wellcome connecting science

Biology at Scale: From Variants to Cellular Programs and Functions
29 June - 1 July 2026

Hybrid Conference Programme

Start (BST)	Finish (BST)	Presenter details
Monday 29 June 2026		
12:00	**13:00**	**Registration, lunch and networking**
12:45	13:00	*Briefing for KNS, Session 1 speakers, microphone runners, chair, moderator & committee - Auditorium*
13:00	**13:10**	**Welcome and introductions**
		Wellcome Connecting Science: *Nagehan Ramazanoglu Bahadir, Wellcome Connecting Science, UK* ***Scientific programme committee:*** *Melina Claussnitzer, Broad Institute, USA* *Craig Glastonbury, Human Technopole, Italy* *Jonathan Pritchard, Stanford University, USA* *Gosia Trynka, Wellcome Sanger Institute/Open Targets, UK*
13:10	**14:00**	**Keynote**
		Chair: Gosia Trynka, Wellcome Sanger Institute/Open Targets, UK *Moderator: Eva Holtkamp, Helmholtz Munich, Germany*
13:10	14:00	Trait Causal Models: Harnessing GWAS and perturbations to understand human biology *Jonathan Pritchard, Stanford University, USA*
14:00	14:05	Comfort break
14:05	**15:35**	**Session 1: Scalable genomic perturbations**
		Chair: Melina Claussnitzer, Broad Institute, USA *Moderator: Eva Holtkamp, Helmholtz Munich, Germany*
14:05	14:35	A CRISPR way to understand neurodegenerative disease *Andrew Bassett, Wellcome Sanger Institute, UK*
14:35	15:05	Functional variation in the human genome: Lessons from population genomics and experimental perturbations *Tuuli Lappalainen, New York Genome Center, USA*
15:05	15:20	Saturation mutagenesis of 37 human splicing factor genes using pooled prime editing *Michael Herger, Francis Crick Institute, UK*
15:20	15:35	Using synthetic lineages to understand gene expression rules *Connor Rogerson, Wellcome Sanger Institute, UK*
15:35	16:15	Refreshment break and networking
16:05	16:15	Briefing for session 2 speakers, chair & moderator - Auditorium
16:15	**17:45**	**Session 2: Imaging technologies for cell profiling**
		Chair: Bart Deplancke, École Polytechnique Fédérale de Lausanne, Switzerland *Moderator: Jeffrey Pullin, MRC Biostatistics Unit, UK*
16:15	16:45	Optical Pooled Screens for Neurodegenerative Diseases: High-Content Functional Genomics beyond the Genome-Wide Scale *Owen Andrews, Broad Institute, USA*
16:45	17:15	Overcoming confounders in organoid CRISPR screens *Silvia Domcke, University of Zurich, Switzerland*
17:15	17:30	Phenotyping beyond gene expression with TGlow: a scalable imaging framework that captures non-transcriptomic hallmarks of human T cell activation *Julie Matte, Wellcome Sanger Institute, UK*
17:30	17:45	Characterizing the genetic regulation of cellular phenotypes in primary stem cell-derived adipocytes using single-cell high-content imaging *Henry Taylor, Broad Institute, USA*
17:45	**18:15**	**Poster pitch talks for odd number posters**
18:15	**19:15**	**Poster session 1 - odd number posters**
19:15		Bar open (card payments only)
19:15	21:00	Dinner

