12. Conference Poster List

NO.	Author	Affiliation	Topic
P-001	Ian Yunus	Singapore Institute of Food and Biotechnology Innovation (SIFBI), Agency for Science, Technology and Research (A*STAR)	Global analysis of natural product diversity from extreme environments reveals vast untapped biosynthetic potential
P-002	Ling Qin	South China University of Technology	Multi-omics analysis reveals the impact of LincRNA deletion on yeast protein synthesis
P-003	Shengding Wang	South China University of Technology	Enhancing PgUGT activity and thermostability via mutation site screening aided by molecular docking structure and computer-aided design for efficient industrial synthesis of Rebaudioside D
P-004	Yiwei Meng	Jiangnan University	Rational design of self-assembling protein scaffolds for enzyme performance reconstruction and efficient cascade catalysis
P-005	Nikhil Aggarwal	National University of Singapore	Engineered Commensals for Metabolic Modulation of the Gut-Liver-Brain Axis
P-006	Sophia Tang	University of California, Berkeley	Engineering all human milk oligosaccharide fucosidic linkages in planta
P-007	Minju Kang	Korea Advanced Institute of Science and Technology	Synthesis of aromatic PHAs as sustainable hot-melt adhesives
P-008	Hyunmin Eun	Korea Advanced Institute of Science and Technology	Expanding the biosynthetic capability of *Corynebacterium glutamicum* for lutein production
P-009	Xiang Li	Chalmers University of Technology	Complementary Yeast Biosensors for Intracellular and Extracellular Lactate
P-010	Bo Peng	VIB-KU Leuven Center for Microbiology	Engineering *Penicillium rubens* as a Next-Generation Fungal Chassis for Flavonoid Biosynthesis
P-011	Jian Xu	Qingdao Institute of Bioenergy and Bioprocess Technology, CAS	Single-cell metabolic engineering (SME) and single-cell process engineering (SPE) by the Ramanomics Platform
P-012	Liping Wang	Shanghai Ocean University	Genome-wide transcriptome analyses reveal changes in pigment -overproducing Monascus obtained by UV mutagenesis
P-013	Ping Men	Qingdao Institute of Bioenergy and Bioprocess Technology, CAS	Decoding Micafungin Precursor Biosynthesis for Industrial Strain Engineering
P-014	Miaohang Hua	Zhejiang University of Technology	Rational charge-modulation engineering of polyphosphate kinase for efficient ATP regeneration
P-015	Qian Liu	Tianjin Institute of Industrial Biotechnology, CAS	Engineering Industrial Filamentous Fungal Chassis for Efficient Recombinant Protein Production
P-016	Mengnan Wang	Zhejiang University of Technology	Residue Engineering for Esterase Optimization through Evidence Integration and Structural Stratification
P-017	Xuanye Zhu	Zhejiang University of Technology	Synergistic enhancement of activity and stability for haloalcohol dehalogenase in aqueous-organic biphasic systems
P-018	Shuwei Zhang	Beijing University of Chemical Technology	Expression and Catalytic Performance Optimization of 2-OST and 3-OST for Enhanced Enzymatic Heparin Synthesis
P-019	Ming Ma	Beijing University of Chemical Technology	Application of the modular strategy to the production of ergothioneine by engineered *Saccharomyces cerevisiae*
P-020	Jiuzhou Chen	Tianjin Institute of Industrial Biotechnology, CAS	Engineering of a LysG-derived arginine-specific biosensor for high-throughput screening of arginine overproducers in *Corynebacterium glutamicum*
P-021	Jia Yan	Shandong University	Decoupling transcriptional gain and leakage enables programmable high-precision gene regulation in *Yarrowia lipolytica*
P-022	Yuhua Wang	Beijing University of Chemical Technology	UV Mutagenesis and Electrochemical Screening of an Oxidative-Stress-Resistant *Cupriavidus necator* for CO_2-Derived Single-Cell Protein Production
