

Annual Meeting 2008

The Society for Biotechnology, Japan

August 27–29, 2008

Tohoku Gakuin University Tsuchitai Campus

1-3-1 Tsuchitai, Aoba-ku, Sendai, Miyagi 980-8511, Japan

The 1st Day (Aug. 27)

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

Society Award Presentation, Industrial Achievement Award Presentation, Technical Award Presentation, Young Asian Biotechnologist Prize Presentation

Opening time	No.	Title	co-authors (affiliation)	○ indicates the presenter.
Society Award Presentation				
9:55	1Za1	Research on Structure, Function, and Utilization of Microbial Community	..... ○Yasuo IGARASHI (Grad. Sch. Agri Life Sci., The University of Tokyo)	
Industrial Achievement Award Presentation				
10:30	1Za2	Screening, Discovery and Application of Novel Bacteriocins	..... ○Kenji SONOMOTO (Fac. Agri., Kyusyu University)	
Technical Award Presentation				
11:05	1Za3	Research and Development of Seamless Capsules Entrapping Living Cells	..... ○Masanori ASADA, Ryosei KAMAGUCHI, Tohru OHNO, Toshio KOZAKI, Takayuki SUGIMOTO (Morishita Jintan Co., Ltd.)	
Young Asian Biotechnologist Prize Presentation				
11:40	1Za4	Development of Highly Productive and Economical Cell-Free Protein Synthesis Systems	..... ○Dong-Myung KIM (Chungnam National University, Korea)	

Room S1 Afternoon (13:30~16:50)

Symposium (Key enzymes contributing to The Latest Frontiers of Industry)

13:30		Opening remarks		
13:35	1S1p01	Biofuel Cells: Recent Trends and Development	..... ○Kenji KANO (Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)	
14:05	1S1p02	Application of hydrogenase on bioprocess	..... ○Masaharu ISHII ¹ , Ki-seok YOON ² , Yasuo IGARASHI ¹ , Hirofumi NISHIHARA ² (¹ Grad. Sch. Agri. Life Sci, Univ. Tokyo, ² Dept. Biores. Sci., Ibaraki Univ.)	
14:35	1S1p03	Bioplastic Production using Artificially Evolved Enzymes: Bacteria to Plants	..... ○Ken'ichiro MATSUMOTO ^{1,2} , Hiroaki SHIMADA ² , Seiichi TAGUCHI ¹ (¹ Grad. Sch. Eng., Hokkaido Univ., ² Dept. BiolSci. Tech., Tokyo Univ. Sci.)	
15:05		Break time		
15:15	1S1p04	A highly unusual non-ribosomal peptide synthase producing epsilon-Poly-L-lysine	..... Kazuya YAMANAKA ¹ , Chitose MARUYAMA ² , Hiroshi TAKAGI ² , ○Yoshimitsu HAMANO ² (¹ Chisso, ² Dept. Biosci., Fukui Pref. Univ.)	
15:45	1S1p05	Hydroxylation of vitamin D ₃ by actinomycete cytochrome P450 monooxygenase: its application to manufacturing of anti-osteoporosis drug	..... Yoshikazu FUJII ^{1,3} , Koji TAKEDA ¹ , Hiroki KABUMOTO ¹ , Yoshiaki YASUTAKE ² , Tomohiro TAMURA ^{2,3} , ○Akira ARISAWA ¹ (¹ Bioresource Labs, Mercian Corp., ² Genome-based Biofactory, AIST, ³ Lab. Mol. Environ. Microbiol., Grad. Sch. Agric., Hokkaido Univ.)	
16:15	1S1p06	Functional Analysis of Enzymes by Rapid Substrate Screening Using FT-ICR Mass Spectrometry	..... ○Kuniki KINO (Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)	
16:45		Closing remarks		

Room S2 Afternoon (13:30~17:00)

Symposium (Inside or outside ?

— Relationship between microbial flora and the intestinal environment)

- 13:30 Opening remarks
 13:35 1S2p01 Function of intestinal microbiota in gnotobiotic animals
 ○Kikuji ITO (Grad. Sch. Agri. Life Sci, Univ. Tokyo)
 14:25 1S2p02 Intestinal bacteria study viewed from environmental microbiology
 ○Satoshi TSUNEDA, Toshifumi OSAKA (Dept. Life Sci. Med. Biosci., Waseda Univ.)
 15:00 1S2p03 The Studies on cell-cell communication systems in the intestinal microbial flora of Ayu fish (*Plecoglossus altivelis*)
 ○Tsukasa IKEDA, Tomohiro MOROHOSHI (Grad. Sch. Eng., Utsunomiya Univ.)
 15:35 Break time
 15:45 1S2p04 Recent research on Intestinal microbial flora using *in vitro* bioreactor system
 ○Yutaka NAKASHIMADA¹, Kentaro WATANABE², Naomichi NISHIO², Atuko MICHINAKA³,
 Toshio FUJII³ (¹Dept. Appl. Chem., Tokyo Univ. Agric. Technol.,
²Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.,
³Central Labs. for Frontier Technology, Kirin Holdings Co. Ltd.)
 16:20 1S2p05 Elucidation of host-bacterial cross-talk via multi comprehensive analysis
 ○Shinji FUKUDA, Hiroshi OHNO (RCAI, RIKEN)

Room S3 Afternoon (13:30~16:40)

Symposium (Recent developments in the application of fermentative microbial functions)

- 13:30 Opening remarks
 13:35 1S3p01 Efficient production of lactic acid with metabolically engineered wine yeast
 ○Nobuhiro ISHIDA¹, Haruo TAKAHASHI¹, Toru ONISHI²
 (¹Toyota Cent. R&D Labs. Inc., ²Toyota Motor Co.)
 14:05 1S3p02 Study on sake yeast about nutritional, brewing and feeding properties
 ○Haruyuki IEFUJI, Muneyoshi KANAI (Natl. Res. Inst. Brewing)
 14:35 1S3p03 Characterization of plant cell wall-degrading enzymes from shochu-koji molds and its application
 ○Takuya KOSEKI (Fac. Agric., Yamagata Univ.)
 15:05 1S3p04 Analysis of proteases from *Aspergillus oryzae*
 ○Michio TAKEUCHI¹, Youhei YAMAGATA², Ken-ichi KUSUMOTO³,
 Yoshinao KOIDE⁴, Hiroki ISHIDA⁵
 (¹Dept. Appl. Biol. Sci., Tokyo Univ. Agric. Technol., ²Grad. Sch. Agric. Sci., Tohoku Univ.,
³Natl. Food Res. Inst., ⁴Amano Enzyme Inc., ⁵Res. Inst., Gekkeikan Sake Co.)
 15:35 1S3p05 Useful bacterium *Bacillus subtilis natto*: Poly-gamma-glutamate synthesis and recombinant spores as oral vaccine
 ○Keitarou KIMURA¹, Ryutaro TANIMURA², Takanobu NISHIKAWA², Keiji AKADA²,
 Noriyuki UKAI² (¹Natl. Food Res. Inst., ²Takanofoods)
 16:05 1S3p06 New approaches of fermentation by transporter technology
 ○Kei NANATANI¹, Keietsu ABE^{1,2} (¹Grad. Sch. Agric. Sci., Tohoku Univ., ²NICHe, Tohoku Univ.)
 16:35 Closing remarks

Room S4 Afternoon (13:30~17:10)

Symposium (Revolution in the higher education in our country and the way of bioengineering education)

- 13:30 Opening remarks
 13:35 1S4p01 The expected scientist in the next generation
 ○Akiyoshi WADA (Ochanomizu University)
 14:00 1S4p02 On the partnership between industry and academia for education
 ○Suteaki Shioya (Biotechnology and Life Science, Sojo Univ.)
 14:25 1S4p03 A proposal for the improvement of the University education from the industry side
 ○Takaharu TANAKA (Suntry Co.)
 14:50 1S4p04 Bioengineering education in Tohoku University
 ○Toru NAKAYAMA (Dept. Bioeng. Tohoku Univ.)
 15:15 1S4p05 Current Status and Issues of JABEE Postgraduate Program Accreditation
 ○Kikuo KISHIMOTO (Tokyo Inst. Technol.)

- 15:40 1S4p06 Professional Science Master's: "The MBA for scientists and mathematicians", a case of industry-academia cooperative education in U.S.
 ○Ichiro SUZUKI (Dept. Chem. Eng. Eng., Grad. Sch. Eng., Yokohama Nat. Univ.)
- 16:05 1S4p07 Education of bioengineering in college of technology
 ○Tadashi KOMETANI (Toyama Nat. Coll. Tech.)
- 16:30 1S4p08 Redesigning of curriculum textbook on biology under new course of study in science education
 ○Hideharu ANAZAWA (Dept. Sci. & Tech., Kyowa Hakko Ltd.)
- 16:55 Overall discussion

Room S5 Afternoon (13:30~17:00)

Symposium (Bacteria in soil environment)

- 13:30 Opening remarks
- 13:40 1S5p01 Dynamics of bacteria in soil microsites
 ○Masaya NISHIYAMA (Fac. Environ., Nagasaki Univ.)
- 14:10 1S5p02 Classical and modern approaches to the functioning microorganisms in soil
 ○Keishi SENOO, Satoshi ISHII, Naoaki ASHIDA, Shigeto OTSUKA (Grad. Sch. Agri. Life Sci, Univ. Tokyo)
- 14:40 1S5p03 Methods for the detection of bacteria in the soil environment
 ○Kazuhide Kimbara, Sou Iijima, Akio Tani (Res. Inst. Biores., Okayama Univ.)
- 15:10 1S5p04 Extraction of RNA from soil and analysis of bacterial gene expression
 ○Naoto Ogawa¹, Masao Fukuda² (¹Fac. Agric., Shizuoka Univ., ²Nagaoka Univ. Tech.)
- 15:40 1S5p05 Behaviors of mobile genetic elements in artificial model soil samples
 ○Masaki SHINTANI, Hideaki NOJIRI (Biotech. Res. Center, Univ. Tokyo)
- 16:10 1S5p06 Molecular genetics for revealing lives of soil microorganisms
 ○Yoshiyuki Ohtsubo, Eri Nishiyama, Masatoshi Miyakoshi, Yuji Nagata, Masataka Tsuda (Grad. Sch. Life Sci., Tohoku Univ.)
- 16:40 Overall discussion
- 16:55 Closing remarks

Room B Afternoon (13:30~16:54)

General Presentation (Bioremediation)

- 13:30 1Bp01 Development of microstructural biodegradable polymer material for bioremediation.
 ○Yukihiro MAI, Takehumi NARITA, Ikuhiro TANIDA, Satoshi OSAWA (Genome Biotechnology Laboratory, KIT)
- 13:42 1Bp02 Induction of two key enzymes of CO₂-dependent extremely oligotrophic *Rhodococcus erythropolis*
 ○Nobuyuki Yoshida, Naoko Ohhata, Hiroshi Takagi (Grad. Sch. Biol. Sci., NAIST)
- 13:54 1Bp03 Degradative pathway of phenylsuccinic acid degrading actinomycetes.
 ○Toru MATSUI¹, Naoya SHINZATO¹, Tomoya NAMIHIRA¹, Katsuya KATO³, Hisashi SEMBA² (¹COMB, Univ. Ryukyus, ²Nippon Shokubai Co., ³AIST)
- 14:06 1Bp04 Simple method of simultaneous nitrification and denitrification using dual bag system
 ○HIROAKI UEMOTO, MASAHIKO MORITA, ATSUSHI WATANABE (CRIEPI)
- 14:18 1Bp05 Removal of Selenium Oxyanions in Wastewater Using Selenate-reducing and Sulfate-reducing Bacteria
 ○Masahiko MORITA¹, Hiromi TERASAWA², Hiroaki UEMOTO¹ (¹CRIEPI, ²Kogakuin Univ.)
- 14:30 1Bp06 Selenium Oxyanions Removal by Microbial Consortium
 ○MITSUFUMI MATSUMOTO, YASUHIKO NISHIMURA (Electric Power Development Co.)
- 14:42 1Bp07 Removal of selenium from metal refinery wastewater by laboratory-scale bioreactor
 ○Masami Kashiwa^{1,2}, Satoshi Soda¹, Hisamitsu Takahashi³, Kazunari Sei¹, Nobuo Iwasaki³, Michihiko Ike¹ (¹Dept. Environ. Eng., Osaka Univ., ²CACJ, ³Shinko Chemical)
- 14:54 1Bp08 Reduction Property of Selenate and Selenite by Aerobic Selenate- Reducing Bacterium, *Pseudomonas stutzeri* NT-I
 ○Akiko SATO¹, Emi NOTAGUCHI¹, Kazunari SEI¹, Satoshi SODA¹, Mitsuo YAMASHITA², Michihiko IKE¹ (¹Div. of Sustain. Energy & Environ. Eng., Osaka Univ., ²Dept. Appl. Chem., Shibaura Inst. Technol.)
- 15:06 1Bp09 Analysis of genes related to selenate reduction in *Bacillus selenatarsenatis* SF-1
 ○Kouta NAGANO¹, Kanako IMAO², Kazunari SEI¹, Satoshi SOUDA¹, Mitsuo YAMASHITA³, Michihiko IKE¹ (¹Dept. Enery & Environ. Eng., Osaka Univ., ²Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ³Dept. Appl. Chem., Shibaura Inst. Technol.)

- 15:18 1Bp10 Development of an arsenic-responsive biosensor based on specific interaction between a fluorescence-labeled *E. coli* ArsR protein and a DNA fragment comprising *ars* promoter
..... ○Koichi INOUE¹, Kazuyuki YOSHIDA¹, Shunsaku UEDA¹, Hitoshi MIYASAKA², Isamu MAEDA¹
(¹Grad. Sch. Agric., Utsunomiya Univ., ²KEP Co., Inc.)
- 15:30 1Bp11 Uptake of arsenic by *Pteris vittata* and its chemical forms in the plant body
..... ○Masayoshi HATAYAMA¹, Takahiko SATO², Kozo SHINODA¹, Kastuya INOUE²,
Nobuyuki KITAJIMA³, Kouichi SUDO¹, Toshihito KONDO³, Chihiro INOUE¹
(¹Grad. Sch. Env. Sci., Tohoku Univ., ²Tagenken, Tohoku Univ., ³Fujita Co)
- 15:42 1Bp12 Isolation of a gene related to the cadmium accumulation ability from bacterial metagenome library associated with sponge
..... ○Yoshiko OKAMURA^{1,2}, Koji IWAMOTO³, Yoshihiro SHIRAIWA³,
Haruko TAKEYAMA^{1,4}, Tadashi MATSUNAGA¹
(¹Dept. Biotechnol., Tokyo Univ. Agric. Technol., ²ASMEW, Waseda Univ.,
³Dept. Functional Biosci., Univ. Tsukuba, ⁴Dept. Life Sci. & Med. Bio-Sci., Waseda Univ.)
- 15:54 1Bp13 Phylogenetic analysis of bacterial isolates producing CdTe particles
..... ○Toshifumi SAKAGUCHI, Katsuya DOI, Yukiko KADOWAKI
(Dept. Environ. Sci., Pref. Univ. of Hiroshima)
- 16:06 1Bp14 Cr(VI) reduction by the mixed culture system
..... ○Tsubasa FUKKUDA¹, Akane OGWA², Takahiro SATO², Yasuhiro ISHINO¹,
Kadzuyo TSUTSUMI², Hiroshi MORITA²
(¹Grad. Sch. Env. Eng., Univ. Kitakyushu, ²Env. Eng., Univ. Kitakyushu)
- 16:18 1Bp15 Characterization of the novel bacteria which reduce hexavalent chromium
..... ○Hironori SUGITO, Kou MAMIYA, Takashi ISHINO, Daisuke MATUMOTO, Tomoyasu SUGIYAMA
(Grad. Sch. Bionics, Tokyo Univ.Tech.)
- 16:30 1Bp16 Characterization of chromate reducing bacteria with genomic subtractive hybridization
..... ○Shin-ichi Hirano, Norio Matsumoto, Naoya Ohmura (CRIEPI)
- 16:42 1Bp17 Screening of metal-accumulating halophilic bacteria to remove metals from concentrated seawater produced by desalination process
..... ○Hideki NAKAYAMA¹, Yasuyuki IKEGAMI²
(¹Grad. Sch. Biol. Sci., NAIST, ²Inst. Ocean Energy, Saga Univ.)

Room C Afternoon (13:30~17:18)

General Presentation (Metabolic engineering Metabolomics / Genetic engineering, Nucleic acid engineering)

- 13:30 1Cp01 Metabolic system analysis in acetone-butanol-ethanol fermentation based on time-sliced metabolic flux analysis
..... ○Yuki KURIYA¹, Hideaki SHINTO¹, Kenji SONOMOTO^{2,3},
Fumihide SHIRAIISHI³, Masahiro OKAMOTO^{3,4}
(¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ., ²Fac. Agric., Kyushu Univ.,
³Bio-Arch., Kyushu Univ., ⁴Grad. Sch. Systems Life Sci., Kyushu Univ.)
- 13:42 1Cp02 Bioconversion of L-arabinose to glucans by *Rhizobium* sp. S24-1
..... ○Zilian ZHANG¹, Tomoko SEYAMA¹, Jeung-yil PARK¹, Ken TOKUYASU¹
(¹National Food Research Institute)
- 13:54 1Cp03 Production of poly(3-hydroxybutyrate) through a new biosynthetic pathway utilizing malonyl-CoA as an intermediate
..... ○Chean Ring Leong¹, Ken'ichiro Matsumoto¹, Toshihiko Ooi¹, Tomohisa Kuzuyama², Seiichi Taguchi¹
(¹Dept. Eng., Div. Biotech. Macromol. Chem., Hokkaido Univ., ²Biotech. Research Center, Tokyo Univ.)
- 14:06 1Cp04 Metabolic analysis of *Corynebacterium glutamicum* using genome-scale metabolic model
..... ○Yohei SHINFUKU¹, Chikara FURUSAWA^{1,2}, Takashi HIRASAWA¹, Hiroshi SHIMIZU¹
(¹Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ., ²ERATO,JST)
- 14:18 1Cp05 Proteome analysis of coryneform bacteria during penicillin-induced glutamate overproduction
..... ○Takashi HIRASAWA¹, Hirohisa FUKUDA¹, Keisuke NAGAHISA¹,
Masaaki WACHI², Hiroshi SHIMIZU¹
(¹Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ., ²Dep. Bioen., Tokyo Inst. Technol.)
- 14:30 1Cp06 Effect of *odhA* antisense RNA expression on glutamate production in *Corynebacterium glutamicum*
..... ○Jongpill KIM¹, Takashi HIRASAWA², Yoshiyasu SATO², Keisuke NAGAHISA²,
Chikara FURUSAWA², Hiroshi SHIMIZU²
(¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ²Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ.)
- 14:42 1Cp07 Inhibition of hydrogen uptake in *Escherichia coli* by expressing the hydrogenase from the cyanobacterium *Syn-
echocystis* sp. PCC 6803
..... ○Toshinari Maeda¹, Hiroaki I. Ogawa¹, Thomas K. Wood²
(¹Grad. Sch. Life Sci. System Eng., Kyushu Inst. Tech., ²Dept. Chem. Engi., Texas A&M Univ.)
- 14:54 1Cp08 Dynamic modeling and simulation of glycolysis, pentose phosphate and TCA cycle in *Escherichia coli*
..... ○Tuty Asmawaty KADIR¹, Kazuyuki SHIMIZU^{1,2}
(¹Grad. Sch. of Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., ²Keio Univ.)

- 15:06 1Cp09 Effect of the respiratory gene knock-out on the metabolism in *Escherichia coli* under glucose and nitrogen-limited continuous culture
..... ○Rahul KUMAR¹, Dongqian SHEN¹, Kazuyuki SHIMIZU^{1,2}
(¹Grad. Sch. of Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., ²Keio Univ.)
- 15:18 1Cp10 Effect of *rpe* mutant on *Escherichia coli* metabolism
..... ○Yuta HASEBE¹, Jiao ZHAO², Kazuyuki SHIMIZU^{1,2}
(¹Grad. Sch. of Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., ²Keio Univ.)
- 15:30 1Cp11 Construction of multiple genes knockout include *cra* in *Escherichia coli* and improvement of Glucose consumption rate
..... ○Makoto OKAMURA¹, Kazuyuki SHIMIZU^{1,2}
(¹Dept. Comp. Sci. System Eng., Kyushu Inst. Tech., ²Inst. Adv. Biosciences, Keio Univ.)
- 15:42 1Cp12 Succinate production from glycerol in *E. coli*
..... ○Shigetsugu SAKAI, Hiroyuki ARAI, Masaharu ISHII, Yasuo IGARASHI (Dept. Biotech., Univ. Tokyo)
- 15:54 1Cp13 The production of 2-deoxy-scyllo-inosose(DOI) from D-glucose by *Escherichia coli* and Yeast.
..... ○Naoki WAKISAKA, Masamichi TAKAGI, Masayuki NASHIMOTO, Hiroaki TAKAKU
(Dept. Appl. Life Sciences, Niigata Univ. of Phar. and Appl. Life Sciences)
- 16:06 1Cp14 A novel breeding method for yeast producing a high level of gamma-aminobutyric acid by femtosecond laser.
..... ○Hiroko TSUTSUMI¹, Makiko MIZUMOTO¹, Masaharu INDO¹, Masaaki SAKAKURA²,
Takuya HASHIMOTO³, Shinichiro KAJIYAMA⁴, Eiichiro FUKUSAKI³,
Mitsuyoshi UEDA⁵, Kazuyuki HIRAO⁶, Yoji HATA¹
(¹Res. Inst., Gekkeikan Sake Co., ²ICC, Kyoto Univ., ³Dept. Biotech., Grad. Sch. Eng., Osaka Univ.,
⁴Sch. Biol. Sci. Technol., Kinki Univ., ⁵Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.,
⁶Dep. Material Chem. Grad. Sch. Engi., Kyoto Univ.)
- 16:18 1Cp15 Simultaneous fermentation of C5·C6 sugars by genetically engineered *Zymobacter palmae*
..... ○Satoshi OKAZAKI, Kenji OKAMOTO, Hideshi YANASE (Dept. Biotech., Tottori Univ.)
- 16:30 1Cp16 Genetic engineering of *Zymobacter palmae* capable of producing ethanol from cellooligosaccharides.
..... ○Motoki KOJIMA, Kenji OKAMOTO, Hideshi YANASE (Dept. Biotech., Tottori Univ.)
- 16:42 1Cp17 Molecular breeding of yeast *Candida boidinii* for efficient production of L-lactic acid
..... ○Fumi OSAWA¹, Toshihiro KOMEDA¹, Toshio FUJII¹, Takehisa NISHIDA¹, Shigehito IKUSHIMA¹,
Nobuki TADA², Toru ONISHI², Satoshi YOSHIDA¹, Osamu KOBAYASHI¹
(¹Kirin Holdings Co., Ltd. Central Lab. for Frontier Technology,
²Toyota Motor Corp. Biotechnology & Afforestation Business Div.)
- 16:54 1Cp18 Construction of the recombinant yeast with high BGL activity and another one with high Xylose fermentation ability from OC-2 triple marker strain as a platform.
..... ○Satoshi Saitoh¹, Kayo Miyata¹, Emiko Suzuki¹, Akihiko Kondoh²
(¹Bio. & Affor. Business Div. Toyota., ²Dept. Chem. Sci. Eng., Kobe Univ.)
- 17:06 1Cp19 Functional analysis of two dihydroxyacetone synthase genes from *Pichia methanolica*
..... ○Tomoyuki NAKAGAWA¹, Shuki FUJIMURA², Takashi ITO², Tatsuro MIYAJI²,
Junichi NAKAGAWA², Noboru TOMIZUKA², Hiroya YURIMOTO³,
Yasuyoshi SAKAI³, Takashi HAYAKAWA¹
(¹Dept. Appl. Biol. Sci., Gifu Univ., ²Dept. Food Sci. Technol., Tokyo Univ. Agric.,
³Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)

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

General Presentation (Bioinformatics)

- 13:30 1Dp01 Development of a new technology for genome network analysis by multi time-laps imaging of living cells
..... ○Yasuhito TOKUMOTO¹, Daisuke TOMINAGA², Sachiyu ABURATANI², Fuyan SUN²,
Masahiko NAKATSUI², Satoshi YAMAGUCHI¹, Katsuhisa HORIMOTO²,
Teruyuki NAGAMUNE¹, Jun MIYAKE¹ (¹CNBI, Tokyo Univ., ²CBRC, AIST)
- 13:42 1Dp02 Extraction of gene set by combined genetic algorithm and permutation test and development of the evaluation method.
..... ○Takahiro OJIO¹, Hiro TAKAHASHI², Takeshi KOBAYASHI²
(¹Bios. Biot., Chubu Univ., ²Dept. Biol. Chem., Bios. Biot., Chubu Univ.)
- 13:54 1Dp03 Genome-Wide Nucleotide-Level Mutation Analysis in *Escherichia coli* using High Density Microarray
..... ○Naoaki ONO¹, Shingo SUZUKI¹, Chikara FURUSAWA^{1,2}, Hiroshi SHIMIZU¹, Tetsuya YOMO^{1,2,3}
(¹Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ., ²ERATO, JST,
³Grad. Sch. Frontier. Biosci, Osaka Univ.)
- 14:06 1Dp04 Analysis of non-specific hybridization on microarray by using a physical model
..... ○Chikara FURUSAWA^{1,2}, NAOAKI ONO¹, Tomoharu AGATA¹, Shingo SUZUKI¹,
Tetsuya YOMO^{1,2,3}, Hiroshi SHIMIZU¹
(¹Grad. Sch. Info. Sci., Osaka Univ., ²ERAT, JST, ³Grad. Sch. Front. Biosci.)

- 14:18** 1Dp05 Analysis of fermentation behavior and gene expression for understanding of low temperature fermentation properties in lager brewing yeast
 ○Takaaki HORINOUCI¹, Katsunori YOSHIKAWA¹, Chikara FURUSAWA^{1,2}, Yoshihiro NAKAO³, Hiroshi SHIMIZU¹
 (1Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ., 2ERATO, JST, 3Res. Center, Suntory Ltd.)
- 14:30** 1Dp06 Analysis of Bacterial Community of Activated Sludge using DNA Microarray
 ○Tohru SUZUKI, Michiyo HIRAOKA, Izumi NOMURA, Nobuhiro KUROIWA, Atushi ITO, Michio TABATA
 (Sci. Biol. Res., United Grad. Sch. Agric. Sci., Gifu Univ.)
- 14:42** 1Dp07 Establish the exhaustive assay of bacterial phenotype alterations by transformation
 ○Shuheii HAYASHI, Norio ONO, Tetsuya ISHITA, Naoya KIKUCHI, Shinjiro YAMAMOTO, Shintaro FURUSAKI, Suteaki SHIOYA
 (Dept. Appl. Life Sci., Fac. Biotech. Life Sci., Sojo Univ.)
- 14:54** 1Dp08 Basic study on the splicing of a bacterial intron for *in situ* molecular breeding
 ○Mei-Fang CHIEN¹, Saeko TOSA², Chieh-chen HUANG³, Tomonobu KUSANO⁴, Ginro ENDO¹
 (1Faculty of Engineering, Tohoku-Gakuin Univ., 2Grad. Sch. of Engineering, Tohoku-Gakuin Univ., 3Dept. Life Sci., National Chung Hsing Univ., 4Grad. Sch. Life Sci., Tohoku Univ.)
- 15:06** 1Dp09 Study on the expression of the functional gene inserted in a transferable genetic element, bacterial group II intron *B.me.11*, and splicing of *B.me.11* in eukaryotic cells
 Saeko TOSA¹, Emi KUMAGAI², Mei-Fang CHIEN², ○Ginro ENDO²
 (1Grad. Sch. of Engineering, Tohoku-Gakuin Univ., 2Faculty of Engineering, Tohoku-Gakuin Univ.)
- 15:18** 1Dp10 Degradation of environmental pollutants in *Sphingomonas bisphenolicum* AO1 strain and the stability of the endogenous plasmid.
 ○Shohei TSUCHIDA, Tikano MAEKAWA, Yoshinobu MATSUMURA
 (Dept. Life Sci. Biotech., Kansai Univ.)
- 15:30** 1Dp11 Exogenous plasmid DNA is released from nano-sized acicular materials by replacing of small molecular nucleic acid *in vivo*: plasmid acquisition mechanism for penetrating-intermediate on the Yoshida effect
 ○Naoto Yoshida, Kaori Ide, Misa Sato (Dept. Biochem. Appl. Biosci., Miyazaki Univ.)
- 15:42** 1Dp12 Phage engineering I : design for new hostrange of *Ralstonia solanacearum* phage RSS
 ○Takeru KAWASAKI, Makoto FUJIE, Shoji USAMI, Takashi YAMADA
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 15:54** 1Dp13 Phage engineering II: design for new hostrange of *Ralstonia solanacearum* phage RSM
 ○Ahmed ASKORA¹, Takeru KAWASAKI¹, Makoto FUJIE¹, Shoji USAMI¹, Takashi YAMADA¹
 (1Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 16:06** 1Dp14 Diagnostic utilization of RSS1 and RSM1, bacteriophages infecting *Ralstonia solanacearum*.
 ○Hideki SATSUMA, Takeru KAWASAKI, Makoto FUJIE, Shoji USAMI, Takashi YAMADA
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 16:18** 1Dp15 Isolation and characterization of the genes involved in polyphosphate accumulation
 ○Nobuteru OHNAKA, Kei MOTOMURA, Ryuichi HIROTA, Akio KURODA
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 16:30** 1Dp16 Transcriptional analysis of silica-induced protein in *Thermus thermophilus* HB8.
 ○Yasuhiro FUJINO¹, Toshihisa OHSHIMA², Seiya OGATA³, Katsumi DOI²
 (1Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ., 2Fac. Agric., Kyushu Univ., 3Dept. Appl. Microb. Technol., Fac. Eng., Sojo Univ.)
- 16:42** 1Dp17 Isolation of novel lipase genes from environmental samples using pre-amplified inverse PCR
 ○Takeshi TERAHARA^{1,3}, Kazutaka YAMADA², Shinya KURATA², Toyokazu YOKOMAKU², Shigeaki HARAYAMA³, Satoshi TSUNEDA¹
 (1Dept. Life Sci. Med. Biosci., Sch. Advanced Sci. Eng., Waseda Univ., 2Nippon Steel Kankyo engineering Co. Ltd., 3NITE)
- 16:54** 1Dp18 Production of soybean bioactive peptides by recombinant *E. coli*.
 ○Rika KATO, Yuko SHIRATORI, Teruo SONE, Tohru HIRA, Hiroshi HARA, Kozo ASANO
 (Divi. Appl. Biosci., Grad. Sch. Agric., Hokkaido Univ.)
- 17:06** 1Dp19 Cloning of inulinase gene from *Arthrobacter nicotinovorans* Y-1 strain.
 ○Shuki FUJIMURA¹, MIE FURUMOTO¹, Tatsuro MIYAJI¹, Noboru TOMIZUKA¹, Tomoyuki NAKAGAWA², Junichi NAKAGAWA¹
 (1Dept. Food Sci. Technol., Tokyo Univ. Agric., 2Dept. Appl. Biol., Gifu Univ.)
- 17:18** 1Dp20 Transcription factor YY1 plays important roles in replication and transcription of retrovirus
 Yu-ki OKINO¹, Yujin INAYOSHI¹, Yu-ya KINOSHITA¹, Akifumi MIZUTANI¹, Toshinari ITOH¹, Ken-ichi NISHIJIMA¹, ○Katsuhide MIYAKE¹, Shinji IJIMA¹, Yonsu PARK²
 (1Dept. Biotech., Grad. Sch. Eng., Nagoya Univ., 2Grad. Sch. Sci. Tech., Shizuoka Univ.)

