Session Chairs

Professor Alan North FRS  
Vice-President and Dean of the Faculty of Life Sciences

Bob Ford  
Professor of Structural Biology, Faculty of Life Sciences

Professor John Perkins FREng  
Vice-President and Dean of the Faculty of Engineering and Physical Sciences

Hans Westerhoff  
Professor of Systems Biology, School of Chemical Engineering and Analytical Science

Peter Fielden  
Professor of Analytical Science, School of Chemical Engineering and Analytical Science

Roy Goodacre  
Professor of Biological Chemistry, School of Chemistry

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Programme
26th October 2006 - MIB Symposium

8.50 – 9.00 Introduction

Session 1: Biomolecular Machines
Chair: Alan North
9.00 – 9.35 John Walker (MRC Dunn Human Nutrition Unit, Cambridge)
Biomolecular rotary motors
9.35 – 10.10 Yoshi Nakamura (Tokyo University, Japan)
Aptamer as RNA-made super antibody for basic and therapeutic applications
10.10 – 10.35 John McCarthy (MIB; School of Chemical Engineering & Analytical Science and Faculty of Life Sciences)
Molecular mechanisms underlying posttranscriptional gene expression
10.35 – 11.00 Refreshment Break

Session 2: Biomolecular Structure and Dynamics
Chair: Bob Ford
11.00 – 11.35 Alan Fersht (MRC Centre for Protein Engineering, Cambridge)
Structure and Stability of the Tumour Suppressor p53
11.35 – 12.10 Gerhard Wagner (Harvard Medical School, USA)
NMR studies of protein interactions regulating gene expression
12.10 – 12.35 Stefan Weber (Freie Universität Berlin)
Aspects and Prospects of Modern Electron Paramagnetic Resonance Spectroscopy
12.40 – 13.40 LUNCH

Session 3: Systems & Information
Chair: John Perkins
13.45 – 14.20 Greg Stephanopoulos (MIT, Cambridge MA, USA)
Promise and Challenges of System Biology in Advancing Biotechnology and Biomedical Research
14.20 – 14.45 Douglas Kell (MIB; School of Chemistry)
Systems Biology - why and how
14.45 – 15.20 Jean Beggs (Wellcome Trust Centre for Cell Biology, Edinburgh University)
Messenger RNA processing - a complex system

Session 4: Biocatalysis
Chair: Hans Westerhoff
15.20 – 15.45 Jun’ichi Tsujii (MIB; School of Computer Science)
Linking text with knowledge - Challenges in Text Mining for Biology
15.45 – 16.10 Refreshment break

Session 5: Bionanoscience/engineering
Chair: Peter Fielden
16.10 – 16.35 Nigel Scrutton (MIB; Faculty of Life Sciences)
‘Squeezing’ barriers – a dynamical view of enzyme catalysis
16.35 – 17.00 Gill Stephens (MIB; School of Chemical Engineering and Analytical Sciences)
Redox biocatalysis - the next generation of enzymes for manufacturing pharmaceutical intermediates and specialty chemicals

Session 6: Postgenomic Analytical Technologies
Chair: Roy Goodacre
17.00 – 17.35 Joseph Wang (Arizona State University, USA)
Nanomaterials for monitoring and controlling biomolecular interactions
17.35 – 18.00 Milan Stojanovich (Columbia University Medical School, NY, USA)
Deoxyribozyme-based Devices

Session: Postgenomic Analytical Technologies
Chair: Roy Goodacre
18.00 – 18.35 Ruedi Aebersold (ETH, Zurich)
Quantitative Proteomics and Systems Biology
18.35 – 19.00 Simon Gaskell (MIB; School of Chemistry)
New analytical science in proteomics and metabolomics
19.00 – 19.10 Concluding Remarks

Speakers’ Dinner