P-023	Yusheng Hu	Zhejiang University of Technology	An integrated workflow for proline hydroxylase discovery and engineering through sequence mining, rational design, and low-N learning
P-024	Jing Yin	Northeast Forestry University	Yeast Cell Factory for Betulinic Acid Biosynthesis through Pathway Optimization and BpPDR4-Mediated Enhancement
P-025	Shuangyan Chang	Yanbian University	Myristoleic acid produced by *Enterococcus faecalis* inhibits obesity by activating brown adipose tissue
P-026	Ke Sun	Yanbian University	Myostatin deletion remodels gut microbiota and improves fast-twitch myofiber growth and muscle atrophy via the valeric acid-GPR43 axis
P-027	Aonan Li	Dalian University of Technology	Genome-scale metabolic modeling maps nitrogen–oxygen control of growth-to-storage allocation for PHB biomanufacturing in *Halomonas boliviensis* LC1
P-028	Zhengyun Jin	Yanbian University	*Lactobacillus reuteri* Promotes GLP-1 Secretion to Improve Intestinal Barrier Integrity and Glucose Homeostasis
P-029	Chenyuan Liu	Beijing University of Chemical Technology	Biosynthetic production of PSA, BNP, and NT-proBNP as biomarkers for cardiovascular and renal diseases
P-030	Defei Liu	Tianjin Institute of Industrial Biotechnology, CAS	Uncovering Lignin Degradation for Chemical Production through Consolidated Bioprocessing in *Myceliophthora thermophila*
P-031	Han Liu	Beijing University of Chemical Technology	From Sterol Precursors to Brassinosteroids: Emerging Metabolic Engineering Strategies for Microbial Biomanufacturing
P-032	Wanyue Zhang	Beijing University of Chemical Technology	Metabolic Engineering for Enhanced Biosynthesis of Vitamin K2 in *Bacillus subtilis*
P-033	Jinjin Yang	Beijing University of Chemical Technology	Biosynthesis and optimization of vanillin
P-034	Yuyang Pan	South China University of Technology	Discovery and Engineering a UDP-glycosyltransferase for Efficient Gastrodin Biosynthesis in Yeast
P-035	Chenchen Xu	Beijing University of Chemical Technology	Shikimate Crosstalk Enables Record-Level Homogentisic Acid Production in *Yarrowia lipolytica*
P-036	Peijie Shen	Zhejiang University	Mining and Engineering of Mesophilic Argonaute for Rapid Phage Detection

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P-037	Xiaoqing Ma	The Second Affiliated Hospital of Soochow University	Unsupervised Learning-Derived Complex Metabolic Signatures Refine Cardiometabolic Risk
P-038	Lili Jia	University of Chemistry and Technology, Prague	Enhanced Yellow Pigment Production by *Monascus pilosus* and Selective Accumulation of Monascuspiloin under Nitrogen Limitation
P-039	Shaozhuang Ma	Yanbian University	*Lactobacillus reuteri*-enriched eicosatrienoic acid restores intestinal barrier via GLP-1R/PI3K-AKT signaling in a PCOS mouse model
P-040	Qingwen He	Dalian University of Technology	Development of a Rapid Yeast Evolution Method Mediated by a Multiplex Base-Editing System
P-041	Muyang Li	Jiangnan University	Structure-Guided Stepwise Engineering of a Microbial Glycosyltransferase for Highly Regioselective and Efficient Biosynthesis of Salidroside
P-042	Kerou Shi	Institute of Feed Research, Chinese Academy of Agricultural Sciences (IFR CAAS)	Se-biofortified *Pediococcus acidilactici* SKR-2 enhances fish thermotolerance over inorganic Se
P-043	Xiaoyu Zhang	Institute of Feed Research, Chinese Academy of Agricultural Sciences (IFR CAAS)	A novel EDTA-independent phage lysin AvLys2 combats Aeromonas veronii infection through targeted gut microbiota remodeling
P-044	Xi Deng	Dalian University of Technology	Marine Metagenome-Derived Novel α-Carbonic Anhydrases: Mining, Characterization of Extreme-Condition Adaptability, and Application in Succinic Acid Fermentation
