

POSTER SESSION B

Tuesday and Thursday, September 21st and 22nd

- B-1** **PROMOTER ENGINEERING: A NOVEL TOOL FOR METABOLIC ENGINEERING APPLICATIONS**
Hal Alper, Curt Fischer and Gregory Stephanopoulos, Massachusetts Institute of Technology, USA
- B-2** **EXPLORING THE METABOLIC LANDSCAPE: COMBINING RATIONAL AND COMBINATORIAL TARGETS**
Hal Alper and Gregory Stephanopoulos, Massachusetts Institute of Technology, USA
- B-3** **METABOLIC RECONSTRUCTION AS THE FOUNDATION FOR METABOLIC ENGINEERING**
Katherine Andrews-Cramer, Integrated Genomics, USA
- B-4** **COMBINED USE OF MULTIPLE ISOTOPIC TRACERS FOR THE DETERMINATION OF GLUCONEOGENESIS**
Maciek R. Antoniewicz, Massachusetts Institute of Technology, USA
Joanne K. Kelleher, Gregory N. Stephanopoulos, Massachusetts Institute of Technology
- B-5** **CELL-CELL COMMUNICATION FOR GENE METABOLIC CIRCUITS**
Wilson WaiChun Wong, UCLA, USA
Sun-Gu Lee, Pusan National University,
Thomas Buelter, Michael R. Connor, Eileen Fung, James C. Liao, UCLA
- B-6** **MAGNETOPHORESIS FOR PATHWAY ENGINEERING IN GREEN CELLS**
Michele Champagne, Manoa Innovation Center, USA
A. R. Kuehnle, G. O. Wallace, M. R. Kuehnle, Kuehnle AgroSystems Co.
- B-7** **INTEGRATING DIFFERENT HIGH THROUGHPUT DATA**
Zheng Li and Christina Chan, Michigan State University, USA
- B-8** **A KINETIC METABOLIC MODEL TO STUDY PLANT CELLS METABOLISM'S CONTROLLABILITY**
Mathieu Cloutier, Ecole Polytechnique de Montréal, Canada
Mario Jolicoeur, Michel Perrier, Ecole Polytechnique de Montréal
- B-9** **AN ARTIFICIAL PROMOTER LIBRARY FOR *ESCHERICHIA COLI***
Marjan De Mey, Ghent University, Belgium
Katja Van Nieuland, Jo Maertens, Wim Soetaert, Erick Vandamme, Ghent University
- B-10** **A METABOLIC ENGINEERING APPROACH TO COMBATING A CLINICALLY RELEVANT PROBLEM: ANTIBIOTIC RESISTANCE**
Ryan T. Gill, University of Colorado at Boulder, USA
Michael Lynch, University of Colorado Health Sciences Center,
Julie Struble, Tanya Warnecke, University of Colorado at Boulder

- B-11 THE ROLE OF TRANSCRIPTION LEVEL ON THE REGULATION OF THE METABOLIC NETWORK OF SACCHAROMYCES CEREVISIAE**
Thomas Grotkjær, University of Manchester, United Kingdom
Balázs Papp, Eotvos Lorand University,
Jens Nielsen, Technical University of Denmark,
Stephen G. Oliver, University of Manchester
- B-12 MID-INFRARED SPECTROSCOPIC QUANTIFICATION OF IONIC DISSOCIATIVE METABOLITES FOR GLYCOLYTIC REACTION SYSTEM**
Atsushi Hashimoto, Mie University, Japan
Tao Pan, Atsushi Yamanaka, Mikihiro Kanou, Kenichi Nakanishi,
Takaharu Kameoka, Mie University
- B-13 MASS SPECTROMETRY FOR METABOLITE FINGERPRINTING**
Jesper Højer-Pedersen, Technical University of Denmark, Denmark
Michael Edberg Hansen, Jørn Smedsgaard,
Jens Nielsen, Technical University of Denmark
- B-14 METABOLIC MODULATION OF GLUCOSE FLUX TO IMPROVE RADIO-/CHEMO THERAPY OF TREATMENT RESISTANT TUMORS**
Viney Jain, Institute of Technology and Management, India
- B-15 ANALYSIS OF TRANSCRIPTIONAL REGULATORY NETWORKS IN E. COLI**
Laura Jarboe, UCLA, USA
Katy Kao, Eileen Fung, Wilson Wong, Young Lyeol Yang, Linh My Tran,
Joshua Kahn, Salina Wu, James C. Liao, UCLA
- B-16 ENGINEERING ENERGY METABOLISM IN PICHIA PASTORIS**
Alexander Kern, TU Graz, Austria
Franz Hartner, Anton Glieder, TU Graz
- B-17 EVALUATING EVOLUTIONARY RELATIONSHIP OF MICROORGANISMS AND THEIR CELLULAR METABOLIC PATHWAYS BASED ON GENOME-SCALE METABOLIC PATHWAY CONTENT**
Tae Yong Kim, Korea Advanced Institute of Science and Technology, Korea
Soon Ho Hong,
Sang Yup Lee, Korea Advanced Institute of Science and Technology
- B-18 RECONCILIATION OF GC/MS BASED FLUX DISTRIBUTION DATA AND METABOLIC FLUX ANALYSIS**
Tae Yong Kim, Korea Advanced Institute of Science and Technology, Korea
Soon Ho Hong,
Sang Yup Lee, Korea Advanced Institute of Science and Technology
- B-19 HIGH-THROUGHPUT TIME-SERIES ANALYSIS OF THE SHORT-TERM ARABIDOPSIS THALIANA RESPONSE TO ENVIRONMENTAL STRESSES: A QUANTITATIVE SYSTEMS BIOLOGY APPROACH**
Maria Klapa, University of Maryland, USA
Bhaskar Dutta, Harin Kanani, University of Maryland,
Tara Vanoai, Linda Moy, Lara Linford, Jeremy Hasseman, TIGR,
John Quackenbush, The George Washington University

