

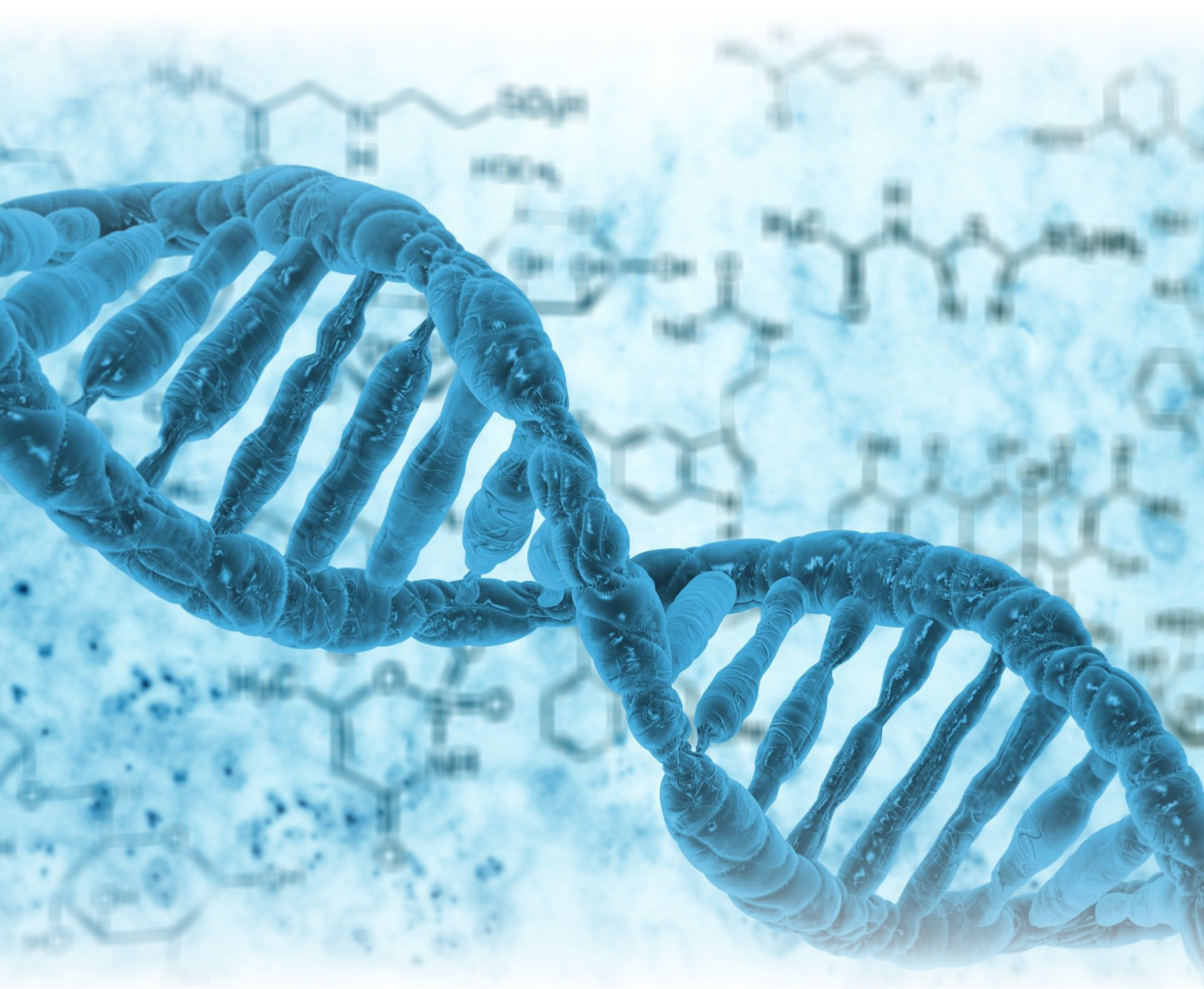
**conference**series.com  
621<sup>st</sup> Conference

*Scientific Program*

2<sup>nd</sup> International Conference on

# Systems & Synthetic Biology

August 18-20, 2016 London, UK



**Hosting Organization: Conference Series LLC**

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# Scientific Program

Day 1 August 18, 2016

09:00-09:30 Registrations

Kennedy

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09:30-10:00

Opening Ceremony

## Keynote Forum

10:00-10:45 **Title: Synthetic mRNAs as optimized tools for stem cell generation and for manipulating cellular phenotypes**  
**Guido Krupp**, AmpTec GmbH, Germany

10:45-11:30 **Title: Enhancing the synthetic IQ of CAR T-cells**  
**Michael Jensen**, Seattle Children's Research Institute, USA

Networking & Refreshment Break 11:30-11:45 @ Foyer

Session: Structural Biology | Integrative Biology | Protein Engineering | Industrial Systems and Synthetic Biology |  
Biotechnology Advances | Metabolomics

Session Introduction

Session Chair: **Guido Krupp**, AmpTec GmbH, Germany

Session Co-Chair: **Roberto Mazzoli**, University of Torino, Italy

11:45-12:15 **Title: Use of synthetic proteins and future trends: The example of calstabin**  
**Jean A Boutin**, Institut de recherches SERVIER, France

12:15-12:45 **Title: Construction of recombinant cellulolytic microorganisms for cellulose consolidated bioprocessing by metabolic engineering: Achievements, hurdles and perspectives**  
**Roberto Mazzoli**, University of Torino, Italy

12:45-13:15 **Title: Solving of the structural heterogeneity of human catalytic antibody light chains and the role of the constant domain**  
**Taizo Uda**, Oita University, Japan

