The Festival of Genomics & Biodata • Day 1 Agenda • June 3rd 2026

TIME	
08:55	**Opening Remarks**
09:00	**AI for Genomic Medicine: A Multimodal Deep Learning Journey from Molecules to Single Cells** **Manolis Kellis**, Professor of Computer Science, **MIT**
09:30	**Streamlining High-Throughput Methods Development Utilizing the icon96 System and AutoNorm — From Single-Cell to Bulk Applications** **Aziz Al'Khafaji Director**, Molecular R&D PI, Methods Development Lab, Genomics Platform, Broad Clinical Labs, **Broad Institute of MIT and Harvard** *Sponsored by N6*
10:00	**Panel Discussion: From Hype to Translational Value: AI & Machine Learning Powering Precision Drug Discovery** **Justin Scheer**, Vice President, In Silico Discovery, **Johnson & Johnson Innovative Medicines** **Birgit Schoeberl**, VP & Head of Data42, **Novartis** **Justin H. Johnson**, Executive Director, Oncology Data Science, **AstraZeneca Oncology R&D**
10:30	**The AI-Driven Future of Health: From Genomes to Wearables and Predictive Wellness** **Leroy Hood**, CEO, **Phenome Health** & President, **Institute for Systems Biology**
11:00	**NETWORKING BREAK**

11:30 – 12:30

INNOVATION STAGE — BUILDING THE INFRASTRUCTURE FOR PETABYTES SCALE GENOMICS

- **11:30 — From Genomics to the Next Frontier: 20 Years of Innovation and What Comes Next**
  Niall Lennon, Senior Director, Genomics Platform and Institute Scientist, **The Broad Institute of MIT and Harvard**
- **12:00 — High-Resolution Profiling of Cancer Transcriptomes and Fusion Isoforms using Roche SBX RNA-Seq (SBX) Technology**
  Brian Haas, Principal Computational Scientist, **Broad Institute of MIT and Harvard**
- **12:30 — One Run, Every Variant: Simplifying Complex Diagnostics through Long-Read Sequencing**
  Bharat Thyagarajan, Laboratory Medicine and Pathology Vice Chair for Translational Research, **University of Minnesota**

MULTI-OMICS INTEGRATION STAGE — LARGE SCALE PROTEOGENOMICS FOR DISCOVERY

- **11:30 — Promises and Challenges of Population Proteomics in Health and Disease**
  Benjamin Sun, Director, Head of Population Health Omics, Informatics and Predictive Sciences, **Bristol Myers Squibb**
- **12:00 — Beyond the Genome: Scalable Proteomics to Power Pharma Discovery and Clinical Translation**
  Joseph Caruso, Sr. Field Application Scientist, Olink™ part of Thermo Fisher
  Sponsored by Olink
- **12:30 — From Data to Decision: Leveraging Multi-Omics & Proteomics for the Right Target, Drug, and Patient**
  Shuwei Li, Director, Population Analytics & Insights, Data Science DPDS, **Johnson & Johnson Innovative Medicines**

AI IN DRUG DISCOVERY STAGE — GENERATIVE AI FOR BIOPHARMA

- **11:30 — Foundation Model-Based AI Estimator Framework for Solid-Tumor Clinical Outcome Prediction from Peripheral Blood**
  Virginia Savova, Head of Cell-targeted Precision Medicine, Oncology Data Science and AI, **AstraZeneca**
- **12:00 — Towards 100,000 Small Molecules: Building AI-Ready Transcriptomic Datasets with DRUG-seq**
  Rory Kirchner, Principal Computational Biologist, **Ginkgo Bioworks**
  Sponsored by Ginkgo Bioworks
- **12:30 — Panel Discussion: AI Reality Check: Where Is It Actually Delivering in Drug Discovery?**
  Shameer Khader, Global Head, Computational Biology Target, Disease and Systems Biology, **Sanofi**
  Bart Naughton, Head of Global Discovery Computational Biology, **Eisai**
  Martin Bringmann, Senior Director Translational Neuroscience, **Johnson & Johnson**
  Rodney Marable, Executive Director, Scientific Computing and Informatics, **Flare Therapeutics**

BIOPHARMA DATA MANAGEMENT STAGE — ENSURING INTEROPERABILITY

- **11:30 — From Data Chaos to Clarity: Operationalizing Genomics through Semantic Foundations and Decision Intelligence**
  Felix Francis, Associate Director, Data Modeling Lead, **Takeda**
- **12:00 — Sponsored slot available**
- **12:30 — Genomic Language Modeling for Sequence Analysis and Management in the Age of AI**
  Yunha Hwang, Assistant Professor and Co-Founder, **MIT & Tatta Bio**

