NEXTGEN OMICS & SPATIAL US 2025

OXFORD GLOBAL

27 - 28 March 2025 | Boston, MA

OMICS BY OXFORD GLOBAL

Next Gen Omics- NGS, Clinical Omics & Diagnostics

Day 1 Track 1: Advanced Sequencing Technologies

- Novel sequencing methods to empower precision medicine
- Long-read RNA-Seq sequencing methods
- Improving accessibility and lowering costs of genome sequencing
- Shining a spotlight on new sequencing instruments
- Sequencing beyond DNA, including protein sequencing
- Overcoming bottlenecks between library prep and multiplexed sequencing
- Improving sensitivity of sequencing technologies

Day 1 Track 2: Multi Omics **Data Harmonization, Integration & Analysis**

Part 1: Bioinformatics & Data Analysis

- Tools for analyzing high-throughput sequencing data
- Bioinformatics & computational analysis tools for NGS data
- Large-scale multi omics data analysis
- Integrating multiple datasets

Part 2: Next-Generation AI Implementations

- AI/ML toolkits for multi-omics datasets
- Utilizing novel AI algorithms for nextgen omics

Day 1 Track 3: **Digital PCR & Liquid Biopsies**

- PCR machines for NGS library preparation
- Advances in analyzing cell-free DNA, CTCs, cell-free RNA, micro-RNA and DNA methylation
- Assessing potential in personalized medicine, targeted drug monitoring, and clinical trials
- Developing next-generation MRD assays

Day 2 Track 1: **Novel Diagnostics for Infectious & Non-Infectious Diseases**

- Utilizing omics technologies & sequencing for diagnostics
- CRISPR-based diagnostics approaches
- Using omics to characterize infectious diseases
- Diagnostics case studies from: cardiovascular, metabolic, neurological, respiratory, genetic & rare disease
- Rapid diagnostics development
- Innovative molecular diagnostic methods

Day 2 Track 2: **Applying Multi-Omics in the Clinic**

- Proteomics, Metabolomics, Genomics, Lipidomics, Epigenomics
- Clinical utility & adoption of liquid biopsies
- Navigating clinical genomic databases
- Developing standardized and harmonized datasets for clinical research
- Utilizing multi-omics data to ensure clinical utility of tests
- Population Genomics, including epidemiology, clinical trials, variance identification and developing therapeutics for underrepresented populations

Next Gen Omics- Single Cell

Day 1 Track 4 – Emerging Single Cell Technologies

- Novel technologies for single cell imaging
- Benchmarking single cell technologies
- Computational tools for single cell analysis
- Proteomics and computational approaches
- Updates from single cell multi-omics
- One pot assays

Day 2 Track 3 – Bioinformatics for Single Cell Analysis

- Computational tools for single cell technologies
- FAIR-data management & analysis
- Machine learning approaches in single cell bioinformatics
- Ensuring high-quality single-cell data
- Cloud-based bioinformatics platforms

Day 2 Track 4 – Applications of Single Cell Technologies

- Spatial single cell patterns
- Scalable single cell analysis pipelines
- Dissecting population dynamics using single cell analyses
- Single cell analytic tools for drug discovery & development
- Leveraging single cell analysis & long read sequencing
- Moving single cell tools towards the clinic

Benefits to Attending

✓ **Hear from and meet with the key innovators in genomics.** 2024 attendees included: Senior Director of Immunology, Revolo Biotherapeutics; Senior Director, AstraZeneca; Director, St Jude Children's Research Hospital

✓ New to 2025! **Take a deep dive into data harmonisation, integration and analysis.** Presentations will include tools for analysing high-throughput sequencing data, large-scale multi-omics data analysis and AI/ML toolkits for multi-omics datasets

✓ New to 2025! **Discuss digital PCR & liquid biopsies.** Hear from key opinion leaders' in-depth presentations on PCR machines for NGS library preparation, developing nextgen MRD assays and advances in analysing cell-free DNA & CTCs

