

90th Anniversary Meeting 2012
The Society for Biotechnology, Japan (SBJ)

October 23rd – 26th, 2012

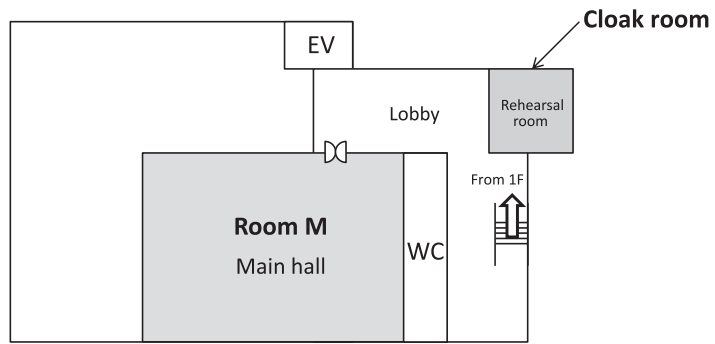
Kobe International Conference Center
Kobe, Japan

64th SBJ Annual Meeting Program

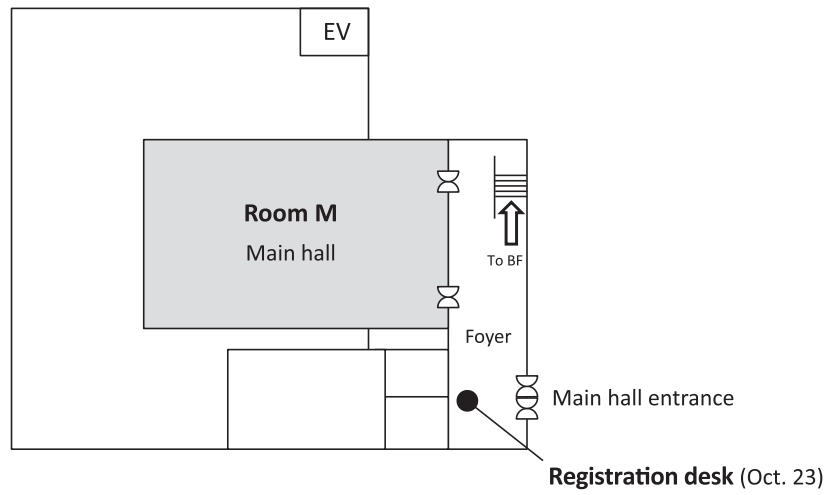
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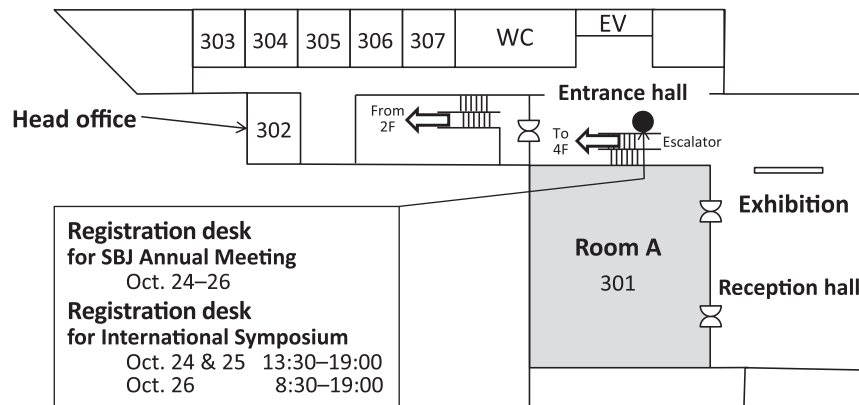
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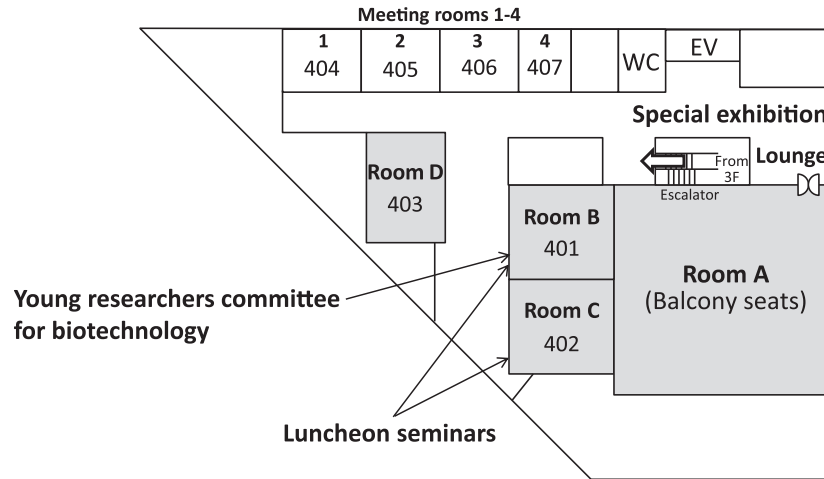


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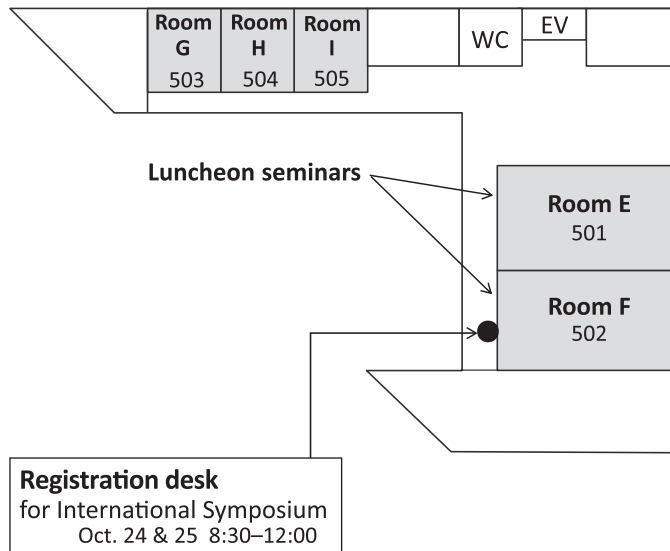


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October 23, 2012

Time	Abst No.	Title	Author (Affiliation) ○ = Indicates the presenter
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Room M Morning (9:30~12:30)

The 90th Anniversary Ceremony
Award Ceremony (11:00~11:55)
Award Lectures

11:55	1Ma01	Meritorious Service Award Speech Acknowledgement of a prize○Masato Hirotsune (Gen. Res. Lab., Ozeki Co.)	
12:00	1Ma02	Society Award Lecture Comprehensive research on bacterial cell wall degradation and modification enzymes○Junichi Sekiguchi (Fac. Tex. Sci. Tech., Shinshu Univ.)	Chairperson: Satoshi Harashima

Room M Afternoon (14:00~17:10)

14:00	1Mp01	Achievement Award Lecture Fundamental studies on the enhancement of central metabolism in bacteria producing useful metabolites○Atsushi Yokota (Lab. Microb. Physiol., Grad. Sch. Agric., Hokkaido Univ.)	Chairperson: Satoshi Harashima
14:30	1Mp02	Technical Award Lecture Development of a novel submerged culture of <i>koji</i> mold and its application○Hiroshi Shoji ¹ , Toshikazu Sugimoto ² , Susumu Masuda ¹ , Takao Ueno ³ (¹ Asahi Breweries, Ltd., ² The Nikka Whisky Distilling Co., Ltd, ³ Asahi Food & Healthcare Co., Ltd)	Chairperson: Takeshi Harima
14:55	1Mp03	Encouragement Award (Eda Award) Lecture Genetic study of high fermentation ability of sake yeast○Daisuke Watanabe (Natl. Res. Inst. Brewing)	Chairperson: Takashi Akamatsu
15:10	1Mp04	Encouragement Award (Saito Award) Lecture Application and development of technologies using magnetic nanoparticles○Mina Okochi (Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.)	Chairperson: Kenji Sonomoto
15:25	1Mp05	Encouragement Award (Terui Award) Lecture Development of scFv-immobilized polystyrene support for sensitive immunodiagnosis○Yoichi Kumada (Dept. Biomol. Eng., Kyoto Inst. Tech.)	Chairperson: Satoshi Harashima
15:50		Plenary Lecture The Hayabusa mission – Its seven years flightJun'ichiro Kawaguchi (Japan Aerospace Exploration Agency JAXA)	

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Room A Morning (9:00~11:55)

Symposium (Commitment to quality and technology in brewing)

9:00		Opening remarks	Masaaki Sakaguchi Chairperson: Yoji Hata
9:05	2Aa01	Traditional sake brewing as multi-microbial system and its quality attributes	○Haruhiko Mizoguchi (Kiku-Masamune Res. Lab.)
9:30	2Aa02	Development of analytical technologies of lager yeast to improve quality and process of brewing	○Satoshi Yoshida, Osamu Kobayashi, Keiko Kanai, Toshiko Minato, Hiroyuki Yoshimoto (Brew. Technol. Dev. Cent., Kirin Brewery Co. Ltd.) Chairperson: Akira Nishimura
9:55	2Aa03	The insistence on quality in making barley SHOCHU “ <i>iichiko</i> ”	○Hideharu Takashita (SANWA SHURUI Co., Ltd.) Chairperson: Nami Goto
10:20	2Aa04	The heart on quality of aroma and taste in wine making	○Hidetoshi Kojima (Frontier Labs., SAPPORO BREWERIES LTD)
10:45	2Aa05	Hop-Derived Odorants Contributing to the Aroma Characteristics of Beer	○Toru Kishimoto (Res. Lab. for Brewing, Asahi Breweries, Ltd.) Chairperson: Masaaki Sakaguchi
11:10	2Aa06	The challenge to diversification of malt whisky characters	○Shinji Fukuyo (Suntory Liquors Limited)
11:35		Closing remarks	Akira Nishimura

Room E Morning (9:00~12:00)

Symposium (Industrial applications of animal cell culture technologies —their progress and awaiting solutions—)

9:00		Opening remarks	Eiji Nagamori Chairperson: Eiji Nagamori
9:05	2Ea01	“Production Science” in biologics production using mammalian cells	○Takeshi Omasa (Institute of Technol. and Sci., The Univ. of Tokushima) Chairperson: Kana Yanagihara
9:35	2Ea02	Theme and development of cell culture technology for production of antibody therapeutics	○Yoshihiro Kaneko (CHUGAI PHARMACEUTICAL CO., LTD.)
10:00	2Ea03	Disparity Mutagenesis Technology for Accelerating Pharmaceuticals Production	○Ken Kasahara (Neo-Morgan Laboratory Incorporated)
10:25		Break	Chairperson: Kazunori Shimizu
10:30	2Ea04	Some problems experienced during industrialization of biopharmaceuticals production	○Masami Yokota (Astellas Phama Inc.)
10:55	2Ea05	Recombinant protein production using animal cells generated by an accumulative site-specific gene integration system	○Yoshinori Kawabe, Akira Ito, Masamichi Kamihira (Dept. Chem. Eng., Fac. Eng., Kyushu Univ.)

			Chairperson: Ryuji Kato
11:20	2Ea06	Some aspects of development and evaluation of biotechnology medicinal products in Japan○Takao Hayakawa (Pharm. Res. & Tech. Inst., Kinki Univ.)	
11:50		Discussion	

Room E Afternoon (14:00~18:30)

Symposium (Biomass-town Project for Sustainable Society)

14:00		Opening remarks Atsuhiko Shinmyo Chairperson: Kenji Kida	
14:05	2Ep01	Biomass Utilization Policy of Ministry of Agriculture, Forestry and Fisheries○Kyoko Sato (Biomass Policy Division, Food Industry Affairs Bureau, Ministry of Agriculture, Forestry & Fisheries)	
14:30	2Ep02	Creating a Recycling Based Society in Oki Town, Fukuoka○Kimio Sakai (Oki Town Office, Fukuoka)	
14:55		Break	
			Chairperson: Kenji Inagaki
15:05	2Ep03	Domestic Animal Excrement and Methane Fermentation○Kenichi Shiroishi (Hokkaido, Town of Shikaoi)	
15:30	2Ep04	Methane Fermentation and Composting of Agricultural and Fisheries Product Residues by PPP○Atsushi Kimishima (Industrial Promotion Dep. of Miura City)	
15:55	2Ep05	Brilliant Future of Biomass Project in Kyoto —Present Status and Future Trends—○Hideyuki Tanaka (Kyoto Environment)	
16:20		Break	
			Chairperson: Atsuhiko Shinmyo
16:30	2Ep06	Development Status of Bamboo-Bioethanol Production Technology, Harmonizing Environment○Chikashi Okayama ¹ , Kenji Kida ² , Akinori Jyo ² , Takashi Akamatsu ³ , Seiji Honda ⁴ , Asato Serigano ⁵ (¹ JNC, ² Dept. Appl. Chem. Biochem., Fac. Eng., Kumamoto Univ., ³ Fac. Appl. Life Sci., Sojo Univ., ⁴ Minamata Environmental R&D Center, ⁵ JNC Engineering)	
16:55	2Ep07	Green-village in South Korea: Application of technology and best practices○Okhee An (Department of Family and Housing Studies, Yeungnam University, South Korea)	
17:30		Panel discussion	

Room F Afternoon (13:30~16:00)

Symposium (Development of new food functions focusing on D-amino acids: its current conditions and prospects)

13:30		Opening remarks Toshihisa Ohshima Chairperson: Tadao Oikawa	
13:35	2Fp01	D-Amino acids in fermented foods: the presence and the function○Toshihisa Ohshima ¹ , Yuta Mutaguchi ¹ , Taketo Ohmori ² , Kana Morisaki ¹ , Yasuhiro Shimizu ¹ , Junpei Kobayashi ¹ , Katsumi Doi ¹ (¹ Fac. Agric., Kyushu Univ., ² Dept. Biotech., Fac. Eng., Osaka Inst. Tech.)	
14:00	2Fp02	Construction of D-amino acid assay systems with D-amino acid-metabolizing enzymes○Tohru Yoshimura, Shiro Kato, Tomokazu Ito, Hisashi Hemmi (Grad. Sch. Biol. Agric. Sci., Nagoya Univ.) Chairperson: Tohru Yoshimura	
14:25	2Fp03	D-Amino acid in sake: quantitative analysis, production mechanism, and function○Tadao Oikawa (Dept. Life Sci. & Biotechnol., Kansai Univ.)	

14:50		Break
15:05	2Fp04	Development of D-amino acid-containing food using lactic acid bacteria isolated from <i>kimoto</i>○Toshinari Takahashi (Gen. Res. Lab., Kiku-Masamune Sake Brewing Co.) Chairperson: Toshihisa Ohshima
15:30	2Fp05	Free D-amino acids in skin tissues and foods as candidates for biologically active molecules○Chieko Okamura ¹ , Yosuke Tojo ^{1,2} , Munehiro Iketani ¹ , Yumiko Hioki ¹ , Yutaka Ashida ¹ , Kenji Hamase ² , Jiro Kishimoto ¹ (¹ Shiseido Research Center, ² Grad. Sch. Pharm. Sci., Kyushu Univ.)
15:55		Closing remarks Toshihisa Ohshima

Room F Afternoon (16:40~19:00)

Symposium (Designable biointerface)

16:40		Opening remarks Katsutoshi Hori Chairperson: Katsutoshi Hori
16:45	2Fp06	Nano-biodevices and interface design○Eiichi Tamiya (Dep. Appl. Physics, Osaka Univ.)
17:20	2Fp07	Electrochemical reguration of microbial metabolisms and gene expression profiles○Shuji Nakanishi ¹ , Kazuhito Hashimoto ^{1,2} (¹ RCAST, The University of Tokyo, ² Grad. Sch. Eng. Tokyo Univ.)
17:35	2Fp08	Functional protein assemblies through enzymatic post-translational modification○Noriho Kamiya ^{1,2} (¹ Center for Future Chem., Kyushu Univ., ² Dept. Appl. Chem., Kyushu Univ.) Chairperson: Noriho Kamiya
17:50	2Fp09	Design of functional peptide and its application to cell-adhesive interface○Honda Hiroyuki (Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.)
18:25	2Fp10	Liposome as Designable Nano-Interface to Induce an Emergence○Hiroshi Umakoshi (Div. Chem. Eng., Grad. Sch. Eng. Sci., Osaka Univ.)
18:40	2Fp11	Analyses of bacterionanofibers and development into interfacial microbial engineering○Katsutoshi Hori (Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.)
18:55		Closing remarks Noriho Kamiya

Room B Morning (9:00~12:00)

General Presentaion (Bioprocess engineering)

9:00	2Ba01	PHB production from molasses by alkaliphilic <i>Halomonas</i> sp.○Hiroto Yokaryo, Yutaka Tokiwa (Okinawa Ind. Tech. Cent.)
9:12	2Ba02	Microorganisms related to indigo dyeing of Hanaori in Okinawa Island○Yutaka Tokiwa, Hiroto Yokaryo (Okinawa Industrial Technology Center)
9:24	2Ba03	Microbial and enzymatic degradation of chemical synthesized Poly[(<i>R</i>)-3-hydroxybutyrate]○Takao Raku ¹ , Miho Hiraga ¹ , Kanako Washida ¹ , Shoei Teruya ² , Hiroto Yokaryo ² , Yutaka Tokiwa ² (¹ Konan Chemical Ind. Co., Ltd., ² OITC)
9:36	2Ba04	The construction of cyanobacterial host with green light inducible auto lysis○Kotone Miyake ^{1,2} , Stefano Ferri ^{1,2} , Mitsuharu Nakajima ^{1,2} , Koichi Abe ^{1,2} , Katsuhiro Kojima ^{1,2} , Koji Sode ^{1,2} (¹ Dept. of Biotechnol., Graduate School of Engineering, Tokyo Univ. of Agric. and Technol., ² JST, CREST)

- 9:48** 2Ba05 Functional evaluation of chimeric blue-light sensor protein in cyanobacteria
○Mitsuharu Nakajima^{1,2}, Koichi Abe^{1,2}, Katsuhiko Kojima^{1,2}, Stefano Ferri^{1,2}, Koji Sode^{1,2}
 (1Dept. of Biotech., Graduate School of Engineering, Tokyo Univ. Agric. and Technol., 2JST, CREST)
- 10:00** 2Ba06 Production of indigo by microbial cells immobilized through bacterionanofiber AtaA
○Kazuki Shigemori¹, Masahito Ishikawa², Katsutoshi Hori²
 (1Dept. Mat. Sci. Eng., Nagoya Inst. Tech., 2Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.)
- 10:12** 2Ba07 Isolation of novel biosurfactant-producing bacterium from the deep sea
○Masaaki Konishi¹, Yuriko Nagano¹, Akinori Yabuki², Tomo-o Watsuji¹,
 Satoshi Nakagawa³, Yuji Hatada¹ (1JAMSTEC, 2JSPS, 3Grad. Sch. Fish. Sci., Hokkaido Univ.)
- 10:24** 2Ba08 Pretreatment of softwood biomass for efficient ethanol production
○Takashi Saijo¹, Chizuru Sasaki², Chikako Asada², Yoshitoshi Nakamura²
 (1Dept. Biol. Sci. Tech., Univ. Tokushima, 2Dept. Biol. Sci. Tech., Fac. Eng., Univ. Tokushima)
- 10:36** 2Ba09 Study on molecular weight decrease of PHA synthesized by class IV PHA synthases
○Manami Hyakutake¹, Satoshi Tomizawa¹, Kouhei Mizuno², Takeharu Tsuge¹
 (1Dept. Innov. Eng. Mat., Tokyo Inst. Technol., 2Dept. Mat. Sci. Chem. Eng., Kitakyushu Natl. Col. Tech.)
- 10:48** 2Ba10 An *in vitro* study of PHA synthase activation by PHA binding protein
○Kazunori Ushimaru, Yoriko Watanabe, Takeharu Tsuge
 (Dept. Innov. Eng. Mater., Tokyo Inst. Technol.)
- 11:00** 2Ba11 Effects of modification of anaplerotic pathway on growth and polyhydroxyalkanoate biosynthesis in H₂-
 oxidizing bacterium *Ralstonia eutropha*
○Rie Shimizu, Izumi Orita, Satoshi Nakamura, Toshiaki Fukui (Dep. Bioen., Tokyo Inst. Technol.)
- 11:12** 2Ba12 Production of 3-hydroxybutyric acid using CoA transferase
○Toshihiko Ooi, Ken'ichiro Matsumoto, Takehiro Ohkei, Inori Honma, Seiichi Taguchi
 (Div. Biotech. Macromol. Chem., Gard. Sch. Eng., Hokkaido Univ.)
- 11:24** 2Ba13 Engineered class I lactate-polymerizing polyhydroxyalkanoate (PHA) synthase
○Takashi Ooba¹, Anna Ochi¹, Kohei Sakai¹, Ken'ichiro Matsumoto¹, Takeharu Tsuge²,
 Seiichi Taguchi¹ (1Grad. Sch. Eng., Hokkaido Univ., 2Dept. Innov. Eng. Mat., Tokyo Inst. Technol.)
- 11:36** 2Ba14 Microbial factory for useful polyesters using engineered *Corynebacterium glutamicum*
Yuyang Song¹, ○Ken'ichiro Matsumoto¹, Toshihiko Ooi¹, Tsutomu Tanaka², Akihiko Kondo²,
 Seiichi Taguchi¹ (1Biotech. Macromol. Eng. Hokudai, 2Appl. Chem. Kobe Univ.)
- 11:48** 2Ba15 Microbial synthesis of 2-hydroxybutyrate-based polyesters
○Satsuki Terai, Ayako Ishiyama, Ken'ichiro Matsumoto, Seiichi Taguchi
 (Dept. Eng., Div. Biotech. Macromol. Chem., Hokkaido Univ.)

Room B Afternoon (13:30~18:42)

General Presentaion (Bioprocess engineering / Sensors and monitoring devices / Cell and tissue engineering)

- 13:30** 2Bp01 LEA-like peptide coexpression system for boost protein expression in *Escherichia coli*
○Shinya Ikeno, Nana Uchida, Tetsuya Haruyama
 (Grad. Sch. Life Sci. System Eng., Kyushu Inst. Tech.)
- 13:42** 2Bp02 Biocatalytic activity of heat-treated cells of the hydrophobic bacterium *Rhodococcus rhodochrous* NBRC15564
 in essentially wate-free environments
○Hibino Aiko, Kousuke Honda, Kenji Okano, Hisao Ohtake (Dept. Mat. Life Sci., Osaka Univ.)
- 13:54** 2Bp03 Immobilization of enzymes on porous silica particles using Si-tag for effective bioprocess
○Keishi Toda, Takeshi Ikeda, Ryuichi Hirota, Akio Kuroda
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sch. Mat., Hiroshima Univ.)

- 14:06** 2Bp04 Development of specific antibody production using goldfish (bubble eye)
○Yutaka Tamaru^{1,2}, Hisayoshi Ishikawa¹, Chikako Shimokawa¹, Hiroko Tsutsumi³
 (1Grad. Sch. Bioresour., Mie Univ., 2Life Sci. Res. Centr., Mie Univ., 3Gekkeikan Sake Res. Inst.)
- 14:18** 2Bp05 Glycosylation of TNFR/Fc produced into yolk in genetically manipulated chicken
○Ken-ichi Nishijima, Kazuhiro Yoshida, Yuuya Okuzaki, Hidenori Kaneoka, Shinji Iijima
 (Dept. Biotechnol., Nagoya Univ.)
- 14:30** 2Bp06 Purification system of IgG using novel thermo-responsive chromatographic resin
○Ichiro Koguma, Kazuo Okuyama (Asahi kasei Medical)
- 14:42** 2Bp07 Production of cell-enclosing microparticles via competitive enzymatic reactions
○Tomoaki Ashida, Shinji Sakai, Shoutaro Ogino, Masahito Taya (Grad. Sch. Eng. Sci., Osaka Univ.)
- 14:54** 2Bp08 Investigation of immobilization of microbial cells on glass surface
○Mayu Miyata, Hitomi Ohara, Yuzi Aso (Kyoto Inst. Tech)
- 15:06** 2Bp09 Development of a rapid and sensitive method for assessing endotoxin by using LAL-conjugated-microbeads and it's application
○Chihiro Toda, Hideki Aoyagi (Grad. Sch. Life Env. Sci., Univ. Tsukuba.)
- 15:18** 2Bp10 Development of a rapid and sensitive method for assessing beta-glucan by using LAL-conjugated-microbeads
○Aiko Shimizu, Chihiro Toda, Hideki Aoyagi (Fac. Life Env. Sci., Univ. Tsukuba)
- 15:30** 2Bp11 The measurements of the concentration of intracellular free magnesium ion through cell cycle
○Yusuke Koga¹, Susumu Uchiyama¹, Sachihiko Matsunaga², Kiichi Fukui¹
 (1Dept. Biotech., Grad. Sch. Eng., Osaka Univ., 2Tokyo University of Science)
- 15:42** 2Bp12 Change of local elastic structure of biotube vascular grafts before and after implantation observed by using a scanning haptic microscope
○Takeshi Moriwaki^{1,2}, Tomonori Oie^{1,3}, Keiichi Takamizawa¹, Masashi Yamanami¹,
 Yoshinobu Murayama⁴, Toru Fukuda⁴, Sadao Omata⁴, Yasuhide Nakayama^{1,2}
 (1Div. Med. Eng. Mater., NCVC Res. Inst., 2Div. Chem., Grad. Sch. Eng., Hokkaido Univ.,
 3Shinkan Kogyo Co., 4Col. Eng., Nihon Univ.)
- 15:54** 2Bp13 Biomechanical properties of cell
○Takanori Kihara, Seyed Mohammad Ali Haghparast, Yuji Shimizu, Jun Miyake
 (Grad. Sch. Eng. Sci., Osaka Univ.)
- 16:06** 2Bp14 A method to modify nanoneedle arrays with antibodies homogeneously
○Marie Shimooku¹, Ryuzo Kawamura², Kazuhiko Ishihara³, Kyoko Fukazawa³,
 Chikashi Nakamura^{1,2} (1Dept. Biotechnol., Tokyo Univ. Agric. Technol.,
 2Biomedical Research Institute, AIST, 3Dept. Mat. Eng., UT.)
- 16:18** 2Bp15 Effect of nanoneedle oscillation on the insertion into living cells
○Seung-Hwan Ryu¹, Yaron Silberberg², Ryuzo Kawamura², Chikashi Nakamura^{1,2}
 (1Dept. Biotechnol., Tokyo Univ. Agric. Technol., 2Biomedical Research Institute, AIST)
- 16:30** 2Bp16 Development of Low voltage electroporation device using Au-ITO electrode for adherent cell
○Kazumi Hakamada¹, Hirofumi Shintaku¹, Takeshi Nagata², Hiroshi Fujimoto¹, Satoyuki Kawano¹,
 Jun Miyake¹ (1Grad. Sch. Eng. Sci., Osaka Univ., 2Grad. Shic. Frontier. Sci., Osaka Univ.)
- 16:42** 2Bp17 Development of cell transport device in autologous culture process
○Norihiko Hata¹, Masahiro Murai², Tomoya Shibata², Hiroki Mastunaga², Kazuhiro Nonaka³,
 Akio Funakubo² (1FRDC. Tokyo Denki Univ., 2Grad. Sch. Sci. Eng. Tokyo Denki Univ.,
 3McGowan Inst. Univ. Pittsburgh)
- 16:54** 2Bp18 Study on evaluation of cell growth potential in cell culture process
○Hiroo Noguchi¹, Norihiko Hata², Kazuhiro Nonaka³, Akio Funakubo¹
 (1Grad. Sch. Sci. Eng. Tokyo Denki Univ., 2FRDC. Tokyo Denki Univ., 3McGowan Inst. Univ. Pittsburgh)

- 17:06** 2Bp19 Chicken oviduct-specific gene expression using synthetic hybrid promoter system
.....○Shota Harada, Yoshinori Kawabe, Takeshi Kurohara, Akira Ito, Masamichi Kamihira
(Dept. Chem. Eng., Fac. Eng., Kyushu Univ.)
- 17:18** 2Bp20 Functional evaluation of genetically engineered hepatoma cells
.....○Hideaki Yamamoto, Yoshinori Kawabe, Akira Ito, Masamichi Kamihira
(Dept. Chem. Eng., Fac. Eng., Kyushu Univ.)
- 17:30** 2Bp21 Production of single-chain Fv-Fc fusion protein by recombinant insect cells
.....Hiroyuki Sonoda¹, Yoichi Kumada², Tomohisa Katsuda¹, ○Hideki Yamaji¹
(¹Dept. Chem. Sci. Eng., Grad. Sch. Eng, Kobe Univ., ²Dept. Chem. Mats. Tech., KIT)
- 17:42** 2Bp22 Gene expression profiles in ATF4-overexpressing CHO cell line
.....○Tomomi Tsutsui¹, Akihiro Shirai², Masayoshi Onitsuka², Akitoshi Noshizawa³, Hideaki Maseda²,
Kohsuke Honda³, Hisao Ohtake³, Takeshi Omasa^{2,3} (¹Adv. Tec. and Sci., Univ. Tokushima,
²Ins. of Tec. and Sci., Univ. Tokushima, ³Grad. Sci. Eng., Osaka Univ.)
- 17:54** 2Bp23 Clonal variability and chromosomal instability in Chinese hamster ovary cell lines
.....○Mai Takahashi¹, Syuichi Kimura¹, Seyed Mohammad Ali Haghparast², Cao Yihua²,
Kohsuke Honda², Hisao Ohtake², Takeshi Omasa^{2,3} (¹Adv. tech. Sci., Univ. Tokushima,
²Grad. Sci. Eng., Osaka University, ³Institute of Tech. Sci., Univ. Tokushima)
- 18:06** 2Bp24 The effect of trehalose addition on antibody aggregation in CHO cell culture
.....○Miki Tatsuzawa¹, Masayoshi Onitsuka², Akihiro Shirai², Hideaki Maseda², Takeshi Omasa²
(¹Adv. Tech. and Sci., Univ. Tokushima, ²Institute of Tech. and Sci., Univ. Tokushima)
- 18:18** 2Bp25 The effect of WFS1 over-expression on recombinant protein production
.....○Akihiro Shirai¹, Koichiro Sato², Masayoshi Onitsuka¹, Hideaki Maseda¹, Takeshi Omasa¹
(¹Ins. of Tec. and Sci., Univ. of Tokushima, ²Fac. Eng., Univ. of Tokushima)
- 18:30** 2Bp26 The effects of glycosylation on antibody aggregation in CHO cell culture
.....○Masayoshi Onitsuka¹, Akira Kawaguchi², Miki Tatsuzawa³, Kohsuke Honda²,
Hisao Ohtake², Takeshi Omasa^{1,2} (¹Inst. Tech. and Sci., Univ. Tokushima,
²Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ³Adv. Tech. and Sci., Univ. Tokushima)

Room C Morning (9:00~12:00)

General Presentaion (Enzymology, enzyme)

- 9:00** 2Ca01 Combinational effects of a DPP-IV inhibitor, TS-021 and metformin in a mouse model of type 2 diabetes
.....○Atsushi Tajima, Takashi Hirata, Kazuo Taniguchi, Yukiko Kondo, Sota Kato, Masako Saito-Hori,
Tsuyoshi Ishimoto, Koji Yamamoto (Mol. Funct. Pharmacol. Labs., Taisho Pharmaceutical Co., Ltd.)
- 9:12** 2Ca02 Characterization and recombinant expression of polyphenoloxidases from *Agaricus brasiliensis*
.....○Akiko Matsumoto-Akanuma¹, Satoshi Akanuma², Masuro Motoi¹, Naohito Ohno¹
(¹Sch. Pharm., Tokyo Univ. Pharm. Life Sci., ²Dept. Mol. Biol., Tokyo Univ. Pharm. Life Sci.)
- 9:24** 2Ca03 Functional library of fungal cytochrome P450s
.....○Yuki Sanada¹, Hirofumi Ichinose², Hiroyuki Wariishi³
(¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ.,
²Fac. Agric., Kyushu Univ., ³Fac. Arts and Sci., Kyushu Univ.)
- 9:36** 2Ca04 Functional screening of cytochrome P450s for production of bioactive flavonoids
.....○Mayumi Hatakeyama¹, Hirofumi Ichinose², Hiroyuki Wariishi^{3,4}
(¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ., ²Fac. Agric., Kyushu Univ.,
³ICMRN, Kyushu Univ., ⁴Fac. Arts and Sci., Kyushu Univ.)
- 9:48** 2Ca05 Purification and characterization of glutamate decarboxylase from *Grifola frondosa*
.....○Iwamoto Kasuko, Yoshida Takahiro, Fukuda Yasuhisa, Terashita Takao, Shirasaka Norifumi
(Grad. School of Agr. Kin-ki Univ.)

- 10:00** 2Ca06 A Novel Cold-active Lipase from *Pichia lynnferdii* Y-7723
.....○Hak-Ryul Kim, Mi-Hyun Kwon, Ji-Yeon Kim
(School Food Sci. Biotechnol., Kyungpook Natl. Univ., Korea)
- 10:12** 2Ca07 Cloning of aspartic protease II gene from *Aspergillus repens* MK82
.....○Mayo Umeda¹, Ken-ichi Yoshida¹, Dai Koyama², Mikiharu Doi², Kenji Aoki³, Shinji Takenaka¹
(¹Dept. Agrobiosci., Kobe Univ., ²Marutomo Co., Ltd., ³Dept. Nutri. Manage. Sagami Women's Univ.)
- 10:24** 2Ca08 Gene cloning and expression of eggshell membrane degrading enzyme from *Pseudomonas aeruginosa* ME-4
.....○Shinji Takenaka, Shinpei Hano, Hitoshi Ashida, Ken-Ichi Yoshida (Grad. Sch. Agric.)
- 10:36** 2Ca09 Purification and characterization of halotolerant amylases from *Bacillus subtilis* FP-133
.....○Ayaka Miyatake, Shinji Takenaka, Ken-Ichi Yoshida (Grad. S. Agric.)
- 10:48** 2Ca10 Role of the small subunit SldS in molecular maturation process of the membrane-bound heterotrimeric sorbitol dehydrogenase of *Gluconobacter* sp.
.....○Toshiharu Yakushi¹, Mayumi Aritsune¹, Wichai Soemphol², Hirohide Toyama³,
Kazunobu Matsushita¹ (¹Fac. Agr., Yamaguchi Univ., ²Khon Kaen Univ., ³Fac. Agr., Univ. Ryukyus)
- 11:00** 2Ca11 Functional analysis of haloalkylphosphorus hydrolase from *Sphingomonas* sp. TDK1
.....○Toyokazu Kobayashi, Kazunobu Kawakami, Katsumasa Abe, Shouji Takahashi, Yoshio Kera
(Nagaoka Univ. Tech.)
- 11:12** 2Ca12 Functional characterization of haloalkylphosphorus hydrolase from *Sphingobium* sp. TCM1
.....○Takahiro Kabasawa, Ryouosuke Majima, Katsumasa Abe, Shouji Takahashi, Yoshio Kera
(Nagaoka Univ. Tech.)
- 11:24** 2Ca13 Detection and Functional Analysis of Methylcitrate Synthase in Citric Acid-Producing *Aspergillus niger*
.....○Keiichi Kobayashi, Yuki Honda, Kohtaro Kirimura
(Dept. Appl. Chem., Fac. Sci. Eng., Waseda Univ.)
- 11:36** 2Ca14 Heterologous Expression in *Escherichia coli* of Gene Encoding Aconitate Isomerase from *Pseudomonas* sp. WU-0701
.....○Kahori Yuhara, Hiromi Yonehara, Keiichi Kobayashi, Yuki Honda, Takasumi Hattori,
Kohtaro Kirimura (Dept. Appl. Chem., Fac. Sci. Eng., Waseda Univ.)
- 11:48** 2Ca15 Characterization of a novel thiosulfate dehydrogenase from tetrathionate-grown *Acidithiobacillus ferrooxidans*
.....○Kazuo Kamimura¹, Mei Kikumoto¹, Shohei Nogami¹, Jun Takada², Tadayoshi Kanao¹
(¹Div. Environ. Life Sci., Okayama Univ., ²Div. Chem. Biol. Technol., Okayama Univ.)

