuke Sugimori [2], Miwa Yamada [1]
([1] Dept. Biolog. Chem. Food sci. Iwate Univ., [2] Fac. Symbio. Syst. Sci., Fukushima Univ.)

14:18 3Kp05 Evaluation of substrate specificity of polypropylene-degrading bacteria
……◯Kenshiro Kokubun, Ying Huang, Kenji Miyamoto (Keio Univ.)

14:30 Break

14:40 3Kp06 Enhancing the decomposition efficiency of the extinguishable garbage disposal container "Chiero"
…… ◯Ken Ogasawara, Ying Huang, Kenji Miyamoto (Keio Univ.)

14:52 3Kp07 Evaluation of biodegradable plastic Green Planet
…… ◯Kao Yamamoto, Ying Huang, Kenji Miyamoto (Keio Univ.)

15:04 3Kp08 Analysis of enzymes involved in *c*-di-GMP synthesis and degradation in an ammonia oxidizing bacterium
……◯Akiko Nishimura [1], Akio Suizu [2], Hidenori Kaneoka [1] ([1] Fac. Eng., Aichi Inst. Technol., [2] Grad. Sch. Biostud., Kyoto Univ.)

15:16 3Kp09 Microbial Degradation of Nitrile and Vinyl Chloride Polymers
……◯Nelly Wira Nurhadi [1], Miyuki Nagamine [2], Nobuaki Takahashi [3], Kengo Inoue [2]
([1] Dept. Materials and Informatics., Interdiscip. Grad. Sch. Agric. Eng., Univ. Miyazaki, [2] Fac. Agric., Univ. Miyazaki, [3] SHOWA GLOVE Co.)

15:28 3Kp10 Utilization of biodegradable polymers useful for removing nitrogen compounds in recirculating aquaculture systems
…… ◯Hiroyuki Tominaga [1], Kazuki Yagura [1], Makoto Sugimoto [1], Akinori Ando [1,2], Jun Ogawa [1,2]
([1] Grad. Sch. Agric., Kyoto Univ., [2] Res. Physiol. Chem., Kyoto Univ.)

Room L Floor 7 710 (13:30–16:50)

【Biomass, Bioresource and Energy Engineering】

13:30 3Lp01 Optimization of single-cell isolation and single-cell culture conditions to prevent chimerization in the colonial microalgae *Botryococcus braunii*
…… ◯Kengo Murayama [1], Minori Aiba [2], Tadashi Toyama [1], Takashi Ohtsuki [1]
([1] Integr. Grad. Fac. Interdisc. Res, Univ. Yamanashi, [2] Integr. Grad. Sch. Med. Eng. Agric. Sci, Univ. Yamanashi)

13:42 3Lp02 Cultivation of acidophilic microalgae with seawater
…… ○Yasuhiro Furuhashi (Kazusa DNA Res. Inst.)

13:54 3Lp03 Co-culture and biodiesel production under aerial-phase conditions using aerial microalgae KGU-D001 and nitrogen-fixing bacteria *R. sphaeroides*
…… ○Misaki Kojima, Katsuhiko Fujii, Nobuhiro Aburai (Grad. Sch. Eng. Kogakuin Univ.)

14:06 3Lp04 Efficient growth for micoalgae mats containing antibacterial substances
…… ○Muneto Uwajima, Katsuhiko Hujii, Nobuhiro Aburai (Fac. Eng., Kogakuin Univ.)

14:18 3Lp05 Isolation and characterization of *Geobacillus* spp. that can grow on glycerol
…… Saori Kani [1], Yuuka Takeda [1], Masaki Murakami [2], Takashi Ohshiro [1,3], ○Hirokazu Suzuki [1,3]
([1] Fac. Eng., Tottori Univ., [2] Dept. Eng., Grad. Sch. Sust. Sci., Tottori Univ., [3] GSC, Tottori Univ.)

14:30 Break

14:40 3Lp06 Fermentative hydrogen production using *Enterobacter* at high glucose concentrations
…… ○Tomoyo Nagamatsu, Ichiro Suzuki, Minoru Takeda (Grad.Sch.Eng.Sci., Yokohama Natl. Univ.)

