



The 22nd
Gene Forum

24–25 August 2023, Tartu, Estonia

Programme

Thursday, August 24th, 2023

8:30–9:00 Registration

9:00–9:15 OPENING OF THE CONFERENCE

Welcome by **Toomas Asser**, Rector, University of Tartu, Estonia

9:15–10:00 KEYNOTE Virginijus Šikšnys

Distinguished professor at Vilnius University, chief scientist/head of the department at the Institute of Biotechnology of Vilnius University and a chairman of the board of Life Science Center.

New tools for genome editing: from CRISPR-Cas to transposon-associated proteins.

Coffee break 10:00–10:30

SESSION I GENOMICS OF MONOGENIC DISORDERS

Moderator Sander Pajusalu

10:30–11:00 Monkol Lek

Assistant professor, Department of Genetics, Yale School of Medicine, USA

High throughput functional assays to improve interpretation of rare variants discovered in neuromuscular disease genes.

11:00–11:30 Angela Lek

VP of research, Muscular Dystrophy Association, USA

Promises and challenges of translating genetic therapies for neuromuscular disorders.

11:30–12:00 Bjarne Udd

Professor, Tampere Neuromuscular Center and Folkhälsan Research Center Helsinki, Finland

Multisystem proteinopathies MSPs – neurodegeneration, +/- muscle, +/- bone.

Lunch break 12:00–13:30

SESSION II PHARMACOGENOMICS

Moderator Lili Milani

13:30–14:00 Mikko Niemi

Professor, MD, Department of Clinical Pharmacology, University of Helsinki, Finland

Pharmacogenetics of lipid-lowering therapy.

14:00–14:30 Espen Molden

Adjunct Professor, Department of Pharmacy, University of Oslo, Norway

The power of therapeutic drug monitoring data in pharmacogenomic studies.

14:30–15:00 Jesse J. Swen

Professor, PharmD PhD, Netherlands

Implementing Pharmacogenomic panel testing in Europe: Results from the U-PGx PREPARE study.

Coffee break 15:00–15:30

SESSION III PERSONALIZED MEDICINE

Moderator Pärt Peterson

15:30–16:00 Andrea Ganna

FIMM-EMBL group leader, Institute for Molecular Medicine, University of Helsinki, Finland

Can genetic associations for disease onset be used to predict disease prognosis?

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- 16:00–16:30** **Kadi Lõhmussaar**
Postdoctoral fellow at Prof. Kim Jensen lab, The Novo Nordisk Foundation Center for Stem Cell Medicine (reNEW), Copenhagen, Denmark
Adult stem cell-derived 3D organoids in modelling tissues in health and disease.
- 16:30–16:50** **Tiffany Morris**
Staff Market Development Manager, Illumina, United Kingdom
Latest Advancements for Illumina WGS.
- 16:50–19:00** **Poster session and opportunity to visit the Estonian National Museum exhibition** (Tickets available on site and on participant's own responsibility)
- 19:00** **Gala dinner at Estonian National Museum**

Friday, August 25th, 2023

8:30–9:00 **Registration**

SESSION IV **MICROBIOME**
Moderator Elin Org

9:00–9:30 **Karsten Kristiansen**
Professor, Laboratory of Genomics and Molecular Biomedicine, Department of Biology, University of Copenhagen, Denmark, BGI-Research, Shenzhen, China, and Institute of Metagenomics, Qingdao-Europe Advanced Institute for Life Sciences, Qingdao, China
The microbiota - Everything Everywhere All at Once.

9:30–10:00 **Susanne Brix Pedersen**
Professor, Department of Biotechnology and Biomedicine, Technical University of Denmark, Denmark
Early life host-microbiota interactions and later disease development.

10:00–10:30 **Anne Salonen**
Group leader, Human Microbiome Research Program, University of Helsinki, Finland
Mother-infant microbiome interface in early development and reproduction.
Coffee break 10:30–11:00

SESSION V **SINGLE CELL OMICS**
Moderator Kaur Alasoo

11:00–11:30 **Rickard Sandberg**
Professor, Department of Cell and Molecular Biology, Karolinska Institutet, Sweden
Novel strategies to study transcriptional dynamics and alternative splicing in single cells.

11:30–12:00 **Monique van der Wijst**
Assistant professor, University Medical Center Groningen, University of Groningen, Department of Genetics, Groningen, the Netherlands
Single-cell consortium for federated PBMC data pipeline for cell-type-specific eQTL mapping and downstream analyses.

12:00–12:30 **Emma Davenport**
Group leader, Wellcome Sanger Institute, United Kingdom
Using functional genomics to understand disease heterogeneity.
Lunch Break 12:30–14:00

SESSION VI MENTAL HEALTH
Moderator Kelli Lehto

14:00-14:30 Eivind Yström
Professor, University of Oslo, Norway

Genes as environments – intergenerational transmission of mental health in the Norwegian Mother, Father and Child Cohort study.

14:30-15:00 Alfonso Buil Demur
Research leader, Institute of Biological Psychiatry, Mental Health Services, Copenhagen University Hospital. Associate professor, Lundbeck Foundation Center for GeoGenetics, GLOBE Institute, University of Copenhagen, Denmark

Leveraging national registers to study psychiatric genetics in Denmark.

15:00-15:30 Sara Hägg
Associate Professor, Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Sweden

Human genetic studies of aging and their implications for precision health.

Coffee break 15:30-16:00

SESSION VII POPULATION GENETICS
Moderator Mait Metspalu

16:00-16:30 Karoline Kuchenbäcker
Professor, Division of Psychiatry, University College London; UCL Genetics Institute, Genes Evolution and Environment, University College London; Genomics England, United Kingdom

Genomic medicine for ancestrally diverse populations.

16:30-17:00 Ida Moltke
Associate professor, University of Copenhagen, Denmark

An example of how valuable disease studies in historically small and isolated populations can be.

17:00-17:15 Closing remarks

Organised by:



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Institute of Genomics



Eesti Geenikeskus
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Center of Genomics, Evolution & Medicine

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