Room C Afternoon (13:30~14:30)

Invited Lectures

- 13:30** 2Cp01 Diversity of Endophytic Actinomycetes from Thai Tropical Plants and Their Properties of Plant Growth Enhancement
.....○Arinthip Thamchaipenet
(Department of Genetics, Faculty of Science, Kasetsart University, Thailand)
- 13:45** 2Cp02 Diversity of fungi and actinomycetes in Vietnam and potential for utilization
.....○Hop Van Duong¹, Lan Dung Nguyen¹, Ando Katsuhiko²
(¹Institute of Microbiology and Biotechnology (IMBT), Vietnam National University, Hanoi (VNU),
²Department of Biotechnology (DOB), National Institute of Technology & Evaluation (NITE), Japan)
- 14:00** 2Cp03 Study on diversity and potencies of Indonesian streptomycetes
.....○Langkah Sembiring¹, Ambarwati Ambarwati², Victor Aprilyanto¹
(¹Laboratorium Mikrobiologi, Fakultas Biologi Universitas Gadjah Mada, Yogyakarta, Indonesia,
²Fakultas Ilmu Kesehatan, Universitas Muhammadiyah, Surakarta, Indonesia)

- 14:15** 2Cp04 Screening and characterization of rare actinomycetes isolated from Thai rhizospheric soil
○Watanalai Panbangred^{1,2}, Bungonsiri Intra^{1,2}, Atsuko Matsumoto³, Yoko Takahashi^{3,4}
 (¹Dept. Biotech., Fac. Sci., Mahidol Univ., Bangkok, Thailand,
²MU-OU:CRC, Fac. Sci., Mahidol Univ., Bangkok, Thailand,
³Kitasato Instit. Life Sci., Kitasato Univ., Tokyo, Japan,
⁴Grad. Sch. Infect. Con. Sci., Kitasato Univ., Tokyo, Japan)

Room C Afternoon (14:30~18:54)

General Presentaion (Enzymology, enzyme)

- 14:30** 2Cp06 Biochemical characterization of coenzyme A biosynthesis in the archaea
○Hiroya Tomita¹, Yuusuke Yokooji¹, Takuya Ishibashi¹, Tadayuki Imanaka^{2,3}, Haruyuki Atomi^{1,3}
 (¹Dept. Synth. Chem. Biol. Chem., Kyoto Univ., ²Dept. Biotechnol., Ritsumeikan Univ., ³CREST, JST)
- 14:42** 2Cp07 Characterization of Tk2168 from *Thermococcus kodakarensis*
○Haruki Otaguro¹, Azumi Hirata², Dong-Ju You¹, Kazufumi Takano², Yuichi Koga¹,
 Shigenori Kanaya¹ (¹Dept. Mat. Life Sci., Osaka Univ., ²Grad. Sch. Life. Env. Sci., Kyoto Pref. Univ.)
- 14:54** 2Cp08 Structural and functional studies of long- and short-type FKBP from *Thermococcus kodakarensis*
○Yohei Ando, Cahyo Budiman, Yuichi Koga, Shigenori Kanaya (Dept. Mat. Life Sci., Osaka Univ.)
- 15:06** 2Cp09 Characterization of glycerophosphodiester phosphodiesterase from *Thermococcus kodakarensis* KOD1
○Yuya Atsuta¹, Yuichi Koga¹, Atsushi Kobayashi¹, Dong-Ju You¹, Takaaki Sato²,
 Haruyuki Atomi², Shigenori Kanaya¹ (¹Dept. Mat. Life Sci., Osaka Univ.,
²Dept. of Synth. Chem. & Biol. Chem., Kyoto Univ.)
- 15:18** 2Cp10 Characterization of glycerol-3-phosphate dehydrogenase from *Thermococcus kodakarensis* KOD1
○Yuichi Koga¹, Atsushi Kobayashi¹, Dong-Ju You¹, Takaaki Sato², Haruyuki Atomi²,
 Shigenori Kanaya¹ (¹Dept. Mat. Life Sci., Osaka Univ., ²Dept. of Chem., Osaka Univ.)
- 15:30** 2Cp11 Roles of PI-*TkoII* homing endonuclease in gene transfer
○Yusuke Onishi¹, Ryota Hidese³, Tadayuki Imanaka², Shinsuke Fujiwara³
 (¹Dept. Biosci., Kwansei Gakuin Univ., ²Dept. of Biotech., Coll. of Life Sci., Ritsumeikan Univ.,
³Res. Cent. for Environ. Biosci., Grad. Sch. of Sci. and Tech., Kwansei Gakuin Univ.)
- 15:42** 2Cp12 Evolvability of thermophilic proteins from Archaea and Bacteria
○Atsushi Aoi¹, Clement Angkawidjaja¹, Yuichi Koga¹, Kazufumi Takano², Shigenori Kanaya¹
 (¹Dept. Mat. Life Sci., Osaka Univ., ²Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ.)
- 15:54** 2Cp13 Functional analysis of ubiquitin-like genes identified from the thermophilic archaeon, *Caldiarchoaeum subterraneum*
○Rikako Fujimoto¹, Masahiro Tokuhara¹, Tamotsu Kanai¹, Takuro Nunoura²,
 Yoshihiro Takaki², Hideto Takami², Ken Takai², Haruyuki Atomi¹
 (¹Dept. Synth. Chem. Biol. Chem., Kyoto Univ., ²JAMSTEC)
- 16:06** 2Cp14 Study of novel metagenome-derived esterase from leaf-and-branch compost
○Hiroyuki Okano, Xun Hong, Saya Yamato, Eiko Kanaya, Dong-Ju You,
 Clement Angkawidjaja, Yuichi Koga, Shigenori Kanaya (Dept. Mat. Life Sci., Osaka Univ.)
- 16:18** 2Cp15 Functional analysis of D-lactate dehydrogenase from the hyperthermophile archaea *Thermoproteus tenax*
○Manami Oi¹, Takenori Satomura¹, Haruhiko Sakuraba², Toshihisa Oshima³, Shin-ichiro Suye¹
 (¹Dept. Biotechnol., Univ. Fukui, ²Dept. Appl. Biol. Sci., Kagawa Univ., ³Dept. Gen. Eng., Kyushu. Univ.)
- 16:30** 2Cp16 Screening of FAD-dependent glucose dehydrogenase gene from thermophilic fungi
○Kazumichi Ozawa, Noriko Sasaki, Nao Kinoshita, Atsunori Hiratsuka, Kenji Yokoyama
 (NRI, AIST)

- 16:42** 2Cp17 Screening and functional analysis of novel dye-linked dehydrogenases from thermophiles
.....○Masaru Ishikura¹, Takenori Satomura¹, Haruhiko Sakuraba², Toshihisa Ooshima³, Shin-ichiro Suye¹
(¹Dept. Biotechnol., Fukui Univ., ²Dept. Appl. Biol. Sci., Kagawa Univ., ³Dept. Gen. Eng., Kyushu Univ.)
- 16:54** 2Cp18 Diversity of 3-hydroxyaspartate degrading enzyme found in soil bacteria
.....○Hiroyuki Nagano, Atsushi Yokota, Masaru Wada
(Lab. Microb. Physiol., Grad. Sch. Agric., Hokkaido Univ.)
- 17:06** 2Cp19 Characterization of Rhizobial Hydroxyproline Epimerase and Synthesis of D-Hydroxyproline
.....○Ryotaro Hara¹, Kuniki Kino^{1,2} (¹ASMeW, ²Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 17:18** 2Cp20 Development of novel assays for amino acids coupling to pyrophosphate-detection as a platform
.....○Masafumi Kameya^{1,2}, Yasuhisa Asano^{1,2} (¹Biotech. Res. Center, Toyama Pref. Univ., ²JST, ERATO)
- 17:30** 2Cp21 Activity and Stability of an Artificial Protein with Two Tandemly-linked RNase H Molecules
.....○Takashi Takamiya, Eiko Kanaya, Clement Angkawidjaja, Dong-Ju You, Kazufumi Takano,
Yuichi Koga, Shigenori Kanaya (Dept. Mat. Life Sci., Osaka Univ.)
- 17:42** 2Cp22 Synthesis of optically active amines by (S)-imine reductase
.....○Koichi Mitsukura, ○Tatsuya Fukuoka, Tatsuya Kuramoto, Toyokazu Yoshida, Nagasawa Toru
(Dept. Biomol. Sci., Gifu Univ.)
- 17:54** 2Cp23 Stereoselective hydrolysis of malonitrile derivatives by *Rhodococcus rhodochrous* J1 nitrilase
.....○Toyokazu Yoshida¹, ○Takuya Mizutani¹, Ryo Nakashima¹, Koichi Mitsukura¹, Toru Nagasawa¹,
Hiroshi Kawabata² (¹Dept. Biomol. Sci., Gifu Univ., ²Sci. Tech. Res. Center)
- 18:06** 2Cp24 Analysis of molecular mechanism for enantioselectivity of lipase from Burkholderia cepacia KWI-56
.....○Akitomo Hatanaka, Hiroyuki Fukuda, Dong-Ju You, Clement Angkawidjaja,
Yuichi Koga, Shigenori Kanaya (Dept. Mat. Life Sci., Osaka Univ.)
- 18:18** 2Cp25 Studies on α -N-acetylgalactosaminidase for the synthesis of glycopeptide
.....○Kentarō Asano¹, Tatsuya Yamaguchi¹, Kenichi Hashimoto¹, Tatsuo Miyazaki²,
Hisashi Kawasaki¹, Ryo Natsume¹, Katsumi Ajisaka², Tsuyoshi Nakamatsu¹
(¹Dept. Mat. Sci. Eng., Grad. Sch. Eng., Tokyo Denki Univ.,
²Dept. Appl. Life Sci., Niigata Univ. Pharm.)
- 18:30** 2Cp26 Conversion to L-arabinokinase from galactokinase
.....○Mamoru Nishimoto, Motomitsu Kitaoka (Natl. Food Res. Inst., NARO)
- 18:42** 2Cp27 Purification of membrane-bound fatty acid desaturase
.....○Kenshi Watanabe, Makoto Ohno, Tsunehiro Aki
(Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)

Room D Morning (9:00~12:00)

General Presentaion (Genetic engineering)

- 9:00** 2Da01 Characterization of 2,6-dihydroxybenzoate catabolic pathway genes of *Rhodococcus jostii* RHA1
.....○Kota Motoi, Daisuke Kasai, Naoto Araki, Eiji Masai, Masao Fukuda
(Dept. Bioeng., Nagaoka Univ. Tech.)
- 9:12** 2Da02 Characterization of arsenic resistance gene clusters in *Rhodococcus erythropolis* IAM1399
.....○Kazuma Hirata¹, Yu Nakanowatari², Masao Fukuda³, Ginro Endo², Keisuke Miyauchi²
(¹Dept. Civil Environ. Eng., Tohoku Gakuin Univ., ²Dept. Civil Environ. Eng., Tohoku Gakuin Univ.,
³Dept. Bioeng., Nagaoka Univ. Tech.)
- 9:24** 2Da03 Genetic analysis of 2-nitrobenzoate degradation pathway in *Cupriavidus* sp. strain KU-41
.....○Makoto Fujioka, Kento Fukushima, Hiroaki Iwaki, Yoshie Hasegawa (Kansai University)

- 9:36** 2Da04 Physiological function of Kdp-type K transporters in *Synechocystis* sp. PCC 6803
○Kei Nanatani¹, Toshiaki Shijuku¹, Yousuke Takano¹, Tomoko Yamazaki¹, Lalu Zulkifli¹,
 Masaro Akai¹, Ryo Iitsuka², Hideyuki Matsumoto², Hisataka Maruyama²,
 Fumihito Arai², Nobuyuki Uozumi¹ (¹Dept. Biomol. Eng., Grad. Sch. Eng., Tohoku Univ.,
²Dept. Micro-Nano Eng., Grad. Sch. Eng., Nagoya Univ.)
- 9:48** 2Da05 Analysis of LD-transpeptidase involved in lysozyme sensitivity in *Corynebacterium glutamicum*
○Akira Kumagai, Kenshi Hayakawa, Tatsuya Miyazawa, Masaaki Wachi
 (Dep. Bioen., Tokyo Inst. Technol.)
- 10:00** 2Da06 A genome-wide screening method to identify novel transcriptional regulators
○Yasuyuki Yamamoto¹, Tamotsu Kanai^{1,3}, Tadayuki Imanaka^{2,3}, Haruyuki Atomi^{1,3}
 (¹Dept. Synth. Chem. Biol. Chem., Kyoto Univ., ²Dept. Biotechnol., Ritsumeikan Univ., ³CREST, JST)
- 10:12** 2Da07 Characterization of a heat shock transcriptional regulator from hyperthermophilic archaea
○Tamotsu Kanai^{1,3}, Toru Odani¹, Tomoyuki Kamashita¹, Tadayuki Imanaka^{2,3}, Haruyuki Atomi^{1,3}
 (¹Dept. Synth. Chem. Biol. Chem., Kyoto Univ., ²Dept. Biotechnol., Ritsumeikan Univ., ³JST, CREST)
- 10:24** 2Da08 Protein phosphorylation network in hyperthermophilic archaeon *Thermococcus kodakarensis*
○Takashi AKIYAMA¹, Ken HIROSAKI², Rumi NEGISHI², Izumi ORITA¹, Nobuhiro HAYASHI²,
 Satoshi NAKAMURA¹, Tadayuki IMANAKA³, Toshiaki FUKUI¹
 (¹Dept. Bioeng., Tokyo Inst. Technol., ²Dept. Life Sci., Tokyo Inst. Technol.,
³Dept. Biosci. Biotech., Ritsumeikan Univ.)
- 10:36** 2Da09 Sulfur-reducing activity of NAD(P)H oxidase homologues from *Thermococcus kodakarensis*
○Phurt Harnvoravongchai¹, Izumi Orita¹, Hiroki Kobori¹, Satoshi Nakamura¹, Tadayuki Imanaka²,
 Toshiaki Fukui¹ (¹Grad. Sch. Biosci. & Biotech., Tokyo Tech., ²Coll. Life Sci., Ritsumeikan Univ.)
- 10:48** 2Da10 Analysis of proteins involved in silica polymerization in *Bacillus cereus* spores
○Hiroshi Konishi, Kei Motomura, Takeshi Ikeda, Mohamed Abdeltawab Abdallah Abdelhamid,
 Ryuichi Hirota, Akio Kuroda (Dept. Mol. Biotech, Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 11:00** 2Da11 Heterologous expression of the binuclear iron monooxygenase gene cluster from Mycobacteria
○Mika Hayashi¹, Toshiki Furuya¹, Hisashi Semba², Kuniki Kino¹
 (¹Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ., ²NIPPON SHOKUBAI CO., LTD.)
- 11:12** 2Da12 Screening of novel xylose isomerase genes from soil metagenome and its cell surface display on yeast
○Yuma Hamamoto¹, Dini Nurdiani¹, Tetsushi Mori¹, Koichi Kuroda², Mitsuyoshi Ueda²,
 Haruko Takeyama¹ (¹Life Sci. Medi. Sci., Grad. Sch. Sci. Eng., Waseda Univ.,
²Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 11:24** 2Da13 A new β -1,3-1,4-glucanase in *Bacillus* sp. SJ-10 isolated from *jeotgal*, a traditional Korean fermented fish
○Yu-Ri Kim, Eun-Young Kim, Jong Min Lee, Joong Kyun Kim, In-Soo Kong
 (Dept. Biotechnol. Fish. Sci. Pukyong Natl. Univ.)
- 11:36** 2Da14 Suppression of *N*-acetylglucosaminidase genes in *Bombyx mori* cells and silkworm larvae by shRNA expression
○Ayumi Kanematsu¹, Vipin Kumar Deo², Tatsuya Kato¹, Enoch Y. Park^{1,2}
 (¹Dept. Appl. Bio. Chem., Fac. Agric., Shizuoka Univ., ²Grad. Sch. Sci. Technol., Shizuoka Univ.)
- 11:48** 2Da15 Functional analysis of Mid2-like protein from *Aspergillus nidulans*
○Taiki Futagami¹, Kazufumi Seto², Yasuhiro Kajiwar³, Hideharu Takashita³, Toshiro Omori³,
 Kaoru Takegawa¹, Masatoshi Goto¹ (¹Fac. Agric., Kyushu Univ.,
²Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ., ³Sanwa Shurui Co. Ltd.)

Room D Afternoon (13:30~14:30)

Invited Lectures

- 13:30** 2Dp01 Genetic and Phenotypic Diversity of *Saccharomyces cerevisiae*: Evidence for the Origin of Domestic Populations of the Yeast
○Feng-Yan Bai, Qi-Ming Wang, Pei-Jie Han, Wan-Qiu Liu
 (State Key Laboratory of Mycology, Institute of Microbiology, Chinese Academy of Sciences, China)
- 13:45** 2Dp02 Taxonomy of yeasts-associated with *Apis cerana* and their potential use for pollen substitutes
○Wellyzar Sjamsuridzal¹, Adi Basukriadi¹, Ariyanti Oetari¹, Effionora Anwar²,
 Novia Rachmayanti¹, Bangsa Beristama Putera¹, Irvan Maulana¹, Retno Widowati¹,
 Estriningtyas Agus Rismawanti¹, Virgine Enfinali¹, Bregas Adi Luhur¹, Dafina Ghossani Nurlaili¹
 (¹Department of Biology, Faculty of Mathematics and Natural Sciences, Universitas Indonesia, Indonesia,
²Faculty of Pharmacy, Universitas Indonesia, Indonesia)
- 14:00** 2Dp03 Yeasts on Agronomic Crop Phylloplane: Description of Novel Species and Potential in Agricultural Application
○Savitree Limtong¹, Rungluk Kaewwichian¹, Hiroko Kawasaki², Wichien Yongmanitchai¹
 (¹Dept. Microbiol., Fac. Sci., Kasetsart Univ., Thailand, ²NITE Biological Resource Center, Japan)
- 14:15** 2Dp04 TISTR Algal Culture Collection and Its Utilization
○Aparat Mahakhant
 (Bioscience Dept., Thailand Institute of Scientific and Technological Research TISTR, Thailand)

Room D Afternoon (14:30~18:54)

General Presentaion (Taxonomy, phylogenetics, Genetic engineering / Plant cell, tissue engineering)

- 14:30** 2Dp06 Draft Genome Sequence of *Pediococcus lolii* NGRI 0510Q^T isolated from silage in Okinawa
○Katsumi Doi¹, Kazuki Mori², Kosuke Tashiro², Yasuhiro Fujino³, Satoru Kuhara²,
 Toshihisa Ohshima¹ (¹Inst. Genet., Fac. Agr. Kyushu Univ.,
²Mole. Gene. Tech., Fac. Agric., Kyushu Univ., ³Fac. Arts & Sci., Kyushu Univ.)
- 14:42** 2Dp07 Presence of halophilic and alkaliphilic lactic acid bacteria in various cheeses
○Mioko Matsuyama, Morio Ishikawa, Akiko Okamoto-Kainuma, Yukimichi Koizumi
 (Dept. Ferment. Sci., Tokyo Univ. Agric.)
- 14:54** 2Dp08 Phosphorylation site regulating intracellular localization and transcriptional activity in *Saccharomyces cerevisiae* transcription activator Gln3
○Minoru Numamoto¹, Yusuke Ueda¹, Yusuke Imabeppu¹, Minetaka Sugiyama¹, Hiromi Maekawa²,
 Satoshi Harashima¹ (¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ²Y. G. R. L., Osaka Univ.)
- 15:06** 2Dp09 Search and diversity analysis of Mating type gene in *Penicillium purpurogenum*
○Kasumi Koganei¹, Teppei Arai¹, Jun Kato², Takahumi Kasumi¹, Jun Ogihara¹
 (¹Dept. Biores. Util. Sci., Grad. Sch. Biores. Sci., Nihon Univ., ²Dept. Chem. Life. Sci., Nihon Univ.)
- 15:18** 2Dp10 Molecular Evolution of [NiFeSe]H₂ase based on Phylogenetic Tree and Modeling
○Takashi Tamura^{1,2}, Naoki Tsunekawa³, Toshiyuki Hirano³, Fumitoshi Sato³, Kenji Inagaki¹
 (¹Grad. Sch. Environ. Life Sci., ²JST Presto, ³Univ. Tokyo)
- 15:30** 2Dp11 Phylogenetic analysis of jatropha from Mexco, Asia, and Africa using SSR markers
○Tomohiro Sasai¹, Atefeh Alipour¹, Hideki Hirakawa², Shusei Sato², Hisashi Tsujimoto³,
 Alfredo Zamarripa Colmenero⁴, Hiroe Sakai¹, Suguru Tsuchimoto¹, Fukui Kiichi¹
 (¹Dept. Mat. Life Sci., Osaka Univ., ²Kazusa DNA Res. Inst., ³Tottori Univ., ⁴INIFAP)
- 15:42** 2Dp12 Characterization of *Alcaligenes faecalis* strain AD15 which indicates biocontrol activity against plant pathogens
○Shin-ichiro Yokoyama¹, Yoshitomi Adachi¹, Shuichi Asakura¹, Erina Kohyama²
 (¹Indust. Tech. Center, Gifu Pref. Gov., ²Gifu Pref. Res. Inst. Health Environ. Sci.)

- 15:54** 2Dp13 Purification and characterization of hemolytic enzyme in periodontopathogenic bacterium *Eikenella corrodens*.
○Mihoko Yamamoto¹, Yayoi Matsuura¹, Akio Kato¹, Yuichiro Noiri², Shigeyuki Ebisu²,
 Hiroyuki Azakami¹ (¹Dept. Biol. Chem., Yamaguchi Univ., ²Grad. Sch. Dent., Osaka Univ.)
- 16:06** 2Dp14 Periodontopathogenic bacterium, *Eikenella corrodens*, enhances its pathogenicity by phage infections in oral cavity
Yoshihiro Kurashige¹, Kazunori Yamada¹, Akio Kato¹, Yuichiro Noiri², Shigeyuki Ebisu²,
 ○Hiroyuki Azakami¹ (¹Dept. Biol. Chem., Yamaguchi Univ., ²Grad. Sch. Dent., Osaka Univ.)
- 16:18** 2Dp15 Sucrose Induces the Extracellular DNA release in *Streptococcus mutans* Biofilm
○Tomohiro Inaba¹, Ayane Sakaguchi¹, Yutaka Yawata¹, Hidenobu Senpuku²,
 Hiroo Uchiyama¹, Nobuhiko Nomura¹ (¹Grad. Sch. Life Env. Sci., Univ. Tsukuba,
²Dept. Bacteriology I, National Institute of Infectious Diseases)
- 16:30** 2Dp16 Time course analysis of three-dimensional structure of *Pseudomonas aeruginosa* Biofilm in anaerobic condition using a novel airtight flow reactor
○Tatsunori Kiyokawa, Yutaka Yawata, Masanori Toyofuku, Hiroo Uchiyama, Nobuhiko Nomura
 (Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 16:42** 2Dp17 Mechanism analysis of the predominate of mucoid mutant in mix biofilm
○Yang Jiayue, Sakai Ryosuke, Hamada Masakaze, Toyofuku Masanori, Nakajima-Kambe Toshiaki,
 Uchiyama Hiroo, Nomura Nobuhiko (Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 16:54** 2Dp18 Morphological change of biofilm in response to temperature in *Clostridium perfringens*
○Nozomu Obana, Kouji Nakamura, Nobuhiko Nomura (Fac. Life Env. Sci., Tsukuba Univ.)
- 17:06** 2Dp19 Dynamic genome rearrangements of T7-like phages that infect *Ralstonia solanacearum*
○Sei KOTERA¹, Akiko FUJIWARA², Takeru KAWASAKI¹, Makoto FUJIE¹, Takashi YAMADA¹
 (¹Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ., ²Cen. Adv. Life. Sci., Toyama Univ.)
- 17:18** 2Dp20 Comparison of three different types T7-like phages infecting *Ralstonia solanacearum*
○Minaho Matsunami, Takeru Kawasaki, Makoto Fujie, Takashi Yamada
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 17:30** 2Dp21 Genetic characterization of bacteriophage-resistant *Ralstonia solanacearum* mutants
○Mariko FUJISAWA¹, Akiko FUJIWARA², Takeru KAWASAKI¹, Makoto FUJIE¹,
 Takashi YAMADA¹ (¹Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.,
²Cen. Adv. Life. Sci., Toyama Univ.)
- 17:42** 2Dp22 Characterization of RSL-like jumbo phage: special virion structure and stable host control
○Ryosuke Hamasaki¹, Akiko Fujiwara², Takeru Kawasaki¹, Makoto Fujie¹, Takashi Yamada¹
 (¹Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ., ²Cen. Adv. Life. Sci., Toyama Univ.)
- 17:54** 2Dp23 Integration mechanism of RSS-type filamentous phages in *Ralstonia solanacearum*
○Yuichi Tasaka, Takeru Kawasaki, Makoto Fujie, Takashi Yamada
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 18:06** 2Dp24 Prolonged Synthesis of Hyaluronan by *Chlorella* Cells Infected with Chloroviruses
○Numfon Rakkhumkaew, Takeru Kawasaki, Makoto Fujie, Takashi Yamada
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 18:18** 2Dp25 Expression analysis of genes involved in flagella-formation and meiosis in *Chlorella*
○Noriyasu Kumagai, Takeru Kawasaki, Makoto Fujie, Takashi Yamada
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 18:30** 2Dp26 Development of recombinant DNA technology of *Chlorella* viruses
○Yuki Takemoto, Takeru Kawasaki, Makoto Fujie, Takashi Yamada
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)

- 18:42** 2Dp27 Chemotaxis toward plant-associated compounds in *Ralstonia solanacearum* and its involvement in bacterial wilt
.....○Shota Oku, Kanako Yoneda, Kenji Nakazato, Toshihiro Takanishi, Akiko Hida, Takahisa Tajima,
Yutaka Nakashimada, Junichi Kato (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)

Room G Morning (9:00~12:00)

General Presentaion (Metabolic engineering)

- 9:00** 2Ga01 Production of 2-phenylethanol and tyrosol from glucose by metabolically engineered *Escherichia coli*
.....○Daisuke Koma, Hayato Yamanaka, Kunihiko Moriyoshi, Takashi Ohmoto, Kiyofumi Sakai
(Osaka Municipal Technical Research Institute)
- 9:12** 2Ga02 Extending Carbon Chain Length of 1-Butanol Pathway for 1-Hexanol Synthesis from Glucose by Engineered *Escherichia coli*
....○Yasumasa Dekishima¹, Ethan I. Lan², Claire R. Shen², Kwang Myung Cho², James C. Liao²
(¹MCRC, ²Dept. Chemical and Biomolecular Engineering, UCLA)
- 9:24** 2Ga03 Identification of the novel L-cysteine synthase and its application to L-cysteine production in *Escherichia coli*
.....○Takeshi Nakatani, Iwao Ohtsu, Hiroshi Takagi (Grad. Sch. Biol. Sci., NAIST)
- 9:36** 2Ga04 Unrealized function of *Escherichia coli* genes; *sufD* and *yehP* in biohydrogen evolution
.....○Mohd Zulkhairi bin Mohd Yusoff^{1,2}, Toshinari Maeda¹, Yuya Hashiguchi¹,
Thomas K Wood³, Yoshihito Shirai¹, Hiroaki I Ogawa¹, Mohd Ali Hassan²
(¹Dept. of Biological Func. and Engineering, Graduate School of Life Sci.
and Syst. Engineering, Kyushu Institute of Technology,
²Dept. of Bioprocess Tech., Fac. of Biotechnology and Biomolecular Sci., Univ. Putra,
³Dept of Chem. Eng. & Biochem. and Molecular Bio, Pennsylvania State Univ., USA)
- 9:48** 2Ga05 Response of metabolic network to gene expression perturbations in *Escherichia coli*
.....Yuki Usui¹, ○Takashi Hirasawa¹, Chikara Furusawa², Tomokazu Shirai³, Natsuko Yamamoto⁴,
Hirotada Mori⁴, Hiroshi Shimizu¹ (¹Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ.,
²RIKEN, QBiC, ³RIKEN, BMEP, ⁴Grad. Sch. Biol. Sci., NAIST)
- 10:00** 2Ga06 Gene expression changes in *Corynebacterium glutamicum* caused by penicillin inducing glutamate production
.....○Masaki Saito¹, Takashi Hirasawa¹, Katsunori Yoshikawa¹, Chikara Furusawa^{1,2}, Hiroshi Shimizu¹
(¹Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ., ²RIKEN, QBiC)
- 10:12** 2Ga07 Biosynthesis of copolymer by recombinant *Ralstonia eutropha* through fatty acid synthesis pathway
.....○Mika Iwasaki¹, Ayaka Hokamura¹, Kenji Tanaka², Takeharu Tsuge³, Hiromi Matsusaki⁴
(¹Grad. Sch. Environ. Sym. Sci., Pref. Univ. Kumamoto, ²Dept. Biol. & Environ. Chemistry, Kinki Univ.,
³Dept. Innov. Eng. Mat., Tokyo Inst. Technol., ⁴Fac. Environ. Sym. Sci., Pref. Univ. Kumamoto)
- 10:24** 2Ga08 Overexpression of SigE increases PHB production in cyanobacteria
.....○Takashi Osanai^{1,2}, Akira Oikawa¹, Keiji Numata³, Kiminori Toyooka¹, Mayuko Sato¹,
Ayuko Kuwahara¹, Hiroko Iijima¹, Yoshiharu Doi³, Kazuki Saito^{1,4}, Masami Hirai^{1,5}
(¹RIKEN, PSC, ²JST, PRESTO, ³RIKEN, BMEP, ⁴Dept. Pharm., Chiba Univ., ⁵JST, CREST)
- 10:36** 2Ga09 Metabolic engineering of filamentous cyanobacteria for biofuel production
.....○Shigeki Ehira^{1,2}, Masayuki Ohmori¹ (¹Dept. Biol. Sci., Chuo Univ., ²PRESTO, JST)
- 10:48** 2Ga10 Creation and improvement of isoprenoid producing cyanobacteria
.....○Hiroshi Kiyota^{1,3}, Michiho Ito², Masami Hirai^{3,4}, Masahiko Ikeuchi^{1,4,5}
(¹Grad. Sci., Tokyo Univ., ²Grad. Sch. Pharma. Sci., Kyoto Univ., ³PSC, RIKEN,
⁴CREST, ⁵Grad. Sch. Art and Sci., Tokyo Univ.)
- 11:00** 2Ga11 Metabolic flux analysis of *Synechocystis* sp. PCC 6803 in photoautotrophic condition
.....○Tsubasa Nakajima^{1,2}, Shuichi Kajihata^{1,2}, Katsunori Yoshikawa^{1,2}, Chikara Furusawa^{1,2,3},
Takashi Hirasawa^{1,2}, Hiroshi Shimizu^{1,2} (¹Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ.,
²JST · CREST, ³QBiC, RIKEN)

- 11:12** 2Ga12 Microbial synthesis of plant triterpenoids
○Hikaru Seki^{1,2}, Ery Odette Fukushima^{1,2}, Kiyoshi Ohyama^{3,4}, Naoyuki Umemoto⁵, Kazuki Saito⁴,
 Toshiya Muranaka^{1,2} (¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ.,
²Kihara Inst. Biol. Res., Yokohama City Univ., ³Dept. Chem. Mater. Sci., Tokyo Inst. Tech.,
⁴RIKEN PSC, ⁵Kirin HD Co., Ltd)
- 11:24** 2Ga13 Identification of novel genes encoding α -bisabolol synthase from *Artemisia* species
○Mika Nishiwaki¹, Hikaru Seki^{1,2}, Munenori Suzuki^{1,2}, Aya Komori², Toshiya Muranaka^{1,2}
 (¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ²Kihara Inst. Biol. Res., Yokohama City Univ.)
- 11:36** 2Ga14 Glycerolipid metabolic switching system in plant and algal developmental processes
○Yuki Nakamura^{1,2} (¹Inst. Plant Microbial Biol. Academia Sinica, ²JST, PRESTO)
- 11:48** 2Ga15 Production of sulfated compounds by metabolic engineering
○Takehiko Shimohira¹, Yoichi Sakakibara¹, Takuyu Hashiguti¹, Ming-Cheh Liu², Masahito Suiko¹
 (¹Dept. Biochem. Appl. Biosci., Miyazaki Univ., ²Dept. Phamaco., Toledo Univ.)

Room G Afternoon (13:30~14:30)

Invited Lectures

- 13:30** 2Gp01 Studies on the Biodegradation and Bioconversion of Lignocelluloses and aromatic compounds by white rot fungi
JIANGUO WU, YANG YANG, FUYING MA, HONGBO YU, ○XIAOYU ZHANG
 (Life Sci. & Biotech, Huazhong Univ. Sci. & Tech)
- 13:45** 2Gp02 Studies of the diversity of flocculating yeasts from different natural resources and cloning of flocculating genes for improved fuel ethanol production
○Xinqing Zhao (School of Life Science and Biotechnology, Dalian University of Technology)
- 14:00** 2Gp03 Unexpected growth ability at high temperature of *Saccharomyces cerevisiae*
○Chuenchit Boonchird¹, Vorrapan Buajumrat^{1,2}, Thipa Asavarak¹, Suthee Benjaphokee³,
 Minetaka Sugiyama³, Yoshinobu Kaneko³, Satoshi Harashima³
 (¹Dept. Biotech., Fac. Sci., Mahidol Univ., Thailand, ²AG-BIO/PERDO-CHE, Thailand,
³Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 14:15** 2Gp04 Isolation and identification of a novel thermophilic bacterial strain from Pakistan and its industrial applications
○Naeem Rashid¹, Muhammad Tayyab¹, Muhammad Akhtar¹, Shigenori Kanaya²
 (¹School of Biological Sciences, University of the Punjab, Pakistan,
²Graduate School of Engineering, Osaka University)

Room G Afternoon (14:30~18:54)

General Presentaion (Metabolic engineering / Lipid engineering)

- 14:30** 2Gp06 Oxidized glutathione production using engineered *Saccharomyces cerevisiae*
○Kiyotaka Hara¹, Kentaro Kiriyama², Naoko Aoki¹, Akihiko Kondo²
 (¹Org. Adv. Sci. Eng, ²Dept. Eng)
- 14:42** 2Gp07 Metabolomic evaluation of succinate-producing recombinant strains of *Saccharomyces cerevisiae*
○Yuma Ito, Takashi Hirasawa, Yoshihiro Ida, Hiroshi Shimizu
 (Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ.)
- 14:54** 2Gp08 Molecular breeding of industrial yeasts by overexpression of the transcription activator Msn2
○Yu Sasano¹, Daisuke Watanabe², Yutaka Haitani³, Jun Shima³, Hitoshi Shimoi², Hiroshi Takagi¹
 (¹Grad. Sch. Biol. Sci., NAIST, ²Natl. Res. Inst. Brewing, ³Res. Div. Microbial Sci., Kyoto Univ.)

- 15:06** 2Gp09 Improvement of astaxanthin production using engineered *Xanthophyllomyces dendrorhous*
○Toshihiko Morita¹, Kiyotaka Hara², Akihiko Kondo¹
 (¹Dept. Chem. Sci. Eng., Kobe Univ., ²Org. Adv. Sci. Tech., Kobe Univ.)
- 15:18** 2Gp10 Efficient production of a direct precursor for aromatic compounds from glucose in *Pichia pastoris*
○Satoshi Ara, Naoki Wakisaka, Harutake Yamazaki, Masamitsu Takagi, Hiroaki Takaku
 (Fac. Appl. Life Sci., Niigata Univ. Pharm. Appl. Life Sci.)
- 15:30** 2Gp11 Improvement of the solubility observed for PPIase-fused aromatic L-amino acid decarboxylase
○Takashi Koyanagi¹, Ayumi Hara¹, Hiromochi Minami², Takane Katayama²,
 Hidehiko Kumagai², Norihiko Misawa² (¹Dept. Food Sci., Ishikawa Pref. Univ.,
²Inst. Biores. Biotechnol., Ishikawa Pref. Univ.)
- 15:42** 2Gp12 Genetic modification of yeast *Kluyveromyces marxianus* for increase of the productivity of flavor components
○Nahoko Kishi¹, Ayako Harai¹, Yoko Yamashita¹, Yuka Yachiguchi¹, Mami Nakao¹,
 Hisanori Tamaki², Takane Katayama³, Hidehiko Kumagai³, Takashi Koyanagi¹
 (¹Dept. Food Sci., Ishikawa Pref. Univ., ²Fac. Agric., Kagoshima Univ.,
³Inst. Biores. Biotechnol., Ishikawa Pref. Univ.)
- 15:54** 2Gp13 Genome and transcriptome analysis of *Candida utilis* by Next Generation Sequencing
○Yasuyuki Tomita¹, Hideyuki Tamakawa¹, Kazuho Ikeo², Takashi Gojobori², Shigehito Ikushima¹
 (¹Central Laboratories for Frontier Technology, KIRIN Holdings Co., Ltd.,
²Center for Information Biology and DNA Data Bank of Japan, National Institute of Genetics)
- 16:06** 2Gp14 Metabolic engineering of *Candida utilis* for isopropanol production.
○Hideyuki Tamakawa, Tokiko Mita, Aki Yokoyama, Shigehito Ikushima, Satoshi Yoshida
 (Central Laboratories for Frontier Technology, KIRIN Holdings Co., Ltd.)
- 16:18** 2Gp15 Genome-wide identification of genes involved in tolerance to isopropanol in yeast
○Akane Misaizu, Yuusei Ikegami, Toshiko Kutsukake, Toshikazu Tsuji, Satoshi Yoshida,
 Shigehito Ikushima (Central Laboratories for Frontier Technology, KIRIN Holdings Company, Ltd.)
- 16:30** 2Gp16 Metabolome analysis of filamentous fungus *Rhizopus oryzae* showing different behaviors of lipase secretion
○Ayumi Yoshida^{1,2}, Shinji Hama³, Tomohisa Hasunuma⁴, Hiroyuki Yamamoto⁵, Akihiko Kondo¹
 (¹Dept. Chem. Sci. Eng., Kobe Univ., ²Current Affiliation: Nippon Suisan Kaisha, Ltd.,
³Bio-energy, ⁴Grad. Sch. Sci. Tech., Kobe Univ., ⁵Human Metabolome Technologies)
- 16:42** 2Gp17 Functional analysis of acyl-CoA synthetase genes from *Mortierella alpina* 1S-4
○Takuya Asaoka¹, Eiji Sakuradani¹, Akinori Ando², Misa Ochiai³, Jun Ogawa¹
 (¹Div. Appl. Life Sci., Grad. Sch. Agri., Kyoto Univ., ²Res. Unit Physiol. Chem. Kyoto Univ.,
³Suntory Business Expert Ltd.)
- 16:54** 2Gp18 Molecular breeding of *Aspergillus oryzae* for itaconic acid production
○Satoshi Yamada¹, Yuko Kurachi², Enoch Yongsoo Park³, Motoo Arai², Shin Kanamasa²
 (¹Grad. Sch. Biosci. Biotech., Chubu Univ., ²Dept. Envi. Biol., Chubu Univ.,
³Grad. Sch. Sci. Technol., Shizuoka Univ.)
- 17:06** 2Gp19 Construction of metabolic flux analysis based on isotopomer enrichment of intermediate metabolites and its comparison with conventional methods
○Nobuyuki Okahashi¹, Shuichi Kajihata¹, Chikara Furusawa^{1,2}, Hiroshi Shimizu¹
 (¹Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ., ²QBiC, RIKEN)
- 17:18** 2Gp20 FastPros: *in silico* screening of multiple gene knockouts for improvement of useful compound production
○Satoshi Ohno¹, Chikara Furusawa^{1,2}, Hiroshi Shimizu¹
 (¹Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ., ²QBiC, RIKEN)

- 17:30** 2Gp21 *In silico* screening of heterologous pathways for production of nonnative metabolites using genome-metabolic networks information
○Sunisa Chatsurachai¹, Chikara Furusawa², Hiroshi Shimizu³
 (1Dept. Biotech., Grad. Sch. Eng., Osaka Univ., 2QBiC, RIKEN,
 3Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ.)
- 17:42** 2Gp22 Modeling and simulation for catabolite regulation and fermentation in *Escherichia coli*
○Yu Matsuoka¹, Kazuyuki Shimizu^{1,2} (1Kyushu Inst. Tech., 2Keio Univ.)
- 17:54** 2Gp23 A novel computational method for designing biosynthetic pathways
○Michihiro Araki¹, Takeshi Taniguchi², Kohei Miyaoku² (1GL Unit., Kyoto Univ., 2MCRC)
- 18:06** 2Gp24 Development of a computational platform for designing biosynthetic pathways
○Takehshi Taniguchi¹, Kohei Miyaoku¹, Hiroki Makiguchi², Michihiro Araki³
 (1MCRC, 2MKI, 3GL Unit., Kyoto Univ.)
- 18:18** 2Gp25 Effect of surfactant on polyunsaturated fatty acid production using genetically modified *Saccharomyces cerevisiae*
○Kazuyoshi Kimura, Yasushi Kamisaka, Hiroshi Uemura, Masakazu Yamaoka
 (Bioproduction Res. Inst., AIST)
- 18:30** 2Gp26 Selective localization of amyloid beta peptides and subsequent membrane dynamics
○Masamune Morita, Mun'delanjji Vestergaard C., Tsutomu Hamada, Masahiro Takagi
 (Sch. Mat. Sci., JAIST)
- 18:42** 2Gp27 Lutein microemulsion: characterization and topical delivery
○Chi-Hsien Liu¹, Hao-Che Chiu¹, Guan-Yu Lai², Wei-Chi Wu^{3,4}
 (1Graduate Institute of Biochemical and Biomedical Engineering, Chang Gung University, Taiwan,
 2Department of Chemical and Materials Engineering, Chang Gung University, Taiwan,
 3College of Medicine, Chang Gung University, Taiwan,
 4Department of Ophthalmology, Chang Gung Memorial Hospital, Taiwan)

Room H Morning (9:00~12:00)

General Presentaion (Biomass, bioresource and energy engineering)

- 9:00** 2Ha01 Characterization of biocathode electrode employing multicopper oxidase from the archaeon *Pyrobaculum aerophilum*
○Toshiki Uchii¹, Kayo Yamaguchi¹, Hiroaki Sakamoto¹, takenori Satomura¹, Haruhiko Sakuraba²,
 Toshihisa Ohshima³, Shin-ichiro Suye¹ (1Dept. Biotechnol., Univ. Fukui,
 2Dept. Appl. Biol. Sci., Kagawa Univ., 3Dept. Gen. Eng., Kyushu Univ.)
- 9:12** 2Ha02 Electron Transfer between Microbial Cells and an Electrode via Biocompatible Phospholipid Polymer
○Koichi Nishio¹, Ryuhei Nakamura¹, Shuji Nakanishi², Xiaojie Lin³, Tomohiro Konno⁴,
 Kazuhiko Ishihara^{3,4}, Kazuhito Hashimoto¹ (1Dept. Appl. Chem., Univ. Tokyo,
 2Res. Cent. Adv. Sci. Tech., Univ. Tokyo, 3Dept. Mater. Eng., Univ. Tokyo,
 4Dept. Bioeng., Univ. Tokyo)
- 9:24** 2Ha03 Evaluation of power in microbial fuel cell using various yeasts and effect of glucose metabolism on the power
○Hiroyuki Kaneshiro, Taro Tachibana, Masayuki Azuma
 (Dept. Appl. Chem. & Bioeng., Osaka City Univ.)
- 9:36** 2Ha04 Isolation of Current-Producing Microorganisms in Microbial Fuel Cells
○Yoshihiro Kawano, Kengo Inoue (Interdisciplinary Research Organization., Univ. Miyazaki)
- 9:48** 2Ha05 Molecular mechanisms of power generation in microbial fuel cells by *Geobacter sulfurreducens*
○Takahiro Tokuishii¹, Yoshihiro Kawano², Youichi Sakakibara¹, Masahito Suiko¹, Kengo Inoue²
 (1Dept. Biochem. Appl. Biosci., Univ Miyazaki., 2Interdisciplinary Research Organization., Univ Miyazaki.)

