

The economic and social life of synthetic biology

The first symposium in an international collaboration between the UK's Royal Society and Royal Academy of Engineering, the USA National Academy of Sciences and National Academy of Engineering, and the Chinese Academy of Sciences and Chinese Academy of Engineering.

To be held at the Royal Society and The Royal Academy of Engineering, 13-14 April 2011.

Wednesday, 13 April (all events at the Royal Society)

Opening Session

8:30 Registration

9:00 Introduction

- Professor Peter Leadley FRS, Herchel Smith Professor of Biochemistry, University of Cambridge

9:10 Keynote

- Professor George Poste FRS CBE, Chief Scientist, Complex Adaptive Systems Initiative, and Del E. Webb Chair in Health Innovation, Arizona State University
Introduced by Professor Richard Kitney OBE FREng, Professor of Biomedical Systems Engineering, Imperial College London

9:45 Ministerial address

- Rt Hon David Willetts MP, UK Minister for Universities and Science
Introduced by Sir William Wakeham FREng, Honorary International Secretary, The Royal Academy of Engineering

Plenary Session 1: Progress to date and prospects for the future

10:15 Research environment

- Professor Guoping Zhao, Director of Laboratory of Synthetic Biology, Institute of Plant Physiology and Ecology, Shanghai Institutes for Biological Sciences
From molecular microbiology towards synthetic biology – A long march via new vehicles with sophisticated steering
- Professor Paul Freemont, Chair of Protein Crystallography, Imperial College London

11:15 Coffee break

11:30 Global infrastructure and innovation

- Dr Drew Endy, Assistant Professor in the Faculty of Bioengineering, Stanford University
- Professor Rifat Atun, Director of Strategy, Performance and Evaluation Cluster, The Global Fund to Fight AIDS, Tuberculosis and Malaria, Geneva

12:30 Lunch

In partnership with



Plenary Session 2: Realising the vision

14:00 *Visions of the future*

- Ji-Bin Sun, Tianjin Institute of Industrial Biotechnology
Creating novel by decrypting known – a discussion on systems biology and modelling as tools for the design of new life
- Dr Luke Alphey, Chief Scientific Officer, Oxitec, and Visiting Professor, Department of Zoology, University of Oxford

15:00 *From rhetoric to reality*

- Professor Peter Leadlay FRS, Co-founder Biotica
- Dr Kirsten Eley, External Programme Manager, TMO Renewables Ltd

15:45 *Tea break*

16:00

- Roel Bovenberg, Corporate Scientist, DSM, Netherlands, and Honorary Professor of Synthetic Biology and Cell Engineering, University of Groningen
- Lionel Clarke, Global Strategic Programme Manager, Shell Global Solutions

16:45 *Endnote*

- Dame Jean Thomas DBE FRS, Biological Secretary, the Royal Society

17:00–19:30 *Reception*

Thursday 14 April (all events at The Royal Academy of Engineering)

9:00 *Introduction*

- Professor Richard Kitney OBE FEng, Professor of Biomedical Systems Engineering, Imperial College London

Plenary Session 3: Creating an enabling environment

9:10 *An enabling environment for research*

- Dr François Képès, Research Director, CNRS, Founding director of the Epigenomics Project
- Professor Ben Davis, Organic Chemistry, University of Oxford
- Hai-Yan Liu, University of Science and Technology of China
Developing reusable designs of new regulatory components for synthetic biology based on the modularity of native elements

10:00 *An enabling environment for innovation*

- TBC – Legal expert
- Dr Ioannis Economidis, former Principal Scientific Officer of the European Commission Directorate-General for Research, Directorate for Biotechnologies, Agriculture, Food
- TBC – UK researcher involved in synthetic biology networks

11:00 *Coffee break*

11:30 *An enabling environment for users*

- Dr Joy Zhang, BIOS Centre, London School of Economics
The international governance of synthetic biology
- TBC – US representative
- Professor Huanming Yang, Director, Beijing Genomics Institute
Synthetic Biology: Safety, Security and Bioethical issues

12:30 *Lunch*

Break-out session: Next steps

13:30 *A roadmap for syn bio*

Four mixed break-out groups

15:00 *Tea break*

Plenary Session 4: Wrap-up

15:30 *Panel discussion*

- Professor John McCarthy, Head of Life Sciences, University of Warwick
- Professor Richard Jones FRS, Pro-Vice Chancellor for Research and Innovation, University of Sheffield
- TBC – UK researcher
- TBC – Social scientist looking at governance of emerging biotechnologies

Chaired by

- Professor Richard Kitney OBE FEng, Professor of Biomedical Systems Engineering, Imperial College London
- Professor Peter Leadley FRS, Herchel Smith Professor of Biochemistry, University of Cambridge

16:45 *Closing remarks from panel chairs*

17:00 *Close & Coffee*

In partnership with

