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. The proceedings of its annual international workshops have been published as special editions of leading scientific and historical journals. Seminars provide an interdisciplinary forum for historians and philosophers of science, as well as scientists, to present and discuss new research, with a special focus on the life sciences.

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

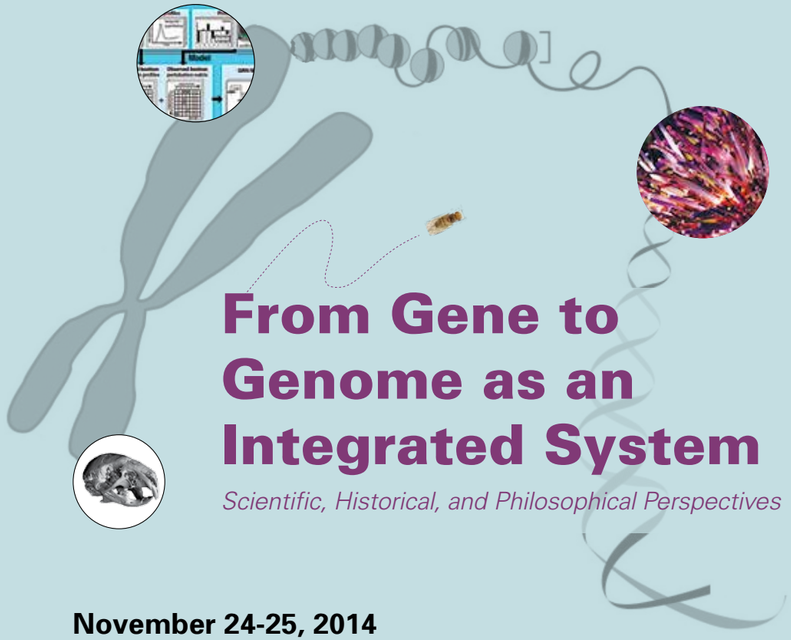
אוניברסיטת בן-גוריון בנגב
Ben-Gurion University of the Negev

For further information and updates, please visit:
http://in.bgu.ac.il/en/loeb/
or contact: jloebcentre@bgu.ac.il

Jacques Loeb Centre

for the History and Philosophy of the Life Sciences

Seventh International Workshop



From Gene to Genome as an Integrated System

Scientific, Historical, and Philosophical Perspectives

November 24-25, 2014

Ilse Katz Institute for Nanoscale Science and Technology (Bldg. 51)
BGU Marcus Family Campus, Beer-Sheva

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

Monday, November 24

9:15-10:00 a.m.
Workshop Registration
and Refreshments

10:00-10:15 a.m.
Greetings and Opening Remarks

Prof. Rivka Carmi, President,
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

10:15 a.m.-1:30 p.m.
I. The Genome and Gene Regulation

Chair: **Anthony S. Travis**, The Hebrew University of Jerusalem

10:15 a.m.
Ramon Birnbaum, Ben-Gurion University of the Negev

Genomic view of gene regulatory elements and their role in human disease

11:00 a.m.
Eric Davidson, California Institute of Technology

Formalizing the genomic logic of spatial gene regulation in development

11:45 a.m.-12:00 noon
Coffee Break

12:00 noon
Hanah Margalit, The Hebrew University of Jerusalem

Integration of post-transcriptional regulation by non-coding RNAs in the cellular networks

12:45 p.m.
Dan Mishmar, Ben-Gurion University of the Negev

Are mitochondria part of the cellular, genome-wide transcription regulatory system?

1:30-2:30 p.m.
Lunch Break

2:30-4:00 p.m.
II. History, Structure, and Function

Chair: **Myles Jackson**, New York University

2:30-3:15 p.m.
Ute Deichmann, Ben-Gurion University of the Negev

Chromatin: Its history, the seminal researchers, and their philosophy

3:15-4:00 p.m.
Michel Morange, École Normale Supérieure, Paris

Gene complexes: The search for a link between genome structure and genome function

4:00-4:30 p.m.
Coffee Break

4:30-6:00 p.m.
III. The Genome and Immunology

Chair: **Tomer Hertz**, Ben-Gurion University of the Negev

Ellen Rothenberg, California Institute of Technology

Genomic compositions of cellular identity in the immune system

Nir Friedman, Weizmann Institute of Science

Acquired immunity for all: Somatic processes allow individuals to learn from their own immune experience

6:00 p.m.
For invited speakers and guests

Reception, Musical Interlude, and Dinner

Tuesday, November 25

9:15 a.m.-12:30 p.m.
IV. Evolutionary Perspectives

Chair: **Ramon Birnbaum**, Ben-Gurion University of the Negev

9:15 a.m.
Patrick Lemaire, Centre de Recherche de Biochimie Macromoléculaire, Montpellier

Developmental systems divergence: When regulatory mechanisms evolve faster than the traits they control

10:00 a.m.
Yitzhak Pilpel, Weizmann Institute of Science

Can we evolve genes and genomes in a Lamarckian fashion in the lab?

10:45-11:15 a.m.
Coffee Break

11:15 a.m.
Eric Davidson, California Institute of Technology

Evolutionary perspectives on developmental gene regulatory network structure/function: The causal bases of phylogeny, of body plan stasis, and of innovation in deep time

12:00 noon
Hugues Roest Crollius, École Normale Supérieure, Paris

Ancestral genomes as a means to integrating evolution into modern biology

12:45-1:45 p.m.
Lunch Break

1:45-3:15 p.m.
V. Philosophy and Ethics

Chair: **Yakir Levine**, Ben-Gurion University of the Negev

1:45 p.m.
Florian Maderspacher, Current Biology - Cell Press/Elsevier

Victory over the genes: The rise and rise of epigenetics in scientific and public discourse

2:30 p.m.
Myles Jackson, New York University

Reining in the Biotech Sector? Gene patenting and personal genomic companies

3:15-3:45 p.m.
Coffee Break

3:45-5:15 p.m.
VI. Genome and Phenotype

Chair: **Eyal Gur**, Ben-Gurion University of the Negev

3:45 p.m.
Lucie Laplane, Institut de Cancérologie Gustave Roussy, Villejuif

History and philosophy of stem cell biology: State or entity?

4:30 p.m.
Diethard Tautz, Max Planck Institute for Evolutionary Biology, Plön

From Genes to Shape: Approaching the genetic basis of complex traits involved in cranial morphology

5:15-5:45 p.m.
Roundtable Discussion

7:15 p.m.
Dinner for invited speakers and guests

Dinner Lecture: **Ellen Rothenberg**
It takes blind men to assemble an elephant: How the immune system has been revealed