

# Program - Thursday September 22

09:00 - 09:25 Registration & Welcome Coffee

## S1 | The CNS one cell at a time: single cell sequencing and cell diversity

Chair: Bart De Strooper

09:25 - 09:30 Welcome  
**Matthew Holt**, VIB Center for the Biology of Disease, KU Leuven, BE

09:30 - 10:30 KEYNOTE: Molecular anatomy of the brain by large-scale single-cell RNA-seq  
**Sten Linnarsson**, Karolinska Institute, SE

10:30 - 11:00 Single Cell Analysis of Brain Somatic Mosaicism  
**Michael J. McConnell**, University of Virginia, US

11:00 - 11:30 Coffee Break

11:30 - 12:00 Dissecting heterogeneity of neuronal injury responses via Single Cell Genomics  
**Guoping Fan**, University of California US

12:00 - 12:30 Div-Seq: Single nucleus RNA-Seq reveals dynamics of rare adult newborn neurons  
**Naomi Habib**, Broad Institute, MIT, US

12:30 - 13:00 Genome-wide changes in lncRNA, alternative splicing and cortical patterning and shifts in the expression of marker genes, in autism  
**Grant Belgard**, Verge Genomics, US

13:00 - 13:15 Selected abstract: A molecular taxonomy of the mouse retina using single cell transcriptomics  
**Karthik Shekhar**, Broad Institute, US

13:15 - 13:20 Sponsored Talk: Merck - Taking Science Further, Faster  
**Irina Van der Vlies**, Scientific Liaison Specialist Merck, BE

13:20 - 15:00 Lunch & Poster Session (Odd numbers)

## S2 | Mapping diversity in the CNS: spatial transcriptomics

Chair: Thierry Voet

15:00 - 15:30 Single cell approaches to understanding human neocortical cell types and local circuit connectivity  
**Ed Lein**, Allen Institute for Brain Science, US

15:30 - 16:00 Positional information of gene expression in the brain cancer and development  
**Je Hyuk Lee**, Cold Spring Harbor Laboratory, US

16:00 - 16:30 Spatially resolved gene expression heterogeneity in tissue sections  
**Joakim Lundeberg**, SciLifeLab, SE

16:30 - 17:00 Coffee Break

16:30 - 17:00 Meet the Expert: Amita Sehgal @N31

## S3 | New developments in technology and bioinformatics

Chair: Thierry Voet

17:00 - 17:15 Selected abstract: By any other name: quantifying neuronal subtype identity through functional meta-analysis  
**Megan Crow**, Cold Spring Harbor Laboratory, US

17:15 - 17:30 Selected abstract: Gene regulatory network inference from single-cell RNA-seq reveals high-resolution cellular states  
**Sara Aibar**, KU Leuven, BE

17:30 - 18:00 Computational challenges in single-cell RNA-seq  
**John Marioni**, EMBL-EBI, UK

18:00 - 19:00 Reception in the Antichambre

20:00 - 23:00 Conference Dinner @ Faculty Club

# Program - Friday September 23

08:30 - 09:00 Welcome coffee

## S4 | CNS disease: can we explain it through sequencing? Chair: Chris Ponting

09:00 - 10:00 KEYNOTE: Somatic mutation and genomic diversity in the human cerebral cortex  
**Christopher Walsh**, Harvard Medical School, US

10:00 - 10:30 Cellular variation in brain development and disease  
**Bassem Hassan**, ICM Institute, FR & VIB Center for the Biology of Disease, KU Leuven, BE

## 10:30 - 11:00 Coffee Break

11:00 - 11:30 Understanding gene regulation via chromatin structure in developing human brain  
**Luis De La Torre-Ubieta**, University of California, School of Medicine, US

11:30 - 12:00 Genetics of Function and Dysfunction of the Brain  
**Hrein Stefánsson**, deCODE, IS

12:00 - 12:15 Selected Abstract: Defining the neurovascular niche through single cell sequencing  
**Michael Vanlandewyck**, Uppsala University / Karolinska Institute, SE

## 12:15 - 14:00 Lunch & Poster Session (Even numbers)

## S5 | CNS functionality: probing activity at the single cell level Chair: Matthew Holt

14:00 - 14:30 Genetic Dissection of Neuron and Glia Genesis using Mosaic Analysis with Double Markers (MADM)  
**Simon Hippenmeyer**, Institute of Science and Technology, AT

14:30 - 15:00 Neural Circuits for Adaptive Behaviors  
**Vanessa Ruta**, Laboratory of Neurophysiology and Behavior, The Rockefeller University, US

15:00 - 15:30 Optogenetics: Lighting Up the Brain  
**Gero Miesenböck**, University of Oxford, UK

## 15:30 - 16:00 Coffee Break

16:00 - 16:30 Circuits underlying rhythmic rest:activity behavior  
**Amita Sehgal**, University of Pennsylvania, US

16:30 - 16:45 Selected Abstract: SIFamide orchestrates multiple peptidergic signals into appetitive and feeding behavior in Drosophila  
**Thomas Riemensperger**, Department of Molecular Neurobiology of Behavior, Georg-August-Universität Göttingen, DE

16:45 - 17:15 All-optical interrogation of neural circuits  
**Michael Häusser**, University College London, UK

17:15 - 17:30 Closing Remarks  
**Jo Bury**, Managing director VIB, BE