- 10:00** 2Ha06 Conversion of formate to electric energy using the insertion of foreign gene into *Escherichia coli*
.....○Teruyoshi Kawata, Yosuke Nishinoue, Yoshihiro Ojima, Masahito Taya
(Div. Chem. Eng., Osaka Univ.)
- 10:12** 2Ha07 Characterization of microorganisms and novel compounds related to biomineralization in an microbial fuel cell
.....○Kei Suzuki¹, Hiroki Mochihara², Nozomi Yoshida², Yutaka Kato²,
Rubaba Owen¹, Hiroyuki Futamata² (¹Shizuoka Univ., Eng., ²Shizuoka Univ., Eng.)
- 10:24** 2Ha08 Metabolic control of *Hydrogenobacter thermophilus* TK-6 by electrochemical cultivation
.....○Shin-ichi Hirano¹, Norio Matsumoto¹, Masaharu Ishii² (¹CRIEPI, ²Dept. Biotech., Univ. Tokyo)
- 10:36** 2Ha09 Metabolic control of *Clostridium acetobutylicum* by electrochemical cultivation
.....○Masamichi Matsuya¹, Shin-ichi Hirano², Norio Matsumoto², Naoya Ohmura² (¹TAITEC, ²CRIEPI)
- 10:48** 2Ha10 Combination of electrochemical cultivation and butanol extraction for cultivation of *Clostridium acetobutylicum*
.....○Kousuke Kasai¹, Shin-ichi Hirano², Norio Matsumoto², Naoya Ohmura², Akikazu Ando³
(¹Grad. S. Adv. Integ. Sci., Chiba Univ., ²CRIEPI, ³Fac. Horticult., Chiba Univ.)
- 11:00** 2Ha11 Effect of facultatively syntrophic proteolysis by bioelectrochemical regulation
.....○Daisuke SASAKI¹, Kengo SASAKI², Masahiko MORITA¹, Shin-ichi HIRANO¹,
Norio MATSUMOTO¹, Naoya OHMURA¹ (¹CRIEPI, ²GSALS, The Univ. of Tokyo)
- 11:12** 2Ha12 Screening of microorganism by electrochemical cultivation -Conversion of BDF waste into ethanol-
.....○Noboru Shinotou¹, Norio Matsumoto², Shin-ichi Hirano², Naoya Ohmura², Akikazu Ando³
(¹Grad. S. Adv. Integ. Sci., Chiba Univ., ²CRIEPI, ³Fac. Horticult., Chiba Univ.)
- 11:24** 2Ha13 Methane fermentation of cellulosic materials by the addition of cellulolytic bacterium
.....○Masahiko Morita, Daisuke Sasaki, Atsushi Watanabe (CRIEPI)
- 11:36** 2Ha14 Highly accumulative production of L(+)-lactate from glucose by crystallization fermentation with immobilized *Rhizopus oryzae*
.....○Tsuneo Yamane, Ryousuke Tanaka (Dept. Biosci. Biotechnol., Chubu Univ.)
- 11:48** 2Ha15 Mass production of spores of *Rhizopus oryzae* NBRC5384
.....○Ryousuke Tanaka, Tsuneo Yamane (Dept. of Biosci & Biotechnol., Chubu Univ.)

Room H Afternoon (13:30~14:45)

Invited Lectures

- 13:30** 2Hp01 Molecular Characterization of Bacteriocinogenic *Pediococcus acidilactici* and *Lactobacillus plantarum* Isolated from Philippine Fermented Food
.....○Francisco B. Elegado¹, Maria Teresa M. Perez¹, Ma. Fatima C. Ilagan²,
Dame Loveliness T. Apaga³, Marilou R. Calapardo¹ (¹BIOTECH, UP Los Banos, Philippines,
²Col. Arts Sci., Cavite State Univ., Philippines, ³Col. Arts Sci., UP Manila, Philippines)
- 13:45** 2Hp02 Lactic Acid Bacteria and Their Role in Food and Health: Research Activities
.....○Endang Sutriswati Rahayu
(Faculty of Agricultural Technology, University Gadjah Mada, Indonesia)
- 14:00** 2Hp03 Legume Nodulating Bacteria (LNB) Biodiversity in Tropical Agroecosystem
.....○Donny Widiyanto¹, Sri Wedhastri¹, Rusdi Evizal², Roswidya Anyana Sitompul¹,
Saptini Mukti Rahajeng¹, Irfan Dwidya Prijambada¹, Jaka Widada¹, Siti Kabirun¹
(¹Grad. Sch. Biotech., Gadjah Mada Univ., ²Fac. Agric., Lampung Univ.)
- 14:15** 2Hp04 Life Cycle and Temporal Variation of the Fungal Pathogen *Ophiocordyceps unilateralis* on Formicine Ants in a Tropical Forest
.....Suchada Mongkolsamrit, Noppol Kobmoo, Kanoksri Tasanathai, ○Janet Jennifer Luangsa-ard
(Mycology Laboratory, BIOTEC, Thailand)

- 14:30** 2Hp05 Chromium Bioreducing Rhizobacteria for Phytoremediation
○Irfan Dwidya Prijambada, Retno Rosariastuti, Ali Pramono, Ngadiman
 (Grad. Sch. Biotech., Gadjah Mada Univ.)

Room H Afternoon (14:54~18:54)

General Presentaion (Bioremediation)

- 14:54** 2Hp08 Genomes and mobile genetic elements of gamma-HCH-degrading bacteria
○Yuji Nagata, Michiro Tabata, Satoshi Ohhata, Yoshiyuki Ohtsubo, Masataka Tsuda
 (Grad. Sch. Life Sci., Tohoku Univ.)
- 15:06** 2Hp09 Study on behavior of bacteria in an Fe(III)-reducing anaerobic microbial enrichment induced with methane
○Samson Viulu¹, Kohei Nakamura², Sakiko Saitou², Kazuhiro Takamizawa^{1,2}
 (¹United Grad. Sch. Agri. Sci., Gifu Univ., ²Fac. Appl. Bio. Sci., Gifu Univ.)
- 15:18** 2Hp10 Transmission electron microscopy of *F. alba* ST13^T which reduce Cr(IV)
○Tomoyasu Sugiyama¹, Toshifumi Sakaguchi²
 (¹Sch. Biosci. Biotech., Tokyo Univ. Tech., ²Dep. of Environ. Sci., Pref. Univ. Hiroshima)
- 15:30** 2Hp11 A novel bacterial organelle, “oligo body” found in an extremely oligotrophic bacterium, *Rhodococcus erythropolis* N9T-4
○Takuya Fujiyoshi, Kaori Kedo, Megumi Iwano, Rina Nagai, Nobuyuki Yoshida, Hiroshi Takagi
 (Grad. Sch. Biol. Sci.)
- 15:42** 2Hp12 Chemotaxis toward environmental pollution in *Pseudomonas aeruginosa* PAO1
○Kazuki Takeuchi, Syota Oku, Tisana Nitisakulkan, Takahisa Tajima, Yutaka Nakashimada,
 Junichi Kato (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 15:54** 2Hp13 Stress response regulated by PhyR of the plant leaf-derived methanotroph
○Hiroyuki Iguchi, Izuru Sato, Hiroya Yurimoto, Yasuyoshi Sakai
 (Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 16:06** 2Hp14 Novel carbazole-degrading bacteria isolated from dioxin-contaminated soil in Vietnam
○Minh Hong Nguyen¹, Yoshihiro Ojima¹, Hang Thuy Dinh², Hop Van Duong², Masahito Taya¹
 (¹Grad. Sch. Eng. Sci., Osaka Univ., ²Inst. Biotechnol. Microbiol., Vietnam Natl. Univ. Hanoi)
- 16:18** 2Hp15 Analysis of relationship between degradation of hydrocarbon and alkane hydroxylase (*alkB*) gene in genus *Rhodococcus*
○Mikihiro Fujiwara, Toshihide Matsuno, Yuki Fukuhara, Sachie Horii,
 Yoshiki Matsumiya, Motoki Kubo (Dept. Biotech., Fac. Life Sci., Ritsumeikan Univ.)
- 16:30** 2Hp16 Analysis of the distribution of petroleum hydrocarbon degrading bacteria carrying *alkB* gene in the soil environment
○Yuki Fukuhara, Toshihide Matsuno, Sachie Horii, Yoshiki Matsumiya, Motoki Kubo
 (Dept. Biotech., Fac. Life Sci., Ritsumeikan Univ.)
- 16:42** 2Hp17 Study on the bacterial flora in rhizosphere of an arsenic hyper-accumulator plant and its arsenic accumulation mechanism
○Mei-Fang Chien, Keisuke Miyauchi, Ginro Endo (Faculty of Eng., Tohoku-Gakuin Univ.)
- 16:54** 2Hp18 Importance of plasmid pBAR1 with regard to biodegradation of phenolic compounds in *Sphingomonas bisphenolicum* AO1
Satoru Koba¹, Mao Uemura¹, Masashi Okuno¹, ○Yoshinobu Matsumura^{1,2}
 (¹Dept. Life Sci. Biotechnol., Kansai Univ., ²ORDIST, Kansai Univ.)
- 17:06** 2Hp19 Trichloroethylene degradation by a trichloroethylene-inducible biphenyl degradation system of *Rhodococcus jostii* RHA1
Naoto Araki, Kenta Yonedzuka, ○Daisuke Kasai, Eiji Masai, Masao Fukuda
 (Dept. Bioeng., Nagaoka Univ. Tech.)

- 17:18** 2Hp20 Improving productivity of bio-degradable plastic degrading enzyme from the phyllosphere yeast, *Pseudozyma antarctica*
○Takashi Watanabe^{1,2}, Xiao-hong Cao¹, Shigenobu Yoshida¹,
 Motoo Koitabashi¹, Hiroko K. Kitamoto¹ (¹NIAES, ²JSPS-PD)
- 17:30** 2Hp21 Identification and characterization of manganese (II) oxidizing halophilic bacteria isolated from natural salt in Nagasaki, Japan
○Hideki Nakayama, Yusuke Shin (Fac. Env., Nagasaki Univ.)
- 17:42** 2Hp22 Whole-genome Analysis of *Dehalococcoides* sp. Strain ATV-1 by Next Generation Sequencers
○Ayane Takechi¹, Masafumi Yohda¹, Noriyoshi Tamura², Tomomi Fukuda², Osami Yagi³,
 Masatoshi Tsukahara^{4,5}, Morimi Teruya^{5,6}, Kikuzato Ikuya^{5,8}, Kazuhiro Fujimori^{5,8},
 Yumi Imada^{4,5}, Maiko Nezu^{4,5}, Kazuhito Sato⁷, Yuki Sato^{5,7}, Shuichi Yano^{4,5},
 Yukino Miwa^{4,5}, Masayuki Machida^{5,7}, Takashi Hirano^{5,8}
 (¹Dept. Biotech., Tokyo Univ. Agric. Technol., ²PaGE Science Co.,
³Nihon Univ., ⁴TTC, ⁵OGCP, ⁶OITC, ⁷OARIS, ⁸AIST)
- 17:54** 2Hp23 Metabolic and mineral profiling for evaluation of ecosystem services in estuarine environment
○Seiji Yoshida¹, Taiga Asakura¹, Yasuhiro Date^{1,2}, Jun Kikuchi^{1,2,3,4}
 (¹Grad. Sch. NanoBioSci., Yokohama City Univ., ²RIKEN PSC,
³RIKEN BMEP, ⁴Grad. Sch. Bioagr., Nagoya Univ.)
- 18:06** 2Hp24 Neuroprotective effects of thymoquinone against amyloid β toxicity on cultured rat primary neurons
○Amani Alhebshi, Ikuro Suzuki, Masao Gotoh
 (Graduate School of Bionics, Tokyo University of Technology)
- 18:18** 2Hp25 Feasibility of using *Cupriavidus oxalaticus* sp.Y1 for the bioremediation of herbicide 2,4-D contaminated soil
○Yuki Abe, Noriyuki Ogasawara, Young Cheol Chang, Shintaro Kikuchi
 (Dept. Appl. Sci. Muroan Inst. Tech)
- 18:30** 2Hp26 Degradation of bisphenol A by hyper lignin-degrading fungus *Phanerochaete sordida* YK-624
○Jianqiao Wang¹, Yotaro Yamamoto², Ryoko Yamamoto², Hirofumi Hirai², Hirokazu Kawagishi^{1,2}
 (¹Grad. Sch. Sci. Tech., Shizuoka Univ., ²Dept. Appl. Biol. Chem., Fac. Agric., Shizuoka Univ.)
- 18:42** 2Hp27 Sediment remediation by bioelectrochemical system -Fundamental studies on suppression of methane gas emissions-
○Yoshiyuki Ueno, Yoji Kitajima (Kajima Tech. Res. Inst.)

Room I Morning (9:00~12:00)

General Presentaion (Biomass, bioresource and energy engineering)

- 9:00** 2Ia01 Efficient secreted production of (R)-3-hydroxybutyric acid under successive aerobic and microaerobic conditions by *Halomonas* sp. KM-1
○Yoshikazu Kawata, Kazunori Kawasaki, Yasushi Shigeri (Health Research Institute, AIST)
- 9:12** 2Ia02 Regulation of 3HH composition for production of PHBH
○Shunsuke Sato, Tetsuya Fujiki, Keiji Matsumoto
 (Kaneka Corp. GP Business Development Division)
- 9:24** 2Ia03 Fermentative production of poly-3-hydroxybutyrate from “konjac Tobiko” flour
○Shunichi Miyakoshi, Masayoshi Eitai, Saki Ozawa
 (Adv. Cour. Environ. Eng., Gunma Nat. Col. Technol.)
- 9:36** 2Ia04 BDF production by thraustochytrids using plant biomass
○Masahiro Hayashi¹, Akihide Takei¹, Naoki Nagano¹, Keiko Harada²,
 Yoshiya Izumi², Yousuke Taoka¹ (¹Univ. Miyazaki, ²BITS)

- 9:48** 2Ia05 Improvement of cyanobacterial enzymes for alkane biosynthesis
○Munehito Arai^{1,2}, Takahiro Watanabe¹, Fumitaka Yasugi¹, Koushiro Nada¹
 (1Dept. Life Sci., Univ. Tokyo, 2PRESTO, JST)
- 10:00** 2Ia06 Hydrocarbon production by *Synechococcus* sp. strain NKBG 15041c through the expression of heterogeneous alkane synthesis genes
○Daichi Arai¹, Toru Honda¹, Masayoshi Tanaka¹, Tomoko Yoshino^{1,2}, Tsuyoshi Tanaka¹
 (1Inst. Engr., Tokyo Univ. Agri. Tech., 2JST, CREST)
- 10:12** 2Ia07 Evaluation of growth and oil production stability during long-term outdoor culture by oleaginous marine pinnate diatom *Fistulifera* sp. JPCC DA0580
○Mitsufumi Matsumoto¹, Tsuyoshi Tanaka² (1Electric Power Development Co.,
 2Dept. Biotech. Life Sci., Tokyo Univ. Agric. Technol.)
- 10:24** 2Ia08 Development of oil body separation procedure and analysis of the oil body associated proteins from marine diatom *Fistulifera* sp. strain JPCC DA0580
○Daisuke Nojima^{1,2}, Michiko Nemoto¹, Tomoko Yoshino¹, Tadashi Matsunaga¹, Tsuyoshi Tanaka^{1,2}
 (1Inst. Engr., Tokyo Univ. Agri. Tech., 2JST, CREST)
- 10:36** 2Ia09 Study for enhancement of Biofuel production in *Euglena*
○Masami Nakazawa^{1,2}, Tomoya Ishikawa¹, Yoko Mizutani¹, Mitsuhiro Ueda¹, Hiroshi Inui^{1,3},
 Yoshihisa Nakano^{1,4}, Kazutaka Miyatake^{1,5} (1Dept. Appl. Biol. Chem., Osaka Pref. Univ.,
 2PRESTO, JST, 3Dept. Clin. Nutr., Osaka Pref. Univ.,
 4Osaka Women's Jun. Col., 5Tezukayama Gakuin Univ.)
- 10:48** 2Ia10 Characteristic of *Wolffia* growth
○Hiroyuki Saito, Tatsuya Ito, Tadashi Toyama, Yasuhiro Tanaka, Kazuhiro Mori
 (Grad. Sch. Med. Eng., Univ. Yamanashi)
- 11:00** 2Ia11 Characterization of torrefied residual biomass of *Jatropha curcas*
○Taiji Watanabe¹, Amiu Shino², Kinya Akashi³, Jun Kikuchi^{1,2,4,5}
 (1Grad. Sch. NanoBioSci., Yokohama City Univ., 2RIKEN PSC,
 3Grad. Sch. Agri. Sci., Tottori Univ., 4RIKEN BMEP,
 5Grad. Sch. Bioagri. Sci., Nagoya Univ.)
- 11:12** 2Ia12 Isolation and characterization of plant growth-promoting rhizobacteria for *Spirodela polyrrhiza* (duckweed)
○Tadashi Toyama¹, Yasuhiro Tanaka², Kazuhiro Mori¹ (1Grad. Sch. Med. Eng., Univ. Yamanashi,
 2Dept. Biotech., Grad. Sch. Med. Eng., Univ. Yamanashi)
- 11:24** 2Ia13 Development of thylakoid membrane assembled electrode and its photon-to-current conversion function
○Yutaka Amao^{1,2}, Miki Nakamura^{1,2}, Akemi Tadokoro^{1,2}
 (1Dept. Appl. Chem., Oita Univ., 2JST PRESTO)
- 11:36** 2Ia14 Measurements of magnetically induced structural colors in micro-mirrors of algae's frustule
○Yuri Mizukawa¹, Masakazu Iwasaka^{1,2}
 (1Dept. Medical System Engng., Chiba Univ., 2JST PRESTO)
- 11:48** 2Ia15 Magnetic light control in guanine crystal type of micro-mirror developed in fish scale
○Masakazu Iwasaka^{1,2}, Yuri Mizukawa¹ (1Grad. Schl. Engng., Chiba Univ., 2JST PRESTO)

Room I Afternoon (13:30~14:30)

Invited Lectures (The Korean Society for Biotechnology and Bioengineering (KSBB))

- 13:30** 2Ip01 Synthetic RNA devices for rational, combinatorial and evolutionary metabolic engineering
○Gyoo Yeol Jung (Dept. Chem. Eng., POSTECH, Korea)

- 13:50 2Ip02 On-bead expression of recombinant proteins in a gel matrix embedding protein synthesis machinery
Kyung-Ho Lee, Su Jin Oh, Kwang Su Kim, Dong-Myung Kim
 (Dept. Fine Chem. Eng. & Appl. Chem., Chungnam Natl. Univ., Korea)
- 14:10 2Ip03 Engineering and production of full-length Immunoglobulin G in *Escherichia coli*
Ki Jun Jeong^{1,2}, Hee Sung Kim¹, Yong Jae Lee¹
 (¹Dept. Chemical and Biomolecular Engineering, KAIST, Korea,
²Institute for the BioCentury, KAIST, Korea)

Room I Afternoon (14:30~18:54)

General Presentaion (Food science, food technology)

- 14:30 2Ip06 Alpha-glucosidase and Alpha-amylase inhibitory activity of aqueous extract of *Actinidia kolomikta* leaves
Xuansheng Hu, Yingnan Yang, Yiting Li, Jian Ma, Shuhong Li, Zhenya Zhang
 (Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 14:42 2Ip07 Anti-glycation and anti-carbonylation properties of pine bark extract (Flavangenol)
Hideki Tagashira, Seiichi Kitamura, Masahito Tsubata (Toyoshinyaku Co., Ltd.)
- 14:54 2Ip08 Production of red-pigment by the microbial isolate from an apple snail *Pomacea canaliculata*
Toshifumi Sakaguchi¹, Shiori Katata², Yuuta Minaga², Tomoyuki Yoshino², Akihiro Tai²
 (¹Dept. Environ. Sci., Pref. Univ. Hiroshima, ²Dept. Life Sci., Pref. Univ. Hiroshima)
- 15:06 2Ip09 Identification of the riboflavin-producing microorganism in the fermentation process for Puer tea
Michiharu Abe¹, Ryutaro Bessho², Kiyohiko Nakasaki¹
 (¹Dept. Int. Develop. Eng., Tokyo Tech., ²Fac. Int. Develop. Eng., Tokyo Tech.)
- 15:18 2Ip10 Studies on controlling factors in polyamine production by *Bacillus subtilis* (natto)
Kazuya Kobayashi, Satoshi Watanabe (Niigata Food Res. Center)
- 15:30 2Ip11 Production of Bacteriocins of Bacilli Isolated from Fermented Foods
Naohiko Taga, Katsuhiko Koga, Syohei Hayashida (Dept. Biosci., Sch. Agric., Tokai Univ.)
- 15:42 2Ip12 Characterization and structure analysis of antifungal substance produced by *Bacillus amyloliquefaciens* G-7,
 isolated from hishio-miso
Yukari Fujii, Yoshitaka Ano, Masafumi Maruyama (Dept. Life Sci., Fac. Agric., Ehime Univ.)
- 15:54 2Ip13 Identification of peptides improving memory derived from *Lactobacillus helveticus* fermented milk
Kazuhito Ohsawa¹, Naoto Uchida¹, Kohji Ohki¹, Seiichi Mizuno¹, Yasunori Nakamura¹,
 Hidehiko Yokogoshi² (¹Microbiology & Fermentation Lab., Calpis Co., Ltd.,
²Dept. Food Nutr. Sci., Coll. Biosci. Biotec., Chubu Univ.)
- 16:06 2Ip14 Growth inhibition of *Porphyromonas gingivalis* using antibacterial substances produced by saccharifying
 enzymes
Kazuma Shibata¹, Yohei Ishiyama², Kazuki Harada¹, Akihito Ochiai¹, Takaaki Tanaka¹,
 Masayuki Taniguchi¹ (¹Grad. Sch. of Sci. Technol., Niigata Univ., ²CFIL, Niigata Univ.)
- 16:18 2Ip15 Antimicrobial activity of a novel peptide from rice protein against pathogenic microorganisms and clarification
 of its action mechanism
Atsuo Ikeda¹, Yohei Ishiyama², Akihito Ochiai¹, Takaaki Tanaka¹, Masayuki Taniguchi¹
 (¹Grad. Sch. of Sci. Technol., Niigata Univ., ²CFIL, Niigata Univ.)
- 16:30 2Ip16 Antimicrobial CL peptide from rice protein modulates inflammatory cytokines in LPS-stimulated human cells
Kenji Hashimoto¹, Saori Takayama², Atsushi Saito², Tetsuo Kato³, Akihito Ochiai¹,
 Takaaki Tanaka¹, Masayuki Taniguchi¹ (¹Grad. Sch. of Sci. Technol., Niigata Univ.,
²Dept. of Periodontol., TDC., ³Dept. of Chem., TDC.)

- 16:42** 2Ip17 Catalytic removal of acetaldehyde in saliva by a *Gluconobacter* strain
Haruhiko Yamaguchi¹, Takefumi Shimoyama¹, Miho Hosoya¹, Seiji Takahashi¹, Eri Tsutsumi²,
 Yukio Suzuki³, Yoshihide Suwa², Toru Nakayama¹ (¹Dept. Biomol. Eng., Grad. Sch. Eng., Tohoku Univ.,
²Suntory Ltd., ³SIFS JAPAN)
- 16:54** 2Ip18 Construction of self-cloning strains producing amidase in *Aspergillus oryzae*
Hirokazu Tsuboi¹, Takayuki Bogaki¹, Kenshiro Kaza², Motoaki Sano², Kenji Ozeki²,
 Shinichi Ohashi², Yusaku Narita³, Kazuya Iwai³, Taiji Fukunaga³
 (¹Gen. Res. Lab., Ozeki Co., ²KIT, ³UCC)
- 17:06** 2Ip19 Study of acrylamide degradation of model beverages by amidase producing *Aspergillus oryzae*
Akira Suzuki¹, Kenshiro Kaza¹, Hiroyuki Miyashita¹, Motoaki Sano¹, Kenji Ozeki¹, Shiniti Ohashi¹,
 Hirokazu Tsuboi², Takayuki Bogaki², Yusaku Narita³, Kazuya Iwai³, Taiji Fukunaga³
 (¹KIT, ²Gen. Res. Lab., Ozeki Co., ³UCC)
- 17:18** 2Ip20 Development of acrylamide-free “ready-to-drink” coffee by *Aspergillus oryzae*
Kazuya Iwai¹, Taiji Fukunaga¹, Yusaku Narita¹, Osamu Nakagiri¹, Takayuki Bogaki²,
 Hirokazu Tsuboi², Motoaki Sano³, Kenji Ozeki³ (¹UCC, ²Gen. Res. Lab., Ozeki Co., ³KIT)
- 17:30** 2Ip21 Intracellular Proteins of Ethanol-treated Yeast Involved in Iron Adsorption Associated with Fishy Aftertaste in Wine
Toshikazu Tsuji¹, Yuki Konoeda², Keiko Kanai¹, Aki Yokoyama¹, Takayuki Tamura³,
 Satoshi Hirano², Ryoji Takata³, Satoshi Yoshida¹ (¹KIRIN HD, ²KIRIN Group Office, ³Mercian)
- 17:42** 2Ip22 The development of mass production technology of Deferriferrichrysin produced by *Aspergillus oryzae* and its effects on anti-oxidization
Motoko Irie, Shin Oura, Takehiko Todokoro, Katsuharu Fukuda, Hiroko Tsutsumi, Yoji HATA
 (Res. Inst., Gekkeikan Sake Co.)
- 17:54** 2Ip23 Stabilization of R(+)-alpha lipoic acid by complex formation with cyclodextrins
Naoko Ikuta^{1,2}, Yukiko Uekaji², Daisuke Nakata³, Keiji Terao³, Seiichi Matsugo¹
 (¹Grad. Sch. Nat. Sci. & Tech., Kanazawa Univ., ²Cyclo. Chem. Bio. Co., Ltd, ³Cyclo. Chem. Co., Ltd)
- 18:06** 2Ip24 The ultrasonic extraction and the antioxidant activities of the polysaccharides extracted from the fermented soybean residue
Jian MA, Min SHI, Yiting LI, Yuepeng WANG, Yingnan YANG, Zhenya ZHANG
 (Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 18:18** 2Ip25 Optimum fermentation condition of wheat bran by *Cordyceps sinensis* mycelium and its antioxidant activity
Yiting Li, Xuansheng Hu, Jian Ma, Yingnan Yang, Zhenya Zhang
 (Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 18:30** 2Ip26 Development of modified COLD-PCR for detecting minor microorganisms
Masayuki Takahashi¹, Kazuo Masaki², Akihiro Mizuno², Nami Goto²
 (¹Nagoya Regional Taxation Bureau, ²Natl. Res. Inst. Brewing)
- 18:42** 2Ip27 Takanazuke production with lactic acid bacteria as starter culture for reduction of salt content
Masako Sakai¹, Mayumi Nagano¹, Tsuyoshi Ichihara², Hiroto Ohta¹, Kenji Kida¹,
 Shigeru Morimura¹ (¹Grad. Sch. Sci. Tech., Kumamoto Univ., ²Ichihara farm)

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

Room F Morning (9:00~9:30)

Award Lecture (Young Asian Biotechnologist Prize Lecture)

Chairperson: **Takeshi Omasa**

9:00	3Fa01	Reaction evaluation and new process design in composting of biological wastes○Jingchun Tang ¹ , Arata Katayama ² (¹ Coll. Environ. Eng., Nankai Univ., ² EcoTopia Sci. Inst., Nagoya Univ.)
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Room A Morning (9:00~11:55)

Symposium (R&D towards fruitful symbiosis between academia and industries — What is expected of students ?)

9:00		Opening remarks Kenzo Yanagi Chairperson: Kenzo Yanagi
9:05	3Aa01	Ajinomoto Group Way of creating new values and my expectations for The Society for Biotechnology, Japan and young researchers○Osamu Kurahashi (Res. Inst. Biosci. Products and Fine Chemicals, Ajinomoto Co., Inc.) Chairperson: Motohiro Hino
9:30	3Aa02	Expectation for young researchers in the sake brewing company (traditional fermentation industry)○Akira Nishimura (Hakutsuru Sake Brewing Co. Ltd.)
9:55	3Aa03	Academic-industrial alliance in the drug discovery and development field, and the expectation to students○Michio Yamashita (Astellas Pharma Inc.) Chairperson: Masaaki Sakaguchi
10:20	3Aa04	Challenge to create bioindustry and expectation to students○Yoshiaki Tsukamoto (Japan Bioindustry Association)
10:45	3Aa05	The joint industry-university research and development project in creation of new business○Hideo Tsujimura (Suntory Holdings Ltd.) Chairperson: Kawatsura Katsuyuki
11:10	3Aa06	Cooperation between university and industry○Shinji Iijima (Dept. Biotechnol., Nagoya Univ.)
11:35		Closing remarks Katsuyuki Kawatsura

Room E Morning (9:00~12:00)

Symposium (Let's learn novel stress adaptation mechanisms from eukaryotic microbes and its application to fermentation foods)

9:00		Opening remarks Hiroshi Kitagaki Chairperson: Hiroshi Takagi
9:10	3Ea01	Detection and structural determination of sphingolipids from shochu distillates and sake lees.○Hiroshi Kitagaki (Saga Univ.)

9:35	3Ea02	Efficient production of shochu and bioethanol using a novel submerged culture of <i>Aspergillus kawachii</i> which has multiple enzyme activities○Hikaru Tanaka ¹ , Toshikazu Sugimoto ² , Tomohiro Makita ³ , Koutaro Watanakbe ¹ , Hiroshi Shoji ¹ (¹ Asahi Breweries, Ltd., ² The Nikka Whisky Distilling Co., Ltd, ³ Asahi Group Holdings, Ltd)
10:00	3Ea03	Molecular mechanism of acetaldehyde tolerance in <i>Saccharomyces cerevisiae</i>○Tomoyuki Nakagawa (Dept. Appl. Life Sci., Gifu Univ.)
10:25	Break	
Chairperson: Hiroshi Kitagaki		
10:35	3Ea04	How has sake yeast acquired high alcohol fermentation ability?○Daisuke Watanabe (Natl. Res. Inst. Brewing)
11:00	3Ea05	Redox responses and signaling by <i>Aspergillus nidulans</i>○Naoki Takaya, Motoyuki Shimizu, Shunsuke Masuo (Life & Environ. Sci., Univ. Tsukuba)
11:25	3Ea06	NO-mediated antioxidative mechanism of yeast and its application to baker's yeast breeding○Hiroshi Takagi (Grad. Sch. Biol. Sci., NAIST)
11:50	Closing remarks Hiroshi Takagi	

Room E Afternoon (14:00~16:20)

Symposium (The innovative treatment strategy for biofilm infection)

14:00	Openign remarks Satoshi Tsuneda Chairperson: Satoshi Tsuneda	
14:05	3Ep01	Control and prevention of biofilm formation based on quorum sensing inhibition○Tsukasa Ikeda ^{1,2} , Tomohiro Morohoshi ^{1,2} (¹ Dept. Mat. Environ. Chem., Utsunomiya Univ., ² CREST, JST)
14:35	3Ep02	Potential of Macrolide Antibiotics as Quorum-Sensing Inhibitor to <i>Pseudomonas aeruginosa</i>○Kazuhiro Tateda (Dept. Microbiol. Infect. Dis., Toho Univ.)
15:05	Break	
Chairperson: Tsukasa Ikeda		
15:15	3Ep03	Cell density dependent RelE-mediated domancy of <i>Escherichia coli</i>○Satoshi Okabe, Yosuke Tashiro, Asami Taniuchi, Thithiwat May, Kenji Kakinuma, Koji Kawata (Dept. Environ. Eng., Hokkaido Univ.)
15:45	3Ep04	c-di-GMP with potentiality as a medicine for biofilm-infection diseases○Yoshihiro Hayakawa (Dept. Appl. Chem., Fac. Eng., Aichi Inst. Tech.)
16:15	Closing remarks Tsukasa Ikeda	

Room E Afternoon (16:40~19:00)

Symposium (Thermotolerant microorganisms leading to high-temperature fermentation)

Chairperson: Kazunobu Matsushita		
16:40	3Ep05	Introduction: Thermotolerant microorganisms leading to high-temperature fermentation○Kazunobu Matsushita (Dept. Biol. Chem., Yamaguchi Univ.)
16:50	3Ep06	Isolation, Selection and Characterization of Thermotolerant Yeasts for Ethanol Production○Savitree Limtong ¹ , Wichien Yongmanitchai ¹ , Napatchanok Yuangsaard ¹ , Mamoru Yamada ² (¹ Dept. Microbiol., Kasetsart Univ., Thailand, ² Fac. Agri. and Grad. Sch. Med., Yamaguchi Univ., Japan)

- 17:20 3Ep07 Thermotolerant ethanol fermentative bacteria developed by adaptive evolution
○Tomoyuki Kosaka¹, Maiko Yamashita², Yasuyuki Nakajima², Minenosuke Matsutani¹,
 Masayuki Murata², Mamoru Yamada^{1,2} (¹Faculty of Agriculture, Yamaguchi Univ.,
²Graduate School of Medicine, Yamaguchi Univ.)
 Chairperson: **Mamoru Yamada**
- 17:40 3Ep08 Characterization of genes mutated in thermal adaptation processes of thermotolerant acetic acid bacteria
○Toshiharu Yakushi, Mitsuteru Nishikura, Natsaran Saichana, Hiromi Hattori,
 Minenosuke Matsutani, Kazunobu Matsushita (Fac. Agr., Yamaguchi Univ.)
- 18:00 3Ep09 Characterization and comparative genome analysis of various *Kluyveromyces marxianus* strains
○Hisashi Hoshida¹, Minenosuke Matsutani², Rinji Akada¹
 (¹Dept. Appl. Mol. Biosci., Yamaguchi Univ., ²Dept. Biol. Chem., Yamaguchi Univ.)
 Chairperson: **Rinji Akada**
- 18:20 3Ep10 Practical applications of ethanol fermentation using thermotolerant yeast
○Chikako Shimizu (Frontier Laboratories of Value Creation, SAPPORO BREWERIES LTD.)
- 18:50 3Ep11 Concluding remarks- Towards effective utilization of the thermotolerant industrial microorganisms
○Rinji Akada (Dept. Appl. Mol. Biosci., Yamaguchi Univ.)

Room F Afternoon (14:00~16:20)

Symposium (Prospect for future studies on non-conventional yeasts)

- Chairperson: **Kazuo Masaki**
- 14:00 3Fp01 Isolation of a new yeast and application of its function
○Haruyuki Iefuji (Fac. Agric., Ehime Univ.)
- 14:28 3Fp02 Achievements and potentials in the yeast *Lipomyces*
○Takafumi Naganuma (Dept. Biotech., Grad. Sch. Med. Eng., Univ. Yamanashi)
- 14:56 3Fp03 Study on Wild Yeasts: Mechanism of Pellicle Formation
○Yuzuru Imura (Dept. Biotech., Grad. Sch. Med. Eng., Univ. Yamanashi)
 Chairperson: **Hiroaki Takaku**
- 15:24 3Fp04 *Yarrowia lipolytica*: From SCP to a novel industrial yeast
○Akinori Ohta^{1,2}, Ryouichi Fukuda²
 (¹Dept. Biosci., Tokyo Univ. Agricul., ²Dept. Biotechnol., Univ. Tokyo)
- 15:52 3Fp05 Virus-like linear plasmids from yeast—Elucidation of the plasmid functions and its development—
○Norio Gunge (Sojo Univ.)