- B-20** **STIMULUS RESPONSE TECHNIQUES FOR IN VIVO KINETICS OF SACCHAROMYCES CEREVISIAE: INTRACELLULAR PH MEASUREMENT**
[M. T. A. P. Kresnowati, Delft University of Technology, The Netherlands](#)
W. A. van Winden, Delft University of Technology, W. M. van Gulik, Delft University of Technology, A. Proell, Delft University of Technology, J. J. Heijnen, Delft University of Technology
- B-21** **METABOLIC FLUX PROFILING AND CLUSTERING: NEW STRATEGIES FOR IDENTIFICATION OF MICROBIAL METABOLIC CHARACTERISTICS**
[Sang Yup Lee, Korea Advanced Institute of Science and Technology, Korea](#)
Soon Ho Hong,
Si Jae Park, Korea Advanced Institute of Science and Technology
- B-22** **KINETIC RESOLUTION OF EPOXIDE BY CELL SURFACE DISPLAYED BIOCATALYSTS**
[Seung Hwan Lee, Korea Advanced Institute of Science and Technology, Korea](#)
Hyung Suk Choi,
Sang Yup Lee, Korea Advanced Institute of Science and Technology
- B-23** **DESIGN AND IDENTIFICATION OF A LINLOG KINETICS MODEL FOR THE METABOLIC NETWORK OF *ESCHERICHIA COLI***
[Jo Maertens, Ghent University, Belgium](#)
Sammy Van Den Broeck, Aditya Bhagwat, Gaspard Lequeux, Peter A. Vanrolleghem, Ghent University
- B-24** **A HIERARCHICAL “TOP-DOWN” AND “BOTTOM-UP” FRAMEWORK FOR REGULATORY NETWORK ELUCIDATION AND VERIFICATION**
[Costas D. Maranas, The Pennsylvania State University, USA](#)
Madhukar S Dasika, Anshuman Gupta, The Pennsylvania State University
- B-25** **ANALYSIS OF TOPOLOGICAL PROPERTIES OF FLUXES AND METABOLITE CONCENTRATIONS IN STOICHIOMETRIC GENOME-SCALE METABOLIC NETWORKS**
[Costas D. Maranas, The Pennsylvania State University, USA](#)
Anthony P. Burgard, Evgeni V. Nikolaev, The Pennsylvania State University
- B-26** **COMPUTATIONAL APPROACHES TO COMBINATORIAL PROTEIN LIBRARY DESIGN**
[Costas D. Maranas, The Pennsylvania State University, USA](#)
Manish C. Saraf, Gregory L. Moore, The Pennsylvania State University
- B-27** **AN IMPROVED BIOSCOPE DESIGN: A SYSTEM FOR CONTINUOUS PULSE EXPERIMENTS**
[Mlawule Mashego, Kluyver Laboratory for Biotechnology, The Netherlands](#)
Ko Vinke, Walter van Gulik,
Joseph Heijnen, Kluyver Laboratory for Biotechnology
- B-28** **EXZYME: A SYSTEM FOR COMPUTATIONAL ZYMURGY**
[Daniel C. McShan, University of Colorado School of Medicine, USA](#)
- B-29** **THE BIOCURVE - A MINI BIOREACTOR FOR STEPWISE UPTAKE RATE VARIATION EXPERIMENTS**
[Aboka Fredrick Otieno, Technical University of Delft, The Netherlands](#)
Wouter van Winden, Walter van Gulik,
J. J. Heijnen, Technical University of Delft

