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

Plenary Keynote Sessions

KEYNOTES

09:00 — **The Latest Developments from the NHS Genomic Medicine Service**

Dame Sue Hill, Chief Scientific Officer, **NHS England, Chaired by Vivienne Parry OBE**

09:30 — **PANEL DISCUSSION: Welcome to the Genome Era - Sponsored by Illumina**

Serena Nik-Zainal, Professor of Genomic Medicine & Bioinformatics, **University of Cambridge**
Matt Brown, Chief Scientific Officer, **Genomics England**
Sian Morgan, Laboratory Director, **All Wales Medical Genomics Service (AWMGS)**
Clare Kingsley, Senior Director, Illumina Laboratory Services, **Illumina, Inc.**

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 DISCUSSION: 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	The Other Stage	Pyramid Stage	Live Lounge	Park Stage	Open Air Stage	The Secret Stage
11:30	**SEQUENCING & POPULATION GENOMICS** **Germline-Focused Analysis of Tumour-Detected Variants in 49,264 Cancer Patients: ESMO Precision Medicine Working Group Recommendations** **Clare Turnbull**, Professor of Translational Cancer Genomics, **Institute of Cancer Research**	**BIODATA** **Beyond 1 Million Genomes Project & Genomics Data Infrastructure** **Serena Scollen**, Head of Human Genomics & Translational Data, **ELIXIR**	**DISSECTING DISEASES WITH SINGLE-CELL ANALYSIS** **Single-Cell and Spatial Transcriptomics in Drug Discovery** **Ulrike Naumann**, Global Lead, Next Generation Sequencing, **Novartis**	**DRUG DISCOVERY & DEVELOPMENT** **PANEL DISCUSSION: 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**	**GENOMICS IN PRECISION MEDICINE** **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**	**RNA-SEQ** **High-Throughput Identification of "Static" and Dynamic RNA Structures** **Danny Incarnato,** Assistant Professor of Molecular Genetics, Groningen Biomolecular Sciences and Biotechnology Institute (GBB), **University of Groningen**	**PATIENT ENGAGEMENT & ACCESS** **PANEL DISCUSSION: 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**	**GENOMICS IN HEALTH RESEARCH** **Population Genetic Testing - Moving Forward to Change the Paradigm** **Ranjit Manchanda**, Professor and Consultant Gynaecological Oncologist, Barts Cancer Institute, **Queen Mary University London**
12:00	**Breaking Speed and Cost Barriers with LightSpeed: The world's Fastest FASTQ to Report Workflow** **Benjamin Turner**, Director, **QIAGEN Digital Insights, EMEA** Sponsored by **Qiagen**	**How AWS is Supporting the UK to be a Genomics Superpower** **Rowland Illing**, Chief Medical Officer and Director of International Public Sector Health, **Amazon Web Services (AWS)** Sponsored by **AWS**	**New Approaches to Characterizing Cells and Immune Profiling in Tumors** **Stephen Hague**, Manager, Science & Technology Advisors, **10x Genomics** Sponsored by **10x Genomics**	**PANEL DISCUSSION: Omics, Big Data & Drug Discovery** **Gitte Neubauser**, VP, Omics Technologies & Head of CellZome, **GSK** **Tony Ng,** Head of School, School of Cancer and Pharmaceutical Sciences, **King's College London** **Patrick Schwab,** Director, Artificial Intelligence & Machine Learning, **GSK** **Justin Johnson, Executive Director, AstraZeneca**	**The Danish National Genome Center** **Bettina Lundgren,** Chief Executive Officer, **Danish National Genome Center**	**Massively Multiplexed Bulk RNA-seq for Large-Scale Blood Transcriptomics and Functional Drug Screening** **Riccardo Dainese,** Co-Founder, **Alithea Genomics** Sponsored by **Alithea Genomics**		**CRISPRoff as Potential Treatment Strategy for Collagen-VI Congenital Muscular Dystrophy** **Franziska Haarich,** PhD Candidate, **University of Luebeck**
12:30	**NPIC and Genomics England – Digitising the 100,000 Genomes Project** **Prabhu Arumugam**, Director of Clinical Data & Imaging, **Genomics England** **Daljeet Bansal**, NPIC Operations Director, **Leeds Teaching Hospitals NHS Trust**	**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 Role of Extracellular Vesicle Small Non-Coding RNAs in Osteoarthritis - A Small RNA Sequencing Approach** **Mandy Peffers,** Wellcome Trust Clinical Intermediate Fellow - Musculoskeletal and Ageing Science Research Lead, **University of Liverpool**	**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	**The Genomics of Obesity** **Giles Yeo**, Professor of Molecular Neuroendocrinology, MRC Metabolic Diseases Unit, **University of Cambridge**

