



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

in collaboration with the Einstein  
Center and the Sidney M. Edelstein  
Center for the History and  
Philosophy of Science, Technology  
and Medicine at The Hebrew  
University of Jerusalem



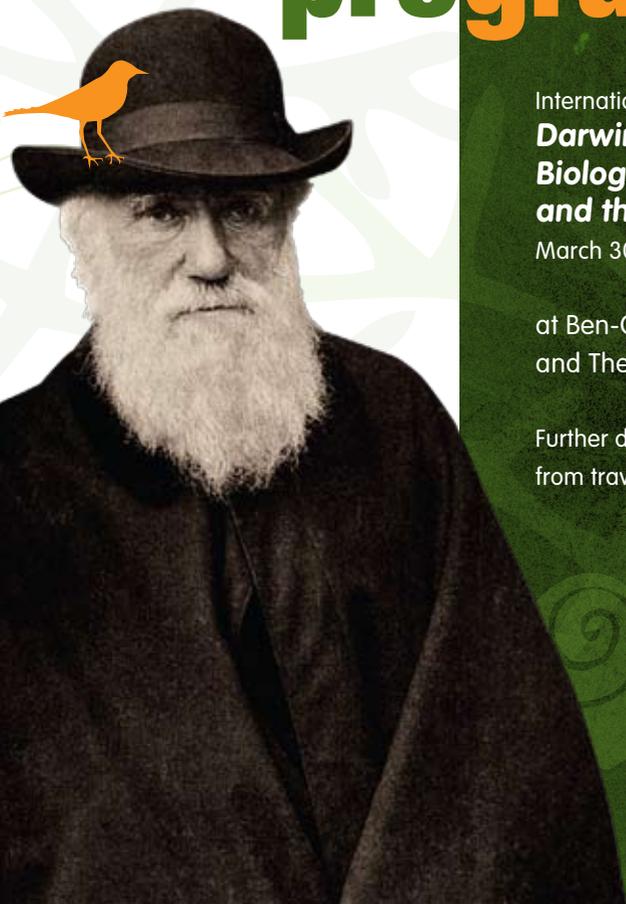
**programme**

International Workshop  
***Darwinism and Functional  
Biology, Other Sciences  
and the Humanities***

March 30 – April 1, 2009

at Ben-Gurion University of the Negev  
and The Hebrew University of Jerusalem

Further details are available  
from [travist@bgu.ac.il](mailto:travist@bgu.ac.il)



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



# programme

## Monday, March 30, 2009

Sara Tadmor Auditorium, Marcus Family Campus  
Ben-Gurion University of the Negev, Beer-Sheva

### 9:50 – 10:15 a.m.

#### Welcoming Remarks and Introduction

Jimmy Weinblatt, Rector, Ben-Gurion  
University of the Negev

Ute Deichmann, Ben-Gurion University of the  
Negev and University of Cologne  
*Jacques Loeb's Experimental Biology and  
Darwinian Evolution*

### Evolution and Genetics

#### 10:15 a.m. – 12:30 p.m.

Michel Morange, Ecole normale  
supérieure, Paris  
*How Evolutionary Biology Presently Pervades  
Cell and Molecular Biology*

Dan Mishmar, Ben-Gurion University  
of the Negev  
*Genetic Aspects of Evolutionary Processes:  
The "Power-Plant of the Cell" (Mitochondria)  
as a Model*

Ute Deichmann, Ben-Gurion University  
of the Negev and University of Cologne  
*"Gemmules" and "Elements": On Darwin's  
and Mendel's Conceptions and Practices in  
Heredity*

#### 2:00 – 4:00 p.m.

#### Greetings

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

#### Introduction to Keynote Lecture

Michel Morange, Ecole normale  
supérieure, Paris

#### Keynote Lecture

Eric Davidson, Caltech, Pasadena  
*A New and Powerful Way of Rationalizing  
Genomic Control Systems: Gene Regulatory  
Networks in Development and Evolution*

#### Commentator

Siegfried Roth, University of Cologne

#### 4:30 – 6:00 p.m.

Alan Templeton, Washington  
University, St. Louis  
*Using Evolutionary Principles to Identify  
Genes Associated with Common  
Diseases in Humans*

Nadav Davidovitch, Ben-Gurion  
University of the Negev  
*Evolutionary Medicine: A Missed Potential?*

