

Minerva-Gentner Symposium 2023

Single Cell Analysis: from Development to Disease

The Steinhardt Museum of Natural History | Tel Aviv University, Tel Aviv, Israel

REGISTRATION >>

Day 1: 23/4 - Sunday

9:00 - 9:30 Gathering in the Museum, light refreshments

9:30 - 9:40 Opening remarks: **Karen Avraham**

9:40 - 10:15 Plenary talk:

Eileen Furlong, EMBL, Heidelberg: *Regulatory control in developmental networks*

10:15-11:15 **Session 1**

Development Deciphered by Single Cell Analysis

Jan Philipp Junker, Max Delbrück Center for Molecular Medicine, Berlin: *Dissecting spatiotemporal diversity of neural stem cell states in adult zebrafish brain*

Yonatan Stelzer, Weizmann Institute: *How cells form an embryo: Intracellular, temporal and phenotypic dissection of mammalian gastrulation*

Tomer Kalisky, Bar Ilan University: *Characterization of cellular heterogeneity in the developing kidney and pediatric kidney tumors*

Coffee Break 11:15 - 11:45

11:45-13:05 **Session 2**

Genomics in Single Cell Analysis and Technologies

Martin Vingron, Max Planck Institute for Molecular Genetics: *Association plots and joint clustering and embedding of genes and cells*

Micha Drukker, Helmholtz Zentrum München: *BART-seq: cost-effective massively parallel targeted sequencing for genomics and transcriptomics*

Ido Amit, Weizmann Institute: *The power of ONE: Immunology in the age of spatial and single cell genomics*

Efrat Shema, Weizmann Institute: *Decoding epigenetic heterogeneity in cancer*

Lunch 13:05 - 14:00

14:00-15:25 **Session 3**

From Populations to Cellular Dynamics

Naomi Habib, Hebrew University: *Reconstructing cellular dynamics underlying Alzheimer's disease and brain aging*

Joachim Schultze, LIMES-Institut (Life and Medical Sciences Bonn): *Application of single cell multi-omics in large clinical trials: A personal perspective*

Ron Shamir, Tel Aviv University: *Analysis of early embryonic lineages using single-cell HiC*

Gerd Meyer zu Horste, Westfälische Wilhelms-University, Münster: *Understanding human brain diseases from single cell analysis of brain borders*

Break 15:25 - 15:50

15:50-17:00 **Session 4**

Tumor Heterogeneity and the Immune System

Itay Tirosh, Weizmann Institute: *Pan-cancer analysis of intra-tumor heterogeneity*

Simon Haas, MDC Berlin: *Combined single-cell and spatially-resolved mapping of lymph node ecosystems reveals fundamental principles of lymphoma tissue organization*

Asaf Madi, Tel Aviv University: *Direct and indirect effect of immunotherapies*

Day 2: 24/4 - Monday

9:00 - 9:30 Gathering in the museum, light refreshments

9:30 - 10:05 Plenary talk

Nikolaus Rajewsky, MDC Berlin: *3D molecular reconstruction of tumors* (Introduction by Omri Wurtzel)

10:05-11:25 **Session 5**

Deciphering Transcriptional Regulation

Oren Ram, Hebrew University: *Deciphering cancer clonal heterogeneity using single-cell, full-length profiling*

Dominic Grun, Max Planck Institute of Immunology and Epigenetics, Freiburg: *Cause and consequence of gene expression variability*

Ran Elkon, Tel Aviv University: *Genetic mapping of developmental trajectories for complex traits and diseases*

Coffee Break 11:25 - 11:50

11:50-13:10 **Session 6**

Cellular Context and Environment

Daniel Lipka, DFKZ German Cancer Research Center, Heidelberg: *Single cell multi-omics profiling reveals onco-fetal reprogramming as a hallmark of high-risk of juvenile myelomonocytic leukemia*

Merav Cohen, Tel Aviv University: *Dissecting the immune controlled signaling networks of the tumor microenvironment*

Shalev Itzkovitz, Weizmann Institute: *Spatial transcriptomics of mammalian tissues*

Mor Nitzan, Hebrew University: *Manipulating layers of biological information in single-cell data*

Lunch 13:10 - 14:10

14:10-15:30 **Session 7**

Lineage and Cell Production

Amos Tanay, Weizmann Institute: *Single cell approaches to characterize ageing in human hematopoiesis*

Roi Gazit, Ben Gurion University: *Exciting hematopoietic stem cells*

Irit Gat-Viks, Tel Aviv University: *Influenza infection: Exploiting the resolution of single cells*

Ella Preger Ben-Noon, Technion: *The evolution of a complex morphology at a single-cell resolution*