Lunch and Live Lounge Talks

Live Lounge

13:05 — **New company, Velsera, advances precision health through data-driven solutions. Explore the Precision Engine Company - Michiel Reessink,** Head of International Laboratory & Speciality Sales, **Velsera**

13:20 — **Evercode™ Whole Transcriptome v2 and Beyond - Mike Day**, Technical Sales Manager, **Parse Biosciences**

13:35 — **Low Input Ultraplexed RNA-seq Library Kits with Integrated Ribosomal RNA Removal - Samuel J. Rulli**, Director, Global Product Management, RNA-seq Profiling, NGS Assay Technologies, **QIAGEN**

13:50 — **Open Integrated Automation for Genomics Workflows - Divya Vijay Pratheek**, Director of Product Growth for Genomics, **Automata**

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14:10	**INTERROGATING THE CANCER GENOME** **Exploring Cancer Evolution and Metastatic Dissemination** **Nicholas McGranahan**, Group Lead, Cancer Genome Evolution Research Group, **University College London Cancer Institute**	**DATA SECURITY, SHARING & CREATING TRUSTED RESEARCH ENVIRONMENTS** **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**	**SINGLE-CELL & SPATIAL ANALYSIS** **Long-Read Sequencing for Single-Cell Transcriptomics** **Iain Macaulay**, Group Leader, **Earlham Institute**	**GENOMIC MEDICINE** **RNA in Genomic Medicine** **Diana Baralle**, Professor of Genomic Medicine and Honorary Consultant in Clinical Genetics, **University of Southampton**	**AI, BIG DATA & DRUG DISCOVERY** **Synthesis of Genomic Data for Drug Discovery and Development** **Trevor Howe**, Head of Translational Genomics, **Johnson & Johnson**	**DECIPHERING GENOTYPE-PHENOTYPE RELATIONSHIPS** **All the Switches: Massively Parallel Mutagenesis to Understand 'the Second Secret of Life'** **Ben Lehner**, ICREA Professor, **Centre for Genomic Regulation**	**MULTI-OMICS & INTEGRATIVE ANALYSIS** **A Novel Epigenetic and Transcriptional Mechanism for Resistance to Targeted Cancer Therapy** **Martin Higgs,** Deputy Director, **Centre for Rare Disease Studies, University of Birmingham**	**GENETIC COUNSELLING** **BRCA-DIRECT: A High-Throughput Digital Genetic Testing Pathway for NHS BRCA-Gene Testing** **Grace Kavanagh**, 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** **Ilyana Rosenberg,** Principal Product Manager, Biomedical Platforms & Genomics, **Microsoft Health Futures** **Christine Loreth,** Associate Director of Scientific Impact, Data Sciences Platform, **Broad Institute** **Marta Bleda Latorre,** Lead Bioinformatics Consultant, **Zetta Genomics** Sponsored by **Microsoft**	**Fresh Cell Transcriptome – The Ultimate Gold!** **Nicolas Fernandez**, Director of Innovation, **Scipio Bioscience** Sponsored by **Scipio Bioscience**	**The Long and Short of It – Learn about Game Changing Capabilities of PacBio Sequencing** **Gavin Boothroyd**, Sales Manager UK North and Ireland, **PacBio** Sponsored by **PacBio**	**Accelerating Genomics with Large Language Models** **Marie Lopez**, Genomics Team Lead, **InstaDeep** Sponsored by **InstaDeep**	**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**	**Exploring Disease Mechanisms from Causal Network Analysis** **Hui Guo**, Senior Lecturer in Statistics, **University of Manchester**	**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**	**Benchmarking of multiple long reads sequencing methods and platforms for transriptome analysis** **Ana Conesa**, Research Professor, **Institute for Integrative Systems Biology (CSIC)**	**Working with Specialist Nurses to Increase Access to Genetic Testing** **Demetra Georgiou,** Principal Genetic Counsellor, **Imperial College Healthcare NHS Trust**

