KEYSTONE SYMPOSIA
on Molecular and Cellular Biology

Neuroepigenetics (B5)

February 22-26, 2015 • Eldorado Hotel & Spa • Santa Fe, New Mexico, USA

Scientific Organizers: Hongjun Song and Li-Huei Tsai

Supported by the Directors' Fund

Abstract & Scholarship Deadline: October 21, 2014 / Abstract Deadline: November 19, 2014 / Discounted Registration Deadline: December 18, 2014

SUNDAY, FEBRUARY 22

Registration

MONDAY, FEBRUARY 23

Keynote Session

*Hongjun Song, Johns Hopkins University School of Medicine, USA

Fred H. Gage, The Salk Institute for Biological Studies, USA
LINE-1 Retrotransposons-Mediated Generation of Somatic Variation in Neuronal Genomes

*Li-Huei Tsai, Massachusetts Institute of Technology, USA

Michael E. Greenberg, Harvard Medical School, USA
Neuronal Activity-Induced Gene Expression: Genetic and Epigenetic Mechanisms

Epigenetic Mechanisms in Embryonic Development of the Nervous System

*Dirk Schübeler†, Friedrich Miescher Institute for Biomedical Research, Switzerland

Antonella Riccio, University College London, UK
Nitric Oxide-Mediated Epigenetic Mechanisms in Developing Neurons

Xiang-Dong Fu, University of California San Diego, USA
Critical Barriers for Neuronal Induction and Maturation

Jürgen A. Knoblich, IMBA - Institute of Molecular Biotechnology, Austria
Epigenetic Mechanism Regulating Neurogenesis in Drosophila

Epigenetic Mechanisms in Adult Neurogenesis

*Fred H. Gage, The Salk Institute for Biological Studies, USA

Anne C. Ferguson-Smith, University of Cambridge, UK
Role of Genomic Imprinting in Regulating Postnatal SVZ and SGZ Neurogenesis

Jenny Hsieh, University of Texas Southwestern Medical Center at Dallas, USA
Epigenetic Modulation of Seizure-Induced Adult Hippocampal Neurogenesis

Peng Jin, Emory University School of Medicine, USA
Role and Mechanism of TET2 Signaling in Regulating Adult Neurogenesis

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, FEBRUARY 24

Epigenetic Mechanisms Regulating Synapse Formation, Plasticity and Behavior

*Michael E. Greenberg, Harvard Medical School, USA

Li-Huei Tsai, Massachusetts Institute of Technology, USA
Novel Insight into Epigenomic Mechanisms Underlying Synaptic Plasticity and Memory Formation

J. David Sweatt, University of Alabama at Birmingham, USA
Epigenetic Mechanisms in Memory Formation

Lisa M. Monteggia, University of Texas Southwestern Medical Center, USA
Role of DNA Methylation and MeCP2 in Regulating Synaptic Transmission and Plasticity

Hongjun Song, Johns Hopkins University School of Medicine, USA
Activity-Induced Epigenetic Mechanisms in Synaptic and Behavior Plasticity

Short Talk(s) Chosen from Abstracts

Molecular Mechanisms

*Anne C. Ferguson-Smith, University of Cambridge, UK

Dirk Schübeler†, Friedrich Miescher Institute for Biomedical Research, Switzerland
Methylation-Dependent and -Independent Genomic Targeting Principles of the MBD Protein Family

Michael G. Rosenfeld, HHMI, University of California, San Diego, USA
Transcriptional Regulation through Noncoding RNAs and Epigenetic Modifications

Paolo Sassone-Corsi, University of California, Irvine, USA
The Circadian Epigenome: How Metabolism Talks to Chromatin Remodeling

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, FEBRUARY 25

The Role of Epigenetic Mechanisms in Brain Disorders and Repair

*Antonella Riccio, University College London, UK

Isabelle Mansuy, University and ETH Zurich, Switzerland
Epigenetic Transmission of the Impact of Traumatic Stress in Early Life Across Generations

Guo-li Ming, Johns Hopkins University, USA
Epigenetic Roadblock for Axonal Regeneration and Brain Repair

Eric J. Nestler, Mount Sinai School of Medicine, USA
Epigenetic Mechanisms in Addiction

Jeffrey S. Nye, Janssen Research and Development, LLC, USA
Translation of Neuroepigenetics discoveries to Neurotherapeutics: An Industry Perspective

Short Talk Chosen from Abstracts

Epigenomes

*Li-Huei Tsai, Massachusetts Institute of Technology, USA

*Hongjun Song, Johns Hopkins University School of Medicine, USA

Manolis Kellis†, Massachusetts Institute of Technology, USA
Interplay Between Chromatin State, Regulator Binding, and Regulatory Motifs

Chuan He, University of Chicago, USA
Chemical Biology Approach Towards Understanding RNA and DNA Epigenetics and Epigenomes

Joseph R. Ecker, HHMI/The Salk Institute, USA
Patterning, Cell Specificity, and Dynamics of DNA Methylation in Mammalian Brain Development

Short Talk Chosen from Abstracts

THURSDAY, FEBRUARY 26

Departure