14:52 3Lp07 Study of a method for high-density cultivation of the marine hydrogen-oxidizing bacterium *Hydrogenovibrio marinus* MH-110 in a seawater-based medium using calcium silicate hydrate
…… ○Norihiro Usui [2], Koya Okabe [1], Tsuyoshi Aketo [2], Akiko Hanada [2], Hirofumi Nishihara [1]
([1] Dept. Food and Life Sci., Coll. Agric., Ibaraki Univ., [2] Taiheiyo Cement Corp.)

15:04 3Lp08 Fed-batch cultivation of formate-utilizing bacteria via pH-linked sequential addition of formate
……○Takuto Morimoto, Masaki Ihara, Kazuhiro Shibata, Sora Nagano
(Grad. Sch. Sci. Technol., Shinshu Univ.)

15:16 3Lp09 Screening for novel methanotrophs suitable for fermentative production
……○Hinako Hisaoka, Yuka Kimura, Takumi Kurihara, Toshiaki Nakajima-Kambe
(Grad. Sch. Life Environ. Sci., Univ. Tsukuba)

15:28 3Lp10 Mesophilic Methane Fermentation of Light Stimulated Fixed-bed Bioreactor Simultaneous with Ammonia-rich and Antibiotic-stressed
…… ○Rika Mizuno, Yingnan Yang (Grad. Sch. Life Environ. Sci., Univ. Tsukuba)

15:40 Break

15:50 3Lp11 Mixed methane fermentation conditions of cow dung and sweet potato for biomethanation to mass-produce methane from CO_2
…… ○Takahiro Suzuki [1], Miu Suzuki [1], Yo Suzuki [2], Osamu Kimura [3], Hirokazu Tanaka [3]
([1] Grad. Sch. Biology-Oriented Sci. Technol., Kindai Univ., [2] Fac. Eng., Univ. Ryukyus,
[3] Fujiwara Energy Co., Ltd)

16:02 3Lp12 Cellulose production by mixed culture with *Aspergillus* spp. and *Komagataeibacter xylinus*
……○Asuka Ota, Haruka Tachibana, Hisako Kaneda, Toru Yoshida, Yasushi Sugano
(Department of Graduate School of Science, Japan Women's University)

16:14 3Lp13 Lignin degradation enzymes from herbivorous land crabs, *Chiromantes haematocheir* and *Chiromantes dehaani*
…… ○Katsuhide Miyake, Kazumi Kameyama, Misaki Hasebe (Fac. Sci. Eng., Meijo Univ.)

16:26 3Lp14 Untargeted Lipidomic Profiling of Yeast under Lignocellulose-Derived Growth Inhibitor Stress
……○Toru Yanabe [1], Nobuyuki Okahashi [1,2,3], Junko Iida [4], Fumio Matsuda [1,2,3]
([1] Grad. Sch. IST, Univ. Osaka, [2] OTRI, Osaka Univ., [3] Shimadzu Anal. Innov. Res. Lab.,Univ.Osaka,
[4] Shimadzu Corp.)

16:38 3Lp15 Comprehensive Study on the Optimal Composition Ratios of Carbon, Nitrogen, and Phosphorus Sources for the Increasing of PHA Production Amounts
…… ○Aoi Miyata, Taiyo Hasegawa, Young-Cheol Chang (Muroran Inst. Technol.)

Room M Floor 7 711 (13:30–16:26)

【Food Science, Food Technology】

13:30 3Mp01 Sensory evaluation and metabolomics based approach reveal the flavor quality of sago starch obtained from different processing method

····· ○Giri Rohmad Barokah [1,5], Aziz Boing Sitanggang [2], Eiichiro Fukusaki [1,3,4], Sastia Prama Putri [1,3]
([1] Grad. Sch. Eng., Univ. Osaka, [2] Dept. Food Sci. Technol., Faculty of Agric. Eng. and Technol., IPB Univ,
[3] Ind. Biotechnol. Div., Inst. For Open and Transdicip. Res. Initiatives, Univ, Osaka,
[4] Osaka Univ. Shimadzu Omics Innov. Res. Labs. Univ. Osaka,
[5] Natl. Res. and Innov. Agency, Res. Organization for Agric. and Food)

13:42 3Mp02 Germinated soybean tempe: investigating the effects of germination duration by using a metabolomics approach

