

EMBL/EMBO Science and Society Conference 2008

Systems and Synthetic Biology: Scientific and Social Implications

Programme:

Friday, 7 November 2008

- 08:00 – 08:50 **Registration**
- 08:50 – 09:00 **Welcome:** Hermann Bujard, Executive Director EMBO,
Halldór Stefánsson, Science and Society Programme Manager, EMBL

Session I: Systems biology (Chair: Uwe Sauer, ETH)

- 09:00 – 09:10 **Introduction:** Uwe Sauer, ETH
- 09:10 – 09:40 Denis Noble, Oxford University

Systems Biology: a new paradigm?

- 09:40 – 10:10 Tom Kirkwood, Centre for Systems Biology of Ageing

Making sense of the complexity of ageing

- 10:10 – 10:40 Marvin Cassman, San Francisco

Integrative Approaches to Biology in the 21st Century

- 10:40 – 11:10 **Coffee break**
- 11:10 – 11:40 Leroy Hood, Institute for Systems Biology

A Systems' Approach to Medicine: Catalyzing the Transformation of Healthcare

- 11:40 – 12:40 **Panel Discussion:**

Lars Steinmetz, EMBL
Thomas Lemberger, Journal of molecular systems biology
Joan Fujimura, University of Wisconsin-Madison
Helga Nowotny, European Research Council [ERC]

12:40 – 14:00 **Lunch**

Session II: Synthetic biology

(Chair: Victor de Lorenzo, Centro Nacional de Biotecnología, CSIC)

14:00 – 14:10 **Introduction:** Victor de Lorenzo, Centro Nacional de Biotecnología

14:10 – 14:40 Doron Lancet, Weizmann Institute of Science

Diversity: a driving force for life's inception and synthesis

14:40 – 15:10 Antoine Danchin, Institute Pasteur

Life and perpetuation of life of a synthetic bacterium

15:10 – 15:40 Jason Chin, University of Cambridge

Ribosome Engineering & New Genetic Codes

15:40 – 16:10 **Coffee break**

16:10 – 16:40 David Deamer, University of California Santa Cruz

First life, and next life: The origins and synthesis of living cells

16:40 – 17:40 **Panel Discussion:**

Luis Serrano, Centre for Genomic Regulation

Nicholas Luscombe, European Bioinformatics Institute

Luis Campos, Drew University

Sibylle Gaisser, Fraunhofer Institute System- und Innovationsforschung

18:00 – 19:00 **Aperitif**

19:00 – 20:30 **Conference dinner**

Saturday, 8 November 2008

Session III:

On uses, and the danger of abuses, of new know-how and technologies (Chair: Regine Kollek, Hamburg University)

09:00 – 09:10 **Introduction:** Regina Kollek, University of Hamburg

09:10 – 09:50 Andres Moya, University of Valencia

The philosophical relevance of Synthetic biology

09:50 – 10:30 Adriano Henney, Astra Zeneca

Challenges and Opportunities for Systems Biology and Drug Discovery: A Perspective

10:30 – 11:10 Joyce Tait, University of Edinburgh

Governance of Synthetic Biology: Science, Policy and Citizens

11:10 – 11:40 **Coffee break**

11:40 – 12:40 **Panel discussion:**

Laurie Zoloth, Northwestern University

Alexander Kelle, University of Bath

Berthold Rutz, European Patent Office

12:40 – 14:00 **Lunch**

Session IV:

Paradigm shifts vs. Fashion shifts in Science

(Chair: Thomas Potthast, University of Tübingen)

14:00 – 14:10 **Introduction:** Thomas Potthast, University of Tübingen

14:10 – 14:50 Evelyn Fox Keller, MIT

Systems Biology: New Paradigm or just Fashion?

14:50 – 15:30 Jane Calvert, University of Edinburgh

Calculating life? A sociological perspective on systems biology

15:30 – 16:10 Michel Morange, ENS/Paris 6

The place of systems biology and synthetic biology in the history of biology

16:10 – 16:40 **Coffee break**

16:40 – 17:40 **Panel Discussion:**

Arantza Etxeberria Agiriano, University of the Basque Country (UPV/EHU)
Philip Bastiaens, MPI für Molekulare Physiologie
Bettina Bock v. Wülfigen, Humboldt University

17:40 – 18:00 **Closing:** Iain Mattaj, EMBL