Room E Afternoon (13:30~16:54)

General Presentation (Fermentation physiology, Fermentation technology)

- 13:30 1Ep01 Isolation and characterization of cold-adapted yeast producing polysaccharide degrading enzymes
..... ○Masao KISHIDA, Yuichiro SEIKE, Shohei HAMADA, Haruhiko KAWASAKI
(Grad. Sch. Life Envi. Sci., Osaka Pref. Univ.)
- 13:42 1Ep02 D-Galacturonic acid reductase produced by cold adapted yeast
..... ○Shohei HAMADA, Yuichiro SEIKE, Haruhiko KAWASAKI, Masao KISIDA
(Grad. Sch. Life Envi. Sci., Osaka Pref. Univ.)
- 13:54 1Ep03 Improvement of *S*-adenosylmethionine accumulation in *S. cerevisiae* and the effect of phosphorus compound on its stability
..... ○Yumi MURAKAMI^{1,2}, Muneyoshi KANAI², Eiko UKENA², Kazuo MASAKI²,
Tsutomu FUJII^{1,2}, Haruyuki IEFUJI^{1,2}
(¹Grad. Sch. Biosph. Sci., Hiroshima Univ., ²Natl. Res. Inst. Brewing)
- 14:06 1Ep04 Action of marine yeasts on rice bran
..... ○Takushi HATANNO¹, Motohiro HAYAKAWA¹, Mao WATANABE¹,
Hiroaki MATSUZAKI¹, Naoto URANO²
(¹Dept. Biotech., Fac. Life Sci. Biotech. Fukuyama Univ., ²Tokyo Univ. of Marine Sci. Tech.)
- 14:18 1Ep05 Development of solid state fermentation system for producing ethanol from molasses.
..... ○Yusuke KUROKI, Hiroaki HONDA, Akihiro OHNISHI, Naoshi FUJIMOTO, Masaharu SUZUKI
(Dept. Ferment. Sci., Tokyo Univ. Agric.)
- 14:30 1Ep06 Analysis of mechanism of solid-state ethanol fermentation from raw rice
..... ○Kazue KANOUE, Hiroaki HONDA, Akihiro OHNISHI, Naoshi FUJIMOTO, Masaharu SUZUKI
(Dept. Brew. Ferment., Tokyo Univ. Agric.)
- 14:42 1Ep07 Effect of ethanol and inositol on ability of scavenging reactive oxygen species in yeast *Candida tropicalis* pK233
..... ○Hiroshi NISHIHARA¹, Yuka NAKAHASHI¹, Reona SUGIHARA¹, Kazunori KURODA¹,
Yoshio TANI², Yukiko YAMADA², Shouko NISHI², Hiroyuki HIRANO³, Hisatoki KOMAKI³
(¹Lab. Chem., Fac. Edu., Kagawa Univ., ²Seibo Jogakuin Jun. Col., ³Seinoken)
- 14:54 1Ep08 Characterization of *Saccharomyces cerevisiae* diploid strain to identify host background suitable for ethanol fermentation from xylose
..... ○Hiroyuki INOUE, Akinori MATSUSHIKA, Shigeki SAWAYAMA (BTRC, AIST)
- 15:06 1Ep09 Evaluation of fermentation ability of various carbon sources in *Rhizopus oryzae*
..... ○katsuiichi saito, naoto hashimoto, yasuihiro hasa, zenta nishio, hiroaki yamauchi
(Natl. Agric. Res. Cent. for Hokkaido Region)
- 15:18 1Ep10 Lactate production using *Schizosaccharomyces pombe*
..... ○Futoshi HARA, Hideki TOHDA, Yuko GIGA-HAMA (Asahi Glass Co., LTD., ASPEX Div.)
- 15:30 1Ep11 Analysis of the high sugar-tolerant mutant of *Saccharomyces cerevisiae* and its utility
..... ○Youji NAKAGAWA¹, Mio KAISE², Hiroshi CHIBA¹, Masayuki HAYAKAWA¹, Yuzuru IIMURA¹
(¹Dept. Biotech., Grad. Sch. Med. Eng., Univ. Yamanashi, ²Dept. Biotech., Univ. Yamanashi)
- 15:42 1Ep12 Molecular breeding of stress-tolerant baker's yeast by way of gene disruption
..... ○Akira ANDO¹, Hiroshi TAKAGI², Jun SHIMA¹ (¹Natl. Food Res. Inst., ²Grad. Sch. Biol. Sci., NAIST)
- 15:54 1Ep13 Biosurfactant-producing microorganisms are widely distributed on the surfaces of vegetables and fruits.
..... ○Konishi Masaaki, Morita Tomotake, Fukuoka Tokuma, Imura Tomohiro, Kitamoto Dai (AIST)
- 16:06 1Ep14 Production of Di- and Tri-acylated Mannosylerythritol Lipids by *Pseudozyma parantarctica* JCM 11752
..... ○Tomotake MORITA, Masaaki KONISHI, Tokuma FUKUOKA, Tomohiro IMURA, Dai KITAMOTO
(AIST)
- 16:18 1Ep15 Development of transformation system of oleaginous microorganism, *Labyrinthulida*
..... Hiroaki IWASAKA, ○Tsunehiro AKI, Hirofumi ADACHI, Maya NANKO, Hiroko KAWASAKI,
Seiji KAWAMOTO, Toshihide KAKIZONO, Kazuhisa ONO
(Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 16:30 1Ep16 Modification of lipid composition by genetic engineering in oleaginous microorganism, *Labyrinthulida*
..... ○Hiroaki IWASAKA, Tsunehiro AKI, Hirofumi ADACHI, Seiji KAWAMOTO, Kazuhisa ONO
(Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 16:42 1Ep17 Investigation of medium for fat production by *Lipomyces starkeyi*
..... ○Hiroaki HATTORI¹, Kazuo MASAKI², Haruyuki IEFUJI², Takafumi NAGANUMA¹, Yuzuru IIMURA¹
(¹Dept. Biotech., Grad. Sch. Med. Eng., Univ. Yamanashi, ²Natl. Res. Inst. Brewing)

Room F Afternoon (13:30~17:30)

Saito Award presentation, General Presentation (Enzymology, Enzyme / protein engineering)

Saito Award presentation

- 13:00 1Fp01 **Basic Research and Development on Generation Mechanism of High Affinity Antibodies**
..... ○Naoki Kanayama (Grad. Sch. Natural Sci. Technol., Okayama University)

- 13:54** 1Fp03 Improvement of Transglucosylation Activity in alpha-Glucosyl Transfer Enzyme XgtA from *Xanthomons campestris* WU-9701 by Site-Directed Mutagenesis in S272 Residue
..... ○Takashi ARAKAWA, Takasumi HATTORI, Kohtaro KIRIMURA
(Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 14:06** 1Fp04 Glucose sensing luciferase - split luciferase fused with glucose/galactose binding protein
..... ○Wakako TSUGAWA¹, Atsushi TANEOKA¹, Tomohiko YAMAZAKI², Koji SODE¹
(¹Dept. Biotech., Tokyo Univ. Agric. Technol., ²NIMS)
- 14:18** 1Fp05 Development and analysis of novel laccases by domain swapping
..... ○Yuko NAKAGAWA, Yuichi SAKAMOTO, Sayaka KIKUCHI, Toshitsugu SATO, Akira YANO
(Iwate Biothech. Res. Center)
- 14:30** 1Fp06 Directed evolution of nylon oligomer hydrolase from an esterase
..... Taku Ohki¹, Naoki Shibata², Yasuyuki Kawashima¹, Masahiro Takeo¹, Dai-ichiro Kato¹,
Yoshiki Higuchi², ○Seiji Negoro¹
(¹Grad. Sch. Eng., Hyogo Univ, ²Grad. Sch. Sci., Hyogo Univ)
- 14:42** 1Fp07 Enzymatic synthesis of amide compounds by nylon-oligomer hydrolase
..... ○Yasuyuki Kawashima¹, Yusuke Matsuura¹, Naoki Shibata², Masahiro Takeo¹,
Dai-ichiro Kato¹, Yoshiki Higuchi², Seiji Negoro¹
(¹Grad. Sch. Eng., Hyogo Univ., ²Grad. Sch. Sci., Hyogo Univ.)
- 14:54** 1Fp08 Crystallization and X-ray analysis of an azoreductase from *Bacillus* sp. B29
..... ○Daiki OGATA¹, Seiichi TAGUCHI¹, Ken'ichiro MATSUMOTO¹, Min YAO², Toshihiko OOI¹
(¹Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ.,
²Div. Biol. Sci., Grad. Sch. Sci., Hokkaido Univ.)
- 15:06** 1Fp09 Structural analysis of 4-hydroxybenzoate decarboxylase
..... Toyokazu YOSHIDA, ○Takuya KOSAKA, Shin-ichi UNO, Toru NAGASAWA
(Dept. Biomol. Sci., Gifu Univ.)
- 15:18** 1Fp10 Cell-surface associated polyhydroxybutyrate depolymerase
..... ○Keiichi Uchino, Terumi Saito (Dept. Biol. Sci., Kanagawa Univ.)
- 15:30** 1Fp11 Thermostabilization of glycerol kinase by ancestral mutation
..... ○Yasuhisa Fukuda¹, Takashi Tmura¹, Asuka Abe¹, Takahide Kishimoto², Atsushi Sogabe², Kenji Ingaki¹
(¹Grad. Sch. Nat. Sci. Tech., Okayama Univ, ²Toyobo Co., Ltd)
- 15:42** 1Fp12 Improvement of substrate affinity of creatininase by using protein engineering method
..... ○Rie HIRAO¹, Takahide KISHIMOTO², Masao KITABAYASHI¹, Yoshiaki NISHIYA¹,
Kinuyo YAMASHITA³, Yoshitaka NAKAJIMA³, Kiyoshi ITO³, Tadashi YOSHIMOTO³
(¹Tsuruga Inst. Biotech., Toyobo, ²Biochemical Dep., Toyobo,
³Grad. Sch. Biomed. Sci., Nagasaki Univ.)
- 15:54** 1Fp13 Crystal structures and expected reaction mechanism of type 2 isopentenyl diphosphate isomerase
..... ○Hisashi HEMMI¹, Hideaki UNNO², Yosuke IKEDA³, Shin-ya SEKIGUCHI¹, Norie YOSHIDA¹,
Toru NAKAYAMA³, Tokuzo NISHINO³, Masami KUSUNOKI⁴, Tohru YOSHIMURA¹
(¹Grad. Sch. Biol. Agrc. Sci., Nagoya Univ., ²Fac. Eng., Nagasaki Univ.,
³Dept. Biomol. Eng., Grad. Sch. Eng., Tohoku Univ., ⁴Inst. Protein Res., Osaka Univ.)
- 16:06** 1Fp14 Altering the pH Dependence of Esterase Activity by protein engineering
..... ○Kazuhiro Ohara¹, Kazuhiro Furukawa¹, Hideaki Unno², Seiji Takahashi¹, Masami Kusunoki³,
Toru Nakayama¹ (¹Dept. Biomol. Eng., Grad. Sch. Eng., Tohoku Univ., ²Dept. Appl. Chem.,
Fac. Eng., Nagasaki Univ., ³Grad. Sch. Med. Eng., Univ. Yamanashi)
- 16:18** 1Fp15 Gene cloning and expression of sphingomyelinase C from *Streptomyces griseocarneus* NBRC13471
..... ○Daisuke SUGIMORI¹, Yu TOMITA¹, Chiaki OGINO², Xiaoli LIU³
(¹Faculty Symbiotic Sys. Sci., Fukushima Univ.,
²Dept. Chem. Sci. & Eng., Kobe Univ., ³NagaseChemtex)
- 16:30** 1Fp16 Enzymatic synthesis of sphingolipid
..... ○HIROKO YAMAZAKI¹, HIDEO NAKANO¹, HIROKO IKUSHIRO²,
HIDEYUKI HAYASHI², YUGO IWASAKI¹
(¹Grad. Sch. Biol. Agrc. Sci., Nagoya Univ., ²Dept. Biochem. Osaka Med. Coll.)
- 16:42** 1Fp17 Glycoglycerophospholipid biosynthetic enzymes in *Mycoplasma fermentans*
..... ○Noriko ISHIDA¹, Daisuke IRIKURA², Kazuhiro MATSUDA², Seiji SATO²,
Teruo SONE¹, Michiko TANAKA¹, Kozo ASANO¹
(¹Lab. Appl. Microbiol., Grad. Sch. Agric., Hokkaido Univ., ²M Bio Tech. Inc.)
- 16:54** 1Fp18 Production and purification of carp acetylcholinesterase in *Escherichia coli*
..... ○Kouichi YOKOTA, Ryohei SATO, Shouji TAKAHASHI, Yoshio KERA (Nagaoka Univ. Tech.)
- 17:06** 1Fp19 Characteristics of L-lactate dehydrogenase from *Rhodobacter sphaeroides*
..... ○Hiroaki SAKAI¹, Takashi AKAMATSU¹, Hisataka TAGUCHI¹, Kenji KIDA²,
Shigeru MORIMURA², Masayoshi MATSUOKA¹ (¹Dept. Appl. Microb. Technol.,
Fac. Biotech. Biosci., Sojo Univ., ²Grad. Sch. Sci. Tech., Kumamoto Univ.)
- 17:18** 1Fp20 Functional analysis of alcohol dehydrogenase isozymes annotated on *Sulfolobus tokodaii* str.7 genome
..... ○Hisaaki YANAI¹, Kana MAEDA¹, Katsumi DOI², Toshihisa OHSHIMA²
(¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ., ²Fac. Agric., Kyushu Univ.)

Room G Afternoon (13:30~16:06)

General Presentation (Cell culture engineering)

- 13:30** 1Gp01 Therapeutic use of Phage Cocktail for Controlling *Escherichia coli* O157:H7
..... ○Yasunori TANJI, Hiroya KUNISAKI, Kazuhiko MIYANAGA (Dep. Bioen., Tokyo Inst. Technol.)
- 13:42** 1Gp02 Kinetic modeling and sensitivity analysis of xylose metabolism in *Lactococcus lactis* IO-1
..... ○Mugihito OSHIRO¹, Hideaki SHINTO¹, Masahiro OKAMOTO^{1,3},
Tatsuya SEKIGUCHI², Kenji SONOMOTO^{1,3}
(¹Fac. Agri., ²Fac. Eng., Maebashi Inst. Technol., ³Bio-Arch., Kyushu Univ.)
- 13:54** 1Gp03 Potential dependency on the growth of environmental anaerobes using electrochemical cultivation method (Part 2)
..... ○Hiroshi SATO, Norio MATSUMOTO, Naoya OMURA (CRIEPI)
- 14:06** 1Gp04 Bioalcohol production by *E. coli* based on Metabolic Engineering
..... ○Taizo HANAI¹, Shota ATSUMI², James C. LIAO²
(¹Dept. Sys. Life Sci., Kyushu Univ., ²Dept. Chem. Eng., UCLA)
- 14:18** 1Gp05 Ethanol production of filamentous fungi by the liquid-surface immobilization (LSI) system.
..... ○Masato WADA, Aoi NAKADA, Wataru HASHITANI, Yukiko KAJIKI, Rie SHINOJIMA,
Shinobu ODA, Kenji OZEKI, Shinichi OHASHI (KIT)
- 14:30** 1Gp06 Non-sulfuric pretreatment of the rice straw for the suitable production of cellulase and fermentable sugars
..... ○Akihiro HIDENO, Hiroyuki INOUE, Xu FANG, Kenichirou TSUKAHARA,
Takashi ENDO, Shigeki SAWAYAMA (BTRC AIST)
- 14:42** 1Gp07 Ethanol production using rice straw delignified by *Pleurotus ostreatus*
..... ○Daisuke TAKAHASHI¹, Ryota SATO¹, Takaaki TANAKA², Masayuki TANIGUCHI²
(¹GS of Natural Sci. Technol., Niigata Univ., ²Fac. of Natural Sci. Technol., Niigata Univ.)
- 14:54** 1Gp08 Optimization of enzymatic saccharification of high yield rice and ethanol production at a low cost from the enzymatic hydrolyzate.
..... ○Shintaro YOSHIDA¹, Takeshi KATO¹, Ryota SATO¹, Takaaki TANAKA², Masayuki TANIGUCHI²
(¹GS of Natural Sci. Technol., Niigata Univ., ²Fac. of Natural Sci. Technol., Niigata Univ.)
- 15:06** 1Gp09 Effects of sericin on the cells under stirred culture
..... ○Akiko Sakuma¹, Satoshi Terada², Masahiro Sasaki³, Kazuhisa Tsujimoto³, Hideyuki Yamada³
(¹JST Innovation Satellite Shiga, ²Univ. of Fukui, ³SEIREN CO.,LTD)
- 15:18** 1Gp10 Study of mitogenic effect of sericin
..... ○Satoshi TAKESHITA¹, Kana YANAGIHARA¹, Satoshi TERADA¹,
Masahiro SASAKI², Kazuhisa TUJIMOTO², Hideyuki YAMADA²
(¹Grad. Sch. Eng. Fukui Univ., ²Seiren)
- 15:30** 1Gp11 Effects of Transforming Growth Factor-beta1 on Migration and Morphology of Rabbit Chondrocytes Cultured in Collagen Gels
..... Ali BARADAR KHOSHFETRAT¹, Masahiro KINO-OKA¹, ○Masahito TAYA¹
(¹Grad. Sch. Eng. Sci., Osaka Univ.)
- 15:42** 1Gp12 Photo-responsive cell culture substrate enables spatial control of the patterned co-culture system
..... ○Kyoko KIKUCHI, Kimio SUMARU, Jun-ichi EDAHIRO,
Toshiyuki TAKAGI, Toshiyuki KANAMORI (AIST)
- 15:54** 1Gp13 Effect of 5-aminolevulinic acid on Taxol production of *Taxus cuspidata* callus
..... ○Shinjiro YAMAMOTO, Shogo KAI, Shuhei HAYASHI, Shintaro FURUSAKI, Suteaki SHIOYA
(Dept. Appl. Life Sci., Fac. Biotech. Life Sci., Sojo Univ.)

Room H Afternoon (13:30~16:42)

General Presentation (Bioresource Energy engineering)

- 13:30** 1Hp01 Continuous Measurement of Internal Resistance in Microbial Fuel Cells with Microflora
..... ○Akira YAMAZAWA, Yoshiyuki UENO (KaTRI, KAJIMA)
- 13:42** 1Hp02 Characterization of microbial fuel cell using an anaerobic enrichment culture on 2-chlorotoluene
..... ○Hiroyuki FUTAMATA¹, Orianna Bretschger², Jinzhong Zhou², Kenneth H. Nealon²
(¹Dept. Mat. Sci. Che. Eng., Shizuoka Univ., ²Dept. Earth Sci., USC)
- 13:54** 1Hp03 Methane generation by oil degrading- methanogenic consortium from oil field
..... ○Sanae KANO¹, Yoshiyuki HATTORI¹, Tsukasa MUKAIDANI¹, Kazuhiro FUJIWARA¹,
Yoshihiro MIYAGAWA², Katsumo TAKABAYASHI², Haruo MAEDA²
(¹Chugai Technos Co., ²Teikoku Oil Co.)
- 14:06** 1Hp04 Identification of propionate-degrading bacteria in an anaerobic chemostat using stable isotope probing method
..... Ayako OZAKI, Yueqin TANG, ○Shigeru MORIMURA, Kenji KIDA
(Grad. Sch. Sci. Tech., Kumamoto Univ.)

- 14:18 1Hp05 Analysis of pretreated wood using carbohydrate-binding module-CFP fusion protein
..... ○Takeshi KAWAKUBO¹, Masafumi OYADOMARI¹, Takahito WATANABE¹,
Yoichi HONDA¹, Syuichi KARITA², Takashi WATANABE¹
(¹RISH, Kyoto Univ., ²Fac. Biores., Mie Univ.)
- 14:30 1Hp06 Isolation and characterization of *Burkholderia* sp.T-14 for bacterial delignification
..... ○Jeung-yil Park, Riki Shiroma, Masakazu Ike, Mitsuhiro Arakane, Zilian Zhang, Ken Tokuyasu
(Nat. Food Res. Inst.)
- 14:42 1Hp07 Bagasse saccharification by cellulases derived from microbial communities
..... ○Shunsuke KUDO¹, Shin HARUTA², Masaharu ISHII¹, Yasuo IGARASHI¹
(¹Dept. Biotech., Univ. Tokyo, ²Tokyo Metro. Univ.)
- 14:54 1Hp08 Ethanol production from enzymatically saccharified lawn
..... ○Eri ISHIKAWA¹, Kohei NAKAMURA¹, Takayoshi TAMURA², Kazuhiro TAKAMIZAWA¹
(¹Grad. Sch. Fac. Agric., Gifu Univ., ²Meiji seika kaisha)
- 15:06 1Hp09 Direct ethanol production from cassava pulp using arming yeast co-displaying amylolytic and cellulolytic enzymes.
..... Waraporn APIWATANAPIWAT^{1,2}, ○Yoshinori MURATA¹, Akihiko KOSUGI¹, Ryosuke YAMADA³,
Akihiko KONDO³, Takamitsu ARAI¹, Yutaka MORI¹
(¹JIRCAS, ²KAPI, Kasetsart Univ., ³Grad. Sch. Sci. Tech., Kobe Univ.)
- 15:18 1Hp10 Selection of yeast producing fatty acid methyl ester
..... ○Naoya Takakuwa (NARO)
- 15:30 1Hp11 Continuous ethanol fermentation of non-sterilized beet juice by a flocculating yeast
..... Mingzhe AN, ○Sachiko TABATA, Yueqin TANG, Shigeru MORIMURA, Kenji KIDA
(Grad. Sch. Sci. Tech., Kumamoto Univ.)
- 15:42 1Hp12 Saccharification of bamboo biomass with concentrated sulfuric acid and batchwise fermentation of hydrolyasate
..... ○Shimada TSUYOSHI¹, Mingzhe AN¹, Sachiko TABATA¹, Kai LIU¹, Yueqin TANG¹,
Shigeru MORIMURA¹, Hisataka TAGUTI², Takashi AKAMATU², Kenji KIDA¹
(¹Grad. Sch. Sci. Tech., Kumamoto Univ., ²Faculty of Eng., Sojo Univ.)
- 15:54 1Hp13 Continuous high-ethanol fermentation from okinawa molasses by a flocculating yeast
..... Kai LIU, ○Mingzhe AN, Yueqin TANG, Shigeru MORIMURA, Kenji KIDA
(Grad. Sch. Sci. Tech., Kumamoto Univ.)
- 16:06 1Hp14 Effect of Pigments Containing in Waste Activated Bleach Earth on Lipase Activity and Biodiesel Conversion
..... ○Lies Dwiarti¹, Ehsan Ali¹, Masaichi Kikuchi², Enoch Yongsoo Park^{1,3}
(¹Fac. of Agric., Shizuoka Univ., ²Mizusawa Industrial Chemicals, Ltd.,
³Intg. Biosci. Sect., Grad. Sch. Sci. Technol., Shizuoka Univ.)
- 16:18 1Hp15 Production of fuel ethanol from non-diluted garbage by a simultaneous saccharification and fermentation
..... ○Tomohiro SHO¹, Mingzhe AN¹, Yueqin TANG¹, Shigeru MORIMURA¹, Hisataka TAGUCHI²,
Takashi AKAMATSU², Kazuhiro NAGAHAMA², Masayoshi MATSUOKA², Kenji KIDA¹
(¹Grad. Sch. Sci. Tech., Kumamoto Univ., ²Faculty of Eng., Sojo Univ.)
- 16:30 1Hp16 Effects of ball-milling on fermentation ability of yeast during ethanol production from spent mushroom culture
..... ○Itsuki WATANABE¹, Takafumi SHIMODA², Kozo NISHIBORI², Jun SHIMA¹
(¹Natl. Food Res. Inst., ²YUKIGUNI MAITAKE Co., LTD)

Room I Afternoon (13:30~17:18)

General Presentation (Biosynthesis Natural organic chemistry, Organic chemistry Polymer chemistry)

- 13:30 1Ip01 Biosynthesis of polyhydroxyalkanoate by recombinant bacteria expressing the PHA synthase genes *phaRC* from *Bacillus* sp. INT005
..... ○Eriko MATSUTANI¹, Yasuharu SATOH¹, Kenji TAJIMA¹,
Tokuo MATSUSHIMA², Masanobu MUNEKATA¹
(¹Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ., ²Agribioindustry Inc.)
- 13:42 1Ip02 Isolation and characterization of a novel bacterium accumulating medium-chain-length polyhydroxyalkanoate
..... ○Sho NAKAMOTO¹, Yasuharu SATOH¹, Kenji TAJIMA¹,
Tokuo MATSUSHIMA², Masanobu MUNEKATA¹
(¹Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ., ²Agribioindustry Inc.)
- 13:54 1Ip03 Chemical reforming system of poly-gamma-glutamate with a stereoregular structure
..... Kenzo FUKUSHIMA, ○Makoto ASHIUCHI (Dept. Biores. Sci., Kochi Univ.)
- 14:06 1Ip04 Biodegradation behavior of poly(butylene succinate-co-adipate) by *Aspergillus oryzae*
..... ○Yoshiaki MORIGUCHI, Katsumi MIZUNO, Satoshi OSAWA, Shinichi OHASHI
(Genome Biotechnology Laboratory, K.I.T.)
- 14:18 1Ip05 Development of environmentally compatible materials with color functions by using natural pigments
..... ○Naoki YAMASHITA, Ikuhiro TANIDA, Tsugumi YAMADA, Satoshi OSAWA
(Genome Biotechnology Laboratory, K.I.T.)