Room F Afternoon (16:40~19:00)

Symposium (Roles of various bio-diesel fuel in a post fossil fuel age)

- Chairperson: **Satoshi Tsuneda**
- 16:40 3Fp06 *Jatropha*: from the hedge to the biofuel crop
○Suguru Tsuchimoto¹, Joyce Cartagena¹, Naruemon Khemkladngoen¹,
 Suthitar Singkaravanit¹, Tsutomu Kohinata¹, Naoki Wada¹, Hiroe Sakai¹,
 Yoshihiko Morishita², Hideyuki Suzuki², Daisuke Shibata², Kiichi Fukui¹
 (¹Grad. Sch. Eng., Osaka Univ., ²Kazusa DNA Res. Inst.)
- 17:05 3Fp07 Asia-Africa research collaboration on a biodiesel plant, *Jatropha curcas* L.
○Kinya Akashi (Fac. Agric., Tottori Univ.)
- 17:30 3Fp08 Problems and future outlook of *Jatropha curcas* for Bio-diesel fuel production
○Yoshiaki Kitaya¹, Tsutomu Fushimi², Yasuaki Maeda¹ (¹Osaka Pref. Univ., ²JIRCAS)
- 17:55 3Fp09 Role and task of a bioprocess for widespread use of biodiesel fuel
○Shinji Hama (Bio-energy Co.)

18:20 3Fp10 Problems in algae-based biofuel production
○Norihide Kurano (Res. Lab., DENSO CORPORATION)

18:45 Discussion

Room B Morning (9:00~12:00)

General Presentaion (Cell and tissue engineering)

- 9:00 3Ba01 Library selection of anti-fluorescein single-chain variable fragment using chimeric receptor
○Rie Yoshida, Masahiro Kawahara, Hiroshi Ueda, Teruyuki Nagamune
 (Grad. Sch. Eng. Tokyo Univ.)
- 9:12 3Ba02 Direct selection of intracellular antibodies against Rabies virus phosphoprotein based on cell proliferation
○Songhee Lee¹, Masahiro Kawahara¹, Yoshihiro Kaku², Satoshi Inoue², Hiroshi Ueda¹,
 Teruyuki Nagamune¹ (¹Dept. Chem. Biotech., Univ. Tokyo, ²Natl. Inst. Infect. Dis.)
- 9:24 3Ba03 Inducing cell death of cancer cells using an antibody/Fas chimera
Yuichiro Tone, ○Masahiro Kawahara, Hiroshi Ueda, Teruyuki Nagamune
 (Dept. Chem. Biotech., Univ. Tokyo)
- 9:36 3Ba04 Analysis of intracellular signaling mechanism through reconstruction of cytokine receptors
○Koichiro Saka, Masahiro Kawahara, Hiroshi Ueda, Teruyuki Nagamune
 (Dept. Chem. Biotech., Univ. Tokyo)
- 9:48 3Ba05 Basal study on hybrid artificial lung with fibrous scaffolds
○Masahiro Murai¹, Norihiko Hata², Hiroo Noguchi³, Kazuhiro Nonaka⁴, Akio Funakubo^{1,3}
 (¹Grad. Sch. Sci. Eng., Tokyo Denki Univ., ²FRDC. Tokyo Denki Univ.,
³Grad. Sch. Adv. Sci. Tech. Tokyo Denki Univ., ⁴McGowan Inst. Univ. Pittsburgh)
- 10:00 3Ba06 Differentiation of rat mesenchymal stem cells on collagen hydrogels cross-linked by gamma-ray irradiation
○Hideki Mori, Akihiro Ikenaka, Kousuke Shimizu, Masayuki Hara
 (Dept. Biol. Sci., Grad. Sch. Sci., Osaka Pref. Univ.)
- 10:12 3Ba07 Preparation of scaffold-free cartilage-like sheet made of mesenchymal stem cells without FCS
○Yasushi Sato¹, Shigeyuki Wakitani², Mutsumi Takagi¹
 (¹Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ.,
²Grad. Sch. Health Sports Sci., Mukogawa Women's Univ.)
- 10:24 3Ba08 Osteochondral-like tissue graft constructed with beta-TCP and mesenchymal stem cells
Miyagi Shigeharu¹, ○Fujiwara Masashi¹, Wakitani Shigeyuki², Takagi Mutsumi¹
 (¹Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ.,
²Grad. Sch. Health Sports Sci., Mukogawa Women's Univ.)
- 10:36 3Ba09 Correlation between laser phase difference and actin density in normal and carcinoma cells
○Tokunaga Naochika, Takagi Mutsumi
 (Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ.)
- 10:48 3Ba10 Noninvasive discrimination of undifferentiated iPS cell from differentiated cell by laser phase shift
 measurement
Yoshioka Hiromichi, ○Takagi Mutsumi (Div. Biotech. Macromol. Chem., Grad. Sch. Hokkaido Univ.)
- 11:00 3Ba11 Effect of vibration of thin glass capillary on viability of bone marrow mesenchymal stem cell in adhesion
 culture
○Sunazuka Dai¹, Tanaka Nobuaki², Wakitani Shigeyuki³, Takagi Mutsumi¹
 (¹Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ., ²NSK Ltd.,
³Grad. Sch. Health Sports Sci., Mukogawa Women's Univ.)

- 11:12** 3Ba12 Examination of the action mechanism and correlation of osteogenic differentiation ability and morphology in the initial cell adhesion of mesenchymal stem cells derived from bone marrow
○Yuta Kobayashi^{1,2}, Motohiro Hirose², Kan Cheng^{1,2}, Yu Sogo², Atsuo Ito², Atsushi Yamazaki¹
 (1Dept. Res Env., Grad. Sch. Sci Eng., Waseda. Univ., 2Human. Tech., AIST)
- 11:24** 3Ba13 3-D construction of adipose derived stem cells cultured on a microfabricated surface : effects on stemness and differentiation
○Yuka Kikuchi¹, Hideyuki Suzuki², Moritosi Sato², Shyuji Takahasi³, Keitaro Yoshimoto¹
 (1Dept. of Life Sci., Grad. Sch. of Arts and Sci. The Univ. of Tokyo,
 2Dept. of General Systems Studies, Grad. Sch. of Arts and Sci. The Univ. of Tokyo,
 3Div. of Life Sci., KOMEX, College of Arts and Sci., The Univ. of Tokyo)
- 11:36** 3Ba14 Subunits of Porcine Hair Keratin Immobilized on Solid Surface
○Yuki Ozaki, Yusuke Saito, Hideki Mori, Masayuki Hara
 (Dept. Biol. Sci., Grad. Sch. Sci., Osaka Pref. Univ.)
- 11:48** 3Ba15 Effects of vitamins on the differentiation to the osteoblast in a mouse C3H10T1/2 cell
○Naofumi Shiomi, Satoko Tanaka, Rumi Takeya, Ayako Higuchi, Minami Hosokawa,
 Kumiko Tasiro, Keiko Watanabe (Dept. Human Sci., Kobe Coll.)

Room B Afternoon (13:30~17:54)

General Presentaion (Cell and tissue engineering)

- 13:30** 3Bp01 Molecular diffusion elucidating dynamical rearrangement of extracellular matrix caused by cells
○Junri Ito, Takanori Kihara, Jun Miyake (Grad. Sch. Eng. Sci., Osaka Univ.)
- 13:42** 3Bp02 Particle simulation of physical environment within the cell
○Kouta Horikawa, Takanori Kihara, Masataka Imura, Osamu Ooshiro, Jun Miyake
 (Grad. Sch. Eng. Sci., Osaka Univ.)
- 13:54** 3Bp03 Analysis of mineralized matrix formation by using “Sim-Culture bone”
○Tatsuro Suzuki¹, Takanori Kihara¹, Kosuke Kashitani¹, Shunsuke Yuba², Jun Miyake¹
 (1Dept. Bio-Engineering Sci., Osaka Univ., 2Health Sci., AIST)
- 14:06** 3Bp04 Development of system for culture process simulation for cell tissue evaluation
○Hiroki Kiuchi¹, Hiroo Noguchi¹, Norihiko Hata², Kazuhiro Nonaka³, Akio Funakubo¹
 (1Grad. Sch. Sci. Eng. Tokyo Denki Univ., 2FRDC. Tokyo Denki Univ., 3McGowan Inst. Univ. Pittsburgh)
- 14:18** 3Bp05 Kinetic analysis of skeletal muscle myoblasts expansion under heterogeneous seeding conditions
○Kyoko Kishi, Masahiro Kino-oka (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 14:30** 3Bp06 Kinetic analysis of maturation in confluent culture of retinal pigment epithelial cells
○Yosuke Teranishi, Masahiro Kino-oka (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 14:42** 3Bp07 Fabrication of *in vitro* blood vessel model using gelatin hydrogel as a substrate
○Sho Shinohara¹, Takanori Kihara², Shinji Sakai², Masahito Taya², Jun Miyake^{1,2}
 (1Grad. Sch. Fro. Bio. , Osaka Univ., 2Grad. Sch. Eng. Sci., Osaka Univ.)
- 14:54** 3Bp08 Fabrication of vascular tissue models by multistep cell deposition inside hydrogel microchannels
○Masaki Iwase, Masumi Yamada, Minoru Seki
 (Dept. of Appl. Chem. and Biotechnol., Grad. Sch. of Eng., Chiba University)
- 15:06** 3Bp09 Rapid bioassembly for engineering of vascular-like structure with electrochemistry
○Tatsuya Osaki, Hiroaki Suzuki, Junji Fukuda (Grad. Sch. Pure and appl. Sci, Univ. Tsukuba)
- 15:18** 3Bp10 Heterogeneity of cell fluidity in a multilayered human skeletal myoblast sheet
○Tadashi NAKAMURA, Eiji NAGAMORI, Masahiro KINO-OKA
 (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)

- 15:30** 3Bp11 Effect of angiogenic growth factors on endothelial network formation in a multilayered skeletal myoblast sheet
.....○Eiji Nagamori, Takaki Osawa, Masahiro Kino-oka (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 15:42** 3Bp12 Cell patterning technique using photocatalyst reaction of titanium oxide
.....○Akifumi Yoshino, Kohji Nakazawa (Dept. of Life and Env Eng.,)
- 15:54** 3Bp13 Tissue engineering using electrochemical cell detachment and *in situ* smart biomaterials.
.....○Tatsuto Kageyama¹, Taichi Itou², Suzuki Hiroaki¹, Fukuda Junji¹
(¹Grad. Sch. Pure and appl. Sci, Univ. Tsukuba, ²Dise. Bio. and Inte. Medi, Univ. Tokyo)
- 16:06** 3Bp14 Microfluidic production of collagen hydrogel microbeads for heterogeneous spheroid formation
.....○Sari Sugaya, Masumi Yamada, Masaki Iwase, Minoru Seki (Grad. Sch. of Eng., Chiba Univ.)
- 16:18** 3Bp15 Development of 3D reconstruction brain circuits controlling the direction of neurite elongation and soma
.....○Aoi Odawara, Ikuro Suzuki, Masao Gotoh (Dept. Bio., Tokyo Univ. of Technolo.)
- 16:30** 3Bp16 Fabrication of artificial skeletal muscle tissue constructs under electrical stimulation
.....○Yasunori Yamamoto¹, Akira Ito², Yoshinori Kawabe², Hideaki Fujita³, Eiji Nagamori³,
Masamichi Kamihira^{1,2} (¹Grad. Sch. Systems Life Sci., Kyushu Univ.,
²Dept. Chem. Eng., Fac. Eng., Kyushu Univ., ³Toyota Cent. R&D Labs. Inc.)
- 16:42** 3Bp17 Label-free ultrarapid spheroid array formation and recovery based on the magneto-Archimedes effect
.....○Yoshitake Akiyama, Keisuke Morishima (Dept. Mech. Eng., Osaka Univ.)
- 16:54** 3Bp18 Development of decellularized neural tissue and 3D culture techniques.
.....○Shota Amano, Ikuro Suzuki, Masao Gotoh (Dept. Bio., Tokyo Univ. Technol)
- 17:06** 3Bp19 Comparing activity of 3 promoters by using event driven timelapse analysis
.....○Yusaku Somei, Kazumi Hakamada, Jun Miyake (Grad. Sch. Eng. Sci., Osaka Univ.)
- 17:18** 3Bp20 Importance of transient cell adhesion to the dish in the megakaryocytic differentiation of K562 cells
.....○Yoshihiro Ojima¹, Shouhei Kobayashi², Retno Nurhayati¹, Tokuko Haraguchi², Masahito Taya¹
(¹Grad. Sch. Eng. Sci., Osaka Univ., ²Adv. ICT Res. Inst., NICT)
- 17:30** 3Bp21 The role of oxidative stress in the megakaryocytic differentiation of K562 cells
.....○Retno Nurhayati¹, Yoshihiro Ojima¹, Mark Duncan², William Miller², Masahito Taya¹
(¹Grad. Sch. Eng. Sci., Osaka Univ., Japan, ²Dept. Chem. Biol. Eng., Northwestern Univ., USA)
- 17:42** 3Bp22 Characterization of eggshell (membrane) derived biomaterials as potential scaffolds for tissue engineering
.....Mahdi Khanmohammadi, ○Ali Baradar Khoshfetrat, Shahla Eskandarneshad, Sirus Ebrahimi
(Dept. Chem. Eng., Sahand Univ. of Tech., Tabriz, Iran)

Room C Morning (9:00~12:00)

General Presentaion (Enzymology, enzyme)

- 9:00** 3Ca01 Stabilization of cellulase components by the addition of surfactants
.....○Shohei Okino, Makoto Ikeo, Daisuke Taneda (JGC Corporation)
- 9:12** 3Ca02 Property of novel cellulase produced by the deepest-sea animal
.....○Hideki Kobayashi, Yuji Hatada, Taishi Tsubouchi, Hideto Takami (JAMSTEC)
- 9:24** 3Ca03 Transglycosylation activity of a chitinase ChiL from the chitinolytic bacterium, *Chitiniphilus shinanonensis*
.....○Norie Sonoda, Moe Nakano, Arisa Shizume, Masahiro Nogawa, Goro Taguchi, Makoto Shimosaka
(Div. Appl. Biol., Fac. Textile Sci. and Technol., Shinshu Univ.)
- 9:36** 3Ca04 Analysis of a novel chitinase ChiG from the chitinolytic bacterium, *Chitiniphilus shinanonensis*
.....○Moe Nakano, Norie Sonoda, Arisa Shizume, Lan-Xiang Huang, Masahiro Nogawa, Goro Taguchi,
Makoto Shimosaka (Div. Appl. Biol., Fac. Textile Sci. and Technol., Shinshu Univ.)
- 9:48** 3Ca05 Production of 6-deoxy-aldohehexoses from L-rhamnose by enzymatic reactions
.....○Sirinan Shompoonsang¹, Kenji Morimoto¹, Akihide Yoshihara¹, Fleet W. J. George², Ken Izumori¹
(¹RSRC., Kagawa Univ., ²Dept. Che., Oxford Univ.)

- 10:00 3Ca06 Production of D-talose from D-psicose using microbial and enzymatic reactions
.....○Yuji Terami, Akihide Yoshihara, Kenji Morimoto, Goro Takata (RSRC., Kagawa Univ.)
- 10:12 3Ca07 Reactivity for rare sugars of *Bacillus* sp. K44 strain and elucidation of its metabolic pathway
.....○Kenji Morimoto, Goro Takata, Hideaki Kobayasi, Akihide Yoshihara (RSRC., Kagawa Univ.)
- 10:24 3Ca08 Characterization of novel D-Tagatose 3-epimerase from *Mesorhizobium loti* tona
.....○Keiko Uechi¹, Yoshinori Fukai¹, Akihide Yoshihara², Kenji Morimoto², Goro Takata²
(¹Fac. Agric., Kagawa Univ., ²RSRC., Kagawa Univ.)
- 10:36 3Ca09 Diversity of xylanases from *Aspergillus fumigatus* TH7-1 isolated from green turtle (*Chelonia mydas*)
.....○Yohei Enomoto¹, Yui Takahashi¹, Yoshito Wakai², Masami Furuta², Shuichiro Murakami³
(¹Grad. Sch. Agric., Meiji Univ., ²Toba Aquarium, ³Sch. Agric., Meiji Univ.)
- 10:48 3Ca10 Analysis of localization and variety of xylanolytic enzymes from *Aspergillus niger* E-1
.....○Yui Takahashi¹, Masayuki Goto², Teruyuki Komiya³, Shuichiro Murakami²
(¹Grad. Sch. Agric., Meiji Univ., ²Sch. Agric., Meiji Univ., ³Ueno Zoological Gardens)
- 11:00 3Ca11 Screening of microorganisms producing novel intercellular glycosyltransferases
.....○Akiko Kawai¹, Kuakrun Krusong², Jarunee Kaulpiboon², Tipaporn Limpaseni²,
Piamsook Pongsawasdi², Shuichiro Murakami³ (¹Grad. Sch. Agric., Meiji Univ.,
²Fac. Sci., Chulalongkorn Univ., ³Sch. Agric., Meiji Univ.)
- 11:12 3Ca12 A study of maltotriose producing amylase from *Kitasatospora* sp. MK-1785
.....○Masahiro Kamon, Shuji Tani, jun-ichi Sumitani, Takashi Kawaguchi
(Dept. Appl. Biol. Chem., Osaka Pref. Univ.)
- 11:24 3Ca13 Study of a novel Gly-Pro degrading-enzyme from *Lactobacillus farciminis* JCM1097
.....○Takuma Sakamoto, Takuya Otokawa, Kenta Okuno, Kunihiro Watanabe
(Grad. Sch., Kyoto Pref. Univ.)
- 11:36 3Ca14 Solution structure of an autolysin inhibitor IseA from *Bacillus subtilis* reveals a novel “hacksaw-like” fold with a characteristic inhibitory loop
.....○Ryoichi Arai^{1,2}, Sadaharu Fukui¹, Naoya Kobayashi¹, Junichi Sekiguchi¹
(¹Dev. Appl. Biol., Fac. Tex. Sci. Tech., Shinshu Univ., ²YREC, Shinshu Univ.)
- 11:48 3Ca15 Secretion of PLA depolymerase from actinomycetes
.....○Takeo Fujimori, Choko Hara, Kota Anzai, Shinji Tokuyama
(Dept. Appl. Biol. Chem., Fac. Agric., Shizuoka Univ.)

Room C Afternoon (13:30~17:54)

General Presentaion (Enzymology, enzyme)

- 13:30 3Cp01 *Lactobacillus casei* M10-8 isolated from Moromi of high amount D-aspartate-containing sake:optimization of D-aspartate production and characterization of aspartate racemase
.....○Rumi Saito, Yoshitaka Gogami, Tadao Oikawa (Dept. Life Sci. & Biotechnol., Kansai Univ.)
- 13:42 3Cp02 Thermostable D-amino acid oxidase of a thermophilic bacterium
.....○Keishi Omae, Namiho Tadokoro, Yayoi Saito, Mieko Koayashi, Katsumasa Abe,
Shouji Takahashi, Yoshio Kera (Dept. Environ. Sys. Eng., Nagaoka Univ. Tech.)
- 13:54 3Cp03 Crystal structure of the yeast *Cryptococcus humicola* D-aspartate oxidase
.....○Shouji Takahashi¹, Masaru Goto², Kohodai Komori¹, Satomi Ohkouchi¹, Katsumasa Abe¹,
Yoshio Kera¹ (¹Dept. Environ. Sys. Eng., Nagaoka Univ. Tech., ²Dept. Biomol. Sci., Toho Univ.)
- 14:06 3Cp04 Analysis of the substrate recognition mechanism in high substrate specificity L-glutamate oxidase and characterization of substrate specificity modified enzymes
.....○Ryuichiro Nakai¹, Takashi Tamura¹, Hitoshi Kusakabe², Katsumi Imada³, Kenji Inagaki¹
(¹Grad. Sch. Env. Life Sci., Okayama Univ., ²Enzyme Sensor Co. Ltd., ³Grad. Sch. Sci., Osaka Univ.)

- 14:18** 3Cp05 Characterization of RimK, a poly- α -glutamic acid synthetase from *Escherichia coli* K-12
 \circ Ayumi Yagita, Yasuhiro Arimura, Toshinobu Arai, Kuniki Kino
 (Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 14:30** 3Cp06 Synthesis of amino acid amides by a module of non-ribosomal peptide synthetase
 \circ Masaru Sato¹, Ryotaro Hara², Kuniki Kino^{1,2}
 (¹Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ., ²ASMeW)
- 14:42** 3Cp07 Screening of novel fructosamine 6-kinase from protein database
 \circ Eri Kamio, Wakako Tugawa, Koji Sode
 (Dept. of Biotechnol., Graduate School of Engineering, Tokyo Univ. of Agric. and Technol.)
- 14:54** 3Cp08 Crystal structure of fructosyl peptide oxidase in complex with *N*⁶-(1-deoxy-D-fructos-1-yl)-L-lysine analog
 \circ Atsushi Ichiyangi¹, Bunta Watanabe³, Kozo Hirokawa², Keiko Gomi¹, Toru Nakatsu⁴,
 Hiroaki Kato⁴, Naoki Kajiyama¹ (¹R&D Div., Kikkoman Corp., ²Kikkoman Biochemifa Co.,
³Inst. Chem. Res., Kyoto Univ., ⁴Grad. Sch. Pharm. Sci., Kyoto Univ.)
- 15:06** 3Cp09 Evaluation of putative cholesterol oxidases selected from genomic data mining
 \circ Jun Sakurai, Stefano Ferri, Wakako Tsugawa, Koji Sode
 (Dept. of Biotechnol., Graduate School of Engineering, Tokyo Univ. of Agric. and Technol.)
- 15:18** 3Cp10 Purification and characterization of glycerophosphocholine cholinephosphodiesterase from *Streptomyces sanglieri*
 \circ Koki Okuda¹, Junki Ogasawara², Daisuke Sugimori²
 (¹Dept. Symbio. Sys. Sci. Tech., Fukushima Univ.,
²Grad. Sch. Symbio. Sys. Sci. Tech., Fukushima Univ.)
- 15:30** 3Cp11 Characterization and gene cloning of glycerophosphocholine cholinephosphodiesterase from *Streptomyces sanglieri*
 \circ Junki Ogasawara¹, Koki Okuda², Daisuke Sugimori¹
 (¹Grad. Sch. Symbio. Sys. Sci. Tech., Fukushima Univ.,
²Dept. Symbio. Sys. Sci. Tech., Fukushima Univ.)
- 15:42** 3Cp12 Substrate specificity and identification of catalytic residues of phospholipase B from *Streptomyces* sp. NA684
 \circ Shingo Mineta¹, Yusaku Matsumoto², Daisuke Sugimori²
 (¹Dept. Symbio. Sys. Sci. Tech., Fukushima Univ.,
²Grad. Sch. Symbio. Sys. Sci. Tech., Fukushima Univ.)
- 15:54** 3Cp13 Purification, characterization, and gene cloning of phospholipase D from *Streptomyces* sp. NA684
 \circ Yusaku Matsumoto, Daisuke Sugimori (Grad. Sch. Symbio. Sys. Sci. Tech., Fukushima Univ.)
- 16:06** 3Cp14 Surface loop deletion as a strategy for enzyme thermostabilization
 \circ Jasmina Damjanovic, Hideo Nakano, Yugo Iwasaki
 (Lab. Mol. Biotech., Grad. Sch. Biol. Agrc. Sci., Nagoya Univ.)
- 16:18** 3Cp15 An amino acid residue that determines the orientation of inositol in phosphatidylinositol-synthesizing phospholipase D
 \circ Ken Ishida, Hidetoshi Tanaka, Jasmina Damjanovic, Hideo Nakano, Yugo Iwasaki
 (Grad. Sch. Biol. Agrc. Sci., Nagoya Univ.)
- 16:30** 3Cp16 Improving the thermostability of AMV reverse transcriptase alpha subunit by site-directed mutagenesis
 \circ Atsushi Konishi, \circ Kiyoshi Yasukawa, Kuniyo Inouye
 (Div. Food Sci. Biotechnol., Grad. Sch. Agric., Kyoto Univ.)
- 16:42** 3Cp17 One amino acid residue determines an ability of NADP⁺ biosynthetic enzyme to utilize inorganic polyphosphate
 \circ Yusuke Nakamichi, Shigeyuki Kawai, Kousaku Murata (Grad. Sch. Agric., Kyoto Univ.)
- 16:54** 3Cp18 The energy carrier availability of acetate kinase
 \circ Aya Yoshioka, Shigeyuki Kawai, Kousaku Murata (Grad. Sch. Agric., Kyoto Univ.)

- 17:06** 3Cp19 Production of *p*-Aminosalicylic Acid by Reversible Salicylic Acid Decarboxylase Obtained through Site-directed Mutagenesis
○Saori Ienaga¹, Yuto Ito¹, Yuki Honda¹, Yoshitaka Ishii², Kohtaro Kirimura¹
 (1Dept. Appl. Chem., Fac. Sci. Eng., Waseda Univ.,
 2Dept. Environ. Info. Sci., Sch. Soc. Info. Stud., Otsuma Women's Univ.)
- 17:18** 3Cp20 Introduction of disulfide bonds into scaffold protein for artificial self-sufficient P450
○Hidehiko Hirakawa, Tomoaki Haga, Fumiya Iwata, Teruyuki Nagamune
 (Dept. Chem. Biotech., Univ. Tokyo)
- 17:30** 3Cp21 Improvement of 3-quinuclidinone reductase by directed evolution
○Nobuyuki Urano¹, Takahiro Nagai², Shoko Kumashiro², Sakayu Shimizu³, Michihiko Kataoka¹
 (1Div. Appl. Life Sci., Grad. Sch. Life Environ. Sci., Osaka Pref. Univ.,
 2Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ., 3Bioenviron. Sci., Kyoto Gakuen Univ.)
- 17:42** 3Cp22 Crystal structure of hydroxylamine oxidoreductase of an anammox bacterium strain KSU-1
○Daisuke Hira¹, Teruya Nakamura², Yuriko Yamagata², Kenji Furukawa³, Takao Fujii¹
 (1Fac. Appl. Life Sci., Sojo Univ., 2Grad. Sch. Pharm. Sci., Kumamoto Univ.,
 3Grad. Sch. Sci. Tech., Kumamoto Univ.)

Room D Morning (9:00~12:00)

General Presentaion (Genetic engineering / Biosensing and analytical chemistry)

- 9:00** 3Da01 DNA uptake speed of competent *Bacillus subtilis*
Nishimura Ayano, Taguchi Hisataka, ○Akamatsu Takashi (Fac. Biotechnol., Sojo Univ.)
- 9:12** 3Da02 Application of the phosphite dehydrogenase gene as a selectable marker in bacteria
○Ryuichi Hirota, Takenori Ishida, Takeshi Ikeda, Akio Kuroda
 (Dept. Mol. Biotech., Hiroshima Univ.)
- 9:24** 3Da03 Excision of a long DNA fragment using two suicide vectors
○Masahito Ishikawa, Katsutoshi Hori (Dept. Biotech., Grad., Sch. Eng., Nagoya Univ.)
- 9:36** 3Da04 Development of the cold-inducible expression system based on *Thermococcus kodakarensis* as a host
○Ryota Hidese¹, Eriko Nagaoka^{1,2}, Ayako Fujiwara², Shinsuke Fujiwara^{1,2}
 (1Res. Cent. for Life and Environ. Sci., Grad. Sch. Sci. Technol., Kwansei Gakuin Univ.,
 2Dept. Biosci., Kwansei Gakuin Univ.)
- 9:48** 3Da05 Overproduction and Easy Recovery of Target Gene Products from Autolysed Cyanobacteria, Photosynthesizing Microorganisms
○Munehiko ASAYAMA, Satomi YOSHIDA, Sayaka HONDOU, Masayuki MINAKAWA,
 Setsuko NUMANO, Chifumi KITAZAKI, Masatoshi TAKAHASHI
 (Lab. Mol. Genet., IBARAKI Univ.)
- 10:00** 3Da06 Effects of increase of heterocysts on *Anabaena* PCC 7120 photobiological hydrogen production and nitrogenase
○Hajime Masukawa^{1,2}, Kazuhito Inoue^{2,3}, Hidehiro Sakurai², Robert Hausinger^{4,5}
 (1PRESTO, JST, 2Res. Instit. for Photobiol. Hydrogen Production, Kanagawa Univ.,
 3Dept. Biol. Sci., Kanagawa Univ., 4Dept. Microbiol. & Mol. Genet., Michigan State Univ.,
 5Dept. Biochem. & Mol. Biol., Michigan State Univ.)
- 10:12** 3Da07 Construction of photo-responsive gene expression switch by fusion of cryptochrome and repressor
○Takayuki Uchida, Tsukasa Ohmura, Kazuhiro Nagahama, Masayoshi Matsuoka
 (Dept. Appl. Microb. Technol., Fac. Eng., Sojo Univ.)
- 10:24** 3Da08 Light regulation of extracellular polysaccharide production by developing various photo-switches
○Rei Narikawa, Ni Ni Win, Masahiko Ikeuchi (Grad. Sch. of Arts and Sci., Univ. of Tokyo)

- 10:36** 3Da09 Characterization of *argB* gene from *Lecanicillium* sp. HF627
.....○Ha Vy Nguyen Nhu¹, Keiichi Ishido¹, Fumio Ihara², Hiroshi Kinoshita¹, Takuya Nihira¹
(¹ICBiotech, Osaka Univ., ²Nat. Inst. Fruit Tree Sci.)
- 10:48** 3Da10 Further enhanced production of heterologous proteins by *AosedD* gene disruption in hyper-producing mutant AUT1 of *Aspergillus oryzae*
.....○Lin ZHU, Jun-ichi MARUYAMA, Katsuhiko KITAMOTO (Dept. Biotech., Univ. Tokyo)
- 11:00** 3Da11 Depression of carbon catabolite repression by disruption of ubiquitin C-terminal hydrolase, CreB, in *Aspergillus oryzae*
.....○Mizuki Tanaka, Shintani Takahiro, katsuya Gomi
(Div. Biosci. Biotech. Future Bioind., Grad. Sch. Agric. Sci., Tohoku Univ.)
- 11:12** 3Da12 LidNA: miRNA inhibitor constructed with unmodified DNA
.....○Yoshiki Komeda, Hiroyuki Ida, Satoshi Saito, Akira Tachibana, Toshizumi Tanabe
(Dept. Bioeng., Grad. Sch. Eng., Osaka City Univ.)
- 11:24** 3Da13 The effective random peptide phage screening method
.....○Ryuichi Murai, Taiki Nogi, Koumei Tateoka, Atsushi Sato (Grad. Bio., Tokyo Univ. Technol)
- 11:36** 3Da14 Genetic production of catalytic antibody heavy chain JN1-2 recognizing HA of influenza virus type A
.....○Ayaka Takezoe¹, Naoko Fujimoto³, Emi Hifumi^{2,3}, Taizo Uda^{1,3}
(¹Oita Univ., ²Research promotion project, ³CREST of JST)
- 11:48** 3Da15 Development and Application of Novel ELISA Techniques (LELIA) Using Giant Liposomes
.....○Tetsuro Yoshimura^{1,2,3}, Hidetaka Fukushima², Hideaki Amagi² (¹Grad. Sch. Eng., Mie Univ.,
²Liposome Eng. Lab., ³Nagoya Ind. Sci. Res. Inst.)

Room D Afternoon (13:30~17:54)

General Presentaion (Genetic engineering)

- 13:30** 3Dp01 Kyokai no. 7 cells inappropriately respond to nitrogen limitation
.....○Aya Sato, Nobushige Nakazawa (Dept. Grad. Sch. Biore., Akita Pref. Univ.)
- 13:42** 3Dp02 Cell death by excision of centromeric DNA from a chromosome in *Saccharomyces cerevisiae*
.....○Hiroaki Matsuzaki, Akihiro Miyamoto, Toshiaki Yanamoto, Takushi Hatano
(Dept. Biotech., Fac. Life Sci. Biotech., Fukuyama Univ.)
- 13:54** 3Dp03 Autophagic elimination of misfolded proteins in yeast
.....○Kengo Higuchi, Akio Kato, Hiroyuki Azakami (Dept. Biol. Chem., Yamaguchi Univ.)
- 14:06** 3Dp04 Identification of a ethanol-inducible promoter from fission yeast and its use as an expression vector
.....○Tomohiko Matsuzawa, Kaoru Takegawa (Dept. Biosci. Biotechnol., Kyushu Univ.)
- 14:18** 3Dp05 Simple, rapid, and high efficiency of double transformation leading to potent manipulation of *Saccharomyces cerevisiae*
.....○Masataka Tomitaka, Hisataka Taguchi, Takashi Akamatsu (Fac. Biotechnol., Sojo Univ.)
- 14:30** 3Dp06 One step construction of yeast strains with high permeability of compounds
.....○Yukio Mukai, Kazuya Kawabata, Nariyuki Saeki, Masato Yoshida, Tatsuki Kunoh,
Tamio Mizukami (Dept. Biosci., Nagahama Inst. Bio-Sci. Tech.)
- 14:42** 3Dp07 High-throughput gene expression monitoring using RFP in the thermotolerant yeast *Kluyvermyces marxianus*
.....○Ayako Suzuki¹, Hiroshi Fujii¹, Morito Mine², Hisashi Hoshida¹, Rinji Akada¹
(¹Dept. Apple. Mol. Biosci., Grad. Sch. Med. Yamaguchi Univ., ²Yamaguchi Univ.)
- 14:54** 3Dp08 Development of a precise gene synthesis method using in-flame fusion with selection marker gene
.....○Tohru YARIMIZU, Hisashi HOSHIDA, Rinji AKADA
(Dept. Appl. Mol. Biosci., Grad. Sch. Med. Yamaguchi Univ.)

- 15:06** 3Dp09 Characterization of genome-reduced fission yeast strains
.....Mayumi Sasaki, ○Hideki Tohda (ASPEX Div., Asahi Glass Co., Ltd.)
- 15:18** 3Dp10 Exploitation of PCDup technology for breeding and genome analysis in *Saccharomyces cerevisiae*
.....○Waranya Natesuntorn, Yuki Matsubara, Tatsuya Hayashi, Minetaka Sugiyama,
Yoshinobu Kaneko, Satoshi Harashima (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 15:30** 3Dp11 A series of multiple disruptions for type 2C protein phosphatase genes in *Saccharomyces cerevisiae* and their phenotypic analysis
.....○Dilruba Sharmin, Minetaka Sugiyama, Satoshi Harashima
(Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 15:42** 3Dp12 Functional redundancy of protein phosphatases Ptp2 and Msg5 prevents hyper-activation of the calcium-mediated signaling in *Saccharomyces cerevisiae*
.....○Walter Alvarez Lavina, Minetaka Sugiyama, Yoshinobu Kaneko, Satoshi Harashima
(Grad. Sch. Eng., Dept. Biotech., Osaka Univ.)
- 15:54** 3Dp13 Increased transcription of *RPL40A* gene is important for the improvement of RNA production in *Saccharomyces cerevisiae*
.....○Fahmida Khatun, Kenta Kurata, Varesa Chuwattanakul, Minetaka Sugiyama,
Yoshinobu Kaneko, Satoshi Harashima (Dept. Biotech. Eng., Osaka Univ.)
- 16:06** 3Dp14 Enhanced bioethanol production from sugarcane molasses using thermotolerant *Saccharomyces cerevisiae* strain TJ14-U54
.....○Masashi Kobata¹, Takatoshi Sakamoto¹, Hosein Shahsavaran¹, Minetaka Sugiyama¹,
Yoshinobu Kaneko¹, Chuenchit Boonchird², Satoshi Harashima¹
(¹Dept. Biotechnol. Osaka Univ., ²Dept. Biotechnol. Mahidol Univ.)
- 16:18** 3Dp15 Functional analysis of *HpFAD3* gene encoding Δ15-fatty acid desaturase in *Hansenula polymorpha*
.....○Juthaporn Sangwallek, Tomoya Tsukamoto, Yoshinobu Kaneko, Minetaka Sugiyama, Hisayo Ono,
Takeshi Bamba, Eiichiro Fukusaki, Satoshi Harashima (Dep. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 16:30** 3Dp16 Thermotolerance and acid tolerance are conferred by overexpressed *PKC1*, *ROM2* and *SNA4* in *Saccharomyces cerevisiae*
.....○Taiji Araki, Natsuko Noriki, Minetaka Sugiyama, Satoshi Harashima
(Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 16:42** 3Dp17 Elucidation of molecular mechanisms of lactic acid tolerance conferred by overexpressed *ESBP6* in *Saccharomyces cerevisiae*
.....○Minetaka Sugiyama, Yuki Kuramoto, Momoko Mune, Yoshinobu Kaneko, Satoshi Harashima
(Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 16:54** 3Dp18 Breeding of acetic acid tolerant xylose-fermenting yeast strain and performance evaluation
.....○Yueqin Tang¹, Kanako Mitsumasu², Yoshimi Nakano², Min Gou¹, Takashi Akamatsu³,
Hisataka Taguchi³, Kenji Kida^{1,2} (¹College of Architecture and Engineering, Sichuan University,
²Graduate School of Science and Technology, Kumamoto University,
³Department of Applied Microbial Technology, Sojo University)
- 17:06** 3Dp19 Cloning of carotenoid biosynthesis gene and effect of carotenoid on stress tolerance of lactic acid bacteria
.....○Tatsuro Hagi¹, Miho Kobayashi¹, Jun Shima², Shinichi Kawamoto³, Masaru Nomura¹
(¹NARO Inst. Livestock Grassland Sci., ²Res. Div. Microb. Sci., Kyoto Univ., ³NARO Food Res. Inst.)
- 17:18** 3Dp20 Engineering of polyphosphate-accumulating lactobacilli for the development of effective probiotics
.....○Yasuaki Ishida¹, Shuichi Segawa², Ryuichi Hirota¹, Takeshi Ikeda¹, Akio Kuroda¹
(¹Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ., ²Sapporo Breweries. Ltd.)
- 17:30** 3Dp21 Extracellular polysaccharide like material synthesized by nitrogen-fixing endophyte, *Gluconacetobacter diazotrophicus*
.....○Nao Idogawa, Shigeyuki Kawai, Kosaku Murata (Grad. Sch. Agric., Kyoto Univ.)

