

Technology Networks

# 2025 Abstract Submission

Supplementary Event Information



# 2025 Online Events

## Online Event Synopses

### Laboratory of the Future

January 15–16

The lab of tomorrow is being shaped by cutting-edge innovations in automation, AI-driven data analysis and digital twin technologies. This event will explore how these advancements are revolutionizing lab design, workflow efficiency and scientific output.

### Advances in Battery Research

February 19–20

As the global energy landscape shifts, battery research is more critical than ever. Returning for a second year, this event will explore the latest breakthroughs in battery chemistry, solid-state technologies and sustainable materials.

### Cell & Gene Therapy

March 19–20

This event will focus on the latest progress in precision genome editing, novel delivery vectors, allogeneic cell therapies and the journey from laboratory research to clinical application, offering insights into the future of personalized medicine.

### Innovations in Disease Modeling

April 23–24

This event will cover innovations in advanced *in vitro* and *in vivo* disease modeling and how these advancements are accelerating drug discovery, personalized medicine and our understanding of complex disease mechanisms.

### Innovations in Biopharma

May 21–22

New for 2025, this event will provide insights from both big pharma and emerging biotech firms. Attendees will gain a comprehensive understanding of how rapid technological advancements are reshaping therapeutic development and delivery.

### The Landscape of Cancer Research: Advances in Immuno-Oncology

June 25–26

This event will feature discussions on novel immune checkpoint inhibitors, personalized cancer vaccines and CAR T-Cell therapies. We will also address the challenges of translating basic research into clinical practice and the future direction of research.

### Advances in Food & Beverage Testing

July 16–17

This online event will highlight the latest technologies in food and beverage analysis with a focus on food quality assurance and combating food fraud, ensuring that consumers have access to safe, authentic and high-quality food products.

### Teach Me in 10: Future of Molecular Diagnostics

August 20

New for 2025, this event will cover the innovative technologies driving this field, including next-generation sequencing, liquid biopsy, AI-driven diagnostic tools and their integration into clinical practice to transform patient outcomes.

### Advances in Drug Discovery & Development

September 24–25

The drug discovery landscape is rapidly evolving with the integration of new technologies and methodologies. Returning for 2025, this event will focus on small molecule and biologic drug development, high-throughput screening and novel target identification strategies.

### Advances in Proteomics & Metabolomics

October 22–23

Proteomics and metabolomics are unlocking new dimensions in our understanding of biology and disease. This event will highlight the latest developments in mass spectrometry, single-cell proteomics and metabolite profiling.

### Teach Me in 10: Accelerating Cell and Gene Therapy

November 6

Featuring short, focused sessions, our expert panel of presenters will address key advances across the entire R&D pipeline, from pre-clinical work right through to bioprocessing and manufacturing.

### The Spatial Biology Revolution

November 12–13

Spatial biology is transforming our understanding of cellular and molecular landscapes within tissues. This event will explore the latest advancements in spatial transcriptomics, multiplex imaging and single-cell spatial analysis.

# 2025 Webinars

## Webinar Synopses

### **Tech Spotlight: Target-Based Drug Discovery**

January 30

Advances in target-based drug discovery are reshaping the pharmaceutical landscape, allowing researchers to design more effective treatments with fewer side effects. This webinar will showcase emerging technologies, including structure-based drug design, high-throughput screening and molecular docking, that are accelerating the identification of therapeutic targets and optimizing drug candidate selection.

### **Panel Discussion: Mass Spectrometry**

February 27

Mass spectrometry continues to be a cornerstone in modern analytical science, offering unparalleled sensitivity and specificity for molecular analysis. This panel will feature leading experts discussing the latest trends, including advancements in ion mobility, high-resolution techniques and novel applications in proteomics, metabolomics and drug discovery.

### **The Role of Precision Medicine in Cancer**

March 27

Precision medicine is transforming cancer care by enabling treatments tailored to individual genetic profiles. This event will dive into the latest advancements in genomic sequencing, molecular diagnostics and targeted therapies that are advancing oncology research and improving patient outcomes.

### **Tech Spotlight: High-throughput Screening**

April 24

High-throughput screening technologies are rapidly accelerating drug discovery and other biological research by enabling the simultaneous testing of thousands of compounds. This event will explore the latest innovations, including automation, miniaturization and data analysis techniques.

### **Cell and Gene Therapies**

May 29

The rise of cell and gene therapies marks a new era in medical treatment, with the potential to cure previously untreatable diseases. This event will cover the latest developments in CRISPR, CAR T-Cell therapy and viral vector production, as well as the challenges in scaling up manufacturing and ensuring safety and regulatory compliance.

### **Panel Discussion: Environmental Pollutants**

June 26

From air and water contamination to microplastics, environmental pollutants pose a serious risk to ecosystems and human health. This panel will discuss cutting-edge techniques for detecting, quantifying and mitigating pollutants, focusing on mass spectrometry, chromatography and novel sensor technologies.

### **Antibodies & Screening**

July 31

Antibodies remain central to drug discovery and diagnostic development. This event will explore advancements in antibody screening technologies, such as next-generation sequencing, high-throughput platforms and machine learning tools, that are helping researchers discover and optimize therapeutic antibodies faster and more efficiently.

### **Panel Discussion: Single-Cell Analysis**

August 28

Single-cell analysis is revolutionizing our understanding of cellular heterogeneity and disease mechanisms. This panel will discuss recent innovations in single-cell sequencing, imaging and data analysis technologies that are enabling breakthroughs in immunology, cancer research and regenerative medicine.

