Metabolic Engineering X- Poster Presentation Schedule

Poster Group 1 (Sunday, June 15 and Monday, June 16)

Poster Number	Abstract Title	Last Name	First Name
1	The Genetic and Metabolic Regulation of Rhamnolipids Biosynthesis in Pseudomonas Aeruginosa Reveals New Engineering Strategies for Heterologous Expression	Abdel-Mawgoud	Ahmad M.
2	Isotopically Nonstationary 13C Flux Analysis of Isobutyraldehyde Production in Synechococcus Elongatus	Adebiyi	Adeola
3	Characterization of LDH Genes for L-Lactic Acid Production in Pichia Pastoris	Almeida	Pollyne B. A.
4	Identification of Key Metabolite Concentrations and Enzyme Saturations Determining the Physiological States of Glucose-Fed E. coli for the Production of 1,4-Butanediol	Andreozzi	Stefano
5	New Advances in 13C Metabolic Flux Analysis: Complete-MFA, Co-Culture MFA and Dynamic MFA	Antoniewicz	Maciek R.
6	Parallel Labeling Experiments: A Novel Approach for Validating Metabolic Network Models	Au	Jennifer
7	Synthetic Microbial Metabolism Refactoring for the Production of a Chemical Synthon, 2,4-Dihydroxybutyric Acid	Auriol	Clément
8	Implementation of a Disassociated Fatty Acid Synthase System (FAS type II) in Saccharomyces Cerevisiae for Fatty Acid and Wax Ester Production	Azevedo	Flávio
9	Production of 4-Hydroxybutyric Acid By Metabolically Engineered Mannheimia Succiniciproducens and Its Conversion to Gamma-Butyrolactone By Acid Treatment	Bang	Junho
10	Challenges in Reverse Engineering of Industrial Fermentation Strains	Benjamin	Kirsten R.
11	Metabolic Engineering for Ricinoleic Acid Production in Y. Lipolytica	Beopoulos	Athanasios
12	Fatty Acid Overproduction in a Genetically Engineered Puryvate Decarboxylase-Negative Strain of Saccharomyces Cerevisiae	Bergman	Alexandra
13	Isolation, Characterization and Metabolic Engineering of a Thermophilic Bacillus for Green Chemical Production	Bosma	Elleke F.
14	Controlled Protein Degradation for Development of Metabolite Valves	Brockman	Irene
15	Flexible and User Friendly Tools for the Incorporation of Fluxomics Data into Metabolic Models	Carreira	Rafael
16	Unraveling the Inhibitory Effects of Acetate on Ethanol Production in Cen.PK	Chakrabarti	Anirikh
17	Understanding and Optimizing Free Fatty Acid Production in Synechocystis Sp. PCC 6803	Cheah	Yi Ern

41	Prediction and Design of Novel Metabolic Pathways for the Production of Desired Chemicals	Kim	Dong In
42	Integration of Transcriptomic Data in Genome-Scale Metabolic Models Predicts in Vitro Intracellular Central Carbon Metabolic Fluxes with High Correlation in Escherichia coli and Saccharomyces Cerevisiae	Kim	Min Kyung
43	Model-Driven Metabolic Engineering of *Escherichia coli* for Improving Conversion of Lignocellulose-Derived Sugars to Ethanol	Kim	Joonhoon
44	Yeast Cell Factories for Production of Biobutanol	Krivoruchko	Anastasia
45	Engineering of a Stable, Syntrophic Microbial Coculture for Enhanced H2 Production	LaSarre	Breah
46	Redirecting Photosynthetic Reducing Power into Light-Driven Biosynthesis of Bioactive Natural Compounds	Lassen	Lærke Marie Münter
47	Biosynthesis of 2-Hydroxyacid Containing Polyhydroxyalkanoates in Metabolically Engineered Ralstonia Eutropha	Park	Si Jae
48	Biosynthesis of Polyhydroxyalkanoates in Recombinant Ralstonia Eutropha Engineered to Utilize Sucrose As a Carbon Source	Park	Si Jae
49	Comparative Cross-Strain Analysis of Stress Resistance Mechanisms Revealed By Transposon Insertion Sequencing	Lennen	Rebecca M.
50	Construction of a Efficient Xylose Metabolic Pathway in Saccharomyces Cerevisiae for Ethanol Production	Li	Yunjie
51	Development of a Yeast Cell Factory for Resveratrol Production	Li	Mingji
52	Modelling Population Dynamics of Pseudomonas Putida KT2440 Under Various Growth Conditions	Lieder	Sarah
53	Carbon Flux-Associated Redox Rebalancing By Static and Dynamic Control	Lim	Jae Hyung
54	Enhanced Utilization of Non-Favored Sugars from Marine Biomass By Re-Designed *Escherichia coli*	Lim	Hyun Gyu
55	Comprehensive Study of Metabolic Flux Rewiring in E. coli Knockout Strains	Long	Christopher P.
56	Metabolic Engineering of Pseudomonas Putida KT2440 for the Production of Compounds Derived from the Shikimic Acid Pathway	Lorenz	Silvia
57	Metabolic Engineering of Yeast for Commercial Production of Succinic Acid	Los	Alrik
58	Vitamin Analogs As Antiinfectives: Occurrence, Mode of Action, Metabolism and Production	Mack	Matthias
59	Genome-Scale Strain Designs Based on Regulatory Minimal Cut Sets	Mahadevan	Radhakrishnan
60	A Bayesian Design of Experiments for Ensemble Modelling of Metabolic Networks	Manesso	Erica

