

# Program for the 2016 Telluride workshop Chromatin Structure and Dynamics

(August 1-5<sup>th</sup>, 30 min talk + 15 min discussion)

**Organizers:** Yawen Bai & Greg Bowman

**TSRC Hosts:** Kristen Redd, (970) 708-0827; Mark Kozak, (970) 708-4426

**Location:** Telluride Elementary School, 447 West Columbia Avenue Telluride CO 81435

## Sunday August 31, 2016

6:00-8:00 pm Reception at Arroyo Wine Bar, 220 E. Colorado Ave  
Cash Bar (no food), TSRC representative will be on hand to  
answer questions; family & guests welcome

## Monday August 1, 2016

8:00-8:45 am Breakfast at TSRC

## **Histone chaperones and nucleosome recognition**

8:45-9:00 am Welcome (TSRC staff)

9:00-9:45 am Linker histone subtypes and 30 nm chromatin fiber structure  
**Yawen Bai**

9:45-10:30 am Histone trafficking during chromatin replication  
**Mair Churchill**

15 min break

10:45-11.30 am Interactions of Spt6  
**Chris Hill**

11:30-12:15 am Molecular mechanisms of epigenetic regulation  
**Tatiana Kutateladze**

Afternoon Hiking/free time

7:00-7:45 pm MNase-sensitive complexes in yeast: Nucleosomes and non-  
histone barriers  
**David Clark**

7:45-8:30 pm Epichromatin: Localization of an anti-nucleosomal antibody  
**Ada Olins**

15 min break

8:45-9:30 pm Defining the epichromatin epitope  
**Don Olins**

**Tuesday August 2, 2016**

Morning

Hiking/free time

**Chromatin fibers and packaging**

1:00-1:45 pm

Topological polymorphism of chromatin fibers: Theoretical modelling and experimental verification

**Victor Zhurkin**

1:45-2:30 pm

A mechanistic understanding of real chromatin based on single-molecule experiments

**John van Noort**

15 min break

2:45-3:30 pm

Architecture of interphase chromosomes

**Kyle Eagen**

3:30-4:15 pm

Phase separation in Biology; Possible roles in chromatin biology

**Richard Kriwacki**

15 min break

4:30-5:15 pm

A 3D code in the human genome

**Erez Lieberman Aiden**

6:00 pm-

Group dinner (covered by the registration fee)

**Wednesday August 3, 2016**

7:30-8:30 am Breakfast at TSRC

**Chromatin complexes**

08:30-9:15 am Structural studies of chromatin complexes  
**Song Tan**

9:15-10:00 am Structural basis of gene regulation by Polycomb Repressive  
Complex 2  
**Xin Liu**

15 min break

10:15-11:00 am Live-cell single-molecule tracking reveals co-recognition of  
H3K27me3 and DNA targets polycomb PRC1 to chromatin  
**Xiaojun Ren**

11:00-11:45 am Epigenetic regulation of nucleosome dynamics  
**Michael Poirier**

15 min break

12:00-12:45 pm Structure and function of DNA G-quadruplex and its potential as  
drug target  
**Danzhou Yang**

Afternoon Hiking/free time

6:00 pm-dark TSRC Picnic at the Ah Haa Art School, located at 300 S  
Townsend; family and guests welcome free of charge

**Thursday August 4, 2016**

7:30-8:30 am Breakfast

**Chromatin remodeling**

8:30-9:15 am A new functional state of a chromatin remodeler revealed by interdomain communication across DNA gyres of the nucleosome  
**Greg Bowman**

9:15-10:00 am Nucleosome plasticity and the ISWI chromatin remodeler  
**Blaine Bartholomew**

15 min break

10:15-11:00 am Illuminating chromatin remodeling with single-molecule imaging  
**Sebastian Deindl**

11:00-11:45 am Combined structural approaches for studying the Chd1 chromatin remodelling enzyme  
**Tom Owen-Hughes**

Afternoon Lunch on your own

**Nucleosome structure and dynamics**

2:00-2:45 pm X-ray crystal structure of a chromatosome  
**Curtis Davey**

2:45-3:30 pm Structural basis of chromatin dynamics  
**Hitoshi Kurumizaka**

15 min break

3:45-4:30 am Nucleosome dynamics on the microsecond to minute time scale studied by single molecule FRET  
**Jörg Langowski**

Evening free time/dinner on your own

**Friday August 5, 2016**

8:00-9:00 am      Breakfast at TSRC

**Informal gathering/discussion**

Defining key questions for future investigation and development of new technologies.

## Participants

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