SINGLE-CELL STAGE — ADVANCES IN SINGLE CELL

- **11:30 — From Barriers to Blueprints: Mapping the Regulatory Landscapes of Cell Identity**
  Samantha Morris, Associate Professor of Medicine and Systems Biology, **Brigham and Women's Hospital & Harvard Medical School**
- **12:00 — Advances in Scalable Single Cell RNA-seq with Parse Biosciences' Evercode**
  Mike Khan, Technical Sales Manager, **Parse Biosciences**
  Sponsored by Parse Biosciences
- **12:30 — Sample-Level Modeling and Quantitative Embedding of Single-Cell Data at Scale with tinydenseR**
  Pedro Milanez-Almeida, Senior Expert II, Data Science, **Novartis**

SPATIAL STAGE — ADVANCES IN SPATIAL TECHNOLOGIES

- **11:30 — Panel Discussion: Spatial Technologies: What's Real, What's Hype, What's Missing**
  Jasmine Plummer, Director, Center for Spatial OMICs, **St. Jude Children's Research Hospital**
  Ioannis Vlachos, Associate Professor of Pathology, Director of the Spatial Technologies Unit, **Harvard Medical School**
  Katy Börner, Victor H. Yngve Distinguished Professor of Engineering and Information Science, **Indiana University Bloomington**
- **12:00 — Beyond Data Generation: AI-Driven Spatial Biology Analysis at Scale with Weave**
  Marc Claesen, Founder and CTO, **Aspect Analytics**
  Sponsored by Aspect Analytics
- **12:30 — A Comparative Assessment of Spatial Transcriptomic Technologies Across Distinct Tissues**
  Nick James, Postdoctoral Associate, Center for Advanced Research Technologies, **University of Rochester**

EPIGENETICS STAGE — THE EPIGENOME IN HEALTH & DISEASE

- **11:30 — Unraveling Histone Modification Machinery: Structural Mechanisms of Epigenetic Regulation in Cancer**
  Evan Worden, Assistant Professor, **Van Andel Institute**
- **12:00 — Epigenetic Restriction of Extraembryonic Lineages Mirrors the Somatic Transition to Cancer and Can Be Used for Non-Invasive Cancer Resolution**
  Franziska Michor, Professor of Computational Biology, **Dana-Farber Cancer Institute**
- **12:30 — Stem Cell States in Neural Regeneration**
  Whitney Heavner, Scientist, **National Institute of Neurological Disorders and Stroke (NINDS)**

CANCER OMICS STAGE — NOVEL CANCER BIOMARKER DISCOVERY

- **11:30 — Mining the TCGA Genome: Driving Cancer Discovery with Whole-Genome Data**
  Gad Getz, Director of the Cancer Genome Computational Analysis Group, **The Broad Institute of MIT and Harvard**
- **12:00 — From Myeloma to Multi-Cancer: Building a Scalable, AI-Ready Data Commons for Translational Oncology**
  Alexander Gout, Director, Translational Research, **Multiple Myeloma Research Foundation**
- **12:30 — AI-Assisted Genomic Data Ecosystems: Scaling Molecular Data Operations for Cancer Research**
  Michael Tolstorukov, Director of Bioinformatics and Molecular Data, **Dana-Farber Cancer Institute Tolstorukov**

ROOM 50 — WORKSHOP

WORKSHOP
Computational Biology Upskilling
Meixue (Michelle) Duan, Senior Expert I Data Science, **Novartis**
Sarah Spencer, AD & Senior Principal Data Science, **Novartis**
Kumar Veerapen, Associate Director of Human Genetics, **Takeda**

ROOM 51 — WORKSHOP

WORKSHOP
Skill-Amplified AI for Biological Data: From Mindset to Debugging
Eric Ma, Senior Principal Data Scientist, **Moderna**

LIVE LOUNGE OVER LUNCH

TIME	
13:05	**Best Practices in Single-Cell and Spatial Sequencing: How to Plan & Validate Experiments** **Mauro Muraro**, Co-Founder & CEO, **Single Cell Discoveries** **Sponsored by Single Cell Discoveries**
13:20	**From Sample to Long Reads: Automating High-Molecular-Weight DNA Extraction Workflows** **Brandon Easparro**, Product Manager, **Omega Bio-tek** **Sponsored by Omega BioTek**
13:35	**Introduction of Twist Library Preparation Kits developed with Novel Enzyme Engineering** **Paul Frere**, Director of Commercial Development, **Twist Bioscience** **Sponsored by Twist Bioscience**
13:50	Sponsored slot available

14:05 – 15:10

INNOVATION STAGE — SEQUENCING: SPEED, COST AND SCALE - WHAT CAN WE ACHIEVE?