61	Developing an Integrated Systems and Synthetic Biology Platform for Gas Fermenting Acetogens	Marcellin	Esteban
62	Rational Genome Engineering with Genetically Encoded Biosensors at Single-Cell Scale	Marienhagen	Jan
63	An Integrated Multi-Omics and Computational Characterization of Seven Unique Escherichia coli Production Strains Commonly-Used in Industrial Biotechnology	Monk	Jonathan M.
64	Computationally Guided Characterization of Carboxylic Acid Reductases for Expanding Aldehyde Bioproduction	Moura	Matthew
65	K-Optforce: Strain Design Using Kinetic Information	Mueller	Thomas
66	Super E. coli" through Automated Reaction Network Generation and Genome Scale Models	Hadadi	Noushin
67	Strategies for Improving Renewable Phenol Biosynthesis in Engineered Escherichia coli	Nielsen	David R.
68	Synthesis of Nylon 6,5 from Biologically Prepared 5AVA By Metabolically Engineered *Escherichia coli*	Oh	Young Hoon
69	Metabolic Flux Analysis of Isopropyl Alcohol-Producing *Escherichia coli*	Okahashi	Nobuyuki
70	The D494G Point Mutation in the Bifunctional Alcohol and Aldehyde Dehydrogenase (adhE) of Clostridium Thermocellum Leads to Improved Ethanol Production	Olson	Daniel
71	Identifying Bottlenecks in Engineering Efficient Cellobiose Metabolism (Evidence for putative promoters within operon and TCA cycle imbalance)	Parisutham	Vinuselvi
72	Building Metabolic Engineering Tools to Better Understanding Product Production from Microbial Sources: Using the Cyanobacterium Synechocystis Sp. PCC 6803 for Astaxanthin Production	Peebles	Christie A.M.
73	Steering Prokaryotic Gene Expression Using Engineered Riboswitches	Peters	Gert
74	Sensor-Selector Strategy for Directed Evolution of Biosynthetic Pathways	Raman	Srivatsan
75	Rapid Evaluation of Itaconic Acid Production Strategies in Saccharomyces Cerevisiae	Roubos	Hans
76	Production of Aromatic Compounds in *E. coli* Strains Lacking Interconversion of PEP and Pyr When Glucose and Acetate Are Coutilized	Sabido	Andrea
77	Metabolic Transistor Strategy for Controlling Electron Transfer Chain in Escherichia coli	San	Ka-yiu
78	Ubiquinone Accumulation Improves Osmotic-Stress Tolerance in Escherichia coli	Sevin	Daniel C.
79	Transport and Metabolism of Fumaric Acid in Saccharomyces Cerevisiae	Shah	Mihir
80	Implementing the Formose Pathway for Conversion of Electricity and CO_2 to Biofuel Precursors Via Formate in *Escherichia coli*	Smith	Amanda Lee