- 14:30 1Ip06 Composition of biodegradable polymer and UV absorber extracted from plant
..... ○Keita ARABIKI, Yasuhiro NAKAMURA, Satoshi OSAWA
(Genome Biotechnology Laboratory, Kanazawa Institute of Technology)
- 14:42 1Ip07 Functional analysis of an epsilon-Poly-L-lysine synthase homolog in *Saccharopolyspora erythraea*
..... ○Naoko KITO¹, Kazuya YAMANAKA², Yoshimitsu HAMANO¹
(¹Dept. Biosci., Fukui Pref. Univ., ²Chisso)
- 14:54 1Ip08 Identification of the epsilon-Poly-L-lysine degrading enzyme in *Streptomyces albulus*.
..... ○Kazuya YAMANAKA¹, Naoko KITO², Yoshimitsu HAMANO²
(¹Chisso, ²Dept. Biosci., Fukui Pref. Univ.)
- 15:06 1Ip09 Cloning and functional analysis of the streptothricin biosynthetic gene cluster.
..... ○Chitose MARUYAMA¹, Yoshimitsu HAMANO²
(¹Fac. Med. Sci., Fukui Univ., ²Dept. Biosci., Fukui Pref. Univ.)
- 15:18 1Ip10 Characterization of *tcnB* and *tcnC* in a gene cluster involved in the teleocidin biosynthesis in *Streptomyces blastomyceticus*
..... ○Hirofumi FURUKAWA¹, Syuji TANI¹, Jyunichi SUMITANI¹, Takashi KAWAGUTI¹,
Hideo HAYASHI¹, Kazuhiro IRIE²
(¹Dept. Appl. Biol. Chem., Osaka Pref. Univ., ²Grad. Sch. Agric., Kyoto Univ.)
- 15:30 1Ip11 Novel salvage pathways of NAD biosynthesis and its effect on silencing in *Saccharomyces cerevisiae*
..... ○Kazuto OHASHI, Rinko KABATA, Shigeyuki KAWAI, Kousaku MURATA
(Grad. Sch. Agric., Kyoto Univ.)
- 15:42 1Ip12 Functional analysis of cyclopiazonic acid biosynthetic genes from *Aspergillus flavus*
..... ○Yasuyo SESHIME¹, Katsuhiko KITAMOTO², Yutaka EBIZUKA³, Isao FUJII¹
(¹Sch. Pharm., Iwate Med. Univ., ²Dept. Biotech., Univ. Tokyo, ³Grad. Sch. Pharm. Sci., Univ. Tokyo)
- 15:54 1Ip13 Molecular structure of poly(γ -glutamic acid) consisting of clusters
..... ○Masahiro YUTANI¹, Mai MUTSUKADO¹, Fei WANG², Masamichi ISHIGURO²,
Makoto TANIGUCHI¹, Ken-ichi FUJITA¹, Toshio TANAKA¹
(¹Grad. Sch. Sci., Osaka City Univ., ²Suntory Ltd.)
- 16:06 1Ip14 Selective Production of *p*-Hydroxybenzoic Acid from Benzoic Acid by Microbial Bioconversion
..... ○Akihiro WATABE, Shusuke TAKAHASHI, Takasumi HATTORI, Kohtarō KIRIMURA
(Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 16:18 1Ip15 Enzymatic esterification of lactic acid, preventing acid inactivation of enzymes by reaction media and alcohols
..... ○Satoshi HASEGAWA, Koji TAKAHASHI
(Dept. Mat. Sci. Eng., Grad. Sch. Sci. Eng., Yamagata Univ.)
- 16:30 1Ip16 Production of ceramide in acetic acid bacteria
..... ○Shin OGAWA, Hideki TACHIMOTO, Takayuki KAGA (Central Research, Mizkan Group Co. Ltd.)
- 16:42 1Ip17 Antimutagenic activity in *Lumbricus rubellus* extract
..... ○Shin-ichi AKAZAWA, Kana YAMAGISHI (Dept. Mat. Eng., Nagaoka Natl. Coll. Tech.)
- 16:54 1Ip18 Bluish-purple pigments produced by *Massilia* sp. BS-1
..... ○Kazuya SUZUKI, Hiroaki TSUYA, Hitosi AGEMATU ((Dept. Applied Chem., Akita NCT))
- 17:06 1Ip19 Screening of novel bioactive compounds from entomopathogenic fungi
..... ○Sastia Prama Putri¹, Hiroshi Kinoshita¹, Fumio Ihara², Yasuhiro Igarashi³, Takuya Nihira¹
(¹ICBiotech, Osaka Univ., ²National Institute of Fruit Tree Science, Tsukuba,
³Biotechnology Research Center, Toyama Pref. Univ.)

Room J Afternoon (15:10~17:10)

Seminar (Career seminar for the young scientists)

The 2nd Day (Aug. 28)

Room S1 Morning (9:00~12:10)

Symposium (Development of production methods for fuel ethanol with various microbe)

- 9:00 2S1a01 Present situation of fuel ethanol production technology
 ○Yasushi MORIKAWA (Nagaoka Univ. Tech.)
- 9:35 2S1a02 Production of ethanol by a flocculating yeast
 ○Kenji KIDA, Shigeru MORIMURA, Gakuin THOU (Grad. Sch. Sci. Tech., Kumamoto Univ.)
- 10:10 2S1a03 Generation of xylose-fermenting *Saccharomyces cerevisiae* by protein-engineering.
 ○Seiya Watanabe¹, Tsutomu Kodaki¹, Keisuke Makino¹, Akinori matusika², shigeki sawayama²
 (1Ins. Adv. Energy, Kyoto Univ., 2AIST)
- 10:45 2S1a04 Ethanologenic recombinant *E. coli*: utilization for fuel ethanol production from ligneous biomass
 ○kazuyoshi Ohta (Dept. Biochem. Appl. Biosci., Miyazaki Univ.)
- 11:20 2S1a05 Genetic engineering of a novel ethanologenic bacterium for SSCF of lignocellulosic biomass.
 ○Hideshi YANASE (Dept. Biotech., Tottori Univ.)
- 11:55 Overall discussion

Room S1 Afternoon (13:30~17:00)

Symposium (Application of systematic study of cellular mechanism to bioindustry-Systems Biology; Current status and future)

- 13:30 Opening remarks
- 13:35 2S1p01 Systems biology - now & the future -
 ○Taizo HANAI (Div. Sys. Bio. Sci., Kyushu Univ.)
- 14:15 2S1p02 Differential glycan profiling by means of lectin microarray
 ○Atsushi KUNO (RCMG, AIST)
- 14:55 2S1p03 Architecture of signaling network and cell decision : Crosstalk between wet & dry
 ○Yuko SAEKI, Mariko HATAKEYAMA (RIKEN ASI Cellular Systems Modeling TM)
- 15:35 2S1p04 Peptide Aptamers Interface between Materials and Biologies
 ○Ken-Ichi SANO^{1,2}, Kiyotaka SHIBA²
 (1Molecular & System Life Science Unit, RIKEN, 2Dept. of Protein Engineering, Cancer Inst., JFCR)
- 16:15 2S1p05 Technological issues for cellular system analysis in systems
 ○Masato MIYAKE (Res. Inst. Cell Engin., AIST)
- 16:55 Closing remarks

Room S2 Afternoon (13:30~16:55)

Symposium (New technologies for complete biomass reuse)

- 13:30 Opening remarks
- 13:35 2S2p01 Production of Bio-ethanol Fuel from Construction Waste Wood
 ○Seiji KANEKO (Bio-ethanol Japan Kansai Co.,Ltd)
- 14:05 2S2p02 Dry Anaerobic Digestion for Organic Solid Waste
 ○Mitsunobu Masuda (Fujisawa High Trust Co., Ltd.)
- 14:35 2S2p03 Development of Enzymatic Methyl Ester Plant
 ○Hideo NODA^{1,2}, Nobuyuki KURATANI¹, Shinji HAMA², Hideki FUKUDA^{2,3}
 (1Kansai Chemical Engineering Co., Ltd, 2Bio-energy Corporation, 3Org. Adv. Sci. Tech., Kobe Univ.)
- 15:05 2S2p04 Dry ammonia-methane two-stage fermentation to recovery ammonia and methane
 ○Naomichi NISHIO (Dept. Mol. Biotech., Hiroshima Univ.)
- 15:35 2S2p05 Production of Hydrogen using Sun light and Sulfur Circulation
 ○Kazuyuki TOHJI, Tugumi HAYASHI, Yo-hei BABA, Hideyuki TAKAHASHI
 (Dept. Env. Sci. & Tech., Tohoku Univ.)
- 16:05 2S2p06 Platform for phosphate compound production by means of thermostable polyphosphate kinase
 ○Akio KURODA, Ryuichi HIROTA (Dept. Mol. Biotech., Hiroshima Univ.)
- 16:35 Overall discussion
- 16:50 Closing remarks

Room S3 Morning (9:00~12:05)

Symposium (Prospect for the bacterial infections and chemotherapy)

9:00		Opening remarks
9:05	2S3a01	Current status and concern for pathogenic microbes and antimicrobial agents ○Yoshichika ARAKAWA (Natl. Inst. Infect. Dis.)
9:40	2S3a02	Discovery and development of antibacterials: now and future ○Tsuyoshi OTANI (Daiichi Sankyo Co., Ltd.)
10:15	2S3a03	A new class of antibacterial agents targeting bacterial signal transduction ○Ryutaro UTSUMI (Dept. Biosci., Grad. Sch. Agric., Kinki Univ.)
10:50	2S3a04	Quorum blockers, potential antibacterial agents ○Junichi KATO ¹ , Tsukasa IKEDA ² (¹ Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ., ² Dept. Appl. Chem., Utsunomiya Univ.)
11:25	2S3a05	Exploring aerobic metabolic pathways which contribute to the virulence of Streptococci ○Yuji YAMAMOTO (Dep. Animal Sci., Sch. Vet. Med., Kitasato Univ.)
12:00		Closing remarks

Room S3 Afternoon (13:30~16:10)

Symposium (Plant science and bioengineering: an approach through metabolic and transport analyses)

13:30		Opening remarks
13:35	2S3p01	E. coli and yeast as expression system for plant K transport proteins ○Nobuyuki UOZUMI (Dept. Biomol. Engin., Tohoku Univ. Tohoku Univ.)
14:05	2S3p02	Flower color development of anthocyanins ○Kumi YOSHIDA (Grad. Sch. of Biol. Sci., NAIST)
14:35	2S3p03	Comparative analysis of stress response reactions in photosynthetic organisms ○Kazumasa HIRATA (Grad. Sch. Pharm. Sci., Osaka Univ)
15:05	2S3p04	Development of metabolomics technology and its application ○Eiichiro FUKUSAKI (Dept. Biotech., Grad. Sch. Engin, Osaka Univ.)
15:35	2S3p05	Biosynthesis of flavonoids in snapdragon flowers: metabolic compartmentation and application ○Toru NAKAYAMA (Dept. Biomol. Engin., Tohoku Univ.)
16:05		Closing remarks

Room A Morning (9:00~12:24)

General Presentation (Process engineering / Biochemical engineering), Invited Presentation

9:00	2Aa01	Development of dispersion method for hydrophobic bioactive substances in water using laser ablation ○Yosuke FUKADA ¹ , Shin'ichiro KAJIYAMA ² , Tsuyoshi ASAHI ³ , Ryohei YASUKUNI ³ , Kiiichi FUKUI ¹ (¹ Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ² Sch. Biol. Sci. Technol., Kinki Univ., ³ Dept. Appl. Phys. Eng., Osaka Univ.)
9:12	2Aa02	Optical resolution of D,L-lactic acid with lipase ○Masafumi YAMAMOTO, Shiro KOBAYASHI, Hitomi OHARA (R&D Center for Bio-based Materials., Kyoto Inst.Tech.)
9:24	2Aa03	Purification and Characterization of Recombinant Monoacylglycerol Lipase from <i>Rhodanobacter</i> sp. strain LP7315 ○Shuji TERAOKA, Masashi MORI, Hiroyuki IMANAKA, Koreyoshi IMAMURA, Kazuhiro NAKANISHI (Grad. Sch. of Natur. Sci. & Technol., Okayama Univ)
9:36	2Aa04	Separation of rare sugars using a SMB chromatography ○Yoon-Mo KOO ^{1,2} , Jin-II KIM ¹ , Ju Weon LEE ² , Jeoung Kun KIM ² (¹ Dept. Biol. Eng., Inha Univ., Korea, ² ERC Adv. Biosep. Technol., Inha Univ., Korea)
10:00	2Aa06	Production of D-glyceric acid by <i>Acetobacter tropicalis</i> NBRC16470 ○Hiroshi HABE, Dai KITAMOTO, Keiji SAKAKI (AIST)
10:12	2Aa07	Biodiesel production using whole-cell biocatalyst of <i>Aspergillus oryzae</i> coexpressing Lipases ○Daisuke ADACHI ¹ , Takao NUMATA ¹ , Tsutomu TANAKA ² , Akihiko KONDO ¹ , Hideki FUKUDA ² (¹ Grad. Sch. Eng., Kobe Univ, ² Org. Adv. Sci. Tech., Kobe Univ)
10:24	2Aa08	Efficient ethanol production from raw starch by delta-integrand polyploid fusants ○Ryosuke YAMADA ¹ , Tsutomu TANAKA ² , Chiaki OGINO ¹ , Hideki FUKUDA ² , Akihiko KONDO ¹ (¹ Grad. Sch. Eng., Kobe Univ, ² Org. Adv. Sci. Tech., Kobe Univ)

- 10:36** 2Aa09 Bioethanol production from rice washing drainage and its practical application
..... ○Masanori WATANABE¹, Makoto TAKAHASHI¹, Yusaku TADA¹,
Kazuo SASANO², Takashi KASHIWAMURA³, Kengo WATANABE³
(¹Grad. Sch. Sci. Mat., Hiroshima Kokusai Gakuin Univ., ²Shokkyou Co. Ltd., ³SATAKE Co. Ltd.)
- 10:48** 2Aa10 Biological detoxification of lignocellulose hydrolysate using *Ureibacillus thermosphaericus*
..... ○Naoyuki OKUDA^{1,2}, Mayumi SONEURA¹, Kazuaki NINOMIYA²,
Yoshio KATAKURA², Suteaki SHIOYA²
(¹Sugar & Bio Technical Group, Tsukishima Kikai Co., Ltd.,
²Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 11:00** 2Aa11 Pervaporation performance using silicalite membranes of ethanol fermentation broths containing low-concentration succinic acid
..... ○Toru IKEGAMI, Tomotake MORITA, Shunichi NAKAYAMA, Hideyuki NEGISHI,
Dai KITAMOTO, Keiji SAKAKI (AIST)
- 11:12** 2Aa12 Development of H₂-driven microbial catalyst by expressing alcohol dehydrogenase in the H₂-oxidizing *Rhodococcus opacus* cells
..... ○Yu HATTORI¹, Akinobu MATSUYAMA², Hiroaki YAMAMOTO², Yoshiteru HASHIMOTO³,
Michihiko KOBAYASHI³, Hirofumi NISHIHARA¹
(¹Dept. Biores. Sci., Ibaraki Univ., ²R&D Center, Daicel Chemical Industries, Ltd.,
³Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 11:24** 2Aa13 Development and reaction of H₂-driven microbial catalyst using a hydrogen-oxidizing bacterium *Ralstonia eutropha*
..... ○Koji ODA¹, Akinobu MATSUYAMA², Hiroaki YAMAMOTO², Hirofumi NISHIHARA¹
(¹Dept. Biores. Sci., Ibaraki Univ., ²R&D Center, Daicel Chemical Industries, Ltd.)
- 11:36** 2Aa14 Effect of pre-treatment of garbage on the production of hydrogen
..... ○Tutomu TANAKA, Hiroharu TOKUDA, Hiroto HOMMA,
Masaharu SUZUKI, Kotoyoshi NAKANISHI
(Dept. Brew. Ferment., Tokyo Univ. Agric.)
- 11:48** 2Aa15 Cloning and functional characterization of a novel eelgrass gene that encodes a plasma membrane H⁺-ATPase (zha2)
..... ○Dai SHINTANI, Abbas ALEMZADEH, Makoto FUJIE, Shoji USAMI, Takashi YAMADA
(Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 12:00** 2Aa16 Evaluation of tobacco K⁺ channel in yeast tonoplast
..... ○Shin Hamamoto¹, Yasuo Mori², Yoichi Nakanishi³, Masayoshi Maeshima³,
Isamu Yabe⁴, Nobuyuki Uozumi¹ (¹Dept. Biomol. Eng., Grad. Sch. Eng.,
Tohoku Univ., ²Dept. Synth. Chem. Biol. Chem., Kyoto Univ.,
³Grad. Sch. Biol. Agric. Sci., Nagoya Univ., ⁴Inst. Mol. Cell. Bioscience., Tokyo Univ.)
- 12:12** 2Aa17 Expression and function of K⁺ transporter OshAK1 in rice
..... ○Tomoyuki OKADA, Hideki NAKAYAMA, Kazuya YOSHIDA
(Grad. Sch. Biol. Sci., Nara Institute of Science and Technology (NAIST))

Room A Afternoon (13:30~17:18)

General Presentation (Biochemical engineering)

- 13:30** 2Ap01 Biotin-displaying yeast for displaying functional molecule
..... ○Shinsuke MASUNARI¹, Tutomu TANAKA², Jun ISHII², Hideki FUKUDA³, Akihiko KONDO¹
(¹Grad. Sch. Eng., Kobe Univ., ²Org. Adv. Sci. Tech., Kobe Univ.)
- 13:42** 2Ap02 Development of cell surface display system of *Aspergillus oryzae* using chitin binding domain
..... ○Soichiro TABUCHI¹, Junji ITO¹, Takashi ADACHI¹, Hiroki ISHIDA², Yoji HATA²,
Tutomu TANAKA³, Chiaki OGINO¹, Hideki FUKUDA³, Akihiko KONDO¹
(¹Grad. Sch. Eng. Kobe Univ., ²Res. Inst., Gekkeikan Sake Co., ³Org. Adv. Sci. Tech. Kobe Univ.)
- 13:54** 2Ap03 Studies on the construction of artificial microorganism symbiotic system consisting of lection and sugar chain located on the surfaces of symbionts.
..... Takuya KITAMURA¹, Masato IMASE¹, ○Hideo TANAKA², Hideki AOYAGI¹
(¹Grad. Sch. Life Env. Sci., Univ. Tsukuba, ²Dep. Human Nutri., Seitoku Univ.)
- 14:06** 2Ap04 Development of high speed screening system for enzyme surface displaying yeast by flow sorting
..... ○Yan ZHOU¹, Shin'ichiro KAJIYAMA², Kouichi ITOH¹, Takanori TANINO³,
Nobuo FUKUDA³, Akihiko KONDO³, Kiichi FUKUI¹
(¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ²Sch. Biol. Sci. Technol.,
Kinki Univ., ³Grad. Sch. Sci. Tech., Kobe Univ.)
- 14:18** 2Ap05 Fiber weight loss process using enzyme reaction and electron beam irradiation
..... ○Seiichi KURATA¹, Hirota YAMAZAKI², Katsumi TAKAYAMA², Tomonori ISHIGAKI³,
Toshiyuki BABA⁴, Takayuki SEKI⁴, Tutomu TANAKA⁵, Akihiko KONDO⁵,
Koichi KURODA⁶, Mitsuyoshi UEDA⁶, Shin-ichiro SUYE¹
(¹Dept. Appl. Chem. Biotechnol., Univ. Fukui, ²Fukui National Col. Tech.,
³Dept. Envi. Sol. Tech., Ryukoku Univ., ⁴SAKAI OVEX Co.,
⁵Dept. Chem. Sci. Eng., Kobe Univ., ⁶Div. Appl. Life. Sci., Kyoto Univ.)

- 14:30** 2Ap06 His32 of *Aspergillus oryzae* hydrophobin RoIA is important for RoIA-cutinae CutL1 interaction.
..... ○Kenji UEHARA¹, Toru TAKAHASHI¹, Hiroshi MAEDA², Yohei YAMAGATA²,
Fumihiko HASEGAWA¹, Katsuya GOMI¹, Keietsu ABE¹
(¹NICHE., Tohoku Univ., ²Grad. Sch. Agric. Sci., Tohoku Univ.)
- 14:42** 2Ap07 Site-selective immobilization of functional materials onto *in vivo* biotinylated bacterial magnetic particles
..... ○Yoshiaki MAEDA¹, Tomoko YOSHINO¹, Masaaki TAKAHASHI², Harumi GINYA²,
Junko ASAHINA², Hideji TAJIMA², Tadashi MATSUNAGA¹
(¹Dept. Biotechnol., Tokyo Univ. Agric. Technol., ²Precision System Science Co. Ltd.)
- 14:54** 2Ap08 Construction of L929 magnetized cell array using non-labeled magnetite nanoparticles and monitoring of cell death by TNF-alpha
..... ○Hironobu KOIDE¹, Yayoi ISAJI¹, Mina OKOCHI¹, Hiroyuki HONDA^{1,2}
(¹Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.,
²MEXT Innovative Research Center for Preventive Medical Engineering)
- 15:06** 2Ap09 Oviduct-specific expression of transgene by truncated ovalbumin promotor
.....Daisuke KODAMA¹, Daisuke NISHIMIYA¹, Makoto MOTONO¹, Ken-ichi NISHIJIMA¹,
Masamichi KAMIHIRA^{1,2}, Takashi YAMASHITA³, ○Shinji IJIMA¹
(¹Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.,
²Dept. Chem. Eng., Fac. Eng., Kyushu Univ., ³Kaneka Corp.)
- 15:18** 2Ap10 Oxidative state determination of erythrocytes by adhesion test to the positive surface for prediction of diabetic complications risk
.....Yayoi ISAJI¹, Mina OKOCHI¹, Misato KOBAYASHI², Fumihiko HORIO², ○Hiroyuki HONDA^{1,3}
(¹Dept. Biotech., Grad. Sch. Eng., Nagoya Univ., ²Grad. Sch. Biol. Agr. Sci., Nagoya Univ.,
³MEXT Innovative Research Center for Preventive Medical Engineering)
- 15:30** 2Ap11 Development of BioMEMS device with microcantilever for the measurement of active tension generated by cultured skeletal muscle cells
..... ○Kazunori SHIMIZU¹, Hikaru SASAKI², Hirotaka HIDA², Hideaki FUJITA¹,
Kei OBINATA¹, Mitsuhiro SHIKIDA², Eiji NAGAMORI¹
(¹Toyota Cent. R&D Labs. Inc., ²Dept. Micro-Nano Systems Eng., Grad. Sch. Eng., Nagoya Univ.)
- 15:42** 2Ap12 Differentiation of human mesenchymal stem cells on surfaces modified with adhesion peptides
..... ○Mina OKOCHI¹, Takeshi SUGAWARA¹, Shigeyuki NOMURA¹,
Chiaki KAGA¹, Ryuji KATO¹, Hiroyuki HONDA^{1,2}
(¹Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.,
²MEXT Innovative Research Center for Preventive Medical Engineering)
- 15:54** 2Ap13 Functional analysis of effective recombinant therapeutic antibody prepared from mammalian cell
..... ○Ryutaro ASANO, Izumi KUMAGAI (Dept. Biomol. Eng., Grad. Sch. Eng., Tohoku Univ.)
- 16:06** 2Ap14 Characterization of membrane lipids raft domain.
..... ○Kentaro YAMAGUCHI, Eriko SUZUKI, Tsutomu HAMADA, Masahiro TAKAGI
(Sch. Mat. Sci., JAIST)
- 16:18** 2Ap15 Chemotherapy of osteosarcoma in drug delivery system by using vesicle immobilized with novel lectin ESA as a drug carrier
..... ○Keita HAYASHI¹, Kenshi SAKAYAMA², Tatuhiro MIYAZAKI³, Setuya KAMEI²,
Jyouzi MIYAWAKI², Jyunichi AIZAWA², Akihiro INADA⁴, Keiichi KATOU¹
(¹Dept. Mate. Sci. and Biotech. Fac. of Grad. Sch. Sci & Eng., Ehime Univ.,
²Dept. Bone & Joint Sur. of Grad. Sch. Med., Ehime Univ.,
³Dept. Pathogen. Patholo. of Grad. Sch. Med., Ehime Univ., ⁴Yamaki Co.Ltd.)
- 16:30** 2Ap16 Characteristics of nanobacteria-like particles isolated from a human leukemia cell line. (Part 3)
..... ○Keiko KONDOU¹, Setsuko SHIODA², Arihiro KOHARA², Hiroshi MIZUSAWA²,
Ryo HARASAWA³, Hideki AOYAGI¹ (¹Grad. Sch. Life Env. Sci., Univ. Tsukuba,
²Nat. Inst. Biomed. Innov., ³Dept. Vet. Med., Iwate Univ.)
- 16:42** 2Ap17 Isolation of nanobacteria-like particles from insect cell lines. (part 2)
..... ○Yoichi TANAKA, Hideki AOYAGI (Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 16:54** 2Ap18 Quantitative analysis of adhesion characteristics of pollen and nano particles. (part2)
..... ○Hitomi ENOKIDO¹, Katsumi YABUSAKI², Hideki AOYAGI¹
(¹Grad. Sch. Life. Env. Sci. Univ. Tsukuba, ²Kowa Res, Ins.)
- 17:06** 2Ap19 Preparation of ethylene nanobubbles and its application
..... ○Shanshan MENG¹, Hiroshi YAMASHITA², Hideki AOYAGI¹
(¹Grad. Sch. Life. Env. Sci., Univ. Tsukuba, ²Hitachi Housotec Co. Ltd.)

Room B Morning (9:00~11:24)

General Presentation (Bioremediation)

- 9:00** 2Ba01 Biosynthetic mechanism of proline, compatible solute, in *Chlamydomonas reinhardtii*
..... ○Takao KUMON, Keita MIYOSHI, Tomoaki YOSHIKAWA, Kazumasa HIRATA
(Grad. Sch. Pharm. Sci., Osaka Univ.)

- 9:12 2Ba02 Function analysis of stress responder in microalgae-analysis of biosynthetic pathway of abscisic acid in *Chlamydomonas reinhardtii*
..... ○Hiroki ISHIDA¹, Atsuki MATSUBARA¹, Takeshi BAMBATA², Eiichiro FUKUSAKI², Kazuo HARADA¹, Kazumasa HIRATA¹
(¹Grad. Sch. Pharm. Sci., Osaka Univ., ²Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 9:24 2Ba03 Degradation of tetrahydrofuran by *Rhodococcus ruber*
..... ○NAOKI HAYASIDA, TOSHIKATU OKUBO, JYUNICHI KATOU, NOBORU TAKIGUTI
(Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 9:36 2Ba04 The study of polychlorinated dibenzo-*p*-dioxin degrading bacterium *Geobacillus midousuji* SH2B-J2
..... ○Takeshi KAWAKAMI¹, Yuzo SUZUKI¹, Yuichiro OTSUKA², Masaya NAKAMURA², Sadayori HOSHINA³, Atsushi TAKAHASHI⁴, Yoshihiro KATAYAMA¹
(¹BASE., Tokyo Univ. Agric. Technol., ²Forestry & Forest Products Res. Inst., ³Jikei Univ., ⁴Takasago Thermal Engineering co., Ltd.)
- 9:48 2Ba05 Mutants of *Novosphingobium* sp. strain KA1 which express carbazole 1,9a-dioxygenase CARDO constitutively.
..... ○YUKO SAIKI¹, YACHIYO KAWAMOTO¹, HIDEAKI NOJIRI², TOSHIO OMORI³, TOYOKAZU YOKOTA¹, YASUYUKI OTAKE¹, TERUO MIYAHARA¹
(¹Asahi Breweries, Ltd., ²Biotech. Res. Center, Univ. Tokyo, ³Shibaura Inst. Technol.)
- 10:00 2Ba06 Transcriptome analysis of a halorespiring bacterium *Desulfitobacterium hafniense* Y51
..... ○Xue PENG¹, Shougo YAMAMOTO¹, Kenichi INATOMI¹, Masayuki INUI¹, Kensuke FURUKAWA², Hideaki YUKAWA¹ (¹RITE, ²Beppu Univ.)
- 10:12 2Ba07 Quantification of the genus *Dehalococcoides* using alternately binding probe competitive PCR (ABC-PCR)
..... ○Ryo MIYATA¹, Ken ADACHI^{1,2}, Hidenori TANI^{1,2}, Shinya KURATA³, Kazunori NAKAMURA³, Satoshi TSUNEDA², Yuji SEKIGUCHI¹, Naohiro NODA¹
(¹IBRF, AIST, ²Grad. Sch. Adv. Sci. Eng., Waseda Univ., ³J-Bio 21 Corporation)
- 10:24 2Ba08 Effect of 2-Bromoethanesulfonate on TCE dechlorination.
..... ○Kotaro ISE, Koichi SUTO, Chihiro INOUE (Grad. Sch. Env. Sci., Tohoku Univ.)
- 10:36 2Ba09 The analysis of the methanotrophic consortium that promote methane oxidation by methanotroph
..... ○Hiroyuki IGUCHI, Hiroya YURIMOTO, Yasuyoshi SAKAI
(Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 10:48 2Ba10 Evaluation of soil condition by analysis of relationship between nitrogen circulation and soil bacterial biomass
..... ○Yasuhiro MOROE, Takanobu SATO, Yoshiki MATSUMIYA, Motoki KUBO
(Dept. Biosci. Biotech., Ritsumeikan Univ.)
- 11:00 2Ba11 Study on techniques of wall surface greening with aerial microalgae
..... Katsuya ABE, ○Kazuya FURUKAWA, Hirokuni ONO (Dept. Appl. Chem., Kogakuin Univ.)
- 11:12 2Ba12 Study on nitrogen uptake and nitrate reductase of the aerial microalgae
..... katuya ABE, ○Hiroki KITAHARA, Hirokuni ONO (Dept. Appl. Chem., Kogakuin Univ.)