15:40 — **Break**

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16:10	**NANOPORE SEQUENCING** **Exploring the Genomic and Epigenomic Landscape of Relapsed Acute Myeloid Leukaemia with Nanopore Sequencing** **Alberto Magi**, Associate Professor of Bioengineering, **University of Florence**	**DATA STORAGE, SHARING & ANALYSIS** **The UK Biobank Research Analysis Platform** **Ben Lacey,** Epidemiology Group Lead, **UK Biobank**	**TRACKING CELLULAR HETEROGENEITY WITH SINGLE-CELL AND SPATIAL TECHNOLOGIES** **Next Generation Tools for Spatial Genomics** **Fei Chen,** Assistant Professor, **Harvard University**	**CLINICAL GENOMICS** **Clinical interpretations of variants found in the non-coding regions of the genome** **Jamie Ellingford**, Researcher, **University of Manchester**	**OMICS IN DRUG DISCOVERY** **Long Read RNA-seq Applications for Targets Identification** **Wilfried Haerty**, Group Leader, **Earlham Institute**	**POPULATION GENOMICS** **Genomic Characterisation of Middle Eastern Populations to Advance Precision Medicine** **Younes Mokrab**, Principal Investigator, Medical and Population Genomics Lab, **Sidra Medicine**	**MICROBIOME & METAGENOMICS** **Defining Person-specific Microbiomes with High-resolution Metagenomics** **Falk Hildebrand,** Group Leader, **Earlham Institute/ Quadram Institute**	**DIVERSITY IN GENOMICS** **The Genetics of Major Depression in Diverse Populations** **Karoline Kuchenbaecker**, Professor of Genetic Epidemiology, **University College London**
16:40	**Applications of Oxford Nanopore Sequencing to Cancer Genomics** **Hillary Elrick,** PhD Student, **EMBL-EBI & University of Cambridge** Sponsored by **Oxford Nanopore**	**Federated Trusted Research Environments in National Population Genomics Programmes** **Thorben Seeger**, Chief Business Development Officer, **Lifebit** Sponsored by **Lifebit**	**Spatial Biology from Organs to Organelles powered by Cloud Based Analysis Platform** **Bryan Serrels**, Technical Sales Specialist, **NanoString Technologies** Sponsored by **Nanostring Technologies**	**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**	**Empowering Drug Discovery with Causal Data** **Daniel Jamieson,** Chief Executive Officer, **Biorelate**	**New Era of Precision Public Health** **Joanne M. Hackett**, Vice President, Genomics & Precision Medicine, EMEA, **IQVIA** Sponsored by **IQVIA**	**Uncovering the Multi-Kingdom Diversity of the Human Microbiome and its Role in Human Health and Disease** **Alexandre Almeida,** Group Leader, **University of Cambridge**	**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	**Advances in Epigenetic Epidemiology catalysed by Nanopore Sequencing** **Eilis Hannon**, Senior Research Fellow, **University of Exeter**	**A FAIR Biodata Analysis Resource in Practice: The Reactome Database of Curated Biomolecular Pathways** **Henning Hermjakob**, Head of Molecular Systems, **EMBL-EBI**	**Mapping Human Tissue Architecture and Pathology Using Spatial Transcriptomics** **Omer Bayraktar,** Group Leader, **Wellcome Sanger Institute**	**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**	**Translational Research using the NIHR BioResource** **Nathalie Kingston**, Director, **NIHR BioResource for Translational Research**	**PANEL DISCUSSION: Actioning the genomics of tomorrow – translating science from papers to patient benefits** **Karolina Zapadka,** VC Investor, **Parkwalk Advisors** **Rebecca Marchington,** Manager, **Illumina Accelerator** **Elena Carrasco,** Co-founder and CEO, **Dama Health**	**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 - Tickets are required in advance. Please see registration desk for availability.**

01:00 — **Close**

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

TIME GMT

Plenary Keynote Sessions

09:00 – KEYNOTES

New Technologies and Analysis Approaches for Rare Diseases and Cancer – the Genomics England Program

Matt Brown, CSO, **Genomics England, Chaired by Vivienne Parry OBE**

09:30

Revealing Illumina's Innovation Updates - Sponsored by Illumina

Jason Betley, Vice President, Technology Development, **Illumina**
Richard Capper, Associate Director, Product Marketing, **Illumina**

