



SCIENTIFIC PROGRAM

Draft Program v1– 2022-11-18

44th Annual International

Asilomar Chromatin, Chromosomes and Epigenetics Conference

December 8th -10th 2022

9:00 AM- 5:00 PM PST [Pacific Standard Time - UTC -8]

Virtual Conference

Keynote talks are 30 min + 10 min Q&A

All other talks are 15 min + 5 min Q&A

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Thursday 12/8 9:00 AM PST

Introductory Remarks – Michael Goldman

KEYNOTE | 9:10 AM PST – 9:50 AM PST

Introduction by Philippe Georgel

Yamini Dalal, National Cancer Institute, NIH

Chromatin fiber defects drive changes in chromosome integrity in human cancer and aging

Break – 9:50 AM – 10:00 AM

SESSION 1. Chromosome Dysregulation

10:00 AM PST – 11:35 AM PST

Chairperson: Philippe Georgel, Marshall University

10:00 AM

Alexander Strunnikov, Guangzhou Institutes of Biomedicine and Health

Ectopic RAD21L1, but not REC8, meiotic cohesin complex generates a source of chromosome instability in both cancer and immortalized human cells

10:20 AM

Paola Vagnarelli, Brunel University London

KI-67 is necessary during DNA replication for forks protection and genome stability

10:40 AM

Arun Kumar Ganesan, National Cancer Institute, NIH

Oncogenic lncRNAs alter epigenetic memory at a fragile chromosomal site in human cancer cells

11:00 AM

Anastasia Roemer, University of Alberta

Mechanisms governing the accessibility of DNA damage proteins to constitutive heterochromatin

Open Discussion – 15 min 11:20 AM – 11:35 AM

Lunch break – 11:35 AM – 1:00 PM

Thursday 12/8 1:00 PM PST

KEYNOTE | 1:00 PM PST – 1:40 PM PST

Introduction by LeAnn Howe, University of British Columbia

Meaghan Jones, University of Manitoba

Using DNA methylation to investigate priming of cellular response to environmental pollutants

Break 1:40 PM – 1:50 PM

SESSION 2. Genome Integrity and Cancer

1:50 PM PST – 4:35 PM PST

Chairperson: LeAnn Howe, University of British Columbia

1:50 PM

Steven De Michino, University of Toronto

Cell-free chromatin profiles from preclinical models reflect molecular phenotypes

2:10 PM

Melanie Li and Priya Bablani, Queen's University

Understanding effects of cancer-associated histone H2AZ mutations using the budding yeast model system

2:30 PM

Carla-Marie Jurkovic, Université de Sherbrooke

High-resolution analysis of protein complexes recruited to the replication fork during stress

2:50 PM

Jacqueline Barlow, University of California, Davis

Regulation of replication stress-induced chromosome rearrangement formation [*confirmed title*]

Break 3:10 PM – 3:20 PM

3:20 PM

Austin Macklem, Queen's University

Uncovering the functional consequences of cancer associated histone H2B mutations

3:40 PM

Audrey Paillé, Université de Sherbrooke

Transcription of ncRNAs promotes repair of UV induced DNA lesions in *Saccharomyces cerevisiae* subtelomeres

4:00 PM

Mary-Elizabeth Raymond, Queen's University

Understanding the role of Cdk8 in glycolysis gene expression regulation

Open Discussion – 15 min 4:20 PM – 4:35 PM

Friday 12/9 9:00 AM PST

Introductory Remarks - Michael Goldman

KEYNOTE | 9:10 AM PST – 9:50 AM PST

Introduction by Jennifer Mitchel

Pedro Rocha, National Institute of Child Health and Human Development, NIH

Enhancer clusters that bypass CTCF loops contribute to phenotypic robustness

Break – 9:50 AM – 10:00 AM

SESSION 3. Chromosomes and Nuclear Organization

10:00 AM PST – 12:25 PM PST

Chairperson: Jim Davie, University of Manitoba

10:00 AM

Ranjith Padinhateeri, Indian Institute of Technology Bombay

Predicting coarse-grained chromatin polymer properties from nucleosome-level contact data

10:20 AM

Brett Schofield, Wingate University

Satb1 homodimerizes and heterodimerizes with Satb2 prior to nuclear import

10:40 AM

Maya Capelson, San Diego State University

Setting the right dose: the role of nuclear pore proteins in chromosome-wide transcriptional output

Break – 11:00 AM – 11:10 AM

11:10 AM

Levi Duhaime, Queen's University

Characterizing the functional consequences of human cancer-associated histone H2AZ mutations in *S. cerevisiae*

11:30 AM

Graham Dellaire, Dalhousie University

PML Nuclear body evolution - from the cytoplasm to the nucleus in 350 million years

11:50 AM

Ken Kaplan, University of California, Davis

Replication stress induced autophagy targets nucleolar cargo to preserve organization of nuclear phase-distinct regions