Room B Afternoon (13:30~16:42)

General Presentation (Bioremediation)

- 13:30 2Bp01 Enzymatic and microbial degradations of additives used in plastics
..... ○Tomomi ASANUMA, Katsumi MIZUNO, Satoshi OSAWA (Genome Biotechnology Laboratory, K.I.T)
- 13:42 2Bp02 Bioremediation of oil-contaminated soil by compost
..... ○Eri HARA¹, Masato KURIHARA², Nobuhiko NOMURA¹, Toshiaki NAKAJIMA¹, Hiroo UCHIYAMA¹
(¹Grad. Sch. Life Env. Sci., Univ. Tsukuba, ²Idemitsu Kosan Co. Ltd.)
- 13:54 2Bp03 Optimum condition for bioremediation of petroleum hydrocarbon-contaminated soil
..... ○Kenzo KUBOTA, Kota HATAYAMA, Yoshiki MATSUMIYA, Motoki KUBO
(Dept. Biosci. Biotech., Ritsumeikan Univ.)
- 14:06 2Bp04 Biostimulation of naphthalene
..... ○Ishino YASUHIRO¹, Fukuda TSUBASA¹, Tsutsumi KADZUYO², Fukunaga KAZUHISA³, Kurata SHINYA⁴, Morita HIROSHI²
(¹Grad. Sch. Env. Eng., Univ. Kitakyushu, ²Env. Eng., Univ. Kitakyushu, ³NSE. co, ⁴NSKE. co)
- 14:18 2Bp05 Comparative study on the alkane-degrading activity in bacteria isolated from the Pacific Ocean
..... ○MAKI TERAMOTO, SHIGEAKI HARAYAMA (NBDC, NITE)
- 14:30 2Bp06 Isolation and characterization of novel petroleum hydrocarbon-degrading bacteria from tropical coastal zones
..... ○Fumiyoshi OKAZAKI¹, Atsushi YAMAZOE¹, Yeti DARMAYATI², Maki TERAMOTO¹, Masahito SUZUKI¹, Dwi SUSILANINGSIH³, Shigeaki HARAYAMA¹
(¹Dept. Biotech., NITE, ²RCO., LIPI, ³RCBiotech., LIPI)
- 14:42 2Bp07 Purification and characterization of degradative enzyme of tris(2-chloroethyl) phosphate from *Sphingobium* sp. strain TCM1
..... ○Yuka DOI, Satoshi YOSHIDA, Shingo MORI, Katumasa ABE, Shoji TAKAHASHI, Yoshio KERA
(Nagaoka Univ. Tech.)

- 14:54 2Bp08 Inducible expression and purification of tris(1,3-dichloro-2-propyl)phosphate degradative enzyme from *Sphingomonas* sp. TDK1
..... ○Jun-ichi MORI, Yuto SUZUKI, Jun MORINO, Hongde XU, Katsumasa ABE, Shouji TAKAHASHI, Yoshio KERA (Nagaoka Univ. Tech.)
- 15:06 2Bp09 Analysis of alkane hydroxylase gene in cyclic-alkane degrading genus *Gordonia*
..... ○Yuji YAMASHITA, Kenzo KUBOTA, Yoshiki MATSUMIYA, Motoki KUBO (Dept. Biosci. Biotech., Ritsumeikan Univ.)
- 15:18 2Bp10 Adaptive evolution of Mn(II)-dependent extradiol dioxygenases as revealed by metagenomic approach
..... ○Hikaru SUENAGA¹, Shiori MIZUTA¹, Kentaro MIYAZAKI^{1,2} (1IBRF, AIST, ²Grad. Sch. Front. Sci., Univ. Tokyo)
- 15:30 2Bp11 Research about the Gene of Rubber Decomposing Bacteria
..... ○Yuki KAI¹, Hirokazu OIKI² (¹Dept. Chem. Sci. Eng., Kurume Natl. Col. Tech., ²Kurume Col. Tech.)
- 15:42 2Bp12 Roles of two hydroxylases in 4-nitrophenol degradation by *Rhodococcus* sp. PN1
..... ○Kenta YAMAMOTO, Takeru SADAHIRO, Dai-ichiro KATO, Masahiro TAKEO, Seiji NEGORO (Grad. Sch. Eng., Univ. Hyogo)
- 15:54 2Bp13 Biodegradation kinetics of bisphenol F by *Sphingobium yanoikuyae* strain FM-2
..... ○Daisuke INOUE, Shoji HARA, Kazunari SEI, Michihiko IKE (Div. Sustain. Energy Environ. Engineer., Osaka Univ.)
- 16:06 2Bp14 Mechanism of accelerated degradation of aromatic compounds in the rhizosphere of *Spirodela polyrrhiza*
..... ○Kazunari SEI¹, Ning YU¹, Tadashi TOYAMA², Daisuke INOUE¹, Satoshi SODA¹, Michihiko IKE¹ (¹Div. Sustain. Ener. Environ. Eng., Osaka Univ., ²Dept. Appl. Chem., Muroran Inst. Tech.)
- 16:18 2Bp15 Enrichment of 4-*n*-butylphenol- and 4-*tert*-butylphenol-degrading bacteria in rhizosphere of *Phragmites australis*
..... ○Tadashi TOYAMA¹, Daisuke INOUE², Kazunari SEI², Young-Cheol CHANG¹, Michihiko IKE², Shintaro KIKUCHI¹ (¹Dept. Appl. Chem., Muroran Inst. Technol., ²Div. Sustain. Energy Environ. Eng., Osaka Univ.)
- 16:30 2Bp16 Biodegradation Characteristics of 4-*tert*-butylphenol by *Sphingobium fuliginis* TIK-1 isolated from rhizosphere of *Phragmites australis*
..... ○Naonori MOMOTANI¹, Tadashi TOYAMA², Hai HOANG¹, Daisuke INOUE¹, Kazunari SEI¹, Young-Cheol CHANG², Shintaro KIKUCHI², Michihiko IKE¹ (¹Div. Sustain. Energy Environ. Eng., Osaka Univ., ²Dept. Appl. Chem., Muroran Inst. Technol.)

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

General Presentation (Metabolic engineering / Metabolomics), Invited Presentation

- 9:00 2Ca01 Comprehensive plant hormone profiling using high sensitive LC-ESI-MS/MS
..... ○Yoshihiro IZUMI, Atsushi OKAZAWA, Akio KOBAYASHI, Eiichiro FUKUSAKI (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 9:12 2Ca02 Metabolic fingerprinting of green tea for development of manufacturing process
..... ○Rui KAWAHARA¹, Takeshi BAMBA¹, Wipawee PONGSUWAN¹, Tsutomu YONETANI², Eiichiro FUKUSAKI¹ (¹Dept. Mat. Life Sci., Osaka Univ., ²Tea branch., Nara Pref. Agri. Exp Sta.)
- 9:24 2Ca03 Development of algorithm for identifying metabolites in GC/MS analysis
..... ○Takuya HASHIMOTO¹, Takashi OISHI², Tatsuhiko IKEDA¹, Shunsuke HAYASHI¹, Takeshi BAMBA¹, Shigehiko KANAYA², Eiichiro FUKUSAKI¹ (¹Dept. Mat. Life Sci., Osaka Univ., ²Grad. Sch. Info. Sci., NAIST)
- 9:36 2Ca04 Development of a method for the quantitative microRNA analysis by LC-MS
..... ○Shin TAKIMURA, Yoshihiro IZUMI, Takeshi BAMBA, Eiichiro FUKUSAKI (Dept. Mat. Life Sci., Osaka Univ.)
- 9:48 2Ca05 High-throughput, high-resolution analysis of hydrophobic metabolites by supercritical fluid chromatography/mass spectrometry
..... ○Atsuki MATSUBARA¹, Hiroki ISHIDA¹, Kazuo HARADA¹, Kazumasa HIRATA¹, Ei-ichiro FUKUSAKI², Takeshi BAMBA² (¹Grad. Sch. Pharm. Sci., Osaka Univ., ²Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 10:00 2Ca06 Exploring biomass degradation enzyme by Metabo-Proteome method and ¹³C metabolic flux analysis of their products
..... ○Jun KIKUCHI^{1,2,3}, Takashi NOBORI³, Masahiro YUKI³, Shigeharu MORIYA⁴ (¹RIKEN PSC, ²Grad. Sch. Agri. Sci., Nagoya Univ., ³Grad. Sch. Integ. Sci., Yokohama City Univ., ⁴RIKEN ASI)
- 10:12 2Ca07 Development of correlation analysis of microbiome-metabolome profiling to evaluate gut environmental changes
..... ○Yasuhiro DATE^{1,2,4}, Shinji FUKUDA^{2,3,4}, Yumiko NAKANISHI^{2,3,4}, Eisuke CHIKAYAMA⁴, Yuuri Tsuboi⁴, Satoshi TSUNEDA¹, Hiroshi OHNO^{2,3}, Jun KIKUCHI^{3,4} (¹Dept. Life Sci. Med. Sci., Grad. Sch. Adv. Sci. Eng., Waseda Univ., ²RCAL, RIKEN, ³Grad. Sch. Int. Sci., Yokohama City Univ., ⁴PSC, RIKEN)

- 10:24** 2Ca08 **Olfactory biosensor**
 ○Tai Hyun PARK¹, Sang Hun LEE¹, Eun Hae OH¹, Hyun Seok SONG¹, Jin-Ho SEO²
 (¹Sch. Chem. Biol. Eng., Seoul Natl. Univ., Korea, ²Dept. Food Sci. Biotechnol., Seoul Natl. Univ., Korea)
- 10:48** 2Ca10 **Nanoscale biomemory device composed of self-assembled recombinant azurin**
 ○Jeong-Woo CHO^{1,2} (¹Dept. Chem. Biomol. Eng., Sogang Univ., Korea,
²Interdiscipl. Prog. Integ. Biotechnol., Sogang Univ., Korea)
- 11:12** 2Ca12 Label-free detection of allergen in milk using a metallic mesh
 ○Hisa YOSHIDA¹, Yasuhide KAWAI¹, Shin'ichiro HAYASHI^{1,2}, Chiko OTANI², Kodo KAWASE^{3,2,1},
 Yuichi OGAWA¹ (¹Div. Biosci. Biotech. Future Bioind., Grad. Sch. Agric. Sci.,
 Tohoku Univ., ²RIKEN, ³EcoTopia Science Institute, Nagoya Univ.)
- 11:24** 2Ca13 Novel sol-gel optical waveguide for fluorescence biosensing devise.
 ○Hirokazu MAKISHIMA¹, Takeshi FUKUDA¹, Yasufumi ENAMI², Shin-ichiro SUYE¹
 (¹Dept. Appl. Chem. Biotechnol., Univ. Fukui, ²Coll. Opt. Sci., Univ. Arizona)
- 11:36** 2Ca14 Novel L-Aspartate amperometric biosensor using thermostable L-Aspartate dehydrogenase
 ○Yosuke OKEZAKI¹, Haitao ZHENG², Kazunari YONEDA³, Haruhiko SAKURABA⁴,
 Toshihisa OHSHIMA⁵, Shin-ichiro SUYE¹ (¹Dept. Appl. Chem. Biotechnol.,
 Univ. Fukui, ²Tianjin Polytech. Univ., ³Dept. Biosci., Tokai Univ.,
⁴Dept. Appl. Biol. Sci., Kagawa Univ., ⁵Dept. Genetic Eng., Kyushu Univ.)
- 11:48** 2Ca15 A colorimetric whole-cell biosensor to detect arsenite based on the carotenogenic reaction by CrtI in *Rhodospseudomonas palustris*
 ○Kazuyuki YOSHIDA¹, Koichi INOUE¹, Yuko TAKAHASHI¹, Shunsaku UEDA¹,
 Katsuhiro ISODA², Kiyohito YAGI², Isamu MAEDA¹
 (¹Dept. Appl. Biochem., Utsunomiya Univ., ²Grad. Sch. Pharm. Sci., Osaka Univ.)
- 12:00** 2Ca16 Analysis of mRNA adsorption on polyimide substrate densely covered with carbon nanofibers
 ○Yoshihiro KYODA¹, Takao SAITO², Katsuya KATO², Masaki TANEMURA¹
 (¹Nagoya Inst. Technol., ²AIST)

Room C Afternoon (13:30~18:06)

General Presentation (Animal cell / tissue engineering), Invited Presentation

- 13:30** 2Cp01 **Non-phosphorylated metabolic pathways in the three domains of life**
 ○Sun Bok LEE^{1,2} (¹Dept. Chem. Eng., Pohang Univ. Sci. Technol., Korea,
²Sch. Interdiscipl. Biosci. Bioeng., Pohang Univ. Sci. Technol., Korea)
- 13:54** 2Cp03 Construction of BmNPV nano-particles displaying human (pro)renin receptor (hPRR)
 ○Tatsuya Kato¹, Fumiaki Suzuki², Enoch Y. Park^{1,3}
 (¹Dept. Appl. Biol. Chem., Fac. Agric., Shizuoka Univ., ²Fac. Applied Biological Science, Gifu Univ.,
³Graduate School of Science and Technology, Shizuoka Univ.)
- 14:06** 2Cp04 Efficient purification of human (pro)renin receptor expressed in silkworm larvae
 ○Dongning DU¹, Tatsuya KATO², Fumiaki SUZUKI³, Enoch Y. PARK^{1,2}
 (¹Grad. Sch. Sci. Technol., Shizuoka Univ., ²Fac. Agric., Shizuoka Univ., ³Fac. Appl. Bio. Sci., Gifu Univ.)
- 14:18** 2Cp05 Efficient expression of human alpha-1,4-N-acetylglucosaminyltransferase(a4GnT) using human molecular chaperone using BmNPV bacmid.
 ○Makoto NAKAJIMA¹, Shin KANAMASA¹, Tatuya KATOU¹, Takeomi MURATA¹, Taichi USUI¹,
 Enoch Y. PARK^{1,2} (¹Dept. Appl. Biol. Chem., Fac. Agric., Shizuoka Univ.,
²Integ. Biosci. Sect., Grad. Sch. Sci. Technol., Shizuoka Univ.)
- 14:30** 2Cp06 Expression and purification of α 2,6-sialyltransferase using *Bombyx mori* (silkworm) and its application on glyco-technology
 ○Makoto OGATA¹, Makoto NAKAJIMA¹, Takeomi MURATA¹, Taichi USUI¹, Enoch Y. PARK^{1,2}
 (¹Dept. Appl. Biol. Chem., Fac. Agric., Shizuoka Univ.,
²Integ. Biosci. Sect., Grad. Sch. Sci. Technol., Shizuoka Univ.)
- 14:42** 2Cp07 Purification human antibody expression in the hemolymph of silkworm larvae using BmNPV bacmid
 ○Takuya NISHINA¹, Motoki ISHIKIRIYAMA¹, Takashi DOUJIMA², Hiroshi UEDA³, Enoch Y. PARK^{1,2}
 (¹Dept. Appl. Biol.chem.,Fac.Agric.,Shizuoka UNIV., ²Integ. Biosci. Sect.,
 Grad. Sch. Sci. Technol., Shizuoka Univ., ³Dept. Chem. Biotech., Univ. Tokyo)
- 14:54** 2Cp08 High-efficient transfection of biological macromolecules into nonadherent cells by field constriction electroporation
 ○Kazuyuki FUKUSHIMA¹, Osamu KUROSAWA², Masao WASHIZU¹, Teruyuki NAGAMUNE¹
 (¹Dept. Bioengineering, Grad. Sch. Eng., Univ. Tokyo, ²ADVANCE CO.)
- 15:06** 2Cp09 DNA transfer to a living cell using diamond nanoneedle
 Chikashi NAKAMURA^{1,2}, ○SeungHwan RYU^{1,2}, Hiroshi UETSUKA³, Naoji FUJIMORI³, Ryo OTA⁴,
 Yosuke AMEMIYA⁵, Nobuo SHIMAMOTO⁵, SungWoong HAN¹, Jun MIYAKE^{1,2}
 (¹RICE, AIST, ²Dept. Biotechnol., Tokyo Univ. Agric. Technol.,
³DRC, AIST, ⁴Olympus, ⁵Struct. Biol. Cent., NIG)

- 15:18** 2Cp10 **Culture-expanded human dermal papilla and outer root sheath cells have biological activity *in vitro* and *in vivo***
 ○Jung-Keug PARK¹, Youn-Ho SHIN², Hee-Hoon YOON¹, Bo-Young YOO¹, Young-Jin KIM²,
 Kye-Yong SONG³ (¹Dept. Chem/Biochem. Eng., Dongguk Univ., Seoul, Korea,
²Lifecord Co. Ltd., Seoul, Korea, ³Dept. Pathol., Chung-Ang Univ. College of Med., Seoul, Korea)
- 15:42** 2Cp12 **Lectin-binding assay for evaluation of sialylation in biopharmaceutical production**
 ○Miwako TOKUNAGA¹, Wook-Dong KIM¹, Hiroyuki OZAKI¹, Takuya ISHIBASHI²,
 Kohsuke HONDA¹, Takeshi OMASA¹, Hisao OHTAKE¹
 (¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ²TBI)
- 15:54** 2Cp13 **Regulation of inflammatory activity of macrophages by sialic acid-binding lectin**
 Munetoshi ANDO, Wenjie TU, Ikuko YAMAI, ○Ken-ichi NISHIJIMA, Shinji IJIMA
 (Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.)
- 16:06** 2Cp14 **Evaluation of muscle cell differentiation process by mechanical force detection of the marker proteins using AFM**
 SungWoong HAN¹, ○Chikashi NAKAMURA^{1,2}, Shingo MIEDA²,
 Takanori KIHARA³, Noriyuki NAKAMURA^{1,2}, Jun MIYAKE^{1,2,3}
 (¹RICE, AIST, ²Dept. Biotechnol., Tokyo Univ. Agric. Technol., ³CNBI, Univ. Tokyo)
- 16:18** 2Cp15 **Generation of Genetically Manipulated Chickens Producing Epo/Fc Fusion Protein**
 ○Carlos Alberto PENNO¹, Yoshinori KAWABE², Akira ITO², Masamichi KAMIHIRA^{1,2}
 (¹Grad. Sch. Life Sci., Kyushu Univ., ²Dept. Chem. Eng., Fac. Eng., Kyushu Univ.)
- 16:30** 2Cp16 **Construction and application of chromosome marker in CHO cells**
 ○Shuichi KIMURA¹, Yihua CAO¹, Hidenori YANO¹, Yasuhiro TAKAGI¹, Kohsuke HONDA¹,
 Takeshi OMASA¹, Shuichi ASAKAWA², Nobuyoshi SHIMIZU³, Hisao OHTAKE¹
 (¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ²Keio Univ. of Medicine, ³Keio Univ.)
- 16:42** 2Cp17 **The effects of heat-treatment and concentration of fish serum on the growth of CHO cells in adhesion culture**
 Ryohei TSUKADA¹, ○Masashi FUJIWARA¹, Itaru SHIOYA², Mutsumi TAKAGI¹
 (¹Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ., ²Nissui Central Research Labo.)
- 16:54** 2Cp18 **Confirmation of the gene structure of the DHFR gene-amplified chromosomal region in CHO DR100L-4N cell line**
 ○Joon Young PARK¹, Yasuhiro TAKAGI¹, Hidenori YANO¹, Wook Dong KIM¹, Kohsuke HONDA¹,
 Takeshi Omasa¹, Shuichi Asakawa², Nobuyoshi Shimizu³, Hisao Othake¹
 (¹Grad. Sch. of Eng., Osaka Univ., ²Keio Univ. Sch. of Medicine, ³GSP center, Keio Univ.)
- 17:06** 2Cp19 **Evaluation of collagen type II formation of chondrocyte cells cultured on collagen-coated substrate**
 ○Nao MARUYAMA, Masahiro KINO-OKA, Masahito TAYA (Grad. Sch. Eng. Sci., Osaka Univ.)
- 17:18** 2Cp20 **Application of elastic salmon collagen gel to vascular grafts**
 ○Ryosuke KUBOTA¹, Nobuhiro NAGAI², Masanobu MUNEKATA¹
 (¹Div. Biotech. Macro. Chem., Grad. Sch. Eng., Hokkaido Univ., ²CRIS, Hokkaido Univ.,
³Div. Biotech. Macro. Chem., Grad. Sch. Eng., Hokkaido Univ.)
- 17:30** 2Cp21 **Development of oviduct-specific gene expression system for transgenic avian bioreactor**
 ○Kensaku NUMATA, Masashi TERAMORI, Yoshinori KAWABE, Akira ITO, Masamichi KAMIHIRA
 (Dept. Chem. Eng., Fac. Eng., Kyushu Univ.)
- 17:42** 2Cp22 **Development of gene amplification system using Cre recombinase**
 ○Yujiro KAMEYAMA, Ryoko WATANABE, Yuta TAKENOUCHE, Yoshinori KAWABE,
 Akira ITO, Masamichi KAMIHIRA (Dept. Chem. Eng., Fac. Eng., Kyushu Univ.)
- 17:54** 2Cp23 **Elucidation of an essential factor that arise the change of differentiation status of embryoid body resulted by seeding ES cells with different cell number.**
 ○Takatoshi Higuchi¹, Yuji Seki¹, Mikiko Koike¹, Emiko Yasuda¹, Satoshi Yamada², Hiroshi Kurosawa¹
 (¹Dept. Biotech., Grad. Sch. Med. Eng., Univ. Yamanashi, ²NOF CO.)

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

General Presentation (Genetic engineering, Nucleic acid engineering)

- 9:00** 2Da01 **Gene Silencing of Alternative Oxidase Gene (*aox1*) by Introduction of Hairpin RNA Expression Cassette in Citric Acid-Producing *Aspergillus niger***
 ○Takasumi HATTORI, Yuki HONDA, Kohtaro KIRIMURA
 (Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 9:12** 2Da02 **Overexpression of Alternative Oxidase Gene (*aox1*) for Metabolic Engineering in Citric Acid-Producing *Aspergillus niger* and Its Application to Oxalic Acid Production**
 Takasumi HATTORI, ○Natsuko FUKUDA, Kohtaro KIRIMURA
 (Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 9:24** 2Da03 **PCR-based total gene synthesis for cellulase and fluorescent proteins**
 ○Sachiko WATANABE¹, Hisashi HOSHIDA², Rinji AKADA¹
 (¹Dept. Appl. Mol. Biosci., Grad. Sch. Med. Yamaguchi Univ., ²Innov. Center, Yamaguchi Univ.)
- 9:36** 2Da04 **Variety of laccase isozymes from *Agaricus bisporus***
 ○Masaaki KIMURA, Kouichi NOZAKI, Masaharu MIZUNO, Takahisa Kanda, Yoshihiko AMANO
 (Fac. of Eng. Shinshu Univ.)

- 9:48 2Da05 Production of proteases and recombinant protein in *prtR* disruptants of *Aspergillus oryzae*
..... ○Yasumichi ONOZAKI, Tomomi MATSUURA, Takahiro SHINTANI, Katsuya GOMI
(Div. Biosci. Biotech. Future Bioind., Grad. Sch. Agric. Sci., Tohoku Univ.)
- 10:00 2Da06 Isolation of a novel promoter used for efficient protein expression by *Aspergillus oryzae* for solid-state bioethanol fermentation.
..... ○Hiroki BANDO¹, Hiromoto HISADA¹, Hiroki ISHIDA¹, Yoji HATA¹,
Yoshio KATAKURA², Akihiko KONDO³
(¹Res. Inst., Gekkeikan Sake Co., ²Dept. Biotech., Grad. Sch. Eng.,
Osaka Univ., ³Dept. Chem. Sci. Eng., Kobe Univ.)
- 10:12 2Da07 Detection of DNA-protein interactions using bead display system of DNA
..... ○Takaaki KOJIMA, Yoko HASHIMOTO, Masashi KATO, Tetsuo KOBAYASHI, Hideo NAKANO
(Grad. Sch. Biol. Agric. Sci., Nagoya Univ.)
- 10:24 2Da08 Study on the regulatory system for acetaldehyde stress response in *Saccharomyces cerevisiae*
..... ○Yoshimi MATSUFUJI¹, FUJIMURA Shuki¹, MIYAJI Tatsuro¹, NAKAGAWA Tomoyuki²,
NAKAGAWA Junichi¹ (¹Dept. Food Sci. Technol., Tokyo Univ. Agric.,
²Dept. Food Sci. Technol., Tokyo Univ. Agric., ³Dept. Food Sci. Technol., Tokyo Univ. Agric.,
⁴Dept. Appl. Biol., Gifu Univ., ⁵Dept. Food Sci. Technol., Tokyo Univ. Agric.)
- 10:36 2Da09 Analysis of a methylotrophic yeast, *Candida boidinii* strain overexpressing *PmFLD1* gene
..... ○Shotaro OZAWA¹, Shuki FUJIMURA¹, Yoshimi MATSUFUJI¹, Tatsuro MIYAJI¹,
Hiroya YURIMOTO², Yasuyoshi SAKAI², Tomoyuki NAKAGAWA³, Junichi NAKAGAWA¹
(¹Dept. Food Sci. Technol., Tokyo Univ. Agric., ²Div. Appl. Life Sci.,
Grad. Sch. Agric., Kyoto Univ., ³Dept. Appl. Biol., Gifu Univ.)
- 10:48 2Da10 Transformation system for thermotolerant yeast *Kluyveromyces marxianus* using DNA fragments from *Saccharomyces cerevisiae*
..... ○Junpei NAKAMURA¹, Sanom NONKLANG¹, Babiker ADDEL-BNAT¹, Kumi NAKAMURA¹,
Ryouta SAKAI¹, Hisasi HOSHIDA², Rinji AKADA¹
(¹Dept. Appl. Mol. Biosci., Gard. Sch. Med. Yamaguchi Univ., ²Innov. Center, Yamaguchi Univ.)
- 11:00 2Da11 Determination of consensus sequence for protein binding site in centromeres from yeast *Yarrowia lipolytica*
..... ○Masayoshi MATSUOKA, Takayoshi YAMANE, Takahira OGAWA
(Dept. Appl. Microb. Technol., Fac. Biotech. Biosci., Sojo Univ.)
- 11:12 2Da12 Genome-wide screening of yeast deletion strain expressing high levels of heterologous proteins.
..... ○Kiyoshi TSURUI¹, Takuya OHGUTHI¹, Jun ASAKAWA¹, Tsuneyasu HUIJITA¹,
Hisashi HOSHIDA², Rinji AKADA¹ (¹Dept. Appl. Mol. Biosci., Grad. Sch. Med.
Yamaguchi Univ., ²Innov. Center, Yamaguchi Univ.)
- 11:24 2Da13 Regulation of maltase by Atf1/Pcr1 in fission yeast
..... Hiroaki KATO, Shintaro KIRA, ○Makoto KAWAMUKAI (Life & Env. Sci., Shimane Univ.)
- 11:36 2Da14 A method of constructing siRNA library *in vitro*
..... ○Yuji NISHIKAWA, Tomoyasu SUGIYAMA (Grad. Sch. Bionics., Tokyo Univ. Tech.)
- 11:48 2Da15 Specific mRNA inducible RNAi machine
..... ○Takayuki UENO, Akira TACHIBANA, Toshizumi TANABE
(Dept. Appl. Bioappl. Chem., Grad. Sch. Eng., Osaka City Univ.)

Room D Afternoon (13:30~16:54)

General Presentation (Genetic engineering, Nucleic acid engineering)

- 13:30 2Dp01 Functional analysis of 50 amino acids encoded by the alternative exon in the *Aohex1* gene for a Woronin body protein in *A. oryzae*
..... ○Kentaro Iwasaki, Jun-ich Maruyama, Katsuhiko Kitamoto (Dept. Biotech., Univ. Tokyo)
- 13:42 2Dp02 Multiple protease gene disruptions by highly efficient gene-targeting background (*ligD*) in *Aspergillus oryzae*
..... ○Jaewoo YOON, Jun-ichi MARUYAMA, Katsuhiko KITAMOTO (Dept. Biotech., Univ. Tokyo)
- 13:54 2Dp03 Posttranslational modification of AoXlnR.
..... ○Yuji NOGUCHI, Kyoko KANAMARU, Masashi KATO, Tetsuo KOBAYASHI
(Grad. Sch. Biol. Agric. Sci., Nagoya Univ.)
- 14:06 2Dp04 Identification of the inducer and the *cis*-element required for induction of the cellobiohydrolase I gene in *Aspergillus aculeatus*
..... ○Shuji TANI, Jun-ichi SUMITANI, Takashi KAWAGUCHI (Dept. Life Env. Sci., Osaka Pref. Univ.)
- 14:18 2Dp05 Improvement of *A. oryzae* promoters for production of biomass degrading enzymes -screening for *cis* elements of the promoters (2)-
..... ○Hiromoto HISADA¹, Etsuko HABE¹, Hiroki ISHIDA¹, Yoji HATA¹, Akihiko KONDO²
(¹Res. Inst., Gekkeikan Sake Co., ²Dept. Chem. Sci. Eng., Kobe Univ.)
- 14:30 2Dp06 Improvement of *A. oryzae* promoters for production of biomass degrading enzymes ~screening for *cis* elements of the promoters (2)~
..... Hiromoto Hisada¹, Etsuko Habe¹, ○Hiroki Ishida¹, Yoji Hata¹, Akihiko Kondou²
(¹Research Institute of Gekkeikan, ²Dept. Chem. Sci. Eng., Kobe Univ.)

