

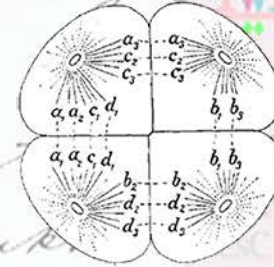
FROM BOVERI TO DAVIDSON

Embryological approaches to genomic function



Anton, Juni 1902

Das klassische Objekt der experimentellen Zellforschung ist die Eizelle, die durch die Befruchtung zu einer Zygote übergeht. Die Bedeutung der Konstitution der Zygote für die Entwicklung ist ein altbekanntes Problem. Experimentelle Untersuchungen an verschiedenen Tieren haben gezeigt, dass man aus einer Zygote den ganzen Embryo und die Folgen seiner Entwicklung in ein künstliches Uterusmilieu überführen kann. Es wurde versucht, Zellen herzustellen, denen nur ein bestimmter Kern fehlt, genauer: Kernelemente, die charakteristisch hervortreten. Dies ist...



Meeting Organizers

- Maria Ina Arnone**
Stazione Zoologica Anton Dohrn
- Silvia Caianiello**
Istituto per la storia del pensiero filosofico e scientifico moderno
- Andrew Cameron**
California Institute of Technology
- Ute Deichmann**
Jacques Loeb Center for History and Philosophy of Science
- Ellen Rothenberg**
California Institute of Technology

Exhibit Organizers

- Maria Ina Arnone**
- Silvia Caianiello**
- Christiane Groeben**
- SZN MAB**



Contact
Margherita Groeben
margherita.groeben@szn.it

Stazione Zoologica Anton Dohrn
Villa Comunale 80121, Naples - Italy

27-28 February, 2017



During the meeting, an Exhibit will be displayed in the Fresco Room:
Theodor Boveri at the Naples Zoological Station

AGENDA

Monday, February 27th, 2017

SESSION 1 – NAPLES, BOVERI AND THE SEA URCHIN EMBRYO

- 2.30 PM **“... the marvelous freedom to research what one finds interesting”**: Theodor Boveri at the Naples Zoological Station
Christiane Groeben, formerly Stazione Zoologica Anton Dohrn
- 3.00 PM **Microscope slides recount Boveri's successes and failures**
Ulrich Scheer, University of Würzburg
- 3.30 PM **A Neapolitan sea urchin tale: from dispermic embryos to gene regulatory networks**
Maria Ina Arnone, Stazione Zoologica Anton Dohrn
- 4.00 PM Coffee break - Foyer

SESSION 2 - GENE REGULATION IN DEVELOPMENT AND EVOLUTION

- 4.30 PM **Dynamic patterning by the Drosophila pair-rule network: Reconciling long-germ and short-germ segmentation**
Michael Akam, University of Cambridge
- 5.00 PM **Transcriptional and posttranscriptional gene regulation in the sea anemone Nematostella vectensis**
Ulrich Technau, Vienna University
- 5.30 PM **Visualization and evolution of developmental enhancers**
Michael Levine, Princeton University
- 6.00 PM **'In-cis' and 'In-trans' constraints during development and evolution**
Denis Duboule, Université de Genève

EXHIBIT - THEODOR BOVERI AT THE NAPLES ZOOLOGICAL STATION

- 7.00 PM Exhibit opening - Fresco Room
- 7.30 PM Dinner buffet – Fresco Room

Tuesday, February 28th, 2017

SESSION 3 – FROM BOVERI TO DAVIDSON: 100 YEARS OF MECHANISTIC RESEARCH

- 9.00 AM **Passion, critique, and mechanistic biology. Jacques Loeb and Eric Davidson**
Ute Deichmann, Jacques Loeb Center for History and Philosophy of Science

- 9.30 AM **Homologies in Boveri's and Davidson's experimental-mechanistic philosophy**
Silvia Caianiello, Institute for the History of Philosophy and Science in Modern Age (CNR)
- 10.00 AM **From embryology to genes and genomes: some difficulties met between 1930 and 1980**
Michel Morange, Ecole Normale Supérieure
- 10.30 AM Coffee break – Foyer

SESSION 4 - FROM THE REGULATORY GENOME TO GENE REGULATORY NETWORKS

- 11.00 AM **The Boverian and Davidsonian roots of Developmental Evolution**
Manfred Laubichler, Arizona State University
- 11.30 AM **Genomics through the eyes of Eric Davidson**
Andrew Cameron, California Institute of Technology
- 12.00 AM **Emergence of a morphogen gradient: the evolution of dorsoventral axis formation in insects**
Siegfried Roth, University of Cologne
- 12.30 PM Lunch buffet – Foyer
- 2.30 PM **Gene regulatory networks: principles for embryonic specification vs. stem-cell based specification of lymphocytes**
Ellen Rothenberg, California Institute of Technology
- 3.00 PM **Gene regulatory networks describing blood and cardiovascular development**
Roger Patient, University of Oxford
- 3.30 PM Coffee break - Foyer

SESSION 5 - EVOLUTIONARY NOVELTIES: A MOVING FRAMEWORK

- 4.00 PM **The interplay of genetics and plasticity in the origin of a novel cell type identity**
Gunter P. Wagner, Yale University
- 4.30 PM **The topology of developmental novelties and the construction of phenotypic space**
Douglas Erwin, Smithsonian National Museum of Natural History

MEMORIES, STORIES, TESTIMONIES

- 5.00 PM Open Mic
- 6.00 PM Closing remarks
- 8.00 PM Dinner - Restaurant Umberto