Open Discussion – 15 min 12:10 PM – 12:25 PM

Lunch break – 12:25 PM – 1:00 PM

Friday 12/9 1:00 PM PST

SESSION 4. Chromatin and Regulation of Transcription – Part I

1:00 PM PST – 4:05 PM PST

Chairperson: Juan Ausiό, University of Victoria

1:00 PM

Javeed Bhat, University of Rochester Medical Center

Directional nucleosome mobilization by chromatin remodeling enzymes

1:20 PM

Trevor Long, University of North Dakota

Binding-site resolution chromatin accessibility dynamics of Cebpa enhancers during macrophage-neutrophil differentiation

1:40 PM

Mario Filice, University of Toronto

Characterizing cis-regulatory elements responsible for regulating Sfbmt2 & other critical placentation genes

2:00 PM

Amoldeep Kainth, University of Chicago

Improved transcript assembly with merged short and stranded long reads

Break 2:20 PM – 2:30 PM

2:30 PM

Monserrat Olea-Flores, University of Massachusetts Chan Medical School

PKM kinases regulate the mSWI/SNF chromatin remodeling enzymes during skeletal muscle differentiation

2:50 PM

Nadiya Khyzha, Fred Hutchinson Cancer Research Center

Profiling RNA at chromatin targets in situ by antibody-targeted tagmentation

3:10 PM

Joshua Brown, University of British Columbia

Requirement of ongoing transcription for stability of the preinitiation complex in budding yeast

3:30 PM

Amanda Ha, University of British Columbia

The Mest DMR regulates Klf14 imprinting via allele-specific sub-TAD structures

Open Discussion – 15 min 3:50 PM – 4:05 PM

Break – 4:05 PM – 4:15 PM

Future of Asilomar Conference – Discussion

Join us to discuss next year's meeting!

4:15 PM – 4:45pm

Saturday 12/10 9:00 AM PST

Introductory Remarks - Michael Goldman

SESSION 5. Chromatin and Regulation of Transcription – Part II

9:10 AM PST – 11:55 AM PST

Chairperson: Jennifer Mitchell, University of Toronto

9:10 AM

Bassem Al-Sady, University of California, San Francisco

What a double-headed histone methyl transferase can teach us about reading and writing gene repressive marks on chromatin

9:30 AM

Mika Saotome, University of North Dakota

DNA binding affinity of GATA3 affects its accumulation to closed chromatin sites for cellular reprogramming

9:50 AM

Motoki Takaku, University of North Dakota

Interpretable machine learning model for detecting cell-free nucleosomes from cancer patients.

10:10 AM

Sahin Naqvi, Stanford University School of Medicine

Precise modulation of transcription factor levels reveals drivers of dosage sensitivity

Break – 10:30 AM – 10:40 AM

10:40 AM

Teresita Padilla-Benavides, Wesleyan University

The canonical BAF complex regulates myoblast growth and differentiation

11:00 AM

Sarah Hainer, University of Pittsburgh

A network of nucleosome remodelers regulates non-coding RNA expression at gene regulatory sites

11:20 AM

Bhuvan Anbalagan, Queen's University

Understanding the role of Cdk8 in transcriptional regulation

Open Discussion – 15 min 11:40 AM – 11:55 AM

Lunch break – 11:55 AM – 1:00 PM

Saturday 12/10 1:00 PM PST

KEYNOTE | 1:00 PM PST – 1:40 PM PST

Introduction by Sally Pasion

Vincent Pasque, KU Leuven-University of Leuven

Chromatin Regulation in Early Mammalian Development and Reprogramming

Break – 1:40 PM – 1:50 PM

SESSION 6. Epigenetics of Cell Differentiation and Disease

1:50 PM PST – 4:35 PM PST

Chairperson: Sally Pasion, San Francisco State University

1:50 PM

Philippe Georgel, Marshall University

Mediating epigenetic de-regulation through diet

2:10 PM

Jim Davie, University of Manitoba

Broad H3K79me2 domain identifies critical genes in leukemia

2:30 PM

Joyce Thompson, National Institute of Child Health and Human Development, NIH

Rapid redistribution and extensive binding of NANOG and GATA6 at shared regulatory elements underlie specification of divergent cell fates

Break – 2:50 PM – 3:00 PM

3:00 PM

Jaime Croft, University of Massachusetts, Lowell

The transgenerational accumulation of H3K9me2 in the germline affects the lifespan of the soma differentially based on the activity of DAF-12 in *C. elegans*

3:20 PM

Rana Karimpour, University of Alberta

Enzymatic regulation of histone H4K16 acetylation

3:40 PM

Kaitlin Montanera, University of Toronto

The chromatin remodeling factor CREST directs establishment of synaptic enhancers in maturing motor neurons

4:00 PM

Fanju Meng, University of Rochester Medical Center

Temporal H2A.Z dynamics facilitate enhancer activation during embryonic developmental transitions

Open Discussion -15 min 4:20 PM – 4:35 PM

4:35 PM PST – 4:40 PM PST

Closing remarks – Michael Goldman