····· ○Rafidha Irdiani [1], Made Astawan [2], Eiichiro Fukusaki [1,3,4], Sastia Prama Putri [1,3]
([1] Dept. Biotechnol., Grad. Sch. Eng., Univ. Osaka, [2] Dept. Food Technol., IPB Univ.,
[3] Ind. Biotechnol. Div., Inst. Open Transdiscip. Res. Initiatives, Univ. Osaka,
[4] Osaka Univ. Shimadzu Omics Innov. Res. Lab., Univ. Osaka)

13:54 3Mp03 Influence of Pre-drying on Cocoa Flavor Improvement: Tracking Flavor Precursors from Beans to Liquor using Metabolomics Approach

····· ○Aulia Gusning Ati [1], Indah Anita Sari [2], Hendy Firmanto [2], Abdul Malik [2],
Eiichiro Fukusaki [1,3,4], Sastia Prama Putri [1,3]
([1] Dept. Biotechnol., Grad. Sch. Eng., Univ. Osaka, [2] Indonesian Coffee & Cocoa Res. Inst.,
[3] Ind. Biotechnol. Div., Inst. for Open and Transdiscip. Res. Initiatives, Univ. Osaka,
[4] Osaka Univ. Shimadzu Omics Innov. Res. Labs. Univ. Osaka)

14:06 3Mp04 Metabolite profile of cocoa powder subjected to ultrasonic-assisted alkalization

····· ○Mary Faith Adan [1], Dimas Rahadian Aji Muhammad [4,5], Danar Praseptiangga [4,5],
Eiichiro Fukusaki [1,2,3], Sastia Prama Putri [1,2]
([1] Dept. Biotechnol., Grad. Sch. Eng., Univ. Osaka,
[2] Ind. Biotechnol. Div., Inst. for Open and Transdiscip. Res. Initiatives, Univ. Osaka,
[3] Osaka Univ. Shimadzu Omics Innov. Res. Labs., Univ. Osaka,
[4] Dept. Food Sci. Technol., Faculty of Agric., Sebelas Maret Univ.,
[5] Res. Collab. Center for Traditional Fermentation, Sebelas Maret Univ.)

14:18 3Mp05 Effect of Organic Acid Addition on Intracellular pH of E. coli

····· ○Mihiro Kobayashi [1], Masahiro Mizuno [1,3], Masakazu Kataoka [2,3]
([1] Grad. Sch. Sci. Technol., Shinshu Univ., [2] Eng. Fac. Eng., Shinshu Univ.,
[3] Renaissance Center for Applied Microbiology)

14:30 Break

14:40 3Mp06 Effect of Alcohol Consumption and Drinking-Related Outcomes to take vinegar drinks or mineral water: A Pilot Randomized Controlled Trial

····· ○Hisashi Yoshimoto [1], Ayako Kikuchi [1], Yuto Aoki [2], Joto Yoshimoto [2]
([1] Univ. Tsukuba, [2] Mizkan Holdings Co., Ltd.)

14:52 3Mp07 Probiotic effect of the conjugated fatty acid-producing bacterium on the alleviation of experimental inflammatory bowel disease in mice

····· ○Yusei Umezawa [1], Hiroki Kaneko [1], Narito Asanuma [2] ([1] Grad. Sch. Agric., Meiji Univ.,
[2] Sch. Agric., Meiji Univ.)

15:04 3Mp08 Antioxidant activity and electronic state information of the tripeptide in high quality Japanese *ginjo* sake

····· ○Akimitsu Miyaji [1], Koji Fukui [2] ([1] Sch. Mater. Chem. Technol., Science Tokyo,
[2] Dep. Biosci. Eng., Coll. Syst. Eng. Sci, Shibaura Inst. Technol.)

15:16 3Mp09 Promoting yeast growth with rice bran extracts and the effective use of the resulting yeast
……◯Asahi Imagawa [1], Yuki Inoue [2], Yoshihiro Ojima [1], Masayuki Azuma [1]
([1] Grad. Sch. Eng., Osaka Metro. Univ., [2] Tsuno Co., Ltd.)

15:28 3Mp10 Cell-Sized Liposome-Based Evaluation of Procyanidin for Optimizing Apple Processing Conditions
……◯Tsuyoshi Yoda [1], Kazuhiko Yokohama [1], Noriyuki Notoya [2], Nanako Kanuka [2]
([1] Ind. Res. Inst., AITC, [2] Agric. Prod. Inst., AITC)

15:40 Break

15:50 3Mp11 Kinetics-based estimation of the effect of small intestinal bacteria on lipid digestion
……◯Rin Endo (Tokyo Metropolitan Ind. Tech. Res. Inst.)

