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Scientific Program

International Conference on

Protein Engineering

October 26-28, 2015 Chicago, USA



OMICS International Conferences:
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Scientific Program

Day 1 October 26, 2015

08:30-09:00 **Registrations**

VERSAILLES-B

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09:00-09:30 **Opening Ceremony**

Keynote Forum

09:30-09:35	**Introduction**
09:35-10:20	**R Stephen Berry** The University of Chicago, USA
10:20-11:05	**David Mead** Lucigen Corporation, USA

Networking & Refreshments 11:05-11:25 @ Foyer

11:25-12:10	**Ram Samudrala** State University of New York, USA

Group Photo

Track 1: Enzyme Engineering
Track 2: Recombinant Protein Expression

Session Chair: Frits Goedegebuur, DuPont Industrial Biosciences, The Netherlands

Session Co-Chair: Sarah Morais, Weizmann Institute of Sciences, Israel

Session Introduction

12:10-12:35	**Strategies for recombinant production of human glycosylation enzymes: comparison of mammalian and insect cell expression systems** **Kelley Moremen,** University of Georgia, Athens GA, USA
12:35-13:00	**IPE - Industrial protein engineering: Accelerated evolution** **Frits Goedegebuur,** DuPont Industrial Biosciences, The Netherlands

Lunch Break 13:00-14:00 @ ATHENS

14:00-14:25	**Engineered "restriction RNases" for sequence-specific cleavage of dsRNA and RNA in DNA-RNA hybrids** **Janusz Bujnicki,** International Institute of Molecular and Cell Biology, Poland
14:25-14:50	**Novel solubility fusion partners high throughput system to produce soluble proteins** **David Mead,** Lucigen Corporation, USA
14:50-15:15	**Multiscale modelling of relationships between protein classes and drug behavior across all diseases using the cando platform** **Ram Samudrala,** State University of New York, USA
15:15-15:40	**Engineering glycosyl hydrolases using binding modules optimally** **M. Waheed,** University of the Punjab, Pakistan

Networking & Refreshments 15:40-16:00 @ Foyer

16:00-16:25	**Development of a convenient expression and assay for the activity of TET2 dioxygenase** **Mridhul Mukherji,** University of Missouri-Kansas City, USA
16:25-16:50	**Development of whole cell biosensor for screening of engineered lignin-degrading enzymes** **Barindra Sana,** A*STAR, Singapore
16:50-17:15	**Improved bacterial enzyme systems for deconstruction of cellulosic biomass for production of liquid biofuels** **Sarah Morais,** Weizmann Institute of Sciences, Israel

Panel Discussion

Day 2 October 27, 2015

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Keynote Forum

10:00-10:45 **Victor Tsetlin**
Russian Academy of Sciences, Russia

10:45-11:30 **Karl Freed**
The University of Chicago, USA

Networking & Refreshments 11:30-11:50 @ Foyer

Track 3: Protein Engineering
Track 4: Protein Therapeutics and Market Analysis

Session Chair: Victor Tsetlin, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry-RAS, Russia

Session Co-Chair: Gamal E H Osman, Umm Al-Qura University, Saudi Arabia

Session Introduction

11:50-12:15 **Gene Isolation, cloning, nucleotide sequencing and overexpression of anticancer protein from local bacterial isolates**
Gamal E H Osman, Umm Al-Qura University, Saudi Arabia

12:15-12:40 **Neural stem cells promote nerve regeneration through IL12-induced oligodendrocyte differentiation**
Ing-Ming Chou, National Health Research Institutes, Taiwan

12:40-13:05 **Neurotoxins: Enemies and/or Friends and why protein engineering?**
Victor Tsetlin, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry-RAS, Russia

Lunch Break 13:05-14:00 @ ATHENS

14:00-14:25 **Designing antigens for reliable serodiagnosis of tuberculosis**
M Waheed Akhtar, University of the Punjab, Pakistan

Young Researchers Forum

14:25-14:45 **A new high affinity immobilization tag for generating recombinant antibodies by phage display library selection**
Somnath Mukherjee, University of Chicago, USA

14:45-15:05 **Superiority through selectivity: Unnatural cofactors and the enzymes that bind them**
Evan Reynolds, University of North Carolina, USA

