



International Symposium

EPIGENETIC CONTROL AND CELLULAR PLASTICITY

At the Beckman Center of the National Academy of Sciences
100 Academy, Irvine, CA 92617



October 4-5, 2018

School of Medicine - University of California, Irvine

Welcome to the

4th International Symposium on 'Epigenetic Control and Cellular Plasticity'

The Center for Epigenetics and Metabolism (CEM) welcomes you at the 4th International Symposium on 'Epigenetic Control and Cellular Plasticity'. The goal of this meeting is to discuss how epigenetic control and chromatin remodeling contribute to various processes that lead to cellular plasticity. The understanding of the molecular mechanisms responsible for this level of control is likely to bring essential information for future strategies in pharmacology, stem cell biology and therapeutics.

The meeting marks the collaboration between the Institut de la Sante et de la Recherche Medicale (INSERM), France, and the University of California, Irvine, which has lead to the creation of the research unit U904 in 2008. INSERM has since renewed the commitment by creating the new U1233 on 'Controle Epigenetique de la Plasticite Cellulaire'. Also, this Symposium extends the partnership that the CEM has established with KAUST's Environmental Epigenetics Research Program (KEEP).

The Symposium has been organized by the Center for Epigenetics and Metabolism at our School of Medicine in collaboration with the Department of Biological Chemistry.

Paolo Sassone-Corsi

Director, Center for Epigenetics and Metabolism

PROGRAM

October 4, Thursday

- 8:30 am Registration
- 9:00 – 9:30 Opening and Introduction to the Symposium
Michael Stamos, Dean of the School of Medicine, UCI
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Session I *Nuclear Organization* *Chair: Paolo Sassone-Corsi*

- 9:30 – 10:10 Plenary Lecture
Robert Tjian (University of California, Berkeley)
From In Vitro Biochemistry to Single Molecule Imaging: Breaking Down Gene Regulation
- 10:15 – 10:45 **Clodagh O’Shea** (Salk Institute)
Cracking the Nucleus: Visualizing the structures and functions of genomic DNA
- 10:50 – 11:10 Break
- 11:15 – 11:45 **Geeta Narlikar** (University of California, San Francisco)
Mechanisms of Heterochromatin Formation and Regulation
- 11:50 – 12:05 **Alon Goren** (University of California, San Diego)
Study of mitotic chromatin supports a model of bookmarking by histone modifications and reveals nucleosome deposition patterns
- 12:10 – 1:40 pm Lunch
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Session II *Stem Cells and Epigenetics* *Chair: Timothy Downing*

- 1:45 – 2:15 **Brad Cairns** (University of Utah)
Regulation of Human Spermatogonial Stem Cell Development and Plasticity

- 2:20 – 2:35 **Diana Hargreaves** (Salk Institute)
Elucidation of a novel BRD9-containing BAF complex
in embryonic stem cells
- 2:40 – 2:55 **Alexei Aravin** (Caltech)
Small RNAs fighting genome invaders
- 3:00 – 3:15 **Katalin Fejes Tóth** (Caltech)
Transcriptional silencing by piRNA
- 3:20 – 3:50 Break
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Session III Epigenetics of Complex Networks
Chair: Emiliana Borrelli

- 3:55 – 4:25 **Steve Jacobsen** (University of California, Los Angeles)
Epigenetic gene regulation in Arabidopsis
- 4:30 – 5:00 **Joseph Ecker** (Salk Institute)
Epigenomic signatures of neuronal diversity in the mammalian brain
- 5:05 – 5:45 Plenary Lecture
Thomas Südhof (Stanford University)
Trans-synaptic control of synaptic transmission by neuroligin
alternative splicing
- 6:00 Cocktail

UCI Jazz Quartet

- 7: 00 PM Dinner at the National Academy

October 5, Friday

Session IV *Epigenetics and Cancer*

Chair: Eric Stanbridge

- 9:00 – 9:30 **Thomas Jenuwein** (Max-Planck Institute, Freiburg, Germany)
Genistein-induced stress signaling selectively derepresses major satellite repeat transcription in mouse heterochromatin
- 9:35 – 10:05 **Mei Kong** (University of California, Irvine)
Dealing with hunger: Crosstalk between glutamine deprivation and epigenetics in tumor
- 10:10 – 10:40 **Kevin Struhl** (Harvard University)
An epigenetic switch linking inflammation to cancer
- 10:45 – 11:00 Break
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Session V *Metabolism and Epigenetics*

Chair: Selma Masri

- 11:00 – 11:30 **Joseph Takahashi** (UT Southwestern)
Transcriptional and Chromatin Landscape of the Circadian Clock in Mammals
- 11:35 – 12:05 **Valerio Orlando** (KAUST, Saudi Arabia)
Polycomb, environment and adaptive cell memory
- 12:15 – 2:00 pm Lunch

This Symposium is organized by:

- **The Center for Epigenetics and Metabolism, School of Medicine (UCI)**
- **The Unite 1233 of INSERM 'Controle Epigenetique de la Plasticite Cellulaire' (UCI)**
 - **The Department of Biological Chemistry, School of Medicine (UCI)**