- B-30** COMMON TRANSCRIPTIONAL MOTIFS BETWEEN *BACILLUS SUBTILIS* AND *CLOSTRIDIUM ACETOBUTYLICUM*
Carlos J. Paredes , Northwestern University, USA
E. Terry Papoutsakis , Northwestern University
- B-31** METABOLIC CONTROL OF GLOBAL REGULATORS IN *ESCHERICHIA COLI*
Annik Perrenoud, Institute of Biotechnology, ETH Zürich, Switzerland
Uwe Sauer, Institute of Biotechnology, ETH Zürich
- B-32** OXYGEN LIMITATION IS INDUCING ACETATE ACCUMULATION DURING HIGH GLUCOSE FERMENTATION OF *E. COLI* BL21
Je-Nie Phue, NIDDK, NIH, USA
Joseph Shiloach, NIDDK, NIH
- B-33** CULTURE OF NEURONAL CELL LINES FOR THE DEVELOPMENT OF CELL TRANSPLANT MATERIAL: A METABOLIC ENGINEERING APPROACH
B. Ribbeck, University of Chile, Chile
L. Sörvik, D. Sepulveda, M. C. Castillo, B. A. Andrews, J. A. Asenjo, University of Chile
- B-34** MITOCHONDRIAL METABOLOMICS IN *SACCHAROMYCES CEREVISIAE*
Eija Rintala, VTT Biotechnology, Finland
Matej Oresic, Helena Simolin, Ismo Mattila, Hannu Maaheimo, Merja Penttilä, Laura Ruohonen, VTT Biotechnology
- B-35** FUNCTIONAL GENOMICS FOR *PROPIONIBACTERIUM FREUDENREICHII*: LEARNING FROM BIOCHEMICAL NETWORK RECONSTRUCTION AND TRANSCRIPTOMICS
Hans Roubos , DSM Food Specialties , The Netherlands
Marcel Hillebrand, Jeroen van Santen, Sybe Hartmans , Herman Pel, DSM Food Specialties
- B-36** A GENETIC NETWORK DRIVEN METABOLIC FLUX ANALYSIS SCHEME
Ka-Yiu San, Rice University, USA
George N. Bennett, Sagit Shalel Levanon, Steve Cox, Brad Peercy, Rice University, Jacqueline V. Shanks, Roman Gonzalez, Iowa State University
- B-37** METABOLOMICS: THE UNBIASED SELECTION AND RANKING OF TARGETS FOR METABOLIC ENGINEERING
Mariët J. van der Werf, TNO Food, The Netherlands
- B-38** MATHEMATICAL MODELING OF PROTEASE PRODUCTION IN *BACILLUS SUBTILIS*
Jeff Varner, Genencor International Inc, USA
- B-39** STATISTICAL METHODS FOR INTEGRATIVE DATA ANALYSIS AND PREDICTIVE SIMULATION OF CELL METABOLISM
Eric von Lieres , Research Centre Jülich, Germany
Sören Petersen, Degussa, Wolfgang Wiechert, University of Siegen
- B-40** APPLICATION OF METABOLOME DATA IN FUNCTIONAL GENOMICS: AN INTEGRATIVE STRATEGY
Liang Wu, Delft University of Technology, The Netherlands
W. M. van Gulik, W. A. van Winden, J. J. Heijnen, Delft University of Technology