- 17:42 3Dp22 Poly- γ -glutamic acid production by recombinant *Bacillus subtilis*
○Kazuhisa Sawada, Hiroshi Hagihara, Katsuya Ozaki (Biol. Sci. Res., Kao corp.)

Room G Morning (9:00~12:00)

General Presentaion (Omics technology)

- 9:00 3Ga01 Development of metabolite identification technique using accurate MSⁿ analysis and compound data base
○Tairo Ogura^{1,2}, Takeshi Bamba¹, Eiichiro Fukusaki¹
 (1Dept. Biotech., Grad. Sch. Eng., Osaka Univ., 2Shimadzu co.)
- 9:12 3Ga02 Optimization of a reproducible metabolic profiling method for *Saccharomyces cerevisiae* based on gas chromatography-mass spectrometry
○Naoki Kawase, Hirosi Tsugawa, Takeshi Bamba, Eiichiro Fukusaki
 (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 9:24 3Ga03 Metabolomics-based prediction of 1-butanol tolerance in *Saccharomyces cerevisiae*
○Shao Thing Teoh¹, Sastia Putri¹, Yukio Mukai², Takeshi Bamba¹, Eiichiro Fukusaki¹
 (1Dept. Biotech., Grad. Sch. Eng., Osaka Univ., 2Dept. Biosci., Fac. Biosci., Nagahama Inst. Bio-Sci. Tech.)
- 9:36 3Ga04 Metabolic fingerprinting of natural cheeses using GC/FID for practical sensory prediction modeling
○Hiroshi Ochi^{1,2}, Takeshi Bamba², Keiji Iwatsuki¹, Fumiaki Abe¹, Eiichiro Fukusaki²
 (1Food Sci. Tech. Inst., Morinaga Milk Industry, 2Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 9:48 3Ga05 Application of metabolic profiling with GC/MS and LC/MS to screening of Umami compounds in soy sauce
○Kazuki Shiga¹, Yukako Kodama¹, Miho Imamura¹, Riichiro Uchida¹, Akio Obata¹,
 Shinya Yamamoto², Takeshi Bamba², Eiichiro Fukusaki² (1R&D Div., Kikkoman Corp.,
 2Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 10:00 3Ga06 Evaluation of effects of polyamines on biofilm formation in *Porphyromonas gingivalis* by metabolomics
○Ayako Tomio¹, Samar Alghamdi², Masae Kuboniwa², Atsuo Amano², Takeshi Bamba¹,
 Eiichiro Fukusaki¹ (1Dept. Biotech., Grad. Sch. Eng., Osaka Univ., 2Grad. Sch. Dent., Osaka Univ.)
- 10:12 3Ga07 Metabolite profiles correlate closely with neurobehavioral function in experimental spinal cord injury in rats
○Yusuke Fujieda^{1,2}, Shinya Ueno², Mariko Kuroda², Ryoko Ogino², Takeshi Bamba¹,
 Eiichiro Fukusaki¹ (1Dept. Biotech., Grad. Sch. Eng., Osaka Univ., 2Asubio Pharma CO., LTD)
- 10:24 3Ga08 Development of oxidized phospholipid isomers profiling method using supercritical fluid chromatography/
 tandem mass spectrometry
○Takato Uchikata¹, Atsuki Matsubara¹, Shin Nishiumi², Masaru Yoshida²,
 Eiichiro Fukusaki¹, Takeshi Bamba¹ (1Dept. Biotech., Grad. Sch. Eng., Osaka Univ.,
 2Div. Gastroenterology, Grad. Sch. Med., Kobe Univ.)
- 10:36 3Ga09 Development of a high-throughput lipid metabolomics system using supercritical fluid chromatography
 coupled with triple quadrupole mass spectrometry
○Takayuki Yamada¹, Takato Uchikata¹, Yasuto Yokoi², Eiichiro Fukusaki¹, Takeshi Bamba¹
 (1Dept. Biotech., Grad. Sch. Eng., Osaka Univ., 2Mitsui Knowledge Industry)
- 10:48 3Ga10 Lipid profiling of erythrocyte by SFC/MS
○Hotaka Sanda¹, Takato Uchikata¹, Shin Nishiumi², Masaru Yoshida²,
 Eiichiro Fukusaki¹, Takeshi Bamba¹ (1Dept. Biotech., Grad. Sch. Eng., Osaka Univ.,
 2Div. Gastro., Grad. Sch. Med., Kobe Univ.)
- 11:00 3Ga11 Analysis of oxidized lipid derived volatiles by Gas Chromatography/Mass Spectrometry
○Shoji Kakuta¹, Yasuhiko Bando², Shin Nishiumi³, Masaru Yoshida³, Eiichiro Fukusaki¹,
 Takeshi Bamba¹ (1Dept. Biotech., Grad. Sch. Eng., Osaka Univ., 2AMR, Inc.,
 3Div. Gastro., Grad. Sch. Med., Kobe Univ.)

- 11:12** 3Ga12 High-throughput simultaneous analysis of pesticide residues by supercritical fluid chromatography/mass spectrometry
○Megumi Ishibashi¹, Takashi Ando², Miho Sakai², Atsuki Matsubara¹, Takato Uchikata¹, Eiichiro Fukusaki¹, Takeshi Bamba¹ (¹Dept. Mat. Life Sci., Osaka Univ., ²Miyazaki Agric. Res. Ins.)
- 11:24** 3Ga13 Theoretical Verification of a Strategy for Determining Elemental Composition Based on Ultrahigh-resolution Mass Spectrometric Data
○Nagao Tatsuhiko¹, Yukihiro Daichi¹, Fujimura Yoshinori², Miura Daisuke², Wariishi Hiroyuki^{2,3}
 (¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ., ²ICMRN, Kyushu Univ., ³Fac. Arts and Sci., Kyushu Univ.)
- 11:36** 3Ga14 Analysis of Comprehensive and Spatiotemporal Metabolic Dynamics by Integrated MS Technique
○Miho Irie¹, Yoshinori Fujimura², Daisuke Miura², Mayumi Yamato², Hiroyuki Wariishi^{2,3}
 (¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ., ²ICMRN, Kyushu Univ., ³Fac. Arts and Sci., Kyushu Univ.)
- 11:48** 3Ga15 Development of Metabolite/Protein Imaging Technique using MALDI-MS in a Single Tissue Section
○Ayumi Yamaguchi¹, Daisuke Miura², Yoshinori Fujimura², Hiroyuki Wariishi^{2,3}
 (¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ., ²ICMRN, Kyushu Univ., ³Fac. Arts and Sci., Kyushu Univ.)

Room G Afternoon (13:30~18:54)

General Presentaion (Omics technology / Biosynthesis, natural organic chemistry / Environmental technology, wastewater treatment)

- 13:30** 3Gp01 Multi-omics analysis of ethanol-tolerant *Escherichia coli* strains obtained by experimental evolutions
○Takaaki Horinouchi¹, Shingo Suzuki¹, Naoaki Ono², Kuniyasu Tamaoka³, Takashi Hirasawa³, Tetsuya Yomo^{3,4,5}, Hiroshi Shimizu³, Chikara Furusawa^{1,3} (¹QBIC, RIKEN, ²Grad. Sch. Info. Sci., NAIST, ³Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ., ⁴Grad. Sch. Info. Sci. Tech., Osaka Univ., ⁵ERATO, JST)
- 13:42** 3Gp02 Consideration of mechanism how high-temperature-adapted yeast acquired thermotolerance by omics analysis
○Yoshiaki Katsuyama¹, Kouichi Kuroda¹, Ayako Tomio², Takeshi Bamba², Eiichiro Fukusaki², Mitsuyoshi Ueda¹ (¹Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ., ²Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 13:54** 3Gp03 High-throughput and sensitive analysis of 3-monochloropropane-1,2-diol (3-MCPD) fatty acid esters in edible oils by supercritical fluid chromatography/tandem mass spectrometry
○Katsuhito Hori¹, Atsuki Matsubara², Takato Uchikata², Kazunobu Tsumura¹, Eiichiro Fukusaki², Takeshi Bamba² (¹Fuji oil, Analytical Center for Food Safety, ²Dept. Mat. Life Sci., Osaka Univ.)
- 14:06** 3Gp04 Proteome analysis of symbiotic nitrogen-fixing bacteria, *Mesorhizobium loti*
○Yohei Tatsukami, Kazuma Matsui, Wataru Aoki, Hironobu Morisaka, Kouichi Kuroda, Mitsuyoshi Ueda (Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 14:18** 3Gp05 Metabolome analysis in phototrophs labeled with oxygen isotope
○Kota Kera¹, Norimoto Shimada^{1,3}, Takeshi Ara¹, Nozomu Sakurai¹, Daisuke Shibata¹, Koh Aoki^{1,2}, Hideyuki Suzuki¹ (¹Kazusa DNA Res. Inst., ²Osaka Pref. Univ., ³Tokiwa Phytochem.)
- 14:30** 3Gp06 Anethole exhibits synergistic antifungal activity via restriction of multidrug resistance
○Takayuki Ishikura¹, Yui Jono¹, Daisuke Yamaguchi¹, Ogita Akira^{1,2}, Ken-ichi Fujita¹, Toshio Tanaka¹ (¹Grad. Sch. Sci., Osaka City Univ., ²Res. Cntr. for Urban Health and Sports, Osaka City Univ.)

- 14:42** 3Gp07 L-2,5-Dihydrophenylalanine induced apoptosis-like cell death accompanying production of reactive oxygen species against a budding yeast
○Yuri Nakao¹, Akira Ogita^{1,2}, Toshio Tanaka¹, Ken-ichi Fujita¹
 (¹Grad. Sch. Sci., Osaka City Univ., ²Res. Cntr. for Urban Health & Sports, Osaka City Univ.)
- 14:54** 3Gp08 Studies on micro cluster structure observed in γ -polyglutamic acid
○Tomoki Shima¹, Naoko Mizuhara¹, Yoshinosuke Usuki¹, Akira Ogita^{1,2},
 Ken-ichi Fujita¹, Toshio Tanaka¹ (¹Grad. Sch. Sci., Osaka City Univ.,
²Res. Cntr. for Urban Health & Sports, Osaka City Univ.)
- 15:06** 3Gp09 Exploring factors related to productivity of gamma-polyglutamic acid
Shou Komaki¹, Kousuke Shinoda¹, Tomoki Shima¹, Akira Ogita^{1,2},
 Toshio Tanaka¹, ○Ken-ichi Fujita¹ (¹Grad. Sch. Sci., Osaka City Univ.,
²Res. Cntr. for Urban Health & sports, Osaka City Univ.)
- 15:18** 3Gp10 Microbial production of the material for Ambroxan by *Hypophozyma* sp.
○Atsuko Hayase¹, Shuichi Takizawa², Mitsuyoshi Sakasai³, Norihiko Higaki¹, Yasushi Kageyama¹,
 Kazuaki Igarashi², Yusuke Shibuya⁴, Hiroshi Hagihara², Katsuya Ozaki¹
 (¹Biol. Sci. Res., Kao Corp., ²Eco. Innov. Res., Kao Corp.,
³Perf. Dev. Res., Kao Corp., ⁴Anal. Sci. Res., Kao Corp.)
- 15:30** 3Gp11 Characterization of ammonium transporters involved in production of azapilone pigment in *Penicillium purpurogenum*
○Ryo Kojima, Ayumi Kameyama, Teppei Arai, Jun Kato, Takafumi Kasumi, Jun Ogihara
 (Dept. Biores. Util. Sci., Grad. Sch. Biores. Sci., Nihon Univ.)
- 15:42** 3Gp12 Isolation, structural elucidation and biological activity of the butenolide signaling molecules that induce antibiotic production in *Streptomyces rochei* 7434AN4
○Kenji Arakawa, Naoto Tsuda, Akihiro Taniguchi, Haruyasu Kinashi
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 15:54** 3Gp13 Chemoenzymatic synthesis of a novel streptothricin(ST) analog using unusual non-ribosomal peptide synthetases
Chitose Maruyama¹, Jyunya Toyoda¹, Yasuo Kato², Miho Izumikawa³, Motoki Takagi³,
 Kazuo Shin-ya⁴, Hajime Katano¹, Takashi Utagawa¹, ○Yoshimitsu Hamano¹
 (¹Dept. Biosci., Fukui Pref. Univ., ²Biotech. Res. Center, Toyama Pref. Univ., ³JBIC, ⁴AIST)
- 16:06** 3Gp14 Identification of aerial microalgae containing various carotenoids
○Nobuhiro Aburai, Katsuya Abe (Dept. Appl. Chem., Fac. Eng., Kogakuin Univ.)
- 16:18** 3Gp15 Inhibition of hepatitis C virus NS3 helicase by sulfate compounds isolated from extracts of marine organisms
○Atsushi Furuta^{1,2}, Kazi Abdus Salam³, Nobuyoshi Akimitsu³, Junichi Tanaka⁴,
 Atsuya Yamashita⁵, Kohji Moriishi⁵, Masamichi Nakakoshi⁶, Masayoshi Tsubuki⁶,
 Hidenori Tani⁷, Yuji Sekiguchi², Satoshi Tsuneda¹, Naohiro Noda^{2,1}
 (¹Dept. Life Sci. Med. Biosci., Grad. Sch. Adv. Sci. Eng., Waseda Univ.,
²Biomed. Res. Inst., AIST, ³RI. Center, Univ. Tokyo,
⁴Dept. Chem. Bio. Marine Sci., Fac. Sci., Univ. Ryukyus,
⁵Dept. Microbiol., Grad. Sch. Med. Eng., Univ. Yamanashi,
⁶Inst. Med. Chem. Hoshi Univ., ⁷Res. Inst. Environ. Manage. Tech., AIST)
- 16:30** 3Gp16 Study of growth inhibition of *Stenotrophomonas maltophilia* by bisphenol A
○Yuma KATAGIRI¹, Mie TOKINOYA¹, Toshiyuki NIKATA², Kazuo KAKII²
 (¹Dept. Appl. Chem., Utsunomiya Univ., ²Dept. Mat. Environ. chem., Utsunomiya Univ.)
- 16:42** 3Gp17 Studies of inositol 1-phosphate analogues as inhibitors of the phosphatidylinositol phosphate synthase in Mycobacteria
○Hiroyuki Morii¹, Tatsuo Okauchi², Midori Ogawa³, Kazumasa Fukuda³, Hatsumi Taniguchi³
 (¹Dept. Chem., UOEH, ²Dept. Appl. Chem., Kyushu Inst. Tech., ³Dept. Microbiol., UOEH)

- 16:54** 3Gp18 Characterization of sulfate-reducing bacteria isolated from a microaerobic wastewater treatment plant
○Kei Fukumoto¹, Souya Harada¹, Kouhei Mizuno¹, Kenji Tanaka²
 (1Dept. Mat. Sci. Chem. Eng., Kitakyushu Natl. Col. Tech.,
²Sch. of Humanity-Oriented Sci. and Eng., Kinki Univ.)
- 17:06** 3Gp19 Coaggregation of Sludge-Constituting Bacteria in Multi-Membered System
○Chika Yoshida, Kazuo Kakii, Toshiyuki Nikata (Dept. Mat. Environ. Chem., Utsunomiya Univ.)
- 17:18** 3Gp20 Flocculation of sewage sludge by chemically modified yeast
○Mayumi Matsukawa¹, Norikazu Miyoshi¹, Yoshihiro Fukumoto², Shun Yogo², Taro Tachibana¹,
 Masayuki Azuma¹ (1Dept. Appl. Chem. & Bioeng., Osaka City Univ., ²Kansai Kako Co. Ltd)
- 17:30** 3Gp21 Mn oxidizing *Betaproteobacteria* from marine sediments
○Hironobu Nagamuta¹, Aya Watanabe¹, Ichiro Suzuki², Jun-ichi Koizumi²
 (1Div. Mat. Sci. Chem. Eng., Yokohama Natl. Univ.,
²Dept. Chem. Energ. Eng., Yokohama Natl. Univ.)
- 17:42** 3Gp22 Composition of microbial consortia in biological filtration systems for removal of Fe and Mn from groundwater
○Ryuichi Yamazaki, Hiromitsu Tabusa, Takuya Fujita, Ichiro Suzuki, Jun-ichi Koizumi
 (Dept. Chem. Energ. Eng., Yokohama Natl. Univ.)
- 17:54** 3Gp23 Demonstration of selenium-removal and recovery process from aqueous phase using selenium biovolatilization
 by *Pseudomonas stutzeri* NT-I
○Masashi KURODA^{1,2}, Takanobu NARITA³, Emiko MIWA², Tsubasa KAGAMI²,
 Satoshi SODA², Mitsuo YAMASHITA³, Michihiko IKE² (1CEIDS, Osaka Univ.,
²Div. Sustain. Energy Environ. Eng., Osaka Univ.,
³Rare-Metal Bio-Research Center, Res. Org. in SIT, Shibaura Inst. Technol.)
- 18:06** 3Gp24 Basic study for a precious metal recycling system by using sulfothermophilic red alga
○Ayumi Minoda¹, Takaiku Yamamoto², Iwane Suzuki¹, Mikio Tsuzuki³
 (1Faculty of Life and Environmental Sciences, Univ. of Tsukuba,
²Graduate School of Engineering, Osaka Univ.,
³School of Life Sciences, Tokyo Univ. of Pharmacy and Life Sciences)
- 18:18** 3Gp25 Disinfection of Bacteria in Fenton-like Reaction System Using Copper Ion
○Yuta MIZUNO, Saori ISHIGAKI, Kazuo KAKII, Toshiyuki NIKATA
 (Dept. Mat. Environ. Chem., Utsunomiya Univ.)
- 18:30** 3Gp26 Adsorption of Chromium(VI) from industrial wastewater using heat-treated Akadama clay
○Jie Chen, Yingxin Zhao, Yingnan Yang, Zhongfang Lei, Zhenya Zhang
 (Grad. Sch. Life Env. Sci., Tsukuba Univ.)
- 18:42** 3Gp27 Development of a novel ceramic adsorbent on treating high concentration of ammonium nitrogen contaminated
 wastewater
○Yingxin Zhao, Shengjiong Yang, Qinghong Wang, Yingnan Yang, Zhongfang Lei, Zhenya Zhang
 (Grad. Sch. Life Env. Sci., Univ. Tsukuba)

Room H Morning (9:00~11:36)

General Presentaion (Bioremediation / Glycoengineering / Plant cell, tissue engineering)

- 9:00** 3Ha01 Effects of *groEL2* on the cell localization of *Rhodococcus rhodochrous* in medium/alkane two phase cultures
○Chiaki Matsuura, Hayato Takihara, Noriyuki Iwabuchi, Michio Sunairi
 (Dept. Appl. Bio. Sci, Nihon Univ.)
- 9:12** 3Ha02 Optimization of ammonium removal of bioreactor using biofilter composed of aerial microalga by pretreatment
 cycle
○Tomohiro Bito, Nobuhiro Aburai, Katsuya Abe (Dept. Appl. Chem., Fac. Eng., Kogakuin Univ.)

- 9:24** 3Ha03 Interspecies hydrogen transfer in microbial community structure which is capable of efficient chloroethenes-dechlorination
○Hiroyuki Morioka¹, Naruaki Sato², Teruaki Hanji², Hiroya Ueda¹, Syuji Yamamoto¹, Tomoaki Sagisaka², Hiroyuki Futamata² (¹shizuoka univ. eng., ²shizuoka univ. eng.)
- 9:36** 3Ha04 Aerobically cDCE-degrading bacterium without cometabolic substrates
○Yoshio Inoue, Yukiyo Fukunaga, Hiroshi Katsumata, Syoko Oji, Akira Hosoyama, Atsushi Yamazoe, Nobuyuki Fujita, Katsuhiko Ando (NITE)
- 9:48** 3Ha05 Degradation of formaldehyde by *Aspergillus oryzae* / porous biodegradable polymer composite
○Asami Sakaue, Yukihiro Mai, Ikuhiro Tanida, Satoshi Osawa (Graduate School of Bioengineering and Chemistry)
- 10:00** 3Ha06 Adsorption and degradation of toxic chemicals by using CD/TiO₂/polysaccharide composite
○Yuko Takada, Hiroshi Yoshida, Satoshi Osawa (Graduate School of Bioengineering and Chemistry, Kanazawa Institute of Technology)
- 10:12** 3Ha07 Influence on soil bacteria by bioremediation with *Rhodococcus erythropolis* NDKK6 and *Gordonia terrae* NDKY76A
○Yoshiki Matsumiya¹, Nobuyuki Kadokura², Shizuo Sasaki², Yuki Fukuhara¹, Sachie Horii¹, Toshihide Matsuno¹, Motoki Kubo¹ (¹Fac. Lifesci, Ritsumeikan Univ., ²Kumagai Gumi Co., Ltd.)
- 10:24** 3Ha08 Structural analysis of glycans produced in *Schizosaccharomyces pombe* α1,3-galactosyltransferase disruptants
○Hiroyuki Ohashi, Takao Ohashi, Kazuhito Fujiyama (ICBiotech, Osaka Univ.)
- 10:36** 3Ha09 Construction and activity assay of chimeric glycosyltransferases fused to immunoglobulin-constant regions.
○Yukihiro Hadae, Ryou Misaki, Kazuhito Fujiyama (ICBiotech, Osaka Univ.)
- 10:48** 3Ha10 *In vitro* androgenesis in anther cultures of TV21 cultivar of tea
Vijay K. Mishra, ○Rakhi Chaturvedi (Dept. Biotech, IIT Guwahati, India)
- 11:00** 3Ha11 Application of different 5' untranslated sequences for higher expression of human β-glucocerebrosidase in tobacco BY2 suspension culture
○Nhung Ly Hong¹, Ko Kato², Ryo Misaki¹, Hiroyuki Kajiuira¹, Takahiro Sasami¹, Kazuhito Fujiyama¹ (¹International Center for Biotechnology, Osaka University, ²Nara Institute of Science and Technology, Graduate School of Biological Sciences)
- 11:12** 3Ha12 Production of Human Glucocerebrosidase in *Nicotiana benthamiana* Plants
○Juthamard Limkul¹, Ryo Misaki¹, Ko Kato², Kazuhito Fujiyama¹ (¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ²Grad. Sch. Biological Sciences, Nara Inst. Science Technol.)
- 11:24** 3Ha13 Cryopreservation of embryogenic callus of switchgrass
○Yoichi Ogawa¹, Masaho Honda¹, Yasuhiro Kondo¹, Ikuko Hara-Nishimura² (¹Kazusa U., HRI-JP, ²Dept. Bot., Grad. Sch. Sci., Kyoto Univ.)

Room H Afternoon (13:30~18:54)

General Presentaion (Proteins / Biochemical engineering / Organic chemistry, polymer chemistry)

- 13:30** 3Hp01 Designing of thermally stable proteins using homologous amino acid sequences
○Satoshi Akanuma, Yoshiki Nakajima, Shin-ichi Yokobori, Akihiko Yamagishi (Dept. of Mol. Biol., Tokyo Univ. of Pharm. Life Sci.)
- 13:42** 3Hp02 Ca²⁺-dependent stabilization mechanism of Tk-subtilisin from hyperthermophile
○Ryo Uehara, Yuki Takeuchi, Shun-ichi Tanaka, Kazufumi Takano, Yuichi Koga, Shigenori Kanaya (Dept. Mat. Life Sci., Osaka Univ.)

- 13:54** 3Hp03 Modification of enzymes by protein folding memory
○Atsushi Satomura, Mitsuru Nagayama, Natsuko Miura, Kouichi Kuroda, Mitsuyoshi Ueda
 (Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 14:06** 3Hp04 Expressions of soluble recombinant human Fcγ receptor and erythropoietin receptor by low translational efficiency in *Escherichia coli*
○Kouta Hatayama¹, Megumi Hoya¹, Yoshiharu Asaoka², Takugo Kuramochi³, Teruhiko Ide^{1,2}
 (¹SCRI, ²Tosoh Corp., ³Colg. Agric., Tamagawa Univ.)
- 14:18** 3Hp05 Expression of virus-like particles (VLPs) that can bind cancer cell in silkworm
○Megumi Yui¹, Jinhua Dong², Tatsuya Kato¹, Vipin Kumar Deo², Hiroshi Ueda³, Enoch Y. Park^{1,2}
 (¹Dept. Appl. Biol. Chem., Fac. Agric., Shizuoka Univ., ²Grad. Sch. Sci. Technol., Shizuoka Univ.,
³Dept. Chem. Biotech., Univ. Tokyo)
- 14:30** 3Hp06 Hyaluronic acid production by *Streptococcus thermophilus*
○Naoki Izawa, Tomoko Hanamizu, Masaki Serata, Toshiro Sone (Yakult Cent. Inst.)
- 14:42** 3Hp07 Production of L-Lysine from cellobiose using *Corynebacterium glutamicum* expressing beta-glucosidase
○Noriko ADACHI¹, Naoko ONO¹, Yuuki HIRATA¹, Chihiro TAKAHASHI¹,
 Naoko OKAI², Tsutomu TANAKA¹, Akihiko KONDO¹ (¹Grad. Sch. Eng., Kobe Univ.,
²Org. Adv. Sci. Tech. Kobe Univ.)
- 14:54** 3Hp08 Development of Bioprocess using Designed Biomass: Enhancement of L-Lactic Acid Production by *Enterococcus mundtii* QU 25 using Different Fermentation Modes
○Mohamed Ali Abdel-Rahman^{1,2}, Yukihiro Tashiro¹, Takeshi Zendo¹, Kenji Sonomoto^{1,3}
 (¹Fac. Agric., Kyushu Univ., ²Fac. Sci., Al-Azhar Univ. Egypt., ³Bio-Arch., Kyushu Univ.)
- 15:06** 3Hp09 Development of Bioprocess with Designed Biomass: High L-Lactic Acid Fermentation Efficacy from Xylose and Glucose Mixture by *Enterococcus mundtii* QU 25
○Yaotian Xiao¹, Yukihiro Tashiro¹, Mohamed Ali ABDEL-RAHMAN^{1,2}, Takeshi Zendo¹,
 Kenji Sakai¹, Kenji Sonomoto^{1,3} (¹Fac. Agric., Kyushu Univ., ²Fac. Sci., Al-Azhar Univ. Egypt.,
³Bio-Arch., Kyushu Univ.)
- 15:18** 3Hp10 Development of bioprocess with designed biomass: Continuous butanol fermentation from xylose with high cell density by cell recycling system
○Jin Zheng¹, Yukihiro Tashiro¹, Tsuyoshi Yoshida¹, Ming Gao¹, Qunhui Wang², Kenji Sonomoto^{1,3}
 (¹Fac. Agric., Kyushu Univ., ²Univ. Sci. Technol. Beijing, China, ³Bio-Arch., Kyushu Univ.)
- 15:30** 3Hp11 Development of bioprocess with designed biomass: Efficient butanol production from completely inedible biomass
○Tsuyoshi Yoshida¹, Yukihiro Tashiro¹, Kenji Sonomoto^{1,2}
 (¹Fac. Agric., Kyushu Univ., ²Bio-Arch., Kyushu Univ.)
- 15:42** 3Hp12 Development of bioprocess with designed biomass: Butanol production without catabolite repression from mixed sugars
○Takuya Noguchi¹, Tsuyoshi Yoshida¹, Yukihiro Tashiro¹, Kenji Sakai¹, Kenji Sonomoto^{1,2}
 (¹Fac. Agric., Kyushu Univ., ²Bio-Arch., Kyushu Univ.)
- 15:54** 3Hp13 Development of novel method for culturing microorganisms using specialized cellulose film
○Ryo Saitoh¹, Kosuke Baba¹, Koichi Murayama², Takuzo Imaizumi², Naomi Goto², Hideki Aoyagi¹
 (¹Fac. Life. Env. Sci. Univ. Tsukuba, ²Futamura Chem. Co. Ltd.)
- 16:06** 3Hp14 Analysis of fermentation process for scFv production by proteomics
○Yuya Fujiki¹, Kotaro Iwatani¹, Yoichi Kumada², Michimasa Kishimoto²
 (¹Dept. Chem. & Mat. Tech., Kyoto Inst. Technol., ²Dept. Biomol. Eng., Kyoto Inst. Technol.)

- 16:18** 3Hp15 Yeast extracellular expression of non-secretory type *Lentinula edodes* laccase and its characterization
Takeshi Kurose¹, Yuta Saito¹, Yuko Nakagawa², Akira Yano², Tsuneo Yamane³, Keisuke Ito^{1,4},
 ○Yasuaki Kawarasaki^{1,4} (¹GSIPNS, Univ. Shizuoka, ²Iwate Biotechnol. Res. C.,
³School. Appl. Biol. Sci., Chubu Univ., ⁴SFNS, Univ. Shizuoka)
- 16:30** 3Hp16 Efficient Production of an Optically Active Alkanol in an Interface Bioreactor.
○Tomohiro Ozaki, Takahiro Karino, Daisuke Neki, Tomoya Shiota, Shinobu Oda, Shinichi Ohasi
 (Kanazawa Inst. Tech.)
- 16:42** 3Hp17 Simple enzymatic conversion to 1, 3-propanediol using psychrophilic bacterium
○Koji Fuki, Naoya Kataoka, Takahisa Tajima, Daizou Kudou, Yutaka Nakashimada, Junichi Kato
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 16:54** 3Hp18 Angiotensin I-converting enzyme inhibitory activity in jellyfish protein hydrolysates obtained by culturing with
 aerial microalga
○Katsuya Abe, Junko Oe, Nobuhiro Aburai (Dept. Appl. Chem., Fac. Eng., Kogakuin Univ.)
- 17:06** 3Hp19 Production of ectoine from biomass using *Halomonas elongata*
○Kosuke Tanimura¹, Hideki Nakayama², Tsutomu Tanaka¹, Akihiko Kondo¹
 (¹Grad. Chem. Sci. Eng., Kobe Univ., ²Grad. Sch. Envi., Nagasaki Univ.)
- 17:18** 3Hp20 Dramatically improved production of a recombinant protease by *Brevibacillus* expression system
○Hiromasa Onishi, Makoto Mizukami, Hiroshi Hanagata, Akira Miyauchi
 (Higeta Shoyu, R & D Dpt.)
- 17:30** 3Hp21 Effect of gas phase in headspace on the microbial community cultured in flask
○Masato Takahashi, Hideki Aoyagi (Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 17:42** 3Hp22 Effect of partition plate on improvement of separation and aeration performance of two-phase fermentation
 system
○Noboru Takiguchi¹, Tatsuhiko Kasai²
 (¹Sch. Nat. Sys., Kanazawa Univ., ²Grad. Sch. Nat. Sci. Tech, Kanazawa Univ.)
- 17:54** 3Hp23 Screening of bifidobacteria and lactic acid bacteria for removing phosphorus and its application
○Satoshi Karasawa, Hideki Aoyagi (Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 18:06** 3Hp24 Effect of soybean-composite on the physiological activities of bifidobacteria and lactic acid bacteria
○Mari Tanaka¹, Sayuri Kitagawa², Hideki Aoyagi¹
 (¹Grad. Sch. Life Env. Sci., Univ. Tsukuba, ²Fuji Oil Co.)
- 18:18** 3Hp25 Computational fluid dynamics for enhancing the light distribution in a photobioreactor grown culture
 of *Hematococcus pluvialis*
○Luca Giannelli, Sotaro Wada, Hideki Yamaji, Tomohisa Katsuda
 (Dept. Chem. Sci. Eng., Grad. Sch. Eng., Kobe Univ.)
- 18:30** 3Hp26 Improvement of the durability of colored biodegradable polymer with natural pigments by addition of quercetin
○Haruka Imaeda, Naoki Yamashita, Satoshi Osawa
 (Graduate School of Bioengineering and Chemistry, Kanazawa Institute of Technology)
- 18:42** 3Hp27 Evaluation of functions and values based on factor analysis for cosmetic emulsion replaced synthetic additives
 with natural ones
○Kana Momonoi, Shizuka Sata, Satoshi Osawa
 (Graduate School of Bioengineering and Chemistry, Kanazawa Institute of Technology)

Room I Morning (9:00~12:00)

General Presentaion (Biomass, bioresource and energy engineering)

- 9:00** 3Ia01 Detection of dissolved hydrogen in a redox water made using microorganisms
○Eisaku Oikawa¹, Nao Shimoda², Taneaki Oikawa³
 (¹Dept. Civ. & Env. Eng. Kure NCT., ²Advanced Eng. Kure NCT., ³ICB. INC.)

- 9:12** 3Ia02 Development of rapid detection methodology for strictly anaerobic bacteria of the genus *Megasphaera*
.....○Shinko Abe, Yuji Hasegawa, Yukiko Bando, Akihiro Ohnishi, Naoshi Fujimoto, Masaharu Suzuki
(Dept. Brew. Ferment., Tokyo Univ. Agric.)
- 9:24** 3Ia03 Discovery of hydrogen producing bacteria using lactate as a sole carbon source
.....○Yuji Hasegawa, Shinko Abe, Yukiko Bando, Akihiro Ohnishi, Naoshi Fujimoto, Masaharu Suzuki
(Dept. Brew. Ferment., Tokyo Univ. Agric.)
- 9:36** 3Ia04 Bio-smart Grid for Stabilized Poer Supply
.....○Jun Miyake, Kazumi Hakamada (Dept. Eng. Sci. Osaka Univ.)
- 9:48** 3Ia05 System evaluation of Bio-smart Grid composed of biohydrogen and renewable energy
.....○Naoki Ikenaga, Kazumi Hakamada, Jun Miyake (Grad. Sch. Eng. Sci., Osaka Univ.)
- 10:00** 3Ia06 Time-delayed hydrogen production in Light/Dark cycle for stabilized energy conversion
.....○Kota Tanaka¹, Kazumi Hakamada², Jun Miyake^{1,2}
(¹Grad. Sch. Frontier Biosci., Osaka Univ., ²Grad. Sch. Eng. Sci., Osaka Univ.)
- 10:12** 3Ia07 Photocatalytic pretreatment of waste activated sludge using a circulating bed photocatalytic reactor for improving bio-hydrogen production
.....○Chunguang Liu, Qinghong Wang, Mijung Kim, Zhongfang Lei, Yingnan Yang, Zhenya Zhang
(Grad. Sch. Life Env. Sci., Tsukuba Univ.)
- 10:24** 3Ia08 Improvement of biohydrogen production from waste activated sludge using TiO₂ photocatalysis as a pretreatment
.....○Dawei Li, Qinghong Wang, Yingnan Yang, Zhongfang Lei, Zhenya Zhang
(Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 10:36** 3Ia09 Biohydrogen production from the untreated and alkali pretreated rice straw
.....○Mijung Kim, Chunguang Liu, Yingnan Yang, Zhongfang Lei, Zhenya Zhang
(Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 10:48** 3Ia10 Promotion of biohydrogen production from apple pomace by inhibition of the biosynthesis of butanol and lactate
.....○Yuma Suzuki¹, Osamu Sato¹, Yoko Oyama², Tomonori Sonoki^{1,2}
(¹Grad. sch. Agr. & Life Sci., Hirosaki Univ., ²Fac. Agr. & Life Sci., Hirosaki Univ.)
- 11:00** 3Ia11 Energy production from food waste by hydrogen-methane two-stage fermentation
.....○Yukio Okada¹, Akira Watari¹, Itsuo Yamamoto², Toshihiro Tanada³, Isao Hataoka²,
Masao Yamasaki³, Yutaka Nakashimada⁴, Naomichi Nishio⁴, Yutaka Mitani¹, Tatsuro Shigyo¹
(¹Frontier Labs, SAPPORO BREWERIES LTD., ²Takaki Bakery Co., Ltd.,
³Andersen Service Co., Ltd., ⁴Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 11:12** 3Ia12 Methane production from hydrogen fermentation residues with rice straw and sewage sludge
.....○Saori MATSUO, Mijung KIM, Yingnan YAN, Zhongfang LEI, Zhenya ZHANG
(Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 11:24** 3Ia13 Pretreatment of cellulosic biomass with rumen fluid for methane production
.....○Yasunori Baba, Chika Tada, Yutaka Nakai (Grad. Sch. Agric. Sci., Tohoku Univ.)
- 11:36** 3Ia14 Development of multilayer molecular biosolar cells (3)—photocurrent properties of alternate adsorption film electrodes composed of photosemiconductor nanoparticles and enzymes—
.....○Tomoya Horiuchi, Nobuhiro Aburai, Katsuya Abe (Dept. Appl. Chem., Fac. Eng., Kogakuin Univ.)
- 11:48** 3Ia15 Electrochemical modification of gene-expression profiles of anode-respiring *Geobacter sulfureducens* cells
.....○Shoichi Matsuda¹, Huan Liu³, Shouichiro Kato³, Shuji Nakanishi^{2,3}, Kazuhito Hashimoto^{1,2,3}
(¹Grad. Sch. Eng. Tokyo Univ., ²RCAST, Tokyo Univ., ³ERATO / JST)

Room I Afternoon (13:30~18:54)

General Presentaion (Brewing, brewing technology / Peptide engineering)

- 13:30** 3Ip01 Change in acetate productivity by inactivation of the glyoxylate pathway of *Acetobacter aceti*
○Hiroyuki Arai, Shoko Yamazaki, Kenta Sakurai, Masaharu Ishii, Yasuo Igarashi
 (Dept. Biotech., Univ. Tokyo)
- 13:42** 3Ip02 Remove of Ethanol Containing in Purple Sweet Potato Shochu Distillery Wastewater by Acetic Acid Bacteria
○Kotaro Iwasita¹, Kiyotaka Kabata², Taturou Murata³, Takeshi Shibata²,
 Tomohiro Araki¹, Shin Yasuda¹, Yasushi Matsuda³, Kensyou Honda⁴, Naohiko Taga¹
 (¹Dept. Biosci., Sch. Agric., Tokai Univ., ²Dept. Anim. Sci., Sch. Agric., Tokai Univ.,
³Dept. Plant Sci., Sch. Agric., Tokai Univ., ⁴Cent. Agric. Tech., Sch. Agric., Tokai Univ.)
- 13:54** 3Ip03 Mixed-species Biofilm Formation between Lactic Acid Bacteria Isolated from Fermented Fishery Products and Budding Yeasts
○Soichi Furukawa, Satoru Hirayama, Atsumu Abe, Noriko Tsuchiya,
 Hirokazu Ogihara, Yasushi Morinaga (Coll. Bioresource Sci., Nihon Univ.)
- 14:06** 3Ip04 Cell Surface Properties of Lactic Acid Bacteria that Co-aggregate with Budding Yeasts
○Satoru Hirayama¹, Yumi Usui¹, Noriko Tsuchiya¹, Atsumu Abe¹, Kengo Momiuchi²,
 Hirotugu Fujitani², Satoshi Tsuneda², Soichi Furukawa¹, Hirokazu Ogihara¹, Yasushi Morinaga¹
 (¹Grad. Sch. Bioresour. Sci., Nihon Univ., ²Dept. Med. Bio sci., Grad. Sch. Adv. Sci. Eng., Waseda Univ.)
- 14:18** 3Ip05 Property of high malic acid-producing *Saccharomyces cerevisiae* isolated from sake mash
○Yuki Kichise¹, Takahiro Oba², Eiji Izumoto¹, Shunichi Nakayama³, Hiroshi Kitagaki⁴
 (¹Dept. Biochem. Appl. Chem., Kurume Natl. Col. Tech.,
²Biotech. and Food Res. Inst., Fukuoka Indust. Tech. Center,
³Dept. Ferment. Sci., Tokyo Univ. Agric., ⁴Faculty of agric., Saga Univ.)
- 14:30** 3Ip06 Gene Expression Analysis of Sake Brewing Yeasts Bred Using Ion Beams
○Y. Tomizawa¹, H. Hayashi¹, T. Masubuchi², O. Kamiyama², K. Satoh³, I. Narumi³, H. Ikenaga¹
 (¹Maebashi Inst. Technol., ²Gunma Ind. Technol. Center, ³JAEA)
- 14:42** 3Ip07 Discrimination of *Zygosaccharomyces rouxii* isolates obtained from miso by RFLP analysis of the rDNA ITS region
○Johji OZEKI, Fuminori HARAYAMA, Yasunori KITAMURA, Takanori UEDA, Sigeru TAKEDA
 (The Shinshu-Miso Research Inst.)
- 14:54** 3Ip08 Breeding of low acid-producing sake yeasts
○Atsushi Kotaka, Hirokazu Kasai, Takeshi Kuroishi, Hiroshi Sahara, Hiroki Ishida, Yoji Hata
 (Res. Inst., Gekkeikan Sake Co.)
- 15:06** 3Ip09 One-nucleotide mutation in *TUP1*, a gene for a component of Cyc8-Tup1 transcriptional corepressor, causes a natural acquisition of abilities to utilize mannitol and to flocculate in *Saccharomyces cerevisiae*
○Shigeyuki Kawai, Anri Ota, Shinichi Mikami, Kousaku Murata (Grad. Sch. Agric., Kyoto Univ.)
- 15:18** 3Ip10 Screening and characterestic of wild-type yeast for sake in Ishikawa
○Tomomi Inoue, Akira Matsuda (Ind. Res. Inst. Ishikawa Pref.)
- 15:30** 3Ip11 Enhancement of ethanol fermentation of yeast by disrupting mitophagy gene
○Shodai Shiroma, Kazuki Izumi, Lahiru Jayakody, Hiroshi Kitagaki (Saga Univ.)
- 15:42** 3Ip12 Analysis of the mechanism of low-pyruvate producing characteristic of pyruvate-underproducing yeast
○Hisashi Fukuzaki¹, Takeshi Akao², Daisuke Watanabe², Hidenori Tominaga¹,
 Naoya Tokunaga¹, Kenta Horie¹, Hiroshi Kitagaki¹ (¹Saga Univ., ²Natl. Res. Inst. Brewing)
- 15:54** 3Ip13 Replicative and chronological lifespan in sake yeast
○Takanobu Kozaki¹, Azumi Ichihashi¹, Michihiro Matsuda¹, Yuka Kamei¹,
 Takayuki Tamura¹, Hiroko Tsutsumi², Eiichiro Fukusaki³, Yukio Mukai¹
 (¹Grad. Sch. Biosci., Nagahama Inst. Bio-Sci. Tech., ²Res. Inst., Gekkeikan Sake Co.,
³Dept. Mat. Life Sci., Osaka Univ.)