- 14:42 2Dp07 Construction of yeast expression libraries for cellulolytic enzyme genes from *A. oryzae*
..... ○Masataka OHASHI, Katsuya GOMI, Takahiro SHINTANI
(Div. Biosci. Biotech. Future Bioind., Grad. Sch. Agric. Sci., Tohoku Univ.)
- 14:54 2Dp08 Localization analysis of secretory protein under endoplasmic reticulum stress conditions in *Aspergillus oryzae*
..... ○Shinya KIMURA, Jun-ichi MARUYAMA, Manabu ARIOKA, Katsuhiko KITAMOTO
(Dept. Biotech., Univ. Tokyo)
- 15:06 2Dp09 Construction of *PEP4* gene disruptant of diploid sake yeast using LOH
..... ○Hiroshi SAHARA¹, Atsushi KOTAKA¹, Kazunori SHIOTA¹,
Mitsuyoshi UEDA², Akihiko KONDO³, Yoji HATA¹
(¹Res. Inst., Gekkeikan Sake Co., ²Div. Appl. Life Sci., Grad. Sch. Agric.,
Kyoto Univ., ³Dept. Chem. Sci. Eng., Kobe Univ.)
- 15:18 2Dp10 Disruption of *SED1* genes of diploid sake yeast using LOH, and its applications
..... ○Atsushi KOTAKA¹, Hiroshi SAHARA¹, Kazunori SHIOTA¹,
Mitsuyoshi UEDA², Akihiko KONDO³, Yoji HATA¹
(¹Res. Inst., Gekkeikan Sake Co., ²Div. Appl. Life Sci., Grad. Sch. Agric.,
Kyoto Univ., ³Dept. Chem. Sci. Eng., Kobe Univ.)
- 15:30 2Dp11 Molecular breeding of lactic acid tolerant yeast for efficient lactic acid production
..... ○Toshihiro Suzuki, Kenta Wakazono, Minetaka Sugiyama, Yoshinobu Kaneko, Satoshi Harashima
(Dept. Mat. Life Sci., Osaka Univ.)
- 15:42 2Dp12 Mechanism of tolerance to lactic acid conferred by overexpression of *ESBP6* gene in *Saccharomyces cerevisiae*
..... ○Shinpei AKASE, Momoko MUNE, Minetaka SUGIYAMA, Yoshinobu KANEKO,
Satoshi HARASHIMA (Dept. Biotech., Grad. Sch. Eng., Osaka Univ.)
- 15:54 2Dp13 Detection of microbiologically available methanol on plant surface by methanol-inducible promoters
..... ○Kosuke KAWAGUCHI¹, Hiroya YURIMOTO¹, Yasuyoshi SAKAI^{1,2}
(¹Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ., ²JST·CREST)
- 16:06 2Dp14 Function of protein phosphatase Siw14 in response to caffeine and rapamycin in *Saccharomyces cerevisiae*.
..... ○Minori NUMAMTO, Masataka HIRASAKI, Minetaka SUGIYAMA, Yoshinobu KANEKO,
Satoshi HAHASHIMA (Dept. Mat. Life Sci., Osaka Univ.)
- 16:18 2Dp15 Cell death by excision of centromere sequence from a chromosome in *Saccharomyces cerevisiae*
..... ○Hiroaki MATSUZAKI, Yoshinori UENISHI, Ai OKADA, Masayoshi KIKUCHI, Takushi HATANO
(Dept. Biotech., Fac. Life Sci. Biotech., Fukuyama Univ.)
- 16:30 2Dp16 Promoter analysis of an arsenic resistant gene cluster in *Rhodococcus jostii* RHA1
..... ○Motoki SATO¹, Shinji TSUKANO², Ginro ENDO², Masao FUKUDA³, Keisuke MIYAUCHI²
(¹Dept. Civil Eng., Tohoku-Gakuin Univ., ²Dept. Civil Eng.,
Tohoku-Gakuin Univ., ³Dept. Bioeng., Nagaoka Univ. Tech.)
- 16:42 2Dp17 Cloning of Archaeal gene from activated sludge using LNA(locked nucleic acid)
..... ○Nobuhiro KUROIWA¹, Izumi NOMURA¹, Atushi ITO¹, Kouhei NAKAMURA²,
Tohru SUZUKI¹, Michio TABATA¹
(¹Sci. Biol. Res., United Grad. Sch. Agric. Sci., Gifu Univ., ²Gifu Univ.)

Room E Morning (9:00~11:48)

General Presentation (Fermentation physiology, Fermentation technology)

- 9:00 2Ea01 Properties of enzyme production by *Aspergillus oryzae* using solid-state fermentation in non-airflow box
..... ○Tomoka KAWASE¹, Tsuyoshi MIYAKE², Hiroyuki SAMMOTO²,
Hidehi TAKEBE³, Katsuya GOMI⁴, Masahiro KARIYAMA¹
(¹Fujiwara Tech., ²Okayama Pref. Ind. Tech. Ctr.,
³Ingredia Solution Co. Ltd., ⁴Tohoku Univ. Grad. Sch. Agric.)
- 9:12 2Ea02 Analysis of enzyme production by submerged culture of *Aspergillus oryzae*
..... ○Susumu MASUDA¹, Kaori KIKUCHI¹, Yuko MATSUMOTO¹,
Toshikazu SUGIMOTO¹, Hiroshi SHOJI¹, Masayuki TANABE²
(¹Res. Lab. Brew. Tech., Asahi Breweries, Ltd., ²Res. Develop. Head. Alc. Bev., Asahi Breweries, Ltd.)
- 9:24 2Ea03 Analysis of the enzyme production by submerged culture of *Aspergillus oryzae* -Analysis of extracellular proteins from culture-
..... ○Tadashi MUTO¹, Masahito MORIMOTO¹, Toshikazu SUGIMOTO¹, Hiroshi SHOJI¹,
Masayuki TANABE² (¹Research Laboratories of Brewing Technology, Asahi Breweries, Ltd.,
²Research & Development Headquarters for Alcoholic Beverages., Asahi Breweries, Ltd.)
- 9:36 2Ea04 Production of valuable substance by biotransformation of component from plant using fungi
..... ○Takehiko TSURUTA (Dept. Chem. Eng. Biol. Environ., Hachinohe Institute Technol.)
- 9:48 2Ea05 Genetic and biochemical analysis of riboflavin biosynthesis in *Ashbya gossypii* mutant
..... ○Yoko ITOH¹, Satoru TAZIMA², Enoch Y. PARK^{1,2} (JST Innovation Satellite Shizuoka,
²Fac. Agric., Shizuoka Univ., ³Integ. Biosci. Sect., Grad. Sch. Sci. Technol., Shizuoka Univ.)

- 10:00 2Ea06 Improvement of riboflavin production by disrupting *cis*-aconitate decarboxylase (*CADI*) of *Ashbya gossypii*
..... ○Takashi Sugimoto¹, Enoch Y. Park² (¹Biosci. Sect., Grad. Sch. Sci. Technol., Shizuoka Univ.,
²Integ. Biosci. Sect., Grad. Sch. Sci. Technol., Shizuoka Univ.)
- 10:12 2Ea07 Cloning and functional analysis of a sterol methyl transferase homologous gene from oleaginous filamentous fungus
Mortierella alpina 1S-4
..... ○Eiji SAKURADANI, Yukiko TAKAFUCHI, Shuo ZHANG, Yoshimi SHIMADA, Sakayu SHIMIZU
(Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 10:24 2Ea08 Screening of sterol-overproducing mutants derived from filamentous fungus *Mortierella alpina*
.....Eiji SAKURADANI, ○Yoshihiro FUKUOKA, Yoshimi SIMADA, Sakayu SHIMIZU
(Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 10:36 2Ea09 D-Lactic acid fermentation with Koji
..... ○Shinta Nakano¹, Yutaka Tokiwa² (¹Tajimaya, ²AIST)
- 10:48 2Ea10 Production of lactic acid by alkaliphilic bacteria
.....Sanchez Andres¹, P. Calabia Buenaventurada², ○Tokiwa Yutaka², Aiba Seiichi²
(¹Heridia Univ, Costa Rica, ²IBRF, AIST)
- 11:00 2Ea11 Enzymatic synthesis and copolymerization of polymerizable nucleoside
..... ○Takao RAKU, Yutaka TOKIWA (Green Products Laboratory)
- 11:12 2Ea12 Insolubilization of fibroin film for biofilm formation
..... ○Kadzuyo TSUTSUMI¹, Akane OGAWA¹, Tsubasa FUKUDA², Tomonori KAWANO¹, Kazuya UEZU¹,
Hiroshi MORITA¹ (¹Dept. Chemical processes and Environments., Kitakyushu Univ.,
²Graduate School of Environmental Engineering., Kitakyushu Univ.)
- 11:24 2Ea13 Development of energy recovery process from marine biomass(kelp) by two-step methane fermentation
..... ○Yuki MURATO, Toshihide KAKIZONO, Naomichi NISHIO
(Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 11:36 2Ea14 Effects of the nitrogen fertilization on fermented quality and microbial community in tropical grass silage
..... ○TOMOYUKI NAMIHIRA, NAOYA SHINZATO, HIDEAKI MAEKAWA, TORU MATSUI
(COMB. Ryukyuu Univ.)

Room E Afternoon (13:30~17:30)

Terui Award presentation,

General Presentation (Fermentation physiology, Fermentation technology)

Terui Award presentation

- 13:00 2Ep01 **Development and Environmental Assessment of Fermentation Process for Biopolyester Production**
..... ○Takeharu Tsuge (Dept. Innov. Eng. Mat., Institute of Technology)
- 13:54 2Ep03 Effect of up-regulation of nisin biosynthetic genes on nisin production of *Lactococcus lactis*
..... ○Kazuaki NINOMIYA¹, Tomoko NOGUCHI², Kumiko MORIWAKI², Antari CAHYANI²,
Yoshio KATAKURA², Suteaki SHIOYA³ (¹Dept. Chem. Chem. Eng., Kanazawa Univ.,
²Dept. Mat. Life Sci., Osaka Univ., ³Fac. Appl. Life Sci., Sojo Univ.)
- 14:06 2Ep04 Screening of microorganisms possessing purine base-metabolizing activity useful for hyperuricemia prevention.
..... ○Iori KOZONO, Jun OGAWA, Hitomi TAENAKA, Nobuyuki HORINOCHI, Sakayu SHIMIZU
(Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 14:18 2Ep05 Effect on the productive efficiency by introduction of stress responsive genes into amino acid producing *E. coli*
..... ○Mizuho KOMAKI¹, Yoshihiro OJIMA¹, Motomu NISHIOKA²,
Masahito TAYA¹, Shintaro IWATANI³, Nobuharu TSUJIMOTO³
(¹Grad. Sch. Eng. Sci., Osaka Univ., ²Osaka Pref. Col. Tech., ³Ferment. Biotech. Lab., Ajinomoto Co.)
- 14:30 2Ep06 The Effect of Mycolic Acid Layer on Glutamate Production in *Corynebacterium glutamicum*
..... ○Ayako HACHISU, Takuo HASEGAWA, Ken-ichi HASHIMOTO, Ryuichi SHIBA, Hisashi KWASAKI,
Tuyoshi NAKAMATU (Dept. Mat. Sci. Eng., Grad. Sch. Eng., Tokyo Denki Univ.)
- 14:42 2Ep07 Changes in enzyme activities at the pyruvate node in glutamate-overproducing *Corynebacterium glutamicum*
..... ○Takafumi ARAI, Kenichi HASIMOTO, Hisashi KAWASAKI, Tuyoshi NAKAMATU
(Dept. Mat. Sci. Eng., Grad. Sch. Eng., Tokyo Denki Univ.)
- 14:54 2Ep08 Metabolic changes in *Corynebacterium glutamicum* in glutamate production medium
..... ○Yusuke YAZAWA, Ken-ichi HASHIMOTO, Hisashi KAWASAKI, Tsuyoshi NAKAMATSU
(Dept. Mat. Sci. Eng., Grad. Sch. Eng., Tokyo Denki Univ.)
- 15:06 2Ep09 Functional characterization of L-alanine efflux genes in *E. coli*
..... ○Hatsuhiro HORI, Tasuke ANDO, Hiroshi YONEYAMA, Ryoichi KATSUMATA
(Div. Biosci. Biotech. Future Bioind., Grad. Sch. Agric. Sci., Tohoku Univ.)
- 15:18 2Ep10 Analysis of L-alanine synthesizing enzymes AvtA, AlaC and AlaD of *E. coli*
..... ○Hiroshi YONEYAMA, Sang-Jo LIM, Ryoichi KATSUMATA
(Div. Biosci. Biotech. Future Bioind., Grad. Sch. Agric. Sci., Tohoku Univ.)

- 15:30** 2Ep11 Production and properties of soluble polysaccharide in *Kozakia baliensis* NBRC16679
 ○Ayumi OTSUKA¹, Hidehisa KAWAHARA¹, Hitoshi OBATA¹
 (1Dept. Life Sci. and Biotech., Kansai Univ., 2Dept. Life Sci. and Biotech.,
 Kansai Univ., 3Dept. Life Sci. and Biotech., Kansai Univ.)
- 15:42** 2Ep12 Development of genetic transformation system for thermophilic anaerobic bacterium, *Moorella* sp.HUC22-1
 ○Takaaki MASUMA¹, Kentaro INOKUMA¹, Yutaka NAKASHIMADA², Toshihide KAKIZONO¹,
 Naomichi NISHIO¹ (1Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.,
 2Dept. Appl. Chem., Grad. Sch. Eng., Tokyo Univ. Agric. Technol.)
- 15:54** 2Ep13 Study on growth condition of *Agrobacterium tumefaciens* -transformed *Haematococcus pluvialis* (1)
 ○Yachiyo HAYAMA¹, Toshihide KAKIZONO², Naomichi NISHIO²
 (1Dept. Soc. Env. Eng. Grad. Sch. Eng., Hiroshima Univ., 2Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat.,
 Hiroshima Univ., 3Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 16:06** 2Ep14 Purification and characterization of sucrose hydrolyzing enzyme produced by *Lactobacillus paracasei* 1532
 ○Hiroto Homma¹, Hideaki Yamashita¹, Hiroharu Tokuda¹, Takashi Ueno², Kotoyoshi Nakanishi¹
 (1Dept. Brew. Ferment., Tokyo Univ. Agric., 2Dept. Mater. Enviro. Eng., Hakodate Nati. Col. Tec.)
- 16:18** 2Ep15 Expression of carboxymethylcellulase gene of *Bacillus subtilis* subsp. *subtilis* in *E. coli*
 ○Jin-Woo Lee^{2,3}, Bo-Hwa Lee^{2,3}, Jin-Woo Lee⁴, Won-Joo Youn⁴, You-Jung Lee^{1,3}
 (1Dept. Medical Bioscience, Graduate School of Dong-A Univ. Korea, 2Dept. Biotechnology,
 Dong-A Univ. Korea, 3BK21 Bio-Silver Project of Dong-A Univ. Korea, 4JinSang Co., Busan, Korea)
- 16:30** 2Ep16 Improvement of DFA IV production by recombinant *Bacillus subtilis* with expression vector contains mutational *degQ* gene.
 ○Nobuchika TAKESUE¹, Teruo SONE¹, Michiko TANAKA¹, Fusao TOMITA², Kozo ASANO¹
 (1Lab. Appl. Microbiol., Grad. Sch. Agric., Hokkaido Univ., 2University of the Air, Hokkaido Univ.)
- 16:42** 2Ep17 Amino lipid production from *Gluconoacetobacter xylinus* and its utilization
 ○Rio HAMANO¹, Kazuki DOIUCHI¹, Eri YOSHIDA¹, Hidehisa KAWAHARA¹, Hitoshi OBATA¹
 (1Dept. Life Sci. and Biotech., Kansai Univ., 2Dept. Life Sci. and Biotech., Kansai Univ.,
 3Dept. Life Sci. and Biotech., Kansai Univ., 4Dept. Life Sci. and Biotech.,
 Kansai Univ., 5Dept. Life Sci. and Biotech., Kansai Univ.)
- 16:54** 2Ep18 Production of conjugated fatty acids by anaerobic bacteria
 Shigenobu KISHINO^{1,2}, ○Si-Bum PARK¹, Masaaki KAWAI¹, Jun OGAWA¹, Kenzo YOKOZEKI²,
 Sakayu SHIMIZU¹ (1Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.,
 2Industrial Microbiology Lab., Grad. Sch. Agric., Kyoto Univ.)
- 17:06** 2Ep19 Efficient Production of Optically Pure D-Lactic Acid from Raw Starch
 ○Qiao ZHANG¹, Kenji OKANO², Satoru SHINKAWA¹,
 Tsutomu TANAKA³, Hideki FUKUDA³, Akihiko KONDO¹
 (1Grad. Sch. Eng., Kobe Univ., 2Grad. Sch. Sci. Tech., Kobe Univ., 3Org. Adv. Sci. Tech., Kobe Univ.)
- 17:18** 2Ep20 Screening of novel D-lactic acid producers 3)Productivity of D-lactic acid by newly isolated *Sporolactobacillus* strains
 ○Minako HOSHINO¹, Hironori ISHIHARA¹, Tai UTIMURA², Kentaro KODAMA^{1,2}
 (1Musashino Chemical Laboratory Co., 2Dept. Appl. Bio. chem., Fac. Appl. Biosci., Tokyo Univ. Agric.)

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

General Presentation (Enzymology, Enzyme / protein engineering)

- 9:00** 2Fa01 Phospholipid Conversion in Ionic Liquid by Phospholipase D
 ○Toru MIYASHITA¹, Yuko ITO¹, Nobuaki SHIMIZU³, Chiaki OGINO²
 (1Dept. Mat. Sci. Eng., Grad. Sch. Sci. Tec., Kanazawa Univ.,
 2Dept. Chem. Sci. Eng., Kobe Univ., 3Inst. Nature Environ. Tec., Kanazawa Univ.)
- 9:12** 2Fa02 Molecular cloning and characterization of a thermostable lipase from plant *Carica papaya*
 ○Chi-Hsien LIU¹, Kun-Hung CHANG¹
 (1Graduate Institute of Biochemical and Biomedical Engineering, Chang Gung University)
- 9:24** 2Fa03 Analysis of phospholipase D mutants preferentially synthesizing 1- and 3-phosphatidylinositols
 ○Atsushi MASAYAMA, Kaori Tsukada, Hideo NAKANO, Yugo IWASAKI
 (Grad. Sch. Biol. Agr. Sci., Nagoya Univ.)
- 9:36** 2Fa04 Synthesis of phosphatidylinositol by the mutant phospholipase D.
 ○Akihiro MORI, Atsushi MASAYAMA, Kaori TSUKADA, Hideo NAKANO, Yugo IWASAKI
 (Grad. Sch. Biol. Agr. Sci., Nagoya Univ.)
- 9:48** 2Fa05 Cloning of the novel L-amino acid ligase
 ○Akihiro Senoo¹, Kazuhiko Tabata¹, Yoshiyuki Yonetani¹, Makoto Yagasaki²
 (1BioFrontier Lab., Kyowa Hakko Kogyo Co., Ltd., 2Tech. Res. Lab., Kyowa Hakko Kogyo Co., Ltd.)
- 10:00** 2Fa06 Screening and Characterization of Putrescine oxidase
 ○Akira YAMAMURA¹, Ayako NAGAOKA², Akimi TEDUKA², Kunio MATSUMOTO¹
 (1Dep. Appl. Biosci., Kanagawa Inst. Technol., 2Dep. Appl. Chem., Kanagawa Inst. Technol.)

- 10:12** 2Fa07 Antitumor enzyme L-Lysine α -oxidase from filamentous fungi
 \circ Haruka NAKATA¹, Takashi TAMURA¹, Junko INAGAKI², Hitoshi KUSAKABE³, Kenji INAGAKI¹
 (1Grad. Sch. Nat. Sci. & Tech., Okayama Univ.,
²Grad. Sch. Med. Dent. & Pharm. Sci., Okayama Univ., ³Enzyme Sensor)
- 10:24** 2Fa08 Improvement of *N*-acylamino acid racemase
 \circ Jumpei Koyama², Takao Sato¹, Shinji Tokuyama²
 (1Dep. Bioen., Tokyo Inst. Technol., ²Dept. Appl. Biol. Chem., Fac. Agric., Shizuoka Univ.)
- 10:36** 2Fa09 Synthesis of L-aspartic acid by using L-aspartate dehydrogenase
 \circ Norika KAWAKAMI¹, Hiroyuki ASHIDA², Takahiro ISHIKAWA¹,
 Hitoshi SHIBATA¹, Yoshihiro SAWA¹
 (1Life Sci. & Biotechnol., Shimane Univ., ²Mol. Func. Genom., Shimane Univ.)
- 10:48** 2Fa10 Application of D-threo-3-dehydratase from *Delftia* sp. HT23
 \circ Masaru WADA, Shigeki SHINOHARA, TAKAYUKI MAEDA, ATSUSHI YOKOTA
 (Divi. Appl. Biosci., Grad. Sch. Agric., Hokkaido Univ.)
- 11:00** 2Fa11 Modification of L-phenylalanine hydroxylase by site-directed mutagenesis
 \circ Ryotaro HARA¹, Ai NOZAWA², Kuniki KINO³
 (1Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ., ²Dept. Appl. Chem., Sch. Sci. Eng.,
 Waseda Univ., ³Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 11:12** 2Fa12 A novel L-amino acid ligase, which is encoded by a gene in the rhizoctin biosynthetic gene cluster, synthesizes oligopeptide
 \circ Toshinobu ARAI, Masahiro KOKUBO, Kuniki KINO
 (Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 11:24** 2Fa13 Characterization of a novel L-amino acid ligase from *Bacillus subtilis* NBRC 3134
 \circ Daisuke TATEIWA, Toshinobu ARAI, Kuniki KINO
 (Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 11:36** 2Fa14 Study of the gene cluster involved in biosynthesis of rhizoctin from *Bacillus subtilis* NBRC3134
 \circ Hiroshi TAKAZAWA, Toshinobu ARAI, Kuniki KINO
 (Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 11:48** 2Fa15 Synthesis of Depsipeptide Using Amino Acid Ligase with Broad Substrate Specificity
 \circ Masaru SATO, Ryoko SATKE, Kuniki KINO (Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)

Room F Afternoon (13:30~17:06)

General Presentation (Enzymology, Enzyme / protein engineering)

- 13:30** 2Fp01 A correlation between firefly luciferase catalyzed bioluminescence and enantioselective thioester formation of 2-arylpropanoic acid
 \circ Dai-ichiro KATO, Keisuke YOKOYAMA, Hiromitsu YOSHIDA, Asami BANSHO,
 Masahiro TAKEO, Seiji NEGORO (Grad. Sch. Eng., Univ. Hyogo)
- 13:42** 2Fp02 Modification of the Gene Encoding a Reversible Salicylic Acid Decarboxylase for Selective Production of 4-Amino-salicylic Acid
 \circ Keiko KOYAMA, Satomi YANASO, Shusuke TAKAHASHI,
 Takasumi HATTORI, Kohtaro KIRIMURA
 (Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 13:54** 2Fp03 Microbial regioselective hydroxylation of 1,3-adamantanediol
Koichi MITSUKURA, \circ Naoki YAMANAKA, Toyokazu YOSHIDA, Toru NAGASAWA
 (Dept. Biomol. Sci., Gifu Univ.)
- 14:06** 2Fp04 Characterization of nitrilases hydrolyzing cyanohydrins
Toyokazu YOSHIDA, \circ Fumiko NAKAJIMA, Ayaka IWASAKI, Koichi MITSUKURA,
 Toru NAGASAWA (Dept. Biomol. Sci., Gifu Univ.)
- 14:18** 2Fp05 Molecular characterization of *Fusarium* nitrilase
Toyokazu YOSHIDA, \circ Hiroe TAKAHASHI, Toru NAGASAWA (Dept. Biomol. Sci., Gifu Univ.)
- 14:30** 2Fp06 High yield synthesis of 12-aminolauric acid by omega-laurolactam hydrolase from *Acidovorax* sp. T31
 \circ Yasuhisa FUKUTA¹, Hidenobu KOMEDA¹, Youichi YOSHIDA², Yasuhisa ASANO¹
 (1Biotech. Res. Center, Toyama Pref. Univ., ²Research and Development Headquarters, Ubekousan)
- 14:42** 2Fp07 Characterization of *Bacillus* P450 monooxygenases by rapid substrate screening using FT-ICR mass spectrometry
 \circ Toshiki Furuya^{1,2}, Daisuke Shibata³, Kuniki Kino^{1,3}
 (1Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ., ²JSPS, ³Kazusa DNA Res. Inst.)
- 14:54** 2Fp08 A strategy to improve a whole-cell catalyst system comprising of cytochrome P450cam
 \circ Takeshi SHIMIZU¹, Tsuyoshi MOURI¹, Noriho KAMIYA^{1,2}, Masahiro GOTO^{1,2}
 (1Dept. Appl. Chem., Kyushu Univ., ²C. Future Chem., Kyushu Univ.)
- 15:06** 2Fp09 Construction of cytochrome P450BM3 reaction system linked by two-step cofactor regeneration
 \circ Tsuyoshi MOURI¹, Noriho KAMIYA^{1,2}, Masahiro GOTO^{1,2}
 (1Dept. Appl. Chem., Kyushu Univ., ²C. Future Chem., Kyushu Univ.)

- 15:18** 2Fp10 Application of branched-structure-mediated intramolecular electron transfer system to a thermophilic P450
..... ○Hidehiko HIRAKAWA^{1,2}, Teruyuki NAGAMUNE^{1,2,3} (¹Dept. Bioeng., Grad. Sch. Eng., Univ. Tokyo,
²CNBI, ³Dept. Chem. Biotech., Grad. Sch. Eng., Univ. Tokyo)
- 15:30** 2Fp11 Recombinant expression and refolding of a tetrathionate hydrolase from the iron-oxidizing bacterium *Acidithiobacillus ferrooxidans*
..... ○Tadayoshi KANAOKA¹, Chie MATSUMOTO², Kumiko SHIRAGA²,
Kazuo KAMIMURA¹, Tsuyoshi SUGIO¹
(¹Grad. Sch. Natural Sci. Technol., Okayama Univ., ²Fac. Agric., Okayama Univ.)
- 15:42** 2Fp12 Transcriptional analysis of a tetrathionate hydrolase gene in the iron-oxidizing bacterium *Acidithiobacillus ferrooxidans*
..... ○Chisa MURAKAMI, Tadayoshi KANAOKA, Kazuo KAMIMURA, Tsuyoshi SUGIO
(Grad. Sch. Natural Sci. Technol., Okayama Univ.)
- 15:54** 2Fp13 Effect of Diol Dehydratase-reactivating Factor for Formation of 3-Hydroxypropionaldehyde by Diol Dehydratase
..... ○Koichi MORI, Seiki YAMADA, Tetsuo TORAYA (Dept. Biosci. Biotech., Okayama Univ.)
- 16:06** 2Fp14 Gene cloning and characterization of 3-quinuclidinone oxidoreductase from *Microbacterium luteolum* JCM 9174
..... ○Kentaro ISOTANI, Junji KUROKAWA, Takashi NEGISHI, Yoshihide MAKINO, Nobuya ITOH
(Biotech. Res. Center, Toyama Pref. Univ.)
- 16:18** 2Fp15 Metabolism of 2-chloroacrylate in *Burkholderia* sp. WS
..... ○Tatsuo KURIHARA, Michiyo FUJITA, Amr M. MOWAFY, Atsushi KURATA, Nobuyoshi ESAKI
(Inst. Chem. Res., Kyoto Univ.)
- 16:30** 2Fp16 Synthesis of ethyl lactate from view of biorefinery
..... ○Chiaki INABA, Kouichi KURODA, Mitsuyoshi UEDA
(Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 16:42** 2Fp17 Analysis of refolding condition in a defensin BJ-AFP1 from *Brassica juncea*
..... ○Yoshiyuki Sagehashi¹, Takashi Tochiwara², Shinichiro Takashima³, Hiroaki Takaku⁴,
Masahiro Ohshima³, Osamu Yatou¹, Hiroshi Tanaka¹, Motoshige Kawata³
(¹NARC, ²Rakuno Gakuen University, ³NICS, ⁴NUPALS)
- 16:54** 2Fp18 Decolorizing of azo dyes by azoreductase from *Bacillus* sp. B29 using modified coenzyme
..... ○Yutaka WATANABE¹, Jyunji IKEUCHI¹, Taeko IZUMI¹, Toshihiko OOI², Tatsuro KIJIMA¹
(¹Div. Chem. ChemEng. Grad. Sch. Sci. Eng., Yamagata Univ.,
²Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ.)

