SELECTBIO

SelectBIO October 27-28, 2026

VOCO Hotel, Laguna Hills, California

Lab-on-a-Chip & Microfluidics 2026

Extracellular Vesicles (EVs) & Lipid Nanoparticles (LNPs) 2026

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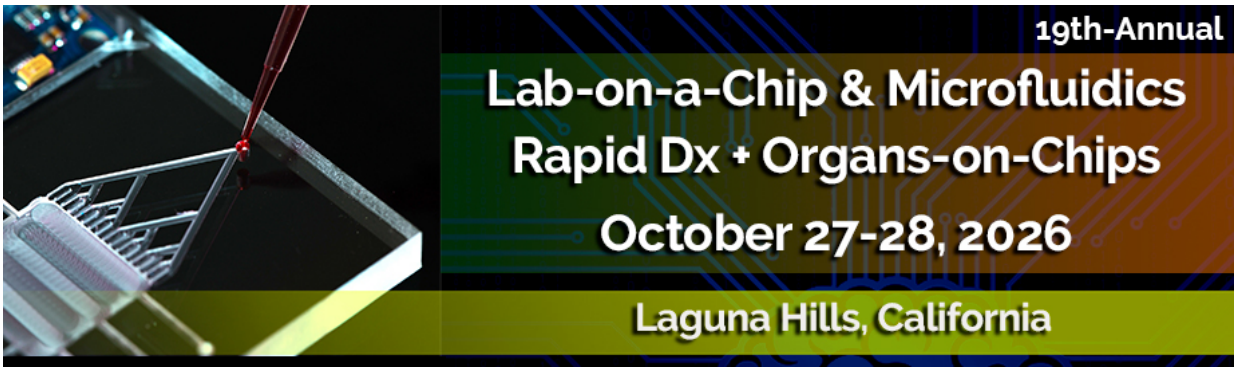
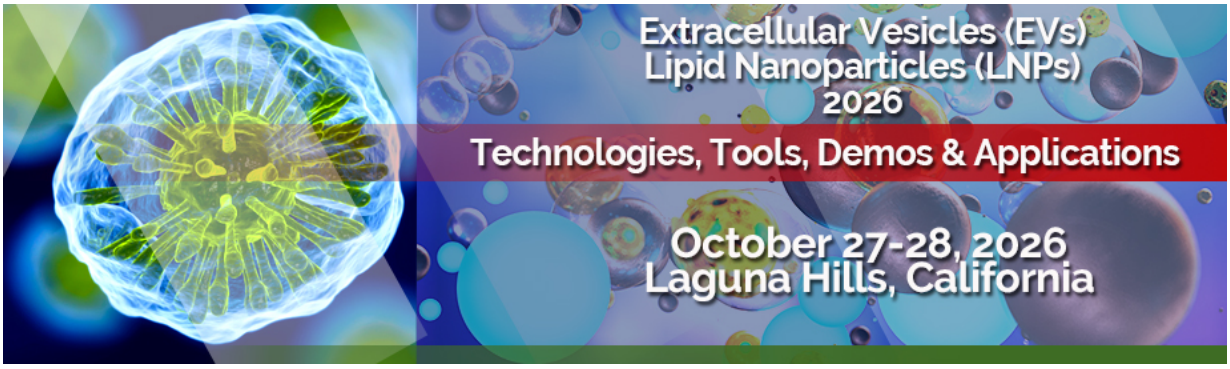




Conference Day 1 – Tuesday, October 27, 2026

07:30 Continental Breakfast Buffet is Served

08:00 Participants Check-In
Conference Registration, Materials Pick-Up, Continental Breakfast and Networking

Joint Plenary Session Starts at 09:00 in the Crystall Ballroom I

09:00 Microfluidics and Liquid Biopsies: From Bench-to-Bedside

Steve Soper, Foundation Distinguished Professor, Director, Center of BioModular Multi-scale System for Precision Medicine, The University of Kansas, United States of America

