The Festival of Genomics & Biodata • Day 1 Agenda • Wednesday 25th January 2023

Plenary Keynote Sessions

TIME GMT	KEYNOTES
09:00	**The Latest Developments from the NHS Genomic Medicine Service** **Dame Sue Hill**, Chief Scientific Officer, **NHS England**
09:30	**Keynote Presentation to be Announced Shortly - Sponsored by Illumina**
10:00	**Discovery of New Oncology Therapeutics - Drugging the Cancer Genome and Beyond** **Paul Workman**, Harrap Professor of Pharmacology and Therapeutics, **The Institute of Cancer Research**
10:30	**PANEL: The Use of Big Data in 2023 and Beyond** **- Data Sharing** **- Data Access** **- Management of large patient datasets** **-Democratisation of data** **Rolf Apweiler**, Director, **EMBL-EBI** **Andrew Morris**, Director, **HDRUK** **Nicola Perrin**, Chief Executive Officer, **AMRC**
11:00	**Break**

	The Main Stage	Biodata Stage	Other Stage	Pyramid Stage	Live Lounge	Park Stage	Open Air Stage
	WHOLE GENOME SEQUENCING & CANCER	BIODATA	DISSECTING DISEASES WITH SINGLE-CELL ANALYSIS	GENOMICS IN PRECISION MEDICINE	DRUG DISCOVERY & DEVELOPMENT	GENOMICS IN HEALTH RESEARCH	PATIENT ENGAGEMENT & ACCESS
11:30	**Genomics and Population Shift – A Widening Healthcare Revolution** **Clare Turnbull**, Professor of Translational Cancer Genomics, **Institute of Cancer Research**	**Beyond 1 Million Genomes Project & Genomics Data Infrastructure** **Serena Scollen**, Head of Human Genomics & Translational Data, **ELIXIR**	**Single-Cell and Spatial Transcriptomics in Drug Discovery** **Ulrike Naumann**, Global Lead, Next Generation Sequencing, **Novartis**	**Precision Medicine in Type-1 Diabetes** **John Todd**, Professor of Precision Medicine, Director for the Wellcome Centre for Human Genetics and Wellcome Diabetes and Inflammation Laboratory, Nuffield Department of Medicine, **University of Oxford**	**PANEL: Harnessing the Power of Real World Evidence in Drug Discovery and Development** **Sajan Khosla**, Executive Director, Global Head of Real World Evidence, **AstraZeneca** **Michael Wallington**, Director and Global Oncology Real World Evidence Scientist Team Lead, **Pfizer** **Alireza Moayyeri**, Senior Real World Evidence Expert, **UCB**	**Population Genetic Testing - Moving Forward to Change the Paradigm** **Ranjit Manchanda**, Professor and Consultant Gynaecological Oncologist, Barts Cancer Institute, **Queen Mary University London**	**PANEL: Patients at the Heart of Research** **Imran Kausar**, Vice President & General Manager, **Novartis Gene Therapies** **Jillian Hastings Ward**, Chair, Participant Panel, **Genomics England** **Raghib Ali**, Chief Medical Officer, **Our Future Health**
12:00	**Removing WGS Analysis Bottlenecks at Light Speed** Sponsored by **Qiagen**	**Reserved Sponsored Slot - More Details to be Announced Shortly**	**More Details to be Announced Shortly** Sponsored by **10x Genomics**	**The Danish National Genome Project** **Bettina Lundgren**, Chief Executive Officer, **Danish National Genome Center**	**PANEL: Omics, Big Data & Drug Discovery** **Gitte Neubauer**, VP, Omics Technologies & Head of CellZome, **GSK** **Joanna Betts**, Head Translational Computational Biology, **GSK** **Justin Johnson**, Executive Director, **AstraZeneca**	**Sponsored slot available**	
12:30	**Linking Whole Genomes to Digital Pathology - The Multimodal Programme** **Prabhu Arumugam**, Director of Clinical Data & Imaging, **Genomics England**	**Our Future Health: A Look to the Future of Prevention Research** **Andrew Roddam**, Chief Executive Officer, **Our Future Health**	**Live-Seq: Transcriptomics of Living Single Cells** **Orane Guillaume-Gentil**, Researcher, **ETH Zurich**	**Genomics Led Precision Cardiology in Clinical Practice** **Dhavendra Kumar**, Honorary Clinical Professor, **Bart's & The London School of Medicine and Queen Mary University of London**		**The Genomics of Obesity** **Giles Yeo**, Professor of Molecular Neuroendocrinology, MRC Metabolic Diseases Unit, **University of Cambridge**	**Genomics - A Systems Approach to Patient Engagement for the Rare Disease Community** **Tony Thornburn**, Chair, **Behcet's UK** & Alliance Network Chair, **Central and South (CAS) Genomic Medicine Service Alliance**