- **14:10 — Nanopore-Based Random Genomic Sampling to Diagnose Neurodegenerative Disease at an Ultra Fast Speed**
  Chun-Chieh Lin, Assistant Professor of Pathology, Geisel School of Medicine, **Dartmouth College**
- **14:40 — Innovative Multimodal Solutions for Rare Disease Diagnostics**
  Christine Eng, Chief Medical Officer, Chief Quality Officer, **Baylor Genetics**
  Sponsored by Baylor Genetics
- **15:10 — Fueling Target Discovery - The Power of Genomic Sequencing**
  Yuxin Liang, Senior Principal Scientific Manager, **Genentech**

MULTI-OMICS INTEGRATION STAGE — PROTEOMICS FOR TARGET DISCOVERY & CELLULAR INSIGHTS

- **14:10 — Regulatory Mechanisms of Proteins Abundance Control across Single Cells in Neurodegenerative Disease**
  Mahlon Collins, Research Innovation Coordinator, **Parallel Squared Technology Institute (Slavov Lab)**
- **14:40 — Solving Production Bottlenecks in Bioinformatics Compute: Runtime, Cost, GPU Access, and Failed Jobs**
  Fengbo Ren, Founder & CEO, ***Fovus***
  Sponsored by Fovus
- **15:10 — Proteomics-Driven Target Discovery and Drug Development**
  Matthew Glover, Associate Director, Proteomics, **AstraZeneca**

AI IN DRUG DISCOVERY STAGE — AI FOR OMICS IN DRUG DISCOVERY

- **14:10 — Closing the Loop in Target Discovery: Applying Foundation Models and AI to Targeted Identification in ADPKD**
  Tiziana Caputo, Senior Expert I, Data Science, **Novartis**
- **14:40 — Towards Personalized Therapeutics: Machine Learning-Driven Integration of Pharmacokinetics and Response Biomarkers**
  Puneet Saxena, Director Computational Biology, **Excelra**
  Adrienne Yanez, Scientific Manager, **Excelra**
  Sponsored by Excelra
- **15:10 — Same-Sample Multi-Omics Profiling and Applying Integrative Multi-Omics AI/ML Methods Benchmark in Rare Disease**
  Anas Al Zabiby, Multi-omics Data Science Expert II, Discovery Sciences, Biomedical Research, **Novartis**

BIOPHARMA DATA MANAGEMENT STAGE — CLOUD AND FEDERATED DATA PLATFORMS

- **14:10 — Curation of Large Scale 'Omics Data for Biomarker Discovery**
  Lauren Wasson, Senior Scientist II - Bioinformatics, **AbbVie**
- **14:40 — Genomics at the Point of Care: Building the Data Foundation for Personalized Medicine**
  Roberto Lleras, *VP, Healthcare & Life Sciences Solutions and Strategy*, **TTEC Digital**
  Devan Szczepanski MD, MA, Owner & CEO, **NuWell Medicine™**
  Sponsored by TTEC
- **15:10 — From Research-Grade Molecular Data to Regulatory Impact: Enabling Drug Filing and Next-Generation AI**
  Andrea Calabria, Senior Director of Data Science and Computational Biology, **Tessera Therapeutics**

SINGLE-CELL STAGE — SCALING SINGLE-CELL ANALYSIS: FROM THOUSANDS TO MILLIONS OF CELLS

- **14:10 — Tissue and Cellular Spatiotemporal Dynamics in Colon Aging**
  Aidan Daly, Computational Scientist, **New York Genome Center**
- **14:40 — Hidden in Plain Sight: Druggable Cell Populations Missed by Standard Annotation**
  Parashar Dhapola, CEO, **Nygen Analytics AB**
  Sponsored by Nygen
- **15:10 — Scaling Single-Cell Multi-omics to Population Studies: Insights into Asthma Risk from Cross-Border Cohorts**
  Darren Cusanovich, Associate Professor, Cellular and Molecular Medicine, **University of Arizona**

SPATIAL STAGE — SPATIAL MULTI-OMICS

- **14:10 — Context-Dependent Effects of Imputation on Spatial and Single-Cell Transcriptomics Integration**
  Claudia Rangel-Escareño, Principal Investigator, **Tecnologico de Monterrey**
- **14:40 — More details to be announced shortly**
  Sponsored by Vizgen
- **15:10 — RNA-Protein Decoupling in Human Tissues: Systematic Discordance Revealed by Same-Slide Spatial Multiomics**
  Bruno Matuck, Principal Investigator of the Oral Systems Biology Lab (LaBBioS), **Hospital Israelita Albert Einstein**

