SUNDAY, MARCH 15
Arrival and Registration

MONDAY, MARCH 16
Welcome Remarks
Leonard Lipovich, Wayne State University, USA
Jeannie T. Lee, Massachusetts General Hospital, USA
James (Ben) Brown, Lawrence Berkeley National Laboratory, USA
John L. Rinn, University of Colorado Boulder, USA

Keynote Session
*James (Ben) Brown, Lawrence Berkeley National Laboratory, USA
Thomas R. Ceci, HHMI/University of Colorado, USA
A Short History of Noncoding RNA Research
Lynne E. Maquat, University of Rochester Medical Center, USA
Control of Gene Expression via IncRNAs and mRNAs that Contain SINEs

The Multidimensional IncRNA Landscape
*John L. Rinn, University of Colorado Boulder, USA
John S. Mattick, Garvan Institute of Medical Research, Australia
The Human Genome as the Zip File Extraordinaire
Nenad Bartonicek, Garvan Institute of Medical Research, Australia
Short Talk: Uncovering Hidden Genes in Intergenic GWAS Regions
Sanjida H. Rangwala, National Institutes of Health, USA
Short Talk: Curation and Evidence Reporting of Eukaryotic RefSeq Long Noncoding RNA Genes and Transcripts

Workshop 1
*Anna Roth, German Cancer Research Center, DKFZ, Germany
Mitchell R. O’Connell, University of Rochester Medical Center, USA
Programmable RNA Targeting and Cleavage by CRISPR/Cas9
Guruhasha Kuthethur Gururaj, Biogen Inc., USA
Mapping RNA-Protein Interaction Modules Important in Neurodegeneration
Hans E. Johansson, LGC Biosearch Technologies, USA
Duplex Imaging of Pre-IncRNAs and Mature IncRNAs by Stellaris® RNA Fluorescence in situ Hybridization (RNA FISH)
*Mathew Thayer, Oregon Health & Science University, USA
Large Noncoding RNA Genes Control Chromosome-Wide Replication Timing and Stability
Karyn Schmidt, Alnylam Pharmaceuticals, USA
Characterization of a lncRNA Contributing to Melanoma Invasion
Martin A. Smith, Garvan Institute of Medical Research, Australia
The Modular Transcriptome: Unraveling a Network of Functional, Structured Noncoding RNA Domains
Per Johnsson, Karolinska Institutet, Sweden
A Novel Role of PTENpg1 as RNA in Drug Response and Outcome in Melanoma

LncRNA Form and Function
*Karissa Y. Sanbonmatsu, Los Alamos National Laboratory, USA
Phillip A. Sharp, Massachusetts Institute of Technology, USA
Origins of Long Noncoding RNAs and New Families of Argonaute-Associated Nuclear RNAs
Ingrid Grummt, German Cancer Research Center, Germany
DNA:RNA Triples Guide Chromatin Modifiers to Regulatory Gene Sequences
Boris Guennewig, Garvan Institute of Medical Research, Australia
Short Talk: Functional Characterization of the Human Brain Transcriptome in Parkinson’s Disease
Howard Y. Chang, Stanford University, USA
Genome Regulation by Long Noncoding RNAs
Anindya Dutta, University of Virginia, USA
Short Talk: Long Noncoding RNAs, H19 and MUNC, Promote Skeletal Muscle Differentiation by Two Different Mechanisms

Poster Session 1
TUESDAY, MARCH 17

LncRNA Evolution: Non-Conserved Functions and Species Uniqueness
*Kevin V. Morris, Center for Gene Therapy, City of Hope, USA
Leonard Lipovich, Wayne State University, USA
The Primate-Specific LncRNAome: Roles in Species Uniqueness, Human Brain and Cancer
Jennifer Harrow, Wellcome Trust Sanger Institute, UK
Identifying and Cataloguing Functional LncRNAs in Reference Genomes
Nikolaus Rajewsky, Max Delbruck Center for Molecular Medicine, Germany
Circular RNAs in the Mammalian Brain
Piero Carninci, RIKEN Center for Life Science Technologies/TransSINE Technologies Inc.
Discovery and Potential Therapeutic Applications of SINEUPs, IncRNA that Stimulate Protein Translation
Jonathan S. Weissman, University of California, San Francisco, USA
Exploring Translation Outside of Canonical Protein Coding Region with Ribosome Profiling