81	Engineering the Valine Assimilation Pathway to Produce Biochemicals and Fuels in S. Cerevisiae	Solomon	Kevin
82	Systems Metabolic Engineering of *Escherichia coli* for the Production of Fumaric Acid	Song	Chanwoo
83	Engineering the Glycolytic Pathway of E. coli K12 Mutants By Gene Deletions and Introduction of a Fructose 6-Phosphate Aldolase	Sprenger	Georg A.
84	The Potential of Lactic Acid Bacteria As Microbial Factory for Pentanol Isomer Production	Starlit	Karen I.
85	Engineering *Saccharomyces Cerevisiae* for the Production of Hexadecanol and Octadecanol	Stuart	David
86	L-Methionine Production with Recombinant E. Coli	Takors	Ralf
87	Engineering of Artificial Enzyme Complexes Mediated By Heterospecific Coiled-Coil Zippers or Synthetic Protein-Protein Interaction Domains in Saccharomyces Cerevisiae	Thomik	Thomas
88	Driven By Demand Metabolic Engineering - Recombinant Rhamnolipid Synthesis in Pseudomonas Putida As an Example	Tiso	Till
89	SMET: Systematic Multiple Enzyme Targeting for Rational Design of Optimal Strains	Trinh	Cong T.
90	Mathematical Modelling of Apoptosis for GS-NS0 Cell Culture Secreting Monoclonal Antibody: Linking Gene to Growth, Metabolism and Metabolic Stress	Usaku	Chonlatep
91	Strong Reduction of Acetate Overflow in *Escherichia coli* By Systems Metabolic Engineering	Valgepea	Kaspar
92	Cytosolic Acetyl-CoA Synthesis By Pyruvate-Formate Lyase in Yeast	van Rossum	Harmen M.
93	Itaconic Acid Production in *Escherichia coli* By Overexpression of Citrate Synthase, Aconitase, and *Cis* -Aconitate Decarboxylase	Vuoristo	Kiira
94	Metabolic Engineering of Klebsiella Pneumoniae for 1-Butanol Production By Using Crude Glycerol	Wang	Miaomiao
95	Single-Cell Bioreactors Boost Bioprocess Development: New Insights into Cellular Metabolism	Wiechert	Wolfgang
96	Corynebacterium Glutamicum Engineered As a Designer Bug for the Production of Pyruvate and Succinate	Wieschalka	Stefan
97	Systems Metabolic Engineering of *Corynebacterium Glutamicum* to Overcome the Cellular Toxicity Derived from Cellulosic Hydrolysate	Woo	Han Min
98	Development of Genetic Tools for the Metabolic Engineering of the Thermophilic Acetogen Moorella Thermoacetica	Woolston	Benjamin
99	Construction of Fast Xylose-Fermenting Yeast Based on Industrial Ethanol-Producing Diploid *Saccharomyces Cerevisiae* By Rational Design and Adaptive Evolution	Yang	Junjie

100	Bacterial Cell Factory for Production of Scyllo-Inositol, a Potential Therapeutic Agent for Alzheimer's Disease	Yoshida	Ken-ichi
101	Construction of a Hybrid Pathway for Selectively Removing Nitrogen Atom from Carbazole	Yu	Bo
102	Protein Design for a De Novo Synthetic Pathway of Microbial Production of 1,3-Propanediol from Sugar	Zeng	An-ping
103	Systematic Characterization of Protein–Protein Interface for the Development of Artificial Biomachinery for Metabolic Engineering	Zeng	An-Ping
104	Dynamic Control of Metabolism through Engineering Ligand-Induced Allosteric Regulation Based on a New Concept of Thermodynamic Cycle of Protein Dynamics	Zeng	An-Ping
105	Development of the First Scalable Rubbery Polyester	Zhang	Kechun
106	Co-Culture Based Modular Engineering for Aromatic and Aromatic-Derived Compounds Production in E. coli	Zhang	Haoran
107	A Fast Metabolic Sensor for *in vivo* Cytosolic Phosphate Concentration in *Saccharomyces cerevisiae*	Zhang	Jinrui
108	Cooperative Co-Culture of Escherichia coli and Saccharomyces Cerevisiae for Overproduction of Paclitaxel Precursors	Zhou	Kang
109	Systematic Engineering of Lipid Metabolism for Fatty-Acid-Based Biofuel Production	Zhou	Yongjin
143	Assessing Metabolic Response to Increased Substrate Loading Rate in Mixed-Culture Fermentation of Waste Water	Hoelzle	Robert D
221	Production of Enantiomerically Pure (S)-3-Hydroxybutyrate Using Metabolically Engineered Saccharomyces Cerevisiae	Yun	Eun Ju
222	Characterization of High Ethanol Producing Properties of Recombinant Saccharomyces Cerevisiae ETS3 Transformed with a Mutated SPT15 Gene	Park	Haeseong
225	Engineering of a protein translocation system in Rhodococcus jostii RHA1 for the secretion of ligninases	Roccor	Raphael
226	Synthetic Design of Pathways and Organelles for Photosynthetic Terpene Production	Kim	Yong Kyoung
227	Production of Anteiso-Branched Fatty Acids in Escherichia coli, Next Generation Biofuels with Improved Cold-Flow Properties	Hauschalter	Robert W.
228	A Functional Rect Gene for Recombineering of Clostridium	Dong	Hongjun
234	A Strategy for Design, Redesign, and Optimization of Ethylene Production in E. coli	Eckert	Carrie
237	Screening predicted CYP719 family members for the production of benzylisoquinoline alkaloids in Saccharomyces cerevisiae	Narcross	Lauren
239	Regulation of yeast central metabolism by enzyme phosphorylation	Oliveira	Ana Paula