EPIGENETICS STAGE — ADVANCES IN EPIGENETIC BIOMARKERS FOR PRECISION MEDICINE

- **14:10 — Taming The Unknown: Pragmatic Epigenetic Approaches in Cancer Risk Assessment and Treatment**
  Mukesh Verma, Chief, **National Cancer Institute (NCI)**
- **14:40 — Long-Read Epigenetics and the Hidden Regulation of mtDNA**
  Stefan Isaac, Assistant Professor, Biochemistry and Cell Biology, **Boston University**
- **15:10 — Epigenetic Signatures Linking Alzheimer's Genetic Risk and Alcohol Use Disorder**
  Gita Pathak, Assistant Professor, **Icahn School of Medicine at Mount Sinai NY**

CANCER OMICS STAGE — MAPPING THE TME AND PATHWAY ANALYSIS

- **14:10 — Y Chromosome Alterations in Cancer: From Neglected Passenger to Potential Biomarker**
  Esther Rheinbay, Assistant Professor of Medicine, **Mass General Brigham Cancer Institute, Harvard Medical School**
- **14:40 — Spatially Resolved Repeat RNA Landscapes in Cancer: Uncovering Viral-like Signals and Tumor-Microenvironment Crosstalk**
  David Ting, Associate Professor of Medicine, **Harvard Medical School**
- **15:10 — Mapping Stromal Divers of TME Reorganization in Progressive Pancreatic Cancer**
  Meredith Brown, Discovery Fellow, **Novartis**

ROOM 50 — WORKSHOP

WORKSHOP
Optimising Your CV in the AI Era
Jim Gould, Director for Postdoctoral Affairs, **Harvard Medical School**
Lauren Celano, Co-Founder and CEO, **Propel Careers**

ROOM 51 — WORKSHOP

WORKSHOP
Beginning with Multi-Omics Data Integration
Planning, Considerations and Practical Guidance
Neva Cherniavsky Durand, Senior Scientist, **Broad Institute of MIT and Harvard**
Natalia Benova, PhD Candidate, **Leeds Beckett University**

15:40	**NETWORKING BREAK**

16:10 – 17:10

INNOVATION STAGE — WHAT DOES THE EVOLUTION OF SEQUENCING MEAN FOR TRANSLATIONAL RESEARCH?

- **16:10 — Exomes, Genomes, Multi-Omics: Navigating the Space Between Today's Standards and Tomorrow's Diagnostics**
  Ramakrishnan Rajagopalan, Director of Translational Bioinformatics, **Children's Hospital of Philadelphia**
- **16:40 — Towards Pre-Symptomatic Diagnosis of Alzheimer's Disease: Unlocking Isoform-Level Biomarkers**
  Mark Ebbert, Associate Professor, Sanders-Brown Center on Aging, **University of Kentucky**
- **17:10 — Panel Discussion: How Do The Sequencing Technology Advancements Drive Translational Research?**
  Miten Jain, Assistant Professor, **Northeastern University**
  Bharat Thyagarajan, Laboratory Medicine and Pathology Vice Chair for Translational Research, **University of Minnesota**
  Jing Colatat, Senior Scientist, Vaccine R&D, **Pfizer**

MULTI-OMICS INTEGRATION STAGE — MULTI-OMICS FOR DRUG DISCOVERY

- **16:10 — Integrating Transcriptomics and Proteomics to Accelerate Biomarker Discovery and Clinical Translation**
  Banishree Saha, Associate Director, Biomarker and Assay Analytical Lead, **Takeda**
- **16:40 — From Spatial Atlas to World Model: The Data and AI Infrastructure Redefining Cancer Biology**
  Jennifer Elliot, Senior Director, Business Development, **Bioptimus**
  Sponsored by Bioptimus
- **17:10 — Multi-Omic Case Studies in Drug Safety: Biomarker Discovery and Mechanistic Insights**
  Tom Lanz, Senior Director of Multi-Omics and Biomarkers, **Pfizer**

AI IN DRUG DISCOVERY STAGE — PREDICTIVE MODELLING FOR TARGET VALIDATION

- **16:10 — Leveraging Foundation Models and In Silico Perturbation to Accelerate Target Identification in Early Discovery**
  Xiong Liu, Director, Data Science and AI, Biomedical Research, **Novartis**
- **16:40 — AI-Driven and Interpretable Gene Network Modeling: From Transcriptomics to Drug Targets**
  Kiyohiro Maeda, Senior Data Scientist, **Fujifilm Corporation**
  Sponsored by Fujifilm Corporation
- **17:10 — Leveraging AI to Accelerate Target Engines**
  Franck Rapaport, Director of Target, Disease and Systems Biology Data Science and AI, **Sanofi**

