Poster Presentations

Room III

July 1 (Sunday) odd: 15:30～16:45 / even: 16:45～18:00

P-01	Molecular characterization of novel salt- and xylose-tolerant GH43 bifunctional *β*-xylosidase/*α*-arabinosidase from the gut bacterial genome
	Bo Xu, Liming Dai, Nanyu Han, Yunjuan Yang, Qian Wu, Junjun Li, Xianghua Tang and Zunxi Huang
P-02	Identification, recombinant expression and efficient purification of tag-free thermo-stable uricase from *Kluyveromyces marxianus*
	Bangchun Wang, Dongmei Wang, Rui Ding and Jiong Hong
P-03	Molecular and biochemical characterization of a novel isoprene synthase from *Metrosideros polymorpha*
	Seung-Gyun Woo, Eugene Rha, Soo-Jin Yeom, Seong Keun Kim, Dae-Hee Lee and Seung-Goo Lee
P-04	Gene identification and characterization of fucoidan deacetylase and fucoidanase for potential application to fucoidan degradation and diversification
	Tatsuhiko Nagao, Yoshihito Arai, Fumika Komatsu, Ayako Kumabe, Mika Yamaoka, Hisashi Yagi, Hirokazu Suzuki and Takashi Ohshiro
P-05	Characterization of novel P450 peroxygenases for oxidative decarboxylation of free fatty acids to terminal alkenes
	Huifang Xu, Yuanyuan Jiang, Linlin Ning, Bo Fang, Laurent Fourage and Shengying Li
P-06	High-level Expression of β-N-Acetylglucosaminidase NagZ in *Pichia pastoris*
	Jiang Shun, Jiang Hongying, Zhou yuling, Jiang Sijing and Zhang Guimin
P-07	Identification of metabolic pathways salvaging thermal degradation products from NAD^+ in the hyperthermophilic archaeon *Thermococcus kodakarensis*
	Takaaki Sato, Shin-ichi Hachisuka and Haruyuki Atomi
P-08	Purification-Free, Target-Selective Immobilization of a Protein from Cell Lysates
	Jaehyun Cha and Inchan Kwon
P-09	Improving recombinant alkaline amylase production in *Bacillus subtilis* 168 by integration of a novel ARTP mutagenesis-screening strategy with systems-level fermentation optimization
	Yingfang Ma, Haiquan Yang and Fei Xu
P-10	Engineering of cyclodextrin glycosyltransferase to enhance product specificity for long-chain glycosylated genistein
	Ruizhi Han, Binbin Ge, Guochao Xu, Jinjun Dong and Ye Ni
P-11	Use of tandem cell-free protein synthesis reactions for rapid screening of effective molecular chaperones
	Hye Jin Lim, Kyung-Ho Lee, Hyeon Jeong Yang and Dong-Myung Kim
P-12	Synthesis of unnatural nucleosides containing fluorescent group by using nucleic acid metabolic enzyme
	Hiroyuki Wakana, Nanae Terado and Akihiko Hatano
P-13	Engineering of TEV-L2F protease by a high-throughput screening method based on yeast ER sequestration screening (YESS)
	Ting Wang, Hui Zheng, Meng Mei, Guimin Zhang and Li Yi
P-14	Characterization of protein retention in the yeast ER for strengthening the application of YESS in protein engineering
	Meng Mei, Xinzhi Li, George Georgiou, Brent L. Iverson, Guimin Zhang and Li Yi
P-15	Crystal screening of aldoxime dehydratase from *Bacillus* sp. OxdB-1 for structural analysis
	Ke Chen, Tomoya Mori, Daisuke Matsui and Yasuhisa Asano
P-16	Facile and reliable preparation of linear DNA templates for cell-free protein synthesis using a digestion-ligation method
	Hyeon Jeong Yang, Kyung-Ho Lee and Dong-Myung Kim
P-17	Engineering of 7β-Hydroxysteroid Dehydrogenase for Continuous Bioproduction of Ursodeoxycholic Acid in Cascade Bioreactors
	Ming-Min Zheng, Zhi-Neng You, Chun-Xiu Li and Jian-He Xu
P-18	Improving the thermostability of a fungal GH11 xylanase via site-directed mutagenesis guided by sequence and structural analysis
	Nanyu Han, Huabiao Miao, Junmei Ding, Junjun Li, Yuelin Mu, Junpei Zhou and Zunxi Huang
P-19	Modeling-based engineering of CALB to produce monoacyl glycerols
	Young-Seo Kang, Seong-Soon Park, Young-Joo Yeon and Jin-Byung Park
P-20	Discovery and Directed Evolution of Nitrilase
	Hualei Wang, Huihui Sun and Dongzhi Wei

