



GENETICS RETREAT

ANNUAL MEETING #31
TOLHUISTUIN
AMSTERDAM



Programme
Genetics Retreat



Maastricht UMC+

10.00 - 10.30 Registration & welcome coffee with sweets

ROOM ZONZIJ

10.30 - 10.45 Opening

10.45 - 11.45 Joep Geraedts lecture: DNA damage and Aging: from Insight to Intervention
Prof. dr. Jan Hoeijmakers (Rotterdam)

11.45 - 12.00 Discussion and closure session

12.00 - 13.00 Lunch

ROOM ZONZIJ

Innovations in Genomics

13.00 - 13.15 Integrating multigenerational sequencing data to enhance de novo variant detection
Laurens Hannes (Leuven)

13.15 - 13.30 Comprehensive investigation of complex chromosomal rearrangements with innovative long-read genomic technologies
Bruna Burssed (Nijmegen)

13.30 - 13.45 Identification of a retrotransposon insertion in two half-siblings with Treacher Collins syndrome by long-read whole genome sequencing
Federico Ferraro (Rotterdam)

13.45 - 14.00 Linking non-coding variation to gene expression in personal genomes through haplotyping, genomics, and deep learning
Mikhail Magnitov (Amsterdam)

14.00 - 14.15 Single-cell multi-omics to study genome plasticity in synthetic models of early development
Darina Obukhova (Maastricht)

14.15 - 14.45 Coffee break + fruit

ROOM ZONZIJ

Omics and bioinformatics

14.45 - 15.00 Generative Artificial Intelligence Substantially Enhances the Accuracy of Embryo Selection Models
Ping Cao (Maastricht)

15.00 - 15.15 Cell-free DNA methylation analysis reveals tissue of origin dynamics in health
Mio Aerden (Leuven)

15.15 - 15.30 Combining long-read and single cell approaches to study DNA methylation signatures in human disease
Maja Vukic (Leiden)

15.30 - 15.45 Systematic analysis of genetic and phenotypic characteristics reveals antisense oligonucleotide therapy potential for one-third of neurodevelopmental disorders
Kim Wijnant (Nijmegen)

15.45 - 16.00 Spatio-temporal organization of single cells in the development of endometriosis
Alvin Meltsov (Maastricht)

16.00 - 16.30 Coffee break + snacks

ROOM ZONZIJ

Disease Models and Therapy

16.30 - 16.45 From genotypes to biochemistry: how PREPL combines catalytic and non-catalytic functions to rescue Prader-Willi syndrome phenotypes in vitro
Yenthe Monnens (Leuven)

16.45 - 17.00 A systematic review on the use of isogenic controls for cardiomyopathy research: recommendations for future clinical trials on the way to gene therapy
Nina van der Wilt (Utrecht)

17.00 - 17.15 Generation of iPSC derived blood vessel organoids as a model for retinal hemangioblastomas
Kiki Bals (Rotterdam)

17.15 - 17.30 Dissecting the ovarian pathology in Classic Galactosemia: a transcriptomics study in galt knockout zebrafish
Naomi Vos (Maastricht)

17.30 - 17.45 Wrapping up

FOYER OR GARDEN

18.00 - 19.00 Drinks & bites and award ceremony