BIOPHARMA DATA MANAGEMENT STAGE — BUILDING YOUR AI-READY DATA STRATEGY

- **16:10 — Judging Deep Research Agents: Validation for Drug Discovery AI**
  Rui Sun, Senior Scientist, Generative AI & Agentic Modeling, **Takeda**
- **16:40 — Turning Biobank-Scale Genetic Associations into Actionable Evidence for Drug Discovery**
  Madhuri Gota, Senior Data Engineer, **Maze Therapeutics**
  Sandor Szalma, Scientific Advisor, **Zifo Technologies**
  Sponsored by Zifo
- **17:10 — Pharma Knowledge Graphs and Large Language Models: Exploring the Semantic Frontier of Biomedical AI in 2026**
  Helena Deus, Lead for Semantic Data Products, **Bristol Myers Squibb**

SINGLE-CELL STAGE — MULTI-MODAL SINGLE-CELL ANALYSIS

- **16:10 — Decoding the Stromal-Immune Axis: Single-Cell Insights into Immune-Mediated Diseases**
  Saurabh Vishnu Laddha, Principal Computational Scientist, **Johnson & Johnson Innovative Medicines**
- **16:40 — Sponsored slot available**
- **17:10 — SIMBA+: Dissecting Genetic Variant Function Through Single-Cell Multiomics Integration**
  Luca Pinello, Associate Professor, **Massachusetts General Hospital**

SPATIAL STAGE — SPATIAL DATA VISUALIZATION & ANALYSIS

- **16:10 — VR-Omics 2.0: A Programming-Free Platform for End-to-End Multi-Slice Spatial Transcriptomics Analysis and Immersive 3D Visualisation**
  Denis Bienroth, Software Engineer, **Murdoch Children's Research Institute**
- **16:40 — More details to be announced shortly**
  Sponsored by Elucidate Biotechnologies
- **17:10 — Evaluating Spatial Transcriptomics Technologies' Ability to Localize Biomarkers of Lung Cancer Progression**
  Jason Weis, PhD Candidate, **Boston University School of Medicine**

EPIGENETICS STAGE — SINGLE-CELL EPIGENOMIC PROFILING

- **16:10 — The Promise and Peril of Targeting Epigenetics through the Large-Scale COSMOS Randomized Clinical Trial to Improve Healthspan and Prevent Disease**
  Howard Sesso, Associate Director, Division of Preventive Medicine, **Brigham and Women's Hospital**
- **16:40 — DropC Allows Scalable and Multimodal Profiling of Genetic and Non-Genetic Determinants of Human Leukemia**
  Giovanni Gambi, Post Doc Fellow, **NYU Langone Health**
- **17:10 — Learning Multiomic Cell Dynamics with Neural ODEs**
  Christina Leslie, Principal Investigator, **Memorial Sloan Kettering Cancer Center**

CANCER OMICS STAGE — PRECISION MEDICINE & IMMUNOTHERAPY

- **16:10 — From Multi-Omics to Real-Time AI Precision Medicine in Colorectal Cancer**
  Enrique Valezquez Villarreal, Assistant Professor, **City of Hope**
- **16:40 — Why T-Cell Immunotherapy Fails in Brain Cancer: Insights from Tumour-Immune Interactions in Glioblastoma**
  Christina Jackson, Assistant Professor of Neurosurgery, **University of Pennsylvania**
- **17:10 — Single Cell Analysis Identifies Factors Underlying CAR T Cell Therapy Response in Glioblastoma**
  Nelson Freeburg, Postdoctoral Researcher, Silverbush Lab, **University of Pennsylvania**

ROOM 50

WORKSHOP
From Prompt to Provenance: AI Enhanced Contextual Workflow Across the Common Fund Data Ecosystem (CFDE)
Noël Burtt, Director, Operations & Development, Knowledge Portals and Diabetes, **The Broad Institute of MIT and Harvard**
Christy Kano, Project Manager, **National Institute of Health**
Luka Maisuradze, Postdoctoral Associate, **The Broad Institute of MIT and Harvard**
Daniall Masood, Postdoctoral Scholar, **BiomarkerKB**

ROOM 51

Roundtable: What Does Your AI-Ready Team Look Like?
Edouard Duquesne, Data & AI Product Delivery Lead - Medical, R&D, **Ipsen**
Marina Darlow, Incubation Lead, AI Tools for Pharma Research and Reporting, **Takeda**
Michail Vlysidis, Principal Engineer, Technology II, **AbbVie**

