The Operon Model and its Impact on Modern Molecular Biology

Speakers
David Allis, Rockefeller University, New York
Url Alon, Weizmann Institute, Rehovot
Philip Avner, Institut Pasteur, Paris
Naama Barkai, Weizmann Institute, Rehovot
Jonathan Beckwith, Harvard Medical School, Boston
Adrian Bird, Edinburgh University
Elisabeth Blackburn, University of California, San Francisco
Helen Blau, Stanford University
Margaret Buckingham, Institut Pasteur, Paris
Hermann Bujard, Heidelberg University
Giacomo Cavalli, IGH, Montpellier
Hans Clevers, Hubrecht Institute, Utrecht
Pascale Cossart, Institut Pasteur, Paris
Patrick Cramer, Ludwig-Maximilians University, Munich
Anne Dejean, Institut Pasteur, Paris
Denis Duboule, Geneva University
Richard Ebright, Rutgers University, Piscataway
Thomas Gaf, CRG, Barcelona
Frank Grosveld, Erasmus University, Rotterdam
Alain Jacquier, Institut Pasteur, Paris
François Jacob, Institut Pasteur, Paris
Rudolf Jaenisch, MIT, Cambridge
Marc Kirschner, Harvard Medical School, Boston
Daphne Koller, Stanford University
Tony Kouzarides, Gurdon Institute, Cambridge
Mitchell Lewis, University of Pennsylvania, Philadelphia
Richard Losick, Harvard University, Cambridge
Robin Lovell-Badge, NIMR, London
Kim Nasmyth, Oxford University
Paul Nurse, Rockefeller University, New York
Christian Nüsslein-Volhard, MPI, Tubingen
Olivier Pourquié, IGBMC, Illkirch
Mark Ptashne, Sloan-Kettering Institute, New York
Nikolaus Rajewsky, MDC, Berlin
Evelyn Richet, Institut Pasteur, Paris
Philippe Sansonetti, Institut Pasteur, Paris
Maxime Schwartz, Institut Pasteur, Paris
François Schweisguth, Institut Pasteur, Paris
Lucy Shapiro, Stanford University
Philip Sharp, MIT, Cambridge
Olivier Voinnet, IBMP, Strasbourg and ETH, Zurich
Ada Yonath, Weizmann Institute, Rehovot
Richard Young, MIT, Cambridge

May, 17-20 2011
Institut Pasteur, Paris, France

Scientific Sessions
- Historical perspectives
- Mechanisms of transcription
- Epigenetics
- Stem cells and development
- Transcription and differentiation
- Cell growth and division
- Networks and systems biology

Scientific Committee
Margaret Buckingham, Institut Pasteur, Paris
Hermann Bujard, Zentrum für Molekulare Biologie, Heidelberg
Anthony Puglsey, Institut Pasteur, Paris
Lucy Shapiro, Stanford University School of Medicine
Moshe Yaniv, Institut Pasteur, Paris

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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>1:00 pm</td>
<td>Welcome desk opening – Welcome coffee</td>
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<tr>
<td>2:00 pm</td>
<td>Moshe Yaniv, Institut Pasteur, Paris, France</td>
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<td>2:10 pm</td>
<td>Alice Dautry, President of Institut Pasteur, Paris: Welcome address</td>
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<td>2:20 pm</td>
<td>Maria Leptin, Director of EMBO, Heidelberg: EMBO address</td>
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<td>2:30 pm</td>
<td>François Jacob, Institut Pasteur, Paris: Memories and Award of the &quot;François Jacob Prize&quot;</td>
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<td>2:45 pm</td>
<td>Jon Beckwith, Harvard School of Medicine, Boston: &quot;The Lac operon as a paradigm: normal science and the beginning of biological complexity.&quot;</td>
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<td>3:15 pm</td>
<td>Mitchell Lewis, University of Pennsylvania, Philadelphia: &quot;The lac and lambda repressors.&quot;</td>
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<td>3:45-4:15 pm</td>
<td>Coffee break</td>
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<td>4:15 pm</td>
<td>Mark Ptashne, Sloan-Kettering Institute, New York: &quot;Basic models tell us more than we can at first know - K. Popper.&quot;</td>
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<td>4:45 pm</td>
<td>Maxime Schwartz and Evelyne Richet, Institut Pasteur, Paris &quot;From positive control in bacteria to eukaryotic signalling.&quot;</td>
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<td>5:15 pm</td>
<td>Rémi Fronzes, Institut Pasteur, Paris: &quot;DNA transfer across the bacterial cellular envelope.&quot;</td>
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<td>5:30-6:30 pm</td>
<td>Testimonies from contemporary actors: Georges Cohen, Arthur Pardee, Agnes Ullmann, Luiz Pereira da Silva and François Gros.</td>
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Speech by Mrs Valérie Pécresse, Minister of Higher Education and Research during the plenary session.

7:00 pm: Welcome cocktails in the hall of CIS
Chairpersons: Geneviève Almouzni (Institut Curie, Paris) and André-Georges Sentenac (CEA/Saclay, Bures-sur-Yvette)

9:00 am. Richard Ebright, Rutgers University, Piscataway: “Positive control of lac operon by CAP and cAMP.”


10:00 am. Uri Alon*, The Weizmann Institute, Rehovot: “Principles of regulatory circuits.”