✓ New to 2025! **Advance your understanding emerging single cell technologies** from novel technologies for single cell imaging, through to one pot assays, benchmarking single cell technologies and updates from single cell multi-omics, applying omics in the clinic, bioinformatics for single cell analysis and clinical genomics updates

✓ **Join a series of workshops, panel discussions & roundtables.** Sessions will include: *'Advanced Multi Omic Data Approaches'; 'Single Cell Proteomics'* and many more

NextGen Omics US Speakers 2025 Include:

Tao Yang, Director of Computational Biology, Eli Lilly

Virginia Acha, Associate Vice President – Global Regulatory Policy, MSD

Pascaline Mary, Senior Director, HiFiBiO Therapeutics

Meet Senior Decision Makers

600+ senior attendees at NextGen Omics US from leading research & academic institutions, clinical research institutions, food & nutrition companies as well as major pharmaceutical and biotech companies will attend the event. Delegate job titles include:

Genomics	Single Cell Analysis
Clinical Diagnostics	Spatial Omics
Next Gen Sequencing	Molecular Bioengineering

Discover New Solutions

Formal and informal meeting opportunities offer delegates the chance to discuss key solutions with leading service providers. Services to be discussed include:

Library Preparation	Spatial Gene Expression
Bioinformatics Tools	Single Cell Genomics
Digital Spatial Profiling	Single Cell RNA-Seq

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Spatial Multi-Omics

Day 1 Track 5: Novel Multi-Omic Technologies: Spatial Genomics & Transcriptomics

- *Translating spatial imaging techniques & approaches into drug development*
- *Transcriptomics: techniques & approaches*
- *Single-cell transcriptome imaging*
- *Multi-modality processing*
- *Utilizing spatial data in biology*
- *Cell-cell interactions*
- *Overcoming the challenges in spatial data analysis*
- *Spatial transcriptomic datasets*
- *Data access & standardization*

Day 1 Track 6: Spatial Biology for Therapeutic Discovery & Development

- *Spatial Biology in the tumour environment*
- *Understanding tumour heterogeneity*
- *Distribution of immune cells within the tumour*
- *Relationship between the immune system and tumour biology to identify new therapeutic targets*
- *Single-cell genomics and spatial transcriptomics: discovery of novel cell states and cellular interactions in liver physiology and disease biology*

Day 2 Track 5: Novel Multi-Omic Technologies: Spatial Proteomics & Metabolomics

- *Next gen proteomics – including developing novel technologies for protein analysis & advancements in quantifying protein expression*
- *Metabolomics & lipidomics, including high resolution profiling*
- *Automated multi-omics workflows*
- *Spatial distribution of proteins within cell*
- *Distribution of metabolites at spatial resolution*

Day 2 Track 6: ***Spatial Biology for Therapeutic Discovery & Development***

- *Spatial techniques to study spatial organization of gene expression patterns during brain development*
- *Identification of spatially restricted gene expression domains*
- *Cellular heterogeneity within the developing brain*
- *Spatial analysis of single fibre cells of the developing ocular lens reveals regulated heterogeneity of gene expression*
- *Mapping cellular diversity in the brain*
- *Spatial analysis of brain-immune interactions*

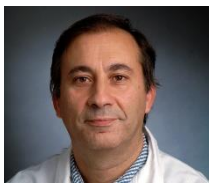
Benefits to Attending

- ✓ **Hear from and meet with the key innovators in spatial multi-omics.** 2024 attendees included: Distinguished University Professor, George Mason University; Senior Scientist, AbbVie; Principal Scientist, Boehringer Ingelheim
- ✓ New to 2025! **Gain invaluable insights into novel multi-omics technologies for spatial genomics & transcriptomics.** Presentations will include translating spatial imaging techniques & approaches into drug development multi-modality processing and spatial transcriptomic databases
- ✓ New to 2025! **Discuss spatial biology for oncology, immunology and neuroscience.** Hear from expert speakers discussing the tumour environment, distribution of immune cells within the tumour and mapping cellular diversity in the brain
- ✓ New to 2025! **Advance your understanding on novel multi-omics technologies for spatial proteomics & metabolomics:** from developing novel technologies for protein analysis through to automated multi-omics workflows, spatial distribution of proteins within cell and distribution of metabolites at spatial resolution
- ✓ **Join a series of workshops, panel discussions & roundtables.** Discussion sessions will include: *'Overcoming the Challenges of Spatial Data Analysis' & 'Spatial Clinical Design'*