17:40	**DRINKS RECEPTION**
19:10	**CLOSE**

The Festival of Genomics & Biodata • Day 2 Agenda • June 4th 2026

TIME	
09:25	**Opening Remarks**
09:30	**Reading & Rewriting Life: A Reflection on the Impact of The Human Genome Project, and The Future of Genomics** **George Church**, Professor of Genetics, **Harvard Medical School** **Mark Adams**, Professor & Interim Scientific Director, **The Jackson Laboratory for Genomic Medicine** **Sorin Istrail**, Julie Nguyen Brown Professor of Computational and Mathematical Sciences, **Brown University**
10:15	**Panel Discussion: Multi-Modal Data at Scale: Discovery, Governance, and Trust** **John Tallarico**, Global Head of Discovery Sciences, **Novartis** **Stacey Gabriel**, Executive Vice President, Platforms and Scientific Execution, **The Broad Institute of MIT and Harvard** **Melina Claussnitzer**, Director, Broad Diabetes Initiative and Faculty, Center for Genomic Medicine & Endocrine Division, **Massachusetts General Hospital** **Woody Sherman**, Founder and Chief Innovation Officer, **PsiThera**
11:00	**NETWORKING BREAK**

11:30 – 12:30

INNOVATION STAGE — BUILDING THE INFRASTRUCTURE FOR PETABYTES SCALE GENOMICS

- **11:30 — Right Read for the Right Task: Orchestrating Multiple NGS Platforms Across the Biologics Pipeline**
  Yang Song, Associate Principal Scientist, **AstraZeneca**
- **12:00 — From Population-Scale Genomics to Trial Acceleration in Prevention and Disease**
  Michael Cook, Chief Science Officer, **Our Future Health**
- **12:30 — Big Data, Big Problems: Building Infrastructure for Research at Any Scale**
  Mitchell Shiell, Product Manager, **Ontario Institute for Cancer Research**

MULTI-OMICS INTEGRATION STAGE — MULTI-OMICS INTEGRATION WITH AI/ML

- **11:30 — AI-Powered Cross-Level Cross-Scale Cross-Species Multi-Omics Integration And Predictive Modeling For Drug Discovery**
  Lei Xie, Professor, **Northeastern University**
- **12:00 — Multiome Perturb-Seq: Scalable CRISPR Screens Linking Transcriptome and Epigenome at Single-Cell Resolution**
  Thomas Norman, Associate Member, **Memorial Sloan Kettering Cancer Center**
- **12:30 — Multimodal Foundation Models for Biomolecular Analysis**
  Smita Krishnaswamy, Associate Professor of Genetics and of Computer Science, **Yale University**

AI IN DRUG DISCOVERY STAGE — BEYOND PROOF OF CONCEPT - AI ROLLOUT AT SCALE

- **11:30 — Panel Discussion: From AI Tools to AI Systems: Operationalising AI in Drug Discovery**
  Julia Fox, Director, Data Sciences, **Takeda**
  Devin Chen, Director, Data Science, NGTx, **Eli Lilly**
  Shicheng Guo, Senior Director of Translational Genetics and Data Science, **Arrowhead Pharmaceuticals**
  Ben DeMeo, Senior Machine Learning Researcher, **Valid Inc.**
- **12:00 — Causal by Design: Genetics-First Discovery Combined with Agentic AI as The Angine of Next-Generation Therapeutics**
  Alexandra Fish, VP of Tech-Enabled Life Sciences, **Genomics Ltd.**
  Sponsored by Genomics LTD
- **12:30 — Operationalizing Spatial Transcriptomics in Clinical Trials: Digital Pathology Integration and Agentic AI Workflows**
  Emre Arslan, Associate Director, **Takeda**

BIOPHARMA DATA MANAGEMENT STAGE — DATA SHARING & ANALYSIS

- **11:30 — Target Gene Notebook: A Dual-Use Platform for Target Evaluation**
  Jennifer Heymont, Associate Director, Scientific Informatics, **Eisai**
- **12:00 — Sponsored slot available**
- **12:30 — Bayer's R&D Data Science Ecosystem – A Central Nervous System to Improve Efficiency and Success Rates in Pharma**
  Dan Gusenleitner, Director of Computational Biology, **Bayer**

SINGLE-CELL STAGE — CANCER HETEROGENEITY AND TME

- **11:30 — Multimodality of Single Cell Analysis in Clinical Settings**
  Asaf Rotem, Senior Director of Translational Medicine, **AstraZeneca**
- **12:00 — Emerging Single-Cell Modalities: Expanding What We Can Measure with Next-Generation Profiling Technologies**
  Caleb Lareau, Assistant Member, Computational and Systems Biology Program, **Memorial Sloan Kettering Cancer Center**
- **12:30 — Learning Cellular Kinetics from Multimodal Single-cell Asynchrony**
  Chenxu Zhu, Assistant Professor and Core Faculty Member, **New York Genome Center**

