

Keystone Symposia in Whistler

Long Noncoding RNAs: From Molecular Mechanisms to Functional Genetics

Whistler Conference Centre | Whistler, British Columbia, Canada | February 24–28, 2019

Joint with the conference on RNA-Protein Interactions

Scientific Organizers:

Saba Valadkhan, Case Western Reserve University, USA

Piero Carninci, RIKEN Center for Life Science Technologies, Japan

Although emerging evidence points to the critical importance of the long noncoding transcriptome in human physiology and pathology, the clinical potential of long noncoding RNAs (lncRNAs) as therapeutic and prognostic targets remain largely unexplored. The increasing availability of high-throughput technologies and newly developed computational methodologies is rapidly making it possible to address this gap in our knowledge. However, optimal use of these new capabilities and recognition of their power in transforming the field of lncRNA research requires the formation of new collaborative and training efforts. This conference specifically aims to: 1) Communicate the latest available technologies and developing methodologies for lncRNA functional genetics to the lncRNA community; 2) Promote collaborations and new research directions that will bridge the already thriving lncRNA mechanistic and basic research to the clinical need for novel, effective diagnostic, prognostic and therapeutic targets; 3) Contribute to attracting the attention of biotech and pharmaceutical industry and clinically-oriented funding agencies to the lncRNA field; and 4) Integrate lncRNA research into other biological fields through the joint pairing with the conference on "RNA-Protein Interactions."

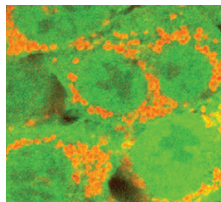
Session Topics:

- Functional RNA Elements in Mammalian Genomes (Joint)
- lncRNAs, Transposons and Evolution of the Genome
- Coding and Noncoding RNAs on Chromatin (Joint)
- Regulation of Differentiation and Development by lncRNAs
- lncRNAs in Disease: Tools for Discovery
- Novel Insights into Functional Mechanism of lncRNAs
- lncRNAs: Diversity in Form and Function
- RNA and RBP in Disease (Joint)

plus two workshops

Scholarship/Discounted Abstract Deadline: Oct 25, 2018; Abstract Deadline: Nov 29, 2018; Discounted Registration Deadline: Jan 10, 2019

Visit www.keystonesymposia.org/19X2 for more details.



KEYSTONE SYMPOSIA[™]
on Molecular and Cellular Biology
Accelerating Life Science Discovery
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KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Long Noncoding RNAs: From Molecular Mechanism to Functional Genetics (X2)

Scientific Organizers: Saba Valadkhan and Piero Carninci

Sponsored by Cell Research and Ionis Pharmaceuticals, Inc.

RNA-Protein Interactions (X1)

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

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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
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 (X2)

Short Talks Chosen from Abstracts

Workshop 1 (X1)

Short Talks 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(s) 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
RNP GRANULES IN HEALTH AND DISEASE

Speaker to be Announced

Short Talk(s) 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
Broad Roles of RNA Binding Proteins in Regulated Gene Expression

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
Epigenome Plasticity, Nuclear Architecture and Cell Adaptation: A Role for Noncoding RNA

Short Talk(s) 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(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
Target-Directed miRNA Decay: yet another function of Ago proteins

Susan L. Ackerman, University of California, San Diego, USA
tRNAs and Neuron Function

Short Talk(s) Chosen from Abstracts

Poster Session 2

WEDNESDAY, FEBRUARY 27

lncRNAs in Disease: Tools for Discovery (X2)

Piero Carninci, RIKEN Center for Integrative Medical Sciences, Japan
Functional Genomics 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

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RNA-Protein Interactions (X1)

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

Short Talk(s) Chosen from Abstracts

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

Speaker to be Announced

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

Short Talk(s) 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(s) Chosen from Abstracts

Structure and Function of RBPs (X1)

Douglas L. Black, University of California, Los Angeles, USA
Splicing Activation by Rbfox Requires Self-Aggregation of its Tyrosine-Rich Domain

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(s) Chosen from Abstracts

Poster Session 3

THURSDAY, FEBRUARY 28

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

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 the Spliceosome

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

Workshop 2 (X2)

Short Talks Chosen from Abstracts

Workshop 2 (X1)

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
A Novel Function of MIWI/piRNA in Activating Translation of Spermiogenic mRNAs during Spermiogenesis

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

Short Talk Chosen from Abstracts

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

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

FRIDAY, MARCH 1

Departure