09:30 Building the 3D Architecture of a Human Small Intestine on Chip

Nancy Allbritton, Frank and Julie Jungers Dean of the College of Engineering and Professor of Bioengineering, University of Washington, United States of America

10:00 OS1 and PyMFCAD: An Open Platform for High-Resolution 3D-Printed Microfluidics

Gregory Nordin, Professor, Brigham Young University, United States of America

10:30 Mid-Morning Coffee Break and Networking in the Exhibit Hall -- Meet Exhibitors and Network with Colleagues

11:15 Microfluidics for Immunoengineering and Immunotherapy

Abraham Lee, Professor, Biomedical & Mechanical Engineering, Pharmaceutical Science, Ctr for Advanced Design & Manufacturing of Integrated Microfluidics, University of California-Irvine, United States of America

11:45 **Commercialization Spotlight Presentation**
Supporting Microfluidic Product Development, Business Growth and Acquisition

H. John Crabtree, President and Founder, HJC Consulting Inc., Canada

12:15 Nanotechnologies for Multi-Omic and Multiplexed EV Diagnostics

Hsueh-Chia Chang, Bayer Professor of Chemical and Biomolecular Engineering, University of Notre Dame, Co-Founder & CTO of Aopia Biosciences, United States of America

12:45 Networking Buffet Lunch -- Meet Exhibitors and Engage with Colleagues
Poster Viewing

Conference Day 1 – Tuesday, October 27, 2026

Lab-on-a-Chip and Microfluidics Track – Crystal Ballroom I

Session Title: Point-of-Care and Rapid Diagnostics
Chaired by Professor Brian Cunningham

14:00 **Keynote Presentation**
Biosensors, Detection Instruments, and Assays for Point of Care Cancer Molecular Diagnostics

Brian Cunningham, Professor and Intel Alumni Endowed Chair, University of Illinois at Urbana-Champaign, United States of America

14:30 Engineering Light for Rapid Point-of-Care Diagnostics

Abraham Qavi, Assistant Professor, Director of Point of Care Testing, Director of Innovative Laboratory Diagnostics, University of California-Irvine, United States of America

15:00 Neutrophil Assays from Blood for Measuring the Risk for Infections in Patients

Daniel Irimia, Professor, Massachusetts General Hospital, Harvard Medical School, Shriners Children's Hospital, United States of America

15:30 Designer DNA Architectures for Disease Diagnosis

Xing Wang, Associate Professor, Holonyak Micro and Nanotechnology Laboratory (HMNTL) Cancer Center at Illinois (CCIL), University of Illinois at Urbana-Champaign (UIUC), United States of America

16:00 Late Afternoon Coffee Break and Networking with the Exhibitors

16:30 Microfluidic Point-of-Care Platforms for Multiplexed Detection of Biomarkers and Viral Nucleic Acids

Enrique Valera, Research Assistant Professor, University of Illinois Urbana-Champaign, United States of America

17:00 **Technology Spotlight Presentation**
Microfluidics Meets Electrochemical Detection: From Poultry AMR to cfDNA Monitoring in Sports Medicine

Claudia Gärtner, CEO, microfluidic ChipShop GmbH, Germany

17:30 Fully Integrated and Automated Microfluidic Platform for Infectious Disease Detection in Human Blood

Ke Du, Associate Professor, University of California-Riverside, United States of America

18:00 **Technology Spotlight Presentation**
From Microfluidic Concept to Scalable Manufacture

Paul Marshall, CEO, Rapid Fluidics, United Kingdom

18:30 Beer and Wine Networking Reception in the Exhibit Hall -- Meet Exhibitors and Sponsors, Network with Colleagues
Poster Viewing

19:30 Close of Day 1 Main Conference Programming

19:45 **Lab-on-a-Chip and Microfluidics Training Course in the Slate Room**

All Conference Participants are Welcome to Attend this Training Course for a Deep Dive into Microfluidics & Lab-on-a-Chip

Training Course Presented by: Claudia Gärtner, CEO, microfluidic ChipShop GmbH, Germany