10:00

UK Biobank: Transforming Future Health

Mark Effingham, Deputy Chief Executive Officer, **UK Biobank**

Break

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11:00	**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**	**Accelerating Genomic Medicine: Collaborative Approaches from UK Biobank** **UK Biobank, alongside a panel of industry and academic experts, will discuss how collaboration across sectors and borders is facilitating scientific discoveries for human health. Find out more about how genomic sequencing on an unprecedented scale is enabling research into the genetic determinants of disease through making these data accessible to researchers worldwide via UK Biobanks' cloud-based research analysis platform** **Value of UK Biobank for Genomic Health Research Naomi Allen**, Chief Scientist, **UK Biobank** **Insights from the UK Biobank Research Analysis Platform Aiden Doherty**, Professor of Biomedical Bioinformatics, **University of Oxford** **Whole Genome Sequencing 0.5M Participants in UK Biobank Keren Carss**, Director of Genome Analytics, **AstraZeneca** **The UK Biobank Research Analysis Platform Asha Collins**, General Manager, Biobanks Data Analysis Platforms, **DNAnexus** **Rowland Illing**, Chief Medical Officer and Director of International Public Sector Health, **Amazon Web Services (AWS)** **Panel discussion and Q&A**	**Finally Finishing the Human Genome** **Adam Phillippy**, Head of Genome Informatics Section, **National Human Genome Research Institute**	**PANEL DISCUSSION: Advances in Single-Cell Analysis** **Andrew Beggs,** Professor of Cancer Genetics & Surgery, **University of Birmingham** **Martin Enge,** Assistant Professor, **Karolinska Institutet** **Irene Papatheodorou,** Team Leader, **EMBL-EBI**	**Space Omics – The Next Platform for Drug Discovery & Target Ageing** **Willian Abraham da Silveira,** Lecturer – Molecular Genetics and Genomics, **Staffordshire University**	**PANEL DISCUSSION: Newborn Sequencing - Navigating the Path** **Catherine Joynson,** Associate Director, **Nuffield Council on Bioethics** **Alice Tuff-Lacey,** Programme Lead, Newborns Initiative, **Genomics England**	**Genomic Data Analysis for Target Discovery** **Philippe Sanseau**, Senior Director, Computational Biology, **GSK**	**New Ways to Harness Epigenetics in Cancer Research** **Benjamin Schuster-Boeckler,** Associate Professor, **University of Oxford**
11:30	**Liquid Biopsies in the Natural History of Breast Cancer** **Jacqui Shaw**, Professor of Translational Cancer Genetics, **University of Leicester**		**Extracellular Vesicles: From promise to translation into liquid biopsy diagnostics** **Tomás De Freitas Dias**, Chief Technology Officer, **Mursla** Sponsored by **Perkin Elmer**	**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**	**Sleep Deprivation & Genomic Regulation** **Derk-Jan Dijk,** Professor of Sleep and Physiology, Director, **Surrey Sleep Research Centre**	**Emma Baple,** Medical Director of the NHS South West Genomic Laboratory Hub and a Professor of Genomic Medicine, **University of Exeter Medical School** **Moderated by: Sarah Wynn, Chief Executive Officer, Unique**	**PANEL DISCUSSION: Human Genetics and Genomics for Target Discovery and Drug Discovery** **Joanna Howson**, VP of Human Genetics, **Novo Nordisk** **Claudia Langenberg**, Director of Precision Healthcare University Research Institute, **QMUL** **Nikolina Nakic**, Head, V2G2F, Computational Biology, **GSK** **Robert Scott**, Senior Director, **GSK**	**(Epi)genomics of Neuroendocrine Tumours** **Mark Quinn**, Senior Clinical Fellow in Diabetes and Endocrinology, Oakey Epigenetics Lab, **Kings College London**
11:45			**PANEL DISCUSSION: The New & the Who of the Changing Sequencing Landscape** **Mette Christiansen**, Head of Clinical NGS Core Facility, **Aarhus University Hospital** **Greg Elgar**, Director of Sequencing, **Genomics England** **Graham Freimanis**, Head of High Throughput Sequencing, **The Pirbright Institute** **Michael Andrew Quail**, Principal Scientific Manager, Sequencing R&D, **Wellcome Sanger Institute**					
12:00	**PANEL DISCUSSION: Pushing Liquid Biopsy into Routine Healthcare** **Andrew Beggs**, Professor of Cancer Genetics & Surgery, **University of Birmingham** **David Crosby**, Head of Prevention and Early Detection Research, **Cancer Research UK** **Janet Shipley**, Head of Molecular Pathology, **Institute of Cancer Research**			**Single-Cell Signalling Analysis of Tumour Microenvironment Organoids** **Christopher Tape,** Group Leader, **UCL Cancer Institute**	**Genetic Links to Anxiety and Depression** **Gerome Breen,** Professor of Psychiatric Genetics, **King's College London**	**Non-conventional SUMO-binding Modules Linked to XRCC4-mediated DNA Repair & Beyond** **Christine Schmidt,** Group Leader, **University of Manchester**		**Connecting Dots for (Epi)Genomic Medicine** **Stephan Beck,** Professor of Medical Genomics, **University College London**