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

General Presentation (Enzymology, Enzyme / Protein engineering)

- 9:00** 2Ga01 Methanol metabolism of *Bradyrhizobium* sp. CE-3
..... ○Nanungagus FITRIYANTO¹, Mako FUSHIMI², Tomonori IWAMA², Keiichi KAWAI²
(¹Sci. Biol. Res., United Grad. Sch. Agric. Sci., Gifu Univ., ²Fac. Appl. Biol. Sci., Gifu Univ.)
- 9:12** 2Ga02 Construction of RNA-selective catcher using yeast displaying RNA-binding protein for quantitative analysis of non-coding RNA
..... ○Eri HAYASHI, Hironobu MORISAKA, Kouichi KURODA, Mitsuyoshi UEDA
(Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 9:24** 2Ga03 Conversion of recognition specificity of *Bacillus subtilis* YxaF transcriptional regulator toward flavonoids
..... ○Kazutake HIROOKA, Yusuke DANJO, Shingo SASAKI, Yasutaro FUJITA
(Dept. Biotech., Fac. Life Sci. Biotech., Fukuyama Univ.)
- 9:36** 2Ga04 Improvement of solubility of recombinant human haptoglobin by amino acid substitutions
..... ○Kentaro SAKAI, Asuka UCHIKAWA, Wakako TSUGAWA, Koji SODE
(Dept. Biotech., Tokyo Univ. Agric. Technol.)
- 9:48** 2Ga05 Screening of hepatitis C virus helicase inhibitors using fluorescence quenching phenomenon
..... ○Yasuyoshi MATSUDA^{1,2}, Hidenori TANI^{1,2}, Osamu FUJITA^{1,2}, Satoshi TSUNEDA²,
Nobuyoshi AKIMITSU³, Jyunnichi TANAKA⁴, Nobutada KIMURA¹,
Yuuji SEKIGUCHI¹, Naohiro NODA¹
(¹IBRF, AIST, ²Dept. Med. Bio sci., Sch. Adv. Sci. Eng., Waseda Univ.,
³RI. Center, Univ. Tokyo, ⁴Dept. Chem. Bio. Marine sci., Fac. Sci., Univ. Ryukyus)
- 10:00** 2Ga06 Preparation of Novel Biocomposite Material Based on Ionic Liquid Gel
..... ○Kazunori Nakashima¹, Tatsuo Maruyama³, Norihiro Kamiya^{1,2}, Masahiro Goto^{1,2}
(¹Dept. Appl. Chem., Kyushu Univ., ²Future Chem., Kyushu Univ., ³Dept. Chem. Sci. Eng., Kobe Univ.)
- 10:12** 2Ga07 Characterization of anti-peptide antibody for wheat allergenic protein CM16
..... ○Shigeru OITA (Natl. Agric. Food Res. Org., Natl. Agric. Res. Center Tohoku Region)
- 10:24** 2Ga08 Production of allergen molecules towards nano-molecular diagnosis
..... ○Chika KAWAMOTO¹, Tomohide NODA², Seiji KAWAMOTO¹,
Tsunehiro AKI¹, Akio KURODA¹, Kazuhisa ONO¹
(¹Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.,
²Res. Inst. Integ. Sci. Nanodev. Bio. Sys., Hiroshima Univ.)

- 10:36** 2Ga09 Characterization of proteins genetically-fused with polystyrene binding peptides and application to immunoassay
..... ○Yoichi KUMADA¹, Kyoko HAMASAKI¹, Yuki SHIRITANI¹, Takuhiro Ohse²,
Yoshio KATAKURA³, Kazuhiro NAKANISHI⁴, Michimasa KISHIMOTO¹
(¹Dept. Chem. Mater. Sci., Kyoto Inst. Tech., ²Enplas Laboratories inc.,
³Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ⁴Dept. Biotech., Okayama Univ.)
- 10:48** 2Ga10 Enzyme-mediated antibody-protein conjugation
..... ○Takayuki SAKAMOTO¹, Tsutomu TANAKA², Hideki FUKUDA², Akihiko KONDO¹
(¹Grad. Sch. Eng., Kobe Univ., ²Org. Adv. Sci. Tech., Kobe Univ.)
- 11:00** 2Ga11 Preparation of Antibody-Enzyme fusion complex by L-chain fusion method
..... ○Chung Yong HAN¹, Masaki IHARA², Hiroshi UEDA^{1,2}
(¹Dept. Chem. Biotech., Sch. Eng., Univ. Tokyo, ²Dept. Bioeng., Sch. Eng., Univ. Tokyo)
- 11:12** 2Ga12 Development of Fab antibody phage display system that can perform Open Sandwich ELISA and selection of specific antibodies from binary-coded libraries
..... ○Jinhua DONG¹, Masaki IHARA¹, Hiroshi UEDA^{1,2}
(¹Dept. Bio. Eng., Grad. Sch. Eng., Univ. Tokyo, ²Dept. Chem. Biotech., Grad. Sch. Eng., Univ. Tokyo)
- 11:24** 2Ga13 *In vitro* affinity maturation of anti-peptide antibody variable region by Open-Sandwich selection
..... ○Hiroto Iwai¹, Ozturk Bengu¹, Masaki Ihara², Hiroshi Ueda^{1,2}
(¹Dept. Chem. Biotech., Sch. Eng., Univ. Tokyo, ²Dept. Bioeng., Sch. Eng., Univ. Tokyo)
- 11:36** 2Ga14 Generation of monoclonal antibodies against ganglioside from single B cells using RT-PCR technique and *in vitro* expression
..... ○Kazunori ARAI, Takaaki KOJIMA, Chihiro SATO, Ken KITAJIMA, Hideo NAKANO
(Grad. Sch. Biol. Agr. Sci., Nagoya Univ.)
- 11:48** 2Ga15 Construction of high-efficient antibody expression system with cell free protein synthesis
..... ○Sho YAHATA¹, Shinya TOBA³, Hiroyuki KISHI², Atsushi MURAGUCHI², Hideo NAKANO¹
(¹Grad. Sch. Biol. Agr. Sci., Nagoya Univ.,
²Grad. Sch. Medicine. Pharmaceutical. Sci., Toyama Univ., ³SC World, Inc)

Room G Afternoon (13:30~17:30)

General Presentation (Enzymology, Enzyme / Protein engineering)

- 13:30** 2Gp01 Transcriptional regulation of poly(3-hydroxybutyrate) depolymerase by tetR-type gene
..... ○Hiroshi OKURA, Mari SIRAKI, Terumi SAITO (Dept. Biol. Sci., Kanagawa Univ.)
- 13:42** 2Gp02 Characterization of Putative Cell Wall Degradation Enzyme, YomI, in *Bacillus subtilis*
..... ○I Putu Sudiarta¹, Junichi SEKIGUCHI¹ (¹Interdiscipl. Grad. Sch. of Sci. Technol., Shinshu University)
- 13:54** 2Gp03 Site-specific protein modification with functional molecule using novel enzyme
..... ○Ryosuke TAKASE¹, Tsutomu TANAKA², Hideki FUKUDA², Akihiko KONDO¹
(¹Grad. Sch. Eng., Kobe Univ., ²Org. Adv. Sci. Tech., Kobe Univ.)
- 14:06** 2Gp04 Expression of the eugenol receptor from *Mus musculus* used the chimeric GPCR in yeast
..... ○Maiko YOROZU, Yousuke FUKUTANI, Tomoko NAKAMURA, Masafumi YOHDA
(Dept. Biotechnol., Tokyo Univ. Agric. Technol.)
- 14:18** 2Gp05 A novel strategy in the development of multi-functional enzyme using engineering accessory protein
..... ○Asuka UCHIKAWA¹, Kunou SUZUKI², Wakako TSUGAWA¹, Koji SODE¹
(¹Dept. Biotech., Tokyo Univ. Agric. Technol., ²Panasonic Shikoku Electronics Co., Ltd.)
- 14:30** 2Gp06 Degradation of PrP^{Res} by manganese peroxidase
..... ○Yuji TSUTSUMI¹, Eri TAKATA², Yuichi MATSUURA³, Shirou MOHRI³, Ryuichiro KONDO¹
(¹Fac. Agric., Kyushu Univ., ²Grad. Sch. Biores. Bioenviron. Sci.,
Kyushu Univ., ³Natl. Inst. Animal Health)
- 14:42** 2Gp07 Genome-wide screening of novel fructosyl amine oxidase from prokaryote
..... ○Satoshi KATAYAMA, Koji SODE (Dept. Biotech., Tokyo Univ. Agric. Technol.)
- 14:54** 2Gp08 Purification and properties of tuliposide-converting enzyme from tulip tissues
..... ○Yasuo KATO¹, Kazuaki SHOJI², Yukio SATO³, Shinjiro OGITA¹
(¹Grad. Sch. Biotech., Toyama Pref. Univ., ²Toyama Pref. Agric. Forest. Fish. Res. Cent.,
³Dept. Liberal Arts Sci., Toyama Pref. Univ.)
- 15:06** 2Gp09 Molecular identification of reductase involved in detoxifying alpha-keto acid derived from alginate monon-saccharide
..... ○Akihito OCHIAI, Ryuichi TAKASE, Wataru HASHIMOTO, Kousaku MURATA
(Div. Food Sci. Biothech., Grad. Sch. Agric., Kyoto Univ.)
- 15:18** 2Gp10 The genetic algorithm based engineering strategy for the improvement of substrate specificity of FAD glucose dehydrogenase
..... ○Thi Mai Linh HUYNH, Yuki YAMASHITA, Stefano FERRI, Kazunori IKEBUKURO, Koji SODE
(Dept. Biotech., Tokyo Univ. Agric. Technol.)
- 15:30** 2Gp11 Stabilization of the hexokinase from *Saccharomyces pastorianus*
..... ○Yoshiaki NISHIYA¹, Takahide KISHIMOTO²
(¹Tsuruga Inst. Biotech., Toyobo, ²Dept. Biochem., Toyobo)

- 15:42** 2Gp12 Purification and characterization of novel endo- β -1,4-glucanase from *Aspergillus oryzae*.
..... \circ Seiryu Ujiie, Masataka Ohashi, Akira Watanabe, Takahiro Shintani, Katsuya Gomi
(Div. Biosci. Biotech. Future Bioind., Grad. Sch. Agric. Sci., Tohoku Univ.)
- 15:54** 2Gp13 Biochemical characterization of a novel beta-glucosidase from *Paenibacillus* sp. KB0549
..... Arun NAIR², \circ Akika KUWAHARA¹, Tatsuya YAMAZAKI¹, Seiji TAKAHASHI¹,
Masa-atsu YAMAGUCHI³, Kunio KIYOMOTO², Toru NAKAYAMA¹
(¹Dept. Biomol. Engin., Tohoku Univ., ²Kiyomoto Co., ³Fact. Horticult. Minami-Kyushu University)
- 16:06** 2Gp14 Recombinant cellobiose dehydrogenase production and its application for the development of cellobiose enzyme
fuel cell system
..... \circ Desriani, Stefano FERI, Takuya HANASHI, Koji SODE
(Dept. Biotechnol., Tokyo Univ. Agric. Technol.)
- 16:18** 2Gp15 Pretreatment and enzymatic saccharification of cellulose using ionic liquids
..... \circ Noriho KAMIYA^{1,2}, Yuichi MATSUSHITA¹, Misa UEDA¹, Kazunori NAKASHIMA¹,
Masahiro GOTO^{1,2}, Mamiko NARITA³, Nobuhiro ISHIDA³, Haruo TAKAHASHI³
(¹Dept. Appl. Chem., Kyushu Univ., ²C. Future Chem., Kyushu Univ., ³Toyota Cent. R&D Labs. Inc.)
- 16:30** 2Gp16 Efficient saccharification of cellulose by cellulose loosening factor.
..... \circ Nobuhiro ISHIDA¹, Xin-ai CHEN², Nemuri TODAKA¹, Jun-ichi MARUYAMA²,
Katsuhiko KITAMOTO², Haruo TAKAHASHI¹
(¹Toyota Cent. R&D Labs. Inc., ²Dept. Biotech., Univ. Tokyo)
- 16:42** 2Gp17 Comparison of fungal cellulase for enzymatic hydrolysis of lignocellulosic materials
..... \circ Tatsuya FUJII, Fang XU, Hiroyuki INOUE, Katsuji MURAKAMI, Shigeki SAWAYAMA
(BTRC, AIST)
- 16:54** 2Gp18 Comparison of the cellulase and hemicellulase activity from *Acremonium cellulolyticus* wild and mutant strain
..... \circ Xu Fang, Shinichi Yano, Hiroyuki Inoue, Shigeki Sawayama (BTRC, AIST)
- 17:06** 2Gp19 global scanning of amino acid mutagenesis in cellulase with cell-free protein synthesis system
..... \circ Hideki MATASUDA¹, Yusuke SUGIHARA¹, Chie IMAMURA², Hideo NAKANO¹
(¹Grad. Sch. Biol. Agric. Sci., Nagoya Univ., ²Toyota Cent. R&D Labs. Inc.)
- 17:18** 2Gp20 Construction of the cellulase expression system in *Streptomyces lividans*
..... \circ Yuko ITO¹, Toru MIYASHITA¹, Nobuaki SHIMIZU², Chiaki OGINO³
(¹Dept. Mat. Sci. Eng., Grad. Sch. Sci. Tech., Kanazawa Univ., ²Inst. Nature. Environ. Tech.,
Kanazawa Univ., ³Dept. Chem. Sci. Eng., Kobe Univ.)

Room H Morning (9:00~11:48)

General Presentation (Taxonomy, phylogenetics)

- 9:00** 2Ha01 Isolation of yet-to-be cultured microbes by using duckweed-microbes co-culture method
..... \circ Yasuhiro TANAKA¹, Hideyuki TAMAKI², Hiroaki MATSUZAWA¹,
Yoichi KAMAGATA^{2,3}, Kazuhiro MORI¹
(¹Grad. Sch. Med. Eng., Univ. Yamanashi, ²IBRF, AIST, ³RIGB, AIST)
- 9:12** 2Ha02 Breeding of *S.cerevisiae* thermotolerant strain with high ethanol productivity
..... \circ Daiki YOKOTA¹, Daisuke HASEGAWA¹, Minetaka SUGIYAMA¹, Yoshinobu KANEKO¹,
Boonchird Chuenchit², Satoshi HARASHIMA¹
(¹Dept. Mat. Life Sci., Osaka Univ., ²Dept. Biotechnol., Mahidol Univ.)
- 9:24** 2Ha03 Isolation and Characterization of a Novel Equol-Producing Bacterium from Human Feces
..... \circ Shin-ichiro YOKOYAMA¹, Tohru SUZUKI² (¹Dept. Appl. Microbiol., Gifu Pref. Res. Inst. Bioeng.,
²Sci. Biol. Res., United Grad. Sch. Agric. Sci., Gifu Univ.)
- 9:36** 2Ha04 Behavior and gene transfer properties of genetically modified lactic acid bacteria in simulated natural environments
..... \circ Tatsuro HAGI¹, Jun SHIMA² (¹Natl. Agric. Res. Cent., Natl. Inst. Livestock Grassland Sci.,
²Natl. Agric. Res. Cent., Natl. Food Res. Inst.)
- 9:48** 2Ha05 Biofilm formation by lactic acid bacteria under various conditions.
..... \circ Tatsuki WADA¹, Yutaka YAWATA¹, Nobuhiko NOMURA¹, Hiromi KUBOTA^{1,2},
Syouko SENDA², Hajime TOKUDA², Hiroo UCHIYAMA¹
(¹Grad. Sch. Life Env. Sci., Univ. Tsukuba, ²Kao Safty Evaluation Lab.)
- 10:00** 2Ha06 Analysis of bacterial flora in Ariake Sea tideland
..... \circ Shigemitsu Tanaka¹, Yukihiko Tashiro¹, Yui Nakazono², Naoko Mitsutake², Genta Kobayashi¹,
Fumio Kato², Kohzo Kanda² (¹ASRP., Saga Univ., ²Fac. Agric., Saga Univ.)
- 10:12** 2Ha07 Effect of polyphenols on biofilm formation of periodontopathogenic bacterium, *Eikenella corrodens*
..... \circ Tetsuro MATSUNAGA, Aya NAKAHARA, Akio KATO, Hiroyuki AZAKAMI
(Dept. Biol. Chem., Yamaguchi Univ.)
- 10:24** 2Ha08 Purification and characterization of autoinducer-2 of periodontopathogenic bacterium, *Eikenella corrodens*.
..... \circ Hiroyuki AZAKAMI, Tatsunori HISAMOTO, Mitsuka ONO, Yoshihiko AKAKABE, Akio KATO
(Dept. Biol. Chem., Yamaguchi Univ.)

- 10:36** 2Ha09 Genomic recombination results in hyper-pathogenicity in periodontopathogenic bacterium, *Eikenella corrodens*.
..... ○Ayumi NAKAYUKI, Kaori MORII, Yuki SAITO, Akio KATO, Hiroyuki AZAKAMI
(Dept. Biol. Chem., Yamaguchi Univ.)
- 10:48** 2Ha10 Development of rapid identification method of plant pathogens using MALDI-MS
.....Shinobu ARAMAKI¹, ○Yayoi ICHIKI¹, Kazunori TSUNO², Hiroto TAMURA³,
Kanae TERAMOTO^{4,5}, Hiroaki SATO⁵, Hiromichi YOSHIKAWA¹
(¹Grad. Sch. Eng., Fukuoka Inst. Tech., ²Dept. Plant and Animal Sci., Miyazaki Univ.,
³Dept. Environ. Biosci., Meijo Univ., ⁴Adv. Tech. Division, JEOL Ltd.,
⁵Res. Inst. Environ. Manage. Tech., AIST)
- 11:00** 2Ha11 Search of Streptomycin-resistant Bacteria in Creek Water and Application of MALDI-TOF MS to the first screening of the Isolated Bacteria
..... ○Tomohiro AOKI¹, Yasuto TAKASHIMA¹, Yayoi ICHIKI¹, Natsuki ISHIZAWA¹,
Kanae TERAMOTO², Hiroaki SATO³, Hiroto TAMURA⁴, Hiromichi YOSHIKAWA¹
(¹Grad. Sch. Eng., Fukuoka Inst. Tech., ²Adv. Tech. Division, JEOL Ltd,
³Res. Inst. Environ. Manage. Tech, AIST, ⁴Dept. Environ. Biosci., Meijo Univ.)
- 11:12** 2Ha12 Search of Oxytetracycline-resistant Bacteria and Application of MALDI-TOF MS to the First Screening of the Isolated Bacteria
..... ○Yasuto TAKASHIMA¹, Tomohiro AOKI¹, Yayoi ICHIKI¹, Natsuki ISHIZAWA¹,
Kanae TERAMOTO², Hiroaki SATO³, Hiroto TAMURA⁴, Hiromichi YOSHIKAWA¹
(¹Grad. Sch. Eng, Fukuoka Inst. Tech., ²Adv. Tech. Division, JEOL Ltd.,
³Res. Inst. Environ. Manage. Tech, AIST, ⁴Dept. Environ. Biosci., Meijo Univ.)
- 11:24** 2Ha13 Actinomycete bacteria isolated from the sediments at coastal and offshore area of Nagasaki prefecture, Japan: diversity and biological activity
..... ○Takuji NAKASHIMA¹, Kozue ANZAI¹, Natsumi KUWAHARA¹,
Rieko SUZUKI¹, Satoshi TAKESHITA², Katsuhiko ANDO¹
(¹NITE Biotechnology Development Center (NBDC), ²Joint Research Center Nagasaki Univ.)
- 11:36** 2Ha14 Function of *DAX1* during zebrafish embryogenesis.
..... ○Yosifumi Yajima, Yusuke Tsuruwaka, Masahiro Takagi (Sch. Mat. Sci., JAIST)

Room H Afternoon (13:30~16:54)

General Presentation (Wastewater treatment)

- 13:30** 2Hp01 Effect of surface characteristics of support materials on packed-bed reactors
..... ○Kengo SASAKI¹, Masahiko MORITA¹, Shinichi HIRANO¹, Norio MATUMOTO¹, Hiroaki UEMOTO¹,
Naoya OHMURA¹, Daisuke SASAKI², Shin HARUTA³, Yasuo IGARASHI²
(¹CRIEPI, ²Grad. Sch. Agri. Life Sci, Univ. Tokyo, ³Univ. Tokyo Metropolitan)
- 13:42** 2Hp02 Analyses of bacterial community structure in a thermophilic anaerobic digester degrading organic solid wastes
..... ○Daisuke SASAKI¹, Tomoyuki HORI², Shin HARUTA³, Yoshiyuki UENO⁴,
Masaharu ISHII¹, Yasuo IGARASHI¹
(¹Dept. Biotech., Univ. Tokyo, ²RIGB, AIST, ³Tokyo Metro. Univ., ⁴Kajima Tech. Res. Inst.)
- 13:54** 2Hp03 Molecular ecological characterization of syntrophic acetate oxidizers in a thermophilic anaerobic digester
..... ○Tomoyuki HORI¹, Daisuke SASAKI², Shin HARUTA³, Yoshiyuki UENO⁴,
Masaharu ISHII², Yasuo IGARASHI² (¹RIGB, AIST, ²Dept. Biotech., Univ. Tokyo,
³Tokyo Metro. Univ., ⁴Kajima Tech. Res. Inst.)
- 14:06** 2Hp04 Microbial community of a thermophilic dry methane fermentation reactor and construction of cellulose-degrading consortiums
.....Nakao YASUAKI, Tang YUEQIN, Shigeru MORIMURA, ○Kenji KIDA
(Grad. Sch. Sci. Tech., Kumamoto Univ.)
- 14:18** 2Hp05 Transcriptome analysis of hydrogenotrophic methanogen grown with different hydrogen availability
..... ○Naoya SHINZATO¹, Toru MATSUI¹, Tomoyuki NAMIHARA¹, Yoichi KAMAGATA²
(¹COMB, Univ. Ryukyus, ²Genome-based biofactory, AIST)
- 14:30** 2Hp06 Analysis of the gene involved in sheath formation of *Sphaerotilus natans*
..... ○Hitomi OGAWA¹, Daisuke KASHIWABARA¹, Ichiro SUZUKI¹,
Jun-ichi KOIZUMI¹, Minoru TAKEDA¹, Yoichi KAMAGATA²
(¹Grad. Sch. Eng., Yokohama Nat. Univ., ²Genome-based biofactory, AIST)
- 14:42** 2Hp07 Relationship between nitrate uptake and nitrogen-absorption mechanism of bioreactor using biofilter composed of aerial microalgae for water purification
.....Katsuya ABE, ○Yoshiki ISHII, Hirokuni ONO (Dept. Appl. Chem., Kogakuin Univ.)
- 14:54** 2Hp08 Application studies of anammox process to brewery wastewater - Pretreatment study-
..... ○Hiroyuki OKAMOTO¹, Yasumitsu UCHIHASHI¹, Ngoc Khanh LUONG¹,
Teruo MIYAHARA¹, Kenji FURUKAWA² (¹R.&D. Lab. for Sustainable Value Creation,
Asahi Breweries, Ltd., ²Grad. Sch. Sci. Tech., Kumamoto Univ.)

- 15:06** 2Hp09 Application studies of anammox process to brewery wastewater - anammox treatment study-
..... ○Yasumitsu UCHIHASHI¹, Hiroyuki OKAMOTO¹, Ngoc Khanh LUONG¹,
Teruo MIYAHARA¹, Kenji FURUKAWA² (¹R.&D. Lab.for Sustainable Value Creation,
Asahi Breweries, Ltd., ²Grad. Sch. Sci. Tech., Kumamoto Univ.)
- 15:18** 2Hp10 Application of combined partial nitrification-Anammox process for livestock wastewater treatment
..... ○Sen Qiao¹, Motoki Misaka¹, Taichi Yamamoto¹, Kazuichi Isaka², Tatsuo Sumino², Kenji Furukawa¹
(¹Dept. Civil Eng. Arch., Kumamoto Univ., ²Hitachi Plant Technologies Co. Ltd.)
- 15:30** 2Hp11 Nitrogen removal from domestic anaerobic sludge digester liquor using SNAP process
..... ○Yuki Kawakubo, Sen Qiao, Kenji Furukawa (Grad. Sch. Sci. Tech., Kumamoto Univ.)
- 15:42** 2Hp12 Partial nitrification treatment of waste underground brine containing high ammonium
..... ○Takehiko SHINOHARA¹, Taichi YAMAMOTO¹, Kenji FURUKAWA¹,
Tatsuo KAIHO², Takashi NISHIYAMA³, Takao FUJII³
(¹Grad. Sch. Sci. Tech., Kumamoto Univ., ²KNG Co.,Ltd, ³Fac. Appl. Life Sci., Sojo Univ.)
- 15:54** 2Hp13 A heme *c* protein with low molecular mass abundantly produced in cells of anammox bacterium strain KSU-1
..... ○Takao FUJII¹, Tatsushi KAWASE¹, Takashi NISHIYAMA¹, Kenji FURUKAWA²
(¹Fac. Appl. Life Sci., Sojo Univ., ²Grad. Sch. Sci. Tech., Kumamoto Univ.)
- 16:06** 2Hp14 A novel application of PVA-gel beads to a special-designed anaerobic fluidized bed (SAFB) reactor treating high strength wastewater
..... ○Wenjie Zhang¹, Yasunori Koga¹, Joseph D. Rouse², Kenji Furukawa¹
(¹Graduate School of Science and Technology, Kumamoto University,
2-39-1, Kurokami, Kumamoto 860-8555, Japan, ²Kuraray Co., Ltd.,
Environmental Business Department, Ote Center Bldg.,
1-1-3, Otemachi, Chiyoda-ku, Tokyo 100-8115, Japan)
- 16:18** 2Hp15 A study on decolorization of brown sugar lump shochu wastewater
..... ○Takashi WATANABE^{1,2}, Miki TANAKA^{1,2}, Mami OKADA²,
Kazuo MASAKI², Tsutomu FUJII^{1,2}, Haruyuki IEFUJI^{1,2}
(¹Grad. Sch. Bios. sci., Hiroshima Univ., ²Natl. Res. Inst. Brewing)
- 16:30** 2Hp16 Oil containing wastewater treatment by photosynthetic bacteria
..... ○KEN SASAKI¹, YOUSUKE YAMAOKA², KENJI TAKENO³, HIDENORI SHINKAWA⁴,
NOPARANARAPORN NAPAWAN⁵ (¹Grad. Sch. Hiroshima Kokusai Gakuin Univ.,
²Grad. Sch. Hiroshima Kokusai Gakuin Univ., ³Grad. Sch. Hiroshima Kokusai Gakuin Univ.,
⁴Grad. Sch. Hiroshima Kokusai Gakuin Univ., ⁵Kasetsart Univ.)
- 16:42** 2Hp17 Sterilization of microorganisms by treatment with microbubble
..... ○Kohei Yamamoto¹, Yuji Miki^{1,2}, Tomoki Kobayashi¹, Keiichi Kanbara²,
Akitsugu Yamamoto¹, Yukio Mukai¹
(¹Grad. Sch. Biosci., Nagahama Inst. Bio-Sci. Tech., ²Kansai Automation Equipment Co., Ltd.)

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

General Presentation (Photosynthetic microorganism / Environmental technology)

- 9:00** 2Ia01 Microbiologically Influenced Corrosion of Carbon Steel in Aqueous Natural Gas Plant
..... ○Takuya HANDA, Momoko MOTOKI, Kazuhiko MIYANAGA, Yasunori TANJI
(Dep. Bioen., Tokyo Inst. Technol.)
- 9:12** 2Ia02 Effects of metal-binding bacteria on the corrosion by metal-corrosive microorganisms
..... ○Satoshi WAKAI, Shigeaki HARAYAMA (NBRC, NITE)
- 9:24** 2Ia03 Composition of Fe- and Mn-oxidizing bacteria in biological filtration systems for treatment of Fe- and Mn-containing groundwater.
..... ○Hidehisa SATO, Shota KASAI, Ichiro SUZUKI, Minoru TAKEDA, Jun-ichi KOIZUMI
(Grad. Sch. Eng., Yokohama Nat. Univ.)
- 9:36** 2Ia04 Methods of PCR-DGGE for analyses of molecular diversity in microbial consortia and comparison with PCR-RFLP.
..... ○Yusuke IGUCHI, Ichiro SUZUKI, Jun-ichi KOIZUMI (Grad. Sch. Eng., Yokohama Nat. Univ.)
- 9:48** 2Ia05 Characterization and Successions of Microbes in Composting Processes for Cattle Dung Wastes by the Hyperthermophilic Pre-treatment Composting Method
..... ○Takeshi YAMADA¹, Hideyo UEDA², Yasuichi UEDA², Keisuke MIYAUCHI¹, Ginro ENDO¹
(¹Faculty of Eng., Tohoku Gakuin Univ., ²Nihon Life Center Co.)
- 10:00** 2Ia06 Does solid-state bio-ethanol production works well?
..... ○Hiroko KITAMOTO, Mitsuo HORITA (NIAES)
- 10:12** 2Ia07 Growth promotion for *Racomitrium canescens* by bacteria
○Akio TANI¹, Motomu AKITA², Haruhiko MURASE³, Kazuhide KIMBARA¹ (¹Res. Inst. Biores., Okayama Univ., ²Sch. Biol. Sci. Technol., Kinki Univ., ³Dept. Appl. Biol. Chem., Osaka Pref. Univ.)
- 10:24** 2Ia08 Element analysis of coccolith of *Emiliania huxleyi* in laboratory culture
..... ○Satoshi SODA¹, Hiroaki HASEGAWA¹, Kazunari SEI¹, Masanori FUJITA², Michihiko IKE¹
(¹Div. Sustainable Energy Environ. Eng., Osaka Univ., ²Kochi Nat. Col. Tech.)