Please see course details and topics covered on the conference website

Theoretical Part as well as Practical Hands-on Part

22:30 Close of Day 1 of the Conference

Conference Day 2 – Wednesday, October 28, 2026

Lab-on-a-Chip and Microfluidics Track – Crystal Ballroom I

07:30 Continental Breakfast Buffet is Served
Networking in the Exhibit Hall

Welcome to the Microfluidics Standardization Workshop
Chaired by Dr. John Crabtree

08:00 **Standardization and Other Emerging Challenges for the Development and Production of Microfluidic Products**

H. John Crabtree, President, HJC Consulting Inc., Canada – Workshop Chairperson

Presentations by:

- John Crabtree, President, HJC Consulting, Inc., Canada
  Introduction to the Microfluidics Association, Standardization in Microfluidics Consulting
- Claudia Gärtner, CEO, microfluidic ChipShop GmbH
- Greg Cooksey, Project Leader, NIST
  Real-time traceable measurements of flows to 1 nL/min using optofluidics – testing performance of various syringe pumps
- Bruno Ribeiro, West Coast Manager, Fluigent, Inc.
  "Pressure-Driven Flow Control for Standardized Microfluidic Workflows"
  Paul Marshall, CEO, Rapid Fluidics, United Kingdom
- Panel Discussion

10:00 Mid-Morning Coffee Break and Networking in the Exhibit Hall -- Meet Exhibitors and Network with Colleagues
Hands-On Practical Session of the Microfluidics Workshop in the Slate Room

10:30 **Technology Spotlight Presentation:**
Integrated Microfluidics on Glass: Exploring the Future of Optimized and Scalable Organ-on-Chip Platforms

Lindsay Pack Moll, CEO, InnovaFlex Foundry, United States of America

H. John Crabtree, President and Founder, HJC Consulting Inc., Canada

11:00 **Technology Spotlight Presentation: Manufacturing and Functionalization of Microfluidic Consumables for Life Science Applications: Cell Separation, Spheroid Culture, and Beyond**

Henry Chung, Senior Application Engineer, Edge Precision Manufacturing, United States of America

11:30 Fully Automated Lab-on-Chip Systems for Continuous Organoid Analysis

Holger Schmidt, Distinguished Professor, Narinder Kapany Chair of Optoelectronics, University of California-Santa Cruz, United States of America

12:00 Modeling Healthy and Diseased Vasculature in the Vascularized Micro-Organ platform

Christopher C. W. Hughes, Chancellor's Professor, University of California-Irvine, United States of America

12:30 Networking Buffet Lunch -- Meet Exhibitors and Engage with Colleagues
View Posters

13:30 Serial Cytometry: Repeating Measurements in Microfluidic Devices to Determine Uncertainty Quantification for Fluorescence, Size, Elasticity, and Kinetics of Cells, Particles, and Droplets

Greg Cooksey, Project Leader, Microsystems and Nanotechnology Division, National Institute of Standards and Technology (NIST), United States of America

14:00 Geometry-First Design of 3D-Printed Membrane Valves: One Measured Coefficient to a Sealing Geometry in Uncharacterized Commercial Resins

Roman S. Voronov, Associate Professor, Otto H. York Department of Chemical and Materials Engineering, New Jersey Institute of Technology; Founder and President, AltVIVO, Inc., United States of America

14:30 **Workshop Open to All Conference Participants: Microfluidics for In Vitro Diagnostics**

- Market size and needs for IVD testing
- The do's and don'ts of bringing new testing platforms to the market
- Analytical and clinical figures-of-merit for IVD tests
- Requirements and the process for FDA approval
- The convergence of liquid biopsy markers and microfluidics for IVD testing

- Integrated microfluidic systems for carrying out multi-step assays for diagnostics, Requirements of microfluidic systems for diagnostic testing

Practical Examples:

- Infectious disease testing (COVID-19)
- Microfluidics for the management of cancer-related diseases

