

# Single Cell Genomics 2014

Tue 09/09/2014

## 13:00-17:10: Gene regulation-

13:00	13:15	Opening Remarks	
13:15	14:00	Life at the Single Molecule Level: Single Cell Genomics	Sunney Xie, Harvard
14:00	14:30	Single-cell transcriptomics	Alexander van Oudenaarden, Utrecht
14:30	14:50	High throughput single cell profiling to elucidate the transcriptome's role in brain function	Neeraj Salathia, Illumina
14:50	15:20	Coffee Break	
15:20	15:50	3D structure of chromosomes and genome organization revealed by single cell Hi-C	Peter Fraser, Babraham Institute
15:50	16:10	A Reproducible Method for Single-Cell Whole-Genome Bisulphite Sequencing for Analysis of Rare Cells and DNA Methylation Heterogeneity	Gavin Kelsey, Babraham/Cambridge
16:10	16:40	Single-cell analyses of dynamic and fixed random monoallelic expression	Rickard Sandberg, KI
16:40	17:10	Coffee Break	

## 17:10-21:00: Neuroscience: deconstructing brain complexity-

17:10	17:40	Single-nucleus sequencing of human adult brain	Kun Zhang, UCSD
17:40	18:00	Cellular taxonomy of mouse cortical area V1 by single cell RNA-seq	Bosiljka Tasic, Allen Brain
18:00	18:30	Coding olfaction and single cell transcriptomics	Peter Mombaerts & Luis Saraiva, Max Planck & Sanger
18:30	19:00	Modularity of the transcriptome revealed by single-cell RNA-seq of mouse cerebral cortex	Sten Linnarsson, Karolinska
19:00	21:00	Dinner	

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## 09:00-14:00: Single-cell cancer genomics-

09:00	09:45	Cancer genomics	Michael Stratton, Sanger
09:45	10:15	Characterizing a phenotypic landscape of tumor heterogeneity	Dana Pe'er, Columbia
10:15	10:45	Single cell nucleic acid analysis: methods, algorithms and results	Michael Wigler, CSHL
10:45	11:05	Coffee Break	
11:05	11:35	Single-cell dissection of tumors	Nicholas Navin, MD Anderson
11:35	11:55	Integrated genome and transcriptome sequencing from the same cell	Siddharth Dey, Hubrecht
11:55	12:25	Is there information in single cell epigenomes?	Amos Tanay, Weizmann
12:25	14:00	Lunch	

## 14:00-19:00: Novel technology enabling the single cell revolution-

14:00	14:30	Single-cell studies with drop-based microfluidics	David Weitz, Harvard
14:30	15:00	Transcriptome sequencing of single cells in a spatial tissue context	Joakim Lundberg, SciLifeLab/KTH
15:00	15:20	Exploring the dynamics of Biology One Cell at a Time	Mark Lynch, Fluidigm

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14:00-19:00: Novel technology enabling the single cell revolution-

15:20	15:40	Coffee Break	
15:40	16:10	Single cell in situ transcriptional profiling by sequential FISH	Long Cai, Caltech
16:10	16:30	DropSeq: A Droplet-Based Technology for Single-Cell mRNA-seq Analysis on a Massive Scale	Evan Macosko, Broad
16:30	17:00	In situ sequencing for RNA expression profiling in tissue sections	Mats Nilsson, SciLifeLab/Stockholm U.
17:00	19:00	Poster Session	

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09:00-14:00: Development/stem cells-

09:00	09:45	Cell signaling at the single-cell level	Michael Elowitz , Caltech
09:45	10:15	Dissecting gene regulation network in human early embryos at single-cell and single-base resolution	Fuchou Tang, Beijing University
10:15	10:45	Developmental dynamics	Paul Robson, GSI
10:45	11:10	Coffee Break	
11:10	11:40	Single-cell analyses of preimplantation embryos	Gouping Fan, UCLA
11:40	12:10	Accounting for technical noise reveals novel structure between populations of cells	John Marioni, EBI Cambridge
12:10	12:30	Reconstructing lineage hierarchies of the distal lung epithelium using singlecell RNAseq	Barbara Treutlein, Stanford/Leipzig
12:30	14:00	Lunch	

14:00-23:00: Immunology and development-

14:00	14:30	Sequencing of DNA template strands from single cells has many applications	Peter Lansdorp, Groningen/UBC
14:30	14:50	Analysis of heterogeneity in single-cell neural progenitor populations with pathway overdispersion	Peter Kharchenko, Harvard
14:50	15:10	Genome-wide RNA tomography in the zebrafish embryo	Jan Junker, Hubrecht
15:10	15:40	Characterization of directed differentiation by high-throughput single-cell RNA-seq	Tarjei Mikkelsen, Broad
15:40	16:10	Coffee Break	
16:10	16:40	Single cell RNA and chromatin dynamics during blood formation	Ido Amit, WIS
16:40	17:10	Single-cell immunology	Christophe Benoist, Harvard
17:10	18:00	Lecture	George Church, Harvard

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14:00-23:00: Immunology and development-

19:00 23:00 Dinner