240	Dynamic Metabolic Profiling of Cyanobacteria Under Conditions of Nitrate Depletion	Hasunuma	Tomohisa
241	Towards Production of Short Chain Fatty Acids and Adipic Acid in Escherichia Coli	Sauer	Michael
242	Glutathione Production Using Yeast Engineered for Membrane and Metabolism	Hara	Kiyotaka Y.
248	Development of Efficient GABA Production System By Introduction of Synthetic Protein Complex Between Gada/B and GadC	Hong	SoonHo
249	Construction of Novel Fumarate Sensing Chimeric Two-Component System in Escherichia coli	Hong	SoonHo

Poster Group 2 (Tuesday, June 17 and Wednesday, June 18)

Poster Number	Abstract Title	Last Name	First Name
31	Targeted Proteomics Enabled Metabolic Engineering of *Clostridium Cellulolyticum* for n-Butanol Production	Gaida	Stefan M.
110	Engineering a Balanced Mevalonate Pathway in E.coli	Alonso-Gutierrez	Jorge
111	Yeast Mitochondrial Engineering: Targeting the Powerhouse of the Cell for Advanced Biofuel Production	Avalos	Jose L.
112	Combining Elementary Mode Analysis with a Network Embedded Thermodynamic Approach for Analysis of Microbial Adipic Acid Production	Averesch	Nils J. H.
113	Metabolic Reconstruction of Clostridium Acetobutylicum for Enhanced Production of Butyric Acid	Bang	Junho
114	Development of Next Generation Yeast Strains for Ethanol Production from Lignocellulosic Feedstocks	Boer	Viktor
115	Identifying the Source of Strain-to-Strain Variability in Isoprenoid Production Capacity of *E. coli* Using a Systems Biology Approach	Bongers	Mareike
116	Rational Metabolic Engineering of Baker's Yeast for Production of 3-Hydroxypropionic Acid	Borodina	Irina
117	Understanding and Overcoming Monoterpene Toxicity in Yeast for the Production of Renewable Jet Fuels	Brennan	Timothy
118	Molecular Approaches to Improve 1-Butanol Tolerance and Production in *Escherichia coli*	Bui	Le Minh
119	Metabolic Engineering for Production of 5-Aminovalerate and Glutarate Using *Escherichia coli*	Chae	Tong Un
120	Synthetic Regulatory Small RNAs for Genome-Wide Metabolic Engineering	Chae	Tong Un
121	Analysis of Aerobic-to-Anaerobic and Anaerobic-to-Aerobic Switches in E. coli Using Large-Scale Dynamic Metabolic Models	Chakrabarti	Anirikh
122	Direct Fermentation for Isobutene, Butadiene and Propylene Production : A Highway to Renewable Plastics, Synthetic Rubber and Fuels	Chayot	Romain
123	Biosynthesis of Lactate-Containing Polymers in Metabolically Engineered *Escherichia coli*	Choi	So Young
124	Production of Native-Sized Spider Dragline Silk Protein through Metabolic Engineering Approach in *Escherichia coli*	Chung	Hannah
125	Splitting the E. coli Metabolism for the Production of Fructose-6-P Derived Chemicals	Coussement	Pieter
126	Engineering S. Cerevisiae Metabolism for Efficient Production of Acetyl-CoA Derived Products	Denby	Charles
127	Engineering Yeast to Produce Fatty Acid-Derived Fuels and Chemicals	d'Espaux	Leopold

