

Thursday March 11

- 3:00 pm Check-in
- 6:00 pm Reception (Lobby)
- 7:00 pm Dinner
- 8:00 pm Welcome (Organizers)
- 8:10 pm **Session 1: Keynote Address**
Joseph G. Gall, Carnegie Institution
Cajal bodies and histone locus bodies
- 9:00 pm Refreshments available at Bob's Pub

Friday March 12

- 7:30 am Breakfast
- 9:00 am Session 2: Nuclear Dynamics of the Transcription Machinery**
Chair: Robert Tjian
- 9:00 am **Jim McNally**, National Institutes of Health
Kinetic modeling of the dynamic nucleus: What do we really know?
- 9:25 am **Xavier Darzacq**, Ecole Normale Supérieure
Regulation of the pTEFb elongation factor nuclear mobility
- 9:50 am **Laszlo Tora**, Institute of Genetics and Molecular and Cellular Biology (IGBMC)
The ATAC acetyl transferase complex controls mitotic progression by regulating CyclinA and SIRT2 activity
- 10:15 am **Gordon Hager**, National Institutes of Health
Dynamic interaction of nuclear receptors with the genome
- 10:40 am Break and Group Photo
- 11:10 am Session 3: Kinetic Aspects of Transcription Regulation**
Chair: Sunney Xie
- 11:10 am **Johan Elf**, Uppsala Universitet
Probing transcription factor kinetics at the level of single molecules
- 11:35 am **Maxime Dahan**, Ecole Normale Supérieure
Addressing the target search of transcription factors at the single molecule level in eukaryotic cells
- 12:00 pm **Robert Tjian**, Howard Hughes Medical Institute
Single cell and single molecule analysis of transcription pre-initiation complex formation
- 12:25 pm **Alberto R. Kornblihtt**, Universidad de Buenos Aires
Chromatin, pol II elongation and alternative splicing
- 12:50 pm Lunch
- 1:20 pm Tour (optional)
- 2:30 pm Session 4: Transcription Elongation**
Chair: Xavier Darzacq

Imaging Transcription in Living Cells

- 2:30 pm **Peter R. Cook**, University of Oxford
Active RNA polymerases: Mobile or immobile machines?
- 2:55 pm **David Bentley**, University of Colorado School of Medicine
The role of elongation rate in coupling of transcription with mRNA processing
- 3:20 pm *TBA*
- 3:45 pm Break
- 4:15 pm Session 5: Bacterial Expression**
Chair: Johan Paulsson
- 4:15 pm **Sunney Xie**, Harvard University
System-wide imaging of proteome and transcriptome of E. coli with single-molecule sensitivity
- 4:40 pm **Ido Golding**, Baylor College of Medicine
The modulation of transcriptional time series in E. coli: Phenomenology, mechanisms and consequences
- 5:05 pm Open Discussion
- 5:30 pm Poster Reception 1
- 7:00 pm Dinner
- 8:00 pm Refreshments available at Bob's Pub

Saturday March 13

7:30 am Breakfast

9:00 am Session 6: Transcriptional Regulation
Chair: Ron Evans

9:00 am **James A. Goodrich**, University of Colorado at Boulder
Regulation of mammalian transcription by noncoding RNAs

9:25 am **James T. Kadonaga**, University of California, San Diego
Discovery and analysis of a novel ATP-dependent DNA rewinding motor

9:50 am **Michael Rosbash**, HHMI/Brandeis University
Regulation of circadian transcription

10:15 am **Ron M. Evans**, HHMI/The Salk Institute
Nuclear receptors and amPK – Resetting physiology

10:40 am Break

11:10 am Session 7: Single Cell / Single Molecule
Chair: Robert Singer

11:10 am **Alexander van Oudenaarden**, Massachusetts Institute of Technology
Single-cell transcript counting: From yeast to mammalian tissues

11:35 am **Johan Paulsson**, Harvard Medical School
Understanding non-genetic heterogeneity in cells

12:00 pm **Daniel Zenklusen**, Université de Montréal
Studying transcription kinetics in yeast – A single molecule approach

12:25 pm **Daniel R. Larson**, Albert Einstein College of Medicine
Fluctuation analysis of individual genes in living cells

12:50 pm Lunch

2:00 pm Session 8: Spatial Gene Regulation
Chair: Andrew Belmont

2:00 pm **Susan Gasser**, Friedrich Miescher Institute for Biomedical Research
Differentiation associated spatial separation of active and silent loci

2:25 pm **Christophe Zimmer**, Institut Pasteur
Mapping and modeling chromosomes in the yeast nucleus

Imaging Transcription in Living Cells

- 2:50 pm **Jie Yao**, Janelia Farm Research Campus/HHMI
Coordinate re-positioning of genes and core transcription machineries during myogenesis
- 3:15 pm **Ana Pombo**, MRC Clinical Sciences Centre
Poised transcription complexes in epigenetics and genome function
- 3:40 pm Break
- 4:10 pm** **Session 9: Technology Discussion - Caveats, Controls and new approaches**
Chair: Susan Gasser
- 4:10 pm **Angela Taddei**, Institut Curie
Operators based gene tagging systems act as protosilencers in budding yeast
- 4:35 pm **Anne E. Carpenter**, Broad Institute of Harvard and MIT
Image analysis and data mining for quantifying microscopy images
- 5:00 pm **Angus I. Lamond**, University of Dundee
New approaches for studying chromatin structure and protein dynamics
- 5:25 pm Poster Reception 2
- 7:00 pm Dinner
- 8:00 pm** **Session 10: Splicing and Transcription**
Chair: Yaron Shav-Tal
- 8:00 pm **Ute Schmidt**, Institut de Génétique moléculaire de Montpellier
Real-time imaging of co-transcription splicing reveals a check-point that regulates 3'-end formation and mRNA release
- 8:25 pm **Maria Carmo-Fonseca**, University of Lisbon Medical School
Live-cell imaging of co-transcriptional pre-mRNA splicing
- 8:50 pm Refreshments available at Bob's Pub

Sunday March 14

- 7:30 am Breakfast
- 9:00 am Session 11: Transcriptional Activation**
Chair: David Bentley
- 9:00 am **David L. Spector**, Cold Spring Harbor Laboratory
Comparative visualization of transcriptional induction in interphase and post-mitotic cells
- 9:25 am **Yaron Shav-Tal**, Bar Ilan University
Analysis of single-gene transcription reveals the kinetics of promoter control during the cell cycle
- 9:50 am **John T. Lis**, Cornell University
Tracking rapid changes in chromatin caused by transcription activation of a potentiated gene
- 10:15 am Break
- 10:45 am Session 12: Chromatin Remodeling**
Chair: David Spector
- 10:45 am **Andrew Belmont**, University of Illinois at Urbana-Champaign
Large-scale chromatin structure and dynamics of active genes
- 11:10 am **Carl Wu**, National Institutes of Health
Chromatin dynamics at promoters and centromeres of budding yeast
- 11:35 am **Peter Verrijzer**, Erasmus University Medical Center
Gene control by chromatin remodelers
- 12:00 pm Closing Remarks & Discussion (Organizers)
- 12:30 pm Lunch (To-go boxes available from servery for those on first shuttle) and Departure
- 1:00 pm First shuttle to Dulles
1:45 pm Second shuttle to Dulles
2:30 pm Last shuttle to Dulles