16:02 3Mp12 Antioxidant Properties of Whey Protein-Derived Peptides: Radical Scavenging and Cytoprotective Effects
……◯Ryota Suzuki, Sayuri Arai, Masaki Kurimoto, Naoki Yuda, Miyuki Tanaka
(Morinaga Milk Industry Co., Ltd.)

16:14 3Mp13 Fermented botanical product (FBP) simultaneously activates type 1 cellular immunity and type 17 barrier immunity *via* TLR2: potential to boost host defense
…… Ayana Yokoyama [1], Ayano Hojo [2], Takumi Suizu [2], Kotaro Fujioka [2], Hideto Torii [2], Shinsuke Kishida [2], ◯Seiji Kawamoto [1]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] Manda Fermentation Co., Ltd.)

Room N Floor 8 805 (13:30–16:38)

【Brewing, Brewing Technology; Food Science, Food Technology】

13:30 3Np01 Screening for Inhibitory Factors of Alcoholic Fermentation Using Cell Wall Defects as a Phenotypic Indicator
……◯Sora Takahashi, Naoki Akasaka, Daisuke Watanabe (Div. Biol. Sci., NAIST)

13:42 3Np02 Analysis of a transcription factor associated with isomaltose assimilation in wild yeast MC87-46
……◯Takuya Okura [1], Takaaki Kojima [1], Takeshi Akao [2], Motoyuki Shimizu [1], Masashi Kato [1]
([1] Grad. Sch. Agric., Meijo Univ., [2] NRIB)

13:54 3Np03 Analysis of the influence of amino acidity on the fermentation in artificial sake mash
…… ◯Sachiko Iizuka [1], Shogo Kakoi [2], Takahiro Akashi [2], Atsuko Isogai [1], Nobuhiko Mukai [1]
([1] NRIB, [2] Hakutsuru Sake Brewing Co., Ltd.)

14:06 3Np04 Screening and analysis of genes responsible for low acetate productivity in sake yeast
……◯Kaede Kijima [1,2], Muneyoshi Kanai [2], Tomoko Shibata [2], Yan Zhou [2], Satoko Teramoto [2], Takeshi Akao [1,2]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] NRIB)

14:18 3Np05 Reduction of ATP and enhancement of glycolysis in high fermentation of Bafilomycin A1-resistant sake yeast
…… ◯Mai Nakase [1], Taisuke Seike [2], Hiroyuki Senjyu [1], Takuya Asai [1], Fumio Matsuda [3], Takahiro Akashi [1]
([1] Hakutsuru Sake Brewing Co., Ltd., [2] Grad. Sch. of Comp. Sci., Kyushu Inst. Technol., [3] Grad. Sch. IST, Univ. Osaka)

14:30 Break

14:40 3Np06 Comparative analysis of intracellular metabolome states of yeast cells cultured in sake fermentation environments
……◯Kotaro Mori [1,2], Taisuke Seike [3], Nobuyuki Okahashi [2], Fumio Matsuda [2], Yoshifumi Takao [1], Toshinari Takahashi [1]
([1] Kiku-Masamune Sake Brewing Co., Ltd., [2] Grad. Sch. IST, Univ. Osaka, [3] Grad. Sch. CSSE, Kyutech)

14:52 3Np07 Ethanolphilicity and its molecular basis in *Fructilactobacillus fructivorans*, a lactic acid bacterium adapted to narazuke

····· ○Motomu Yoshioka [1], Yukihiko Masuda [2], Mariko Mori [3], Naoki Akasaka [1], Daisuke Watanabe [1]
([1] Div. Biol. Sci., NAIST, [2] Naraya Honten, [3] Morinaraduketen Co.,LTD.)

