

Frontiers in Synthetic Biology-2008 Meeting
at the Joseph B. Martin Conference Hall-Rotunda, Harvard Medical School
77 Louis Pasteur Avenue, Boston, MA, USA

AGENDA/ SPEAKERS*

Meeting on December 1-2, 2008

Scientific Organizers:

Krishnarao Appasani, PhD., MBA.	GeneExpression Systems, Inc.
Ron Weiss, PhD.	Princeton University
Farren Isaacs, PhD.	Harvard Medical School
Giovanni Murtas, PhD.	University of Rome 3

Day 1: Monday, December 1

8:30 A.M: **Registration Open**

9.00 AM – 12.15 PM: Session I: Synthetic Biology & DNA Programmed Chemistry

Chair: Krishna Appasani

9.00 AM- 9.10

Chairman's Welcoming Note: Krishnarao Appasani, PhD.

Founder & CEO, GeneExpression Systems, Waltham, Massachusetts, **USA** &
Chairman, Appasani Research Conferences & Educational Institute (ARCEI.org), **USA**
Presentation of Lifetime Achievement Award to Dr. John Walker &
Lifetime Achievement Award to Dr. Jack Szostak

9.10 – 10.00 AM

Inaugural Lecture by Dr. Jack Szostak, PhD.

Professor of Genetics

Massachusetts General Hospital & Harvard Medical School, Boston, MA, **USA**

Title: Towards the Design and Synthesis of an Artificial Cell

10.00 – 10.30 AM

James Collins, D.Phil.

University Professor & Professor of Biomedical Engineering
Boston University, Boston, MA, **USA**

Title: TBA

10.30 – 10.45 AM

BREAK

10.45 – 11.15 AM

Edward Driggers, PhD.

Director of Technology Development

Ensemble Discovery Corp., Cambridge MA, **USA**

Title: Using DNA programmed chemistry (DPC) to discover macrocyclic structures with activity against therapeutically relevant protein-protein interaction targets (PPI's)

11.15 – 11.45 AM

Alfonso Jaramillo, Ph.D.

Investigator of the Laboratory of Biochemistry

CNRS, Ecole Polytechnique, EVRY Cedex, **France**

Title: Automatic design of transcriptional and metabolic networks with targeted behavior

11.45 – 12.15 PM

Roy Bar-Ziv, PhD.

Senior Scientist at the Center for Nanoscale Science

The Weizmann Institute of Science, Rehovot, **Israel**

Title: TBA

12.15 – 1.30 PM

Lunch Break (1 hour 15 min.) Bagged Lunch will be provided

1.30 – 5.00 PM: Session II: Constructive Biology and Genetic Circuits:
Chair: G. Murtas

1.30 – 2.00 PM **Pamela Silver, PhD.**
Professor of Systems Biology & Director of Graduate Program in Systems Biology
Harvard Medical School, Boston, MA, **USA**

Title: Designing Biological Systems

2.00 - 2.30 PM **Lingchong You, PhD.**
Assistant Professor of Biomedical Engineering
Duke University, Durham, NC USA

Title: TBA

2.30 – 3.00 PM **Jonathan Didier**
PhD Student in the Lab of Dr. Philip R. LeDuc
Associate Professor of Mechanical & Biomedical Engineering
Carnegie Mellon University, Pittsburgh, PA, **USA**

Title: TBA

3. 00 – 3.30 PM: Refreshment Break (30 min)

3.30 – 4.00 PM **Giovanni Murtas, PhD.**
Senior Grant at Centro "Enrico Fermi"
University of Rome3, Roma, **Italy**

Title: TBA

4.00 – 4.30 PM **Jiandong Huang, PhD.**
Associate Professor of Biochemistry
The University of Hong Kong, Pokfulam, **Hong Kong**

Title: Formation of new patterns by programming cell motility

4.30 – 5.00 PM **Aurelien Rizk**
PhD. Student in the Lab of Dr. Francois Fages
INRIA, Lechesnay, **France**

Title: Towards a general computational method for robustness analysis

5.00 PM End of Day 1 Sessions

Day 2: Tuesday, December 2, 2008

8:30 A.M: Registration Open

9.00 AM – 12.15 PM: Session III: Synthetic Genes, Genomes & Nano-enabled Science
Chair: Ron Weiss

9.00 AM- 9.10 Introduction & Presentation of Synthetic Biology Innovator Award to
Dr. Cyde Hutchison III by Krishna Appasani, PhD.

9.10 – 10.00 AM Keynote Lecture by Dr. Clyde A. Hutchison III, PhD.
Investigator
The J. Craig Venter Institute, San Diego, CA, **USA**

Title: The Quest for a Minimal Cell: Constructing a Synthetic *Mycoplasma genitalium* Genome

10.00 – 10.30 AM Heinz Schwer, PhD.
Co-Founder & CEO
Sloning BioTechnology GmbH, Puchheim, **Germany**

Title: A novel solid phase technology for high throughput gene synthesis

10.30 – 10.45 AM BREAK

10.45 – 11.15 AM **Ron Weiss, PhD.**
Associate Professor of Electrical Engineering
Princeton University, Princeton, NJ, **USA**

Title: TBA

11.15 – 11.45 AM **Mitchel J. Doktycz, Ph.D.**
Investigator in Biosciences Division
Oak Ridge National Laboratory, Oak Ridge, TN, **USA**

Title: Cell mimics and nano-enabled synthetic biology

11.45 – 12.15 PM **Hirohide Saito, Ph.D.**
Assistant Professor, Laboratory of Gene biodynamics
Graduate School of Biostudies, Kyoto University, Sakyo-ku, Kyoto, **Japan**

Title: RNP Synthetic Biology: Regulation of Translational Systems and De Novo Design of Nanostructures with RNA-Protein Binding Motifs

12.15 – 1.30 PM Lunch Break 1 hour 15 min (ON YOUR OWN)

1.30 – 3.00 PM: Session IV: Engineering Phages & Yeast Deletion Strains

Chair: Farren Isaacs

1.30 – 2.00 PM **Timothy K. Lu, MD., Ph.D.**
Massachusetts Institute of Technology &
Massachusetts General Hospital, Boston, MA, **USA**
Title: Engineered Bacteriophage to Combat Bacterial Biofilms and Antibiotic-Resistant Bacteria

2.00 – 2.30 PM **Farren J. Isaacs, Ph.D.**
Research Fellow of Genetics
Harvard Medical School, Boston, MA, **USA**

Title: TBA

2.30 – 3.00 PM **Richard I Kitney OBE FEng DSc FCGI**
Professor & Director of the Graduate School of Engineering and Physical Sciences
Imperial College, London, **UK**

Title: TBA

3.00 – 3.15 PM **Suzanne Reynders**
PhD. Student in the Lab of Dr. Frederic Cazals
INRIA, Sophia-Antipolis, **France**
Title: Determining the Structure of Large Macro-molecular Assemblies: the Example of the Nuclear Pore Complex

3.15 – 3.45 PM **Frederick P. (Fritz) Roth, PhD.**
Associate Professor of Biological Chemistry & Molecular Pharmacology
Harvard Medical School
Boston, MA, **USA**
Title: Multisite engineering in *S. cerevisiae* through sexual cycling and fluorescence selection

3.45 – 3.50 PM CLOSING REMARKS by Krishna Appasani & Announcement of next year Meeting

* Speaker names, titles and order may subject to change.

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