15:05-15:25 **Optogenetic control of endogenous neuronal commitment and differentiation**
Samrat Roy Choudhury, Purdue University, USA

Networking & Refreshments 15:25-15:45 @ Foyer

15:45-16:05 **Recombinant fusion proteins for targeted therapy of leukemia**
J Madhumathi, Indian Institute of Technology, India

16:05-16:25 **Identification of high affinity Adhirons for the development of rapid point-of-care diagnostics for Clostridium difficile infection**
Modupe Ajayi, University of Leeds, UK

16:25-16:45 **Heterogeneous expression and functional characterization of ß-glucosidase gene from AspergillusnigerBE-2 and construction of it's hyper-expression system in Trichoderma orientalis EU7-22 by (cbh1) promoter optimization**
Nasir Ali, Xiamen University, China

16:45-17:05 **The mechanical impact of Aromatic residue mutation on Aß amyloid protofibrils**
Hyun Joon Chang, Korea University, Korea

17:05-17:25 **Co-immobilization by DNA binding protein tags**
Atsbeha Gebreegziabxier, Ethiopian Public Health Institute, Ethiopia

Panel Discussion

16:00-17:00 **Poster Presentations**

Day 3 October 28, 2015

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Track 5: Pharmacogenomics and Pharmacoproteomics
Track 6: Protein Purification

Session Chair: Cody Coyne, Mississippi State University, USA

Session Introduction

10:00-10:25 **Necessary concepts in the design of the molecular structure and organic chemistry reactions for the synthesis of covalent biopharmaceuticals**
Cody Coyne, Mississippi State University, USA

10:25-10:50 **New views on old kinetic ideas: How empirical enzyme kinetic analysis can shed new light on disease mechanisms**
Ryan Walsh, INRS–Institut Armand-Frappier Research Centre, Canada

Networking & Refreshments 10:50-11:05 @ Foyer

11:05-11:30 **Generation of purely native recombinant human cellular proteins and human viral antigens in the yeast expression systems**
Rimantas Slibinskas, Vilnius University, Lithuania

11:30-11:55 **Cloning, characterization and saccharification analysis of GH12 endo-1,4-ß-glucanase from Thermotoga petrophila in a mesophilic host**
Ikram ul Haq, GC University, Pakistan

11:55-12:20 **Purification and characterization of Glucose oxidase from locally isolated strain of Aspergillus niger**
Irfana Mariam, Queen Mary college Lahore, Pakistan

Panel Discussion

Poster Presentation

P01 **Universal labeling method for antibody IgGs**
Judie Berlier, Thermo Fisher Scientific, USA

P02 **Expression of de novo disulfide-rich proteins with α,ß-hydrolase-type folds**
Ruud Van Duersen, University of Washington, USA

P03 **Using synthetic affinity binders (sABs) as biological tools to study the chromosome passenger complex proteins**
Marcin Ura, University of Chicago, USA

P04 **Design and characterization of antimicrobial peptides with high anticancer activity and selectivity**
Jya-Wei Cheng, National Tsing Hua University, Taiwan

P05 **Thermodynamic dissection of an affinity matured antibody and implications for library design**
Sriram Jakkaraju, Northern Illinois University, USA

P06 **Two Dimensional Electrophoresis in Diagnosis of lysosomal storage disorders mainly Mucopolysaccharidoses in India**
Gujjarlapudi Deepika, Asian Institute of Gastroenterology, INDIA

P07 **Diverse stacking and facing directions of ß-strands alters the structural stability and mechanical properties of hIAPP protofibrils**
Myeongsang Lee, Korea University, Korea

P08 **Protein engineering of roultella planticola organophosphorus acid anhydrolase (OPAA) for hydrolysis of organophosphorus nerve agents**
Katie F. Glenn, US Army Edgewood Chemical Biological Center, USA

P09 **Active Site Engineering of ß-glucosidase**
Sneha C. Sawant, DBT-ICT Centre for Energy Biosciences, India

P10 **Genomic big data: Scalability challenges and solutions**
Faraz Faghri, University of Illinois at Urbana-Champaign, USA

Lunch Break: 12:05-13:35 @ ATHENS

Closing Ceremony