CANCER GENOMICS & LIQUID BIOPSY · UK BIOBANK SHOWCASE · ADVANCED SEQUENCING TECHNOLOGIES · SINGLE CELL ANALYSIS · OUT OF THE BOX · NEWBORN SCREENING · DRUG DISCOVERY · EPIGENETICS & 3D STRUCTURE, & ACCESSIBILITY

Lunch and Live Lounge Talks

12:35 – Live Lounge

Identifying chrono-pharmacogenomic variation to inform chrono-dosing potential of medicines - Aris Saoulidis, Senior Pharmacist Genomics Transformation, **East Genomics**

12:50

A service evaluation of potential workload from implementing pharmacogenomics testing at Cambridge University Hospitals NHS Foundation Trust - Paul Selby, Clinical Pharmacy Lead, **East Genomics**

13:05

Extraverts and Introverts are epigenetically wired to act socially different - Uri Bertocchi, Graduate Researcher, **Tel Aviv University**

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	**Skin Deep: a Journey Through the Skin Cancer Genome** **David Adams**, Senior Group Leader, **Wellcome Sanger Institute**	**The Genomics England Interpretation Platform** **Christopher Boustred**, Lead Clinical Bioinformatician, **Genomics England**	**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**	**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**	**Understanding Transcriptional Plasticity in Treatment Resistant Breast Cancer** **Rachael Natrajan**, Group Leader, Functional Genomics, **Institute of Cancer Research**	**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**	**Gene and Cell therapies for Rare Lung Diseases** **Uta Griesenbach,** Professor of Molecular Medicine, **Imperial College London**	**The Changing Face of Prenatal Diagnosis in the NHS Genomic Medicine Service** **Dame Lyn Chitty**, Professor of Genetics and Fetal Medicine, **University College London**, and Deputy Director, **NIHR Great Ormond Street Hospital BRC**
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**	**Scaling and Accelerating Genomics Research and innovation in the Cloud** **Ankit Malhotra**, Global Genomics Lead, Public Sector and Healthcare, **Amazon Web Services** Sponsored by **AWS**	**Assessing Pharmacogenomic Testing to Treat Mental Health Conditions in the NHS** **Jessica Woodley**, Principal Clinical Scientist and R&D Lead, **West Midlands Regional Genetics Laboratories, Birmingham Women's and Children's NHS Foundation Trust** Sponsored by **Inagene Diagnostics**	**Integrated Magicprep Transcriptomic Solutions in the Running Diagnostics and Monitoring of Childhood Acute Lymphoblastic Leukemia** **Grazia Fazio**, Postdoctoral Researcher, **Università Milano-Bicocca** Sponsored by **Tecan**	**Adapting Bulk Seq Methods for Single Cell Genomic Analysis** **Aleksander Mihajlović**, Head of Operations, Bioinformatics, **APIS Assay Technologies Ltd** Sponsored by **APIS Assay Technologies**	**Harnessing Genomics for Anti-Microbial Resistance Surveillance** **Kate Baker,** Professor and Chair of Applied Microbial Genomics, **University of Liverpool**	**Genome Edited Therapeutic T-Cells** **Waseem Qasim,** Professor of Cell and Gene Therapy, UCL and Consultant in Paediatric Immunology, **Great Ormond Street Hospital for Children NHS Trust**	**Genomics of Reproductive Ageing** **Anna Murray**, Professor of Human Genetics, **University of Exeter**
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**	**Pathogen Genomics: An Evolution in Public Health Security** **Dame Jenny Harries,** CEO, **UK HSA**	**Target Discovery through CRISPR Screening** **Davide Gianni,** Senior Director, **AstraZeneca**	**Improving Women's Health through Genomic Approaches: Endometriosis** **Krina Zondervan**, Head of the Nuffield Department of Women's & Reproductive Health, **University of Oxford**