Room IV

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P-21	Enhancement of the thermal and alkaline pH stability of *Escherichia coli* lysine decarboxylase for efficient cadaverine production
	Fengyu Kou, Jing Zhao, Jiao Liu, Cunmin Sun, Yanmei Guo, Zijian Tan, Feng Cheng, Zhimin Li, Ping Zheng and Jibin Sun
P-22	Halogen Bond in Substrate Selectivity of Enzymatic Catalysis: A Case Study in Nitrilase
	Shuiqin Jiang, Bo Yin, Lujia Zhang and Dongzhi Wei
P-23	Production of shikimic acid from cellobiose using *Corynebacterium glutamicum*
	Naoki Sato, Tsutomu Tanaka and Akihiko Kondo
P-24	Engineering of lysine cyclodeaminase conformational dynamics for relieving substrate and product inhibitions via rational design of ligands delivery processes
	Hanxiao Ying, Jing Wang, Xin Wang, Hak-Sung Kim and Kequan Chen
P-25	Construction and engineering of cellulases in *Escherichia coli*
	Min Liu and Hongwei Yu
P-26	Evolutionary coupling saturation mutagenesis: coevolution-inspired protein engineering
	Xinye Wang, Yao Nie, Fei Xu and Yan Xu
P-27	Structure of *Ralstonia eutropha* polyhydroxyalkanoate synthase and reaction mechanism of the whole enzyme
	Jiyeon Hong, Seulhoo Lee and Kyung-Jin Kim
P-28	Cadaverine production from cellobiose using *Corynebacterium glutamicum*
	Rena Matsuura, Tsutomu Tanaka and Akihiko Kondo
P-29	High-throughput screening method for directed evolution of aldol reaction activity of D-threonine aldolase
	Lei Gong, Guochao Xu, Xudong Cao and Ye Ni
P-30	Molecular Basis for the High Activity and Enantioselectivity of the Carbonyl Reductase from *Sporobolomyces salmonicolor* toward α-Haloacetophenones
	Xi Chen, Hongliu Zhang, Jinhui Feng, Qiaqing Wu and Dunming Zhu
P-31	Archaeal metabolism and its application
	Haruyuki Atomi, Takaaki Sato and Tamotsu Kanai
P-32	Crystal structure of type IF CRISPR RNA–guided surveillance complex component Csy3 from *Zymomonas mobilis* ZM4
	Do-Heon Gu, Jiali Sun, Sung-Chul Ha and Jeong-Sun Kim
P-33	Improving the thermal stability and catalytic activity of mesophilic β-glucosidase Cel1b by bioinformatics
	Kangle Niu, Zhenzhen Wang and Xu Fang
P-34	*Aspergillus fumigatus* Gpi7 is a phosphoethanolamine transferase required for transportation of the GPI anchored proteins
	Haomiao Ouyang, Ting Du, Hui Zhou, Iain B. H. Wilson and Cheng Jin
P-35	Structural basis of UDP-N-acetylmuramoyl:L-alanine ligase MurC complex with UDP-GlcNAc from Mycobacterium
	Pil-Won Seo and Jeong-Sun Kim
P-36	Metabolic design of *Escherichia coli* for production of shikimate pathway derivatives
	Ryosuke Fujiwara, Shuhei Noda, Tsutomu Tanaka and Akihiko Kondo
P-37	Harnessing the endogenous CRISPR-Cas system for metabolic engineering of *Zymomonas mobilis*
	Yanli Zheng, Shihui Yang, Li Yi and Wenfang Peng
P-38	Substrate binding cleft engineering of xylanases for bio-bleaching
	Xinzhi Li, Dingkun Ke and Guimin Zhang
P-39	Toxicological evaluation of 2-MCPD and estimation of intestinal absorption of its fatty acyl esters
	Yomi Watanabe, Naoki Kaze, Kaeko Murota, Hirofumi Sato, Yuri Osafune and Araki Masuyama
P-40	Structural information of the *Campylobacter jejuni* GDP-L-fucose synthase
	Jun-Hong Kim and Jeong-Sun Kim