Lunch Break 13:15-14:15 @ Orwell's Brasserie

14:15-14:45 Special Session: **Automation at the heart of synthetic biology**  
by **Paul Lomax**, TTP Labtech, UK

14:45-15:15 **Title: Biological features of human catalytic antibody light chains possessing the ability against the infection of influenza virus**  
**Emi Hifumi**, Oita University, Japan

15:15-15:45 **Title: Lactic acid bacteria for nutraceuticals and added value products production**  
**Enrica Pessione**, University of Torino, Italy

Networking & Refreshment Break -15:45-16:00 @ Foyer

16:00-16:30 **Title: MicroRNAs: Potential biomarkers and therapeutic targets in osteoarthritis**  
**Mohit Kapoor**, University Health Network, Canada

16:30-17:00 **Title: Design of artificial anaerobic microbial community for bioremediation**  
**Arata Katayama**, Nagoya University, Japan

17:00-17:30 **Title: Exploring unique compounds from lignin degradation using MnSOD and Dyp-type peroxidase enzymes**  
**Sharon Mendel Williams**, Coventry University, UK

17:30-18:00 Special Session: **Biosecurity and how export controls impact the life sciences**  
by **Betty Lee**, United States Department of Commerce, USA

Panel Discussion

Day 2 August 19, 2016

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## Keynote Forum

9:00-9:45 **Title: A computer model simulating human glucose absorption and metabolism in health and metabolic disease states**  
**Richard J Naftalin**, King's College London, UK

Session: Synthetic Genomics | Synthetic Gene Network | Gene Synthesis | Biophysics | Bio-Sensors and Bio-Electronics |  
Next Generation Sequencing | Computational Systems Biology | Pharmaceutical Biology

Session Introduction

**Session Chair: Anthony C Forster, Uppsala University, Sweden**

**Session Co-Chair: Martin Falk, Czech Academy of Sciences, Czech Republic**

**09:45-10:15** **Title: NextGen SynBio: Synthetic genomics and drug discovery**

**Anthony C Forster, Uppsala University, Sweden**

**10:15-10:45** **Title: Towards a complex view on DNA damage and repair: Epigenetic and spatio-temporal aspects**

**Martin Falk, Czech Academy of Sciences, Czech Republic**

**Networking & Refreshment Break 10:45-11:00 @ Foyer**

**11:00-11:30** **Title: Selection systems for  $\alpha$ -type and  $\alpha$ -type yeasts using cell-type-specific transcriptional regulation machinery**

**Nobuo Fukuda, National Institute of Advanced Industrial Science and Technology, Japan**

**11:30-12:00** **Title: Designable RNA architectures for rapidly engineering and analyzing synthetic metabolisms**

**James M Carothers, University of Washington, USA**

**12:00-12:30** **Title: The assembly of 2D and 3D droplet interface bilayers from cell-sized droplets using optical tweezers**

**Mark S Friddin, Imperial College London, UK**

**12:30-13:00** **Title: Real-world microfluidic analytics applications in the pharmaceutical biotech industry**

**Hector Hugo Caicedo, Pharmaceutical Companies of Johnson & Johnson, USA**

**13:00-13:30** **Title: Spatial control of biochemical modification pathways and cascades**

**Krishnan, Imperial College London, UK**

**Lunch Break 13:30-14:30 @ Orwell's Brasserie**

**Session Chair: Richard J Naftalin, King's College London, UK**

**Session Co-Chair: Roberto Mazzoli, University of Torino, Italy**

**14:30-14:50** **Title: Cyanobacteria as photosynthetic biofuel factories: Synthetic biology methods in the development of next-generation production platforms**

**Pauli Kallio, University of Turku, Finland**

#### **Young Research Forum**

**14:50-15:10** **Title: Engineering listeriolysin O for specific pore formation *in vitro***

**Sasa Rezelj, National Institute of Chemistry, Slovenia**

**15:10-15:30** **Title: Engineering of *Saccharomyces cerevisiae* toward n-butanol production**

**Reem Swidah, The University of Manchester, UK**

**15:30-15:50** **Title: Towards cellulose consolidated bioprocessing into biofuel through recombinant *Clostridium cellulovorans*: Detailed analysis of the central metabolism and development of optimized gene manipulation tools**

**Chiara Gandini, University of Torino, Italy**

**15:50-16:10** **Title: Engineering a mini-cellulosome in *Lactococcus lactis* for direct conversion of cellulose in lactic acid: Cloning and expression of recombinant scaffoldin proteins**

**Loredana Tarraran, University of Torino, Italy**

**Networking & Refreshment Break 16:10-16:25 @ Foyer**

**16:25-16:45** **Title: Recombinant *Lactococcus lactis* for efficient conversion of cello-oligosaccharides into L-lactic acid**

**Denis Kalemasi, University of Torino, Italy**

**16:45-17:05** **Title: Cell junction, oxidative stress, inflammation and gene polymorphism: Are they clues to myocardial infarction?**

**Ingy Hashad, German University in Cairo, Egypt**

**17:05-17:25** **Title: Use of the *Arabidopsis* MAGIC population to identify genes involved in phosphate use efficiency**

**Azizah Nahari, The University of Edinburgh, UK**

**17:25-17:45** **Title: Evolution and diversification of alcohol dehydrogenases in the monoterpene indole alkaloid pathway of *Catharanthus roseus***

**Anna K Stavrinides, John Innes Centre, UK**

#### **Panel Discussion**

**Day 3 August 20, 2016**

**Extended Networking Session & Lunch 13:00-13:30 @ Orwell's Brasserie**

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