Steve Soper, Foundation Distinguished Professor, Director, Center of BioModular Multi-scale System for Precision Medicine, The University of Kansas, United States of America

15:30	Mid-Afternoon Coffee Break and Networking in the Exhibit Hall -- Engage with Exhibitors and Network with Colleagues View Posters

16:00 Engineering Heterogeneous 3D Tumor Microenvironments Using Well Plate-Compatible 3D-Printed Microfluidics

Mahdi Eskandarisani, Department of Bioengineering, University of Pittsburgh, United States of America

16:30 Overcoming Resolution Limitations in 3D-Printed Microfluidics: Applications in Small Volume Rheology and Isothermal Titration Calorimetry

Derek Sanchez, Mechanical Engineer, National Institute of Standards and Technology (NIST), United States of America

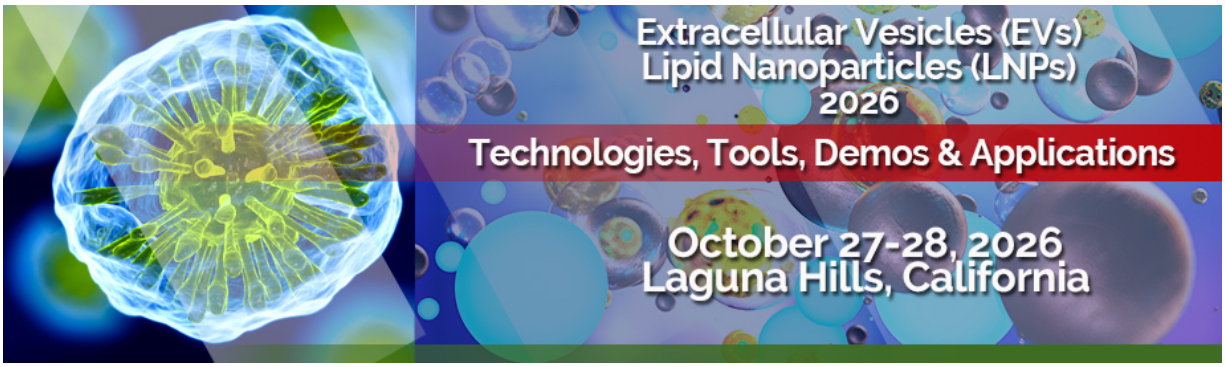
17:00 From Single-Species Growth in On-Chip Networks to a Design Discipline for Artificial Bacterial Communities

Samuel Oliveira, Assistant Professor, Department of Nanoengineering, Joint School of Nanoscience and Nanoengineering, North Carolina A&T State University, United States of America

17:30 Machine Learning-Enabled Smartphone Readout of LAMP Assays on a Microfluidic Lab-on-a-Chip for Point-of-Care Diagnostics

Amir Sakhaei, Department of Mechanical & Aerospace Engineering, University of Kentucky, United States of America

18:00	Close of Conference



Conference Day 1 – Tuesday, October 27, 2026

EV-LNP Track – Crystal Ballroom II

Welcome and Introduction to the EV-LNP Track and Topics Covered
Michael Graner, Professor, Department of Neurosurgery, University of Colorado Denver, Anschutz Medical Campus, United States of America

14:00 **Keynote Presentation**
Extracellular Vesicle Plasma Proteins in Diagnosis and Prognosis of Cardiovascular Disease

Dominique PV de Kleijn, Professor Experimental Vascular Surgery, Professor Netherlands Heart Institute, University Medical Center Utrecht, The Netherlands

14:30 **Keynote Presentation**
Engineering Stem Cell-Derived Extracellular Vesicles (EV) and Lipid Nanoparticles (LNP) for Targeted Delivery and Gene Editing

Aijun Wang, Chancellor's Fellow Professor of Surgery and of Biomedical Engineering, University of California-Davis (UC Davis), United States of America

15:00 **Technology Spotlight Presentation**
ZetaView® Evolution: Calibration-Free Screening of Lipid Nanoparticles and Extracellular Vesicles by Size, Concentration and Zeta Potential