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P-41	Novel transamination similar reaction catalyzed by amino acid dehydrogenase for chiral amino acids synthesis
	Xiaoqing Mu, Xian Feng, Yao Nie and Yan Xu
P-42	Application of glycosyltransferase in biosynthesis of novel protopanaxadiol-type ginsenosides
	Longhai Dai, Can Liu, Jiao Li, Xueli Zhang and Yuanxia Sun
P-43	Structural background for a specific recognition of a hydroxyl group among two in an alcohol dehydrogenase specialized for a long alkyl chain alcohol
	Hye-Ji Kim, Eun-Ji Seo, Jin-Byung Park and Jeong-Sun Kim
P-44	Biotransformation of foreign substrates by cultured plant cells
	Yuya Fujitaka, Kei Shimoda, Naoji Kubota, Daisuke Uesugi, Manami Inoue, Shin-ichi Ozaki and Hiroki Hamada
P-45	Hybrid Organo- and Biocatalytic Process for the Transformation of L-α-Amino Acids into Enantiopure (*R*)- and (*S*)-Vicinal Diols in Aqueous Medium
	Jian-Dong Zhang, Jian-Wei Zhao, Hong-Hong Chang and Wen-Long Wei
P-46	Cascade Synthesis of Rare Sugars Based on DHAP-Dependent Aldolases in vitro and in vivo
	Zijie Li, Xiaoru Wu, Yingxin Qiao, Mayan Wang, Fen Li and Xiao-Dong Gao
P-47	Metabolic engineering of *Escherichia coli* for production of mevalonate from cellobiose
	Daichi Satowa, Ryosuke Fujiwara, Tsutomu Tanaka and Akihiko Kondo
P-48	Structural basis for molecular mechanism of poly(ethylene terephthalate) degradation of PETase from *Ideonella sakaiensis*
	Donghoon Lee, Jihye Seok and Kyung-Jin Kim
P-49	Rational regulation of enzyme-catalyzed stereoselective organic synthesis reaction
	Xiaoxue Zhou, Yu Han and Liangyu Zheng
P-50	Efficient reductive amination process for enantioselective synthesis of L-phosphinothricin applying engineered glutamate dehydrogenase
	Xin-Jian Yin, Jian-Ping Wu and Li-Rong Yang
P-51	Biotransformation of fatty acids with outer membrane vesicles of *Escherichia coli*
	Ha-Yeon Jeong, Ji-Won Song and Jin-Byung Park
P-52	The microbial production of 1-methyl-Δ^1-pyrrolinium cation, a common intermediate of nicotine and tropane alkaloids, in *Escherichia coli*
	Fumihito Hasebe, Katsuki Muroda, Tomoka Kawashima, Kazuhiro Oishi, Mioka Tani, Teruki Aizawa and Nobutaka Funa
P-53	The effect of deep eutectic solvents on the asymmetric hydrolysis of styrene oxide by mung bean epoxide hydrolases
	Fei Peng, Zi-Fu Ni and Wen-Yong Lou
P-54	Efficient biosynthesis of tyrosol via a non-natural metabolic pathway in *Saccharomyces cerevisiae*
	Wei Guo, Qiulan Huang and Xu Fang
P-55	Metabolic engineering of *S. pombe* via CRISPR-Cas9 genome editing for 3-hydroxyprpininc acid production from glucose and cellobiose
	Tsutomu Tanaka, Seiya Takayama and Akihiko Kondo
P-56	Structural analysis of thiolase from *Clostridium acetobutylicum*
	Sangwoo Kim and Kyung-Jin Kim

