

# Enzyme Engineering XIX Poster List

- 1. Development of novel enzymes from the genome of the hyperthermophilic archaeon *Thermococcus onnurineus* NA1**  
Jung-Hyun Lee, Korean Ocean Research and Development, Korea
- 2. An in vitro translation system for proteases and its use for the screening of genomic libraries**  
Antje Eichler, University of Leipzig, Germany
- 3. Exploring Microbial Biodiversity for the Discovery and Development of Pyruvate Aldolases**  
P. Weiner, Diversa Corporation, USA
- 4. Characterization and gene cloning of two novel, cold adapted and alkalitolerant cellulases from marine bacteria**  
O. Salazar, University of Chile, Chile
- 5. Development of enantioselective epoxide hydrolase activities from marine microorganisms using genomic approach**  
Sung Gyun Kang, Korean Ocean Research and Development Institute, Korea
- 6. A Novel Histidinol Phosphate Phosphatase, Catalyzing the Penultimate Step of the Histidine Biosynthesis Pathway, from a Hyperthermophilic Archaeon *Thermococcus onnurineus* NA1**  
Hyun Sook Lee, Korean Ocean Research and Development Institute, Korea
- 7. Purification, characterization, and gene cloning of sphingomyelinase C from *Streptomyces griseocarneus* NBRC13471**  
Daisuke Sugimori, Fukushima University, Japan
- 8. A new phosphatase of the haloacid dehalogenase superfamily from the hyperthermophilic archaeon *Thermococcus onnurineus* NA1**  
Yona Cho, Korean, Ocean Research and Development Institute, Korea
- 9. Expression of recombinant human haemoglobin mutants**  
Marie Grey, Lund University, Sweden
- 10. Heterologous expression of peroxisomal enzymes in yeast**  
V. Siewers, BioCentrum-DTU, Denmark
- 11. Novel enoate reductases for the reduction of C=C double bonds**  
Andreas S. Bommarius, Georgia Institute of Technology, USA
- 12. Towards the identification of new biocatalysts for the bioreduction of bicyclic diketones**  
N.S. Parachin, Lund University, Sweden

- 13. myo-Inositol Oxygenase: a Novel Biocatalyst for a New Industrial Process**  
Sara C. McFarlan, Biotechnology Development Center, USA
- 14. A new kumamolisin-like protease from *Alicyclobacillus acidocaldarius*: an enzyme active under extreme acidic conditions**  
G. Palmieri, Istituto di Biochimica delle Proteine-CNR, Italy
- 15. Using Catalytic Modules for Enzyme Engineering**  
RA Nagatani, University of California, San Francisco, USA
- 16. Improving Chemo- and Regioselectivity of a Cytochrome P450 Monooxygenase**  
Vlada B. Urlacher, University of Stuttgart, Germany
- 17. Computational design of novel carboxylesterases**  
Sagar D. Khare, University of Washington, USA
- 18. Computational de novo design of enzyme catalysts**  
Daniela Grabs-Röthlisberger, University of Washington, USA
- 19. Molecular Dynamic Simulation of Pyrroloquinoline Quinone (PQQ) Glucose Dehydrogenase Substrate Recognition**  
Stefano Ferri, Tokyo University of Agriculture & Technology, Japan
- 20. Screening of peptide ligands for alpha-synuclein by in silico panning**  
Koichi Abe, Tokyo University of Agriculture and Technology, Tokyo
- 21. Thermostable Lipase from: *Bacillus stearothersophilus* PI, *Bacillus stearothersophilus* LI and *Geobacillus* sp. Strain TI**  
Mohd Basvaruddin Abdul Rahman, Universiti Putra Malaysia, Malaysia
- 22. Application of a novel computational method for enzyme design and identification**  
Alexandre Zanghellini, University of Washington, USA
- 23. Computational Design of Aldolase Enzymes**  
Eric A. Althoff, University of Washington, USA
- 24. Computational design for shifting pH optimum of *Bacillus circulans* xylanase**  
Young Je Yoo, Seoul National University, Korea
- 25. Engineering of NADPH-dependent Aldo-keto Reductase from *Penicillium citrinum* by Directed Evolution to Improve Thermostability and Enantioselectivity**  
Hiroyuki Asako, Sumitomo Chemical Co., Ltd., Japan