Lunch and Live Lounge Talks

	Live Lounge
13:05	**Sponsored Slot Available**
13:20	**Evercode™ Whole Transcriptome v2 and Beyond - Mike Day**, Technical Sales Manager, **Parse Biosciences**
13:35	**More details to be announced shortly - sponsored by Qiagen**
13:50	**More details to be announced shortly - sponsored by Automata**

	The Main Stage	The Biodata Stage	The Other Stage	The Pyramid Stage	Live Lounge	Park Stage	Open Air Stage
	INTERROGATING THE CANCER GENOME	DATA SECURITY, SHARING & CREATING TRUSTED RESEARCH ENVIRONMENTS	SINGLE-CELL & SPATIAL ANALYSIS	GENOMIC MEDICINE	AI, BIG DATA & DRUG DISCOVERY	DECIPHERING GENOTYPE-PHENOTYPE RELATIONSHIPS	GENETIC COUNSELLING
14:10	**Exploring Cancer Evolution and Metastatic Dissemination** **Nicholas McGranahan**, Group Lead, Cancer Genome Evolution Research Group, **University College London Cancer Institute**	**Getting Ready for Incorporating Genomic Data in Health Data Research Studies at Whole Population Scale in the UK** **Cathie Sudlow**, Inaugural Director, **The British Heart Foundation Data Science Centre**	**Long-Read Sequencing for Single-Cell Transcriptomics** **Iain Macaulay**, Group Leader, **Earlham Institute**		**Synthesis of Genomic Data for Drug Discovery and Development** **Trevor Howe**, Head of Translational Genomics, **Johnson & Johnson**	**All the Switches: Massively Parallel Mutagenesis to Understand 'the Second Secret of Life'** **Ben Lehner**, ICREA Professor, **Centre for Genomic Regulation**	**BRCA-DIRECT: A High-Throughput Digital Genetic Testing Pathway for NHS BRCA-Gene Testing** **Grace Kravanagh**, Research Genetic Counsellor, **The Institute of Cancer Research**
14:40	**Long-Term Multi-Modal Recording Reveals Unpredictable Nongenetic Adaptation Routes in Dormant Breast Cancer Cells** **Dalia Rosano**, Research Associate in Cancer Epigenomics, **Imperial College London** Sponsored by **Novogene**	**Accelerating Biomedical Research and Scientific Discovery** **Chaitanya Bangur**, Senior Director, Biomedical Platforms & Genomics, **Microsoft Health Futures** Sponsored by **Microsoft**	**Reserved Sponsored Slot - More Details to be Announced Shortly**	**PacBio Sequencing and New Technology** Sponsored by **Pacific Biosciences**	**Sponsored slot available**	**Using Advanced Variant Annotation Techniques and Deep Phenotyping to Diagnose Patients Referred to UK's First SWAN Clinic** **Hywel Williams**, Senior Lecturer in Bioinformatics, **Cardiff University**	**Supporting Genetic Counselling for Families Affected by Sudden Cardiac Death** **Katie Frampton**, Lead Nurse for Inherited Cardiac Conditions, **South East Genomic Medicine Service Alliance**
15:10	**Integrating Multiomics with Evolution to Understand the Dynamics & Drivers of Cancer** **Trevor Graham**, Professor of Genomics and Evolution, **Institute of Cancer Research**	**Investing in the Future of NHS Data for Research at a National Scale** **Claire Bloomfield**, Deputy Director, Data For R&D, Centre for Improving Data Collaboration, **NHS England**	**Microscopy-Based Functional & Spatial Single Cell Sequencing** **Miao Ping Chen**, Principal Investigator, **Erasmus University**	**Transforming Genomic Medicine in Healthcare** **Sir Mark Caulfield**, Vice Principal for Health, **Queen Mary University of London**, Director, **NIHR Barts Biomedical Research Centre**	**The Application for AI/ML to Gain Insights from Imaging Data and Clinical Outcomes** **Joerg Degen**, Global Head, Early Development Informatics, **Roche**	**Challenges in Clinical Utilisation of Genotype-Phenotype Correlations** **Alisdair McNeill**, Senior Clinical Lecturer in Neurogenetics, **University of Sheffield**	**Working with Specialist Nurses to Increase Access to Genetic Testing** **Demetra Georgiou**, Principal Genetic Counsellor, **Imperial College Healthcare NHS Trust**
15:40	**Break**						

