

2023 Telluride Workshop on Physical Genomics and Transcriptional Engineering

(February 27-March 2, 30 min talk + 15 min discussion)

Organizers: Vadim Backman & Martin Aryee

TSRC Host: Mark Kozak (970) 708-4426

Location: Ah Haa School for the Arts, 155 W Pacific Ave Telluride, CO 81435

Monday February 27

9.00am-9.30am: Breakfast

9.30am-9.45am: Welcome (TSRC staff and Vadim)

9.45am-10.30am: TBD
Nick Gilbert, University of Edinburgh (ZOOM)

10.30am-11.15am: Dynamics of 3D Genome Structure and Function
Anders Hansen, MIT

11.15am-11.30am: Break

11:30pm-12.15pm: Mapping Regulatory Chromatin Interactions with Near Base-Pair Resolution
Martin Aryee, Dana Farber Cancer Institute

12:15pm-1:15pm: Lunch

1.15pm-2.00pm: Investigating Complex Diseases: Network Dysregulation
Steven Altschuler, University of California – San Francisco

2.00pm-2.45pm: Investigating Complex Diseases: Patient Heterogeneity
Lani Wu, University of California – San Francisco

2.45pm-3.00pm: Break

3.00pm-3.45pm: The Interplay of MYC, DNA Topology and DNA Structure Governs Global Gene Expression
David Levens, National Cancer Institute

Tuesday February 28:

- 3.00pm-3.45pm: Intradomain Chromatin Conformation and Transcription: A Two-way Street
Vadim Backman, Northwestern University
- 3.45pm-4.30pm: Modeling Epigenetic Lesions That Disrupt Topological Boundaries and Cause Cancer
Bradley Bernstein, Harvard University
- 4.30pm-4.45pm: Break
- 4.45pm-5.30pm: Connecting State Transitions and Fate Decisions in Single Cells
Yogesh Goyal, Northwestern University
- 6.00pm-8.00pm: **Conference Dinner @ Black Iron, Mountain Village**

Wednesday March 1:

- 9:00am Optional Group Ski
- 3.00pm-3.45pm: TBD
Alexander Tarakhovsky, Rockefeller University
- 3.45pm-4.30pm: RNA Promotes the Formation of Spatial Compartments in the Nucleus
Mitchel Guttman, California Institute of Technology
- 4.30pm-4.45pm: Break
- 4.45pm-5.30pm: RNA-Based Transcriptional Regulation
John Rinn, University of Colorado - Boulder

Thursday March 2:

- 8:30am-9:15am: Defining How Local Chromatin Context and Global Genome Architecture Regulate Gene Expression
Seychelle Vos, MIT (ZOOM)
- 9:15am-10:00am: TBD
Anne Schaefer, Mt. Sinai School of Medicine & Max Planck Institute for Aging, Cologne
- 10:00am-10.15am: Break
- 10:15am-11:00am: Changes in the Nuclear Organization in Cellular Senescence
Nicola Neretti, Brown University