

# SELECTBIO

**Lab-on-a-Chip and  
Microfluidics 2024**

**Organoids &  
Organs-on-Chips 2024**

**Flow Cytometry & EVs 2024**

**November 18-20, 2024  
Laguna Hills, California**

**Produced by SelectBIO Conferences**

<https://www.selectbioconferences.com/>

## SelectBIO Laguna Hills November 18-20, 2024 Consolidated Conference Agenda The Hills Hotel – Laguna Hills, California

**Monday, November 18, 2024**

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08:00 Exhibitors Start Move-In to the Exhibit Hall

09:00 Pre-Conference Training Course

**Microfluidics and Nanofluidics for Diagnostic Tests**

Presented by Professor Steve Soper, Foundation Distinguished Professor,  
University of Kansas

Duration: 09:00 – 11:00

Venue: The Slate Room

\*\*Separate Registration is Required to Participate in this Training Course\*\*

11:00 Pre-Conference Training Course

**Microfluidic Product Development**

Presented by Dr. Leanna Levine, Founder & CEO, ALine, Inc.

Duration: 11:00 – 13:00

Venue: The Slate Room

\*\*Separate Registration is Required to Participate in this Training Course\*\*

13:00 Main Conference Registration Commences  
Conference Entrance/Registration Area

13:45 Plenary Session Begins in the Plenary Ballroom

Chaired by Professor Dino Di Carlo, Professor, UCLA and Dr. Leanna Levine, CEO,  
ALine, Inc.

**2024 Conference Focus and Themes Highlighted Over the 2.5-Day Event**

14:00 Steven C. George, Edward Teller Distinguished Professor and Chair, Department  
of Biomedical Engineering, University of California-Davis, United States of  
America

**Organ-on-Chip Systems to Probe Extracellular Vesicle Transport Across  
Biological Barriers**

14:30 Abraham Lee, Chancellor's Professor, Biomedical Engineering & Director, Center  
for Advanced Design & Manufacturing of Integrated Microfluidics, University of  
California-Irvine, United States of America

**Microfluidic Immunoengineering**

15:00 Claudia Gärtner, CEO, microfluidic ChipShop GmbH, Germany

**The Technology and Market Landscape for Lab-on-a-Chip, Microfluidics and  
Organs-on-Chips**

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15:30 Mid-Afternoon Coffee Break and Networking in the Exhibit Hall

16:15 Roger Kamm, Cecil and Ida Green Distinguished Professor of Biological and Mechanical Engineering, Massachusetts Institute of Technology (MIT), United States of America

**Brain Neurovascular Models and Their Application to Modeling Transport in Health and Disease**

16:45 Jim Heath, President, Institute for Systems Biology, United States of America

**New Technologies for Accelerating Progress in Cancer Immunotherapies**

17:15 Eric Diebold, WW Vice President, Research and Development, BD Biosciences, United States of America

**Integrating Innovations for the Advancement of Single Cell Analysis**

17:45 Martyn Boutelle, Professor of Biomedical Sensors Engineering, Imperial College London

**Developing Microfluidic Biosensors and Sensors for Use in Acute Hospital Care - Towards Real-Time Point of Care Diagnostics**

18:15 Roger Royse, Partner, Haynes & Boone LLP, United States of America

**How Developments in Diagnostics, Monitoring and Treatment Impact Patients-Perspective from a Patient**

18:45 Networking Reception in the Exhibit Hall with Beer, Wine and Dinner  
Network with Colleagues, Engage with the Exhibitors and View Posters

20:15 Close of Day 1 of the Conference – Main Conference Programming

20:30 Training Course

**3D-Printing of Microfluidics**

Presented by Noah Malmstadt, Professor of Chemical Engineering and Materials Science, University of Southern California

Duration: 20:30 – 22:30

Venue: The Slate Room

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**Tuesday, November 19, 2024**

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07:30 Morning Coffee, Continental Breakfast and Networking in the Exhibit Hall

Session Title: Emerging Themes and Trends in Lab-on-a-Chip and Microfluidics 2024

Venue: Ballroom A

09:00 Dino Di Carlo, Armond and Elena Hairapetian Chair in Engineering and Medicine, Professor and Chair of Bioengineering, University of California-Los Angeles, United States of America

**Accelerating Life Science Research: From Lab-on-a-Chip to Lab-on-a-Particle**

09:30 Adam Abate, Professor of Bioengineering and Therapeutic Sciences, University of California-San Francisco, United States of America

**Single Cell and Virus Sequencing to Support HIV Cure Studies**

10:00 Steve Soper, Foundation Distinguished Professor; Director, Center of BioModular Multi-scale System for Precision Medicine, Adjunct Professor, Ulsan National Institute of Science & Technology, The University of Kansas