- 26. Directed evolution of two key cellulases for the conversion of biomass to ethanol**  
Aubrey Jones, Novozymes, Inc., USA
- 27. An Improved Zinc Finger Nuclease Architecture for Highly Specific Genome Editing**  
J.C. Miller, Sangamo BioSciences, Inc., USA
- 28. Engineering Cytosine Deaminase for Gene Therapy of Cancer**  
Michi Fuchita, Washington State University, USA
- 29. A diverse family of thermostable cytochrome P450s created by recombination of stabilizing fragments**  
Andrew M. Sawayama, California Institute of Technology, USA
- 30. Diversification of catalytic function in a synthetic family of chimeric cytochrome P450s**  
Martina Carbone, California Institute of Technology, USA
- 31. Directed Evolution of Glucose Oxidase from *Aspergillus niger* Towards Higher Catalytic Activity**  
Ya-Feng Zhou, Wuhan Institute of Virology, China
- 32. Expanding the promiscuity of a natural product glycosyltransferase by directed evolution**  
Gavin J. Williams, University of Wisconsin-Madison, USA
- 33. Altering the substrate specificity of two thermostable AP endonucleases and exonuclease III (*E. coli*) by single mutations within their hydrophobic DNA binding pockets**  
Ramona Schmiedel, University of Leipzig, Germany
- 34. Expanding the Substrate Range of Monoamine Oxidase N from *Aspergillus niger* Using a Semi-Rational Approach**  
R. Reiss, University of Manchester, UK
- 35. The Diversity Challenge in Directed Protein Evolution**  
U. Schwaneberg, Jacobs University Bremen, Germany
- 36. Changing stereoselectivity of Ypr1-catalysed carbonyl reduction of a bicyclic diketone compound**  
M. Carlquist, Lund University, Sweden
- 37. Directed Evolution of *Bacillus licheniformis* RSP-09 Lipase to Improve Thermostability**  
Bhawna Madan, Prashant Mishra, Indian Institute of Technology Delhi, India

- 38. The Concept to Generate a Glycosynthase from an Inverting Hydrolase**  
Motomitsu Kitaoka, National Food Research Institute, Japan
- 39. Expanding the Scope of Indole Alkaloid Biosynthesis**  
Peter Bernhardt, Massachusetts Institute of Technology, USA
- 40. Structure and Engineering of an SGNH-Hydrolase for Biobleach Applications**  
JS Fung, Genencor, USA
- 41. Systematic exploration of active site mutations on human deoxycytidine kinase substrate specificity**  
Pinar Iyidogan, Emory University, USA
- 42. Bacterial Cytochrome P450 BM3 as a Prototype for Biocatalysts with Human Cytochrome P450 Activities**  
Keon-Hee Kim, Chonnam National University, Korea
- 43. Directed evolution of Galactose Oxidase (GaoA)**  
Avgousta Ioannou, University of Manchester, UK
- 44. Improvement on the alkaliphilic performance of a thermostable  $\beta$ -xylanase XynB6, isolated from *Dictyoglomus thermophilum***  
P. R. Choudhary, Macquarie University, Australia
- 45. Alteration of substrate specificity of phenylalanine dehydrogenase from *Bacillus sphaericus* towards an aliphatic unsaturated amino acid by directed evolution**  
Sihong Chen, University College Dublin, Ireland
- 46. Directed Evolution of a  $\beta$ -Glucosidase Using Random Drift Mutagenesis**  
Elizabeth Hardiman, Macquarie University, Australia
- 47. Improved resistance of evolved 5-enolpyrovoylshikimate 3-phosphate synthases (EPSPS) to the herbicide glyphosate**  
Volker Heinrichs, Athenix Corp., USA
- 48. Role of Valine 329 Residue in the Acarbose Hydrolysis of *Thermus maltogenicus* amylase**  
Tae-Jip Kim, Chungbuk National University, Korea
- 49. Protein thermal unfolding as a multisite reaction of protein with water molecules**  
Osato Miyawaki, Ishikawa Prefectural University, Japan
- 50. Spectroscopic Study of Lipase from *Candida rugosa* Immobilized Onto Calcined Layered Double Hydroxides**  
Mohd Basyaruddin Abdul Rahman, Universiti Putra Malaysia, Malaysia

- 51. Immobilization and Kinetics of Glutamate Dehydrogenase from C3 Plant**  
H. M. El-Shora, Mansoura University, Egypt
- 52. Induction and characterization of fibrinase with great affinity towards human blood clot**  
H. M. El-Shora, Mansoura University, Egypt
- 53. Carboxyl Group Modification: Extreme Thermostabilization and Activation of Fungal CMCase in Hydrophilic Milieu**  
M.H. Rashid, National Institute for Biotechnology and Genetic Engineering, Pakistan
- 54. Key Residues in Determining the Substrate Specificity of Acylaminoacyl peptidase from the thermophilic *Aeropyrum pernix* K1**  
Y. Feng, Jilin University, P. R. China
- 55. Enzyme immobilization on carbon nanoparticles by covalent binding**  
Young Je Yoo, Seoul National University, Korea
- 56. Enzymatic Properties of Bacterial  $\alpha$ -L-Arabinofuranosidases, Endo-Arabinanases, and Their Fusion Proteins**  
Jung-Mi Park, Chungbuk National University, Korea
- 57. Role of Tryptophan residues 64 and 449 in the allosteric interaction of glutamate dehydrogenase from *Clostridium symbiosum***  
Muaawia A Hamza, University College Dublin, Ireland
- 58. Effect of Bax inhibitor-1 on the production of reactive oxygen species by cytochrome P450 2E1**  
Mihee Kim, Chonnam National University, Korea,
- 59. Role of phospholipids in the catalytic activities and conformation of Human cytochrome P450 1B1: Optimal reconstituted system for human CYP1B1**  
Hyun-Hee Jang, Chonnam National University, Korea
- 60. Role of the N-terminal membrane anchor domain for catalytic function and conformation of human cytochrome P450 1A2**  
Dong-Hyun Kim, Chonnam National University, Korea
- 61. Engineering perhydrolase activity in *Pseudomonas fluorescens* esterase: The role of Pro 29**  
Tyler (De) Lu Yin, Molecular Biology & Biophysics and The Biotechnology Institute, USA
- 62. Enantiocomplementary Enzymes: Classification, Molecular Basis for their Reversed Enantioference and Prospects for Mirror-Image Biotransformations**  
Romas Kazlauskas, University of Minnesota, USA