P-045	Guofu Zhao	Dalian University of Technology	Integrated dynamic control and enzyme co-localization strategies enable high-efficiency stilbenoid biosynthesis
P-046	Qun Dong	Dalian University of Technology	Data-Driven Modeling of Large-Scale Pan-Cancer Phosphoproteomics Reveals Molecular Subtypes and Drivers of Tumor Proliferation
P-047	Yanyan Liu	Nanjing Normal University	Biotin-Assisted Pyruvate Carboxylase Engineering Coordinates Inorganic Carbon Anaplerosis and DHA-Rich Lipid Production in *Schizochytrium* sp. HX-308
P-048	Ziyan Wang	Dalian University of Technology	Telomere-to-Telomere Genome Assembly and Comparative Genomics of *Rhodotorula toruloides*
P-049	Yuan Fang	International Centre for Bamboo and Rattan	Alkaline sulfite pretreatment of bamboo culm for enzymatic sugar production
P-050	Lijie Long	Nanjing Normal University	Engineering Ancestral Fatty Acid Photodecarboxylases for Photostable, Catalytically Robust Conversion of Oils into Hydrocarbon Fuels
P-051	Ziyu Chen	Huazhong Agricultural University	Directed Evolution of Carbonyl Reductase for Biosynthesis of Chiral Pydiflumetofen Intermediate
P-052	Di Li	Huazhong Agricultural University	Engineering *Yarrowia lipolytica* for geranylgeraniol production via the isopentenol utilization (IUP) pathway and the mevalonate (MVA) pathway
P-053	Wei Xie	South China University of Technology	Metabolic Engineering of *Saccharomyces cerevisiae* for De Novo Biosynthesis of Rare Ginsenoside Rh1 from Red Algal Biomass
P-054	Seo Hui Lee	Kyung Hee University	Engineering Methylosinus trichosporium OB3b for Methane-to-Poly(3HB-co-3HP) Bioconversion
P-055	Halim Genoveva Jessica Valerie	Kyung Hee University	Engineering the Glycosylation Regioselectivity of TcCGT1 toward O-Glycosylation of Aloesone
P-056	Jun Seo Shin	Kyung Hee University	Engineering Methanotrophs for One-Pot Conversion of Gaseous Alkenes to Vicinal Diols

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P-057	Rongkun Du	Xi'an Jiaotong University	Synergistic Lanthanum Recovery and Methane Mitigation by *Methylotuvimicrobium buryatense*: A Biotechnological Strategy Targeting Coal Mining Waste Streams
P-058	SeoYeon Shin	Kyung Hee University	Engineering a Methanotroph–*Escherichia coli* Consortium for Co-conversion of Methane and Propane to Polyhydroxybutyrate
P-059	Seungwoo Baek	Sungkyunkwan University	FBAwOMC: Organelle-Level Molecular Crowding in Yeast Genome-Scale Flux Balance Analysis
P-060	Chanyoung Joung	Korea Advanced Institute of Science and Technology	Machine-learning guided decomposition of *Streptomyces coelicolor* transcriptome reveals the regulatory architecture encompassing secondary metabolism
P-061	Jae Heon Kim	Korea Advanced Institute of Science and Technology	In Silico Retrobiosynthesis and AI-Guided Design of Modular Natural Product Pathways
P-062	Jingyi Song	Dalian University of Technology	Binary Solvent Extraction Enables Cell Recycling and Semi-Continuous Lipid Production in *Rhodotorula toruloides*
P-063	Tisa Rani Saha	Kyung Hee University	Engineering yeast platforms for aloesone biosynthesis through metabolic engineering and pathway optimization
P-064	Yidan Wang	Xi'an Jiaotong-Liverpool University	Long-term serial passage and recurrent strain reinforcement shape the assembly of selenium- and zinc-enriched probiotic communities
P-065	Hyeseong Kim	Korea Advanced Institute of Science and Technology	Genome-wide identification of genetic regulatory elements in *Streptomyces tsukubaensis* NRRL 18488
P-066	Sangmin Park	Korea Advanced Institute of Science and Technology	Transcriptome and Translatome Analysis of FK506 Biosynthesis in *Streptomyces tsukubaensis* NRRL 18488
P-067	Yingyu Zhou	Tianjin University	Development of a promoter-based PLP-responsive biosensor platform for directed evolution of PLP biosynthetic enzymes in *Corynebacterium glutamicum*