Ross Jacobson, Technical Sales and Service Lead, Western USA, Particle Metrix Inc., United States of America

15:30 New Approaches Using EVs and LNPs for Kidney Diseases

Eunji Chung, Associate Professor of Biomedical Engineering, Director of the Transformative Center for Nanomedicine and Drug Delivery, University of Southern California, United States of America

16:00	Late Afternoon Coffee Break and Networking with the Exhibitors Poster Viewing

16:30 High-Throughput and Cell-Free Engineering of Synthetic Extracellular Vesicles

Cheemeng Tan, Chancellor's Fellow, Professor, Department of Biomedical Engineering, University of California-Davis, United States of America

17:00 Charge Switching Lipid Nanoparticles (LNPs) Deliver Nucleic Acids Without Triggering Inflammation

Niren Murthy, Professor, University of California at Berkeley and the Innovative Genomics Institute, United States of America

17:30 **Technology Spotlight Presentation**
From Bench to Commercial-Scale: Scale-X™ Structured Fixed-Bed Bioreactors for Scalable Production of Extracellular Vesicles

Matt Kremer, Business Development Manager, Univercells Technologies (a Donaldson Life Sciences Company), United States of America

18:00 **Keynote Presentation**
Do Glioblastoma Exosomes in vitro Come with Their Own Corona? A Focus on Antibodies, with Implications for Downstream Functions

Michael Graner, Professor, Department of Neurosurgery, University of Colorado Denver, Anschutz Medical Campus, United States of America

18:30	Beer and Wine Networking Reception in the Exhibit Hall -- Meet Exhibitors and Sponsors, Network with Colleagues and Poster Viewing

19:30 Close of Day 1 Main Conference Programming

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Training Course Presented by: Claudia Gärtner, CEO, microfluidic ChipShop GmbH, Germany

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Theoretical Part as well as Practical Hands-on Part

22:30	Close of Day 1 of the Conference

Conference Day 2 – Wednesday, October 28, 2026

EV-LNP Track – Crystal Ballroom II

07:30 Continental Breakfast Buffet is Served
Networking in the Exhibit Hall and Poster Viewing

09:00 **Keynote Presentation**
Nano-Engineered Extracellular Vesicles for Precision Immunity Regulation

Mei He, Associate Professor, University of Florida, United States of America

09:30 **Technology Spotlight Presentation**
Demeter EVPrep: Automated EV Isolation to Accelerate Your Discovery

Caitlin McAtee, Field Application Scientist, Exokeryx, United States of America

10:00 Mid-Morning Coffee Break and Networking in the Exhibit Hall -- Meet Exhibitors and Network with Colleagues, View Posters
Hands-On Practical Session of Microfluidics Workshop in the Slate Room

10:30 Engineering Extracellular Vesicles in the Extracellular Matrix

Marley Dewey, Assistant Professor of Bioengineering, University of California-Santa Barbara, United States of America

11:00 Tumor Extracellular Vesicle Vaccine for Treating Solid Tumors

Hua Wang, Associate Professor, University of Illinois at Urbana-Champaign, United States of America

11:30 Genetic Engineering of Nanoscale Exosomes for Targeted Drug Delivery and Therapy

Biao (Bill) Lu, Professor, Department of Bioengineering, School of Engineering, Santa Clara University, United States of America

12:00 **Keynote Presentation**
A Deep Dive into LNPs 2026

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

12:30 Networking Buffet Lunch -- Meet Exhibitors and Engage with Colleagues
View Posters

13:30 **Technology Spotlight Presentation**
Translational Potential of Extracellular Vesicles as Emerging Biomarkers and Drug Delivery Carriers in Breast Cancer

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

14:00 Point of Care Devices for Early Detection of Cancer Related Biomarkers

Michael J Heller, Professor Emeritus, Bioengineering Department, University of California-San Diego, United States of America

