



Join Keystone Symposia
for the 2016 conference on:

Noncoding RNAs in Health and Disease

February 21–24, 2016

Santa Fe Community Convention Center | Santa Fe, New Mexico | USA

Scientific Organizers: Ramin Shiekhattar and Roberto Bonasio

Joint with the conference on *Enhancer Malfunction in Cancer*

Over the past decade, there has been a greater understanding of genomic complexity in eukaryotes ushered in by the immense technological advances in high-throughput sequencing of DNA and its corresponding RNA transcripts. This has resulted in the realization that beyond protein-coding genes, there are a large number of transcripts that do not encode for proteins and, therefore, may perform their function through RNA sequences and/or through secondary and tertiary structural determinants. This Keystone Symposia meeting is focused on the latest findings concerning different classes of noncoding RNAs that use different strategies to regulate transcription. These are exciting times for discovering the biological scope and the mechanism of action for these RNA molecules, which have roles in dosage compensation, imprinting, enhancer function and transcriptional regulation, with a consequently great impact in development and disease.

Session Topics:

- Noncoding RNAs in Dosage Compensation and Germline Function
- Small Noncoding RNA in Transcriptional Silencing
- Enhancer RNA in Development and Disease (Joint)
- Enhancer Chromatin and Noncoding RNA (Joint)
- Noncoding RNAs and Polycomb/Trithorax Complexes
- Noncoding RNAs and Nuclear Architecture



Submitting an abstract is a great way of participating in the conference through poster presentation and possible selection for a short talk.

Scholarship & Discounted Abstract Deadline: Oct 20, 2015

Abstract Deadline: Nov 18, 2015

Discounted Registration Deadline: Dec 18, 2015

For additional details, visit www.keystonesymposia.org/16Q5.

KEYSTONE SYMPOSIA™
on Molecular and Cellular Biology
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KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Noncoding RNAs in Health and Disease (Q5)

Scientific Organizers: Ramin Shiekhattar and Roberto Bonasio

Sponsored by Cell Research and Journal of Molecular Cell Biology (JMCB)

Enhancer Malfunction in Cancer (Q6)

Scientific Organizers: Ali Shilatifard and Dale Dorsett

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SUNDAY, FEBRUARY 21

Arrival and Registration

MONDAY, FEBRUARY 22

Welcome and Keynote Session (Joint)

***Ramin Shiekhattar**, University of Miami, USA

***Ali Shilatifard**, Northwestern University, USA

Michael S. Levine, Princeton University, USA
Enhancers/Promoters and Regulation of Gene Expression

Eric N. Olson, University of Texas Southwestern Medical Center, USA
Modulation of Muscle Development and Disease by Noncoding RNAs

Noncoding RNAs in Heterochromatin and Dosage Compensation (Q5)

***François Fuks**, Université libre de Bruxelles, Belgium

Howard Y. Chang, Stanford University, USA
Genome Regulation by Long Noncoding RNAs

Joshua T. Mendell, HHMI/University of Texas Southwestern Medical Center, USA
Regulation of Genomic Stability by the Noncoding RNA NORAD

Shiv I. S. Grewal, NCI, National Institutes of Health, USA
RNA Processing Machineries in Gene Silencing

Montserrat Anguera, University of Pennsylvania, USA
Short Talk: Unusual Maintenance of X-Chromosome Inactivation Predisposes Female Lymphocytes for Increased Expression from the Inactive X

Enhancer Biology (Q6)

***Gerd A. Blobel**, Children's Hospital of Philadelphia, USA

Dale Dorsett, St. Louis University School of Medicine, USA
RNA Binding Proteins Aid Association of Cohesin with Genes and Enhancers

Matthias Merckenschlager, Imperial College London, UK
The contribution of cohesin to enhancer connectivity and function.

Alexander Stark, Research Institute of Molecular Pathology - IMP, Austria
EMBO Young Investigator Lecture: Decoding Transcriptional Regulation

Julie Ahringer, University of Cambridge, UK
Short Talk: Properties and Activities of Enhancers

Beatriz Aranda-Orgilles, NYU School of Medicine, USA
Short Talk: Med12 Regulates Enhancer Dynamics in HSCs Independently of Mediator Kinase Activity

Noncoding RNAs and Enhancers in Development (Joint)

***Luciano Di Croce**, CRG - Center for Genomic Regulation, Spain

Robert A. Martienssen, Cold Spring Harbor Laboratory, USA
Noncoding RNAs and Transposition

Anindya Dutta, University of Virginia, USA
Short Talk: MUNC and DRAIC: lncRNAs Involved in Differentiation and in Repression of Metastasis

Robin D. Dowell, University of Colorado, USA
Enhancer RNAs Originate from Active Transcription Factor Binding

Gioacchino Natoli, Humanitas University, Italy
Noncoding Transcription at Enhancers and Promoters: Genome-Wide Suppression by Early Termination

Gerd A. Blobel, Children's Hospital of Philadelphia, USA
A Hyperactive Transcriptional State Marks Genome Reactivation during Mitotic Exit

***Panagiotis Ntziachristos**, Northwestern University, USA
Short Talk: Characterization of the Oncogenic Enhancer Repertoire in T Cell Leukemia using Chromatin Conformation Studies