	Main Stage	Biodata Stage	The Other Stage	Pyramid Stage	Live Lounge	Park Stage	Open Air Stage
	NANOPORE SEQUENCING	DATA STORAGE, SHARING & ANALYSIS	TRACKING CELLULAR HETEROGENEITY WITH SINGLE-CELL AND SPATIAL TECHNOLOGIES	CLINICAL GENOMICS	OMICS IN DRUG DISCOVERY	POPULATION GENOMICS	DIVERSITY IN GENOMICS
16:10	**Exploring the Genomic and Epigenomic Landscape of relapsed Acute Myeloid Leukaemia with Nanopore Sequencing** **Alberto Magi**, Associate Professor of Bioengineering, **University of Florence**	**The UK Biobank Research Analysis Platform** **Mahesh Pancholi**, Chief Information Officer, **UK Biobank**	**Mapping Human Tissue Architecture and Pathology Using Spatial Transcriptomics** **Omer Bayraktar**, Group Leader, **Wellcome Sanger Institute**	**Clinical Interpretation of Non-coding Regions for Rare Disease Diagnoses** **Jamie Ellingford**, Researcher, **University of Manchester**	**Multi-Omics Approaches for Drug Target Discovery** **Wilfried Haerty**, Group Leader, **Earlham Institute**	**Genomic Characterisation of Middle Eastern Populations to Advance Precision Medicine** **Younes Mokrab**, Principal Investigator, Medical and Population Genomics Lab, **Sidra Medicine**	**The Genetics of Major Depression in Diverse Populations** **Karoline Kuchenbaecker**, Professor of Genetic Epidemiology, **University College London**
16:40	**More Details to be Announced Shortly** Sponsored by **Oxford Nanopore**	**Sponsored Slot Available**	**Reserved Sponsored Slot - More Details to be Announced Shortly**	**Development and Implementation of a Pan-Ethnic Carrier Testing Assay within a Genomics Laboratory Hub** **Luke Stuart**, Trainee Clinical Scientist, **North West Genomic Laboratory Hub** Sponsored by **Agilent**	**Benchmarking Computational Methods for B-cell Receptor Reconstruction on Single Cell RNA Sequencing Data for Monoclonal Antibody Generation** **Tommaso Andreani**, Bioinformatics Data Scientist, AI & Deep Analytics, **Sanofi**	**Sponsored slot available**	**Inclusion of Underrepresented Populations in Genomics Research: Opportunities and Challenges** **Opeyemi Soremekun**, Post-Doc, **The Medical Research Council/Uganda Virus Research Institute and London School of Hygiene & Tropical Medicine**
17:10		**A FAIR Biodata Analysis Resource in Practice: The Reactome Database of Curated Biomolecular Pathways** **Henning Hermjakob**, Head of Molecular Systems, **EMBL-EBI**	**Next Generation Tools for Spatial Genomics** **Fei Chen**, Assistant Professor, **Harvard University**	**Linking Variants to Functional Effects with Saturation Genome Editing** **Greg Findlay**, Group Leader, **The Francis Crick Institute**	**Translational Genomics: Moving Targets to the Clinic** **Joanna Betts**, Head Translational Computational Biology, **GSK**	**Use of Population Scale Cohort Data to Support Common and Rare Disease Research** **Nathalie Kingston**, Director, **NIHR BioResource for Translational Research**	**Advancing Genomic Equity through Better Data Science** **Maxine Mackintosh**, Programme Lead on Diverse Data, **Genomics England**
17:40	**Drinks Reception - Sponsored by Qiagen**						
19:00	**Festival at Night**						
21:00	**Close**						