Workshop 2
*Howard Y. Chang, Stanford University, USA
*Marina Barriocanal, University of Navarra - FIMA, Spain
Brian S. Clark, Johns Hopkins University, USA
Dynamic Expression of IncRNAs and Examination of their Role in Retinal Progenitor Competence
Rohit Malik, University of Michigan, USA
Integrative Analysis of Androgen Receptor Regulated Long Noncoding RNA in Prostate Cancer
Maninjay K. Atianand, University of Massachusetts Medical School, USA
LincRNA-Eps Controls Immune Responses in Macrophage and Mice
Evan S. Forsythe, University of Arizona, USA
Phylogenetic Analysis of lncRNA Origins and Evolution in the Plant Family Brassicaceae
Jhumku D. Kohtz, Feinberg School of Medicine, Northwestern University, USA
The Ultraconserved Evf2 IncRNA Reduces Seizure Susceptibility in Mice
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 Cell Research, Isis Pharmaceuticals, Inc., Regeneron Pharmaceuticals, Inc. and Sarepta Therapeutics

Hazuki Takahashi, RIKEN, Japan  
Mapping of Functional Domains of SINEUPs, Antisense IncRNAs that Enhance Protein Translation

Susan A. Boackle, University of Colorado School of Medicine, USA  
Altered Expression of Long Noncoding RNA Is Associated with a Lupus-Associated Variant in Complement Receptor 2

**In vivo Roles of IncRNAs: The Promises and Limitations of Animal Models**

*Leonard Lipovich, Wayne State University, USA  
Alexandra Henrion-Caude, Necker Hospital – Imagine Foundation, France  
Kevin G. Nyberg, University of Maryland, College Park, USA  
Ciro Bonetti, Regeneron Pharmaceutical, USA  
Sven Diederichs, German Cancer Research Center DKFZ, Germany  
Caio F. Damski, University of New South Wales, Australia  
Matthew G. Schwartz, Harvard Medical School, USA

**Poster Session 2**

**WEDNESDAY, MARCH 18**

**LncRNA Mechanisms: Diversity and Heterogeneity**

*Jhumu D. Kohtz, Feinberg School of Medicine, Northwestern University, USA  
Ramin Shiekhattar, University of Miami, USA  
Vladimir Bajic, King Abdullah University of Science and Technology, Saudi Arabia  
Ranjan J. Perera, Sanford Burnham Prebys Medical Discovery Institute, USA  
Emily R. Feldman, University of Florida, USA

**Conserved IncRNA Functions**

*Alexandra Henrion-Caude, Necker Hospital – Imagine Foundation, France  
James (Ben) Brown, Lawrence Berkeley National Laboratory, USA  
Mridula (Millie) K. Ray, Harvard University, Massachusetts General Hospital, USA  
Luis Arnes, Columbia University, USA

**Poster Session 3**

**THURSDAY, MARCH 19**

**Transcription Factors and IncRNAs: Direct Endogenous Riboregulation**

*Jeannie T. Lee, Massachusetts General Hospital, USA  
David R. Corey, University of Texas Southwestern Medical Center, USA  
Vladimir Bajic, King Abdullah University of Science and Technology, Saudi Arabia

*Session Chair † Invited but not yet accepted  Program current as of June 29, 2018. Program subject to change. Meal formats are based on meeting venue. For the most up-to-date details, visit www.keystonesymposia.org/15C7.
Michael G. Rosenfeld, HHMI/University of California, San Diego, USA
Enhancer Signatures eRNAs and Nuclear Architecture in Regulated Gene Transcription

Veronica Peschansky, University of Miami, USA
Short Talk: Fragile X-Associated IncRNA FMR4 Is Trans-Active, Involved in Neural Development and Localized to Chromatin

Katelin R. Haynes, University of Queensland Diamantina Institute, Australia
Short Talk: Identification of Monocyte-Specific eRNAs at an Intergenic GWAS Locus Associated with Ankylosing Spondylitis Reveals Potential Mechanism in Disease

Jennifer F. Kugel, University of Colorado Boulder, USA
Regulation of RNA Polymerase II by SINE-Encoded ncRNAs

Jesse M. Engreitz, Broad Institute of Harvard and MIT, USA
Short Talk: Many Nuclear-Localized lincRNAs Regulate Gene Expression in cis

Workshop 4
*Saba Valadkhan, Case Western Reserve University, USA
A Bi-Functional Long Noncoding RNA Links Neuronal Differentiation to Survival after Stress

Eleonora Leucci, KU Leuven, Belgium
Short Talk: Targeting the Melanoma-Specific Long Noncoding RNA LINC01212 as an Effective Antimelanoma Strategy

Claes Wahlestedt, University of Miami/CURNA-OPKO
Long Noncoding RNAs: Therapeutic Opportunities

Concluding Remarks
Leonard Lipovich, Wayne State University, USA
Jeannie T. Lee, Massachusetts General Hospital, USA
James (Ben) Brown, Lawrence Berkeley National Laboratory, USA
John L. Rinn, University of Colorado Boulder, USA

FRIDAY, MARCH 20
Departure