14:30 Extracellular Vesicle Dysfunction Contributes to Synaptic and Cognitive Deficits in Angelman Syndrome

Xiaoning Bi, Professor, Western University of Health Sciences, United States of America

15:00 Mid-Afternoon Coffee Break, Network with Exhibitors and View Posters

15:30 Multidimensional Analysis of Dopaminergic Neuron-Derived Extracellular Vesicle Expression During Nicotine Exposure

Valeria Lallai, Assistant Professor of Pharmacology, University of South Carolina College of Pharmacy, United States of America

16:00 Presentation Details to be Confirmed

16:30 Peptide-targeted Lipid Nanoparticles (LNPs)

Ester Kwon, Associate Professor, Department of Bioengineering, University of California-San Diego, United States of America

17:00 **Closing Keynote Presentation**
BioCapZ: A Modular Platform for Targeted, Mucosal, and Gene-Based Delivery

R Holland Cheng, Professor, University of California-Davis, United States of America

17:30 Close of Conference Track

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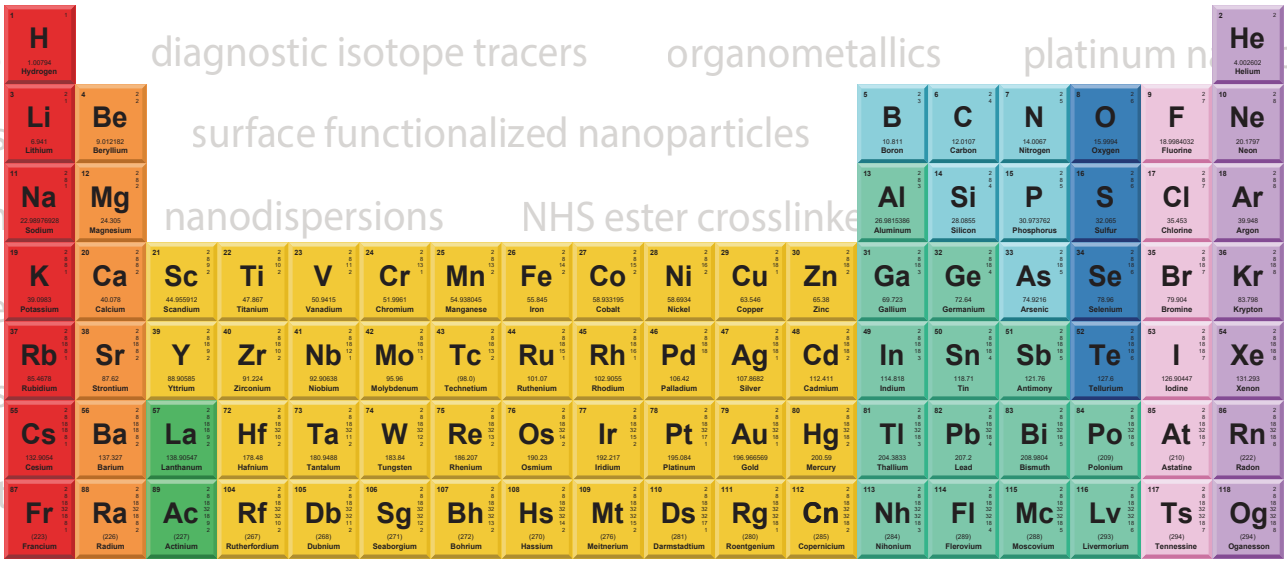

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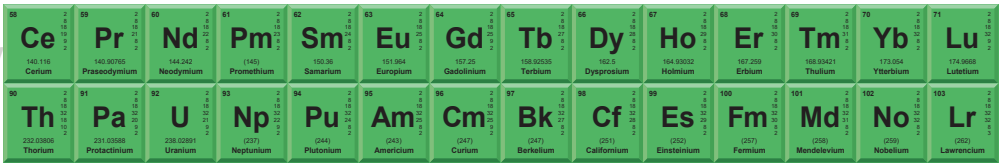

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