- 16:06** 3Ip14 Analysis of the conditions appropriate for ethanol production from solid biomass using *Aspergillus oryzae*
.....○Akane Saito¹, Marie Tashima¹, Junichi Maruyama², Katsuhiko Kitamoto², Hiroshi Kitagaki¹
(¹Saga Univ., ²Dept. Biomat. Sci., Univ. Tokyo)
- 16:18** 3Ip15 Development of genetic engineering system of white koji mold, *Aspergillus kawachii*
.....○Satoshi Tashiro¹, Taiki Futagami², Yasuhiro Kajiwar³, Hideharu Takashita³, Toshiro Omori³,
Kaoru Takegawa², Masatoshi Goto² (¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ.,
²Fac. Agric., Kyushu Univ., ³Sanwa Shurui Co. Ltd)
- 16:30** 3Ip16 Analysis of flavor components of *Awamori* using "amino acid accumulation yeast", and whole genome analysis
.....○Masatoshi Tsukahara¹, Maiko Nezu¹, Yu Sasano², Keisuke Hashida², Iwao Ootsu²,
Takashi Tomiki¹, Shimon Touma¹, Shouta Toguchi¹, Haruna Azuma¹, Hiroshi Takagi²
(¹Biojet, ²Grad. Sch. Biol. Sci., NAIST)
- 16:42** 3Ip17 Whole genome comparative analysis of *Aspergillus awamori* used in brewing products of *Awamori*
.....○Maiko Nezu¹, Taisuke Watanabe², Shouta Toguchi¹, Takashi Tomiki¹, Simon Touma¹,
Tomoya Iha¹, Haruna Azuma¹, Hirohide Toyama², Masatoshi Tsukahara¹
(¹Biojet, ²Dept. Biosci & Biotech., Univ of Ryukyus)
- 16:54** 3Ip18 Detection and quantitation of Sphingolipids in Sake- lees
.....○Koshiro TAKAHASHI, Miyo HIRATA, Marie TASHIMA, Eriko NAKAHATA,
Yoshitaka URANO, Shigeki INABA, Hiroshi KITAGAKI (Saga Univ.)
- 17:06** 3Ip19 Screening of high D-amino acid-producing strains of lactic acid bacteria from *kimoto*
.....○Tomoko Noguchi¹, Yasuyuki Masuda¹, Toshinari Takahashi¹, Kaori Okada², Yoshitaka Gogami²,
Tadao Oikawa², Haruhiko Mizoguchi¹ (¹Gen. Res. Lab., Kiku-Masamune Sake Brewing Co.,
²Dept. Life Sci. & Tech., Fac. Chem., Materials & Bioeng., Kansai Univ.)
- 17:18** 3Ip20 Quantitative analysis of D-amino acid in black vinegar and fruit black vinegar
.....○Yoshitaka Gogami¹, Kaori Okada¹, Yoshitaka Takeshita², Tadao Oikawa¹
(¹Dept. Life Sci. & Tech., Kansai Univ., ²Fukuyama vinegar Corp.)
- 17:30** 3Ip21 Removal of haze-causing proteins in shiro-syoyu by ceramic
.....○Tetsuya Kondo¹, Nami Ishihara¹, Tohru Fukuhara¹, Tomoyuki Itoh², Keigo Terao²,
Tsukasa Matsuda³ (¹Food Res. Center, ACIST, ²Morita Co., ³Grad. Sch. Biol. Agr. Sci., Nagoya Univ.)
- 17:42** 3Ip22 Analysis of the effects of the main mash fermentation temperature on dimethyl trisulfide production in sake
.....○Nahoko Nishibori¹, Tsutomu Fujii^{1,2}, Kei Sasaki^{1,2}, Muneyoshi Kanai¹, Yuta Okimori^{1,2},
Atsuko Isogai¹, Osamu Yamada¹, Nami Goto^{1,2} (¹Natl. Res. Inst. Brewing,
²Grad. Sch. Biosphere Sci., Hiroshima Univ.)
- 17:54** 3Ip23 Searching for microorganic and enzymatic digestion of soybean body-complex
.....○Kaori Fujiyoshi, Tatsuji Sakamoto, Naoya Kasai (Dept. Appl. Biol. Chem., Osaka Pref. Univ.)
- 18:06** 3Ip24 Tannin measurement and specific stain using Arg repeat peptide with affinity for tannin
.....○Naoya Kasai, Mai Tougo, Tatsuji Sakamoto, Shinji Esumi
(Dept. Appl. Biol. Chem., Osaka Pref. Univ.)
- 18:18** 3Ip25 Synthetic peptides derived from rice defensin exhibit antifungal activity against *Candida albicans*
.....○Yoshiyuki Sagehashi¹, Hiroaki Takaku², Osamu Yatou³ (¹NARO, ²NUPALS, ³NARO)
- 18:30** 3Ip26 Purification and identification of tyrosinase-inhibitory peptides in enzymatic hydrolyzate of rice bran protein
.....○Seiya TANAKA, Hisashi YOSHIDA, Akihito OCHIAI, Takaaki TANAKA,
Masayuki TANIGUCHI (Grad. Sch. of Sci. Technol., Niigata Univ.)
- 18:42** 3Ip27 Analysis of action mechanism of antimicrobial peptides using cell-free protein synthesis system
.....○Hiroshi KONDO¹, Yohei ISHIYAMA², Akihito OCHIAI¹, Takaaki TANAKA¹,
Masayuki TANIGUCHI¹ (¹Grad. Sch. of Sci. Technol., Niigata Univ., ²CFIL, Niigata Univ.)

October 26, 2012

Time	Abst No.	Title	Author (Affiliation) ○ = Indicates the presenter
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Room B Afternoon (13:30~15:30)

Symposium (The state-of-art R&D in stem cell biomanufacturing)

Chairpersons: **Yasuyuki Sakai, Hiroshi Kurosawa, Masahiro Kino-oka**

13:30	4Bp01	Bioreactor design of stem cell manufacturing○Masahiro Kino-oka (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
13:54	4Bp02	The Current Trends and Future Prospects of Regenerative Medicine and Stem Cell Research○Atsuhiko Saito ¹ , Shigeru Miyagawa ² , Yoshiki Sawa ^{1,2} (¹ Med. Cent. Transl. Res., Osaka Univ. Hosp., ² Dep. Cardiovasc. Surg., Grad. Sch. Med., Osaka Univ.)
14:18	4Bp03	The development of three-dimensional bioreactor culture system for the mass production of pluripotent stem cell-derived cardiac cell sheet○Katsuhisa Matsuura ^{1,2} , Tatsuya Shimizu ¹ , Masanori Wada ³ , Ushio Iwamoto ⁴ , Teruo Okano ¹ (¹ ABMES., Tokyo Women's Medical Univ., ² Dept. Cardiol., Tokyo Women's Medical Univ., ³ ABLE Co., ⁴ Asahikasei Co. Ltd.)
14:42	4Bp04	Industrial Use of Pluripotent Stem Cells: Application of Safety Assessment Research for Chemicals○Koichi Saito (Sumitomo Chemical Co. Ltd., Environmental Health Science Lab.)
15:06	4Bp05	Current Activities of Guideline Development and International Standardization toward Industrialization of Regenerative Medicine○Motohiro Hirose (HTRI, AIST)

Room E Morning (9:00~12:00)

Symposium (The cutting edges of cultivation and downstream processes)

9:00		Opening remarks
		Chairperson: Yoichi Ishikawa
9:05	4Ea01	Attachment, detachment, and subculture of adhesive animal cells using a potential controlled electrode○Sumihiro Koyama (JAMSTEC)
9:30	4Ea02	Culture Scale-up Studies as Seen from the Viewpoint of Oxygen Supply and Dissolved Carbon Dioxide Stripping○Naoki Matsunaga ¹ , Kenjiro Kano ¹ , Toshiaki Dobashi ² (¹ Kyowa Hakkō Kirin Co., Ltd., ² Dept. Bio. and Chem. Eng., Gunma Univ.)
		Chairperson: Kazuhiko Matsui
9:55	4Ea03	Nanobubble is bio-activating bubble○Tadayuki Imanaka (Dept. Biotech., Ritsumeikan Univ.)
10:20	4Ea04	Construction of Bioreactor for Active Pharmaceutical Ingredients (API) Facilities○Makoto Sekine (Marubishi Bioengineering Co., Ltd.)
		Chairperson: Hideo Sakuma
10:45	4Ea05	NIR spectroscopic analysis for pharmaceutical ingredient and product manufacturing○Tsuyoshi Miura (Bruker Optics K. K.)

- Chairperson: **Teruyuki Nagamune**
- 11:10** 4Ea06 The Present Status of Fermentation Industry and Fermentation Technology Developments in China
○Jian Chen^{1,2}, Guocheng Du^{1,3}, Jianghua Li^{1,2}, Zhen Kang^{1,4}
 (1)Sch. Biotechnol, Jiangnan Univ., 2)Natl. Eng. Lab. Cereal Ferment. Technol., Jiangnan Univ.,
 3)Key Lab. Carbohydrate Chem. Biotechnol., Minist. Edu., Jiangnan Univ.,
 4)Key Lab. Ind. Biotechnol., Minist. Edu., Jiangnan Univ.)

Room E Afternoon (13:30~16:00)

Symposium (Advanced microbial culture technology for realizing production enhancement)

- Chairperson: **Jun-ichi Horinouchi**
- 13:30** 4Ep01 Dr. Jokichi Takamine, Father of Biotechnology, who got the success of Enzymes Production based on Solid-State *Koji* Culture
○Yutaka Yamamoto (Shin-nihon Chemicals Corp.)
- Chairperson: **Michimasa Kishimoto**
- 14:00** 4Ep02 Glutamate fermentation from natural isolate to crystallization fermentation
○Hiroyuki Kojima (Ajinomoto Co., Inc.)
- 14:30** 4Ep03 Significance of oxygen in *Corynebacterium glutamicum*
○Masato Ikeda (Dept. Biosci. Biotech., Fac. Agric., Shinshu Univ.)
- Chairperson: **Jun-ichi Horinouchi**
- 15:00** 4Ep04 Development of fermentation processes using genome information and metabolic coupling
○Tetsuya Abe (Tech. Res. Labs., Kyowa Hakko Bio)
- 15:30** 4Ep05 Feeding operation for the increase of bioproduction
○Michimasa Kishimoto¹, Yoichi Kumada¹, Jun-ichi Horiuchi²
 (1)Dept. Bio-mol. eng., Kyoto Inst. Tech., 2)Dept. Bio. Env. Chem., Kitami Inst. Technol.)

Room F Morning (9:00~12:00)

Symposium (A new concept from Japan: Unifying “e-Bio” and “carbox fixation” with high energy efficiency)

- 9:00** Opening remarks
 Masaharu Ishii
 Chairperson: **Yasuyoshi Sakai**
- 9:05** 4Fa01 Fundamental Aspects of Electron-oriented Biotechnology for Energy and Ecology
○Kenji Kano (Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 9:35** 4Fa02 Photosynthetic pigments take the initiative in light-driven electron transfer
○Akio Murakami (Res. Ctr. Inland Seas, Kobe Univ.)
- 10:05** Break
- Chairperson: **Masaharu Ishii**
- 10:15** 4Fa03 Modification of carbon metabolism based on the e-bio strategy
○Norio Matsumoto (CRIEPI)
- 10:45** 4Fa04 C1-microbial metabolism as “energy-saving” carbon fixation system
○Yasuyoshi Sakai, Hiroya Yurimoto (Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- Chairperson: **Kenji Kano**
- 11:15** 4Fa05 Analyses of autotrophic metabolism through the viewpoint of e-bio
○Masaharu Ishii, Hiroyuki Arai, Yasuo Igarashi (Dept. Biomat. Sci., Univ. Tokyo)
- Chairperson: **Masaharu Ishii**
- 11:45** Discussion

Room F Afternoon (13:30~15:50)

Symposium (Bioremediation —Key Technology for Reinvigoration of Japan's Economy—)

13:30		Openign remarks Masao Fukuda Chairperson: Masao Fukuda
13:35	4Fp01	Partial amendment of the commentary on the guidelines for the bioremediation using microorganisms○Toshiyuki Nishimoto (Ministry of the Environment)
13:55	4Fp02	Impact of 3rd Generation DNA Sequencers on Bioremediation○Masafumi Yohda (Dept. Biotechnol., Tokyo Univ. Agric. Technol.) Chairperson: Hideaki Nojiri
14:15	4Fp03	Technical report from the actual site remediation by bioremediation and a state-of-the-art bioremediation research○Nishimura Minoru (In Situ Solutions Co., Ltd.)
14:35	4Fp04	Development and application of anaerobic bioremediation of chlorinated ethylene contamination○Noriya Okutsu (Kurita Water Industries Ltd.)
14:55	4Fp05	Possibility and problem for practical application of bioaugmentation○Yoh Takahata (Taisei Corp.) Chairperson: Masao Fukuda
15:15		Panel discussion
15:45		Closing remarks Junichi Kato

Room B Morning (9:00~12:00)

General Presentaion (Cell and tissue engineering / Biomedical engineering, artificial organs)

9:00	4Ba01	The effectiveness of the presence of ROCK inhibitor (Y-27632) during dissociating human iPS cells into single cells○Ayumi Horiguchi, Yoshitsugu Ohnuki, Mami Aoyagi, Hiroshi Kurosawa (Dept. Biotech., Grad. Sch. Med. Eng., Univ. Yamanashi)
9:12	4Ba02	Kinetic analysis of “de-undifferentiation” in colony of human induced pluripotent stem cells○Yuta NOZAWA, Eri MASUDA, Mee-Hae KIM, Masahiro KINO-OKA (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
9:24	4Ba03	Micropatterned Embryoid Body culture of mouse ES cells○Takuya Hara, Koji Nakazawa (Dept. Life and Environment eng., The University of Kitakyusyu)
9:36	4Ba04	Differentiation of mouse iPS cells into neurons○Mai Nakamura ¹ , Yu Kamishibahara ¹ , Ayako Kitazawa ² , Hideo Kawaguchi ¹ , Norio Shimizu ^{1,2} (¹ Grad. Sch. Life Sci., Toyo Univ., ² Bio-nano., Toyo Univ.)
9:48	4Ba05	Analysis of zinc-toxicity for mouse neural stem/progenitor cells○Mayu Nishikawa, Hideki Mori, Go Sasaki (Dept. Biol. Sci., Grad. Sch. Sci., Osaka Pref. Univ.)
10:00	4Ba06	Neural stem/progenitor cells damaged by reactive oxygen speciesHideki Mori ¹ , Yousuke Yoshida ¹ , Yonehiro Kanemura ² , ○Masayuki Hara ¹ (¹ Dept. Biol. Sci. Grad. Sch. Sci. Osaka Prefecture Univ., ² Institute for Clinical Research, Osaka National Hoptital, National Hospital Organization)

- 10:12** 4Ba07 T-cell receptor repertoires of tumor-infiltrating lymphocytes after hyperthermia using melanoma-targeted magnetite nanoparticles
○Akira Ito¹, Masaki Yamaguchi¹, Noriaki Okamoto¹, Yuji Sanematsu¹, Yoshinori Kawabe¹, Kazumasa Wakamatsu², Shosuke Ito², Hiroyuki Honda³, Takeshi Kobayashi⁴, Eiichi Nakayama⁵, Yasuaki Tamura⁶, Masae Okura⁷, Toshiharu Yamashita⁷, Kowichi Jimbow⁷, Masamichi Kamihira¹
 (¹Dept. Chem. Eng., Fac. Eng., Kyushu Univ., ²Dept. Chemistry, Fujita Health Univ., ³Dept. Biotech., Grad. Sch. Eng., Nagoya Univ., ⁴School of Biosci. Biotechnol., Chubu Univ., ⁵Fac. Health and Welfare, Kawasaki Univ. Medical Welfare, ⁶First Dept. Pathol., Sapporo Medical Univ. School of Med., ⁷Dept. Dermatol., Sapporo Medical Univ. School of Med.)
- 10:24** 4Ba08 Construction and Characterization of *Bifidobacterium* expressing NK4
○Ryuji Yamada¹, Masami Matsumoto¹, Kazuaki Ninomiya², Katsuya Sakai³, Kunio Matsumoto³, Nobuaki Shimizu² (¹Div. Mat. Eng., Grad. Sch. Nat. Sci. Tech., Kanazawa Univ., ²Inst. Nat. Environ. Tech., Kanazawa Univ., ³Cancer Res. Inst., Kanazawa Univ.)
- 10:36** 4Ba09 Characterization of DNA aptamer selected by Cell SELEX for human hepatic cancer cells
○Satoshi Kawashima¹, Kazuaki Ninomiya², Chiaki Ogino³, Nobuaki Shimizu²
 (¹Div. Mat. Eng., Grad. Sch. Nat. Sci. Tech., Kanazawa Univ., ²Inst. Nat. Environ. Tech., Kanazawa Univ., ³Dept. Chem. Sci. Eng., Grad. Sch. Eng., Kobe Univ.)
- 10:48** 4Ba10 Detection of FGF-2 by an albumin film carrying antibody
○Hikaru Hattori, Hisashi Nakanishi, Akira Tachibana, Toshizumi Tanabe
 (Dept. Bioeng., Grad. Sch. Eng., Osaka City Univ.)
- 11:00** 4Ba11 Preparation of keratin-precursor HA crystal composites as a controlled drug release carrier by using modified SBF
○Ryo Nakata, Yu Osumi, Akira Tachibana, Toshizumi Tanabe
 (Dept. Appl. Bioappl. Chem., Grad. Sch. Eng., Osaka City Univ.)
- 11:12** 4Ba12 Controlled release of FGF2 using chitin gel
○Dai Yasuma, Akira Tachibana, Toshizumi Tanabe (Dept. Bioeng. Grad. Sch. Eng. Osaka City Univ.)
- 11:24** 4Ba13 Angiogenesis of blood vessel during kidney development
○Yusuke Nishimura, PiChao Wang (Inst. Life Env. Tsukuba Univ.)
- 11:36** 4Ba14 Effect of various collagens on the development of renal tubules
PiChao Wang¹, Yusuke Murasawa², ○HanHsiu Hsu¹
 (¹Inst. Life Sci., Tsukuba Univ., ²Center Geriatrics Gerontology)
- 11:48** 4Ba15 Construction of quality control method for stem cells using cell image analysis and gene analysis
○Hiroyuki Sasaki¹, Ichiro Takeuchi², Rumi Sawada³, Kei Kanie^{1,4}, Yasujiro Kiyota⁵, Hiroyuki Honda¹, Ryuji Kato^{1,4} (¹Dept. Biotech., Grad. Sch. Eng., Nagoya Univ., ²Nagoya Inst. of Tech., ³Div. Med. Dev., NIHS, ⁴Dept. Basic Med. Sci., Grad. Sch. Pharm. Sci., Nagoya Univ., ⁵Nikon Corporation)

Room B Afternoon (15:42~18:42)

General Presentaion (Biomedical engineering, artificial organs / Cell culture engineering)

- 15:42** 4Bp12 iPS cell quality assessment method using colony morphology informatics
○Megumi Matsumoto¹, Hiroyuki Sasaki¹, Kei Kanie^{1,2}, Yasujiro Kiyota³, Miho Furue⁴, Hiroyuki Honda¹, Ryuji Kato^{1,2} (¹Dept. Biotech., Grad. Sch. Eng., Nagoya Univ., ²Dept. Basic. Med. Sch., Grad. Sch. Pharm. Sci., Nagoya Univ., ³Nikon Corporation, ⁴NIBIO)

- 15:54** 4Bp13 iPS colony morphology informatics for standardization of iPS cell culture
○Risako Joto¹, Megumi Matsumoto², Hiroto Sasaki², Kei Kanie^{1,2},
 Yasujiro Kiyota³, Hiroyuki Honda², Miho Furue⁴, Ryuji Kato^{1,2}
 (¹Dept. Basic. Med. Sch., Grad. Sch. Pharm. Sci., Nagoya Univ.,
²Dept. Biotech., Grad. Sch. Eng., Nagoya Univ., ³Nikon Corporation, ⁴NIBIO)
- 16:06** 4Bp14 Fluid simulation for supporting automation of cell culture assessment
○Kei Kanie¹, Hiroto Sasaki², Hiroyuki Honda², Ryuji Kato¹
 (¹Dept. Basic Med. Sci., Grad. Sch. Pharm. Sci., Nagoya Univ.,
²Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.)
- 16:18** 4Bp15 Improved cryopreservation of primate ES/iPS cells using a new freezing medium
○Shinsuke Imamatsu¹, Sunggho Ahn², Kenzo Bamba³, Hirosato Okazaki¹, You-ichi Tagawa²
 (¹LYMPHOTEC, ²Dept. Life Sci., Tokyo Institute of Technology, ³Nippon Genetics)
- 16:30** 4Bp16 Establishment of mammalian cell line suitable for industrial production of recombinant protein using mutation induced by high energy beam radiation
○Yasuhito Chida¹, Takuro Kawamura¹, Keiichi Takagi², Satoshi Terada¹
 (¹Grad. Sch. Eng. Fukui Univ., ²The Wakasa Wan Energy Research Center)
- 16:42** 4Bp17 Culture supplement for mammalian cells obtained from rice bran
○Satoshi Terada¹, Satoko Moriyama¹, Ken Fukumoto¹, Masayuki Taniguchi², Takuo Tsuno³
 (¹Dept. Applied Chem. & Biotech., Univ. of Fukui, ²Grad. Sch. of Sci. Technol., Niigata Univ.,
³TSUNO CO., LTD.)
- 16:54** 4Bp18 Rapid Construction of Transgene-amplified CHO Cell Lines by Cell Cycle Regulator Engineering
○Kyounggho Lee¹, Masayoshi Onitsuka², Kohsuke Honda¹, Hisao Ohtake¹, Takeshi Omasa^{1,2}
 (¹Grad. Sch. Eng., Osaka Univ., ²Ins. of Tec. and Sci., Univ. Tokushima)
- 17:06** 4Bp19 Mechanism of the change of albumin film cell-adhesiveness
○Hisashi NAKANISHI^{1,2}, Hironori YAMAZOE², Yoshihisa HAGIHARA², Akira TACHIBANA¹,
 Toshizumi TANABE¹ (¹Dept. Bioeng., Grad. Sch. Eng., Osaka City Univ.,
²National Institute of Advanced Industrial Science and Technology AIST)
- 17:18** 4Bp20 Establishment of cell surface FIA for single-cell isolation of efficiently antibody-secreting hybridomas
○Akiko Kida, Nobuo Yoshimoto, Jin Kobayashi, Shun'ichi Kuroda
 (Grad. Sch. Biol. Agrc. Sci., Nagoya Univ.)
- 17:30** 4Bp21 Autotrophic Dark Cultivation for the Microalgae by the Electrolytic Cultivation Technique
○Kouji Yoshida¹, Mai Kaneko², Yoshihiro Nakamura¹, Masaharu Ishii¹, Yasuo Igarashi¹
 (¹Grad. Sch. Agri. Life Sci, Univ. Tokyo, ²JARUS)
- 17:42** 4Bp22 Improved β -glucan production from *Aureobasidium pullulans* M-2 by medium optimization
○Yukoh Asada^{1,2}, Naoyuki Moriya², Yukiko Moriya², Kisato Kusano²,
 Mitsuyasu Okabe², Enoch Y Park¹ (¹Grad. Sch. Sci. Technol. Shizuoka Univ., ²Aureo Co. Ltd.)
- 17:54** 4Bp23 Improved β -(1-3)(1-6) glucan production using high-yield mutant strain of *Aureobasidium pullulans* M-1
Naoyuki Moriya¹, Yukiko Moriya¹, Hideo Nomura², ○Kisato Kusano¹, Enoch Y Park³, Yukoh Asada³
 (¹Tokyo head office, Aureo Co., Ltd, ²Kazusa factory, Aureo Co., Ltd.,
³Grad. Sch. Sci. Technol. Shizuoka Univ.)
- 18:06** 4Bp24 Direct ethanol production from reject fiber from pulping by CBP using *Mucor javanicus*
○Maki Takano, Kazuhiro Hoshino (Grad. Sch. Sci. Eng., Univ. Toyama)
- 18:18** 4Bp25 High yield ethanol production from biodiesel wastes with exponentially fed-batch cultures
○Yutaka Nakashimada, Masato Shimohigashi, Takahisa Tajima, Junichi Kato, Naomichi Nishio
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)

- 18:30** 4Bp26 Development of the isolation method of uncultured microbe by coculture
○Taku Inoue, Akihiro Ohnishi, Naoshi Fujimoto, Masaharu Suzuki
 (Dept. Brew. Ferment., Tokyo Univ. Agric.)

Room C Morning (9:00~12:00)

General Presentaion (Enzymology, enzyme / Proteins)

- 9:00** 4Ca01 Effect of amino acid substitutions on auto-proteolysis of NylC precursor
○Shohei Oshima¹, Keisuke Nagai¹, Naoki Shibata², Yoshiki Higuchi², Dai-ichiro Kato¹,
 Masahiro Takeo¹, Seiji Negoro¹ (¹Grad. Sch. Eng., Univ. Hyogo., ²Grad. Sch. Life Sci., Univ. Hyogo)
- 9:12** 4Ca02 Mechanism of thermostability of nylon hydrolase NylC
○Keisuke Nagai¹, Ryuji Santa¹, Masanori Shinoda¹, Naoki Shibata², Yoshiki Higuchi²,
 Young-Ho Lee³, Yuji Goto³, Dai-ichiro Kato¹, Masahiro Takeo¹, Seiji Negoro¹
 (¹Grad. Sch. Eng., Univ. Hyogo., ²Grad. Sch. Life Sci., Univ. Hyogo., ³Inst. Protein Res., Osaka Univ.)
- 9:24** 4Ca03 Measurement of enzymatic hydrolysis of nylon by gas cluster secondary ion mass spectrometry
○Duc Tran Dac¹, Kazuki Iida¹, Keisuke Nagai¹, Kensuke Iuchi², Kouzou Mochiji², Masahiro Takeo¹,
 Dai-ichiro Kato¹, Seiji Negoro¹ (¹Dept. Mat. Sci. and Chem., Grad. Sch. Eng., Univ. Hyogo,
²Dept. Intel. Mech. Tech., Grad. Sch. Eng., Univ. Hyogo)
- 9:36** 4Ca04 Enzymatic degradation of nylon66 and its related compounds
○Kazuki Iida¹, Duc Tran Dac¹, Keisuke Nagai¹, Kensuke Iuchi², Kozo Mochiji², Dai-ichiro Kato¹,
 Masahiro Takeo¹, Seiji Negoro¹ (¹Dept. Mat. Sci. and Chem., Grad. Sch. Eng., Univ. Hyogo,
²Dept. Intel. Mech. Tech., Grad. Sch. Eng., Univ. Hyogo)
- 9:48** 4Ca05 Mutational effect on the reaction of NylB
○Takeshi Baba¹, Katsumasa kamiya², Toru Matsui³, Hiroki Nishiguchi⁴, Boero Mauro⁵,
 Seiji Negoro⁴, Masayoshi Nakano¹, Yasuteru Shigeta¹ (¹Grad. Sch. Eng. Sci., Osaka Univ.,
²Grad. Sch. Pure Appl. Sci., Univ. Tsukuba, ³Grad. Sch. Sci., Osaka Univ.,
⁴Grad. Sch. Eng., Univ. Hyogo, ⁵Univ. Strasbourg)
- 10:00** 4Ca06 Enzymatic synthesis of amide compounds by nylon-oligomer hydrolase
○Hiroki Nishiguchi¹, Tatsuya Kobayashi¹, Seiji Negoro¹, Masahiro Takeo¹, Dai-ichiro Kato¹,
 Yasuteru Shigeta², Toru Matsui², Takeshi Baba², Katsumasa Kamiya³, Young-Ho Lee⁴
 (¹Grad. Sch. Eng., Univ. Hyogo., ²Grad. Sch. Eng. Sci., Osaka Univ.,
³Grad. Sch. Pure Appl. Sci., Univ. Tsukuba., ⁴Inst. Prot. Res., Osaka Univ.)
- 10:12** 4Ca07 The importance of hydrogen bonding network for firefly bioluminescence
○Mika Maenaka¹, Dai-ichiro Kato¹, Takaya Kubo¹, Kazuki Niwa², Yoshihiro Ohmiya²,
 Masahiro Takeo¹, Seiji Negoro¹ (¹Grad. Sch. Eng., Univ. Hyogo, ²AIST)
- 10:24** 4Ca08 Functional analysis of various haloalkane dehalogenase genes derived from bacterial genomes
○Hiroki Tanaka, Yoshiyuki Ohtsubo, Yuji Nagata, Masataka Tsuda
 (Grad. Sch. of Life Sci., Tohoku Univ.)
- 10:36** 4Ca09 A novel technology for on/off control of enzymatic activity on magnetic nanoparticles by induction heating
○Toshihiro Shikakura¹, Kazunari Yoshida², Michika Abe², Kazuma Watanabe²,
 Satoshi Seino², Takashi Nakagawa², Takao Yamamoto², Yuichi Koga¹, Shigenori Kanaya¹
 (¹Dept. Mat. Life Sci., Osaka Univ., ²Dept. Manag. Ind. Tech., Osaka Univ.)
- 10:48** 4Ca10 Isolation of LC-cutinase with PET-Degrading Activity from Leaf-branch Compost using a Metagenomic Approach
○Sintawee Sulaiman, Saya Yamato, Dong-Ju You, Eiko Kanaya, Shigenori Kanaya
 (Dept. Mat. Life Sci., Osaka Univ.)

- 11:00** 4Ca11 An improved bioluminescence-based signaling assay for odor sensing with a yeast expressing a chimeric olfactory receptor
○Yosuke Fukutani¹, Jun Ishii², Keiichi Noguchi³, Akihiko Kondo⁴, Masafumi Yohda¹
 (¹Dept. Biotechnol., Tokyo Univ. Agric. Technol., ²Org. Adv. Sci. Tech., Kobe Univ.,
³Instr. Anal. Center, Tokyo Univ. Agric. & Technol., ⁴Grad. Sch. Eng., Kobe Univ.)
- 11:12** 4Ca12 Derivative program of ClustalW can predict candidate residues which improve protein solubility
○Shogo Nakano^{1,2}, Yasuhisa Asano^{1,2} (¹Biotech. Res. Center, Toyama Pref. Univ., ²JST · ERATO)
- 11:24** 4Ca13 Improvement of maturation rate of Tk-subtilisin by propeptide engineering
○Kota Yuzaki, Rryo Uehara, Yudai Sanda, Yuichi Koga, Kanaya Shigenori
 (Dept. Mat. Life Sci., Osaka Univ.)
- 11:36** 4Ca14 Optimization of cationized avidin as biotinylated protein transduction carrier for mammalian cells
○Midori Futami¹, Yasuyoshi Watanabe², Hitoshi Murata³, Hiroko Tada²,
 Hidenori Yamada², Junichiro Futami² (¹Dept. Biomed. Eng., Fac. Eng., Okayama Univ. Sci.,
²Dept. Med. Bioeng. Sci., Grad. Sch. Nat. Sci. Biotech., Okayama Univ.,
³Dept. Cell Biol., Grad. Sch. Med. Dent. Pharm. Sci., Okayama Univ.)
- 11:48** 4Ca15 Hybrid nanocellulosome: Nanocluster design of high performance cellulases with multivalent cellulose-binding modules
○Hikaru Nakazawa¹, Do-myung Kim¹, Takashi Matsuyama², Nobuhiro Ishida², Akinori Ikeuchi²,
 Izumi Kumagai¹, Mitsuo Umetsu¹ (¹Dept. Biomol. Eng., Grad. Sch. Eng., Tohoku Univ., Tech.,
²Toyota Central R & D)

Room C Afternoon (13:30~18:54)

General Presentaion (Proteins / Nucleic acid engineering)

- 13:30** 4Cp01 Application of GroEL mutant as nano-sized water soluble capping agent
○Hiromi Yoda¹, Osamu Yamamoto², Ayumi Koike-Takeshita¹
 (¹Dept. Appl. Biosci., Grad. Sch. Eng., Kanagawa Inst. of Tech.,
²Dept. Bio-Sys. Eng., Yamagata Univ.)
- 13:42** 4Cp02 Screening of NFkB(p50) affinity peptides by adopting functional biomoleculer immobilization
○Takayuki Takimoto¹, Tetsuya Miyahara¹, Koreyosi Imamura¹, Hiroyuki Imanaka¹,
 Eisaku Kondou², Kazuhiro Nakanishi³ (¹Grad. Sch. Natur. Sci. & Technol., Okyama Univ.,
²Aichi Cancer Center, ³College Biosci. Biotech. Chubu Univ.)
- 13:54** 4Cp03 Examination of the site specific peptide drug screening method transcription factor, FOXP3, as the target
○Kazuki Kawasaki¹, Kohei Matsumoto¹, Hiroyuki Imanaka¹, Koreyoshi Imamura¹, Eisaku Kondou²
 (¹Grad. Sch. Natur. Sci. & Technol., Okayama Univ., ²Aichi Caner Center)
- 14:06** 4Cp04 Keeping firefly luciferase in oxidation form to improve a protein-protein interaction assay, FLImPIA
○Yuki Ohmuro-Matsuyama, Makoto Kurihara, Yuko Hara, Chan-I Chung, Hiroshi Ueda
 (Dept. Chem. Biotech., Univ. Tokyo)
- 14:18** 4Cp05 Development of thermoresponsive MHC molecule-conjugated magnetic particles for efficient screening of cancer antigen peptides
○Toru Honda, Tadashi Matsunaga, Tsuyoshi Tanaka, Tomoko Yoshino
 (Inst. Engr., Tokyo Univ. Agri. Tech.)
- 14:30** 4Cp06 Expression of Hemagglutinin of *Avian Influenza Virus H5N1 (A/Vietnam/1194/2004)*
○Yuri Kato¹, Tatsuya Kato¹, Jinhua Dong², Makoto Ogata², Enoch Y. Park^{1,2}
 (¹Dept. Appl. Biol. Chem., Fac. Agric., Shizuoka Univ.,
²Grad. Sch. Sci. Techonol. Shizuoka Univ. Biosci.)