15:04 3Np08 Study on the transporter of the multiple bacteriocins of *Lactiplantibacillus plantarum* PUK6

····· ○Maki Yoshihara [1], Takeshi Zendo [2], Hiromi Matsusaki [1,3]
([1] Grad. Sch., Environ. Sym. Sci., Pref. Univ. Kumamoto, [2] Grad. Sch. Agric., Kyushu Univ., [3] Fac. Environ. Sym. Sci., Pref. Univ. Kumamoto)

15:16 3Np09 A bacteriocin produced by *Lactococcus lactis* PJR24 isolated from pickled Japanese radish

····· ○Asuka Nose [1], Takeshi Zendo [2], Hiromi Matsusaki [1,3]
([1] Grad. Sch. Environ. Sym. Sci., Pref. Univ. Kumamoto, [2] Grad. Sch. Agric., Kyushu Univ., [3] Fac. Environ. Sym. Sci., Pref. Univ. Kumamoto)

15:28 3Np10 Effects of zygomycetes and lactic acid bacteria on the physical properties of sourdough

····· ○Natsumi Murayama [1], Koki Tatara [2], Natsumi Ishizaki [2], Shuichiro Murakami [3]
([1] Grad. Sch. Agric., Meiji Univ., [2] Table Mark Co., Ltd. Food Research Institute, [3] Sch. Agric., Meiji Univ.)

15:40 Break

15:50 3Np11 Method validation and technical challenges of lactic acid bacteriota quantification

····· Keisuke Nakamura [1], Rahul Sk [2], Yuh Shiwa [2,3], Yukihiro Tashiro [1], ○Mugihito Oshiro [1]
([1] Grad. Sch. Agric., Kyushu Univ., [2] NGRC, Tokyo Univ. Agric., [3] Fac. Life Sci., Tokyo Univ. Agric.)

16:02 3Np12 Impact of nutrient from aqueous extract of pitaya and ultrasound on the growth of lactic acid bacteria

····· Wen-Ling Hsiao, Wei-Ting Lian, ○Chun-Yao Yang (Dept. Food Sci., Fu Jen Catholic Univ.)

16:14 3Np13 Elucidation of function of *Enterococcus faecalis* protease in the cow milk clotting process

····· ○Isamu Maeda [1,2], Reishi Ou [2] ([1] Fac. Agric., Utsunomiya Univ., [2] United Grad. Sch. Agric. Sci., Tokyo Univ. Agric. Technol.)

16:26 3Np14 Screening of lactic acid bacteria for extraction of astaxanthin from fermented shrimp waste

····· ○Kanako Saita, Takako Satoh (Kumamoto Ind. Res. Inst.)

Room O Floor 8 806 (13:30–16:38)

【Bioprocess Engineering】

13:30 3Op01 Analytical methods of oxidative stress in *Acinetobacter* sp. Tol 5

····· ○Honoka Imai [1], Shori Inoue [1], Shogo Yoshimoto [1], Kenya Tanaka [2], Tomohisa Hasunuma [2], Katsutoshi Hori [1]
([1] Grad. Sch. Eng., Nagoya Univ., [2] EGBRC, Kobe Univ.,)

13:42 3Op02 Heterologous expression of carbonic anhydrase in *Acinetobacter* sp. Tol 5 for whole-cell biocatalysis

····· ○Shogo Yoshimoto [1], Yuki Ohara [2], Katsutoshi Hori [1]
([1] Grad. Sch. Eng., Nagoya Inst. Technol., [2] Friend Microbe inc.)

13:54 3Op03 Selection and functional evaluation of microalgae growth-promoting bacteria for oleaginous microalga

····· ○Rion Shigeishi [1], Pai Yu Tan [1], Yuta Katou [2], Tomoko Kagenishi [3], Masaaki Konishi [3]
([1] Grad. Sch. Eng., Kitami Inst. Technol., [2] Kankyo Daizen Company, Ltd, [3] Kitami Inst. Technol.)

14:06 3Op04 Selection and Characterization of Symbiotic Bacterial Mutants for Elucidating the Mechanism of Cyanobacterial Growth Promotion

····· ○Pei Yu Tan [1], Yuta Kato [2], Masaaki Konishi [3]
([1] Grad. Sch. Eng., Kitami Inst. Technol., [2] Kankyo Daizen Company, Ltd, [3] Kitami Inst. Technol.)

14:18 3Op05 Can Non-conventional yeast be developed as animal feeds?

