

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

RNA-Protein Interactions (X1)

Scientific Organizers: Xiang-Dong Fu, Anne Ephrussi and Douglas L. Black

Sponsored by Cell Research

Long Non-Coding RNAs: From Molecular Mechanism to Functional Genetics (X2)

Scientific Organizers: Saba Valadkhan and Piero Carninci

February 24-28, 2019 • Whistler Conference Centre • Whistler, British Columbia, Canada

Sponsored by Cell Research and Ionis Pharmaceuticals, Inc.

Abstract & Scholarship Deadline: October 25, 2018 / Abstract Deadline: November 29, 2018 / Discounted Registration Deadline: January 10, 2019

SUNDAY, FEBRUARY 24

Arrival and Registration

MONDAY, FEBRUARY 25

Welcome and Keynote Session (Joint)

Jennifer A. Doudna, HHMI/University of California, Berkeley, USA
CRISPR: An RNP Machine

John S. Mattick, Garvan Institute of Medical Research, Australia
The Evolution and Future of lncRNA Research

Functional RNA Elements in Mammalian Genomes (Joint)

Brenton R. Graveley, UConn Health, USA
Large Scale Analysis of Functional RNA Elements in the Human Genome

Thomas R. Cech, HHMI/University of Colorado, USA
Long Non-Coding RNA-Protein Interactions Regulate Epigenetic Silencing

Chris B. Burge, Massachusetts Institute of Technology, USA
Patterns in the Recognition of RNAs by RBPs

Short Talk(s) Chosen from Abstracts

Workshop 1 (X1)

Short Talks Chosen from Abstracts

Workshop 1 (X2)

Short Talks Chosen from Abstracts

RNP in Phase Transition (X1)

Kathrin Plath, University of California, Los Angeles, USA
Association of Xist RNA with Chromatin

Roy R. Parker, HHMI/University of Colorado, USA
Phase Transition in P-Body Formation

Speaker to be Announced

Short Talk Chosen from Abstracts

lncRNAs, Transposons and Evolution of the Genome (X2)

Igor Ulitsky, Weizmann Institute of Science, Israel
lncRNAs, Transposons and Genome Evolution

Lynne E. Maquat, University of Rochester Medical Center, USA
Role of Retrotransposon Elements within Cellular RNAs

Paulo P. Amaral, University of Cambridge, UK
Regulatory Roles of Covalent Modifications in lncRNAs

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, FEBRUARY 26

Coding and Non-Coding RNAs on Chromatin (Joint)

Xiang-Dong Fu, University of California, San Diego, USA
Transcription Hubs Defined by Nascent RNAs

Yijun Ruan, University of Connecticut, USA
RNA-Chromatin Interactions

Jeannie T. Lee, Massachusetts General Hospital, USA
lncRNAs: Lessons from X Inactivation

Valerio Orlando†, King Abdullah University of Science and Technology, Saudi Arabia
Talk Title to be Announced

Short Talk(s) Chosen from Abstracts

Dissecting RNP Functions in vivo (X1)

Danesh Moazed, Harvard Medical School, USA
RNAi in Chromatin Remodeling

Joan A. Steitz, HHMI, Yale University, USA
Non-coding RNAs: More Surprises

Susan L. Ackerman, University of California, San Diego, USA
RNA Regulation in Neurodegenerative Diseases

Short Talk Chosen from Abstracts

Regulation of Differentiation and Development by lncRNAs (X2)

Saba Valadkhan, Case Western Reserve University, USA
lncRNAs in Cancer and Immunity

Joshua T. Mendell, HHMI/University of Texas Southwestern Medical Center, USA
lncRNAs in Mammalian Physiology and Disease

Susan B. Carpenter, University of California, Santa Cruz, USA
lncRNAs in Immune Function

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, FEBRUARY 27

RNA Transport and Localization (X1)

Anne Ephrussi, European Molecular Biology Laboratory, Germany
Motor-Mediated RNA Transport and Localization

Robert H. Singer, Albert Einstein College of Medicine, USA
End of Life Decisions for mRNA

Erin M. Schuman, Max-Planck-Institut für Hirnforschung, Germany
Post-Transcriptional Regulation of Neuronal Function

Dierk Niessing, Ulm University, Germany
Molecular Architecture and Dynamics of Transport Complexes

Short Talk(s) Chosen from Abstracts

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lncRNAs in Disease: Tools for Discovery (X2)

Piero Carninci, RIKEN Center for Life Science Technologies, Japan
Functional Genetics of lncRNAs

Arul M. Chinnaiyan, University of Michigan, USA
Identification of Novel Disease-Related lncRNAs

Jonathan S. Weissman, University of California, San Francisco, USA
CRISPR as a Tool in lncRNA Discovery

Joakim Lundeberg, KTH-Royal Institute of Technology, Sweden
Spatial Transcriptome Analysis and Disease

Short Talk(s) Chosen from Abstracts

Structure and Function of RBPs (X1)

Douglas L. Black, University of California, Los Angeles, USA
Regulated RNA Processing by Chromatin-Associated RBPs

Frédéric H.T. Allain, ETH Zurich, Switzerland
Structural Basis for RNA Recognition

Traci M.T. Hall, NIEHS, National Institutes of Health, USA
Natural and Engineered RNA Recognition Specificity

Short Talk Chosen from Abstracts

Novel Insights into Functional Mechanism of lncRNAs (X2)

Howard Y. Chang, Stanford University, USA
Mechanism of Function of lncRNAs

Michael G. Rosenfeld, HHMI/University of California, San Diego, USA
lncRNA Mechanism of Function

John L. Rinn, University of Colorado Boulder, USA
Mechanism of Function of lncRNAs

Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, FEBRUARY 28

RNP Machines and Regulation (X1)

V. Narry Kim, Institute for Basic Science, South Korea
Modulation of the Microprocessor

Rui Zhao, University of Colorado, USA
Structure and Function of U1 snRNP

Yanli Wang, Institute of Biophysics, Chinese Academy of Sciences, China
CRISPR-Cas Mediated Cleavage of Invading Nucleic Acids

Erik Sontheimer, University of Massachusetts Medical School, USA
CRISPR/Cas Pathways

Short Talk(s) Chosen from Abstracts

lncRNAs: Diversity in Form and Function (X2)

Thomas R. Gingeras, Cold Spring Harbor Laboratory, USA
No RNA Left Behind

Karissa Y. Sanbonmatsu, Los Alamos National Laboratory, USA
Structure-Function Relationship in lncRNAs

Jay W. Shin, RIKEN Yokohama, Japan
Fantom6: from Discovery to Function of lncRNAs

Lingling Chen, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, China
lncRNAs of Novel Origin

Short Talk(s) Chosen from Abstracts

Workshop 2 (X1)

Short Talks Chosen from Abstracts

Workshop 2 (X2)

Short Talks Chosen from Abstracts

RNA and RBP in Disease (Joint)

Maurice S. Swanson, University of Florida, USA
RNA Disease

Mofang Liu, Shanghai Institutes of Biological Sciences, Chinese Academy of Sciences, China
The New Function of PIWI/piRNA in Human Infertility

Frank W. Rigo, Ionis Pharmaceuticals, USA
Targeting RNA with Antisense Oligonucleotides to Treat Disease

Speaker to be Announced

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (X1)

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (X2)

FRIDAY, MARCH 1

Departure