P-068	Manyu Chen	First Affiliated Hospital of Army Medical University	Injectable Hydrogel Microspheres Loaded with Cartilage-Targeting Hybrid Exosomes Mediating FGF18 Gene Delivery for Osteoarthritis Treatment
P-069	Yao Wang	The First Hospital Affiliated to Army Medical University	Matrix Stress Relaxation Regulates Tendon-Bone Interface Repair via OGT/O-GlcNAc-Mediated Mechanometabolic Signaling
P-070	Gahyeon Kim	Korea Advanced Institute of Science and Technology	Genome-Scale Multi-Omics Analysis of Gene Regulation across Industrially Relevant *Streptomyces* Species
P-071	Chanho Park	Korea Advanced Institute of Science and Technology	Elucidating essential genes for autotrophic growth in *Eubacterium limosum* through genome-wide CRISPRi screening
P-072	Hyesoo Shin	Seoul National University	Engineering *Saccharomyces cerevisiae* for Cannabigerolic Acid Production
P-073	Muhammad Israr	Huazhong Agricultural University	High-Throughput Growth-Coupled Evolution of D-Amino Acid Biocatalysts for Non-Canonical Amino Acid Synthesis
P-074	Dain Jang	Seoul National University	Development of an EvolvR-Based Continuous Evolution System in *Yarrowia lipolytica*
P-075	Xiaobing Jiang	South China University of Technology	De novo synthesis of sakuranetin by metabolic engineering of *E. coli*
P-076	Hengrun Li	Shanghai Jiao Tong University	An In Vivo-Guided Optimization Framework for Efficient Cell-Free Protein Synthesis and Biomanufacturing

NO.	Author	Affiliation	Topic
P-077	Yueming Dong	McGill University	Transcriptome and lipidome profiling reveal phospholipid remodeling in diterpenoid-producing yeast
P-078	Xinyi Li	Beijing Institute of Technology	Design of the biosensor-dependent coupling system stabilizes the high-synthesis phenotype of cell factory
P-079	Meiling Zhang	Tsinghua University	Establishing cell suitability for high-level production of licorice triterpenoids in yeast
P-080	Kirti Kirti	Indian Institute of Technology Bombay	Precursor Engineering and ^{13}C Flux Analysis Reveal Fatty Acid Recycling as a Control Point for Cyanobacterial Alkane Biosynthesis
P-081	Yuhui Cheng	East China University of Science and Technology	Hierarchical modular rewiring of yeast sterol metabolism for high-titer de novo cholesterol biosynthesis by resolving multi-layer metabolic bottlenecks
P-082	Lina Ma	Shanghai Jiao Tong University	Engineering High-Temperature Biosynthetic Pathway for Polylactic Acid Production
P-083	Khoi Nhat Pham	Kyung Hee University	Development of a DNA-GPT-Machine Learning Framework for Promoter Generation and Gene Expression Prediction in Bacteria
P-084	Chuanling Zhan	Shanghai Jiao Tong University	Dynamic Metabolic Engineering of *Komagataella phaffii* for Muconic Acid Production from Methanol
P-085	Jehun Moon	Sungkyunkwan University	Codon Design Online (CoDOn): a Comprehensive Synthetic Gene Design Tool for Codon Optimization of Microbial and Mammalian Cell Factories
P-086	Krishi Mantri	Princeton University	Brown macroalgae Rags to Riches: Engineering Stress-Tolerant Yeast Issatchenkia orientalis for Sargassum Valorization
P-087	Jiale Zhang	Tianjin University	Metabolic Engineering of *Saccharomyces cerevisiae* for High-Titer Ginsenoside Rh2 Production from Glycerol
P-088	Andrés F. González Barrios	Universidad de los Andes	A Machine Learning-Based Tool for Enzyme-Substrate Activity Prediction and Enzyme Discovery in Plant Transcriptomes
P-089	Yong Jun Jeong	Korea Advanced Institute of Science and Technology	Carbon-Ratio Tuning of a Division-of-Labor *Corynebacterium glutamicum* Co-culture for 3'-Prenylnaringenin Biosynthesis