SPATIAL STAGE — SPATIAL TRANSCRIPTOMICS IN DEVELOPMENTAL BIOLOGY

- **11:30 — Polyploid Cardiomyocytes Define Niche-Specific Transcriptional States in the Mammalian Heart**
  Paul Kiessling, PhD Student, **University of Aachen**
- **12:00 — A unified toolbox for single-cell spatial genomics**
  Fei Chen, Associate Professor, **Harvard University**
  Sponsored by Takara Bio
- **12:30 — Single Cell Spatial Transcriptomics Links Wnt Signaling Disruption to Extracellular Matrix Development in a Cleft Palate Model**
  Jeremie Piña, Postdoctoral Fellow, **NIH**

EPIGENETICS STAGE — EPIGENETIC THERAPEUTICS

- **12:00 — Sex-Specific Epigenetic Regulation of Neurodevelopment via Stress Signalling and Transposons**
  Richard Hunter, Associate Professor, **University of Massachusetts Boston**
- **12:30 — Rewriting The Epigenetic Playbook: Targeting Epigenetic Drivers of Childhood Cancer**
  Dr. Michael Koldobskiy, Assistant Professor of Oncolog, **Johns Hopkins University School of Medicine**

CANCER OMICS STAGE — LIQUID BIOPSY FOR PRECISION ONCOLOGY

- **11:30 — Panel Discussion: Transforming Early Cancer Detection, Diagnosis, and Surveillance with Liquid Biopsies**
  Aparna Parikh, Associate Professor, **Harvard Medical School**
  Shervin Tabrizi, Assistant Professor, Radiation Oncology, **University of Pennsylvania**
  Diana Merino Vega, Global Senior Director Early Detection, **AstraZeneca**
  Elaine Joseph, Director, Precision Medicine, **AstraZeneca**
- **12:00 — Measuring Immune Fitness from Blood: A Biophysical Liquid Biopsy for Immunotherapy**
  Scott Manalis, David H. Koch Professor in Engineering, **Koch Institute for Integrative Cancer Research**
- **12:30 — Technologies for Ultrasensitive ctDNA Detection**
  Viktor Adalsteinsson, Director, Gerstner Center for Cancer Diagnostics, **The Broad Institute of MIT and Harvard**

ROOM 50 — WORKSHOP

WORKSHOP
Analysis and Visualization of Spatial Transcriptomics Data
Luca Zanella, Research Scientist and Course Director, **Columbia University**
Martin Hemberg, Associate Professor of Neurology, **Harvard Medical School**

ROOM 51

NETWORKING: Boston Women in Bioinformatics Networking Session

Join us for an energizing discussion and networking session designed to foster meaningful connections among women working in bioinformatics and related fields. Whether you're a student, researcher, data scientist, or industry professional, this is a unique opportunity to expand your network, share experiences, and spark collaborations in a supportive, women-led environment.

You'll hear from the Boston Women in Bioinformatics group and meet peers and mentors from diverse backgrounds, each bringing a different perspective on navigating careers, research challenges, and leadership in a rapidly evolving field.

13:00	**LUNCH BREAK**

14:00 – 15:00

INNOVATION STAGE — AI/ML IN GENOMIC ANALYSIS

- **14:00 — Decoding the Language of Life: A Large Language Model for the RNA World**
  John Rinn, Professor, **University of Colorado Boulder**
- **14:30 — tRNA Isodecoder Analysis using Nanopore Ionic Current Signals and Deep Learning**
  Miten Jain, Assistant Professor, **Northeastern University**
- **15:00 — Using Machine Learning to Predict Compound Polypharmacology**
  Stephen Capuzzi, Principal Scientist, Data and Computational Sciences, **Vertex Pharmaceuticals**

MULTI-OMICS INTEGRATION STAGE — MULTI-OMICS FOR BRAIN BIOLOGY

- **14:00 — Advances in Single-cell and Long-read Sequencing Converge for Novel Insights in Alzheimer's Disease**
  Lindsay Rizzardi, Assistant Professor of Pathology and Laboratory Medicine, **The University of Alabama at Birmingham**
- **14:30 — CSF Proteomics Reflect Neuronal Excitability Before Amyloid Aggregation in Preclinical AD**
  Abhay Moghekar, Biofluid Biomarker Core Leader, Clinical Core Co-Leader, **Johns Hopkins School of Medicine**
- **15:00 — Single-Cell Multi-Omics Integration to Find Blood Targets for Brain Diseases**
  Mark Gerstein, Professor of Biomedical Informatics, **Yale School of Medicine**

AI IN DRUG DISCOVERY STAGE — AI-READY ENTERPRISE STRATEGY

- **14:00 — From Data to Decisions: Building an Agentic AI Platform for Drug Discovery**
  Amir Bayegan, Associate Director AI/ML, **Cellarity**
- **14:30 — AI/ML and FAIR Data Foundations for Functional Genomics-driven Target and Biomarker Discovery**
  Michael Steinbaugh, Director, Data, AI and Genome Sciences, **Merck**
- **15:00 — Building the Lab of the Future - Connecting AI, Digitalisation and Automation for Closed-Loop Drug Discovery**
  Hans Bitter, Head of Computational Science & Data Strategy (R&D leadership team), **Takeda**
  Jonathan O'Connell, Head of Drug Discovery Automation and Transformation, **Takeda**