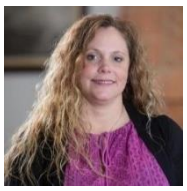
Omics US Speakers 2024 Included:

NextGen Omics & Spatial US Speakers 2025

Aleksandra Markovets
AstraZeneca



Mike Makrigiorgos
Dana-Farber Cancer Institute



Deidre Dalmas
GSK

Meet Senior Decision Makers

600+ senior attendees at NextGen Omics US from leading research & academic institutions, clinical research institutions, food & nutrition companies as well as major pharmaceutical and biotech companies will attend the event. Delegate job titles include:

Spatial Genomics	Spatial Proteomics	Cellular Profiling	Translational Medicine
Spatial Transcriptomics	Systems Biology	Biostatistics	Spatial Omics
Spatial Metabolomics	Molecular Medicine	Computational Genomics	Translational Science

Discover New Solutions

Formal and informal meeting opportunities offer delegates the chance to discuss key solutions with leading service providers. Services to be discussed include:

Spatial Imaging Platforms	Tissue Imaging & Prep	Proteome Analysis	Spatial Mapping
Spatial Data Analysis Tools	Single Molecule Imaging	Spatial Bioinformatics	Spatial Proteogenomics
Spatial Genomics	Cellular Analysis	Spatial Profiling	Biomarker Profiling

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2025 Nextgen Omics US Speakers include

Pharmaceutical Representatives:

- *(Reserved)* Kris Sachsenmeier, Vice President, Compass Therapeutics
- *(Reserved)* Zora Modrusan, Senior Director of NGS, Genentech
- Anka Ehrhardt, Director, Cell-Based Assays / Analytical Research & Development, Merck
- Tao Yang, Director of Computational Biology, Eli Lilly
- Yuchun Guo, Director of Computational Biology and Machine Learning, Camp4 Therapeutics
- Aleksandra Markovets, Director, AstraZeneca
- Virginia Acha, Associate Vice President – Global Regulatory Policy, MSD
- Wenning Qin, Senior VP, Innovation & Process Development, eGenesis, Inc
- Giorgio Gaglia, Head of Systems Biology, Precision Medicine & Computational Biology, Sanofi
- Rajib Schubert, Group Leader, Roche
- Pascaline Mary, Senior Director, HiFiBiO Therapeutics
- Eugean Jiwanmall, Senior Research Analyst for Medical Policy & Technology Assessment, Independence Blue Cross
- Aridaman Pandit, Senior Principal Research Scientist, Abbvie
- Felix Francis, Sr. Manager, Data Management and Analytics Technology Lead, R&D Technology, Takeda
- Priya S. Chockalingam, VP, Head of Clinical BioAnalytics & Translational Sciences, Beam Therapeutics
- Sourav Choudhury, Lab Head, Sanofi
- Guolin Zhang, Principal Scientist, Sensei Therapeutics
- Young Don Kwak, Principal Scientist II, Novartis Institutes for Biomedical Research
- Dong Dong Lin, Principal Scientist, EMD Serono
- *(Reserved)* Kalpana Pillai, Technical Development Principal Scientist, Genentech

Academic Representatives:

