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Epigenomics of Common Diseases

17-19 November 2021

Virtual Conference Agenda

Start (GMT)	Finish (GMT)	Presenter details

Wednesday, 17 November 2021

13:00	**13:10**	**Welcome**
		Scientific Programme Committee: *Daniele Fallin, Johns Hopkins University, USA* *Bas Heijmans, Leiden University Medical Center, The Netherlands* *Nada Jabado, McGill University, Canada* *Jonathan Mill, University of Exeter, UK*
13:10	**13:55**	**Keynote 1**
		Introduction to the session *Chair: Bas Heijmans, Leiden University Medical Center, The Netherlands*
13:10	13:40	Replication of the Epigenome *David Gilbert, San Diego Biomedical Institute, USA*
13:40	13:55	Q&A *Chair: Bas Heijmans, Leiden University Medical Center, The Netherlands* *Moderator: Jonathan Mill, University of Exeter, UK*
13:55	14:15	Networking / Break
14:15	**15:45**	**Session 1: Population Epigenetics**
		Introduction to the session *Chair: Daniele Fallin, Johns Hopkins University, USA*
14:15	14:35	Genetics of DNA methylation: Insights from GoDMC *Caroline Relton, University of Bristol, UK*
14:35	14:55	Identical twins carry a persistent epigenetic signature of early genome programming *Jenny van Dongen, Vrije Universiteit Amsterdam, Netherlands*
14:55	15:05	Selection Inference on Epialleles: Implications for the evolution of promoter DNA methylation in the male germline and CpG dinucleotides *Leandros Boukas, Johns Hopkins University, USA*
15:05	15:15	Exploring the Mediation of Maternal Substance Use and Neurodevelopmental Outcomes in Toddlers by DNA Methylation: A Methylation Risk Score Approach *Sarina Abrishamcar, Emory University Rollins School of Public Health, USA*
15:15	15:45	Q&A *Chair: Daniele Fallin, Johns Hopkins University, USA* *Moderator: Bas Heijmans, Leiden University Medical Center, The Netherlands*
15:45	16:05	Networking / Break

16:05	17:35	**Session 2: Technologies**
		Introduction to the session *Chair: Jonathan Mill, University of Exeter, UK*
16:05	16:25	Single-cell Epigenomics of Oligodendroglia during Neural Development and in Multiple Sclerosis *Goncalo Castelo-Branco, Karoliska Institutet, Sweden*
16:25	16:45	Exploring the genome and epigenome with long-read sequencing *Winston Timp, Johns Hopikins University, USA*
16:45	16:55	Quantifying DNA Modification Kinetics in Dividing Cells with EDIMS *Kathleen Stewart-Morgan, Novo Nordisk Foundation Centre for Protein Research (CPR), Denmark*
16:55	17:05	Neuronal Nsun2 deficiency causes epitranscriptomic dysregulation of Gly-tRNAs and proteomic shifts impacting synaptic function and behavior *Jennifer Blaze, Icahn School of Medicine at Mt. Sinai, USA*
17:05	17:35	Q&A *Chair: Jonathan Mill, University of Exeter, UK* *Moderator: Nada Jabado, McGill University, Canada*
17:35	18:05	Networking

Thursday, 18 November2021

13:00	14:30	**Session 3: New Frontiers**
		Introduction to the session *Chair: Bas Heijmans, Leiden University Medical Center, The Netherlands*
13:00	13:20	Genome-wide Programmable Transcriptional Memory by CRISPR-based Epigenome Editing *Jonathan Weissman, Massachusetts Institute of Technology, USA*
13:20	13:40	Genetic and functional fine-mapping of immune disease associations *Nicole Soranzo, Wellcome Sanger Institute, UK*
13:40	13:50	DNA methylation scores augment 10-year risk prediction of diabetes *Yipeng Cheng, Institute of Genetics and Cancer, UK*
13:50	14:00	The Epiallelic Nature of the Mouse Ribosomal DNA *Francisco Rodriguez-Algarra, Queen Mary University of London, UK*
14:00	14:30	Q&A *Chair: Bas Heijmans, Leiden University Medical Center, The Netherlands* *Moderator: Nada Jabado, McGill University, Canada*
14:30	14:50	Networking / Break

14:50	**15:40**	**Poster Session I**
14:50	15:10	Poster session I lightning talks
15:10	15:40	Poster session I
15:40	**17:10**	**Session 4: Multi-omics**
		Introduction to the session *Chair: Jonathan Mill, University of Exeter, UK*
15:40	16:00	PsychENCODE and integrative genomics *Mike Gandall, University of California Los Angles, USA*
16:00	16:20	Dissecting the impact of histone H3.3 oncomutations on genome maintenance *Sophie Polo, University of Paris, France*
16:20	16:30	Chromatin and gene-regulatory dynamics of the developing human cerebral cortex at single-cell resolution *Fabian Mueller, Saarland University, Germany*
16:30	16:40	Integrated single-cell genomics to predict cellular etiology of autoimmune risk loci *Hamish King, Queen Mary University of London, UK*
16:40	17:10	Q&A *Chair: Jonathan Mill, University of Exeter, UK* *Moderator: Daniele Fallin, Johns Hopkins University, USA*
17:10	17:40	Networking

Friday, 19 November 2021

13:00	**14:50**	**Session 5: Chromatin, Ageing and Disease**
		Introduction to the session *Chair: Nada Jabado, McGill University, Canada*
13:00	13:20	Clinical epigenomics: DNA methylation episignatures in Mendelian disorders – from concepts to clinical care *Berkim Sadikovic, University of Western Ontario, Canada*
13:20	13:40	Tau Epigenomic Score: properties of the summary score for the impact of tau proteinopathy on chromatin conformation at the tissue and single cell level *Philip De Jager, Columbia University Medical Center, USA*
13:40	14:00	Mechanisms of microglia specification and its implication for age-associated neurodegeneration *Anne Schaefer, Mount Sinai School of Medicine, USA*
14:00	14:10	DNA methylation is required to maintain both DNA replication timing precision and 3D genome organisation integrity *Qian Du, Garvan Institute of Medical Research, Australia*
14:10	14:20	Widespread cortical DNA methylation differences associated with Alzheimer's disease neuropathology are primary manifest in non-neuronal cell-types *Gemma Shireby, University of Exeter, UK*
14:20	14:50	Q&A *Chair: Nada Jabado, McGill University, Canada* *Moderator: Daniele Fallin, Johns Hopkins University, USA*
14:50	15:10	Networking / Break
15:10	**16:00**	**Poster session II**
15:10	15:30	Poster session II lightning talks
15:30	16:00	Poster session II
16:00	**17:00**	**Keynote 2**
		Introduction to the session *Chair: Nada Jabado, McGill University, Canada*
16:00	16:30	Specialization of brain cell types is encoded by specific 3D genome architectures *Ana Pombo, Berlin Institute for Medical Systems Biology, Germany*
16:30	17:00	Q&A *Chair: Nada Jabado, McGill University, Canada* *Moderator: Bas Heijmans, Leiden University Medical Center, The Netherlands*
17:00	**17:10**	**Closing remarks**

Scientific Programme Committee:

Daniele Fallin, Johns Hopkins University, USA

Bas Heijmans, Leiden University Medical Center, The Netherlands

Nada Jabado, McGill University, Canada

Jonathan Mill, University of Exeter, UK