····· ○Yoshinori Murata [1], Yoshihisa Ohtani [2] ([1] JIRCAS, [2] Meiji Feed co.ltd)

14:30 Break

14:40 3Op06 Thermostabilization of thermotolerant yeast *Kluyveromyces marxianus* by zwitterions

……◯Souta Uemori [1], Ayumi Hachisu [1], Kazuaki Ninomiya [2], Kosuke Kuroda [1]
([1] Grad. Sch. Nat. Sci. Technol., Kanazawa Univ., [2] Inst. Front. Sci. Init., Kanazawa Univ.)

14:52 3Op07 Direct bioconversion of rice into lipid by the amylolytic oleaginous yeast

……◯Yuya Kaizu [1], Rikako Sato [1], Akihiro Nakamura [2], Yousuke Shida [2], Wataru Ogasawara [2], Harutake Yamazaki [1], Hiroaki Takaku [1]
([1] Fac. Appl. Life Sci., Niigata Univ. Pharm. Appl. Life Sci., [2] Nagaoka Univ. Technol.)

15:04 3Op08 Improvement of cellulose production by markerless deletion of the glucose dehydrogenase gene (*gcd*)

…… ◯Miho Suginaka [1], Shunsuke Nagai [1], Ryo Takahama [2], Yuma Ishido [1], Hirohumi Tani [2], Kenji Tajima [2]
([1] Grad. Sch. Chem. Sci. Eng., Hokkaido Univ., [2] Grad. Sch. Eng., Hokkaido Univ.)

15:16 3Op09 Examination of conditions for efficient capture of emitted CO_2 in an aerobic oil fermentation process

……◯Yuto Kataoka [1], Kenshi Watanabe [1], Setu Kato [1], Yutaka Nakashimada [1], Tsukasa Yoshizaki [2], Masashi Matsuura [2], Tsunehiro Aki [1]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] The Chugoku Electric Power Company, Incorporated)

15:28 3Op10 Optimization of erythritol purification from fermentation broth for low-calorie sweetener production

…… ◯Riahna Kembaren, Adinda D. Kadar, Mario D. Bani, Kamilah Dainawari
(Dept. Biotechnol. Indonesia International Institute for Life Sciences)

15:40 Break

15:50 3Op11 Development and application of single-cell selection technology based on photoactivatable PEG-lipid

……◯Shinya Yamahira, Satoshi Yamaguchi (SANKEN, Univ. Osaka)

16:02 3Op12 **〈Topics〉**
Efficient and high-density immobilization of animal cells by a microfiber with both swelling and cell adhesion properties and its application to exosome production

……◯Naofumi Shiomi, Pengfei Zhang, Shuji Nakatuka, Kazuo Kumagai, Hideto Matsuyama
(EGBRC, Kobe Univ.,)

16:14 3Op13 Quality evaluation of adeno-associated virus vector production based on differences in nucleic acid structures of starting materials

…… ◯Kyoko Masumi-Koizumi [1], Emi Ito-Kudo [1], Shota Hirayama [2], Koki Sasamoto [2], Teruyuki Nishi [1,2], Kazuhisa Uchida [1]
([1] Grad. Sch. Sci. Technol. Innov., Kobe Univ., [2] Kaneka Corp.)

16:26 3Op14 Host factor involvement in chimeric HBsAg-VLP expression: role of NF-kappa B and HNF1-alpha in CHO-K1

……◯Natanan Laosillapacharoen [1], Yuki Morishita [1], Guirong Kanai-Bai [1], Noriko Yamano-Adachi [1,2], Takeshi Omasa [1,2]
([1] Grad. Sch. Eng., UOsaka, [2] OTRI, UOsaka)

Room P Floor 9 905 (13:30–16:50)

【Biochemical Engineering】

13:30 3Pp01 Withdrawn

13:42 3Pp02 Fabrication of polypropylene nonwoven fabric with antiviral properties through graft processing

…… ◯Rie Hirao, Hisato Takeuchi, Jumpei Kawada, Nobuhiro Ishida (Toyota Cent. R&D Labs. Inc.)

13:54 3Pp03 Synthesis of a natural aroma compound limonene oxide with an interface bioreactor

…… Shinobu Oda, ◯Kenta Kurano (Genome Biotechnol. Lab., Kanazawa Inst. Technol.)