#### 6:00 p.m.

#### Evening Lecture

Doron Lancet, Weizmann Institute of Science  
*Early Darwinian Evolution without Nucleic  
Acids*

#### 6:45 p.m.

#### Reception

## Tuesday, March 31, 2009

Sara Tadmor Auditorium, Marcus Family Campus  
Ben-Gurion University of the Negev, Beer-Sheva

### **Darwinism 1: Philosophical and Scientific Aspects**

**9:00 – 11:15 a.m.**

Yaron Ramati, London School of Economics  
Giora Hon, University of Haifa  
*The Case for Emergence in Evolution*

Siegfried Roth, University of Cologne  
*How Much Has Evolutionary Developmental (EvoDevo) Research Contributed to the Understanding of the Mechanisms of Evolution? Historical and Philosophical Comments on a Current Controversy*

Jeff Dodick, Hebrew University of Jerusalem  
Nir Orion, Weizmann Institute of Science  
*Perceptions of Geology within Science and the Education System*

**11:30 a.m. – 1:00 p.m.**

Ulrich Charpa, Ruhr University, Bochum and  
Leo Baeck Institute, London  
*Whewell and Schleiden on Development and Evolution: A Comparison*

Helmut Pulte, Ruhr University, Bochum  
*Darwin and the Exact Sciences*

**2:00 – 4:00 p.m.**

Ruth Lorand, University of Haifa  
*Darwin's Theory of Beauty*

Susie Fisher, Open University of Israel  
*Are RNA Viruses Vestiges of an RNA World? Historical Perspectives and Current Views*

Haim Gilon, Hebrew University of Jerusalem  
*Combinatorial Chemistry: A Darwinian Concept?*

**4:15 – 5:30 p.m.**

Haim Marantz, Ben-Gurion University  
of the Negev  
*Herbert Spencer's On Education: A Critical Re-examination*

Frank J. (Yeruham) Leavitt, Ben-Gurion  
University of the Negev  
*Bertrand Russell on Darwin and Aristotle*



## Wednesday, April 1, 2009

Sidney M. Edelstein Center, Levy Building, Givat Ram  
Hebrew University of Jerusalem

### **Darwinism 2: Knowledge and Evolution**

**9:00 – 11:00 a.m.**

**Raphael Falk**, Hebrew University of Jerusalem  
*On the Shoulders of a Giant: From Lamarck to Darwin*

**Jeff Dodick**, Hebrew University of Jerusalem  
**Shlomo Argamon and Paul Chase**  
Illinois Institute of Technology, Chicago  
*Methodological Differences between the Historical and Experimental Sciences*

**Sara Schwartz**, Open University of Israel  
*How Darwinian Motifs Migrate to the Wider Culture: Illustrated Covers of the Origin of Species*

**11:15 a.m. – 12:30 p.m.**

**Tony Travis**, Ben-Gurion University of the Negev  
*Raphael Meldola, Field Naturalist, and "Several professors, a great many butterfly fanciers and gentlemen who visited the forest in pursuit of the insect tribe!"*

**Rony Armon**, Ben-Gurion University of the Negev  
*Joseph Needham's Theory of Evolution: Biochemical Recapitulation, Spencerian Emergence and Functional Evolution in the 1920s*

**2:00 – 3:30 p.m.**

**Alan Templeton**, Washington University, St. Louis  
*Evolutionary Biology and Conservation Biology: Using Evolutionary Principles to Save Endangered Species*

**Ayelet Shavit**, Tel Hai College, Upper Galilee  
*A Tale of Two Databases: Do Different Evolutionary Perspectives Shape a Different Species' "Locality"?*

**4:00 – 5:30 p.m.**

**Simcha Rozen**, Hebrew University of Jerusalem  
*Darwin's Quest: Naturalizing God and Deifying Nature*

### **Concluding Remarks**



The year 2009 marks the bicentenary of Charles Darwin's birth, and also the 150th anniversaries of his *Origin of Species* and Jacques Loeb's birth. As an experimental scientist, the physiologist Loeb was sceptical of Darwin's theory of evolution in regard to its fruitfulness for science. This International Workshop explores many such tensions – as well as productive interactions – between Darwin's concept of evolution by natural selection, functional biology, other experimental sciences, and the humanities, from the mid-19th century until the present time.