

The background of the entire page is a complex, multi-colored molecular structure. It consists of numerous small spheres in shades of blue, green, and purple, connected by thin lines, creating a dense, three-dimensional lattice that resembles a protein or a complex molecule. The structure is set against a dark teal background.

19-23 May 2025

Genomic Mechanisms of Disease

Monday 19 May 2025

17:15 - 17:30 Transportation to Favrholt from the hotels

17:15 - 17:30 Hang up posters

17:30 - 18:45 Dinner at Favrholt Campus

18:45 - 19:00 **Official Opening by Kristine Williams**, Medical Science, Novo Nordisk Foundation, Denmark

19:00 - 20:30 SESSION 1: The AI Revolution: A New Era for Science and Innovation

Welcome by Committee Chair: Kasper Lage, Novo Nordisk Foundation Center for Genomic Mechanisms of Disease, United States

KEYNOTE SPEAKER: Daphne Koller, Insitro, United States
Machine Learning for Better Medicines

20:30 - 22:30 Drinks & Networking

20:30 - 22:30 Transportation to hotels

Tuesday 20 May 2025

09:00 - 10:30 SESSION 2: Functional Genomics and Variant-to-Function

INVITED SPEAKER: Marcelo Nobrega, University of Chicago, United States
Abstract title: TBA

INVITED SPEAKER: Gosia Trynka, Wellcome Sanger Institute, United Kingdom
Are We Oversimplifying Immune Disease Genetics? The Case for Multi-Modal Functional Readouts

SHORT TALK: Samuel Ghatan, New York Genome Center, United States
CRISPRi perturbation screens and eQTLs provide complementary and distinct insights into GWAS target genes

SHORT TALK: Tune H Pers, University of Copenhagen, Denmark
Systematic identification of novel neuronal cell type-specific leptin regulators

CHAIR: Susanne Mandrup, University of Southern Denmark, Denmark

10:30 - 11:00 Coffee break

11:00 - 12:30 SESSION 3: Gene Regulation, Chromatin Architecture & 3D Genomics

INVITED SPEAKER: Wendy Bickmore, University of Edinburgh, United Kingdom
Role of the 3D genome in enhancer-driven gene regulation

INVITED SPEAKER: Melissa Gymrek, University of California San Diego, United States
Tandem repeats make widespread and ancestry-specific contributions to complex traits

SHORT TALK: Xiangyu Liu, Harvard University, United States
Transcription elongation induces sub-genic repositioning of chromatin during hormone signaling

SHORT TALK: Adam Maynard, Broad Institute of MIT and Harvard, United States
Integration of metabolic disease genetic associations with a high-resolution 3D-chromatin reference map of differentiating human adipocytes prioritizes variants associated with dynamic chromatin looping

CHAIR: Liz Gaskell, Novo Nordisk Foundation Center for Genomic Mechanisms of Disease, United States

12:30 - 13:30 Lunch

13:30 - 14:45 SESSION 4: Genetic Insights into Complex Diseases

INVITED SPEAKER: Carl A Anderson, Wellcome Sanger Institute, United Kingdom
Abstract title: TBA

INVITED SPEAKER: Stephen Parker, University of Michigan, United States
Multi-Omic Insights into Context-Specific Regulation and Disease Mechanisms of Complex Traits

SHORT TALK: Victor Svenstrup, University of Copenhagen, Denmark
Genetic mapping of coding variants to hypothalamic cell types implicates novel candidate causal cell types in obesity

CHAIR: Ben Neale, Novo Nordisk Foundation Center for Genomic Mechanisms of Disease, United States

14:45 - 16:45 POSTER SESSION

16:45 - 18:00 SESSION 5: Evolution and Aging: The Genetic Perspective

INVITED SPEAKER: Vadim Gladyshev, Brigham and Women's Hospital and Harvard Medical School, United States
Abstract title: TBA

INVITED SPEAKER: Alexander Meissner, Max Planck Institute for Molecular Genetics, Germany
Non-canonical epigenome regulation in development and disease

SHORT TALK: Elena Torlai Triglia, Queen Mary University of London, United Kingdom
Cell type-specific distal regulation of the 9p21 locus cell cycle regulators: p14ARF, p16INK4A, p15INK4B, and CDKN2B-AS1/ANRIL

CHAIR: Brad Bernstein, Novo Nordisk Foundation Center for Genomic Mechanisms of Disease, United States

18:00 - 20:00 Dinner

20:00 - 22:00 PI Pub / Editors' Corner

22:00 - 23:00 Transportation to hotels

Wednesday 21 May 2025

09:30 - 11:00 SESSION 6: AI & Machine Learning in Genomics

INVITED SPEAKER: Caroline Uhler, Broad Institute of MIT and Harvard, United States
Multimodal Data Integration: From Biomarkers to Mechanisms

