

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 and sections 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 in the history and philosophy of modern biological, biochemical and medical sciences. Particular attention is given to the history of ideas and practices in modern life sciences, to the role of individuals in scientific advancement, and also in dead ends, to the role of Jewish scientists in 19th- and 20th-century German science, to scientific practices, achievements, and failures, to the individual and social-political backgrounds, and to the mutual interactions of science and politics.



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

Sixth International Workshop

***The Changing Concept of the Gene:
Recurrent Debates on the
Causal Role of Genes***

May 20-21, 2013

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



The history of epigenetics is linked with the study of evolution and development. But during the past 50 years, the meaning of the term "epigenetics" has itself undergone an evolution that parallels our dramatically increased under-

Monday, May 20

9:30 – 10:15

Conference registration and coffee

10:15 – 10:30

Greetings and opening remarks

Prof. Rivka Carmi, President, Ben-Gurion University of the Negev

Prof. Jerry Eichler, 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

10:30 – 12:45

I. Causality of Gene Regulation and a Reflection on its History

Chair: **Anthony S. Travis**, The Hebrew University of Jerusalem and Jacques Loeb Centre

10:30

Eric Davidson, California Institute of Technology

Causality of Gene Regulation in Animal Biology

11:15

Ute Deichmann, Ben-Gurion University of the Negev

The Concept of the Causal Role of Chromosomes and Genes in Heredity and Development and Its Opponents from Darwin to Lysenko

12:00

Stephen Small, New York University

How Gene Regulation Mechanisms Establish Body Plans in Developing Embryos

Comments: **Siegfried Roth**, University of Cologne

12:55 – 14:00

Lunch break

14:00 – 15:30

II. Novel Concepts of Genomic Complexity and *de novo* Evolution of Genes and their Historical Background

Chair: **Bertrand Jordan**, CoReBio PACA, Marseille

14:00

Michel Morange, École Normale Supérieure, Paris

The Genome as a Multi-Purpose Structure

14:45

Diethard Tautz, Max Planck Institute for Evolutionary Biology, Plön

De novo Evolution of Genes

15:30 – 16:00

Coffee break

16:00 – 17:30

III. Genes and Complex Diseases

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

16:00

Bertrand Jordan, CoReBio PACA, Marseille

Genes and Non-Mendelian Diseases: Dealing with Complexity

16:45

Rivka Carmi, Ben-Gurion University of the Negev

Lessons on Genes (and Genies) Learned from the Negev Bedouins

18:00

Musical interlude, reception and dinner (at the University) for invited speakers

Tuesday, May 21

9:15 – 10:45

IV. Genes, Epigenetics and its Evolution

Chair: **Dan Mishmar**, Ben-Gurion University of the Negev

9:15

Gary Felsenfeld, National Institutes of Health, Maryland

The Evolution of Epigenetics

10:00

Ellen Rothenberg, California Institute of Technology

Remembrance of Things Past, and Constructive Forgetting: Transcription Factor-Directed Remodeling of Epigenetic Marks in Development

10:45 – 11:15

Coffee break

11:15 – 13:30

V. DNA, Race, and the Questions of the 'Jewish Difference' and Genetics as a Tool for Historians

Chair: **Isaac (Yanni) Nevo**, Ben-Gurion University of the Negev

11:15

Myles Jackson, New York University

The CCR5-Delta32 Allele: Reintroducing Race at the Level of DNA

12:00

Snait Gissis, Tel Aviv University

Biological Conceptualization of 'Jewish Difference' – 1945-2012. The Work of Israeli Population-Geneticists

12:45

Sophie Kohler, Ben-Gurion University of the Negev

Genes as an Historical Archive

13:30 – 14:45

Lunch break

14:45 – 17:00

VI. The Changing Concept of the Gene and its Philosophical and Social Implications

Chair: **Dan Nicholson**, Tel Aviv University

14:45

Raphael Falk, The Hebrew University of Jerusalem

The Rise and Fall of the Gene

15:30

Nils Roll-Hansen, University of Oslo

Whatever Happened to Wilhelm Johannsen's Genotype?

16:15

Garland E. Allen, Washington University, St. Louis

Mechanistic Materialism and the Classical Gene: Scientific and Social Consequences

17:00 – 17:30

VII. Round-Table Discussion

19:00

Dinner for invited speakers

Programme