### **Tech Spotlight: Lab of the Future**

September 25

Building on emerging technologies like AI, automation and smart lab environments, the lab of the future promises to enhance research efficiency, collaboration and data integrity. This event will examine innovations in lab informatics, robotics and real-time data integration that are shaping the next generation of scientific research spaces.

### **Virology**

October 30

As global health continues to be challenged by viral pathogens, advancements in virology research are more critical than ever. This event will cover new insights into virus-host interactions, vaccine development, antiviral therapies and cutting-edge diagnostic techniques that are reshaping the fight against viral diseases.

### **Tech Spotlight: Battery Research**

November 21

Battery research is critical for powering the next generation of energy storage technologies, from electric vehicles to renewable energy grids. This event will highlight key developments in battery materials, electrochemical techniques and high-throughput testing methods that are advancing the field of energy storage.

### **Panel Discussion: Sustainability in the Lab**

December 11

As the scientific community strives for greener practices, this panel will focus on strategies for achieving sustainability in laboratory environments. Topics will include energy-efficient lab equipment, reducing plastic waste, implementing circular economy principles and promoting eco-friendly practices in research and development.

# 2025 Ask Me Anything

## Ask Me Anything Synopses

### **Body-on-a-Chip**

January 31

This session will explore the rapidly evolving field of "Body-on-a-chip" technologies. Central topics of discussion will revolve around how these microfluidic devices mimic human organs to advance drug discovery, toxicity testing and disease modeling.

### **Epigenetic Biomarkers for Early Disease Detection**

February 24

New for 2025, this session focuses on the critical role of epigenetic biomarkers in early disease detection. Central topics of discussion will revolve around the technologies driving advancements in epigenetics, with a special focus on cancer and autoimmune disease.

### **Precision Medicine for Rare Genetic Disorders**

March 28

New for 2025, this session will highlight the latest breakthroughs in precision medicine for rare genetic disorders. Central topics of discussion will revolve around how advances in genomic sequencing, gene therapies, and tailored treatments are offering new hope for patients, the unique challenges of clinical trials and regulatory hurdles in rare disease research.

### **PFAS**

April 28

This session will delve into the pressing issue of PFAS contamination. Central topics of discussion will revolve around cutting-edge technologies for detecting and mitigating PFAS in water, soil and consumer products.

### **AI-Driven Lab Automation**

May 30

New for 2025, this session focuses on the transformative role of AI in laboratory automation. Central topics of discussion will revolve around how artificial intelligence is streamlining workflows, from data analysis to robotic automation and decision-making.

### **Quantitative Proteomics**

June 30

New for 2025, this session will highlight the essential role of quantitative proteomics in understanding cellular processes. Central topics of discussion will revolve around the latest technologies for protein quantification and their application in biomarker discovery, systems biology and drug development.

### **Organoids**

July 28

This session will explore the groundbreaking field of organoid research. Central topics of discussion will revolve around how organoids are advancing personalized medicine, drug screening and disease modeling and how this technology is reducing reliance on animal models and transforming translational research.

### **Next-Generation Battery Technologies**

August 29

This session will focus on the rapid advancements in battery technology. Central topics of discussion will revolve around next-generation innovations, such as solid-state and flow batteries and new materials that promise to revolutionize energy storage as well as how these technologies are driving sustainability and efficiency in the energy sector.

### **Advances in Cell and Gene Therapy**

September 29

This session will showcase the cutting-edge advancements in cell and gene therapy. Central topics of discussion will revolve around CRISPR, viral vectors and stem cell therapies, along with the challenges in manufacturing, regulation and clinical delivery. It is likely discussion will also include the future of personalized medicine and gene editing technologies.

### **Cell-to-Cell Communication in Cancer**

October 31

This session will focus on how cell-to-cell communication drives cancer progression. Central topics of discussion will revolve around the latest research into the tumor microenvironment, how intercellular signaling contributes to treatment resistance and the emerging technologies used to study these interactions.

# 2025 Ask–Me–Anything

## Ask Me Anything Synopses

### **Innovative CRISPR–Cas Applications**

*November 20*

New for 2025, this session will highlight the latest applications of CRISPR technology beyond genome editing. Central topics of discussion will revolve around how CRISPR is being used for gene regulation, diagnostics and epigenetic modification, exploring its transformative potential across medicine and agriculture.

### **Precision Drug Delivery Technologies**

*December 12*

New for 2025, this session will focus on the rapidly advancing field of precision drug delivery. Central topics of discussion will revolve around latest innovations in nanotechnology, smart drug carriers and targeted therapeutics. It is likely that the speaker will also be answering questions on how these technologies are shaping the future of personalized medicine and enabling more effective treatments.

# 2025 Webinar Series

## Webinar Series Synopses

### **Sustainability in Laboratory Operations**

*March*

This series will explore strategies for reducing waste and improving energy efficiency in labs. Episodes will cover topics such as sustainable lab design, waste management and energy–saving techniques to help labs reduce their environmental impact.

### **Single Cell Analysis**

*June*

Join industry experts as they discuss the benefits of high–resolution single cell analysis over bulk methods. Episodes will also cover how to understand cellular heterogeneity, troubleshooting techniques and the integration with spatial biology for a comprehensive view of cellular behavior.

### **Next–Generation Sequencing (NGS) Techniques**

*September*

This series will focus on optimizing NGS technologies, covering whole genome sequencing, exome sequencing and RNA sequencing. Episodes will provide guidance on troubleshooting, setup and sample preparation to enhance workflow efficiency.

### **Flow Cytometry**

*December*

This series examines the broad applications of flow cytometry across various research and diagnostic fields. Episodes will highlight the technology’s relevance, recent advancements and best practices.



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