**Applications of Resistive Pulse Sensing in Biology and Medicine**

10:30 Mid-Morning Coffee Break and Networking in the Exhibit Hall - Meet Exhibitors and View Posters

Session Title: Presentations Focusing on Organoids in this Session

Venue: Ballroom A

11:00 Holger Schmidt, Distinguished Professor of Electrical and Computer Engineering, Narinder Singh Kapany Chair of Optoelectronics, Director, W.M. Keck Center for Nanoscale Optofluidics, University of California-Santa Cruz, United States of America

**Lab-on-Chip Devices for Analysis of Extracellular Vesicles and Their Contents From Cerebral Organoid Tissue**

11:30 Mehdi Nikkhah, Associate Professor of Bioengineering, Arizona State University, United States of America

**Integrating Tissue-on-a-Chip Systems with Single-Cell Analysis to Study Disease Progression and Test Therapeutics**

12:00 Alysson Muotri, Professor, Director of the Stem Cell Program, University of California-San Diego, United States of America

**Applications of Human Brain Organogenesis**

12:30 Networking Buffet Luncheon -- Network with Exhibitors and Colleagues, View Posters

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Session Title: Organoids and Organs-on-chips -- Utilizing Microfluidics for Harvesting Biological Insights

Venue: Ballroom A

13:30 Shuichi Takayama, Professor, Georgia Research Alliance Eminent Scholar, Georgia Institute of Technology, United States of America

**Organoids with Reversed Biopolarity (ORBs): SARS-CoV-2 Drug Testing & Breast Cancer Progression**

14:00 Alice Soragni, Assistant Professor, University of California-Los Angeles, United States of America

**Leveraging Patient-derived Tumor Organoids for Precision Medicine**

14:30 Mandy Esch, Project Leader, National Institute of Standards and Technology (NIST), United States of America

**Development of Pumpless Single-Organ and Multi-Organ MPS**

15:00 Mid-Afternoon Coffee Break and Networking in the Exhibit Hall

Session Title: 3D-Printing of Microfluidics

Venue: Ballroom A

15:30 Gregory Nordin, Professor, Brigham Young University, United States of America  
**Pushing Boundaries: High Resolution 3D Printing for Microfluidics**

16:00 Technology Spotlight Presentation

Jeff Schultz, Co-Founder, Phase, Inc., United States of America

**A Platform for Commercialization of 3D Printed Microfluidics Embedded into Standard Well Plates**



16:30 Pranav Soman, Professor, Biomedical and Chemical Engineering, Syracuse University; IPA Program Director, Advanced Manufacturing (AM), National Science Foundation (NSF), United States of America

**Multipath Projection Stereolithography (MPS) and 'CellNet' Technology for Lab-on-Chip Applications**

17:00 Technology Spotlight Presentation

Bryce Hiller, Digital Education Coordinator, ASIGA, United States of America

**ASIGA Advancing 3D Printed Microfluidics**



17:30 Technology Spotlight Presentation

Nicolas Brillouet, CTO, Kloé, France

**Microfluidics and Mask-Aligner: How to Make the Right Choice?**



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18:00 Technology Spotlight Presentation  
Christoph Zellweger, Area Sales Manager, IMT Precision  
on Glass, Switzerland  
**How Microfluidic Structures in Glass can be the Real  
Game Changer for Better Performance**



18:30 Networking Reception with Beer, Wine and Dinner in the Exhibit Hall -- Network  
with Exhibitors, Colleagues and View Posters

20:15 Close of Day 2 of the Conference – Main Conference Programming

20:30 Training Course

**Introduction to Microfluidics**

Presented by Shuichi Takayama, Professor, Georgia Research Alliance Eminent  
Scholar, and Price Gilbert, Jr. Chair in Regenerative Engineering and Medicine,  
Georgia Institute of Technology & Emory University School of Medicine, United  
States of America

Duration: 20:30 – 22:30

Venue: The Slate Room

**\*\*Separate Registration is Required to Participate in this Training Course\*\***

20:30 Training Course

**Lab-on-a-Chip for Point-of-Care Diagnostics Training Course: Technologies,  
Research Trends and Applications**

Presented by Claudia Gärtner, CEO, microfluidic ChipShop GmbH, Germany

Duration: 20:30 – 22:30

Venue: Ballroom A

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**Tuesday November 19, 2024 – Afternoon Session in Parallel Track  
Innovations in Flow Cytometry & Extracellular Vesicles 2024**

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Session Title: Innovations in Flow Cytometry and EVs

Venue: Ballroom B

13:20 Michael Graner, Professor, Dept of Neurosurgery, University of Colorado Anschutz School of Medicine – Session Co-Chairperson

**Single Cell Analysis and EV Research via Flow Cytometry**

13:30 Daniel Chiu, A. Bruce Montgomery Professor of Chemistry, University of Washington, United States of America