Room V

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P-57	Metabolic engineering of *Escherichia coli* for the production of N-acetylglutamate
	Baixue Lin, Shasha zhang, Wei Yang and Yong Tao
P-58	Gluconic acid production from potato waste
	Yi Jiang, Ning Su, Hongsen Zhang, Jie Bao and Xu Fang
P-59	Improving fatty acid biotransformation rates of *Escherichia coli* -based biocatalysts by increasing expression level of FadL
	Hye-Jin Jo, Ji-Won Song, Eun-Yeong Jeon and Jin-Byung Park
P-60	Efficient production of L-carnitine using dual nitrile-related enzymes
	Takanori Akiyama, Fumiaki Watanabe and Wataru Mizunashi
P-61	Development of *Bacillus amyloliquefaciens* as an alternative cell factory for the high-level secretion of recombinant proteins
	Hui Wang, Huoqing Huang, Huiying Luo and Bin Yao
P-62	The Response Characteristics of Pyranose Oxidase Electrode to Glucose and Xylose
	Zhang Jinling, Du Yi, Gao Guangheng, Zhu Sirong and Bi Chunyuan
P-63	Dietary fatty acid metabolism in lactic acid bacteria
	Shigenobu Kishino, Akiko Hirata, Michiki Takeuchi and Jun Ogawa
P-64	Identification and Characterization of *Vibrio vulnificus plpA* Encoding a Phospholipase A_2 Essential for Pathogenesis
	Kyung Ku Jang, Zee-Won Lee and Sang Ho Choi
P-65	Research on uric acid biosensor based on graphene oxide-prussian blue nanocompositrs
	Zheng Lan, Ma Yaohong, Yang Junhui, Meng Qingjun, Gong Weili, Yang Yan, Liu Qingai, Cai Lei, Bi Chunyuan and Shi Jianguo
P-66	Ginsenoside Rg5 induces apoptosis by activating two apoptotic pathways in human esophageal cancer cells
	Yang Li and Ying-Hua Jin
P-67	Stereoselective synthesis of chiral secondary amines from renewable fatty acids by multi-step biotransformations
	Da-Som Lee, Jung-Hoo Lee, Uwe Bornscheueur and Jin-Byung Park
P-68	Microbial Fe(II)/α-Ketoglutarate-Dependent Enzyme-catalyzed Oxygenation to Produce Industrially Useful Amino Acids
	Makoto Hibi, Ryotaro Hara, Takayuki Iihoshi, Shoko Kozono, Satomi Takahashi and Jun Ogawa
P-69	Characterization of a single-chain catalytic antibody promoting the degradation of oligomeric amyloid beta-protein
	Yunlong Zhang, Xiaoning Zhang, Chuli Song and Yingjiu Zhang
P-70	Characterization of the Single-Chain Antibody Inhibiting PHD2 Activity
	Liangzhong Zhao, Ruijuan Gao, Jialiang Zhao, Ziyu Liu, Fang Yang and Guiying Li
P-71	Isolation of diverse styrene monooxygenase genes from soil metagenomes by S-GAM (Screening of Gene-Specific Amplicons from Metagenomes) method
	Hiroshi Toda and Nobuya Itoh
P-72	Generation of therapeutic enzyme variants with the human serum albumin binding capacity via site-specific fatty acid conjugation
	Jinhwan Cho and Inchan Kwon
P-73	The development of deer blood serum enzymatic products and research on its antioxidant effects
	Lu Hou and Wei Shi
P-74	Ginsenosides with a specific structure regulate NF-kB pathway by targeting Annexin A2
	Ying-Hua Jin, Yushi Wang, Yingjia Lin, Yang Li and He Li
P-75	Production of *o* -hydroxylated monophenolic glycosides using *Burkholderia thailandensis* tyrosinase at acidic condition
	Hyun Kim, Ukjae Lee, Pyung-Gang Lee and Byung-Gee Kim
P-76	Production of n-butylamine in Escherichia coli by transaminase
	Yuki Mori, Takuya Matsumoto, Tsutomu Tanaka and Akihiko Kondo