129	Engineering a Functional Deoxyxylulose Phosphate (DXP) Pathway in Saccharomyces Cerevisiae	Dietzel	Kevin
131	The Importance of the Lipid Biosynthetic Pathway for Glycolipids Production in Engineered E. coli Cells	Faijes	Magda
132	Micrornas and Apoptosis in Cell Culture - Application for Enhanced Biological Production and Cancer Treatment	Shiloach	Joseph
133	Implications of the Assumptions on Intracellular Metabolic Operational States in Metabolic Control Analysis	Fengos	Geogios
134	Novel Biosensors for Optimizing Yeast Cell Factories	David	Florian
135	13C Metabolic Flux Analysis of Co-Culture Systems: A Novel Approach	Gebreselassie	Nikodimos A.
136	Targeted Omics Informed Engineering to Improve C5 Alcohol Production in E. coli	George	Kevin W.
137	A Novel Design of a Translation Coupling-RNA Scaffold System to Improve the Efficiency of Molecular Chaperone on Recombinant Proteins Solubilization	Geraldi	Almando
138	2-Butanol and Butanone Production in Saccharomyces Cerevisiae through the B12 Dependent Dehydratase Pathway Using a Tev-Based Expression System	Ghiaci	Payam
139	Using Metrxn for Flux Elucidation and Model Reconstruction	Gopalakrishnan	Saratram
140	Use of Transporter Plug-Ins for Enhanced Productivity and Reduced Byproduct Formation of Bioalkanes and Related Compounds	Grant	Chris
142	Using Protein Scaffolds to Redirect Photosynthetic Reducing Power for Biosynthesis of Natural Products	Henriques de Jesus	Maria
144	Genetic Engineering to Produce Higher Alcohols in Yeast Saccharomyces cerevisiae	Ishii	Jun
145	Directed Evolution of Terpene Synthases Using High-Throughput Colorimetric Screening Based on Substrate Consumption	Iwasaki	Miki
146	Enhanced Biofuel Production through Coupled Consumption of Acetic Acid and Cellulosic Sugars By Engineered Yeast	Jin	Yong-Su
147	Lysate of Engineered Escherichia coli Supports Conversion of Glucose to 2,3-Butanediol with Near-Theoretical Yields and Ultrahigh Productivity	Kay	Jennifer E.
148	Evolution Reveals a Glutathione-Dependent Mechanism of 3-Hydroxypropionic Acid Detoxification	Kildegaard	Kanchana R.
149	Optimality of Microbial Metabolism with Biosynthetic Heterologous Reactions	Kim	Dong In
150	Deciphering Thermodynamics in Metabolic Networks: A Priority List of Candidates for Metabolomics	Kiparissides	Alexandros
151	Malic Acid Production By Aspergillus Oryzae	Knuf	Christoph