- 14:42 4Cp07 Highly-oriented co-immobilization of proteins on streptavidin-supported particles
○Takuya Matsumoto, Yuto Hata, Tsutomu Tanaka, Akihiko Kondo
 (Dept. Chem. Sci. Eng., Kobe Univ.)
- 14:54 4Cp08 Study on Development of Ultra-High Sensitive CRP Latex Reagent by Epitope Analysis
○Naoko Inoue¹, Tomoe Komoriya², Kazuaki Yoshimune², Hideki Kohno²
 (¹Grad. IE. Chem., Nihon Univ., ²Dept. IE. Chem., Nihon Univ.)
- 15:06 4Cp09 Development of fluorescent nanoparticle using bacteriophage T7
○Mie Tsuboyama, Isamu Maeda (Grad. Sch. Agric., Utsunomiya Univ.)
- 15:18 4Cp10 Purification procedure for water-soluble tumor antigen with high purity using reversible cationization techniques
○Komako Mandai, Kengo Fujiwara, Momoko Kido, Kana Fujita, Tomoko Honjo,
 Hidenori Yamada, Junichiro Futami (Grad. Sch. Nat. Sci. Tech., Okayama University)
- 15:30 4Cp11 Construction of an *in vitro* gene screening system for membrane proteins
○Haruka Soga¹, Satoshi Fujii³, Tetsuya Yomo^{2,3}, Hajime Watanabe¹, Tomoaki Matsuura^{1,3}
 (¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ²Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ.,
³ERATO, JST)
- 15:42 4Cp12 Characterization of a Dps family protein, MrgA in *Bacillus subtilis*
Kenichirou Teramura¹, ○Jin Sakamoto^{2,3}, Nishio Keisuke², Tetsuaki Tsuchido^{1,2,3}
 (¹Grad. Sch., Sci. Eng., Kansai Univ., ²Dep. Life Sci. Biotech., Fac. Chem., Materials Bioeng., Kansai Univ.,
³ORDIST, Kansai Univ.)
- 15:54 4Cp13 Expression and functional analysis of CcmL, CcmM, CcmN composing Carboxysome
 from *Thermosynechococcus elongatus* BP-1
○Tomohiro Miki¹, Kei Yamaguchi¹, Keiichi Noguchi², Masafumi Odaka¹, Masafumi Yohda¹
 (¹Dept. Biotechnol., Tokyo Univ. Agric. Technol.,
²Instrumentation Analysis Center. Tokyo Univ. of Agric. and Technol.)
- 16:06 4Cp14 Expression and structural analyses of Encapsulin from *Rhodococcus erythropolis* N771
○Akio Tamura¹, Yosuke Fukutani¹, Fumio Arisaka², Keiichi Noguchi³,
 Masafumi Yohda¹, Masafumi Odaka¹ (¹Dept. of Biotechnol. Tokyo Univ. of Agric. and Technol.,
²Grad. Sch. of Biosci and Biotechnol. Tokyo Inst. of Technol.,
³Instrumentation Analysis Center. Tokyo Univ. of Agric. and Technol.)
- 16:18 4Cp15 Identification of NeuAc synthetase from *Clostridium kluyveri*
○Ryosuke Miyauchi, Hiroyuki Kajiura, Kazuhito Fujiyama (ICBiotech, Osaka Univ.)
- 16:30 4Cp16 Analysis of the interaction between *Aspergillus oryzae* hydrophobin RolA and cutinase CutL1
○Yusei Tsushima¹, Kimihide Muragaki¹, Kenji Uehara¹, toru Takahashi^{2,3}, Youhei Ymagata^{2,4},
 Keietsu Abe^{1,2} (¹Div. Biosci. Biotech. Future Bioind., Grad. Sch. Agric. Sci., Tohoku Univ.,
²NICHe., Tohoku Univ., ³Natl. Res. Inst. Brewing, ⁴Tokyo Univ. of Agric. and Technol.)
- 16:42 4Cp17 Analysis of the interaction between *Aspergillus oryzae* hydrophobin RolA and solid surfaces
Hiroki Tanabe¹, ○Takumi Tanaka¹, Keiko Orui¹, Kenji Uehara¹, Toru Takahashi^{2,3},
 Takanari Togashi⁴, Keietsu Abe^{1,3} (¹Grad. Sch. Agric. Sci., Tohoku Univ., ²NRIB,
³NICHe., Tohoku Univ., ⁴IMRAM., Tohoku Univ.)
- 16:54 4Cp18 Crystal structure of a metagenome-derived homolog of *Sulfolobus tokodaii* RNase H1
○Tri-Nhan Nguyen¹, Clement Angkawidjaja^{1,2}, Hiroyuki Matsumoto¹, Dong-Ju You¹,
 Yuichi Koga¹, Shigenori Kanaya¹ (¹Dept. Mat. Life Sci., Grad. Sch. Eng., Osaka Univ.,
²International College, Osaka Univ.)
- 17:06 4Cp19 Chaperone engineering - New bio-functions of molecular chaperone protein
○Tamotsu Zako, Mizuo Maeda (Bioeng. Lab. RIKEN Institute)

- 17:18** 4Cp20 Dual role of divalent metal ions in activating and replacing salt essential for folding of RNase H1 from a halophilic archaeon
.....○Elias Tannous, Koji Yokoyama, Yuichi Koga, Shigenori Kanaya
(Dept. Mat. Life Sci., Grad. Sch. Eng., Osaka Univ.)
- 17:30** 4Cp21 Role of N- and C-terminal extensions of RNases H2 from thermophilic bacteria
.....○Etin Diah Permanasari, Nujarin Jongruja, Yuichi Koga, Shigenori Kanaya
(Dept. Mat. Life Sci., Grad. Sch. Eng., Osaka Univ.)
- 17:42** 4Cp22 Stability of the active-site mutants of Tk-SP from hyperthermophilic archaeon
.....○Kazumasa Abe, Koga Yuichi, Shigenori Kanaya (Dept. Mat. Life Sci., Osaka Univ.)
- 17:54** 4Cp23 High level expression of transmembrane protein in *Escherichia coli*
.....○Atsushi Fujimoto¹, Takumi Ikeda¹, Keisuke Onbe¹, Junichiro Futami¹, Hidenori Yamada¹,
Hiroko Tada² (¹Grad. Sch. Nat. Sci. & Tech., Okayama Univ., ²Dpt. Inst. Anal., Okayama Univ.)
- 18:06** 4Cp24 Study for unusual solubility of mixture denatured protein from mammalian cells
.....Junichiro Futami, ○Haruna Fujiyama, Kengo Fujiwara, Hidenori Yamada
(Grad. Sch. Nat. Sci. Tech., Okayama Univ.)
- 18:18** 4Cp25 Functional expression of transcription factor protein by In-cell folding techniques
.....○Masahiro Makihara, Shinji Yamaguchi, Shinji Kondo, Hidenori Yamada, Junichiro Futami
(Grad. Sch. Nat. Sci. Tech., Okayama University)
- 18:30** 4Cp26 Function analysis of a novel cellulosomal scaffolding protein CbpB from *Clostridium cellulovorans* 743B
.....○Hideo Miyake^{1,2,3}, Daichi Nakajima¹, Akihiko Nagano¹, Hironobu Morisaka⁴, Kouichi Kuroda⁴,
Mitsuyoshi Ueda⁴, Yutaka Tamaru^{1,2,3} (¹Dept. Life Sci., Grad. Sch. Biores., Mie Univ.,
²Dept. Bioinfo. Life Sci. Res. Center, Mie Univ., ³Indust. Technol. Inno. Inst., Mie Univ.,
⁴Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 18:42** 4Cp27 Cell-SELEX for selection of DNA aptamers against uropathogenic bacteria
.....○Nasa SAVORY¹, Brian V JONES², Kazunori IKEBUKURO¹
(¹Dept. Biotech., Grad. Sch. Eng., Tokyo Univ. Agric. Technol.,
²Cntr. Biomed. Health Sci. Res., Univ. Brighton)

Room D Morning (9:00~12:00)

General Presentaion (Genetic engineering / Fermentation physiology, fermentation technology)

- 9:00** 4Da01 Characterization of phenazine antibiotic production in *Pseudomonas chlororaphis* subsp. *aurantiaca* and its application as a biocontrol agent
.....○Tomohiro Morohoshi¹, Wenzhao Wang¹, Tomonori Sutou¹, Nobutaka Someya², Tsukasa Ikeda¹
(¹Dept. Mol. Environ., Grad. Sch. Eng. Utsunomiya Univ., ²Hokkaido Agric. Res. Cent.)
- 9:12** 4Da02 Mechanism for the oligotrophic mutation of a gamma-HCH-degrading bacterial strain
.....○Joe Hirano, Hiroki Ui, Yoshiyuki Ohtsubo, Yuji Nagata, Masataka Tsuda
(Grad. Sch. Life Sci., Tohoku Univ.)
- 9:24** 4Da03 Heterologous *mms6* gene introduction to *Desulfovibrio magneticus* RS-1 for bacterial magnetite morphological regulation
.....○Takanori Katayama, Ayana Yamagishi, Tadashi Matsunaga, Atsushi Arakaki
(Inst. Engr., Tokyo Univ. Agri. Tech.)
- 9:36** 4Da04 Alginate-dependent gene expression in a superchannel-forming bacterium *Sphingomonas* sp. A1
.....○Chie Hayashi, Yukie Maruyama, Wataru Hashimoto, Kousaku Murata
(Div. Food Sci. Biotech., Grad. Sch. Agric., Kyoto Univ.)

- 9:48** 4Da05 Transcriptome analysis of isobutanol stress response in *Corynebacterium glutamicum*
.....○Toshihiro Tsujimoto¹, Koichi Toyoda², Haruhiko Teramoto², Masayuki Inui², Hideaki Yukawa^{1,2}
(¹Grad. Sch. Biol. Sci., NAIST, ²RITE)
- 10:12** 4Da07 Production of eicosapentaenoic acid by *Pinguiochrysis pyriformis* MBIC10872
.....○Hitoshi Izumida, Yuji Okita (Nippon Suisan Kaisha, Ltd.)
- 10:24** 4Da08 Purification of a ubiquinol oxidase containing cytochromes *b*, *c* and *aa₃* from *Acidithiobacillus ferrooxidans*
.....○Tsuyoshi Sugio¹, Rie Sugio¹, Fumiaki Takeuchi²
(¹Sugio Inst. of Chemolithoautotrophy, ²Environ. Manage. Cen. Okayama Univ.)
- 10:36** 4Da09 Cell attachment for improved electricity generation by biosolar cells using *Synechocystis* sp.
.....○Yuki Matsuo, Toshihide Kakizono
(Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 10:48** 4Da10 Elucidation of extracellular matrices that participate in flocculation of purple non-sulfur bacterium, *Rhodovulum sulfidophilum*
.....○Dai Ogawa, Isamu Maeda (Grad. Sch. Agric., Utsunomiya Univ.)
- 11:00** 4Da11 Alterations of glucose metabolism in *Escherichia coli* mutants defective in both respiratory-chain enzymes and PdhR
.....○Hironori ARAI, Chie KIHARA, Soya MAEDA, Satoru FUKIYA,
Masaru WADA, Atsushi YOKOTA (Divi. Appl. Biosci., Grad. Sch. Agric., Hokkaido Univ.)
- 11:12** 4Da12 Does the *E. coli* RNaseG recognize nucleotides around the cleavage site ?
.....○Kazutaka Ito, Koushin Hamasaki, Aya Kayamori, Phuong Anh Thi Nguyen, Masaaki Wachi
(Dept. of Bioeng., Tokyo Inst. of Technol.)
- 11:24** 4Da13 Influence of reactive oxygen species on *Escherichia coli* cells treated with an antibacterial agent
.....○Kunihiro Nakata¹, Yoshinobu Matsumura^{1,2}
(¹ORDIST, Kansai Univ., ²Dept. Life Sci. Biotechnol., Kansai Univ.)
- 11:36** 4Da14 Development of High Isopropyl Alcohol-Producing *Escherichia coli*
.....○Yoshiko Matsumoto¹, Koh Amano¹, Tomokazu Shirai^{1,2}, Junichiro Hirano¹,
Hitoshi Takahashi¹, Nozomi Takebayashi¹, Takashi Morishige¹, Toshihiro Tateno¹,
Chikara Furusawa², Takashi Hirasawa², Hiroshi Shimizu², Mitsufumi Wada¹
(¹Catalysis Science Lab., Mitsui Chemicals, Inc., ²Dept. of Bioinformatic Engineering, Osaka Univ.)
- 11:48** 4Da15 Production of acetone-butanol from un-utilized starch biomass
.....○Yohei Kushiki¹, Chizuru Sasaki², Chikako Asada², Yoshitoshi Nakamura² (¹Dept. Biol. Sci. Tech.,
Fac. Eng., Univ. Tokushima, ²Dept. Biol. Sci. Tech., Fac. Eng., Univ. Tokushima)

Room D Afternoon (13:30~18:54)

General Presentaion (Fermentation physiology, fermentation technology)

- 13:30** 4Dp01 Metabolic engineering for enhanced supply of oxaloacetate in *Corynebacterium glutamicum*
.....○Kotaro Ogura, Kazunori Sawada, Takuya Hagiwara, Masaki Yanase, Masaru Wada, Yokota Atsushi
(Lab. Microb. Physiol., Grad. Sch. Agric., Hokkaido Univ.)
- 13:42** 4Dp02 Production of cadaverine by *Corynebacterium glutamicum*
.....○Naoko Okai¹, Emma Niba¹, Hideki Nakayama², Fumio Matsuda¹, Chiaki Ogino³, Akihiko Kondo³
(¹Org. Adv. Sci. Tech., Kobe Univ., ²Grad. Sch. Envi., Nagasaki Univ., ³Dept. Chem. Sci. Eng., Kobe Univ.)
- 13:54** 4Dp03 Branched-chain amino acid production by an acetic acid bacterium *Gluconacetobacter europaeus*
.....○Naoki Akasaka¹, Hisao Sakoda¹, Shinsuke Fujiwara²
(¹Marukan Vinegar Co. Ltd., ²Dept. Biosci., Kwansai Gakuin Univ.)

- 14:06** 4Dp04 Function of transcriptional regulator GntR on acetic acid fermentation performed by *Acetobacter pasteurianus* NBRC3283
Akiko Okamoto-Kainuma¹, ○Taihei Ishikawa¹, Morio Ishikawa¹, Kouichi Itoh², Yukimichi Koizumi¹
 (1Dept. Ferment. Sci., Tokyo Univ. Agric., 2Central Research Institute, Mizkan Group Corporation)
- 14:18** 4Dp05 L-lactic acid production by novel bacillus coagulans F6-2 and optimization of culture medium and fermentation conditions
○Naoki Ikemura¹, Shinichi Shibata², Tetsuya Takemoto³, Hideki Shintaku³, Yoshikazu Kondou⁴
 (1Dept. Mech. Eng., Univ. Ryukyus, 2Dept. Mech. Eng., Univ. Ryukyus, 3Energy Technology Laboratories, Osaka Gas Co., Ltd., 4Integrated Innovation Center, Univ. Ryukyus)
- 14:30** 4Dp06 Screening and identification of novel bacteriocins produced by lactic acid bacteria
○Xiao Gong¹, Takeshi Zendo¹, Kenji Sonomoto^{1,2}
 (1Fac. Agric., Kyushu Univ., 2Bio-Arch., Kyushu Univ.)
- 14:42** 4Dp07 Regulation of the capsule biosynthesis genes of Streptococci
Yuko Matsumoto¹, Yayoi Kawasaki¹, Honami Takato¹, Nakai Chiemi², Hiroyuki Tsunashima²,
 Shinji Iijima², ○Katsuhide Miyake¹ (1Res. Inst. Biores. Biotech., Ishikawa Pref. Univ., 2Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.)
- 14:54** 4Dp08 Stress response to an antimicrobial surfactant in *Staphylococcus aureus*
○Miyako Ota¹, Kunihiro Nakata^{1,2}, Yoshinobu Matsumura^{1,2}
 (1Dept. Life Sci. Biotechnol., Kansai Univ., 2ORDIST, Kansai Univ.)
- 15:06** 4Dp09 Characterization of genes involved in D-sorbitol oxidation in *Gluconobacter frateurii*
Wichai Soemphol¹, Saichana Natsaran², Toshiharu Yakushi², Osao Adachi²,
 Kazunobu Matsushita², ○Hirohide Toyama³ (1Khon Kaen Univ., 2Dept. Biol. Chem., Yamaguchi Univ., 3Dept. Biosci. Biotech., Univ. Ryukyus)
- 15:18** 4Dp10 Microbial production of *N*-acetyl *cis*-4-hydroxy-L-proline by coexpression of the Rhizobium L-proline *cis*-4-hydroxylase and the yeast *N*-acetyltransferase Mpr1
Hoa Bach Thi Mai¹, Ryotaro Hara², Kuniki Kino², ○Hiroshi Takagi¹
 (1Grad. Sch. Biol. Sci., NAIST, 2Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 15:30** 4Dp11 Effect of fumarate on bile acid transformation by intestinal bacteria
○Nozomi Honda, Hsin-Yu Chang, Satoru Fukiya, Satoshi Ishizuka, Atsushi Yokota
 (Divi. Appl. Biosci., Grad. Sch. Agric., Hokkaido Univ.)
- 15:42** 4Dp12 Development of the biofuel producing technology from aquatic resources
○Takeshi Yamaguchi, Satoshi Kawata, Takahisa Tajima, Junichi Kato, Naomichi Nishio,
 Yutaka Nakashimada (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 15:54** 4Dp13 Benzoic acid fermentation from starch and cellulose using the polyketide synthesis pathway of *Streptomyces maritimus*
○Shuhei Noda, Tsutomu Tanaka, Chiaki Ogino, Akihiko Kondo (Dept. Sci. Eng., Kobe Univ.)
- 16:06** 4Dp14 Importance of aromatic amino acids in stress tolerance of budding yeast and its application
○Koichi TANAKA¹, Noriko KOMATSUZAKI², Shinobu FUJIWARA², Yukari ISHII¹,
 Makoto HIBI³, Jun OGAWA⁴, Jun SHIMA¹ (1Res. Div. Microbial Sci., Kyoto Univ., 2Dept. Human Nutrition, Seitoku Univ., 3Ind. Microbiol., Grad. Sch. Agric., Kyoto Univ., 4Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 16:18** 4Dp15 Uptake property of soy peptides in yeast
○Masahiro Sugiyama¹, Sayuri Kitagawa¹, Takayasu Motoyama¹, Fumiyoshi Abe²
 (1Fuji Oil Co., Ltd., 2Dept. Chem. & Biol. Sci., Coll. Sci. & Engineering., Aoyama Gakuin Univ.)

- 16:30** 4Dp16 High-throughput analytical system for peptide transporter using yeast
○Aya HIKIDA¹, Keisuke ITO², Takayasu MOTOYAMA³, Sayuri KITAGAWA³,
 Yasuaki KAWARASAKI² (¹Grad. Sch. Nutri. Environ. Sci., Univ. Shizuoka.,
²Sch. Food Nutri. Sci., Univ. Shizuoka., ³Fuji Oil Co., Ltd.)
- 16:42** 4Dp17 Metabolomics analysis of the budding yeast under acetaldehyde stress
○Haruka Matsuyama¹, Yoshimi Matsufuji², Takashi Hyakawa², Tomoyuki Nakagawa²
 (¹Grad. Sch. Appl. Biol. Sci., Gifu Univ., ²Dpt. Appl. Life Sci., Gifu Univ.)
- 16:54** 4Dp18 Formation of P-bodies and stress granules by furfural and HMF in yeast
○Shingo Izawa, Takao Kawai, Aya Iwaki (Dept. Appl. Biol., Kyoto Inst. Technol.)
- 17:06** 4Dp19 Comprehensive analysis of the essential genes involved in oxidative stress tolerance in *Saccharomyces cerevisiae*
○Natsumi Okada¹, Akira Ando², Jun Ogawa³, Jun Shima¹ (¹Res. Div. Microb. Sci., Kyoto Univ.,
²Food Res. Inst., NARO, ³Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 17:18** 4Dp20 Function of three Hog1 homologs (TmHog1, TmHog2, TmHog3) in osmotic stress response of *Trichosporonoides megachiliensis*
○Tomomi Nishimura, Junjiro Yoshida, Yousuke Kobayashi, Jun Ogihara,
 Jun Kato, Takafumi Kasumi (Dept. Agric. Biol. Chem., Nihon Univ.)
- 17:30** 4Dp21 Relation between the ratio of autopolyploid nuclei in the *Shiitake* mycelia and the cellulose degrading ability
○Hideo Toyama (Dept. Food Sci. Tech.)
- 17:42** 4Dp22 Analysis of cell surface structure of *Saccharomyces cerevisiae* mutants with high activity for immuno-stimulation
○Ayano Mizobuchi, Yuki Takada, Taro Tachibana, Masayuki Azuma
 (Dept. Appl. Chem. and Bioeng., Osaka City Univ.)
- 17:54** 4Dp23 Screening of β -glucan secretion mutants of *Saccharomyces cerevisiae*
○Akihito Suwabe, Taro Tachibana, Masayuki Azuma
 (Dept. of Appl. Chem. and Bioeng., Grad. Sch. of Eng., Osaka City Univ.)
- 18:06** 4Dp24 Characterization of triacylglycerol-secreting mutant strain of *Saccharomyces cerevisiae*
○Takushi Hatano, Hiroki Fujii, Hitomi Ikemoto, Hiroaki Matsuzaki
 (Dept. Biotech., Fac. Life Sci. Biotech. Fukuyama Univ.)
- 18:18** 4Dp25 Production of farnesol in the farnesol producing strain crossed with sake yeast
○Naotaka Sada, Natsuko Kaneko, Takahiro Yamauchi, Takahiro Akashi, Akira Nishimura
 (Hakutsuru Sake Brewing Co. Ltd.)
- 18:30** 4Dp26 Production of ethanol by continuous fermentation from saccharified potato tubers mixed with cheese whey
○Kenji Nakamura¹, Yoshitake Orikasa², Yuji Oda²
 (¹Dep. Biores. Sci., United Graduate School Agr. Sci., Iwate Univ.,
²Dep. Food Sci., Obihiro Univ. Agric. Vet. Med.)
- 18:42** 4Dp27 Practical bioethanol production using waste Japanese noodle (udon)
○Yasuhito Matsubara¹, Shigehiko Ohnishi¹, Hiromi Matsuoka¹, Kazuko Kubo¹, Takako Asai¹,
 Masako Inoue¹, Tadao Inazu¹, Ken-ichi Iwasaki¹, Kenji Yoshimi², Tetsuo Ozaki², Yasuko Fujita³,
 Yoshihiro Nakajima³, Hiroko Abe³ (¹香川・産技セ, ²ちよだ製作所, ³産総研・健康工学)

Room E Afternoon (16:06~18:54)

General Presentaion (Antibody engineering / Organic chemistry, polymer chemistry)

- 16:06** 4Ep14 Development of a novel protein display system using a hypermutating B cell line DT40
○Takuya Hikasa, Shuichi Matsuda, Hidetomo Uetsuki, Masaki Magari,
 Hitoshi Ohmori, Naoki Kanayama (Dept. Biosci. Biotech., Okayama Univ.)

- 16:18** 4Ep15 Affinity maturation of monoclonal antibodies in the hypermutating chicken B cell line DT40-SW
○En Sai, Satoshi Kojima, Shinobu Fujii, Kouichi Kitamura, Kayoko Kamoshita, Mika Ikeda,
 Masaki Magari, Hitoshi Ohmori, Naoki Kanayama (Dept. Biosci Biotech., Okayama Univ.)
- 16:30** 4Ep16 Generation of antigen-specific antibodies using a chicken B cell line DT40 that expresses a human antibody
○Kawakami Kanae, Kazue Inoue, Okayama Nobuhisa, Kanehiro Yuichi, Ikeda Mika,
 Magari Masaki, Omori Hitoshi, Kanayama Naoki (Dept. Biosci. Biotech., Okayama Univ.)
- 16:42** 4Ep17 Development of lectin immunoassay method for detection of glycol-chains conjugated with Human antibodies
○Kagenari Yamakawa, Yoichi Kumada, Michimasa Kisimoto (Dept. Biomol Eng., Kyoto Inst. Tech)
- 16:54** 4Ep18 (Canceled)
- 17:06** 4Ep19 Sensitive detection of vimentin serine phosphorylation by multilabeled Quenchbodies
○Hee-Jin Jeong¹, Hiroshi Ueda¹, Masaki Inagaki² (¹Dept. Chem. Biotech., Univ. Tokyo, ²ACCR)
- 17:18** 4Ep20 Study on functionalization of anti-EGFR scFv multimers for cancer therapy
○Ryutaro Asano¹, Noriaki Koyama¹, Yasuyo Hagiwara¹, Yosuke Masakari¹, Shozo Furumoto²,
 Mitsuo Umetsu¹, Izumi Kumagai¹ (¹Dept. Biomol. Eng., Grad. Sch. Eng., Tohoku Univ.,
²Grad. Sch. Med., Tohoku Univ.)
- 17:30** 4Ep21 Effects of rotational speed on the hydrodynamic properties of antibodies measured by analytical ultracentrifugation sedimentation velocity
○Elena Krayukhina, Susumu Uchiyama, Kiichi Fukui (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 17:42** 4Ep22 Cytotoxicity of human catalytic antibody light chain
○Kazuki Moriyama¹, Ryo Iikura¹, Sari Sonoda¹, Emi Hifumi^{2,3}, Taizo Uda^{1,3}
 (¹Oita Univ., ²Research Promotion Project, Oita Univ., ³CREST, JST)
- 17:54** 4Ep23 The ADLib[®] System: A Novel Technology to Generate Monoclonal Antibodies
○Hidetaka Seo^{1,2}, Shunsuke Miyai¹, Shigehisa Kawata², Shu-ichi Hashimoto¹, Shunsuke Moriyama¹,
 Kunihiro Ohta^{1,2} (¹Chiome Bioscience Inc., ²Grad. Sch. Art and Sci., Univ. Tokyo)
- 18:06** 4Ep24 A rapid method for generation and engineering a monoclonal antibody with ADLib system
○Kohei Kurosawa, Koji Hashimoto, Akiho Murayama, Kunihiro Ohta
 (Dept. Life Sci., Grad. Art and Sci., Univ. Tokyo)
- 18:18** 4Ep25 Screening and production of human catalytic antibody light chain
○Yasuyuki Sasano¹, Naoko Fujimoto³, Manami Watanabe¹, Emi Hifumi^{2,3}, Taizo Uda^{1,3}
 (¹Dept. Appl. Chem., Fac. Eng., Oita Univ., ²Research Promoton Institute, Oita Univ., ³CREST of JST)
- 18:30** 4Ep26 Sterically caging for light-induced activation of biopolymers
○Satoshi Yamaguchi, Satoshi Takamori, Teruyuki Nagamune (Dept. Chem. Biotech., Univ. Tokyo)
- 18:42** 4Ep27 Development of the surfactant-free cosmetics: The potency of the three-phase emulsification for cosmetics
○Masahito Tsubata¹, Nobutaka Kusaba¹, Tomoko Matsuda¹, Tomoyasu Kamiya¹,
 Kazuya Yamashita¹, Ryuichi Takamoto¹, Motoya Ikeguchi¹, Kinya Takagaki¹, Yoko Imai²,
 Kazuo Tajima², Juichiro Nakayama³
 (¹Toyoshinyaku Co., Ltd, ²Kanagawa Univ., ³Fac. Med., Fukuoka Univ.)

Room F Afternoon (15:54~18:54)

General Presentaion (Bioinformatics / Systems biology / Genetic engineering)

- 15:54** 4Fp13 Screening of neutrophil activating factors from metagenomic libraries of sponge-associated bacteria
○Yoshiko Okamura¹, Katsuhiko Suzuki², Yoko Suzuki², Haruko Takeyama³
 (¹Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ., ²Fac. Sport Sci., Waseda Univ.,
³Dept. Life Bio-Med., Sch. Adv. Sci. Eng., Waseda Univ.)

- 16:06** 4Fp14 Analysis of genetic interaction between histone deacetylase (HDAC) *AoHst4* and *LaeA*
○Moriyuki Kawauchi^{1,2}, Masato Hirose^{1,2}, Kazuhiro Iwashita^{1,2}
 (¹Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ., ²Natl. Res. Inst. Brewing)
- 16:18** 4Fp15 Correlation of a NRPS gene with productivity of echinocandin B in producing strain and non-producing strain
○Sakai Chikako¹, Yamada Masato¹, Orino Yoshosuke¹, Ohuchi Takuya¹, Tsurumi Yasuhisa²,
 Isogai Yasuhiro¹, Hashimoto Seiji¹ (¹Dept. Biotech., Toyama Pref. Univ., ²NITE NBRC)
- 16:30** 4Fp16 Construction of an AHL-degrading gene *macQ* mutant and functional analysis of antibiotic resistance mechanism in β -lactam antibiotics resistant bacterium *Acidovorax* sp. S7
○Hiroyuki Kusada^{1,2}, Satoshi Hanada^{1,2}, Yoichi Kamagata¹, Nobutada Kimura¹
 (¹BRI. AIST, ²Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 16:42** 4Fp17 Cloning of the genes responsible for 1-deoxynojirimycin biosynthesis from *Streptomyces lavendulae*
○Misaki Ohnishi, Shuji Tani, Jun-ichi Sumitani, Takashi Kawaguchi
 (Grad. Sch. Life Env. Sci., Osaka Pref. Univ.)
- 16:54** 4Fp18 Prediction of secondary metabolite gene cluster using comparative genomics
○Itaru Takeda¹, Myco Umemura², Hideaki Koike², Yoshinori Koyama², Masayuki Machida^{1,2}
 (¹Dept. Biotechnol., Tokyo Univ. Agric. Technol., ²Bioproduction Res. Inst., AIST)
- 17:06** 4Fp19 Development of the BLAST-based algorithm for identification of upstream open reading frames with conserved amino acid sequences
○Hiro Takahashi¹, Anna Takahashi¹, Mariko Takemoto², Shun Watanabe², Isao Ebina³, Yayoi Endo⁴,
 Hiroaki Koyama², tomomi Toda⁴, Ryuta Seto⁴, Satoshi Naito^{2,3}, Hitoshi Onouchi²
 (¹Sch. Bios. Biot., Chubu Univ., ²Grad. Sch. Agric. Hokkaido Univ.,
³Grad. Sch. Life Sci., Hokkaido Univ., ⁴Fac. Agric., Hokkaido Univ.)
- 17:18** 4Fp20 The importance of age-dependence on autonomic nerves in the diagnosis of chronic fatigue syndrome
○Tetsuro Kodama, Suguru Nishida, Kei Sadakari, Hiroki Ando, Ayana Shibuya, Jun-ichi Koizumi
 (Grad. Sch. Eng., Yokohama Natl. Univ.)
- 17:30** 4Fp21 A noble sleep index shows break-down of firemen, which is estimated from autonomic nerve in his sleep
○Kei Sadakari¹, Tetsuro Kodama¹, Hiroki Ando¹, Ayana Shibuya¹, Suguru Nishida¹,
 Yasushi Oka¹, Masaru Miura², Jun-ichi KOIZUMI¹ (¹Grad. Sch. Eng., Yokohama Natl. Univ.,
²Fire Dept., Yokohama city.)
- 17:42** 4Fp22 Relative strength of stressors which emerge on driving in express way
○Hiroki Ando¹, Ayana Shibuya¹, Teturo Kodama¹, Kei Sadakari¹, Suguru Nishida¹,
 Wataru Hayasi², Junichi Koizumi¹ (¹Grad. S. Eng., Yokohama Natl. Univ., ²G. M. S. Inc.)
- 17:54** 4Fp23 Predict the stress at the dental treatment
○Ayana Shibuya¹, Tetsuro Kodama¹, Hiroki Ando¹, Kei Sadakari¹, Suguru Nishida¹,
 Kenichi Fukuda², Naoko Saita², Jun-ichi Koizumi¹ (¹Grad. Sch. Eng., Yokohama Natl. Univ.,
²Tokyo Dental Col. Suidobashi Hosp.)
- 18:06** 4Fp24 Construction of a dynamic model for evaluation of metabolic profiles
○Naoaki Ono¹, Koji Inuishi², Yoshihiro Toya², Hiroshi Shimizu²
 (¹Grad. Sch. Info. Sci., NAIST, ²Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ.)
- 18:18** 4Fp25 Systematic Analysis of Metabolic Regulatory System based on Temporal Variation of Metabolite Network
○Daichi Yukihiro¹, Daisuke Miura², Hiroyuki Wariishi^{2,3}
 (¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ.,
²ICMRN, Kyushu Univ., ³Fac. Arts and Sci., Kyushu Univ.)
- 18:30** 4Fp26 Multipotency obtained by gene overexpression in a bistable system
Kana Ishimatsu^{1,2}, Takashi Hata¹, ○Daisuke Kiga¹ (¹Dept. Comp. Int. & Sys. Sci., Tokyo Tech, ²JST)

- 18:42** 4Fp27 Bile acid is a host factor that regulates the composition of the cecal microbiota in rats
○Satoru Fukiya¹, K.B.M. Saiful Islam¹, Masahito Hagio¹, Nobuyuki Fujii¹, Satoshi Ishizuka¹,
 Ooka Tadasuke^{2,3}, Yoshitoshi Ogura^{2,3}, Tetsuya Hayashi^{2,3}, Atsushi Yokota¹
 (1)Divi. Appl. Biosci., Grad. Sch. Agric., Hokkaido Univ.,
 (2)Cent. Front. Sci. Res., Miyazaki Univ., (3)Dept. Med., Miyazaki Univ.)

Room G Morning (9:00~12:00)

General Presentaion (Environmental technology, wastewater treatment)

- 9:00** 4Ga01 Analyses of nitrification in eutrophicated brackish Lake Sanaru
○Yuto Kudo, Masanori Kurahashi, Yoshiki Sugiura, Hiroyuki Futamata (Shizuoka Univ. Eng.)
- 9:12** 4Ga02 Emission and formation mechanism of nitrous oxide from a partial ammonia oxidation process-The effect of dissolved oxygen concentration
○Keisuke Hojo¹, Tomoko Yamamoto¹, Megumi Kuroiwa², Kazuo Isobe³, Chie Katsuyama⁴,
 Sheng Zhou¹, Masaaki Hosomi¹, Yuichi Suwa⁴, Kesiuke Koba², Akihiko Terada¹
 (1)nst. Grad Sch. Eng., Tokyo Univ. of Agric. and Technol., (2)Inst. Agr., Tokyo Univ. of Agric. and Technol.,
 (3)Grad. School Agric. Life Sci., Tokyo Univ., (4)Inst. Bio Sci., Chuo Univ.)
- 9:24** 4Ga03 Evaluation of nitrogen removal using various type of anaerobic ammonium oxidizing bioreactors
○Masahiro Tatara, Shu Ishikawa, Yoji Kitajima, Yoshiyuki Ueno (Kajima Tech. Res. Inst.)
- 9:36** 4Ga04 Relationship analysis of autotrophic ammonia-oxidizing bacteria and nitrification in agricultural soil
○Toshihide Matsuno, Sachie Horii, Yuuki Fukuhara, Yoshiki Matsumiya, Motoki Kubo
 (Dept. Biosci. Biotech., Ritsumeikan Univ.)
- 9:48** 4Ga05 Analysis of nitrogen circulation in agricultural soil based on Soil Fertile Index
○Kanyou Ngamsomsuke, Sachie Horii, Toshihide Matsuno, Yuki Fukuhara,
 Yoshiki Matsumiya, Motoki Kubo (Dept. Biotechnology, Ritsumeikan University)
- 10:00** 4Ga06 Effect of ammonia on performance of methane fermentation
Shojiro Yamaji¹, Xia Jiang², Yueqin Tang², ○Kida Kenji^{2,1}, Hiroshi Oshibe³,
 Noriko Osaka³, Toru Matsui³ (1)Grad. Sch. Sci. & Technol., Kumamoto Univ.,
 (2)College Architect & Environ, Sichuan Univ., (3)Tokyo Gas)
- 10:12** 4Ga07 Development of Dry Thermophilic Anaerobic Digestion Process using Swine Manure and Rice Straw
○Kazuhiro Suzuki, Sheng Zhou, Akihiko Terada, Masaaki Hosomi
 (Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)
- 10:24** 4Ga08 Correlation of methane emission and related microorganisms in rice paddy fields applying liquid manure from livestock wastewater
○Miu Kamimura, Shohei Riya, Sheng Zhou, Masaaki Hosomi, Akihiko Terada
 (Grad. School of Eng., Tokyo Univ. Agric. Tech.)
- 10:36** 4Ga09 Effect of magnetite addition for degrading acetate and microbial community in thermophilic methane fermentation
○Chihaya Yamada, Masaharu Ishii, Yasuo Igarashi (Dept. Biotech., Univ. Tokyo)
- 10:48** 4Ga10 Inhibitory effect of high ammonia concentration on UASB methane fermentation and its reduction
○Sho Suzuki, Shobu Takahiro, Kohei Kimura, Kazuhide Kimbara
 (Dept. Mat. Sci. Chem. Eng., Shizuoka Univ.)
- 11:00** 4Ga11 Environmental distribution and potential diversity of acetate-reducing, aminolytic microbes revealed by enrichment culture technique
○Makoto Ato, Masaharu Ishii, Yasuo Igarasi (Dept. Biotech., Univ. Tokyo)

- 11:12** 4Ga12 Microbial community in the bioelectrochemical hydrogen fermenter
○Kengo Sasaki¹, Masahiko Morita², Daisuke Sasaki², Norio Matsumoto², Naoya Ohmura²,
 Masaharu Ishii¹, Yauo Igarashi¹ (¹Grad. Sch. Agri. Life Sci, Univ. Tokyo, ²CRIEPI)
- 11:24** 4Ga13 Visualization approach for microfloral ecosystems by the multivariate statistical analysis
○Akira Yamazawa^{1,2}, Yasuhiro Date^{2,3}, Jun Kikuchi^{2,3,4,5}
 (¹Kajima Tech. Res. Ins., ²Grad. Sch. NanoBioSci., Yokohama City Univ.,
³RIKEN PSC, ⁴RIKEN BMEP, ⁵Grad. Sch. BioAgriSci., Nagoya Univ.)
- 11:36** 4Ga14 Isolation of aerobic thermophilic bacteria and analysis of bacterial community structure of liquid fertilization
 process with organic waste water
○Toshihiko Kii, Keikun Tei, Kosuke Kanda, Yukihiko Tashiro, Kenji Sakai
 (Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ.)
- 11:48** 4Ga15 Mitigating biofilm formation by an enzyme-immobilized membrane allowing degradation of intercellular
 signal molecules
○Kaori Suzuki¹, Shohei Mizuma¹, Satoshi Tsuneda², Masaaki Hosomi¹, Akihiko Terada¹
 (¹Dept. Chem. Eng., Tokyo Univ. Agric. Technol., ²Dept. of Adv. Sci. Eng., Waseda Univ.)

