

The Jacques Loeb Centre for the History and Philosophy of the Life Sciences was inaugurated in March 2008. It supports advanced research covering topics related to the life sciences. The Centre pursues a broad range of investigations into the history and philosophy of modern research. It organizes national and international conferences aimed at an interdisciplinary exchange between scientists and commentators on science, such as historians and philosophers of science. The proceedings of its annual international workshops have been published as special editions of leading scientific and historical journals.

The Centre offers post-doctoral and graduate fellowships or positions for exchange students and other qualified individuals in the history and philosophy of the modern life sciences.

Particular attention is given to historical and philosophical research in the following areas:

- Developmental genetics, genomics, molecular cell biology, and neurobiology.
- Physico-chemical research into the structure and function of proteins.
- Phylogeny and evolutionary biology.
- Collaboration in the life sciences between Israel and Germany.
- Molecular understanding of disease processes, such as cancer.
- Ethical and legal implications of recent research on genes and genomes.



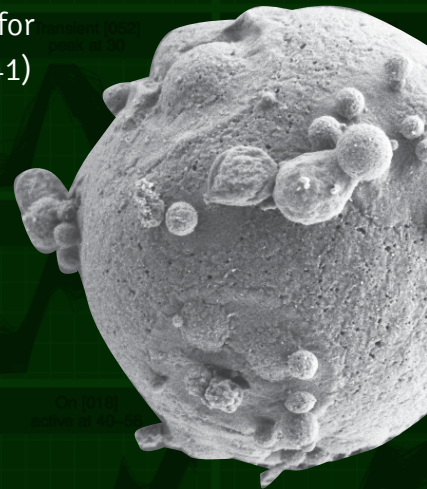
**Jacques Loeb Centre
for the History and Philosophy
of the Life Sciences**
Eighth International Workshop



From Genome to Gene: Causality, Synthesis, and Evolution

November 30 – December 2, 2015

Edgar de Picciotto Family National Institute for
Biotechnology in the Negev Building (Bldg. 41)
BGU Marcus Family Campus



 **אוניברסיטת בן-גוריון בנגב**
Ben-Gurion University of the Negev



For further information and updates, please visit:

<http://bit.ly/17D000L>

or contact: jloebcentre@post.bgu.ac.il

Abstracts can be viewed at <http://bit.ly/1XeWLLx>

 **אוניברסיטת בן-גוריון בנגב**
Ben-Gurion University of the Negev



Monday, November 30

9:15–10:15 a.m.
Registration and Refreshments

10:15–10:45 a.m.
Greetings:
Prof. Jiwchar Ganor, Dean,
Faculty of Natural Sciences,
Ben-Gurion University of the Negev

Prof. Jerry Eichler, Chairman,
Department of Life Sciences,
Ben-Gurion University of the Negev

Prof. Ute Deichmann, Director,
Jacques Loeb Centre for the History
and Philosophy of the Life Sciences,
Ben-Gurion University of the Negev

10:45 a.m. – 1:00 p.m.
**I. Genomic Causality in
Development**

*Long-Range Regulation During
Development and Evolution: Back to
Preformation?*
Denis Duboule, University of Geneva,
Switzerland

*Quantitative Biology of Developmental
Abnormalities*
Stas Shvartsman,
Princeton University, U.S.A.

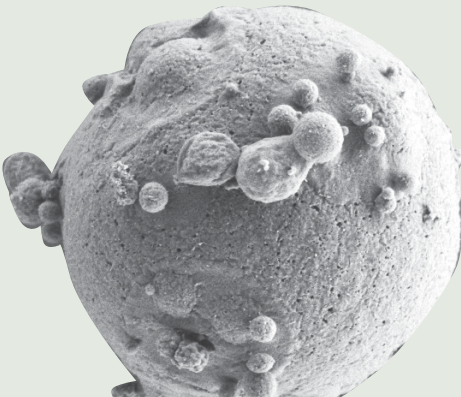
*Functional Characterization of
Gene Regulatory Elements of
Epilepsy-Associated Genes*
Ramon Birnbaum, Ben-Gurion
University of the Negev, Israel

1:00–2:00 p.m.
Lunch Break

2:00–3:00 p.m.
**II. Cells and Genomes –
Synthesis and Function (I)**

*Building a Minimal Bacterial Cell by
Global Design and Synthesis*
John Glass, Craig Venter Institute,
U.S.A.

3:00–3:30 p.m.
Coffee Break



3:30–5:45 p.m.
**Cells and Genomes –
Synthesis and Function (II)**

*Intrinsic and Collective Cellular
Function: Lessons from Single
Cell Transcriptional Analysis and
Epigenomics*
Amos Tanay, Weizmann Institute,
Israel

*3D Genome Regulation in Cell
Differentiation and Response to
Hormones*
Ofir Hakim, Bar-Ilan University, Israel

*The Complexity of Mitochondrial DNA
Regulation: Modulating the Once and
Future Endosymbiont*
Dan Mishmar, Ben-Gurion University
of the Negev, Israel

6:00–8:30 p.m.
Reception, Musical Interlude, and
Dinner
(for invited speakers and guests)

Tuesday, December 1

9:15–11:00 a.m.
**III. Session in Memory of
Eric Davidson**
Speakers:
Ellen Rothenberg
Douglas Erwin
Michel Morange
Ute Deichmann
Smadar Ben-Tabou de Leon

11:00–11:30 a.m.
Coffee Break

11:30 a.m. – 1:00 p.m.
**IV. The Regulatory Genome
and Evolution (I)**

*The Construction of Evolutionary
Opportunity through Gene Regulation*
Douglas Erwin, Smithsonian
National Museum of Natural History,
U.S.A.

*Paleo-epigenetics: Reconstructing
Gene Regulation in Archaic Humans*
Liran Carmel, The Hebrew University
of Jerusalem, Israel

1:00–2:00 p.m.
Lunch Break

2:00–3:30 p.m.
**The Regulatory Genome and
Evolution (II)**

*A Trade-off Between Constraints on
Embryo Geometry and Regulatory
Genome Evolution*
Patrick Lemaire, Centre
de Recherche de Biochimie
Macromoléculaire, France

*Genomic Spaces of the Possible and
the Origins of Adaptations*
Andreas Wagner, University of
Zurich, Switzerland

3:30–4:00 p.m.
Coffee Break

4:00–5:30 p.m.
V. Ethics and Genomics

*Ethical and Political Findings of
Whole-Genome Sequencing*
Anna Zielinska, Ben-Gurion
University of the Negev, Israel

*Human Germ Line Editing: A Historical
Perspective*
Michel Morange, École Normale
Supérieure, France

7:15 p.m.
Dinner and Evening Lecture
(for invited speakers and guests)

Wednesday, December 2

9:15–11:15 a.m.
VI. Genome Annotation

The Role of Genome Annotation
Howard Cedar, The Hebrew
University of Jerusalem, Israel

*Marking Developmental History on the
Genome in Immune Cells*
Ellen Rothenberg, California
Institute of Technology, U.S.A.

11:15–11:45 a.m.
Coffee Break

11:45 a.m. – 12:30 p.m.
*Immunogenetics and Immune History
of Previous Infections*
Tomer Hertz, Ben-Gurion University
of the Negev, Israel

12:30–1:00 p.m.
VII. Roundtable Discussion
Chair: **Michel Morange**

1:00 p.m.
Lunch
(for invited speakers and guests)