196	Pigment-Based, Low-Cost, Portable Micronutrient Status Tests Using Engineered Bacteria	Styczynski	Mark P.
197	The Role of Trehalose Metabolism in *Saccharomyces cerevisiae* from a Quantitative Approach	Suarez-Mendez	Camilo A.
198	Characterization of Anaerobic Central Metabolism to Improve Succinate Production in Enterobacter Aerogenes	Tajima	Yoshinori
199	Expanding Biosynthetic Pathways Based on Thermodynamic Preferences	Tashiro	Yohei
200	Fatty-Acid Production in Yeast through Reversal of the Beta-Oxidation Cycle	Teixeira	Paulo G.
201	Increased 3-Hydroxypropionic Acid Production from Glycerol Based on the Genome-Scale Metabolic Simulation in *Escherichia coli*	Tokuyama	Kento
203	Improving Dipicolinic Acid Production By *Bacillus subtilis* during Stationary Phase Based on ^{13}c-Metabolic Flux Analysis	Toya	Yoshihiro
204	Construction of E. coli Reporter Strains for the Study of Stress-Answer Regulator Proteins	Trachtmann	Natalia
205	Rational Design of Modular Cells for Efficient Combinatorial Biosynthesis of Designer Bioesters	Trinh	Cong T.
206	Design and Construction of an Artificial Nonmevalonate Operon of Escherichia coli	Tsuge	Kenji
207	Lactic Acid Production from Xylose By Engineered Saccharomyces Cerevisiae	Turner	Timothy L.
208	Model Driven Mechanistic Analysis of Adaptive RNAP Mutations	Utrilla	Jose
209	Carbon Dioxide Fixation By Calvin-Cycle Enzymes Improves Ethanol Yield in Yeast	van Maris	Antonius J.A.
210	Rational Engineering of the Methylerythritol Phosphate Pathway through Metabolic Control Analysis	Volke	Daniel
211	Comprehensive Evaluation of Two Genome-Scale Metabolic Network Models of Scheffersomyces Stipitis	Wang	Jin
212	Genome Scale Metabolic Modeling Reveals New Insights into Biomass Production in the Marine Sponge Amphimedon Queenslandica	Watson	Jabin
213	Quorum-Sensing Linked RNAi for Dynamic Pathway Control in Saccharomyces Cerevisiae	Williams	Thomas C.
214	Balancing Flux through Secondary Metabolic Pathways in Plant Culture Systems	Wilson	Sarah
215	Optimization of Multi-Gene Biological Systems Using High-Throughput DNA Assembly, Sequencing, and Model-Guided Search Strategies	Woodruff	Lauren B. A.
216	Evaluation of Biosynthetic Pathways for Conversion of Natural Gas to Liquid Fuels	Woolston	Benjamin
217	High-Efficiency Scarless Genetic Modification Method in Escherichia coli without Counterselection	Yang	Junjie

218	Metabolic Engineering of a Biosensor-Based Screening Platform in Yeast	Zhang	Jie
219	Metabolic Engineering for Production of Valuable Chemicals Based on Escherichia coli Strains Designed in silico	Zhang	Xiaolin
220	Hy-Dynfba: A Software Platform to Build Large Models, Hybrid in Time Scale	Nikerel	Emrah
223	Comparative Metabolomic Study of Anaerobic and Aerobic Processings of Metabolite Sample Preparation for Clostridium Acetobutylicum	Kim	Sooah
224	Identification and Characterization of a Processive Endoglucanase from a Marine Bacterium As a Means to Substitute Cellulbiose Hydrolases	Lee	Hee Jin
229	Enhancement of Hyaluronic Acid Molecular Weight By Re-Direction of Metabolic Fluxes in Engineered Lactococcus Lactis Cultures	Kaur	Mandeep
230	High-Throughput Screening of Metabolite Producers Using Synthetic Suicide Riboswitch in Saccharomyces Cerevisiae	Lee	Sang-Woo
231	A Computational Method to Construct an Extensive Metabolic Pathway Database	Araki	Michihiro
232	Development and Analysis of High-Light Stress Tolerant Strain of Synechocystis Sp. PCC 6803	Yoshikawa	Katsunori
233	Transport Proteins for Itaconic Acid Production in Aspergillus Niger	Steiger	Matthias
235	Down-regulation of competing pathways increases (+)-valencene production in Nicotiana benthamiana	Cankar	Katarina
236	Intracellular Metabolomics of Microorganisms for Metabolic Engineering	McCloskey	Douglas
238	Immediate product-process separation strategies for microbial fuel production	Jones	Patrik R.
243	Model Based Engineering of Pichia pastoris Central Metabolism Enhances Recombinant Protein Production	Mattanovich	Diethard
244	Deregulation of Purine Pathway in Bacillus Subtilis and Its Use in Riboflavin Biosynthesis	Wang	Zhiwen
245	Comparative Genomic and Transcriptomic Analysis Reveal Genetic Characteristics Related to Industrially Riboflavin Production in Bacillus Subtilis	Wang	Zhiwen
246	Reverse Metabolic Engineering of Bacillus Subtilis for Xylose Utilization and Acetoin/ 2,3-Butanediol Production	Chen	Tao
247	Automatic design of optimal producers using a novel approach based on elementary flux modes (EFMs), minimal cut sets (MCSs), and binary integer programming (BIP)	Jungreuthmayer	Christian