

Genome Science UK

Newcastle, 9th - 11th July 2025



Programme

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Wednesday 9th July 2025

Time	Title	Presenter
13:00–13:30	Registration, Lunch & Networking	
13:30–14:30	Keynotes	Chair: Nick Loman (University of Birmingham)
13:30	Francis Crick, the father of genomics and phylogenetics	Matthew Cobb (University of Manchester)
14:00	Rapid intraoperative diagnostics of CSF tumours	Matt Loose (University of Nottingham)
14:30–16:00	Evolving Technologies 1	Chair: Michael Quail (Wellcome Sanger Institute)
14:30	Driving the multiomics revolution: The latest innovations from Illumina	Oliver Miller (Illumina)
14:50	High-Dimensional Biology: Advancing Single-Cell and Spatial Multiomics with AVITI24TM	Rachel Piddock (Element Biosciences)
15:10	From big dreams to real possibilities...	Dan Fordham (Oxford Nanopore Technologies)
15:30	Innovation across the technology spectrum	Neil Ward (PacBio)
16:00–16:30	Coffee Break	
16:30–17:50	Evolving Technologies 2	Chair: Michael Quail (Wellcome Sanger Institute)
16:30	Access the Full Richness of Biological Complexity with New Single Cell and Spatial tools from 10X Genomics	Nicola Cahill (10X Genomics)
16:50	Low cost, high accuracy sequencing from Ultima Genomics	Alex Watkins (Ultima)

Time	Title	Presenter
17:10	Next Evolution in Sequencing: Volumetric DNA Sequencing in Solution and Cells	Johan Stroemqvist (Single Technologies)
17:30	Sequencing by Expansion (SBX), a versatile, high-throughput single-molecule sequencing technology for a variety of applications	Bernd Timmermann (Roche)
18:00-19:30	Drinks Reception and Posters	

Thursday 10th July 2025

Start (GMT)	Finish (GMT)	Presenter	Presentation Details
08:15	09:15		Genomics Community UK Networking Breakfast
08:30	09:20	-	Coffee and Pastries

Parallel Session A - G.56

Time	Title	Presenter
09:20-11:00	Plant and Animal Genomics	Chair: Al Darby (University of Liverpool)
09:20	Decoding multiple layers of Genomics using Twist Bioscience	Sponsor Talk (Twist)
09:30	Wheat Pan Genomics	Antony Hall (Earlham Institute)
09:55	Fly genomes and transposable element invasions	Andrea Betancourt (University of Liverpool)
10:20	Artificial Lighting Induces Gene Expression Responses Linked to Oxidative Stress in Bats	Tom Jenkins (University of Exeter)
10:35	Performance assessment of a rapid library preparation kit for short-read RNA sequencing	Thomas Brabbs (Earlham Institute)
10:50	Exploring the power of 10X spatial applications: A focus on Visium HD and Xenium In situ tools in plant and animal studies	Sponsor Talk (10x Genomics)
11:00-11:30	Coffee Break	
11:30-13:00	Spatial Genomics	Chair: Iain Macaulay (Earlham Institute)
11:30	Enabling Spatial Omics at true single-cell resolution	Sponsor Talk - Matthieu Pesant (Takara Bio Europe)
11:40	Spatial transcriptomics of developing flowers across time	Christobal Uauy (John Innes Centre)
12:05	A Longer Look: Benchmarking Long-Read Sequencing for Single-cell Tanscriptomics	Anita Scoones (Earlham Institute)
12:30	Spatiotemporal and Single-cell Sequencing of chicken trachea reveals differences in host Responses after Vaccination with Pathogenic and Attenuated Infectious Bronchitis Virus (IBV)	Graham Freimanis (The Pirbright Institute)
12:45	Introducing Illumina Spatial Technology	Sponsor Talk - Illumina (Andrew Slatter)

13:00–14:00	Photo, Lunch and Poster Session II	
14:00–15:30	Epigenetics/Human & Clinical Genomics	Chair: Ania Piskorz (CRUK Cambridge)
14:00	“NGS: What are you missing?”	Sponsor Talk - Miles Collier (Dovetail)
14:10	Towards multi-modal liquid biopsies	Florent Mouliere (The University of Manchester)
14:35	Barcoded ultra-long read sequencing for genetic exploration of cancer samples	Joe Fenwick (Newcastle University)
14:50	Understanding gene expression involved in immune response to SARS-CoV-2 Infection	Lee Murphy (The University of Edinburgh)
15:05		Sponsor Talk - Riki Aydeniz (PacBio)
15:20–16:00	Coffee Break	
16:00–17:30	Computational Biology	Chair: Sion Bayliss (University of Bristol)
16:00	Using rearrangement distances and historical samples to study plasmid evolution and epidemiology	Zamin Iqbal (University of Bath)
16:25	Machine Learning and AI approaches for understanding Prokaryotic Pangenomes	James McInerney (University of Liverpool)
16:50	Accurate bioinformatic host pangenome depletion using fast minimizer search	Bede Constantinides (University of Birmingham)
17:05	Ultra-long Sequencing Reveals Structural Heterogeneity of Common Dicentric Chromosomes in Childhood Cancer	Eleanor Woodward (Newcastle University)
17:20	Technology Platforms at the Earlham Institute: Research, Collaboration and Service	Sponsor Talk - Alex McNeil (Earlham Institute)