- 10:36** 2Ia09 On-chip real-time observation of osmotic stress adaptation in cyanobacteria
 ○Toshiaki SHIJUKU¹, Hideyuki MATSUMOTO², Masaro AKAI¹, Fumihito ARAI²,
 Nobuyuki UOZUMI¹ (¹Dept. Biomol. Eng., Grad. Sch. Eng., Tohoku Univ.,
²Dept. Bioengineering and Robotics, Grad. Sch. Eng., Tohoku Univ.)
- 10:48** 2Ia10 Production and characterization of protease by aerial microalgae.
 Abe Katsuya, ○Negishi Hiromitsu, Ono Hirokuni (Dept. Appl. Chem., Kogakuin Univ.)
- 11:00** 2Ia11 Functional characterization of carotenoid cleavage dioxygenase from *Rhodospseudomonas palustris*
 ○Atsushi INABA, Kazuyuki YOSHIDA, Hiromu SUDA, Shunsaku UEDA, Isamu MAEDA
 (Dept. Appl. Bioschem., Utsunomiya Univ.)
- 11:12** 2Ia12 Resistant mechanism to antibacterial cationic surfactants in *Escherichia coli* cells
 ○KUNIHIO NAKATA, TETSUAKI TSUCHIDO, YOSHINOBU MATSUMURA
 (Dept. Life Sci. Biotech., Kansai Univ.)
- 11:24** 2Ia13 Formulation and validation of logistic growth model for aquatic macrophytes
 ○Rabin MALLA¹, Nobuyuki NAGAO², Yashuhiro TANAKA³, Kazuhiro MORI⁴
 (¹Dept. Civil & Environ. Engineering, Yamanashi Univ., ²Saiku Kogyo Co. Ltd.
 2-6-2 Oh-temachi Chiyoda-ku, Tokyo, ³Dept. Civil & Environ. Engineering, Yamanashi Univ.,
⁴Dept. Civil & Environ. Engineering, Yamanashi Univ.)

Room I Afternoon (13:30~17:18)

General Presentation (Food science / Food technology)

- 13:30** 2Ip01 In vitro screening of immuno modulating strains of lactic acid bacteria from *kimoto* using the macrophage cell line
 ○Yasuyuki MASUDA¹, Toshinari TAKAHASHI¹, Kazutoshi YOSHIDA², Masashi MIZUNO³,
 Haruhiko MIZOGUCHI¹ (¹Gen. Res. Lab., Kiku-Masamune Sake Brewing Co.,
²Hyogo Prefectural Institute of Technology, ³Grad. Sch. Agric., Kobe Univ.)
- 13:42** 2Ip02 Isolation and identification of microorganisms from coffee cherries and their effects on γ -aminobutyric acid content in coffee beans
 ○Hiroshi MINAMIZUKA¹, Yumika MIGIYAMA¹, Yuji KAMITANI²,
 Izumi ONISHI¹, Taiji FUKUNAGA², Tadao OIKAWA¹
 (¹Dept. Life Sci. &Tech., Fac. Chem., Materials & Bioeng., Kansai Univ.,
²UCC Ueshima Coffee Co.,Ltd., R&D Center)
- 13:54** 2Ip03 Gene cloning and molecular analysis of salivacin K21, a bacteriocin produced by thermotolerant *Lactobacillus salivarius* AC21
 ○Chie KOGA¹, Nana SONOMURA¹, Saki ITO², Sunee NITISINPRASERT³,
 Takeshi ZENDO⁴, Jirou NAKAYAMA⁴, Kenji SONOMOTO⁴, Hiromi MATUSAKI³
 (¹Grad. Sch. Environ. Symbiotic Sci., Pref. Univ. Kumamoto, ²Fac. Environ. Symbiotic Sci.,
 Pref. Univ. Kumamoto, ³Fac. Agro-Industry, Kasetsart Univ., ⁴Fac. Agr., Kyushu Univ)
- 14:06** 2Ip04 Purification and characterization of a bacteriocin produced by *Lactococcus lactis* PJR24 isolated from pickled Japanese radish
 ○Eri HIRAYAMA¹, Hiromi MATSUSAKI² (¹Grad. Sch. Environ. Sym. Sci.,
 Pref. Univ. Kumamoto, ²Fac. Environ. Sym. Sci., Pref. Univ. Kumamoto)
- 14:18** 2Ip05 Production and purification of the bacteriocin produced by *Enterococcus faecalis* 11-5 from airag
 ○Naohiko TAGA, Tsutomu NAKASHIMA, Syou NAKAMOTO, Gouta HATAKENAKA
 (Dept. Biosci., Sch. Agric., Tokai Univ.)
- 14:30** 2Ip06 Detection of harmful microorganisms using BIST System and multiplex PCR
 ○Akemi FUKUDA¹, Yukiko MIYASHITA², Ryoji KARINAGA²,
 Tomoyuki HATANO², Masaaki TAKAHASHI², Shin-ichiro SUYE¹
 (¹Dept. Appl. Chem. Biotechnol., Fukui Univ., ²Precision System Science Co., Ltd.)
- 14:42** 2Ip07 Growth-inhibition activity of bacteriocins from lactic acid bacteria against *hiochi*-bacteria in sake making process.
 ○Yohei ISHIYAMA¹, Takeomi TAKATA¹, Yusuke KOISO¹, Mistuoki KANEOKE²,
 Ken-ichi WATANABE², Takaaki TANAKA³, Masayuki TANIGUCHI³
 (¹GS of Natural Sci. Technol., Niigata Univ., ²Niigata Pref. Sake Res. Inst.,
³Fac. of Natural Sci. Technol., Niigata Univ.)
- 14:54** 2Ip08 Isolation and characterization of antimicrobial proteins from rice against *Porphyromonas gingivalis*.
 ○Tomoaki KOUYA¹, Yusuke KOISO², Mayumi TAIYOJI^{2,3}, Sadami OHTSUBO³, Takaaki TANAKA⁴,
 Masayuki TANIGUCHI⁴ (¹FSC, Niigata Univ., ²GS of Natural Sci. Technol., Niigata Univ.,
³Niigata Rpref. FSC, ⁴Fac. of Natural Sci. Technol., Niigata Univ.)
- 15:06** 2Ip09 Development of high sensitive antimicrobial assay method and its application to screening of antimicrobial proteins from plants.
 ○Yusuke KOISO¹, Tomokazu HIROSE¹, Yasuyuki SHITOMI², Mayumi TAIYOJI^{1,3},
 Takaaki TANAKA³, Masayuki TANIGUCHI³
 (¹GS of Natural Sci. Technol., Niigata Univ., ²VBL, Niigata Univ.,
³Fac. of Natural Sci. Technol., Niigata Univ.)

- 15:18** 2Ip10 Influence of salts on high-pressure inactivation of *Escherichia coli*
 ○Toru SHIGEMATSU¹, Toshimi HASEGAWA¹, Masako HAYASHI¹, Shigeaki UENO¹,
 Tomoyuki FUJII^{1,2} (¹Dept. Food Sci., Niigata Univ. Pharm. Appl. Life. Sci.,
²Dept. Biotechnol., Maebashi Inst. Technol.)
- 15:30** 2Ip11 Production of ethyl alpha-D-glucoside by alpha-glucosidase from *Aspergillus niger* and *Aspergillus oryzae*
 ○Masataka Uchino¹, Yukiko Abe¹, Kotoyoshi Nakanishi², Katsumi Takano¹
 (¹Dept. Appl. Biol. Chem., Tokyo Univ. Agric., ²Dept. Ferment. Sci., Tokyo Univ. Agric.)
- 15:42** 2Ip12 Purification and characteristics of β -1,3-glucanase from marine yeast YS41
 ○Sayaka WATANABE¹, Makoto KANAUCHI², Shin KASAHARA²,
 Koujiro TAKAHASHI¹, Takeo KOIZUMI¹
 (¹Dept. Ferment. Sci., Tokyo Univ. Agric., ²Dept. Food Management Miyagi. Univ.)
- 15:54** 2Ip13 Effects of soy peptides on lipid metabolism in yeast
 ○Shingo IZAWA, Kayo IKEDA, Yoshiharu INOUE
 (Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 16:06** 2Ip14 Hepatoprotective effect of syringic acid and vanillic acid on concanavalin A-induced liver injury
 ○Katsuhiko ISODA¹, Ayano ITOU¹, Masakazu KOBAYASHI²,
 Makoto TAMESADA², Masuo KONDOH¹, Kiyohito YAGI¹
 (¹Grad. Sch. Pharm. Sci., Osaka Univ., ²Kobayashi Pharm. Co., Ltd.)
- 16:18** 2Ip15 Functionalization of dextran using various enzymatic reactions.
 ○Hidetaka Kawakita, Seto Hirokazu, Ohto Keisuke, Hiroyuki Harada, Katsutoshi Inoue
 (Dept. Appl. Chem., Saga Univ.)
- 16:30** 2Ip16 Evaluation of rice protein with protease inhibitors as a material for improving quality of food.
 ○Yoko SAIKAWA¹, Rika YAMAZAKI¹, Yasuyuki SHITOMI², Tomokazu KAWASE²,
 Takaaki TANAKA³, Masayuki TANIGUCHI³ (¹GS of Natural Sci. Technol., Niigata Univ.,
²VBL, Niigata Univ., ³Fac. of Natural Sci. Technol., Niigata Univ.)
- 16:42** 2Ip17 Physiological Functions of Igusa and the Application to Food Industry
 ○Mariko OONAKA¹, Akane OGAWA², Tsubasa FUKUDA¹, Kazuyo TSUTSUMI²,
 Kaori MAMITSUKA², Hiroshi MORITA²
 (¹Grad. Sch. Env. Eng., Univ. Kitakyushu, ²Env. Eng., Univ. Kitakyushu)
- 16:54** 2Ip18 Antibiotic activity of *Eriobotrya japonica* seed extract and the use development
 ○Kazuyuki MIYATA¹, Tsubasa FUKUDA², Kazuyo TUTUMI², Hiroshi MORITA²
 (¹Oju Pharmaceutical Co. Ltd., ²Env. Eng., Univ. Kitakyushu)
- 17:06** 2Ip19 Screening of the NF- κ B suppressors from natural foods extracts
 ○HIROSE SATOSHI¹, IKEBE EMI¹, KICHISE YOSHIKATSU², NAKAMURA TOMOYUKI³,
 HASEBE TATSUYOSHI⁴, ISHIKAWA YUICHI⁵, OGATA MASAO⁶, NISHIZONO AKIRA¹,
 IHA HIDEKATSU¹ (¹Dept. Infec. Dis., Facul. Med., Oita Univ.,
²Chlorella Honsha Ltd., ³IBI Applied Fungi Institute Ltd., ⁴Tsue AP Ltd.,
⁵Dept. Appl. Chem., Fac. Eng., Oita Univ., ⁶Dept. transfusion, Oita Univ. Hosp.)

The 3rd Day (Aug. 29)

Room S1 Morning (9:00~12:30)

Symposium (Frontline of production technology for recombinant proteins)

- 9:00 3S1a01 Construction of *Bacillus subtilis* host cells with hyper-production of industrial enzymes by genome engineering
..... ○Katsuya OZAKI, Katsutoshi ARA (Biol. Sci. Lab., Kao Corp.)
- 9:30 3S1a02 Heterologous protein production by using *Corynebacterium glutamicum*
..... ○Yoshimi KIKUCHI (Ajinomoto Inst. Life Sci.)
- 10:00 3S1a03 The development of yeast mutant altered by disparity mutagenesis for production of human compatible glycoprotein
..... ○Hiroko ABE (HTRC, AIST)
- 10:30 3S1a04 Recent advances in heterologous protein production in *Aspergillus oryzae*
..... ○Katsuya GOMI, Takahiro SHINTANI
(Div. Biosci. Biotech. Future Bioind., Grad. Sch. Agric. Sci., Tohoku Univ.)
- 11:00 3S1a05 Production of candidate vaccine against edema disease in plant cells using plant factor
..... ○Takeshi MATSUI^{1,2}, Hiroshi ASAO³, Ko KATO², Kazutoshi SAWADA¹, Kazuya YOSHIDA²
(¹Adv. Technol. Res. Labs. Idemitsu, ²Grad. Sch. Biol. Sci., NAIIST, ³Nara Agr. Exp. Sta.)
- 11:30 3S1a06 Development of silkworm *Bombyx mori* nucleopolyhedrovirus (BmNPV) and application on the expression of recombinant protein in silkworm
..... ○Enock Y. PARK (Integ. Biosci. Sec., Grad. Sch. Biosci. Technol., Shizuoka Univ.)
- 12:00 3S1a07 Production of pharmaceuticals by genetically manipulated chickens
..... ○Ken-ichi NISHIJIMA (Dept. Biotech., Grad. Sch. Eng., Nagoya Univ.)

Room S2 Morning (9:00~12:05)

Symposium (Frontier of fermentation technology)

- 9:00 Opening remarks
- 9:00 3S2a01 Development for highly effective fermentation system by membrane-integrated bioprocess
..... ○Katsushige YAMADA, Hideki SAWAI, Takashi MIMITSUKA, Kenji SAWAI, Shinichi MINEGISHI,
Tetsu YONEHARA (New Frontiers Res. Lab., Toray Ind., Inc.)
- 9:30 3S2a02 Identification and characterization of L-alanine exporters in *Escherichia coli*
..... Hatsuhiko HORI, Snng-Jo RIM, Hiroshi YONEYAMA, ○Ryoichi KATSUMATA
(Div. Biosci. Biotech. Future Bioind., Grad. Sch. Agric. Sci., Tohoku Univ.)
- 10:00 3S2a03 Enhancement of central metabolism by H⁺-ATPase defect - comparison between *Escherichia coli* and *Corynebacterium glutamicum*
..... ○Atsushi YOKOTA, Masaru WADA (Div. Appl. Biosci., Res. Fac. Agric., Hokkaido Univ.)
- 10:30 3S2a04 Toward Upgrading Designability of Cell Factories
..... ○Hiroshi SHIMIZU (Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ.)
- 11:00 3S2a05 Metabolic engineering of oleaginous microorganisms for the production of useful lipids
..... Eiji SAKURADANI, Shigenobu KISHINO, Jun OGAWA, Kenzo YOKOZEKI, ○Sakayu SHIMIZU
(Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 11:30 3S2a06 How to activate the bacterial dormant genes ?
..... ○Kozo Ochi (Natl. Food Res. Inst.)
- 12:00 Closing remarks

Room S3 Morning (9:00~12:05)

Symposium (Prospects of the metal-biotechnology for resource and environmental conservation)

- 9:00 Opening remarks
- 9:05 3S3a01 Selective accumulation of uranium and/or thorium from aqueous solution using microorganism and ion exchange reaction on a surface of microorganism
..... ○Takehiko TSURUTA (Dept. Chem. Eng. Biol. Environ.)
- 9:30 3S3a02 Microbial diversity in biological filtration system for removal of iron, manganese and arsenic from groundwater
..... ○Ichiro SUZUKI (Dept. Chem. Energ. Eng., Fac. Eng., Yokohama Nat. Univ.)

- 9:55** 3S3a03 Phytoremediation technology for boron and fluoride contaminated soil
 ○Motoyuki ASADA¹, Sumio HORIUCHI¹, Taiichiro WATANABE¹, Sotaro YONEMURA¹,
 Takehiko BAN², Kazuhiro MORI³ (¹Inst. Technol., Shimizu Co.,
²Polytech ADD, Inc., ³Grad. Sch. Med. Eng., Univ. Yamanashi)
- 10:20** 3S3a04 Comparative analysis of response reactions against heavy metals in photosynthetic organisms
 ○Kazumasa HIRATA (Grad. Sch. Pharm. Sci., Osaka Univ.)
- 10:45** 3S3a05 Microbial formation of cadmium tellurite (CdTe)
 ○Toshifumi SAKAGUCHI (Dept. Environ. Sci., Pref. Univ. Hiroshima)
- 11:10** 3S3a06 A genome-wide screen for metal-binding proteins in a halophilic bacterium as a tool for metal-biotechnology at high-salinity environments
 ○Hideki NAKAYAMA (Grad. Sch. Biol. Sci., NAIST)
- 11:35** 3S3a07 Metal adsorption and recovery using cell surface engineering - Cell surface design by arming technology
 ○Mitsuyoshi UEDA, Koichi KURODA (Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)
- 12:00** Closing remarks

Room S4 Morning (9:00~12:25)

Symposium (Frontier of biomass-utilization technology development)

- 9:00** Opening remarks
- 9:05** 3S4a01 Cellulosme and xylanosome
 ○Kazuo SAKKA (Grad. Sch. Bioresources, Mie Univ.)
- 9:35** 3S4a02 Function, secretion, and cell-surface location of *Paenibacillus* sp. W-61 xylanases
 ○Yoshiyuki KAMIO^{1,2}, Seiji WATANABE¹, Mutsumi FUKUDA¹, Viet Dung NGUYEN¹,
 Naoko OKI¹, Yasuko ITO¹, Narayan ROY¹, Jun KANEKO¹, Naoki ABE¹,
 Toshio TOMITA¹, Yoshifumi ITOH¹ (¹Div. Biosci. Biotech. Future Bioind.,
 Grad. Sch. Agric. Sci., Tohoku Univ., ²Grad. Sch., Shokei Gakuin Univ.)
- 10:05** 3S4a03 Promising Technology for Biomass Utilization
 ○Haruo TAKAHASHI (Toyota Cent. R&D. lab.)
- 10:35** 3S4a04 Enzymatic and non-enzymatic ligninolytic radical reactions for wood biomass conversion
 ○Takashi WATANABE, Yasunori OHASHI, Takahisa TSUKIHARA, Takahito WATANABE,
 Yoichi HONDA (Res. Inst. Sust. Human., Kyoto Univ.)
- 11:05** 3S4a05 Pretreatment for saccharification of biomass by using sub- and supercritical water
 ○Kimitaka MINAMI¹, Takanari TOGASHI², Toshihiko ARITA², Tadafumi ADSCHIRI¹
 (¹WPI Res. Cen., Tohoku Univ., ²Inst. Multi. Res. Adv. Materilas., Tohoku Univ.)
- 11:35** 3S4a06 Usage of woody biomass as materials: Development of high-valued functional materials from lignin
 ○Seiji OHARA, Masaya NAKAMURA, Yuichiro OTSUKA (Forestry & Forest Products Res. Inst.)
- 12:05** Overall discussion
- 12:20** Closing remarks

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

General Presentation (Biochemical engineering, Plant)

- 9:00** 3Aa01 Effect of illumination on hydrocarbon-degrading bacteria, *Rhodococcus* sp. NDKK6 and *Gordonia* sp. NDKY76A
 ○Takahisa Kose, Kenzo Kubota, Yoshiki Matsumiya, Motoki Kubo
 (Dept. Biosci. Biotech., Ritsumeikan Univ.)
- 9:12** 3Aa02 Bioconversion of water-immiscible compounds by hydrophobic bacteria.
 ○Takahiro HAMADA¹, Yusuke MAEDA¹, Shinichi FUKUMA¹, Kohsuke HONDA¹, Takeshi OMASA¹,
 Junichi KATO², Hisao OHTAKE¹ (¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ.,
²Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 9:24** 3Aa03 Development of bioprocess for production catechol compounds by organic-solvent-tolerant *Pseudomonas putida* T-57
 ○Shinichi TAKESHITA, Junichi KATOU, Noboru TAKIGUCHI
 (Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 9:36** 3Aa04 Screening for organic-solvent susceptible mutants of *Rhodococcus opacus* B-4
 ○Chifun PARK¹, Masanobu YUZUKI¹, Kohsuke HONDA¹, Takeshi OMASA¹, Tomohiro TAMURA²,
 Junichi KATO³, Hisao OHTAKE¹ (¹Dept. Mat. Life Sci., Osaka Univ., ²RIGB, AIST,
³Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 9:48** 3Aa05 Monolayer adsorption of cells of a highly hydrophobic, toluene-degrading bacterium to solvent
 ○Katsutoshi HORI^{1,2,3}, Hisami WATANABE⁴, Yasunori TANJI⁴, Hajime UNNO⁵
 (¹Dept. Mat. Sci. Eng., Nagoya Inst. Tec., ²Pro. Res. Centr. Interfac. Microbiol., Nagoya Inst. Tec.,
³PRESTO, JST, ⁴Dep. Bioen., Tokyo Inst. Technol., ⁵Kogakuin Univ.)

- 10:00** 3Aa06 Effect of functionally undefined gene, *yggE*, on alleviation of intracellular oxidative stress in recombinant *E. coli*
..... ○Yoshihiro OJIMA¹, Daisuke KAWASE¹, Motomu NISHIOKA², Masahito TAYA¹
(¹Grad. Sch. Eng. Sci., Osaka Univ., ²Osaka Pref. Col. Tech.)
- 10:12** 3Aa07 Development of a novel system for producing cell wall components using protoplasts. (Part 2)
..... ○Hideki AOYAGI¹, Takuaki TOMITA¹, Hideo TANAKA²
(¹Grad. Sch. Life Env. Sci., Univ. Tsukuba, ²Dep. Human Nutri., Seitoku Univ.)
- 10:24** 3Aa08 Development of a detection method of RNA using in situ nanoprobe
..... ○Narutoshi YOSHIDA¹, Takanori KIHARA¹, Chikashi NAKAMURA^{2,3}, Jun MIYAKE^{1,2,3}
(¹Dept. Bioeng., Grad. Sch. Eng., Univ. Tokyo, ²RICE-CAIST, ³Dept. Biotechnol., Tokyo Univ. Agric. Technol.)
- 10:36** 3Aa09 Real-time measurement of intracellular ATP concentration
..... ○KIYOTAKA HARA¹, KUNIKI KINO^{1,2}
(¹ASMeW, Waseda Univ., ²Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 10:48** 3Aa10 A newly generated antibacterial activity of salinomycin against Gram-negative bacteria in combination with a lemon-derived component
..... ○Akira OGITA¹, Ken-ichi FUJITA², Toshio TANAKA²
(¹Res. Center Urban Health & Sports., Osaka City Univ., ²Grad. Sch. Sci., Osaka City Univ.)
- 11:00** 3Aa11 Analysis of mechanism for decrease in tubulin level in pseudohyphal formation of budding yeast
..... ○Nozomi KITAHARA, Satoko KINPAPA, Yutaka TARUI, Toshio TANAKA, Ken-ichi FUJITA
(Grad. Sch. Sci., Osaka City Univ.)
- 11:12** 3Aa12 A poly(ADP-ribose) polymerase inhibitor, 5-aminoisoquinoline suppresses antimycin A-induced apoptosis on HL-60 cells
..... ○Masaki OGITA¹, Akira OGITA², Ken-ichi FUJITA¹, Toshio TANAKA¹
(¹Grad. Sch. Sci., Osaka City Univ., ²Res. Center for Urban Health & Sports, Osaka City Univ.)
- 11:24** 3Aa13 Functional Analysis of Phytochrome A from a Non-photosynthetic Parasitic Plant, *Orobancha minor* Sm.
..... ○Kazuteru TAKAGI¹, Atsushi OKAZAWA¹, Eiichiro FUKUSAKI¹, Koichi YONEYAMA², Akio KOBAYASHI¹
(¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ²Weed Sci. Center, Utsunomiya Univ.)
- 11:36** 3Aa14 Growth effect of tomato plant with chitinase and chitosanase produced by *Paenibacillus fukuinensis*
..... YUKI SATOU¹, KENJI AMAYA², HISASHI KIMOTO³, ○HIDEO KUSAOKE¹
(¹Dept. Eng., Fukui Univ. Tech., ²SAKAI OVEX CO. LTD., ³Dept. Biosci., Fukui Pref. Univ.)
- 11:48** 3Aa15 Effects of root hair promoting peptide on plant growth
..... ○Yoshiki MATSUMIYA, Masahiro NOZAKI, Takanobu SATO, Motoki KUBO
(Dept. Biosci. Biotech., Ritsumeikan Univ.)

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

General Presentation (Medical engineering, Artificial organs)

- 9:00** 3Ba01 Development of Pinpoint Drug Delivery System with Bio-nanocapsules Displaying Biotin
..... ○Yuki AZUMI¹, Takuya SHISHIDO², Tsutomu TANAKA³, Hideki FUKUDA³, Akihiko KONDO¹
(¹Grad. Sch. Eng., Kobe Univ., ²Grad. Sch. Sci. Tech., Kobe Univ., ³Org. Adv. Sci. Tech., Kobe Univ.)
- 9:12** 3Ba02 Bioability of podocytes in *in vitro* culture
..... ○Shunsuke Komuro, Yusuke Murasawa, Pi-chao Wang (Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 9:24** 3Ba03 Influence of fetal calf serum on differentiation of mesenchymal stem cells to chondrocytes during expansion
..... Mari YOKOYAMA¹, ○Hiroto MIWA¹, Satoshi MAEDA¹, Shigeyuki WAKITANI², Mutsumi TAKAGI¹
(¹Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ., ²Orth. Surg., Osaka-City Univ.)
- 9:36** 3Ba04 Development of mini-bioreactor for 3-D tissue culture
..... ○Masanori WADA¹, Junji KOBAYASHI¹, Ryuji KATO², Hiroyuki HONDA^{2,3}, Youichi ISHIKAWA¹
(¹ABLE Corporation, ²Dept. Biotech., Grad. Sch. Eng., Nagoya Univ., ³PME Center)
- 9:48** 3Ba05 Function of versican/PDGF-M in granulation tissues
..... ○Yusuke Murasawa¹, Masahiko Yoneda², Koji Kimata³, Pi-Chao Wang⁴, Zenzo Isogai¹
(¹National Center for Geriatrics and Gerontology, ²Aichi Prefectural college of Nursing and Health, ³Aichi Medical University, ⁴Grad. Sch. Life Env. Sci., Univ. Tsukuba)
- 10:00** 3Ba06 Noninvasive estimation of cell cycle of adhesive animal cell by cell height determination using phase-shifting laser microscope
..... Shunsuke ITO, ○Mutsumi TAKAGI (Div. Biotech. Macromol. Chem., Grad. Sch. Eng., Hokkaido Univ.)
- 10:12** 3Ba07 Influence of laser irradiation condition on viability of adhesive animal cells
..... Mutsumi TAKAGI¹, ○Jun SAKAI¹, Kosei UENO², Hiroaki MISAWA², Yoichiro HOSOKAWA³, Hiroshi MASUHARA^{3,4}
(¹Div. Biotechnol., Grad. Sch. Eng., Hokkaido Univ., ²Res. Inst. Electr. Sci., Hokkaido Univ., ³Grad. Sch. Mater. Sci., NAIST, ⁴Dep. Appl. Chem., Nat. Chiao Tung Univ., ROC)
- 10:24** 3Ba08 Embryoid body culture of mouse ES cells using microchip technique
..... ○Kohji NAKAZAWA, Tomoko TAMURA, Yukiko YOSHIURA, Yusuke SAKAI
(Dept. Life Eng., Univ. Kitakyushu)

- 10:36** 3Ba09 The effects of FGF-2 immobilized to keratin sponge
..... ○Kazuki SAWA, Ryosuke YAMASHITA, Akira TACHIBANA, Toshizumi TANABE
(Dept. Appl. Bioappl. Chem., Grad. Sch. Eng., Osaka City Univ.)
- 10:48** 3Ba10 Cell adhesion on the complex materials by inorganic to organic interface
..... ○Taro KANAZAWA¹, Tsutomu FURUZONO², Miwa MASUDA², Hideki AOYAGI¹, Pi-chao WANG¹
(¹Grad. Sch. Life Env. Sci., Univ. Tsukuba, ²Natl. CVD. Cntr.)
- 11:00** 3Ba11 Facile cell patterning on albumin based substrate
..... ○Hironori YAMAZOE (AIST)
- 11:12** 3Ba12 Formation of aligned-cell-sheet using patterned temperature sensitive polymer.
..... ○Hideaki FUJITA, Kazunori SHIMIZU, KEI OBINATA, Eiji NAGAMORI
(Toyota Cent. R&D Labs. Inc.)
- 11:24** 3Ba13 Prediction model of remaining doubling time in cell culture for the industrialization of regenerative medicine
..... ○Ryuji Kato¹, Yoshihide Nagura¹, Wakana Yamamoto¹, Hiroyuki Honda^{1,2}
(¹School of Eng., Nagoya Univ., ²MEXT PME center)
- 11:36** 3Ba14 An early quality control using cell morphology for the industrialization of regenerative medicine
..... ○Wakana Yamamoto¹, Ryuji Kato¹, Hirofumi Shiono², Hiroaki Kii², Akiko Yamada², Takayuki Uozumi²,
Hirotada Watanabe², Ryuji Koshiba², Jirou Mizuno², Hiroyuki Honda^{1,3}
(¹School of Eng., Nagoya Univ., ²Nikon corp., ³MEXT PME center)
- 11:48** 3Ba15 Three-dimensional cell patterning with dielectrophoresis using microelectrodes
..... ○Kosuke INO¹, Fumisato OZAWA¹, Tomoyuki YASUKAWA², Hitoshi Shiku¹, Tomokazu MATSUE¹
(¹Grad. Sch. Envi. Stu., Tohoku Univ., ²Grad. Sch. Mate. Sci., Hyogo Univ.)