Tuesday 30 June 2026

09:15	*09:30*	*Briefing for Session 3 speakers, chair & moderator - Auditorium*
09:30	**11:00**	**Session 3: Linking polygenic signals to gene programs**
		Chair: Gosia Trynka, Wellcome Sanger Institute/Open Targets, UK *Moderator: Jeffrey Pullin, MRC Biostatistics Unit, UK*
09:30	10:00	UTTOPIA: A universal translator of transcriptomes to protein interactomes for molecularly realistic virtual cell models *Stephen Michnick, Université de Montréal, Canada*
10:00	10:30	Insights from process specific polygenic scores in diabetes *Miriam Udler, Harvard Medical School, USA*
10:30	10:45	Genome-scale perturb-seq in primary human CD4+ T cells maps context-specific regulators of human immune traits *Emma Dann, Stanford University & Gladstone Institutes, USA*
10:45	11:00	Integration of GWAS, 3D genomics, and CRISPRi screens in microglia implicates causal variants and genes at Alzheimer's disease loci, including an enhancer variant regulating TSPAN14 expression *Shannon Laub, University Of Pennsylvania, USA*
11:00	11:45	Refreshment break and networking
11:30	*11:45*	*Briefing for session 4 speakers, chair & moderator - Auditorium*
11:45	**13:15**	**Session 4: From genetic and induced perturbation to phenotype through imaging**
		Chair: Jonathan Pritchard, Stanford University, USA *Moderator: Marina Simunovic, European Molecular Biology Laboratory, Germany*
11:45	12:15	From Polygenic Risk to Cellular Programs: Imaging-Based Mapping of Actionable Cardiometabolic Biology *Melina Claussnitzer, Broad Institute, USA*
12:15	12:45	Image-based profiling to investigate how environmental contaminants impact cell function *Jessica Ewald, EMBL/EBI, UK*
12:45	13:00	Genome-scale profiling of genetic determinants of micronucleus formation in human cells using optical pooled screening *Louise Morlot, Danish Cancer Institute, Denmark*
13:00	13:15	Dissecting the heterogeneity of secondary senescence using paired single-cell transcriptomics and high-resolution imaging *Augoustina Maria Economou, Ecole Polytechnique Fédérale de Lausanne, Switzerland*
13:15	14:30	Lunch and networking
14:15	*14:30*	*Briefing for Session 5 speakers, chair & moderator - Auditorium*
14:30	**16:00**	**Session 5: Generating high-resolution trait descriptors**
		Chair: Miriam Udler, Harvard Medical School, USA *Moderator: Marina Simunovic, European Molecular Biology Laboratory, Germany*
14:30	15:00	A picture's worth a thousand data points: leveraging biomedical imaging to dissect the impact of genetic variation on human biology *Hannah Currant, University of Oxford, UK*
15:00	15:30	Mapping and modeling genetic variants one cell at a time *Sarah Teichmann, Cambridge Stem Cell Institute, University of Cambridge, UK*
15:30	15:45	Spatial molecular profiling and tissue architecture define subtype, outcome and genetic specificity in inflammatory bowel disease *Francesco Cisternino, Human Technopole, Italy*
15:45	16:00	Endophenotype-aware colocalisation prioritises shared effector genes in fibrosis *Elena Bernabeu, Genomics England, United Kingdom*
16:00	16:45	Refreshment break and networking
16:45	**17:15**	**Poster pitch talks for even number posters**
17:15	**18:15**	**Poster session 2 - even number posters**
18:15		Bar open (card payments only)
18:15	20:15	Dinner

Wednesday 1 July 2026

09:15	*09:30*	*Briefing for Session 6 speakers, chair & moderator - Auditorium*
09:30	**11:00**	**Session 6: Charting cellular function at high-throughput** *Chair: Jessica Ewald, EMBL/EBI, UK* *Moderator: Haerin Jang, Wellcome Sanger Institute, UK*
09:30	10:00	Perturbing cellular pathways with pathogenic effectors *Mikko Taipale, University of Toronto, Canada*
10:00	10:30	Bridging Cellular Morphology and Molecular State through Single-Cell Phenomics *Bart Deplancke, École Polytechnique Fédérale de Lausanne, Switzerland*
10:30	10:45	A genetic interaction map for a human cell line *Maximilian Billmann, University of Bonn, Germany*
10:45	11:00	Decoding the genetic interaction network of a multi-functional regulator through kinetics perturbations *Judith Notbohm, University Of Zurich, Switzerland*
11:00	11:30	Refreshment break and networking
11:15	*11:30*	*Briefing for Session 7 speakers, chair & moderator - Auditorium*
11:30	**13:00**	**Session 7: Computational methods for multimodal data integration** *Chair: Craig Glastonbury, Human Technopole, Italy* *Moderator: Haerin Jang, Wellcome Sanger Institute, UK*
11:30	12:00	Multimodal pooled genetic screens integrating transcriptomics and image-based phenotypes *Romain Lopez, New York University, USA*
12:00	12:30	Multimodal integration across scales: from biomarkers to function *Xinyi Zhang, AITHYRA Research Institute for Biomedical Artificial Intelligence, Austria*
12:30	12:45	Stage-resolved multi-omic annotations from human prefrontal cortex refine psychiatric diseases heritability estimation and polygenic prediction. *Ang Li, University of Oxford, UK*
12:45	13:00	Integrating GWAS heritability and genome-scale CRISPR screens to map condition-specific T cell regulatory programs in immune-mediated diseases *Boris Vasilev, University Of Cambridge, UK*
13:00	**13:10**	**Closing Remarks** ***Scientific Programme Committee:*** *Melina Claussnitzer, Broad Institute, USA* *Craig Glastonbury, Human Technopole, Italy* *Jonathan Pritchard, Stanford University, USA* *Gosia Trynka, Wellcome Sanger Institute/Open Targets, UK*
13:10	14:00	Lunch and departures
14:00		Coach departures for Stansted and Heathrow airports
14:10		Coach departures for Cambridge train station and city centre