**High-Resolution Analysis of Single Extracellular Vesicles and Particles with Digital Flow Cytometry**

14:00 Yu-Hwa Lo, Professor, University of California San Diego, United States of America

**AI Enabled 2D and 3D Image-Guided Cell Analyzers and Sorters**

14:30 Hervé Tiriac, Researcher, University of California-San Diego, United States of America

**Chemoresistance Drives Cell Intrinsic and Extrinsic Programs in Pancreas Cancer**

15:00 Technology Spotlight Presentation

Joshua Welsh, Staff Scientist, Advanced Technology Group, Becton Dickinson, United States of America

**Navigating Small Particle Flow Cytometry**



15:30 Gregory Cooksey, Project Leader, National Institute of Standards and Technology (NIST), United States of America

**A Microfluidic Serial Cytometer to Estimate Per-Cell Uncertainty and Single Object Kinetic Measurements**

16:00 Technology Spotlight Presentation

Joseph de Rutte, CEO and Co-Founder, Partillion Bioscience, United States of America

**Nanovials: Bridging Microfluidics with Flow Cytometry to Enable Functional Screening of Cells**



16:30 Ramin Hakami, Co-Director of the Center for Infectious Disease Research, George Mason University, United States of America

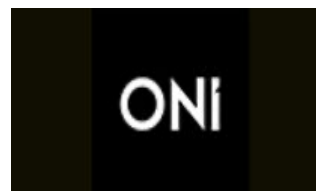
**Lab-on-a-Chip Platform for Functional Studies of Extracellular Particles**

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17:00 Technology Spotlight Presentation  
Sven Kreutel, CEO, Particle Metrix, Inc., United States of America  
**Characterization of Extracellular Vesicles and Other Biological Nanoparticles using Nanoparticle Tracking Analysis (NTA)**



17:30 Technology Spotlight Presentation  
Alison Fujii, Field Application Scientist, ONI Inc., United States of America  
**Characterization of Extracellular Vesicles Using the ONI Nanoimager Super-Resolution Microscope**



18:00 Technology Spotlight Presentation  
Jean-Luc Fraikin, CEO, Spectradyne, United States of America  
**Quantifying Extracellular Vesicles (EVs) in Complex Biofluids with Spectradyne's ARC™ Particle Analyzer**



18:30 Networking Reception with Beer, Wine and Dinner in the Exhibit Hall -- Network with Exhibitors, Colleagues and View Posters

20:15 Close of Day 2 of the Conference – Main Conference Programming

20:30 Training Course

**Introduction to Microfluidics**

Presented by Shuichi Takayama, Professor, Georgia Research Alliance Eminent Scholar, and Price Gilbert, Jr. Chair in Regenerative Engineering and Medicine, Georgia Institute of Technology & Emory University School of Medicine, United States of America

Duration: 20:30 – 22:30

Venue: The Slate Room

\*\*Separate Registration is Required to Participate in this Training Course\*\*

20:30 Training Course

**Lab-on-a-Chip for Point-of-Care Diagnostics Training Course: Technologies, Research Trends and Applications**

Presented by Claudia Gärtner, CEO, microfluidic ChipShop GmbH, Germany

Duration: 20:30 – 22:30

Venue: Ballroom A

\*\*Separate Registration is Required to Participate in this Training Course\*\*



# SELECTBIO

**Wednesday, November 20, 2024 – “Ballroom A Track”**

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07:30 Morning Coffee, Continental Breakfast and Networking in the Exhibit Hall

08:00 Industry Breakout Round Tables:

**Each Round-Table Moderated by an Industry Participant**

**Delegates Engage with the Moderator and Others to Discuss Topics Relating to Commercialization Themes Across Topics of this Conference**

Moderators are:

- David Weitz, Harvard – Microfluidics
- Roger Kamm, MIT – Organs-on-Chips
- Greg Cooksey, NIST – Flow Cytometry

Duration: 08:00-09:00

Venue: Ballroom A

Research to Commercialization -- Companies Present Technologies and Engage with the Participants

Chaired by Dr. Leanna Levine, CEO, ALine, Inc.