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

General Presentation (Animal cell /tissue engineering)

- 9:00** 3Ca01 Metal behavior in embryonic stem cells
..... ○Hiroaki AIKAWA¹, Masaya KAWASE², Tadashi SAITO³, Toshihiro AKAIKE¹, Yoh-ichi TAGAWA^{1,4,5}
(¹Tokyo Inst. Tech., ²Biosci., Nagahama Inst. Biosci. Technol., ³Osaka Univ.,
⁴JST PRESTO, ⁵Fron, Tokyo Inst. Technol.)
- 9:12** 3Ca02 Morphological study of pancreatic islet cell line on various ECM proteins
..... ○Mari YAMAGUCHI, Hirofumi MITUIISHI, Satoshi TERADA (Grad. Sch. Eng. Fukui Univ.)
- 9:24** 3Ca03 Sonoporation of macromolecule in planarian
..... ○Chiaki HARADA¹, Ryoji FUJIWARA¹, Yuki EMOTO¹, Tetsuya KODAMA², Tomoyasu SUGIYAMA¹
(¹Grad. Sch. Bionics., Tokyo Univ. Tech., ²Tohoku Univ. Biomedical Engineering Research Organization)
- 9:36** 3Ca04 Effect of *COQ1* RNAi in planarian regeneration
..... ○Yumiko SHIOBARA¹, Yusuke OGAWA¹, Wataru OKUAKI¹, Chiaki HARADA¹, Guangzhi JIN¹,
Misato KASHIBA¹, Phillip A. NEWMARK², Yorihiro YAMAMOTO¹, Tomoyasu SUGIYAMA¹
(¹Grad. Sch. Bionics., Tokyo Univ. Tech., ²Univ. Illinois at Urbana-Champaign, Cell Develop. Biol.)
- 9:48** 3Ca05 Populational variation in serial co-cultures of human skeletal muscle myoblasts and fibroblasts
..... Shiplu R. CHOWDHURY¹, Rieko AMI², Yasunori TAKEZAWA²,
○Masahiro KINO-OKA², Masahito TAYA^{1,2}
(¹Dept. Biotech., Grad. Sch. Eng., Osaka Univ., ²Grad. Sch. Eng. Sci., Osaka Univ.)
- 10:00** 3Ca06 Characterization of human epithelial cells in basal layer based on stereoscopic observation technique
..... ○Naoki TSUBAKINO, Masahiro KINO-OKA, Masahito TAYA (Grad. Sch. Eng. Sci., Osaka Univ.)
- 10:12** 3Ca07 Analysis of intracellular network using reverse transfection method
..... ○Satoshi FUJITA^{1,2}, Shigeru YAMADA¹, Reiko NAGASAKI¹, Kazumi HAKAMADA^{1,2},
Masato MIYAKE^{1,2}, Jun MIYAKE^{1,2} (¹RICE, AIST, ²Grad. Sch. Eng. Tokyo Univ.)
- 10:24** 3Ca08 Different IL-6 signaling pathways in hybridoma cells prior and posterior to adaptation to serum-free culture
..... ○Ken FUKUMOTO, Masato TANAKA, Tatuya YAMASITA, Satoshi TERADA
(Grad. Sch. Eng. Fukui Univ.)
- 10:36** 3Ca09 Cytokine detection on-site of the producing cells by filter direct contact method
..... ○Saki TAKEKOSHI, Junichi KONDO, Akira TACHIBANA, Toshizumi TANABE
(Dept. Appl. Bioappl. Chem., Grad. Sch. Eng., Osaka City Univ.)
- 10:48** 3Ca10 Cellular dynamics analysis using single cell analysis
..... ○Kazumi HAKAMADA¹, Satoshi FUJITA², Teruyuki NAGAMUNE¹, Jun MIYAKE^{1,2}
(¹Dept. Bioeng. Tokyo Univ., ²RICE AIST)
- 11:00** 3Ca11 In vitro antibody screening system using a chicken B cell line, DT40-SW: application of converting mutation pattern for high affinity antibodies.
..... ○Masamichi KAJITA, Kagefumi TODO, Masaki MAGARI, Naoki KANAYAMA, Hitoshi OHMORI
(Dept. Biotech., Okayama Univ.)
- 11:12** 3Ca12 In vitro antibody screening system using a chicken B cell line, DT40-SW: Improvement of mutation frequency.
..... ○Yuichi KANEHIRO, Masaki MAGARI, Kagefumi TODO, Naoki KANAYAMA, Hitoshi OHMORI
(Dept. Biotech., Okayama Univ.)

- 11:24 3Ca13 Selective activation of antigen-specific B cells in vitro by FDC-like line; FL-Y.
..... ○Masaki MAGARI, Yumiko NISHIKAWA, Hiroki SANŌ, Yasumasa FUJII, Naoki KANAYAMA,
Hitoshi OHMORI (Dept. Biotech., Okayama Univ.)
- 11:36 3Ca14 Alteration in activity patterns in the mouse olfactory bulb in response to a learned odor
..... ○Shinichiro YAMAMURA, Noboru TAKIGUCHI, Akio KURODA, Junichi KATO
(Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 11:48 3Ca15 Identification of the brain region relevant to the selective attention during odor learning in mice.
..... ○Noboru TAKIGUCHI, Shinichiro YAMAMURA, Akio KURODA, Junichi KATO
(Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)

Room D Morning (9:00~11:48)

General Presentation (Analytical chemistry, Physical chemistry)

- 9:00 3Da01 Reverse transcription loop-mediated isothermal amplification for rapid and simple quantification of WT1 mRNA
..... ○Soji MORISHITA^{1,2}, Hidenori TANI^{1,2}, Shinya KURATA³, Kazunori NAKAMURA³,
Satoshi TSUNEDA², Yuji SEKIGUCHI¹, Naohiro NODA¹
(¹IBRF, AIST, ²Dep. Life Sci. Med. Bio-sci., Grad. Sch. Adv. Sci. Eng., Waseda Univ., ³J-Bio21 Corp.)
- 9:12 3Da02 Fluorescence-based assay for monitoring the RNA helicase activity
..... ○Osamu FUJITA^{1,2}, Hidenori TANI^{1,2}, Yasuyoshi MATSUDA^{1,2}, Satoshi TSUNEDA²,
Nobuyoshi AKIMITSU³, YUJI SEKIGUCHI¹, Naohiro NODA¹
(¹IBRF, AIST, ²Dept. Med. Bio sci., Sch. Adv. Sci. Eng., Waseda Univ., ³RI. center, Univ. Tokyo)
- 9:24 3Da03 Development of surface functioned probe to evaluate activities of intracellular caspase-3 in single cell
..... ○Takanori KIHARA¹, Chikashi NAKAMURA^{2,3}, Sayako UEMATSU³, Miho SUZUKI⁴,
Kyoko FUKAZAWA¹, Kazuhiko ISHIHARA¹, Jun MIYAKE^{1,2,3}
(¹Grad. Sch. Eng. Tokyo Univ., ²RICE, AIST, ³Dept. Biotech.,
Tokyo Univ. Agric. Technol., ⁴Dept. Funct. Mat. Sci., Sitama Univ.)
- 9:36 3Da04 Immobilization of Biomolecules by Cushion Protein on Solid Surfaces
..... ○Hiroyuki IMANAKA, Daisuke YAMAZUMI, Keisuke YANAGITA, Koreyoshi IMAMURA,
Kazuhiro NAKANISHI (Grad. Sch. of Natur. Sci. & Tech., Okayama Univ.)
- 9:48 3Da05 Fabrication of a nano-particle with photo-luminescence in the apoferritin cavity
..... ○Kenji IWAHORI^{1,2}, Ichiro YAMASHITA^{1,2,3}
(¹Grad. Sch. Mater. Sci., NAIIST, ²CREST, JST, ³ATRL, Panasonic)
- 10:00 3Da06 Apoptosis detection using microchip-based enzyme-linked immunosorbent assay
..... ○Keisuke Shibuya, Ryoichi Haga, Masaru Namba
(Hitachi, Ltd. Power & Industrial Systems R&D Laboratory)
- 10:12 3Da07 Preparation of cell-sized liposome with asymmetric nature
..... ○Yuuki KOMATSU, Yoko MIURA, Tsutomu HAMADA, Masahiro TAKAGI (Sch. Mat. Sci., JAIST)
- 10:24 3Da08 Transformation of Giant Vesicles Depending on the Structure of Constituent Lipid Molecules
..... ○Kohei KAWAGUCHI, Ken-ichi ISHII, Tsutomu HAMADA, Masahiro TAKAGI
(Sch. Mat. Sci., JAIST)
- 10:36 3Da09 Construction of *in vivo* screening system for amidotransferase GatCAB inhibitor
..... ○Miho CHATANI¹, Akiyoshi NAKAMURA², Michiko TANAKA¹, Teruo SONE¹, Kozo ASANO¹
(¹Lab. Appl. Microbiol., Grad. Sch. Agric., Hokkaido Univ.,
²Lab. Struct. Biol., Grad. Sch. Life Sci., Hokkaido Univ.)
- 10:48 3Da10 Sequentially quantitative method of specific rRNA using affinity capillary electrophoresis
..... ○Masahiro YAMAGUCHI^{1,2}, Ken ADACHI^{1,3}, Makoto NAKASHIGE^{1,3},
Satoshi TSUNEDA², Yuji SEKIGUCHI¹, Naohiro NODA¹
(¹IBRF, AIST, ²Dept. Med. Bio sci., Sch. Adv. Sci. Eng., Waseda Univ.,
³Dept. Appl. Chem., Sch. Sci. Eng., Waseda Univ.)
- 11:00 3Da11 Development of on-chip DGGE
..... ○Tomoyuki MORITA, Takashi MATSUMURA, Lingyun HAO, Akiko MIYA (Ebara Research)
- 11:12 3Da12 Rapid and specific detection of the plant pathogen *Pantoea ananatis* by PCR amplification of the quorum-sensing genes
..... ○Kiemi OSEKI¹, Tomohiro MOROHOSHI¹, Norihiro KATO², Tsukasa IKEDA¹
(¹Dept. Mat. Environ., Grad. Sch. Eng., Utsunomiya Univ.,
²Dept. Adv. Interdiscip. Sci., Grad. Sch. Eng., Utsunomiya Univ.)
- 11:24 3Da13 Analysis and inhibition of pathogenicity controlled by quorum-sensing in the plant pathogen *Pantoea ananatis*
..... ○Taiki UNNO¹, Tomohiro MOROHOSHI¹, Norihiro KATO², Tsukasa IKEDA¹
(¹Dept. Mol. Environ., Grad. Sch. Eng., Utsunomiya Univ.,
²Dept. Adv. Interdiscip. Sci., Grad. Sch. Eng., Utsunomiya Univ.)
- 11:36 3Da14 Comparative analysis of regulation of violacein biosynthesis by quorum sensing in *Chromobacterium violaceum*
..... ○Katsumasa FUKAMACHI¹, Tomohiro MOROHOSHI¹, Norihiro KATO², Tsukasa IKEDA¹
(¹Dept. Mol. Environ., Grad. Sch. Eng., Utsunomiya Univ.,
²Dept. Adv. Interdiscip. Sci., Grad. Sch. Eng., Utsunomiya Univ.)

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

Eda Award Presentations, General Presentation (Brewing, Brewing technology)

Eda Award Presentations,

- 9:00** 3Ea01 **Analysis of the Role of Mitochondria during Sake Brewing**
..... ○Hiroshi Kitagaki (Fac. Agric., Saga University)
- 9:12** 3Ea02 **Peptide Transport Regulation of *Saccharomyces cerevisiae* in Sake Brewing, and Isolation of the Mutant of Sake Yeast That Paid Attention to the Mechanism**
..... ○Tasuku Yamada (Kiku-Masamune Sake Brewing Co., Ltd)
- 9:24** 3Ea03 Normalization of serum lipoprotein profiles by lactic fermentation products of rice bran
..... ○Masanobu OHTOMO¹, Hiroki SASAKI², Keishi HATA³, Kazuki TOEDA³
(¹Akitameijyo Co., Ltd, ²Skylight Biotech Inc, ³Akita Research Institute for Food and Brewing)
- 9:36** 3Ea04 Purification and characterization of an acid proteinase from *Monascus pilosus*.
..... ○Poramba Liyanage Nilantha LAKSHMAN¹, Yoichi TOYOKAWA¹, Hirohide TOYAMA²,
Toki TAIRA², Masaaki YASUDA² (¹Grad. School of Agric., Kagoshima Univ.,
²Dept. of Biosc. and Biotec., Fac. of Agri., Univ. of the Ryukyus)
- 9:48** 3Ea05 Study of Water-Absorption Characteristics and Structural Properties of Rice for Sake Brewing
..... ○Tomochika MIZUMA, Yoshifumi KIYOKAWA, Yoshinori WAKAI (Kizakura Co., Ltd.)
- 10:00** 3Ea06 The novel control method for versatile *koji* making process.
..... ○Ken Kobayashi, Nobuko Sawamura, Tatuya Masuda, Akihiro Mizuno (Natl. Res. Inst. Brewing)
- 10:12** 3Ea07 The effect of lactic acid bacteria in *Awamori Moromi* (mash) on *Awamori* flavour
..... ○Masatoshi TSUKAHARA, Ryo TAKARA, Tomoya IHA, Takashi TOMIKI, Makiko TAKARA,
Tadaaki TOKASHIKI (Tropical Technology Center LTD.)
- 10:24** 3Ea08 Brewing technique producing *Awamori* with high amounts of 4-Vinylguaiaicol using yeast TTC360 isolated from mango fruit
..... Masatoshi TSUKAHARA¹, ○Takashi TOMIKI¹, Ryo TAKARA¹, Tomoya IHA¹,
Mami IKEHATA¹, Souhei INOUE², Kazushi ATSUTA²,
Tsutomu OOSHIRO², Yasutomo TAMAKI³, Tadaaki TOKASHIKI¹
(¹Tropical Technology Center Ltd., ²Cyuukou Shuzo Co. Ltd., ³Okinawa Natl. Col. Tech.)
- 10:36** 3Ea09 Discrimination of sake yeast by PCR-DGGE analysis of specific gene fragment
..... ○Toshimori KADOKURA, Ayaka KISHI, Masami KITADE, Shunichi NAKAYAMA,
Sachiko NAKAMURA, Atsumi NAKAZATO
(Dept. Ferment. Sci., Tokyo Univ. Agric.)
- 10:48** 3Ea10 Isolation spore clone from bottom-fermenting yeast
..... ○Tomoo OGATA¹, Miyoshi Miho SHIKATA¹, Yasushi KITAGAWA¹, Nobushige NAKAZAWA²
(¹Res. Lab. Brew. Tech., Asahi Breweries, Ltd., ²Biores. Sci., Akita Pref. Univ., Grad. Sch.)
- 11:00** 3Ea11 Effects of sulfur compounds on amino acid metabolism of *Saccharomyces cerevisiae* in sake mash
..... ○Kazutaka KUSAKA, Toshiaki MATSUMOTO, Hiroaki NAGAO, Ken KOBAYASHI
(Natl. Res. Inst. Brewing)
- 11:12** 3Ea12 The effect of the aromatic amino acid concentration on generating aromatic alcohol in sake brewing.
..... ○TAKADO Aya, ITO Toshihiko, NAKAZAWA Nobushige, IWANO Kimio
(Dept. Biochemical. Akita Pref Univ.)
- 11:24** 3Ea13 The sake brewing by aspergillus oryzae strains of the low peptidase activity.
..... ○SASAKI Kota¹, TAKAHASHI Hitoshi^{1,2}, ITO Toshihiko¹, NAKAZAWA Nobushige¹, IWANO Kimio¹
(¹Dept. Bioelectronol., Akita Pre Univ., ²Akita Pref. Inst. for Food and Brewing)
- 11:36** 3Ea14 Analysis of rice protein hydrolysates during sake making
..... ○Yukiko MAEDA^{1,2}, Masaki OKUDA², Katsumi HASHIZUME², Nami GOTO^{1,2}, Shigeaki MIKAMI²
(¹Grad. Sch. Biosph. Sci., Hiroshima Univ., ²Natl. Res. Inst. Brewing)
- 11:48** 3Ea15 Characterization of *palF* gene from *Aspergillus oryzae*
..... ○Saano Motoaki, Kitagawa Harue, Kobayashi Akiko, Oda Ken, Shin-ich Ohashi (KIT)
- 12:00** 3Ea16 Analysis of *Aspergillus oryzae* gene expression during *shoyu koji* making
..... ○Norihiko MAGISHI¹, Tadaaki HASHIMOTO¹, Kazuhiro IWASHITA²,
Ryouko HAMADA², Makio KOBAYASHI¹, Sigeaki MIKAMI²
(¹Res. Lab. of Higashimaru Shoyu, ²Natl. Res. Inst. Brewing)

Room F Morning (9:00~11:48)

General Presentation (Peptide engineering Proteomic)

- 9:00** 3Fa01 Synthesis of OBOC (One-Bead One-Compound) peptide library using novel Au-Fe₃O₄ composite nano-particles
..... ○Yuichi Koga¹, Masayuki Kuwabara¹, Norimitsu Tohnai¹, Kazuhumi Takano¹,
Satoshi Seino², Shigenori Kanaya¹
(¹Dept. Mat. Life Sci., Osaka Univ., ²Dept. Business. Eng., Osaka Univ.)

- 9:12** 3Fa02 Controlled magnetite formation using peptides by mimicking Mms6 protein
..... ○Atsushi ARAKAKI, Fukashi MASUDA, Tsuyoshi TANAKA, Tadashi MATSUNAGA
(Dept. Biotechnol., Tokyo Univ. Agric. Technol.)
- 9:24** 3Fa03 Evaluation of *in vivo* assay system for selection of activity-enhanced mutants of antibacterial peptide apidaecin
..... ○Kenta ICHINOHE¹, Yusuke KAJI¹, Masaaki WAKABAYASHI¹, Kensuke MITA¹,
Shigeki HASHIMOTO², Seiichi TAGUCHI¹ (¹Div. Biotech. Macromol. Chem.,
Grad. Sch. Eng., Hokkaido Univ., ²Fuc. Ind. Sci. Tec., Tokyo Univ. Sci.)
- 9:36** 3Fa04 NMR based structure–activity relationship analysis of an antimicrobial peptide, thanatin, engineered by site-specific
chemical modification
..... ○Yoshitake ORIKASA¹, Tomohiro IMAMURA², Naoki YAMAMOTO³, Atsuo TAMURA³,
Shigeki HASHIMOTO², Hiroaki SHIMADA², Seiichi TAGUCHI¹
(¹Div. Biotech. Macromol. Chem., Grad. Sch. Eng, Hokkaido Univ.,
²Fuc. Ind. Sci. Tec., Tokyo Univ. Sci., ³Dept. Chem., Grad. Sch. Sci., Kobe Univ.)
- 9:48** 3Fa05 Antimicrobial mechanism of lactacin Q, a bacteriocin from lactic acid bacteria
..... ○Fuminori YONEYAMA¹, Yuichi IMURA², Kanako OHNO¹, Takeshi ZENDO¹,
Jiro NAKAYAMA¹, Katsumi MATSUZAKI², Kenji SONOMOTO^{1,3}
(¹Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ.,
²Grad. Sch. Pharm., Kyoto Univ., ³Bio-Arch., Kyushu Univ.)
- 10:00** 3Fa06 Structure analysis of a novel cyclic bacteriocin, lactocyclicin Q, produced by *Lactococcus* sp. QU 12
..... ○Naruhiko SAWA¹, Takeshi ZENDO¹, Junko KIYOFUJI¹, koji FUJITA¹, Jiro NAKAYAMA¹,
Kenji SONOMOTO^{1,2} (¹Fac. Agric., Kyushu Univ., ²Bio-Arch., Kyushu Univ.)
- 10:12** 3Fa07 Peptide array based design of bile acid binding peptides for inhibition of cholesterol absorption
..... ○Chiaki KAGA¹, Mina OKOCHI¹, Ryuji KATO¹, Yuka YAMASHITA²,
Kensei MORIKAWA², Satoshi NAGAOKA², Hiroyuki HONDA^{1,3}
(¹Dept. Biotech., Grad. Sch. Eng. Nagoya Univ., ²Fac. Agric., Gifu Univ.,
³MEXT Innovative Research Center for Preventive Medical Engineering)
- 10:24** 3Fa08 Screening of functional peptides derived from food proteins using peptide informatics
..... ○Toshikazu TAKESHITA¹, Chiaki KAGA¹, Mina OKOCHI¹, Ryuji KATO¹,
Satoshi NAGAOKA², Hiroyuki HONDA^{1,3}
(¹Dept. Biotech., Grad. Sch. Eng., Nagoya Univ., ²Fac. Agric., Gifu Univ.,
³MEXT Innovative Research Center for Preventive Medical Engineering (PME Center))
- 10:36** 3Fa09 Characterization of SmapA protein identified with comparative proteome analysis of *Magnetospirillum magneticum*
AMB-1
..... ○Masayoshi TANAKA, Tadashi MATSUNAGA (Dept. Biotechnol., Tokyo Univ. Agric. Technol.)
- 10:48** 3Fa10 Proteome analysis of irregular shaped magnetosomes in *Desulfovibrio magneticus* strain RS-1
..... ○Michiko NEMOTO¹, Atsushi ARAKAKI¹, Masayoshi TANAKA¹, Hidekazu NAKAZAWA^{1,2},
Koji JIN-NO², Isao YASHIRO², Tadashi MATSUNAGA¹
(¹Dept. of Biotechnol., Tokyo Univ. Agri. Technol., ²National Institute of Technology and Evaluation)
- 11:00** 3Fa11 Genome-wide systematic screening of signal peptides from *Corynebacterium glutamicum*
..... ○Keiro WATANABE¹, Yoshiki TSUCHIDA^{1,2}, Naoko OKIBE¹, Haruhiko TERAMOTO¹,
Nobuaki SUZUKI¹, Masayuki INUI¹, Hideaki YUKAWA¹ (¹RITE, ²Honda R&D)
- 11:12** 3Fa12 Episomal expression of interaction domain from yeast autophagy-related(ATG) protein antagonize the intracellular
interaction between the native proteins.
..... ○Takuma KAMIYA¹, Akinori IKEUCHI², Tsuneo YAMANE³, Hideo NAKANO²,
Yasuaki KAWARASAKI¹ (¹Dept. FNS, GNES, US, ²Grad. Sch. Biol. Agr. Sci.,
Nagoya Univ., ³Grad. Sch. Appl. Biol., Chubu Univ.)
- 11:24** 3Fa13 Proteomic analysis of priplasmic proteins in *Acidithiobacillus ferrooxidans* grown on iron or sulfur
..... ○Kazuo Kamimura, Sinichi Noguchi, Tadayoshi Kanao
(Dept. BioSci. Grad. Sch. Nat. Sci. Tech., Okayama Univ)
- 11:36** 3Fa14 Semi-quantitative Y2H screening system based on fungal secretory galactosidase
..... Takuma Kamiya¹, Teruyo Ojima², Kanoko Sugimoto³, Akinori Ikeuchi²,
Yugo Iwasaki², Hideo Nakano², ○Yasuaki Kawarasaki^{1,3}
(¹Grad. Sch. Nutr. Environ. Sci, University of Shizuoka, ²Grad. Sch. Bio. Agr. Sci,
Nagoya University, ³Dept. Food. Nutr. Sci, University of Shizuoka)

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

General Presentation (Enzymology, Enzyme / Protein engineering / Glycoengineering)

- 9:00** 3Ga01 Characterization of mouse sulfotransferase SULT2B1
..... ○Yosuke KAMEMOTO¹, Katsuhisa KUROGI¹, Yoichi SAKAKIBARA¹,
Ming-Cheh LIU², Masahito SUIKO¹
(¹Dept. Biochem. Appl. Biosci., Univ. of Miyazaki, ²Dept. Pharmacol. Univ. of Toledo)

- 9:12** 3Ga02 Development of the affinity purification method for Si-tagged protein.
..... ○Ken-ichi NINOMIYA, Takeshi IKEDA, Ryuichi HIROTA, Akio KURODA
(Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 9:24** 3Ga03 Analysis of the intrinsically disordered regions of the silica-binding protein “Si-tag”
..... ○Takeshi IKEDA^{1,2}, Ken-ichi NINOMIYA², Ryuichi HIROTA², Akio KURODA²
(¹Res. Inst. Integrated Sci. Nanodevice Bio Systems,
²Dept. Mol. Biotech., Grad. Sch. Adv. Sci. Mat., Hiroshima Univ.)
- 9:36** 3Ga04 Development of a biomagnetic concentration system by cell surface display in magnetotactic bacterium, *Magneto-*
spirillum magneticum AMB-1
..... ○Eri MAZUYAMA¹, Masayoshi TANAKA¹, Hitoshi MIYASAKA², Haruko TAKEYAMA^{1,3},
Tadashi MATSUNAGA¹ (¹Dept. Biotechnol., Tokyo Univ. Agric. Technol.,
²KEP Co., Inc., ³Dept. Life Sci. & Med. Bio-Sci., Waseda Univ.)
- 9:48** 3Ga05 Analysis and improvement of cell wall environment of *Saccharomyces cerevisiae* for cell-surface display system
..... ○AKI SAIJO¹, HIROYUKI MATSUOKA¹, AKIHIKO KONDO²,
TARO TACHIBANA¹, MASAYUKI AZAMA¹
(¹Dept. Appl. Chem. and Bioeng., Osaka City Univ., ²Dept Chem. Sci. Eng., Kobe Univ.)
- 10:00** 3Ga06 Screening of genes involved in cell wall synthesis using yeast database
..... ○Hiroki ASAI, Taro TACHIBANA, Masayuki AZUMA
(Dept. Appl. Bioappl. Chem., Grad. Sch. Eng., Osaka City Univ.)
- 10:12** 3Ga07 Development of rapid and sensitive detection system of human FOXP3-DNA interaction
..... ○Masami MAEKAWA¹, Hiroyuki IMANAKA¹, Koreyoshi IMAMURA¹,
Eisaku KONDO², Kazuhiro NAKANISHI¹
(¹Grad. Sch. of Natur. Sci. & Tech., Okayama Univ., ²Sch. of Med. Dent. & Pharm., Okayama Univ.)
- 10:24** 3Ga08 Enzymatic transglycosylation reaction enhanced by using physicochemical properties of polysaccharides
..... ○Atsushi KOBAYASHI, Hiroshi ITOH, Masato NOGUCHI, Shin-ichiro SHODA
(Dept. Biomol. Eng., Grad. Sch. Eng., Tohoku Univ.)
- 10:36** 3Ga09 Synthesis and application of artificial substrates by use of transglycosylation of β -galactosidase from *Bacillus*
circulans
..... ○Chihiro CHIBA¹, Naoki YOSHIDA¹, Kazuhide TOTANI¹, Hideyo KOIZUMI²,
Takashi YOSHIDA², Taichi USUI³
(¹Dept. Chem. Sci. Eng., Ichinoseki Natl. Col. Tech., ²Biochem. & Biotech., Agr. & Life Sci.,
Hirosaki Univ., ³Dept. Appl. Biol. Chem., Fac. Agric., Shizuoka Univ.)
- 10:48** 3Ga10 Disaccharide-condensing activity of *Trichoderma reesei* EG I catalytic domain
..... ○Kazuhide TOTANI¹, Naoki YOSHIDA¹, Hikaru NAKAZAWA², Wataru OGASAWARA²,
Hirofumi OKADA², Yasushi MORIKAWA²
(¹Chem. Eng., Ichinoseki Natl. Col. Tech., ²BioEng., Nagaoka Univ. Tech.)
- 11:00** 3Ga11 Preparation of lacto-*N*-biose I using immobilized enzymes
..... ○MAMORU NISHIMOTO, MOTOMITSU KITAOKA (Natl. Food Res. Inst.)
- 11:12** 3Ga12 Functional analysis of the novel sialidases from *Bifidobacterium bifidum*
..... ○Masashi KIYOHARA¹, Kana TANIGAWA¹, Thida SRIPUAN²,
Hisashi ASHIDA¹, Kenji YAMAMOTO¹
(¹Grad. Sch. Biostud., Kyoto Univ., ²Sch. Sci.Tech., Naresuan Univ.)
- 11:24** 3Ga13 Saccharification of chitin biomass by mechanochemical and enzymatic treatment
..... ○Nobuko KON¹, Naoki YOSHIDA¹, Mitsuru NIKAI¹, Koichi TANNO¹,
Kazuhide TOTANI¹, Shoji INOMATA², Ayano MASUI³,
Mamoru OKADA³, Mitsuaki KAWAGUCHI³, Yoshiharu MATAHIRA³
(¹Chem. Eng., Ichinoseki Natl. Col. Tech., ²Earth Technica Co., Ltd.,
³Yaizu Suisankagaku Industry Co., Ltd.)