P-090	Xuerui Jin	Tianjin University	Biocatalytic synthesis of chiral fluorinated non-natural amino acids via aldolase-aminase cascades
P-091	Juhee Won	Korea Research Institute of Bioscience and Biotechnology	Engineering of Olivetol Synthase for Effective Biosynthesis of the Cannabinoid Precursor, Olivetolic Acid
P-092	Xuyuan Wang	KAIST	Development of a Microbial Platform for Serotonin-Derived Metabolite Biosynthesis
P-093	Han Lin	Beijing University of Chemical Technology	A Spatially Decoupled Electro-Biosystem for Efficient CO_2-to-Chemicals Conversion
P-094	Ziling Wang	Korea Advanced Institute of Science and Technology	DeepDDI-X Enables High-Throughput Mapping of Drug-Drug Interactions and Clinical Severity
P-095	Leidun Xu	Korea Advanced Institute of Science and Technology	Engineering *Escherichia coli* for highly efficient production of recombinant native-sized spider dragline silk protein
P-096	Shuaiwen Wang	Korea University	Blocking β-oxidation and amplifying ω-oxidation enables de novo sebacic acid production from glucose in *Saccharomyces cerevisiae*

NO.	Author	Affiliation	Topic
P-097	Jing Chen	Tianjin University	Integrated Rewiring of Aromatic Metabolism Enhances p-Coumaric Acid Production in *Yarrowia lipolytica*
P-098	Yuliang Li	The First Affiliated Hospital of Army Medical University	A Bacterial Metabolism-Driven Dual-Enzyme Cascade Sensor for Rapid Metabolic Phenotyping and Antibiotic Susceptibility Profiling
P-099	Bangbi Weng	Southwest Hospital of Army Medical University	Metabolic Reprogramming of Bronchial Epithelial Autophagic Flux by Azithromycin Eradicates Intracellular Persistent *Acinetobacter baumannii*
P-100	Kyeong Ho Kim	Korea Advanced Institute of Science and Technology	Biosensor-guided strain engineering of Klebsiella michiganensis for high-level 2,3-butanediol production
P-101	Yusik Kim	Korea University	Biosensor-Driven Engineering of Taxadiene Synthase for Rapid Paclitaxel Precursor Biosynthesis
P-102	Minjun Chang	Korea University	A multi-input probiotic biosensor for inflammatory bowel disease
P-103	Kyubin Shim	Korea University	Directed Evolution of Dextransucrase for Thermostability Engineering toward Rebaudioside Derivative Production
P-104	Ingyeong Jeong	Korea University	Microbial Production of Urolithins through AI-Assisted Biosynthetic Pathway Reconstruction in *Escherichia coli*
P-105	Sion Lee	Korea University	Reprogramming the *Escherichia coli* Tryptophan Repressor into Serotonin- and Melatonin-Responsive Microbial Biosensors
P-106	Yating Zhao	Charité-Universitätsmedizin Berlin	Proteome allocation distinguishes glycolytic rewiring strategies in *Escherichia coli*
P-107	Hongyi Fan	Institute of Applied Microbiology, RWTH Aachen University	Engineering L-Lactic Acid Production in *Cupriavidus necator* under Different Trophic Conditions
P-108	Hyunji Yoon	Korea University	Engineering *Escherichia coli* Nissle 1917 for Enhanced Serotonin Biosynthesis toward Gut–Brain Axis Applications
P-109	Min Sun Kim	University of Seoul	Methane-Based Production of D-Pantothenic Acid by the Newly Isolated Methanotroph *Methylosinus sporium* UOS2
P-110	Mariia Kharchenko	JSC Ajinomoto-Genetika Research Institute	Structure-based design of *P. ananatis* glutamate dehydrogenase mutants with altered coenzyme specificity
P-111	Weijian Jin	University of Science and Technology of China	Metabolic Engineering Optimization of *Escherichia coli* BL21 Star (DE3) for High-efficient Production of Hydroxytyrosol
P-112	Anka Siebericchs	Institute of Applied Microbiology, RWTH Aachen University	Utilization of toxic, hard-to-degrade plastic monomers by engineered *Pseudomonas putida* KT2440
P-113	Fuzhou Zhu	Tianjin University	Multidimensional engineering and peptidoglycan modulation for surfactin production in *Bacillus subtilis*