Poster Session 1

TUESDAY, FEBRUARY 23

Enhancer RNAs in Development and Disease (Joint)

***Anne Brunet**, Stanford University, USA

***Julie Ahringer**, University of Cambridge, UK

Ramin Shiekhattar, University of Miami, USA
Biogenesis and Mechanism of Action of Enhancer RNAs

Shelley L. Berger, University of Pennsylvania, USA
CBP Senses its Transcription Environment at Enhancers to Locally Modulate Acetyltransferase Activity

Christopher K. Glass, University of California, San Diego, USA
Mechanisms and Consequences of Enhancer Transcription

Tae-Kyung Kim, University of Texas Southwestern Medical Center, USA

Functional Mechanisms of Neuronal Enhancers

Franziska Petermann, NIAMS, National Institutes of Health, USA
Short Talk: Deletion of NeST Reduces IFN-gamma Expression and Chromosomal Looping at the Ifng locus

Daniel R. Larson, NCI, National Institutes of Health, USA
Short Talk: Coordinate Regulation of Estrogen-Responsive Genes and eRNA in Single Cells

Enhancer Chromatin and Noncoding RNAs (Joint)

***Karen Adelman**, Harvard Medical School, USA

***Dale Dorsett**, St. Louis University School of Medicine, USA

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Ali Shilatifard, Northwestern University, USA
Enhancer Malfunction in Cancer

Tony Kouzarides, University of Cambridge, UK
Role of ncRNAs in Transcription and Cancer

Harinder Singh, Cincinnati Children's Hospital Medical Center, USA
Single-Cell Analysis of Mixed-Lineage Transcriptional States Leading to a Binary Cell Fate Choice

Jesse M. Engreitz, Harvard University and Broad Institute, USA
Short Talk: Many Promoters of lncRNAs and mRNAs Act as Enhancers in Local Gene Regulatory Networks

Poster Session 2

WEDNESDAY, FEBRUARY 24

Noncoding RNAs in Epigenetics (Q5)

***Roberto Bonasio**, University of Pennsylvania, USA

François Fuks, Université libre de Bruxelles, Belgium
Mechanisms of TETs and Hydroxymethylation

Anne Brunet, Stanford University, USA
Epigenetic Regulation of Longevity

Chris Marine, VIB-KU Leuven, Belgium
Cancer Cell Addiction to lncRNAs

Gozde Korkmaz, Netherlands Cancer Institute, Netherlands
Short Talk: Functional Genetic Screens for Enhancer Elements in the Human Genome Using CRISPR-Cas9

Luciano Di Croce, CRG - Center for Genomic Regulation, Spain
Polycomb Orchestrates Gene Regulation Dynamics in Cell Differentiation and Cancer

Madoka Chinen, NIDDK, National Institutes of Health, USA
Short Talk: Structure-Function Analysis of Drosophila Argonaute2 in Chromatin Insulator Activity

Enhancers and Regulatory Networks (Q6)

***Dale Dorsett**, St. Louis University School of Medicine, USA

Ann Dean, NIDDK, National Institutes of Health, USA
Enhancer Mechanisms Underlying the Erythroid Transcriptome

Warren S. Pear, University of Pennsylvania, USA
Modular Domains within a Super Enhancer Determine Drug Resistance in T-Cell Leukemia

W. Lee Kraus, University of Texas Southwestern Medical Center, USA
Molecular Mechanisms for the Assembly and Function of Cell Type-Specific Enhancers

Denes Hnisz, Whitehead Institute, USA
Enhancer Structure and Function in Health and Disease

Sarah C. Pyfrom, Washington University in St. Louis, USA
Short Talk: Defining and Targeting Pathogenic Enhancers in B Cell Cancers

Noncoding RNAs and Nuclear Architecture (Q5)

***Howard Y. Chang**, Stanford University, USA

John L. Rinn, University of Colorado Boulder, USA
Function and Evolution of Local Repeats in the FIRRE Locus

Eric A.J. Simko, Johns Hopkins University, USA
Short Talk: Nuclear Paraspeckle Disruption by C9orf72 Repeat RNA

Karen Adelman, Harvard Medical School, USA
Pol II Pausing and Elongation at Noncoding RNA Loci

Roberto Bonasio, University of Pennsylvania, USA
RNA-Mediated Regulation of Chromatin-Associated Proteins

Chromatin Structure and Enhancer Promoter Communications (Q6)

***Ann Dean**, NIDDK, National Institutes of Health, USA

Nadav Ahituv, University of California, San Francisco, USA
Functional Characterization of Gene Regulatory Elements

Robert E. Kingston, Massachusetts General Hospital, USA
Alterations in Nucleosome Accessibility during Regulation

Blaine Bartholomew, University of Texas MD Anderson Cancer Center, USA

Short Talk: Auto-Regulation of SWI/SNF in Cancer and its Relationship to Enhancers

Sharon Y.R. Dent, University of Texas MD Anderson Cancer Center, USA

Short Talk: A SAGA of GCN5 and USP22 in Development and Disease

Meeting Wrap-Up: Outcomes and Future Directions (Q5)

***Ramin Shiekhatter**, University of Miami, USA

***Roberto Bonasio**, University of Pennsylvania, USA

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Q6)

THURSDAY, FEBRUARY 25

Departure