- B-41 MID-IRRED SPECTROSCOPIC ANALYSIS ON KINETIC SUGAR UPTAKE PHENOMENA OF MONOSACCHARIDE AND DISACCHARIDE BY SUSPENSION TBY-2 CELLS**
Atsushi Yamanaka, Mie University, Japan
Tomomi Matsuo, Mikihiro Kanou, Atsushi Hashimoto,
Takaharu Kameoka, Mie University
- B-42 NETWORK COMPONENT ANALYSIS**
Mark Brynildsen, UCLA, USA
Young Lyeol Yang, Linh My Tran, James C. Liao, UCLA
- B-43 MODEL-INDEPENDENT FLUXOME PROFILING FROM ²H AND ¹³C EXPERIMENTS**
Nicola Zamboni, Stanford Genome Technology Center, USA
Uwe Sauer, Institute of Biotechnology, ETH Zürich
- B-44 PRODUCTION OF ADENOVIRUS VECTORS FOR GENE THERAPY**
Barbara A. Andrews, University of Chile, Chile
E. Olivares, F. Zuñiga, Y. Israel, J. A. Asenjo, University of Chile
- B-45 FUNCTIONAL GENOMICS OF ASPERGILLUS NIGER STRAINS**
Herman Pel, DSM Food Specialities, The Netherlands
Hans Roubos, Noël van Peij, Hilly Menke, Lucie Parenicova,
Panos Sarantinopoulos, Stefaan Breestraat, Rogier Meulenberg,
Ab van Ooyen, Hein Stam, DSM Food Specialities
- B-46 COMPARATIVE PROTEOMIC ANALYSIS OF GS-NS0 MURINE MYELOMA CELL LINES WITH VARYING SPECIFIC MONOCLONAL ANTIBODY PRODUCTION RATE**
David C. James, University of Queensland, Australia
Diane M. Dinnis, Scott H. Stansfield, University of Queensland,
C. Mark Smales, Daniel Alete, Elizabeth A. Sage, University of Kent,
John R. Birch, Andrew Racher, Lonza Group plc.,
Carol T. Marshall, GlaxoSmithKline
- B-47 METABOLOMICS: APPLICATIONS IN MICROBIOLOGY**
Nicole van Luijk, TNO Nutrition and Food Research, The Netherlands
Karin M. Overkamp, Thomas Hankemeier,
Mariët J. van der Werf, TNO Nutrition and Food Research
- B-48 ERROR PROPAGATION REGARDING IDENTIFICATION OF PARAMETERS FOR LINLOG KINETICS AND ITS IMPACT ON METABOLIC DESIGN**
Joachim W. Schmid, University of Stuttgart, Germany
Klaus Mauch, Matthias Reuss, University of Stuttgart
- B-49 MMT 2: SUPPORTING THE MODELING PROCESS FOR RAPID SAMPLING EXPERIMENTS**
Wolfgang Wiechert, University of Siegen, Germany
Marc Haunschild, University of Siegen
Eric von Lieres, Ralf Takors, Aljoscha Wahl, Research Center Jülich
Ermir Qeli, Bernd Freisleben, University of Marburg
- B-50 METABOLIC MODELLING AS A TOOL FOR GENE ANNOTATION**
M. G. Poolman, Oxford Brookes University
P. Krabben, J. M. Ward, University College London
D. A. Fell, Oxford Brookes University

- B-51 METABOLOMICS OF RECOMBINANT YEAST: FLUXES, GENE EXPRESSION AND DISCREET MATHEMATICAL MODEL FOR GENE REGULATION OF METABOLISM**
Juan A. Asenjo, University of Chile, Chile
C. Oviedo, H. Diaz, A. Cintolesi, B. A. Andrews, University of Chile
R. Gonzalez, Iowa State University
S. Oliver, University of Manchester
- B-52 SYSTEMS BIOLOGY IN BIOTECHNOLOGICAL PROCESS DEVELOPMENT**
Sabine Arnold, DSM Nutritional Products, Switzerland
Werner Bretzel, Bastien Chevreux, Isabelle Maillet,
Andrea Muffler, Markus Wyss, DSM Nutritional Products
- B-53 DEVELOPMENT AND APPLICATION OF GENOME-SCALE MODELS OF MICROBIAL METABOLISM**
Christophe H. Schilling, Genomatica, Inc., USA
- B-54 METABOLIC ENGINEERING IN SINGLE CELLS**
Friedrich Srienc, University of Minnesota, USA
Cong Trinh, James Kacmar, Alan Gilbert, Janelle Cockrell, University of Minnesota
- B-55 BioSPICE Demonstration**
John Pedersen, SRI International, USA
Olivia Peters, SRI International
- B-56 BioSPICE Demonstration**
John Pedersen, SRI International, USA
Olivia Peters, SRI International
- B-57 GENOME-SCALE METABOLIC MODEL OF PSEUDOMONAS FLUORESCENS**
Sung M. Park, Genomatica, USA
Christophe Schilling, Genomatica
Lawrence C. Chew, Douglas Hershberger, Tom Ramseier,
Chuck Squires, The Dow Chemical Company
- B-58 DEVELOPMENT OF A QUANTITATIVE MODEL FOR A REGULATORY SWITCH IN STREPTOMYCES COELICOLOR**
Sarika Mehra, University of Minnesota, USA
Wei Lian, Wei-Shou Hu, George Karypis, University of Minnesota
David H. Sherman, Frank Glod, University of Michigan
Eriko Takano, University of Tuebingen