14:06 3Pp04 〈**Topics**〉
DO Jump method - Development of an easy method for k_La measurement
……Keiko Kaetsu, Atsuko Uzura, ○Nobuyoshi Ishii (Nagase & Co., Ltd)

14:18 3Pp05 Effect of flask aging on certain production in shaker culture
…… ○Keiko Kaetsu, Nobuyoshi Ishii (Nagase & Co., Ltd)

14:30 Break

14:40 3Pp06 Bioplastic (PHB) production at high temperatures using high temperature-adapted evolved *E.coli*
…… ○Waka Makino [1], Noriko Kobayashi [2], Fugo Ube [1], Makoto Kashima [1,2], Ken'ichiro Matsumoto [3], Toshihiko Kishimoto [1,2]
([1] Grad. Biomol. Sci., Fac. Sci., Toho Univ., [2] Dept. Biomol. Sci., Fac. Sci., Toho Univ., [3] Grad. Sch. Eng., Hokkaido Univ.)

14:52 3Pp07 Application of heliorhodopsin to bioproduction
……Momoka Yokoyama [1], Nana Suzuki [1], Yoko Hirono-Hara [1,2], Satoshi Tsunoda [3], ○Kiyotaka Hara [1]
([1] Sch. Food Nutr. Sci., Univ. Shizuoka., [2] 396bio Co., Ltd., [3] Grad. Sch. Eng., Nagoya Inst. Technol.)

15:04 3Pp08 Develpoment of thermophilic gas fermentation process by *Moorella thermoacetica*
…… ○Shota Nakatsugawa [1], Junya Kato [2], Tatsuya Fujii [2], Setsu Kato [1], Yoshiteru Aoi [1], Yutaka Nakashimada [1]
([1] Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2] AIST)

15:16 3Pp09 Selective antibacterial activity of conjugated-fatty acid produced by the isolated bacterium against Staphylococci
……○Enoka Arimatsu [1], Hiroki Kaneko [2], Narito Asanuma [1]
([1] Sch. Agric., Meiji Univ., [2] Grad. Sch. Agric., Meiji Univ.)

15:28 3Pp10 Preparation of drug-encapsulated membrane vesicles derived from lactic acid bacteria
…… ○Moe Matsumoto [1], Honoka Hase [1], Mei Nakamura [2], Yoshio Katakura [1], Shino Yamasaki-Yashiki [1]
([1] Fac. Chem. Mater. Bioeng., Kansai Univ., [2] Grad. Sch. Sci. Eng., Kansai Univ.)

15:40 Break

15:50 3Pp11 Construction and validation of a metabolic pathway model for *Streptomyces thermoviolaceus*
……○Togo Yamada [1], Pamella Apriliana [1], Prihardi Kahar [2], Yutaro Mori [1], Chiaki Ogino [1,2]
([1] Grad. Sch. Eng, Kobe Univ., [2] EGBRC, Kobe Univ.,)

16:02 3Pp12 Screenig of useful promoters for protein production in cultivation of *Aspergillus oryzae* with Sorghum juice
……○Sho Motosako [1], Tomohiro Suzuki [1], Satoshi Wakai [1,2], Yutaro Mori [1], Prihardi Kanar [3], Takashi Satsuka [4], Chiaki Ogino [1]
([1] Grad. Sch. Eng, Kobe Univ., [2] JAMSTEC X-star, [3] EGBRC, Kobe Univ.,, [4] Grad. Sch. Bioagric., Sci., Nagoya Univ.)

16:14 3Pp13 Lipid production from organic acids by oleaginous yeast *Lipomyces starkeyi*
…… ○Akihiro Ishioka [1], Prihardi Kahar [2], Yutaro Mori [1], Chiaki Ogino [1,2]
([1] Grad. Sch. Eng, Kobe Univ., [2] EGBRC, Kobe Univ.,)

16:26 3Pp14 Muconic acid production from aromatic compounds by *Acinetobacter* sp. Tol 5
……○Kyosuke Nishi [1], Hanayo Nakanishi [1], Yuuki Ohara [2], Katutoshi Hori [1]
([1] Grad. Sch. Eng., Nagoya Univ., [2] Friend Microbe Inc.)