BIOPHARMA DATA MANAGEMENT STAGE — DATA GOVERNANCE & COMPLIANCE IN PRACTICE

- **14:00 — Building an AI-Ready Data Strategy: Lessons from Data Governance at Takeda**
  Krimish Shah, Associate Director Regulatory Data Governance Lead, **Takeda**
- **14:30 — Architecting the Genomic Data Backbone: Orchestration, Metadata and Versioned Assets**
  Yohann Potier, Senior Director of Data Engineering and Informatics, **Tessera Therapeutics**
- **15:00 — Building a Clinical Data Management Department from Ground Up**
  Julie Filipenko, Vice President, Clinical Data Management, **Graviton Biosciences**

SINGLE-CELL STAGE — MACHINE LEARNING, DEEP LEARNING & GENERATIVE MODELS FOR SINGLE-CELL

- **14:00 — Development and Optimization of scRNA-seq Pipelines to Characterise iPSC-Derived Hematopoietic Stem Cells using AI**
  Aayudh Das, Senior Scientist, **Stratus Therapeutics**
- **14:30 — Platform MACS: Accelerating Target Discovery with Single-Cell Workflows**
  Marc Wadsworth, Senior Principal Scientist, **Pfizer**
- **15:00 — Application of single cell analytics to drug discovery and development**
  Giorgio Gaglia, Head of Systems Biology, Associate Director, **Sanofi**

SPATIAL STAGE — PATHOLOGY X SPATIAL OMICS

- **14:00 — Acquiring Principles of Spatial Data Analysis for Effective Disease Profiling**
  Priyank Patel, Principal Scientist, **Boehringer Ingelheim**
- **14:30 — Advancing Toxicologic Pathology Through Spatial Omics: Challenges, Opportunities, and Cross-Species Insights**
  Chandra Saravanan, Director of Pathology, **Novartis Institutes for Biomedical Research**
- **15:00 — Mapping Therapeutic Targets in Fibrotic Diseases using Spatial Transcriptomics**
  Lauren Gutgesell, Scientist, **Arda Therapeutics**

EPIGENETICS STAGE — EPIGENETICS

- **14:00 — Single-cell 3D Genome Organization in Leukemia with DROP-C**
  Guido Barzaghi, Postdoctoral Fellow in the Tsirigos Lab, **NYU Grossman School of Medicine**
- **14:30 — Structure and Function of ATP-Dependent Chromatin Remodeling Complexes in Health and Disease**
  Dr. Siddhant Jain, Postdoctoral research fellow, **Dana-Farber Cancer Institute**
- **15:00 — How Enhancer Mutations Drive Ovarian Cancer Through RNA-Mediated Epigenetic Regulation**
  Natalia Benova, PhD Student, **Leeds Beckett University**

CANCER OMICS STAGE — MRD

- **14:00 — Ultra-Sensitive ctDNA for MRD Detection in Early-Stage EGFRm Lung Cancer: Insights from ADAURA, NeoADAURA, and LAURA**
  Ryan Hartmaier, Senior Director, Translational Medicine, Oncology R&D, **AstraZeneca**
- **14:30 — Ultrasensitive MRD Monitoring to Predict Response to CDK4/6 Inhibitors in Metastatic Breast Cancer**
  Pedram Razavi, Director, Liquid Biopsy and Cancer Genomics, MSK Biomarker Development Program, **Memorial Sloan Kettering Cancer Center**
- **15:00 — Liquid Biopsies Predict Outcome and Guide Therapy in Patients with Hodgkin Lymphoma**
  Julia Paczkowska, Post-doctoral Researcher, **Dana-Farber Cancer Institute**

ROOM 50 — WORKSHOP

WORKSHOP
Building Single-Cell RNA-seq Atlases: Concepts and Best Practices
Saurabh Vishnu Laddha, Principal Computational Scientist, **Johnson and Johnson Innovative Medicines**
Ángel Gálvez Merchán, Scientist II, Computational Biology, **eGenesis**

ROOM 51 — WORKSHOP

WORKSHOP
Enhancing Variant Analysis and Interpretation
Overview of Curation Resources for Clinicians to Facilitate Genetic Aanalysis for Rare Disease
Marina DiStefano, Director, Clinical Genomic Operations, **Broad Clinical Labs**
Andrea Oza, Clinical Genomic Analyst and Genetic Counselor, **Broad Clinical Labs**

15:30	**CLOSE**