- 63. Multimerization is important for nuclear transport of Rad52 in *S. cerevisiae***  
L. Albertsen, Technical University of Denmark, USA
- 64. Atoms in Biomolecules: Polarized electron density observed for the pyrophosphate of a protein bound FAD**  
Paula Lario, Zymeworks, Inc., Canada
- 65. A quantitative determination of L-methionine using transaminase and newly created methionine dehydrogenase for diagnosis of homocystinuria**  
Shino Yamasaki, Toyama Prefectural University, Japan
- 66. Development of HIC media useful for isolation of proteins carrying single amino acid substitutions**  
Kristian Becker, Lund University, Sweden
- 67. Expression of a Capsid Protein Gene of Porcine Circovirus Type 2 and CO-26K region in the spike protein of the porcine epidemic Diarrhea Virus on the surface of *Salmonella typhimurium* using Ice Nucleation Protein**  
Dae-hwan Kim, Chonnam National University, Korea
- 68. Improving the whole cell activity of *Escherichia coli* at low temperature**  
Sun-Gu Lee, Pusan National University, Korea
- 69. A direct screening method for directed evolution of nucleoside analog kinases**  
Lingfeng Liu, Emory University, USA
- 70. Electrochemical oxidation of NAD(P)H using tin oxide electrode**  
Young Je Yoo, Seoul National University, Korea
- 71. Successful combinatorial library and confocal HTS strategies for extensive optimization of a human protease**  
J. Tebbe, DIREVO Biotech AG, USA
- 72. Microbial Display and Biocatalysis**  
Jae-Gu Pan, Korea Research Institute of Bioscience and Biotechnology, Korea
- 73. A Screening System for Directed Evolution of Epoxygenases**  
Kang Lan Tee, Jacobs University Bremen, Germany
- 74. Droplet-Based Microfluidic Technology for Rapid Screening of Secreted Enzyme Activity**  
Jeremy Lambert, RainDance Technologies, Inc., USA
- 75. Simultaneous Synthesis of L-homophenylalanine and 2-phenylethanol with NADPH regeneration system**  
Byung-Gee Kim, Seoul National University, Korea
- 76. Enzymatic enantioselective hydrolysis of ethyl mandelate in ionic liquids**  
Jing Gao, Hebei University of Technology, China

- 77. Enzymatic asymmetric hydrolysis of ethyl lactate in organic medium**  
Jing Gao, Hebei University of Technology, China
- 78. Enzymatic synthesis of ethyl oleate in CTAB reverse micellar system in the presence of additive**  
Jing Gao, Hebei University of Technology, China
- 79. Immobilized-lipase catalyzed preparation of biodiesel from Jatropha oil**  
Jing Gao, Hebei University of Technology, China
- 80. Selective transesterification in 10 M Urea or 8 M glycerol: deep eutectic solvents**  
J. T. Gorke, BioTechnology Institute, USA
- 81. Multi-parameter optimization of Buttiauxella phytase by protein engineering for animal feed applications and bioethanol feedstock processing**  
Birgitta Leuthner, DIREVO Biotech AG, Germany
- 82. Use of enzymes to modify dynamics of biogel networks**  
Véronique M. Larreta-Garde, University of Cergy Pontoise, France
- 83. Enzymatic Production of Umami Seasonings**  
Yasuhiro Mihara, Ajinomoto Co. Inc, Japan
- 84. Photochemical and Enzymatic Synthesis of Methanol from CO<sub>2</sub> with Dehydrogenases-zinc Porphyrin System**  
Y. Amao, Oita University, Japan
- 85. Preparation of an Amino Acid Intermediate for the Dipeptidyl Peptidase IV Inhibitor, Saxagliptin, using a Modified Phenylalanine Dehydrogenase**  
Ronald L. Hanson, Bristol-Myers Squibb, USA
- 86. Chemoenzymatic Production of Glycolic Acid**  
Mark S. Payne, E.I. du Pont de Nemours and Co., USA
- 87. Impact of Ionic Liquids on Bio-Redox-Catalysis**  
Stephan Lütz, Research Centre Jülich, Germany
- 88. Carbon dioxide fixation - Anaplerotic key reaction for industrial biotechnology**  
Markus Pötter, Creavis Technologies & Innovation, Germany
- 89. Use of a maize  $\beta$ -glucosidase expressed in E.coli for the synthesis of alkyl glucosides in organic media**  
R. Lortie, National Research Council Canada, Canada