

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Long Noncoding RNAs: From Evolution to Function (C7)

March 15-20, 2015 • Keystone Resort • Keystone, Colorado, USA

Scientific Organizers: Leonard Lipovich, Jeannie T. Lee, John L. Rinn and James (Ben) Brown

Sponsored by Regeneron Pharmaceuticals, Inc.

Abstract & Scholarship Deadline: November 18, 2014 / Abstract Deadline: December 16, 2014 / Discounted Registration Deadline: January 15, 2015

SUNDAY, MARCH 15

Registration

MONDAY, MARCH 16

Keynote Session

Thomas R. Cech, HHMI/University of Colorado, USA
The RNA Worlds, Primordial and Modern: The lncRNAome in Focus

Lynne E. Maquat, University of Rochester Medical Center, USA
lncRNA-Mediated mRNA Decay via the dsRNA-Binding Protein Staufen

The Multidimensional lncRNA Landscape

Danny F. Reinberg, HHMI/New York University, USA
Histone Modification and Long ncRNAs

Jennifer Harrow, Wellcome Trust Sanger Institute, UK
Identifying and Cataloguing Functional lncRNAs in Reference Genomes

Howard Y. Chang, Stanford University, USA
High-Throughput Analysis of lncRNP Structure and Function

Short Talk(s) Chosen from Abstracts

Workshop 1

Short Talks Chosen from Abstracts

lncRNA Form and Function

Kevin V. Morris, The Scripps Research Institute, USA
Non-Coding RNA Epigenetic Regulation and Targeted Editing of the Genome

Phillip A. Sharp, Massachusetts Institute of Technology, USA
lncRNA 3'end Stabilization and uasRNAs

Ramin Shiekhattar, Wistar Institute, USA
The Mechanistic Centrality of lncRNAs in Enhancer Function

Poster Session 1

TUESDAY, MARCH 17

lncRNA Evolution: Non-Conserved Functions and Species Uniqueness

Leonard Lipovich, Wayne State University, USA
The Primate-Specific lncRNAome: Roles in Species Uniqueness, Human Brain, and Cancer

Chris Ponting, MRC, University of Oxford, UK
lncRNA Repertoires and Functions Across Mammalian and Fruitfly Lineages

Speaker to be Announced

Short Talk(s) Chosen from Abstracts

Workshop 2

Short Talks Chosen from Abstracts

In vivo Roles of lncRNAs: The Promises and Limitations of Animal Models

Frank W. Rigo, Isis Pharmaceuticals, USA
lncRNA Inhibition by Antisense Oligonucleotides: Preclinical Outcomes Despite Non-Conserved Functions

Sven Diederichs, German Cancer Research Center DKFZ, Germany
Long Noncoding RNA Function in Cancer

Speaker to be Announced

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, MARCH 18

lncRNA Mechanisms: Diversity and Heterogeneity

Jonathan S. Weissman, University of California, San Francisco, USA
Riboseq and Proteogenomics to Define an Empirical lncRNAome

Jeannie T. Lee, Massachusetts General Hospital, USA
Epigenetic Regulation by Long Non-Coding RNAs

John S. Mattick, Garvan Institute of Medical Research, Australia
The Human Genome as the Zip File Extraordinaire

Speaker to be Announced

Short Talk(s) Chosen from Abstracts

Transgenerational Transmission and Roles of lncRNAs

John L. Rinn, Harvard University, USA
Linking RNA from Mouse to Mechanism

James (Ben) Brown, Lawrence Berkeley National Laboratory, USA
Epigenetic Inheritance of Stress Response Phenotypes Is Largely Independent of the Initial Stressor, Conserved from Ecdysozoa to Mammals, and Governed by Male Germline-Specific Antisense lncRNAs

Lingling Chen, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, China
Sno-lncRNAs: Splicing Regulators in Primate Evolution

Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, MARCH 19

Transcription Factors and lncRNAs: Direct Endogenous Riboregulation

Bethany A. Janowski, University of Texas Southwestern Medical Center, USA
Regulation of Nuclear Hormone Receptors by Endogenous Long Non-Coding RNAs

Vladimir Bajic, King Abdullah University of Science and Technology, Saudi Arabia
Protein-Coding and lncRNA Genes Are Regulated Differently: Feedback Loops with lncRNA-interacting Transcription Factors

Michael G. Rosenfeld, HHMI, University of California, San Diego, USA
Nuclear Receptor Trans-Repression, lncRNAs, and Nuclear Architecture

Short Talk(s) Chosen from Abstracts

Workshop 3

Short Talks Chosen from Abstracts

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LncRNAs in Human Disease: Toward Rational Ribo-Therapeutics

Alexandra Henrion-Caude, Necker Hospital - Imagine Foundation,
France

*MiRage in HOTAIR: Primate-Specific Short and Long ncRNAs,
Metabolism, and Mendelian Disease*

James Barsoum, RaNA Therapeutics Inc., USA

*Selective Activation of Gene Expression by Targeting Long
Non-Coding RNA*

Piero Carninci, RIKEN Yokohama Institute/TransSINE Technologies
Inc.

*Quantification of LncRNA Promoteromes at a Single-Base Resolution:
Toward lncRNA Sense-Antisense Therapeutics*

Claes Wahlestedt, University of Miami/CURNA-OPKO

Long Noncoding RNAs: Therapeutic Opportunities

FRIDAY, MARCH 20

Departure