Venue: Ballroom A

09:00 David Weitz, Mallinckrodt Professor of Physics and Applied Physics, Director of the Materials Research Science and Engineering Center, Harvard University, United States of America

**High-Sensitivity Biomarker Detection Using Digital PCR with Microfluidics**

09:30 Technology Spotlight Presentation

Jing Chen, Founder & CEO, Hicomp Microtech, United States of America and China

**Can Your Prototype Go Big? Scaling Up Microfluidic Innovations from Lab to Fab**



10:00 Technology Spotlight Presentation

Théo Champetier, Technical Sales Engineer, Elveflow, France

**Elveflow, Microfluidics One-Stop-Shop: PDMS Microfabrication and Flow Control**



10:30 Technology Spotlight Presentation

Harald Fuchs, Project Manager, Z-MICROSYSTEMS, Austria

**Precision Microfluidic Plastic Consumables: From Design for Manufacturing to High-Volume Production**



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11:00 Technology Spotlight Presentation

Leanna Levine and Stefano Begolo, ALine, Inc., United States of America



**Mixed Manufacturing Techniques for Microfluidic Commercialization: Examples and Best Practices**

11:30 Technology Spotlight Presentation

Magdalena Schimke, Sales Specialist, STRATEC Consumables GmbH, Austria



**The Key Role of Microfluidics and Plasmonic Sensors in Monitoring Cell Therapy Manufacturing**

12:00 Technology Spotlight Presentation

Victor Morel Cahoreau, Head of Sales, Eden Microfluidics, France



**A Holistic Journey into Microfluidics Innovative Materials and Microfluidic Solutions**

12:30 Technology Spotlight Presentation

John Town, CTO, Vantiva Precision Biodevices



**Five Mistakes to Avoid When Designing a Microfluidic Chip for Manufacturing**

13:00 Networking Lunch in the Exhibit Hall -- Engage with Exhibitors, Colleagues and View Posters

14:00 Technology Spotlight Presentation

Rob Rich, Director of Sales, Americas at BioDot, Inc., United States of America



**A Novel Method in Lyobead Formation Technology for R&D Laboratories and Pilot Production**

14:30 Noah Malmstadt, Professor, Mork Family Dept. of Chemical Engineering & Materials Science, University of Southern California, United States of America

**Understanding Three-Dimensional Microfluidic Design to Optimize Lipid Nanoparticle Fabrication**

15:00 Best Poster Awards Given Out in Ballroom A

**3 Cash Awards Sponsored by the RSC and Lab-on-a-Chip Journal—For Posters  
Plus iPad Raffle for All Participants**

15:30 Venkat Gundabala, Associate Professor, Indian Institute of Technology (IIT) Bombay, India

**Droplet Microfluidics for the Fabrication of Photopolymerized Hydrogels in the Presence of Electric Fields**

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**Wednesday, November 20, 2024 – “Ballroom B Track”**

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07:30 Morning Coffee, Continental Breakfast and Networking in the Exhibit Hall

08:00 Industry Breakout Round Tables:

**Each Round-Table Moderated by an Industry Participant**

**Delegates Engage with the Moderator and Others to Discuss Topics Relating to Commercialization Themes Across Topics of this Conference**

Moderators are:

- David Weitz, Harvard – Microfluidics
- Roger Kamm, MIT – Organs-on-Chips
- Greg Cooksey, NIST – Flow Cytometry

Duration: 08:00-09:00

Venue: Ballroom A

Session Focus on Organoids First and then Moves to Flow Cytometry and EVs  
Venue: Ballroom B

09:30 Robert Halliwell, Professor of Neuroscience, University of The Pacific, United States of America

**Neurons from Human Stem Cells in 2D and 3D Culture for the Discovery of New Antiseizure Agents**

10:00 Paul Patrone, Physicist and Staff Scientist, Applied and Computational Mathematics Division, National Institute of Standards and Technology (NIST), United States of America

**Foundations of Metrology and Uncertainty Quantification in Cytometry**

10:30 John Nolan, CEO, Cellarcus Biosciences, Inc., United States of America

**Single Vesicle Measurements and the Optimization and Validation of EV Production and Manufacturing**

11:00 Lynn Pulliam, Professor of Laboratory Medicine and Medicine, University of California-San Francisco, United States of America

**Using Extracellular Vesicles to Diagnose and Follow Neurodegenerative Processes**

11:30 Terry Morgan, Professor, Oregon Health and Science University (OHSU), United States of America -- Conference Track Co-Chairperson

**NanoFACS and Bioassays**

12:00 Malgorzata Witek, Associate Research Professor, University of Kansas, United States of America

**Liquid Biopsy Core (LBC) - Enabling Tools for the Isolation of Liquid Biopsy Markers and Their Molecular Analysis**

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12:30 Technology Spotlight Presentation  
Jimmy Fay, Field Application Scientist, NanoFCM,  
United States of America  
**Nano-flow Cytometry for Comprehensive EV  
Characterization**



13:00 Networking Lunch in the Exhibit Hall -- Engage with Exhibitors, Colleagues and View Posters

15:00 Best Poster Awards Given Out in Ballroom A

**3 Cash Awards Sponsored by the RSC and Lab-on-a-Chip Journal—For Posters  
Plus iPad Raffle for All Participants**

16:00 Session with Presentations from Emerging Researchers: PostDoctoral Fellows, Students who submitted abstracts for oral presentation

17:30 Close of Conference