

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Single Cell Omics (E3)

May 26-30, 2017 • Clarion Hotel Sign • Stockholm, Sweden

Scientific Organizers: Sarah Teichmann, Evan W. Newell and William J. Greenleaf

Organized in collaboration with Knut and Alice Wallenberg Foundation and Science for Life Laboratory. Sponsored by Janssen R&D: Pharmaceutical Companies of Johnson & Johnson and Regeneron Pharmaceuticals, Inc.

Abstract & Scholarship Deadline: January 26, 2017 / Abstract Deadline: February 28, 2017 / Discounted Registration Deadline: March 28, 2017

FRIDAY, MAY 26

Arrival and Registration

SATURDAY, MAY 27

Welcome and Keynote Address

Alexander van Oudenaarden, Hubrecht Institute, Netherlands
Revealing New Cell Types and Interactions Using Single-Cell Omics

Single Cell DNA-Sequencing and Cancer

Anna Marciniak-Czochra, University of Heidelberg, Germany
Mathematical Modeling of Heterogeneity, Clonal Selection and Emergence of Resistance in Acute Leukemias

Michael Stratton, Wellcome Trust Sanger Institute, UK
Clonal Evolution of Cancers

Samuel Aparicio, University of British Columbia, Canada
Dissecting Tumors at the Single Cell Level

Short Talk(s) Chosen from Abstracts

Workshop 1: Making Sense of Single Cell Data (Visualization, Analysis)

Short Talks Chosen from Abstracts

High-Throughput Imaging for Single Cell Analysis

Rahul Satija, New York University, USA
Learning the 'Metadata' of a cell with Single Cell Genomics

Long Cai, California Institute of Technology, USA
Single Cell in situ Profiling by FISH SCALYS (Sequential Coding Analysis)

Xiaowei Zhuang, Harvard University, USA
High-Throughput Superresolution Imaging of Single Cells

Short Talk Chosen from Abstracts

Poster Session 1

SUNDAY, MAY 28

Single Cell Epigenomes

Edith Heard, Institut Curie, France
X Inactivation

William J. Greenleaf, Stanford University, USA
Methods for Single Cell Epigenome Analysis

Arjun Raj, University of Pennsylvania, USA
Single Cell Gene Expression

Short Talk(s) Chosen from Abstracts

Single Cell Transcriptomes

Sarah Teichmann, Wellcome Trust Sanger Institute, UK
Immune Responses Dissected One Cell at a Time

Alexandra-Chloé Villani, Broad Institute of MIT and Harvard, USA
Discovery of Human Immune Cell Populations by Single Cell Profiling

Peter Sims, Columbia University, USA
Microfluidic Techniques for Single Cell Transcriptomics

Rickard Sandberg, Karolinska Institutet, Sweden
Single-Cell Gene Expression Analyses with Allelic Resolution

Poster Session 2

MONDAY, MAY 29

Single Cell Nuclear Architecture

Bas van Steensel, Netherlands Cancer Institute, Netherlands
Nuclear Architecture in Single Cells

Ana Pombo, Max-Delbrück-Centrum für Molekulare Medizin, Germany
Genome Architecture Mapping in Single Cells

Peter Fraser, Babraham Institute, UK
Single Cell Hi-C and Whole Genome 3D Reconstruction

Speaker to be Announced

Short Talk(s) Chosen from Abstracts

Spatial Omics

Jay West, Fluidigm Corporation, USA
Talk Title to be Announced

John Marioni, European Bioinformatics Institute, EMBL-EBI, UK
Modelling Cell Fate Decisions during Early Development

Je H. Lee, Cold Spring Harbor Laboratory, USA
Heuristic In Situ Targeted Oligo-Paint Sequencing (HISTO-seq) and the Nucleolar Organization in Cancer

Short Talk Chosen from Abstracts

Poster Session 3

TUESDAY, MAY 30

Single Cell Proteomics

Evan W. Newell, Singapore Immunology Network, SigN, Singapore
Mass Cytometry to Dissect Immune Cells

Garry P. Nolan, Stanford University, USA
CyToF Approaches in Immunology

Dana Pe'er, Columbia University, USA
Machine Learning for Data Analysis and Visualization

J. Christopher Love, Koch Institute at MIT, USA
Cellular Heterogeneity and Phenotyping

Short Talk(s) Chosen from Abstracts

Workshop 2: Technology

Short Talk(s) Chosen from Abstracts

Single Cell Immunology

Kevin T. Chapman, Berkeley Lights, Inc., USA
Talk Title to be Determined

Nir Friedman, Weizmann Institute of Science, Israel
Clonal Expansion Under the Microscope: Imaging Collective T Cell Responses with Single Cell Resolution

Shalin H. Naik, Walter & Eliza Hall Institute, Australia
Clonal Multi-Omics in Hematopoiesis

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

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WEDNESDAY, MAY 31

Departure