16:38 3Pp15 Research on enzyme leakage caused by heat treatment of psychrophile-based simple biocatalysts
…… ○Chie Son, Kota Anada, Akiko Hida, Junichi Kato, Takahisa Tajima
(Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

Room Q Floor 9 907 (13:30–15:40)

【Cell Culture Engineering】

13:30 3Qp01 Valorising Chinese hamster ovary cell waste medium for protein expression in *Escherichia coli*MM294
……◯Judee Nogodula[1,4], Takeyuki Mogi[2], Tetsushi Namatame[2], Pijar Religia[3,4], Noriko Yamano-Adachi[1,4], Kohsuke Honda[3,4], Takeshi Omasa[1,4]
([1] Dept. Biotechnol., Grad. Sch. Eng., UOsaka, [2] Yokogawa Electric Corp., [3] ICBiotech, UOsaka, [4] OTRI, UOsaka)

13:42 3Qp02 Research on a new defoaming agent for high-concentration culture of CHO cells
…… ◯Yudai Hirao[1], Koji Sekiguchi[2], Megumi Nagayama[2], Yumiko Sasaki[2], Eiji Nagamori[1]
([1] Grad. Sch. Eng., Osaka Inst. Technol., [2] NOF Corp.)

13:54 3Qp03 Discovery of molecules that activate mitochondrial function and phenotypic analysis in CHO cells
…… ◯Sayaka Kazami (Hamamatsu Photonics K.K.)

14:06 3Qp04 Cell morphological analysis toward the development of novel cryopreservation agents
…… ◯Koki Kobayashi[1], Kenjiro Tanaka[1], Ryuji Kato[1,2]
([1] Grad. Sch. Pharm. Sci., Nagoya Univ., [2] Inst. of Nano-Life-Syst., Nagoya Univ.)

14:18 3Qp05 Development of a shear stress culture system for iPS cell-derived cerebral vascular endothelial cells using a pressure-driven biomimetic system
…… ◯Shinji Sugiura[1], Tatsunosuke Tomita[1], Kazuma Kurihara[2], Tadahiro Hashita[3], Hiroyuki Sato[3], Yuya Morimoto[4], Byeongwook Jo[5], Shigenori Miura[6], Chikara Miyake[7], Tomoki Ohkubo[7], Yoichi Fujiyama[7], Takeshi Sakura[7]
([1] CMBRI, AIST, [2] AMRI, AIST, [3] Grad. Sch. Pharm., Nagoya City Univ., [4] Sch. Fund. Sci. Eng., Waseda Univ., [5] Grad. Sch. Info. Sci. Tech.., Univ. Tokyo, [6] Grad. Sch. Biomed. Health Sci., Hiroshima Univ., [7] Shimadzu Corp.)

14:30 Break

14:40 3Qp06 Large-scale cultivation of various human iPS cell lines in bioreactor with reciprocal mixing
…… ◯Masashi Ueki[1], Tadashi Suzuki[1], Yoshikazu Kato[1,2]
([1] Glycometabolic biochemistry lab, PRI, RIKEN, [2] Mixing Technology Laboratory, Satake multimix corp.)

14:52 3Qp07 Functions of sulfated hyaluronic acid in growth factor binding and regulation of cell proliferation and differentiation: a comparison with heparin
…… ◯Noriyuki Yuasa, Yoshiko Nagano, Masato Habu, Fumie kimura, Jun Iwaki, Hideki Ishida, Yuji Matsuzaki
(Institute for Glycotechnology, Tokyo chemical industry Co. Ltd.)

15:04 3Qp08 Non-stained Wide-Field Imaging for Assessing Nutritional Status in Cultured Cells
…… ◯Haruka Maeoka, Takushi Ichinoo, Yoji Yamamoto (Canon Corp.)

15:16 3Qp09 Development of Size Fractionation of Osteoclasts and Co-Culture with Osteoblast
…… ◯Shogo Saito, Takumi Haga, Mina Okochi (Sch. Mater. Chem. Technol., Science Tokyo)

15:28 3Qp10 **〈Topics〉**
Development and validation of a multi-throughput multi-organ microphysiological system using 3D shakers
…… ◯Ren Yoshitomi, Shinji Sugiura (AIST)

Luncheon Seminars（12:00–13:00）

Room K Floor 7 704

3L-K On-chip Biotechnologies Co., Ltd.

Room N Floor 8 805

3L-N Beckman Coulter, Inc.

Room P Floor 9 905

3L-P KIRIN HOLDINGS CO., LTD. Institute for Bioprocess Technology

DE & I Workshop（11:45–13:15）

Floor 4 Cafe