The Festival of Genomics & Biodata • Day 2 Agenda • Thursday 26th January 2023

Plenary Keynote Sessions

TIME GMT	KEYNOTES
09:00	**The Future of Personalised Nutrition** **Tim Spector**, Professor of Genetic Epidemiology, **King's College London**
09:30	**Keynote Partner to be Announced Shortly**
10:00	**UK Biobank: Transforming Future Health** **Mark Effingham**, Deputy Chief Executive Officer, **UK Biobank**

Break

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11:00	CANCER GENOMICS & LIQUID BIOPSY	**How Genomic Testing is Revolutionising Cancer Care** **Mike Hubank**, Scientific Director, **NHS North Thames NHS Genomic Laboratory Hub**, Head of Clinical Genomics (Research), **The Royal Marsden NHS Foundation Trust**	UK BIOBANK SHOWCASE	**UK Biobank Showcase**	ADVANCED SEQUENCING TECHNOLOGIES	**Finally Finishing the Human Genome** **Adam Phillipy**, Head of Genome Informatics Section, **National Human Genome Research Institute**	OUT OF THE BOX	**Space Omics – The Next Platform for Drug Discovery & Target Ageing** **Willian Abraham da Silveira**, Lecturer, Molecular Genetics and Genomics, **Staffordshire University**	SINGLE CELL ANALYSIS	**PANEL: Advances in Single-cell Analysis** **Andrew Beggs**, Professor of Cancer Genetics & Surgery, **University of Birmingham** **Irene Papatheodorou**, Team Leader, **EMBL-EBI**	CRISPR & GENOME EDITING	**Gene and Cell therapies for Rare Lung Diseases** **Uta Griesenbach**, Professor of Molecular Medicine, **Imperial College London**	DRUG DISCOVERY	**Genomic Data Analysis for Target Discovery** **Philippe Sanseau**, Senior Director, Computational Biology, **GSK**	ADDRESSING WOMEN'S HEALTH & REPRODUCTIVE HEALTH	**The Changing Face of Prenatal Diagnosis in the NHS Genomic Medicine Service** **Lyn Chitty**, Professor of Genetics and Fetal Medicine, **University College London**
11:30		**Liquid Biopsies in the Natural History of Breast Cancer** **Jacqui Shaw**, Professor of Translational Cancer Genetics, **University of Leicester**		**UK Biobank Showcase**		**Sponsored Slot Available**		**Sleep Deprivation & Genomic Regulation** **Derk-Jan Dijk**, Professor of Sleep and Physiology, Director, **Surrey Sleep Research Centre**		**More Details to be Announced Shortly** **Sponsored by Scipio Bioscience**		**Sponsored Slot Available**		**PANEL: Human Genetics and Genomics for Target Discovery and Drug Discovery** **Robert Scott**, Senior Director, **GSK** **Nikolina Nakic**, Head, V2G2F, Computational Biology, **GSK**		**Genomics of Reproductive Ageing** **Anna Murray**, Professor of Human Genetics, **University of Exeter**
12:00		**PANEL: Pushing Liquid Biopsy into Routine Diagnostics** **David Crosby**, Head of Prevention and Early Detection Research, **Cancer Research UK** **Janet Shipley**, Head of Molecular Pathology, **Institute of Cancer Research**		**UK Biobank Showcase**		**Utilising Error-Corrected NGS to Enhance the Assessment of Mutation Burden in an In Vitro Genetic Toxicology Assay** **Anne Ashford**, Senior Scientist, **AstraZeneca**		**Genetic Links to Anxiety and Depression** **Gerome Breen**, Professor of Psychiatric Genetics, **King's College London**		**Single-Cell Multi-Omics to Uncover Functional Effects of Somatic Structural Variation** **Jan Korbel**, Senior Scientist Genome Biology & Head of Data Science, **EMBL Heidelberg**		**Target Discovery through CRISPR Screening** **Davide Gianni**, Senior Director, Functional Genomics, **AstraZeneca**				**Improving Women's Health through Genomic Approaches: Endometriosis** **Krina Zondervan**, Head of the Nuffield Department of Women's & Reproductive Health, **University of Oxford**