CANCER GENOMICS & IMMUNOTHERAPY · ENABLING GENOMIC ADVANCES WITH BIG DATA · PHARMACOGENOMICS & PRS · WGS & RAPID DIAGNOSIS · SINGLE CELL OMICS IN COMPLEX TISSUES & DISORDERS · LARGE SCALE PROTEOMICS · GENE THERAPY & GENOME EDITING · ADDRESSING WOMEN'S HEALTH & REPRODUCTIVE HEALTH

Break

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15:25	**PANEL DISCUSSION: The UK as a Role Model of Genomics: The Role of Genomics in making the UK a Life Science Superpower** **Jonathan Berg**, Senior Lecturer and Honorary Consultant in Clinical Genetics, **University of Dundee** **Matt Brown**, Chief Scientific Officer, **Genomics England** **Lucy Chappell**, Chief Scientific Adviser, **Department of Health and Social Care** **Rob Orford**, Chief Scientific Adviser for Health, **Welsh Government** **Ian Young**, Chief Scientific Adviser, **Department of Health** and Director of Research and Development, **Health and Social Care, Northern Ireland** **Dame Anna Dominiczak**, Chief Scientist (Health), **Scottish Government**	**Genomics and the Future of Drug Discovery and Development** **John Lepore**, Senior Vice President, Head of Research, **GSK** **Andrew Roddam**, Chief Executive Officer, **Our Future Health** **Athena Matakidou**, Senior Director, Oncology Applied Genetics, **GSK**	**Pitfalls and Utility of Polygenic Risk Scores for Dementia Prediction** **Valentina Escott-Price**, Professor in Biostatistics and Bioinformatics, Dementia Institute, **Cardiff University**	**PANEL DISCUSSION: Patient & Public Perspectives 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**	**Mining the CNS Transcriptome for Novel Therapeutic Targets: The Cerevance NETSseq platform** **Steven Sheardown**, Head of Molecular Biology and Cell Engineering, **Cerevance**	**Proteomics Strategies to Identify New Diagnostic and Therapeutic Targets** **Manuel Mayr,** Professor of Cardiovascular Proteomics, **King's College London**	**INTERACTIVE DISCUSSION: Ethics in Genomics** **Angus Clarke,** Clinical Professor, **Cardiff University** **Susan Wallace,** Honorary Lecturer, **Population and Public Health Sciences** **Peter Mills,** Associate Director, **Nuffield Council on Bioethics** **Arzoo Ahmed,** Head of Ethics, **Our Future Health**	**Utilising Error-Corrected NGS to Enhance the Assessment of Mutation Burden in an In Vitro Genetic Toxicology Assay** **Anne Ashford**, Senior Scientist, **AstraZeneca**
15:55			**Moving Polygenic Risk Score Analysis into Clinical Practise** **Sowmiya Moorthie**, Senior Policy Analyst, **PHG Foundation**	**Carrying a BRCA Mutation: The Patient Perspective** **Caroline Presho,** Director, **BRCA Umbrella**	**Single Cell Phenotyping: Understanding Development and Disease One Cell at a Time** **Malte Spielmann**, Director, **Institute for Molecular Genetics**	**Spatial and High Throughput Proteomics for Target and Biomarker Discovery** **Roman Fischer**, Associate Professor and Senior Group Leader in Clinical Proteomics, **Nuffield Department of Medicine, University of Oxford**		**Molecular Mechanisms of DNA Damage Response** **Qian Wu,** Group Leader, **University of Leeds**

ROLE OF UK GENOMICS · FIRESIDE CHAT · POLYGENIC RISK SCORES · PATIENT PERSPECTIVES · NEURAL CIRCUITS & NEURODEGENERATIVE DISEASE · PATHOGEN DETECTION & SURVEILLANCE · ETHICS IN GENOMICS · DNA DAMAGE & ADVANCED SEQUENCING

Closing Keynote Session

16:25 – KEYNOTE

Fireside Chat with Professor Brian Cox CBE and Vivienne Parry OBE

17:10

Close