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P-77	Effects of Hereditary Moderate High-fat Diet in C57BL/6 Offspring on Atrogin-1/MuRF-1 in E3 Ubiquitin Ligase
	Xueyan Zhang, Bingjie Zhang, Fang Liu and Guirong Zhang
P-78	The anti-aging effect of nanozyme in *C. elegans*
	Li Xu, Junrong Zhang, Zhixian Zhang, Qi Yan, Yafan Li and Yi Guo
P-79	A hemolysin-like protein responsible for S-layer formation in a sulfur-oxidizing bacterium, *Thiothrix nivea*
	Keiko Kondo, Yuta Kawasaki, Daisuke Kan, Masato Katahira, Michio Sato, Ichiro Suzuki and Minoru Takeda
P-80	Characterization of a D-threonine aldolase for D-threonine production
	Sung-Hyun Park, Kil Koang Kwon and Soo-jin Yeom
P-81	A deuterohemin peptide protects a transgenic *Caenorhabditis elegans* model of Alzheimer's disease by inhibiting $A\beta_{1-42}$ aggregation
	Jia Xu, Chonghan Wang, Yujia Chen and Liping Wang
P-82	Gold nanoparticle functionalized with a selenopeptide displays tunable GPx-like activity
	Yi Guo, Na Shen, Qi Yan, Siqi Wang, Yafan Li and Li Xu
P-83	Thermostabilization of mutant beta-glucuronidase resulted in increased stability and lower background signal of homogeneous immunoassay
	Jiulong Su, Yuki Ohmuro-Matsuyama and Hiroshi Ueda
P-84	Caveolin-1 regulates core-fucosylation and α 1,6-fucosyltransferase (Fut8) expression level in murine hepatocarcinoma via wnt/β-catenin signaling
	Xixi Chen, Cheng Zhang, Yubo Liu, Zhengyao Zhang, Shujing Wang and Jianing Zhang
P-85	Research on utilization of lignin from biorefinery
	Donghua Xue, Li Wang, Kun Zhang and Xiaoxiao Chen
P-86	A novel cycling method by a purine nucleoside phosphorylase for assaying inorganic phosphate
	Shigeru Ueda and Shin-ichi Sakasegawa
P-87	Design of a PolyTag that affords polymerization of functional proteins
	Ryo Sato, Kosuke Minamihata, Masahiro Goto and Noriho Kamiya
P-88	Engineering of fungal-derived FAD-GDH by circular permutation
	Satoru Ishihara, Kyoichi Nishio, Satoshi Koikeda and Stefan Lutz
P-89	Creation of Useful Variants of Industrial Lipases from *Burkholderia cepacia* and *Pseudomonas fluorescens*
	Kazunori Yoshida, Masakazu Ono, Takahiro Yamamoto, Takashi Utsumi, Satoshi Koikeda and Tadashi Ema
P-90	A Novel Chitinase from the Chitin-degrading Hyperthermophilic Archaeon, *Thermococcus chitonophagus*
	Tamotsu Kanai, Ayumi Horiuchi, Mehwish Aslam and Haruyuki Atomi