Lunch and Live Lounge Talks

	Live Lounge
12:35	**Sponsored Slot Available**
12:50	**Sponsored Slot Available**
13:05	**Sponsored Slot Available**
13:20	**Tailoring the Agilent Femto Pulse to improve sizing during the PacBio ultra-low input workflow - Iraad Bronner**, Senior Staff Scientist, Sequencing R&D, **Wellcome Sanger Institute**

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13:40	CANCER GENOMICS & IMMUNOTHERAPY	**Skin Deep: a Journey Through the Skin Cancer Genome** **David Adams**, Senior Group Leader, **Wellcome Sanger Institute**	ENABLING GENOMIC ADVANCES WITH BIG DATA	**The Genomics England Interpretation Platform** **Christopher Boustred**, Lead Clinical Bioinformatician, **Genomics England**	PHARMACOGENOMICS & PRS	**The Development of a New Cloud-Native Bioinformatics Tool for Pharmacogenetic Analysis** **David Yuan**, Genomics Software Development Project Lead, Data Coordination Centre and Cloud Computing Manager, **European Bioinformatics Institute**	WGS & RAPID DIAGNOSIS	**How Rapid Genomic Sequencing is Transforming Care for Critically Ill Babies and Children** **Emma Baple**, Medical Director of the NHS South West Genomic Laboratory Hub and a Professor of Genomic Medicine, **University of Exeter Medical School**	SINGLE CELL OMICS IN COMPLEX TISSUES & DISORDERS	**Understanding Transcriptional Plasticity in Treatment Resistant Breast Cancer** **Rachael Natrajan**, Group Leader, Functional Genomics, **Institute of Cancer Research**	LARGE SCALE PROTEOMICS	**Proteomics Strategies to Identify New Diagnostic and Therapeutic Targets** **Manuel Mayr**, Professor of Cardiovascular Proteomics, **King's College London**	MULTI-OMICS & INTEGRATIVE ANALYSIS	**Multi-Omic Dissection of Signaling Pathways in Cancer** **Rob Ewing**, Associate Professor, **University of Southampton**	EPIGENETICS & 3D STRUCTURE, & ACCESSIBILITY	**New Ways to Harness Epigenetics in Cancer Research** **Benjamin Schuster-Boeckler**, Associate Professor, **University of Oxford**
14:10		**Immunogenomic Drivers of the Anti-Tumour Immune Response** **Kevin Litchfield**, Group Lead, The Tumour Immunogenomics and Immunosurveillance Laboratory, **University College London Cancer Institute**		**Sponsored Slot Available**		**Sponsored slot available**		**Reserved Sponsored Slot - More Details to be Announced Shortly**		**Sponsored Slot Available**		**Sponsored Slot Available**		**Sponsored Slot Available**		**Sponsored Slot Available**
14:40		**Hedgehog Signalling in the Immune System: Novel Biology and Treatment Opportunities** **Maike de la Roche**, Group Head of Cancer Immunology, **Cancer Research UK Cambridge**		**Population and Medical Genomics Applications to Human Traits and Diseases** **Nicole Soranzo**, Head of Genomics Research Centre, **Human Technopole**		**Pharmacogenomics in Cardiovascular Medicine: Opportunities to Enhance Understanding via Trans-Ancestry Differences in Pharmacogenes** **Emma Magavern**, Clinician, **Queen Mary University of London**		**Opportunities and Challenges of rWGS for Diagnosis and Screening** **Siân Morgan**, Consultant Clinical Scientist / Laboratory Director, **All Wales Medical Genomics Service**		**The Power of Single Cell Studies to Unravel the Cellular Phase of Alzheimer's Disease** **Bart De Strooper**, Professor, **University College London**		**Spatial and High Throughput Proteomics for Target and Biomarker Discovery** **Roman Fischer**, Associate Professor and Senior Group Leader in Clinical Proteomics, **University of Oxford**		**Exploring Disease Mechanisms from Causal Network Analysis** **Hui Guo**, Senior Lecturer in Statistics, **University of Manchester**		**Connecting Dots for (Epi)Genomic Medicine** **Stephan Beck**, Professor of Medical Genomics, **University College London**