- Robert Green, Professor of Medicine & Director of Genomes To People's BabySeq Project, Brigham and Women's Hospital
- Mike Makrigiorgos, Director of the Medical Physics and Biophysics Division, Dana Farber Cancer Institute
- Gábor Balázsi, Henry Laufer Professor, Stony Brook University
- Gang Wu, Director, Center for Applied Bioinformatics, St Jude's Hospital
- Simona Cristea, Head of Genomics Data Science & AI, Dana-Farber Cancer Institute
- Ruslan Sadreyev, Director of Bioinformatics & Assistant Professor, Massachusetts General Hospital / Harvard Medical School
- Yu-Hwa Lo, Professor, UC San Diego Health
- Theodore Perkins, Professor, University of Ottowa
- Brian Cunningham, Professor, University of Illinois
- Nikolai Slavov, Professor, Bioengineering, Founding Director, Parallel Squared Technology Institute
- Winston Hide, Associate Professor of Pathology, Beth Israel Deaconess Medical Center
- Joann Arce, Assistant Professor of Paediatrics, Harvard Medical School
- Xiang Chen, Associate Member, St Jude Children's Research Hospital
- Shuqiang Li, Senior Scientist, Broad Institute
- Wardiya Afshar-Saber, Research Fellow in Neurology, Boston Children's Hospital
- Luca Pinello, Associate Professor of Pathology, Harvard Medical School
- Leonora Balaj, Assistant Professor, Brain Tumor Research Center, Massachusetts General Hospital
- Kalina Hristova, Professor of Materials Science & Engineering Institute, Johns Hopkins University
- Ricardo de Matos Simoes, Instructor, Brigham & Women's Hospital
- Yu-Chi Chen, Bioinformatics Scientist, National Center for Advancing Translational Sciences, NIH
- *(Reserved)* Lana Garmire, Associate Professor, University of Michigan

2025 Spatial Biology US Speakers Include:

Pharmaceutical Representatives:

- Deidre Dalmas, Scientific Director, GSK
- Angela Hadjipanayis, Head of Disease Profiling Genomics and Flow Cytometry, PMCB, Sanofi R&D US
- Alina Ainbinder, Scientific Associate Director, Oncology, Takeda
- Colles Price, Scientific Associate Director, Oncology, Takeda
- Maxime Dhainaut, Director, Spatial Functional Genomics, Noetik
- Shoh Asano, Senior Principal Scientist, Pfizer
- Marina Bleck, Principal Scientist, Boehringer Ingelheim
- Zongmei Gao, Senior Scientist II, AbbVie
- Alexandra Tsolias, Scientist II, Histology, Voyager Therapeutics, Inc.
- Alice Wan, Senior Scientist, AbbVie
- Priyank Patel, Senior Scientist, Boehringer Ingelheim
- Jan Schejbal, Senior Scientist, AbbVie
- Danya Ariel Dean, Senior Scientist Metabolomics, Merck

Academic Representatives:

- Jasmine Plummer, Director, St. Jude Children's Research Hospital
- Stephen Wong, Department Chair & Centre Director Houston Methodist Hospital, Professor at Cornell Medical College
- Jia-Ren Lin, Technical Director of Tissue Imaging, Harvard Medical School
- Lin Wu, Director, Genome Modification Facility, Harvard University
- Elsa Molina, Director, Single-Cell & Spatial Omics Core, Salk Institute for Biological Studies
- Troy McEachron, NIH Distinguished Scholar, Head, Integrated Solid Tumor Biology Section, Pediatric Oncology Branch, National Cancer Institute
- Yasser Riazalhosseini, Associate Professor & Head of Cancer Genomics, McGill University
- Kieran Campbell, Assistant Professor & Group Leader, Samuel Lunenfeld Research Institute, University of Toronto
- Yan Tang, Associate Professor, Principal Investigator, Brigham & Women's Hospital
- Keri Martinowich, Professor, Departments of Psychiatry and Neuroscience, The Johns Hopkins University School of Medicine
- Sammy Ferri-Borgogno, Instructor in the Department of Gynaecologic Oncology and Reproductive Medicine, The University of Texas MD Anderson Cancer Center
- Tien Phan-Everson, Scientist II, Allen Institute
- Jun Wang, Associate Professor, Department of Biomedical Engineering, Stony Brook University, State University of New York
- Kimberly Smythe, Staff Scientist & Laboratory Head, Fred Hutchinson Cancer Research Center
- Allison Herman Stadtman, Investigator, Vascular Aging Biology Unit, Laboratory of Cardiovascular Science, National Institute on Aging, NIH

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