Parallel Session B - G.06

Time	Title	Presenter
09:20–10:50	Evolutionary Genomics	Chair: Matt Loose (University of Nottingham)
09:20	The Future of Exponentially Scalable Single Cell-omics	Sponsor Talk - ParseBio (Ryan Wall)
09:30	Cycles of centromere evolution	Ian Henderson (University of Cambridge)
09:55	Hanging on the Tree of Life: Sequencing All Life and the Genomic Impact of Jumping Elements in Sloths.	Marcela Uliano-Silva (Wellcome Sanger Institute)
10:20	High-Resolution Mapping of Bacterial Evolution Under Antibiotic Stress Using Single-Cell Whole-Genome Sequencing	Matt Bawn (Newcastle University)
10:35	Testing the regulatory effects of indels and structural variants using massively parallel reporter assays	Lindsey Plenderleith (The University of Edinburgh)
11:00–11:30	Coffee Break	

11:30–13:00	Microbial Genomics	Chair: Lauren Cowley (University of Bath)
11:30	Accurate detection of small non-coding RNAs using NEBNext Low-bias Small RNA Library Prep Kit	Sponsor Talk - New England BioLabs
11:40	Spatially-resolved host-pathogen interactions across the lung	Josie Bryant (Wellcome Sanger Institute)
12:05	Pathogen Genomics in Maternal and Neonatal Health: Informing Targeted Interventions for Better Outcomes	Elita Jauneikaite - (Imperial College London)
12:30	Genomic epidemiology of plasmids carrying the iuc5 locus and antimicrobial resistance genes in Escherichia coli and Klebsiella pneumoniae from One Health settings	Keira Cozens (University of Bath)
12:45	PyamilySeq: Transparent and interpretable gene (re)clustering and pangenomic inference highlights the fragility of conventional methods.	Nicholas Dimonaco (Queen’s University Belfast)
13:00–14:00	Photo, Lunch and Poster Session II	
14:00–15:30	Microbial Communities & Microbiome	Chair: Nick Loman (University of Birmingham)
14:00	Empowering Discovery: Agilent’s Integrated Genomics Solutions for the Future of Precision Science	Sponsor Talk - Agilent
14:10	Resolving MAGs from complex microbiomes with long reads	Chris Quince (Earlham Institute)
14:35	Making the most of microbiome biobanks: Enabling Cross-Cohort and Multi-Kingdom Analyses	Greg Young (Newcastle University)
14:50	Beyond Taxonomic Composition: Metagenomic Evidence for Functional Niche Displacement in the Rumen Microbiome.	Katie Lawther (Queen’s University Belfast)
15:05	Perspectives on applying metagenomics to infectious disease diagnostics and monitoring	Justin O’Grady (Ellison Institute of Technology)
15:20–16:00	Coffee Break	
16:00–17:20	Human & Clinical Genomics	Chair: Katherine Johnson (Newcastle University)
16:00	Rapid genomic sequencing: Where are we and where are we going	Andy Parrish (The Exeter Genomics Laboratory)
16:25	The Generation Study: Insights from the first year	Katie Handley (Genomics England)
16:50	Investigating mitochondrial DNA replication dynamics using thymidine analogues and ONT long read sequencing.	Katja Menger (Newcastle University)
17:05	Size Matters - Enhance your long-read sequencing data and yields	Sponsor Talk - Yourgene Health

Conference Dinner

Genome Science Conference Dinner The Magpie Suite, St James’ Park – Newcastle United Football Club

Friday 11th July 2025

Time	Title	Presenter
08:30-09:15	Coffee & Pastries	
09:15-11:00	New Methods in Genomics	Co-chairs: Sally James, Iain Macaulay
9:15		Sponsor Talk - Element
9:30	Towards nanopore proteomics: Single-molecule detection of post-translational modifications on full-length proteins	Yujia Qing (University of Oxford)
9:55	Leveraging single-cell long-read sequencing and machine learning for therapeutic target identification	Adam Cribbs (University of Oxford)
10:20	Revealing mechanisms of chemo-resistance and sensitisation with next generation lineage tracing technologies	Kirsty Sawicka (CRUK Cambridge)
10:45	Reveal the power of the 6-base genome	Sponsor Talk - Biomodal
11:00-11:30	Coffee break	
11:30-12:15	Keynotes	Chair: Michael Quail (Wellcome Sanger Institute)
11:30	Shining a light on the dark genome	Wendy Bickmore (University of Edinburgh)
12:15	Lunch & end	

