

PROGRAM | THURSDAY 10 OCTOBER

08:30 - 09:00 Registration & coffee

09:00 - 09:05 Welcome

Session 1 Hall: Promotiezaal

SINGLE CELL SEQUENCING AND CELL DIVERSITY

Chair: Carlo Sala Frigerio

09:05 - 09:55 Human brain development from single-cell transcriptomes
keynote **Sten Linnarsson**, *Karolinska Institutet, SE*

09:55 - 10:30 Single-cell multi-omics of the *Drosophila* brain and retina
Stein Aerts, *VIB-KU Leuven Center for Brain & Disease Research, BE*

10:30 - 11:00 Coffee break

11:00 - 11:35 Heterogeneity of *Drosophila* Dopaminergic Neurons
Scott Waddell, *University of Oxford, UK*

11:35 - 12:10 Cell types of adult mouse cortex and hippocampus
Bosiljka Tasic, *Allen Institute for Brain Science, US*

12:10 - 12:45 Reconstructing great ape cerebral organoids development using single-cell genomics
Barbara Treutlein, *ETH Zürich, CH*

12:45 - 13:30 Lunch

13:30 - 14:30 Poster Session

Session 2 Hall: Promotiezaal

SPATIAL TRANSCRIPTOMICS

Chair: Stein Aerts

14:30 - 15:05 Spatial data driven transcriptomics analysis of brain and neurological disease
Joakim Lundeberg, *SciLifeLab, KTH Royal Institute of Technology, SE*

15:05 - 15:40 Integrative single-cell RNA and chromatin analysis of human brain
Kun Zhang, *University of California, US*

15:40 - 16:15 In situ RNA sequencing reveals RNA-protein binding with sub-cellular resolution
Je Hyuk Lee, *Cold Spring Harbor Laboratory, US*

16:15 - 16:40 A spatial atlas of inhibitory cell types in mouse hippocampus CA1
Xiaoyan Qian, *Stockholm University & Cartana, SE*

16:40 - 16:45 Sponsored talk: Quantifying Gene Expression in Space
Christian Korfhage, *Qiagen, DE*

16:45 - 17:15 Coffee break

Session 3 Hall: Promotiezaal

NEW DEVELOPMENTS IN TECHNOLOGY

Chair: Sebastian Munck

17:15 - 17:50 Comprehensive integration of single cell data
Rahul Satija, *New York Genome Center & NYU, US*

17:50 - 18:25 An integrated omics approach provides a detailed view on the molecular landscape of the brain
Jan Mulder, *Karolinska Institutet, SE*

18:25 - 19:00 Reception

19:00 - 20:00 Guided tour to the conference dinner

20:00 - 22:30 Conference dinner @ The Faculty Club

08:30 - 09:00 Coffee

Session 4 Hall: Promotiezaal

CNS DISEASE I

Chairs: Roosmarijn Vandenbroucke & Carlo Sala Frigerio

- 09:00 - 09:50** The power of ONE: Immunology in the age of single cell genomics
keynote **Ido Amit**, *Weizmann Institute of Science, IL*
- 09:50 - 10:25** Genomic mosaicism in the normal and Alzheimer's disease brain
Jerold Chun, *Sanford Burnham Prebys Medical Discovery Institute, US*
- 10:25 - 10:55** Coffee break
- 10:55 - 11:30** Single-cell transcriptomic analysis of Alzheimer's disease
Hansruedi Mathys, *Picower Institute for Learning and Memory, Massachusetts Institute of Technology, US*
- 11:30 - 12:05** Somatic mutations in synucleinopathies (Parkinson's disease and Multiple System Atrophy)
Christos Proukakis, *UCL Queen Square Institute of Neurology, University College London, UK*
- 12:05 - 12:20** *Selected Talk:* A human single cell atlas of the substantia nigra reveals novel cell specific pathways associated with the genetic risks of Parkinson's disease
Viola Volpato, *Cardiff University, UK*
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- 12:20 - 13:15** Lunch
- 13:15 - 14:15** Poster Session

Session 4 Hall: Promotiezaal

CNS DISEASE 2

Chairs: Roosmarijn Vandenbroucke & Carlo Sala Frigerio

- 14:15 - 14:50** Spatial and temporal transcriptomics reveal microglia-astroglia crosstalk in the amyloid- β plaque cell niche of Alzheimer's disease
Wei-Ting Chen, *VIB-KU Leuven Center for Brain & Disease Research, BE*
- 14:50 - 15:05** *Selected Talk:* Mass cytometry analysis of aging brain in the context of cognitive decline
Marissa Schafer, *Mayo Clinic, US*
- 15:05 - 15:35** Coffee break

Session 5 Hall: Promotiezaal

CONNECTIONS AND ACTIVITY

Chair: Aya Takeoka

- 15:35 - 16:10** The Janelia MouseLight Project: A platform for brain-wide reconstructions and molecular characterization of individual neurons in the mouse brain
Jayaram Chandrashekar, *HHMI Janelia Research Campus, US*
- 16:10 - 16:25** *Selected Talk:* Ventral tegmental area somatostatin-expressing neuron subtypes revealed by PatchSeq method
Elina Nagaeva, *University of Helsinki, FI*
- 16:25 - 17:00** Neuronal circuits of thermal perception
James Poulet, *Max Delbrück Center (MDC), Berlin, DE*
- 17:00 - 17:35** Towards a brain architecture for visual behavior selection
Gwyneth Card, *HHMI Janelia Research Campus, US*
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- 17:35 - 17:45** Poster prize ceremony and closing remarks