10:30-11:00 am. Coffee break

11:00 am. Richard Young, MIT, Cambridge: “Transcriptional control of embryonic stem cells.”


12:00 am. Frank Grosveld, Erasmus University, Rotterdam: “Transcription networks and long range interactions in the genome.”


1:00 pm-2:30 pm. Lunch at the “Espace Congrès” + Coffee in the hall of CIS

Chairpersons: Edith Heard (Institut Curie, Paris) and Jean-François Nicolas (Institut Pasteur, Paris)

2:30 pm. Adrian Bird, University of Edinburgh: “The dinucleotide CpG as a genomic signaling module.”

3:00 pm. David Allis, The Rockefeller University, New York: “Beyond the Double Helix: Varying the ‘Histone Code’.”

3:30 pm. Tony Kouzarides, Gurdon Institute, Cambridge: “Role of chromatin modifying enzymes in transcription and cancer.”

4:00-4:30 pm. Philip Avner, Institut Pasteur, Paris “X-inactivation: an epigenetic paradigm.”

4:30-5:00 pm. Coffee break

5:30 pm. Giacomo Cavalli, Institut de Génétique Humaine, Montpellier: “Epigenetic regulation of development by polycomb proteins.”


* Molecular Cell/Cell Press sponsored speakers
Thursday May 19, 2011
Session IV: Stem cells and development

Chairpersons: André Choulika (Cellectis, Romainville) and Rolf Kemler (MPI, Freiburg)

9:00 am. Christiane Nüsslein-Volhard, MPI, Tubingen:
"The development of colour patterns in fishes: towards an understanding of the evolution of beauty."

9:30 am. Denis Duboule, Geneva University:
“The Dynamic Architecture of Hox Gene Clusters”

10:00 am. Olivier Pourquié, IGBMC, Illkirch:
"Developmental patterning of the vertebrate body axis."

10:30-11:00 am. Coffee break

11:00 am. Robin Lovell-Badge, NIMR, London:
"The regulation of cell fate choice during sex determination in mammals."

11:30 am. Rudolf Jaenisch, MIT, Cambridge:
"Stem cells, pluripotency and nuclear reprogramming."

12:00 am. Hans Clevers, Hubrecht Institute, Utrecht:
"Lgr5 Stem Cells in self-renewal and cancer."

12:30 pm-2:30 pm. Lunch at the "Espace Congrès" + Coffee in the hall of CIS

Session V: Transcription and differentiation

Chairpersons: Mary Weiss (Institut Pasteur, Paris) and Shahragim Tajbakhsh (Institut Pasteur, Paris)

2:30 pm. Patrick Cramer, Ludwig-Maximilians-Universität München:
Structural biology of eukaryotic gene transcription

3:00 pm. Thomas Graf, CRG, Barcelona
"Transcription factor induced transdifferentiation. How does it happen?"

3:30 pm. Anne Dejean, Institut Pasteur, Paris:
"Sumoylation in intestinal homeostasis and cancer."

4:00 pm. Margaret Buckingham, Institut Pasteur, Paris:
"Pax3 regulation of stem cell entry into the myogenic differentiation programme."

4:30-5:00 pm. Coffee break

5:00 pm. François Schweisguth, Institut Pasteur, Paris:
"Control of binary cell fate choice in Drosophila."

5:30 pm. Helen Blau, Stanford University:
"Nuclear reprogramming to pluripotency: problems, pitfalls and alternatives"

8:00 pm. Conference dinner at L’Alcazar restaurant.
Chairpersons: Nadine Peyriéras (CNRS, Gif-sur-Yvette) and Simon Wain-Hobson (Institut Pasteur, Paris)

9:00 am. Paul Nurse, The Rockefeller University, New York: “Controlling the cell cycle.”

9:30 am. Kim Nasmyth, Oxford University: “How do cells establish and subsequently maintain sister chromatid cohesion?”

10:00 am. Elizabeth Blackburn, University of California at San Francisco: “Telomeres and telomerase: Not at the end yet.”

10:30-11:00 am. Coffee break

11:00 am. Lucy Shapiro, Stanford University: “Systems architecture of the bacterial cell cycle.”

11:30 am. Richard Losick, Harvard School of Medicine, Boston: “Life and death of a microbial community.”

12:00 am. Philippe Sansonetti, Institut Pasteur, Paris: “From virulence operons to pathogenesis: Shigella as a model of host subversion.”

12:30 pm-2:30 pm. Lunch at the “Espace Congrès” + Coffee in the hall of CIS

Chairpersons: William Dove (University of Wisconsin-Madison) and Bernard Dujon (Institut Pasteur, Paris)

2:30 pm. Nikolaus Rajewsky, MDC, Berlin: “Regulation of genetic programs by microRNAs.”

3:00 pm. Pascale Cossart, Institut Pasteur, Paris: “Host pathogen interactions: from genomics to epigenetics.”


4:00-4:30 pm. Coffee break


5:00 pm. Ada Yonath, The Weizmann Institute, Rehovot: “On regulatory capabilities of the ribosomal exit tunnel.”

5:30 pm. Jean-Pierre Changeux, Institut Pasteur, Paris: “From allosterity to neuronal circuits.”

6:00 pm. Hermann Bujard, Heidelberg University: Conclusions