Break

	The Main Stage		Biodata Stage		The Other Stage		Pyramid Stage		Live Lounge		Park Stage		Open Air Stage		The Secret Stage
15:25	ROLE OF UK GENOMICS	**PANEL: The UK as a Role Model of Genomics: The Role of Genomics in making the UK a Life Science Superpower** **Matt Brown**, Chief Scientific Officer, **Genomics England** **Ian Young**, Chief Scientific Adviser, **Department of Health and Director of Research and Development for Health and Social Care, Northern Ireland** **Rob Orford**, Chief Scientific Adviser for Health, **Welsh Government** **Professor Dame Anna Dominiczak**, Chief Scientist for Health, **Scottish Government**	ETHICS IN GENOMICS	**INTERACTIVE DISCUSSION: Ethics in Genomics** **Angus Clarke**, Clinical Professor, **Cardiff University** **Susan Wallace**, Honorary Lecturer, **Population and Public Health Sciences**	POLYGENIC RISK SCORES	**Pitfalls and Utility of Polygenic Risk Scores for Dementia Prediction** **Valentina Escott-Price**, Professor in Biostatistics and Bioinformatics, Dementia Institute, **Cardiff University**	NEWBORN SEQUENCING & RARE DISEASE	**PANEL: The Newborn Sequencing Initiative - Navigating the Path** **Catherine Joynson**, Associate Director, **Nuffield Council on Bioethics** **Alice Tuff-Lacey**, Programme Lead, Newborns Initiative, **Genomics England**	MICROBIOME & METAGENOMICS	**Defining Person-specific Microbiomes with High-resolution Metagenomics** **Falk Hildebrand**, Group Leader, **Earlham Institute/ Quadram Institute**	PATHOGEN DETECTION & SURVEILLANCE	**Pathogen Genomics - Building on the Success of Sequencing During the COVID-19 Pandemic** **Ewan Harrison**, Group Lead of the Respiratory Virus and Microbiome Initiative, **Wellcome Sanger Institute**	PATIENT & PUBLIC PERSPECTIVES	**PANEL: Patient & Public Persepctives in Genomics** **Louise Fish**, Chief Executive, **Genetic Alliance UK** **Sarah Wynn**, Chief Executive Officer, **Unique** **Richard Milne**, Deputy Director, **Kavli Centre for Ethics, Science and the Public**	NEURAL CIRCUITS & NEURODEGENERATIVE DISEASE	**Mining the CNS transcriptome for Novel Therapeutic Targets: the Cerevance NETSseq platform** **Steven Sheardown**, Head of Molecular Biology and Cell Engineering, **Cerevance**
15:55						**Moving Polygenic Risk Score Analysis into Clinical Practise** **Sowmiya Moorthie**, Senior Policy Analyst, **PHG Foundation**				**Approaches for Understanding the Genomic Composition of the Human Microbiome** **Robert Finn**,Team Leader of Microbiome Informatics, **EMBL-EBI**		**Harnessing Genomics for Anti-Microbial Resistance Surveillance** **Kate Baker**, Professor and Chair of Applied Microbial Genomics, **University of Liverpool**				**Single Cell Phenotyping: Understanding Development and Disease One Cell at a Time** **Malte Spielmann**, Director, Institute for Human Genetics, **UKSH**

16:25	**New Technologies and Analysis Approaches for Rare Diseases and Cancer – the Genomics England program** **Matt Brown**, CSO, **Genomics England**
16:55	**Close**