INVITED SPEAKER: Anshul Kundaje, Stanford University, United States
Deciphering regulatory syntax and genetic variation with deep learning models

SHORT TALK: Arnór Ingi Sigurðsson, University of Copenhagen, Denmark
EIR: A Deep Learning Framework for Genomic Data and More

SHORT TALK: Ulrik de Lichtenberg, Danish Centre for AI Innovation, Denmark
Gefion – Denmark's new AI Supercomputer: Perspectives for Genomics

CHAIR: Simon Rasmussen, Novo Nordisk Foundation Center for Basic Metabolic Research, Denmark

11:00 - 11:15 Break

11:15 - 12:30 SESSION 6: AI & Machine Learning in Genomics (continuation)

INVITED SPEAKER: Oliver Stegle, European Molecular Biology Laboratory, Germany
Abstract title: TBA

SHORT TALK: Gül S Demircan, University of Copenhagen, Denmark
Improving CRISPR/Cas9 Guide RNA Design Through Active Learning Techniques

SHORT TALK: Jun Wang, University of Copenhagen, Denmark
SpatialFormer: Universal Spatial Representation Learning from Subcellular Molecular to Multicellular Landscapes

CHAIR: Simon Rasmussen, Novo Nordisk Foundation Center for Basic Metabolic Research, Denmark

12:30 - 13:30 Lunch

13:30 - 15:30 POSTER SESSION

15:30 - 16:30	Free time and activities at Favrholtm Campus
16:30 - 16:50	Transportation to social outing
16:50 - 17:00	Group Picture
17:00 - 22:00	Social Outing & Dinner
22:00 - 22:30	Transportation to hotels

Thursday 22 May 2025

09:00 - 10:30	SESSION 7: Translating Genetic Findings into Medicines
	INVITED SPEAKER: Claudia Langenberg , Precision Healthcare University Research Institute, United Kingdom <i>Insights into diverse human diseases – from populations to cells</i>
	INVITED SPEAKER: Eimear Kenny , Icahn School of Medicine at Mount Sinai, United States <i>Population Genetics in an Era of Genomic Health</i>
	SHORT TALK: Greta Pintacuda , Broad Institute of MIT and Harvard, United States <i>An Integrative Neuronal Protein Network Model Unifying Genetic, Transcriptional, and Proteomic Perturbations in the Developing and Adult brain</i>
	SHORT TALK: Ayshwarya Subraman , Cornell University, United States <i>GWAS risk allele and immune checkpoint molecule Tim-3 regulates microglia and Alzheimer's disease</i>
	CHAIR: Ruth Loos , Novo Nordisk Foundation Center for Basic Metabolic Research, Denmark
10:30 - 11:00	Coffee break
11:00 - 12:00	SESSION 7: Translating Genetic Findings into Medicines (Continuation)
	INVITED SPEAKER: Seamus Harrison , Genomics Ltd, United Kingdom <i>Abstract Title: TBA</i>
	SHORT TALK: Anne Loft , University of Southern Denmark, Denmark <i>Single cell-resolved transcriptional dynamics of human subcutaneous adipose tissue during lifestyle- and bariatric surgery-induced weight loss</i>
	CHAIR: Ruth Loos , Novo Nordisk Foundation Center for Genomic Mechanisms of Disease, Denmark
12:00 - 13:00	Lunch
13:00 - 15:00	SESSION 8: Conference Retrospective facilitated through LEGO® Serious Play®, Camilla Norgaard Jensen , Pioneer Centre for AI & DTU Skylab, Denmark
	CHAIRS: Annika Weimer and Liz Gaskell , Novo Nordisk Foundation Center for Genomic Mechanisms of Disease, United States
15:00 - 15:30	Coffee break
15:30 - 17:00	SESSION 9: Computational & Single-Cell Genomics
	KEYNOTE SPEAKER: Jonathan Pritchard , Stanford University, United States <i>Causal modeling of gene effects in complex traits: From regulators to programs to traits</i>
	Closing Remarks by the Scientific Committee
	CHAIR: Annika Weimer , Novo Nordisk Foundation Center for Genomic Mechanisms of Disease, United States
17:15 - 19:15	Transportation to and from hotels
19:15 - 19:45	Welcome drinks and canapés at Favrholtm Campus
20:00 - 02:00	Dinner & Party
23:00 - 02:00	Transportation to hotels

Friday 23 May 2025

09:00	Check-out from hotels
09:10	Bus departure from hotels