Room G Afternoon (13:30~18:30)

General Presentaion (Environmental technology, wastewater treatment / Biosensing and analytical chemistry)

- 13:30** 4Gp01 Physicochemical, Metabolic and Microbial Profile Analysis on Paddy Field: Study Case
○Diogo Ogawa^{1,2,3,4}, Shigeharu Moriya^{5,6,7}, Yuuri Tsuboi⁵, Yasuhiro Date⁴, Alvaro Prieto^{1,3,8},
 Gandhi Baptista^{1,2,3}, Tetsuo Yamane^{1,3,8}, Jun Kikuchi^{4,6,7,9} (¹Biotech. Nat. Res. Prog., UEA,
²Inst. Marine Sci., UFC, ³IEEB, INCT, ⁴RIKEN PSC, ⁵RIKEN ASI, ⁶RIKEN BMEP,
⁷Grad. Sch. Bionano., YCU, ⁸Butantan Inst., ⁹Grad. Sch. Bioagri. Nagoya Univ.)
- 13:42** 4Gp02 Analysis of phosphorus circulation in agricultural soil based on Soil Fertile Index
○Sachie Horii, Toshihide Matsuno, Yuki Fukuhara, Yoshiki Matsumiya, Motoki Kubo
 (Dept. Biotechnology, Ritsumeikan Univ.)
- 13:54** 4Gp03 Preparation of nitrite reducing catalyts with immobilized microorganisms
○Yoshinori SUZUKI, Tan CHIFER, Hiroshi SAIKI (Sch. Biosci. Biotechnol., Tokyo Univ. Technol.)
- 14:06** 4Gp04 Construction of rubber decomposing reactor using the immobilized enzyme from rubber decomposing bacteria
○Tsukasa Tanaka¹, Hirokazu Oiki²
 (¹Matel. Eng., Adv. KurumeNCT., ²Biochem. Appl. Chem., KurumeNCT.)
- 14:18** 4Gp05 Effect of enzymatic treatment for sedimentation and flocculating abilities
○Masanori Watanabe¹, Nobuyuki Kusunoki²
 (¹Dept. Agric., Yamagata Univ., ²Kusunoki Kitchen Instrument Co. Ltd.)
- 14:30** 4Gp06 Development of the new microbial culture analysis technique using a microfluidic device
○Keiji Nagata¹, Yutaka Yawata¹, Erika Setoyama¹, Kensuke Toda², Junji Fukuda², Hiroaki Suzuki²,
 Hiroo Uchiyama¹, Nobuhiko Nomura¹ (¹Grad. Sch. Life Env. Sci., Univ. Tsukuba,
²Grad. Sch. Pure and Applied Sci., Univ. Tsukuba)
- 14:42** 4Gp07 Analysis of membrane vesicle production in *Pseudomonas aeruginosa*
○Masanori Toyofuku, Hiroo Uchiyama, Nobuhiko Nomura (Dept. Life Environ., Univ. Tsukuba)
- 14:54** 4Gp08 Establishment of a Quantification Method by Live Imaging of *Daphnia magna*
○Akiko Suzuki, Tomoaki Matsuura, Hajime Watanabe (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 15:06** 4Gp09 Isolation and identification of thermophilic & halophilism microalgae in the Sultanate of Oman
○Masaharu Tasaki¹, Kazuo Okamura¹, Youichi Kuroiwa¹, Ikue Hatakeyama¹, Kengo Suzuki²,
 Ryouhei Nakano², Rashid Al-Maamari³ (¹Shimizu Co., ²Euglena Co., Ltd., ³Sultan Qaboos Univ.)

- 15:18** 4Gp10 Colonization of *Acinetobacter calcoaceticus* strain P23 on rhizosphere of duckweed, Lemna minor
.....○Yoshiyuki HACHIYA¹, Angela QUACH¹, Yuka OGATA¹, Masashi KURODA¹, Daisuke INOUE¹,
Masaaki MORIKAWA², Michihiko IKE¹ (¹Dept. Sustain. Energy & Environ. Eng., Osaka Univ.,
²Div. Biosphere Sci., Hokkaido Univ.)
- 15:30** 4Gp11 Detection of nosocomial infection bacteria, MRSA by using handheld gene sensor
.....○Tomohiko Ikeuchi¹, Keiichiro Nakayama², Masato Saito¹, Masafumi Seki³, Kazunori Tomono³,
Tamiya Eiichi¹ (¹Dept. Appl. Phys. Eng., Osaka Univ., ²PARC, Osaka Univ., ³Osaka Univ. Hospital.)
- 15:42** 4Gp12 Visualization of cellular morphological change by zinc stimulation and application of it for zinc quantitative
analysis
.....○Akiko Ogawa¹, Nobumitsu Hirai¹, Katsuya Hio², Hidekazu Tamauchi³, Hideyuki Kanematsu¹
(¹Suzuka Col. Tech., ²Mie Pref. Industrial Res., ³Med., Kitasato Univ.)
- 15:54** 4Gp13 Comprehensive electrochemical detection using micro/nanogap electrodes for cell analysis
.....○Kosuke Ino¹, Yusuke kanno¹, Taku Nishijo¹, Hitoshi Shiku¹, Tomokazu Matsue^{1,2}
(¹Grad. Envi. Tohoku Univ., ²WPI-AIMR, Tohoku Univ.)
- 16:06** 4Gp14 Development of histone modification evaluating method using luciferase-fused Zn finger protein
.....○Aki Kezuka, Wataru Yoshida, Kazunori Ikebukuro (Dept. Biotech., Tokyo Univ. Agric. Technol.)
- 16:18** 4Gp15 Development of miRNA detection probes consisting of unmodified DNA
.....○Hiroyuki Ida, Akira Tachibana, Toshizumi Tanabe
(Dept. Bioeng., Grad. Sch. Eng., Osaka City Univ.)
- 16:30** 4Gp16 Development of Nano-carbon Electrode For High Sensitivity Recordings of Neurotransmitters
.....○Mao Fukuda, Ikuro Suzuki, Masao Gotoh (Dept. Bio., Tokyo Univ. Technol.)
- 16:42** 4Gp17 GABA release and control from pancreatic β -cells for hyperglycemia
.....Masato Nomura¹, Yujiro Nagai², Yasunori Shioki¹, Kazuki Iwaya², Tetsuhiro Kawamoto²,
○Sachiko Yoshida¹ (¹Dep. Environ. Life Sci. Toyohashi Univ. Technol., ²R&D lab., Tokai Pickeling)
- 16:54** 4Gp18 Development of lateral flow assay using antimicrobial peptide for the detection of enterohemorrhagic
Escherichia coli
.....○Ryuji Ohtsuki¹, Taro Yonekita¹, Eri Hojo¹, Naoki Morishita¹, Takashi Matsumoto¹,
Tomoyasu Aizawa², Fumiki Morimatsu¹ (¹R&D Ctr., Nippon Meat Packers.,
²Grad. Sch. Life Sci., Hokkaido Univ.)
- 17:06** 4Gp19 Thermoresponsive magnetic nano-biosensors for rapid measurements of inorganic arsenic and cadmium
.....○Isamu Maeda, Mohammad Shohel Rana Siddiki, Shun Shimoaoki, Shunsaku Ueda
(Fac. Agric., Utsunomiya Univ.)
- 17:18** 4Gp20 Detection of Neosporosis in Bovine by Au-CdTe Nanocomplex
.....○Jinhua Dong¹, Hongjian Zhou², Jaebeom Lee², Enoch Y. Park¹
(¹Biosci. Grad. Sci. Technol., Shizuoka Univ., ²Dept. Nano Fusion Technol., Pusan National Univ.)
- 17:30** 4Gp21 Development of the alpha-synuclein oligomer sensing system based on electrochemical impedance spectroscopy
.....○Yuki Uchikura, Wakako Tsugawa, Koji Sode
(Dept. of Biotechnol., Graduate School of Engineering, Tokyo Univ. of Agric. and Technol.)
- 17:42** 4Gp22 Sensitive immunoassay using microtiter plates modified with fluorescence enhancement structure
.....○Kazuyoshi Yano, Akira Iwasaki (Grad. Bionics, Tokyo Univ. Technol.)
- 17:54** 4Gp23 Development of immunoassay measuring system by ion-sensitive field-effect transistor (ISFET) sensor
.....○Naohiro Tomari¹, Kiyoo Hirooka¹, Jun Wada¹, Thihiro Kousaka¹, Yoshihiro Yamamoto¹,
Masaomi Nimata², Keiichi Higano², Yoko Takagi², Toshio Tani³, Kunihiro Watanabe⁴
(¹KITC, ²K. E. M Co., Ltd., ³Bio-X Co., Inc., ⁴Grad. Sch. Life Env. Sci., Kyoto Pref. Univ.)
- 18:06** 4Gp24 Protein capturing biosensor with short peptides for the detection of biomarkers
.....○Jong Pil Park, Sang-Chul Jeong (Dept. Pharmaceutical Engineering, Daegu Haany University)
- 18:18** 4Gp25 Enzymatic determination of acetylcarnitine
.....○Kosuke Tomita (formerly, Coll. Eng., Kanto Gakuin Univ.)

Room H Morning (9:00~11:36)

General Presentaion (Biochemical engineering)

- 9:00** 4Ha01 Inhibition of Growth and Met/HGF Receptor Activation in Human Lung Cancer Cells by Lipoic Acid
○Hiromitsu Michikoshi¹, Takahiro Nakamura², Katsuya Sakai², Kunio Matsumoto²,
 Seiichi Matsugo¹ (¹Dept. Chem. Chem. Eng., Kanazawa Univ., ²Cancer Res. Inst., Kanazawa Univ.)
- 9:12** 4Ha02 Development of a novel method for screening microorganisms using low-shear modeled microgravity culture
 (Part 3)
Akiha Kuroda, Tomoya Kouketsu, ○Hideki Aoyagi (Fac. Life. Env. Sci. Univ. Tsukuba)
- 9:24** 4Ha03 Development of high-throughput screening system of manganese peroxidase derived from *Phanerochaete*
chrysosporium using cell-free protein synthesis and bead display
○Ryoko Ninomiya¹, Bo Zhu¹, Isao Kobayashi², Takaaki Kojima¹, Yugo Iwasaki¹, Hideo Nakano¹
 (¹Grad. Sch. Biol. Agrc. Sci., Nagoya Univ., ²Natl. Agric. Res. Cent.)
- 9:36** 4Ha04 Development of comprehensive phenotype analysis of *Escherichia coli* transformed simultaneously with
 different plasmids
○Shuhei Hayashi, Natsumi Maeda, Shinjiro Yamamoto, Suteaki Shioya
 (Fac. Appl. Life Sci., Sojo Univ.)
- 9:48** 4Ha05 Construction of biomass-degradation enzymes library from *Streptomyces* and exploring novel high-level
 secretion signal
○Takaya Miyazaki, Shuhei Noda, Tsutomu Tanaka, Chiaki Ogino, Akihiko Kondo
 (Grad. Sch. Sci. Tech., Kobe Univ.)
- 10:00** 4Ha06 Alteration of the coenzyme specificity of the malic enzyme from *Thermococcus kodakarensis* KOD1 and its
 utilization in synthetic metabolic pathway
○Yumi Morimoto, Xiaoting YE, Kohsuke Honda, Kenji Okano, Hisao Ohtake
 (Dept. Mat. Life Sci., Osaka Univ.)
- 10:12** 4Ha07 Use of lipophilic bacterium *Rhodococcus opacus* B4 in organic solvents as whole-cell catalyst
○Mayumi Wada, Kohsuke Honda, Kenji Okano, Hisao Ohtake
 (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 10:24** 4Ha08 Regulation of gene expression by riboregulators in cyanobacteria
Kazunori Ikebukuro^{1,2}, ○Saki Nakashima^{1,2}, Koichi Abe^{1,2}, Yuta Sakai^{1,2}, Masataka Araki^{1,2},
 Koji Sode^{1,2} (¹Dept. of Biotechnol., Grad. School of Eng., Tokyo Univ. of Agric. and Technol.,
²JST, CREST)
- 10:36** 4Ha09 Construction of the artificial pyruvate oxidation pathway by synthetic metabolic engineering
○Takashi Imagawa, Kousuke Honda, Kenji Okano, Hisao Ohtake (Dept. Mat. Life Sci., Osaka Univ.)
- 10:48** 4Ha10 Characteristics of nanobacteria-like particles isolated from cultured animal cell lines
○Kentarou Takeuchi, Hideki Aoyagi (Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 11:00** 4Ha11 Dynamics of oxidized-cholesterols-containing membrane induced by Alzheimer's amyloid beta
○Huong Thi Thanh Phan, Takahiro Hata, Masamune Morita,
 Mun'delANJI Vestergaard C., Tsutomu Hamada, Masahiro Takagi (Sch. Mat. Sci, JAIST)
- 11:12** 4Ha12 Coproduction of vinegar and electricity by application of microbial fuel cell technology to acetic acid
 fermentation
○Takanori Tanino, Youhei Nara, Takayuki ohshima (Dept. Chem. Environ. Eng., Gunma Univ.)
- 11:24** 4Ha13 Improvement of *ompC* promoter by applying genetic algorithm
○Yuta Sakai^{1,2}, Koichi Abe^{1,2}, Stefano Ferri^{1,2}, Koji Sode^{1,2}, Kazunori Ikebukuro^{1,2}
 (¹Dept. Biotech., Tokyo Univ. Agric. Technol., ²Japan Science and Technology Agency, CREST)

Room H Afternoon (13:30~18:54)

General Presentaion (Biochemical engineering / Biomass, bioresource and energy engineering)

- 13:30** 4Hp01 Spectrum analysis of phlorotannins isolated from brown alga *Eisenia bicyclis*
○Youhei Fuji¹, Toshiyuki Shibata¹, Reiji Tanaka¹, Hideo Miyake¹, Shigeo Kawaguchi²,
 Yutaka Tamaru¹, Kouichi Kuroda³, Mitsuyoshi Ueda³ (¹Fac. Biores., Mie Univ.,
²Fac. Agric., Kyushu Univ., ³Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 13:42** 4Hp02 Design of riboregulators that function in cyanobacteria
○Koichi Abe^{1,2}, Yuta Sakai^{1,2}, Saki Nakashima^{1,2}, Masataka Araki^{1,2}, Koji Sode^{1,2},
 Kazunori Ikebukuro^{1,2} (¹Dept. Biotech., Tokyo Univ. Agric. Technol., ²JST, CREST)
- 13:54** 4Hp03 Regulation of plant potassium channel function through phosphorylation
○Shin Hamamoto, Kota Nakayama, Naoki Matsumoto, Yuki Sato, Kei Nanatani, Nobuyuki Uozumi
 (Dept. Bio. Eng., Grad. Sch. Eng., Tohoku Univ.)
- 14:06** 4Hp04 Effect of cholesterol on stability of inner- and outer-leaflets of membrane
○Sho KATO, Tsutomu HAMADA, Masahiro TAKAGI (Sch. Mat. Sci., JAIST)
- 14:18** 4Hp05 Dynamic thermo-response of liposomes and liquid crystals containing cholesterol derivatives
○Tsuayoshi YODA, Huong Thi Thanh PHAN, Mun'delANJI VESTERGAARD C.,
 Tsutomu HAMADA, Masahiro TAKAGI (Sch. Mat. Sci, JAIST)
- 14:30** 4Hp06 Exploration and characterization of ionic liquid tolerant cellulase
○Yuka Kubota¹, Koji Yamaguchi¹, Nanami Nakashima¹, Motonori Kudou², Kazunori Nakashima³,
 Fumiyoishi Okazaki², Chiaki Ogino¹, Akihiko Kondo¹ (¹Dept. Chem. Sci. Eng., Kobe Univ.,
²Org. Adv. Sci. Technol., Kobe Univ., ³Dept. Chem. Eng., Tohoku Univ.)
- 14:42** 4Hp07 Development of three-dimensional cell culture array based on magnetic force for drug assessment
○Syuhei Yamamoto, Mina Okochi, Hiroyuki Honda (Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.)
- 14:54** 4Hp08 Novel quantification of mitochondria in a human cell by using of qRT-PCR
○Akiyo Yamashita, Ayako Watanabe, Kanji Tomioka (Dept. Biochem., Kurume Natl. Col. Tech.)
- 15:06** 4Hp09 Cellulase and glucose dehydrogenase co-immobilized bioanode for biofuel cell
○Shota Shimada, Kazuhiro Yamamoto, Takuya Matsumoto, Tsutomu Tanaka, Akihiko Kondo
 (Dept. Chem. Sci. Eng., Kobe Univ.)
- 15:18** 4Hp10 Enhancement of ammonia-oxidizing bacterial biofilm by a chemically-modified non-woven sheet
○Higuchi Ryo, Hosomi Masaaki, Terada Akihiko (Dept. Chem. Eng., Tokyo Univ. Agric. Technol.)
- 15:30** 4Hp11 Poly-gamma-glutamate-based hydrogels with high metal-binding activity
○Kento Yamamoto¹, Syota Oike¹, Haruna Oya², Sachiyo Yamasaki¹, Makoto Ashiuchi^{1,2}
 (¹Dept. Agr., Kochi Univ., ²Agr. Sci., Kochi Univ.)
- 15:42** 4Hp12 Effect of conditions of pyrosequencing on bacterial community structure analysis in hyper-thermal compost
○Yukihiro Tashiro¹, Hanae Tabata¹, Natsuki Shimizu¹, Kousuke Tashiro¹, Satoru Kuhara¹,
 Takahiro Yoshii², Tairo Oshima², Kenji Sakai¹ (¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ.,
²Kyowakako Corp.)
- 15:54** 4Hp13 L-lactic acid fermentation by the plant growth promoting bacteria and functionalization of compost
○Arisa Hayami¹, Taleh Anfal², Kitpreechavanish Vichien², Yukihiro Tashiro¹, Kenji Sakai¹
 (¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ., ²Kasetsart Univ.)
- 16:06** 4Hp14 Effect of xylose isomerase addition on the production of lactic acid from xylose by *Rhizopus oryzae*
○Katsuichi Saito¹, Yasuhiro Hasa², Naoto Hashimoto³
 (¹NARO/NFRI, ²NARO/HARC, ³NARO/KARC)
- 16:18** 4Hp15 Efficient D-lactic acid fermentation from cellulosic biomass using pentose-assimilating lactic acid bacteria
○Shino Mizuno¹, Maki Kihara¹, Sayaka Takenaka¹, Shinji Hama¹, Akihiko Kondo², Hideo Noda¹
 (¹Bio-energy, ²Dept. Chem. Sci. Eng., Kobe Univ.)

- 16:30** 4Hp16 Enhanced production of L-lactic acid from acid hydrolyzed corn cob residues by simultaneous saccharification and fermentation
.....○Hiroya TAKAMURA, Kiyoshi TADA, Tohru KANNO, Jun-ichi HORIUTHI
(Kitami Inst. Technol.)
- 16:42** 4Hp17 Microbial production of astaxanthin from corncob hydrolysate containing glucose and xylose
.....○Kazuki MATSUI, Kiyoshi TADA, Tohru KANNO, Jun-ichi HORIUTHI (Kitami Inst. Technol.)
- 16:54** 4Hp18 Fermentative Utilization of Glycerol by Microorganisms (2)
.....○Daiki Inoue¹, Shota Ide¹, Akio Mimura², Katsuhiko Nakagawa³, kazutoshi Ushio³, Nobuki Hayase³
(¹Adv. Cour. NNCT, ²Dep. Appl. Biotech., Univ. Yamanashi, ³Dep. Appl. Chem. Biotech. NNCT)
- 17:06** 4Hp19 Role of exopolymers produced by sheath-less mutant of *Leptothrix* sp. strain OUMS1
.....○Hiromichi Ishihara, Tomoko Suzuki, Mitsuki Furutani, Hideki Hashimoto,
Hitoshi Kunoh, Jun Takada (Grad. Sch. Natural Sci. and Tech., Okayama Univ.)
- 17:18** 4Hp20 Structural and physicochemical analyses of extracellular iron oxides produced by *Gallionella ferruginea*
.....○Tomoko Suzuki, Hiromichi Ishihara, Hideki Hashimoto, Atsushi Itadani, Yuta Akae,
Nobuyuki Matsumoto, Hitoshi Kunoh, Jun Takada (Grad. Sch. Natural Sci. Tech., Okayama Univ.)
- 17:30** 4Hp21 Enrichment and characterization of vanadium-reducing microorganisms
.....○Satoshi Soda, Kanako Terasawa, Masashi Kuroda, Ike Michihiko
(Div. Sustain. Ener. Environ. Eng., Osaka Univ.)
- 17:42** 4Hp22 Reduction of palladium by marine microorganism
.....○Shuntaro Aoki, Hiroshi Sasanuma, Hiroshi Saiki, Yoshinori Suzuki
(Grad. Sch. Bionics, Tokyo Univ. Technol.)
- 17:54** 4Hp23 Fundamental characterization of CdSe biosynthesis by *Pseudomonas aeruginosa* RB-R
.....○Naoyuki AKIYAMA¹, Masaki MIYAKE², Masashi KURODA¹, Satoshi SODA¹, Michihiko IKE¹
(¹Dept. Environ. Eng., Osaka Univ., ²Organo Co. Ltd.)
- 18:06** 4Hp24 Effect of heavy metal-doping on fluorescent calcite formed by thermophilic bacterium *Geobacillus thermoglucosidasius*
.....○Rie Murai, Naoto Yoshida (Dept. Biochem. Appl. Biosci., Miyazaki Univ.)
- 18:18** 4Hp25 Characterization of sediment ecosystems in deep-sea ocean by NMR-based geochemical profiling
.....○Yasuhiro Date^{1,2}, Yuuri Tsuboi¹, Taiga Asakura², Takao Yoshida³, Tadashi Maruyama³,
Jun Kikuchi^{1,2,4,5} (¹RIKEN PSC, ²Grad. Sch. NanoBioSci., Yokohama City Univ., ³JAMSTEC,
⁴RIKEN BMEP, ⁵Grad. Sch. BioAgriSci., Nagoya Univ.)
- 18:30** 4Hp26 Utilization of D-amino acids by deep-sea bacteria
.....○Takaaki Kubota, Tohru Kobayashi, Shigeru Deguchi (JAMSTEC)
- 18:42** 4Hp27 Development of novel photocatalyst immobilized photocatalytic reactor for the decomposition of methyl orange
.....○Chengjie Han, Dawei Li, Yingnan Yang, Zhongfang Lei, Zhenya Zhang
(Grad. Sch. Life Env. Sci., Univ. Tsukuba)

Room I Morning (9:00~12:00)

General Presentaion (Biomass, bioresource and energy engineering)

- 9:00** 4Ia01 Ultrasonic irradiation for the pretreatment of cellulose for efficient enzymatic hydrolysis
.....○Kazunori Nakashima, Takumi Sato, Naomi Kitakawa, Toshikuni Yonemoto
(Dept. Chem. Eng., Grad. Sch. Eng., Tohoku Univ.)
- 9:12** 4Ia02 Ethanol production from woody biomass by ionic liquid pretreatment
.....○Nobuhiro Ishida¹, Satoshi Katahira¹, Satoshi Saito², Noriho Kamiya³, Chiaki Ogino⁴
(¹Toyota Cent. R&D Labs. Inc., ²Toyota Motor Corp.,
³Center for Future Chem., Kyushu Univ., ⁴Dept. Chem. Sci. Eng., Kobe Univ.)

- 9:24** 4Ia03 Direct hydrolysis of cellulosic material by ultra-high temperature and pressure steam explosion
○Keisuke SUMIMOTO¹, Chizuru SASAKI², Chikako ASADA², Yoshitoshi NAKAMURA²
 (¹Dept. Biol. Sci. Tech., Fac. Eng., Univ. Tokushima, ²Dept. Biol. Sci. Tech., Fac. Eng., Univ. Tokushima)
- 9:36** 4Ia04 Ultrasonic pretreatment of lignocellulose using chorinium-based ionic liquids
○Kazuaki Ninomiya¹, Sayuri Omote², Hiroshi Soda², Akiko Ohta²,
 Kenji Takahashi², Nobuaki Shimizu¹ (¹Inst. Nat. Environ. Tech., Kanazawa Univ.,
²Div. Mat. Eng., Grad. Sch. Nat. Sci. Tech., Kanazawa Univ.)
- 9:48** 4Ia05 Synergistic effect of delignification and alkaline swelling treatments on enzymatic degradation of rice straw
○Prihardi Kahar, Taku Kazuo, Tanaka Shuzo (Sch. Sci. Eng., Meisei Univ.)
- 10:00** 4Ia06 Enhancement of delignification activity of *Ureibacillus thermosphaericus* by feeding glutamic acid
○Yoshio Katakura¹, Risa Harada¹, Hiroki Sekino², Masahiro Kinooka²
 (¹Dept. Biotech., Fac. Eng., Kansai Univ., ²Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 10:12** 4Ia07 Basic Research on Enzymatic Saccharification of Cellulosic Biomass (1) Comprehensive Analysis of Enzymatic
 Saccharification
○Yoshinori Kobayashi, kohei Ino, Noriko Ida, Yasushi Morikawa (JBA)
- 10:24** 4Ia08 Basic Research on Enzymatic Saccharification of Cellulosic Biomass (2) Analysis of the Binding Behavior of
 CBM for Insoluble Cellulose by Surface Plasmon Resonance
○Tetsushi Kawai¹, Yoshiki Horikawa², Junji Sugiyama², Yoshinori Kobayashi¹, Yasushi Morikawa¹
 (¹JBA, ²Kyoto Univ.)
- 10:36** 4Ia09 Role of endoglucanase I and II from *Trichoderma reesei* in biomass degradation
○Yusuke Mitsui¹, Yuji Saito¹, Madoka Nagano¹, Mitsuko Komatsu¹, Hikaru Nakazawa¹,
 Wataru Ogasawara¹, Yasushi Morikawa¹, Hirofumi Okada¹, Kazuhide Totani², Mitsuru Nikaido²
 (¹Bioeng. Nagaoka Univ. Technol, ²Chemeng. Ichinoseki Natl. College. tec)
- 10:48** 4Ia10 Physiological roles of three β -glucosidases in *Trichoderma reesei*
○Toru Obata, Takahisa Suzuki, Takuya Nagato, Yuji Saito, Mitsuko Komatsu, Nobuhiro Ochiai,
 Hikaru Nakazawa, Wataru Ogasawara, Hirofumi Okada (Bioeng. Nagaoka Univ. Tech.)
- 11:00** 4Ia11 Characterization of the novel β -glucosidases from ethanol-fermenting fungus
○Yasuo KATO¹, Shinjiro OGITA¹, Taiji NOMURA¹, Kazuhiro HOSHINO², Maki TAKANO²
 (¹Dept. Biotechnol., Toyama Pref. Univ., ²Dept. Life Sci. Bioeng., Univ. Toyama)
- 11:12** 4Ia12 Characteristics of cellulase from deep-sea cellulolytic bacteria
○Kohsuke Uchimura, Mikiko Tsudome, Tohru Kobayashi, Osamu Koide, Shigeru Deguchi
 (JAMSTEC)
- 11:24** 4Ia13 Characterisation of cellulose digestion in *Aplysia kurodai*
○Keiko Tominaga, Nami Nishiyama, Keizo Yuasa, Chizuru Sasaki,
 Yoshitoshi Nakamura, Akihiko Tsuji (Dept. of Biol. Sci. and Tech., Univ. of Tokushima Grad.)
- 11:36** 4Ia14 Characterisation of β -glucosidase from *Aplysia kurodai*
○Yuji Ueno, Nami Nishiyama, Keiko Tominaga, Keizo Yuasa, Akihiko Tsuji
 (Dept. of Biol. Sci. and Tech., Univ. of Tokushima Grad.)
- 11:48** 4Ia15 Purification and Characterization of α -amylase from *Aplysia kurodai*
○Nami Nishiyama, Keiko Tominaga, Keizo Yuasa, Akihiko Tsuji
 (Dept of Biol. Sci. and Tech., Univ. Tokushima Grad.)

Room I Afternoon (13:30~18:54)

General Presentaion (Biomass, bioresource and energy engineering)

- 13:30** 4Ip01 Production of bioethanol from raw paper sludge by SSF with ethanol-producing fungi
○Yusuke Seto¹, Maki Takano², Kazuhiro Hoshino²
 (1Grad. Sch. Sci. Eng., Univ. Toyama, 2Grad. Sch. Sci. Eng., Univ. Toyama)
- 13:42** 4Ip02 Direct ethanol production from *N*-acetylglucosamine and chitin substrates by *Mucor* species
○Kentaro Inokuma¹, Maki Takano², Kazuhiro Hoshino²
 (1Dept. Chem. Sci. Eng., Kobe Univ., 2Dept. Mat. Sys. Eng. Life, Toyama Univ.)
- 13:54** 4Ip03 Production of ethanol from *Eisenia bicyclis* by mixed culture
○Eun-Jung Kim, Joong Kyun Kim (Dept. Biotech., Pukyong National Univ.)
- 14:06** 4Ip04 Construction of NAD(H)-dependent ethanol produing bacterium, *Sphingomonas* sp. A1
○Ryuichi Takase, Wataru Hashimoto, Shigeyuki Kawai, Kousaku Murata
 (Grad. Sch. Agric., Kyoto Univ.)
- 14:18** 4Ip05 A growth inhibitor elaborated during the process of ethanol production from alginate by ethanologenic *Sphingomonas* sp. A1
○Mari Fujii, Shiori Yoshida, Mitsunori Yanagisawa, Shigeyuki Kawai, Kousaku Murata
 (Grad. Sch. Agric., Kyoto Univ.)
- 14:30** 4Ip06 Improvement of co-fermentation of xylose by recombinant *Zymobacter palmae*
○Haruka Takigami, Saki Kondou, you Okuda, Kenji Okamoto, Hisashi Harada, Hideshi Yanase
 (Dept. Biotech., Tottori Univ.)
- 14:42** 4Ip07 Laccase reduces inhibition of aromatic aldehydes from lignin during cellulosic bioethanol production
○Hiroki Ihara, Yoshiyuki Takahashi, Shun Sugioka, Kenji Okamoto, Hisashi Harada, Hideshi Yanase
 (Dept. Biotech., Tottori Univ.)
- 14:54** 4Ip08 Cloning and secretive expression of *Cellvibrio* cellulases in ethanologenic bacteria
○Motoki Kojima, Masaru Hatabe, Keisuke Tamai, Kenji Okamoto, Hisashi Harada, Hideshi Yanase
 (Dept. Biotech., Tottori Univ.)
- 15:06** 4Ip09 Development of efficient production technology for bioethanol (Part 1) — Breeding of a xylose-fermenting yeast harboring xylose isomerase gene from a protist in termite hindgut —
○Satoshi Katahira¹, Risa Nagura¹, Nobuhiro Ishida¹, Chie Imamura¹, Noriko Yasutani²,
 Nobuki Tada², Toru Onishi² (1Toyota Cent. R&D Labs. Inc., 2Toyota Moter Corp.)
- 15:18** 4Ip10 Development of efficient production technology for bioethanol (Part 2)-Simultaneous saccharification and co-fermentation process for the xylose-fermenting yeast harboring a xylose isomerase gene-
○Noriko Yasutani¹, Nobuki Tada¹, Satoshi Katahira², Risa Nagura², Nobuhiro Ishida²,
 Chie Imamura², Toru Onishi¹ (1TOYOTA MOTOR CORP., 2Toyota Central R&D Labs. Inc.)
- 15:30** 4Ip11 Enhancement of fermentation efficiency on softbiomass with yeast strains displaying hemicellulases
○Hirokazu Murayama¹, Takuya Nakagawa¹, Hiromoto Hisada¹, Hiroko Tsutsumi¹, Yoji Hata¹,
 Akihiko Kondo², Mitsuyoshi Ueda³ (1Res. Inst., Gekkeikan Sake Co. Ltd.,
 2Dept. Chem. Sci. Eng., Grad. Sch., Kobe Univ., 3Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 15:42** 4Ip12 Ethanol production from glucose and xylose at elevated temperature using isolated xylose-fermenting yeast
○Ayumi Tanimura¹, Itsuki Watanabe², Toshihide Nakamura², Jun Ogawa³, Jun Shima¹
 (1Res. Div. Microbial Sci., Kyoto Univ., 2Food Res. Inst., NARO,
 3Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 15:54** 4Ip13 Multiple gene overexpression towards engineering of a yeast strain resistant to hot compressed-water-treated cellulose and its novel key inhibitor, glycolaldehyde
○Lahiru Jayakody^{1,2}, Kenta Horie², Nobuyuki Hayashi², Hiroshi Kitagaki^{1,2}
 (1Join Grad. Sch. of Agri., Kagoshima Univ., 2Fac. of Agri., Saga Univ.)

- 16:06** 4Ip14 Bleeding of heat-resistant yeasts using Disparity Mutagenesis Technology
○Yasuhiro Oki¹, Shuntaro Yano², Yutaka Mitani¹, Tatsuro Shigyo¹
 (¹Frontier Labs, SAPPORO BREWERIES LTD, ²Neo-Morgan Laboratory Incorporated)
- 16:18** 4Ip15 Metabolic engineering of a thermotolerant yeast *Kluyveromyces marxianus* for xylose fermentation
○Tetsuya Goshima, Akinori Matsushika, Hiroyuki Inoue, Shinichi Yano, Tamotsu Hoshino
 (BRRC, AIST)
- 16:30** 4Ip16 Development of multiple-stress-resistant ethanologenic *Saccharomyces cerevisiae* strain TJ14 for cost-effective bio-ethanol production
○Hosein Shahsavarani¹, Takatoshi Sakamoto¹, Daisuke Hasegawa¹, Daiki Yokota¹,
 Minetaka Sugiyama¹, Yoshinobu Kaneko¹, Chuenchit Boonchird², Satoshi Harashima¹
 (¹Dept. Biotechnol, Osaka Univ., ²Dept. Biotechnol, Mahidol Univ., Thailand)
- 16:42** 4Ip17 Acid-salt tolerant yeasts capable of fermenting di-saccharides to ethanol under severe conditions ensuring contamination-free
○Shotaro Kodama, Hiroshi Nakanishi, Yasuo Ono, Thalagala Thalagala,
 Naoto Isono, Makoto Hisamatsu (Fac. Biores., Mie Univ.)
- 16:54** 4Ip18 Ethanol fermentable and acid-salt tolerant yeasts suitable for sugar components derived from various biomass
○Makoto Hisamatsu, Shotaro Kodama, Youji Ueno, Hiroshi Nakanishi,
 Thalagala Thalagala, Naoto Isono (Fac. Biores., Mie Univ.)
- 17:06** 4Ip19 High temperature ethanol fermentation from lignocellulose and cell recycling using thermotolerant yeast
○Kohsuke Nakano¹, Shinji Hama¹, Kenichiro Ichiki¹, Satoshi Harashima²,
 Akihiko Kondo³, Hideo Noda¹ (¹Bio-energy Co., ²Dept. Biotech., Grad. Sch. Eng., Osaka Univ.,
³Grad. Sch. Sci. Tech., Kobe Univ.)
- 17:18** 4Ip20 Effect of *HST1* gene disruption on ethanol yield of *Saccharomyces cerevisiae* having xylose fermenting ability
○Tomohide Maeda, Yuri Yasue, Kazue Nishiyama, Ayako Nakai, Haruyo Hatanaka
 (SUNTORY BUSINESS EXPERT LIMITED, Institute for Microbial Science)
- 17:30** 4Ip21 Development of the novel system in sugar-ethanol production using the selective fermentation of reducing sugars by the yeast defective in sucrose utilization
○Satoshi Ohara¹, Yasuhiro Fukushima², Akira Sugimoto³, Yoshifumi Terajima³, Tetsuya Ishida¹,
 Akiyoshi Sakoda⁴ (¹Asahi Group HD, ²National Cheng Kung Univ., ³JIRCAS, ⁴IIS. Univ. of Tokyo)
- 17:42** 4Ip22 Saccharification and fermentation of biomass by the ionic liquid pretreatment with the engineered xylose fermentable yeast
○Kazuma Ogura¹, Nanami Nakashima¹, Ryousuke Yamada², Tomohisa Hasunuma², Noriho Kamiya³,
 Nobuhiro Ishida⁴, Satosi Saito⁵, Chiaki Ogino¹, Akihiko Kondo¹ (¹Dept. Chem. Sci. Eng., Kobe Univ.,
²Grad. Sch. Sci. Tech., Kobe Univ., ³Dept. Appl. Chem., Kyushu Univ.,
⁴Toyota Cent. R&D Labs. Inc., ⁵Bio Res. Lab., Toyota Motor Corp.)
- 17:54** 4Ip23 Genedata Selector™ for Biofuels R&D
Hans-Peter Fischer¹, Thomas Hartsch¹, Ludwig Macko¹, Sebastien Ribrioux¹, Julia Retey¹,
 Niko Bausch¹, Hideki Shimohiro², Kaori Moriwaki², ○Masako Shinjoh² (¹Genedata AG, ²Genedata KK)
- 18:06** 4Ip24 Screening of molecular targeting peptides for lignin in phage displayed peptide library
○Asako Yamaguchi, Rie Takada, Mai Murakami, Hiroshi Nishimura, Takashi Watanabe
 (RISH, Kyoto Univ.)
- 18:18** 4Ip25 Characterization of laccase isozymes from a white-rot fungus *Trametes versicolor* RC3 and expression in *Pichia pastoris*
○Takahito Watanabe¹, Megumi Kagiyama¹, Keisuke Nishi¹, Hiroshi Nishimura¹,
 Woottichai Nachaiwieng², Chartchai Khanongnuch², Takashi Watanabe¹
 (¹RISH, Kyoto Univ., ²Chiang Mai Univ.)

- 18:30** 4Ip26 Studies on molecular breeding of hyper xylitol-producing white-rot fungi
.....○Sho Hirabayashi¹, Hirofumi Hirai¹, Hirokazu Kawagishi^{1,2}
(¹Dept. Appl. Biol. Chem., Fac. Agric., Shizuoka Univ., ²Grad. Sch. Sci. Tech., Shizuoka Univ.)
- 18:42** 4Ip27 Xylitol Production Using *xdhA* and *ladA* Homologous Gene Disrupted Mutants of *Aspergillus oryzae* KBN616
.....○Asif Mahmud¹, Noriyuki Kitamoto², Tohru Suzuki¹, Kohei Nakamura³, Kazuhiro Takamizawa^{1,3}
(¹United Grad. Sch. Agr. Sci. Gifu Univ., ²Food Res. Center, Aichi Center Ind. Sci. Tech.,
³Fac. Appl. Biol. Sci. Gifu Univ.)