



Conference Day 1—Monday, October 6, 2025

08:00 Conference Registration, Materials Pick-Up, Coffee, Tea and Networking in the Exhibit Hall [Ozora Room]

Session Title: Conference Plenary Session

Venue: Tsuru A

09:00 Welcome and Introduction to the Conference by Conference Chairperson
Noah Malmstadt, Professor, Mork Family Dept. of Chemical Engineering & Materials Science, University of Southern California, United States of America

09:15 Plenary Presentation
Nanobiodevices and Quantum Life Science for Biomedical Applications
Yoshinobu Baba, Professor, Nagoya University, Japan

10:00 Plenary Presentation
Gut Microbiome-on-a-Chip: Insights into Gut Pathogenesis and Therapy
Chwee Teck Lim, NUSS Chair Professor, National University of Singapore

10:30 Plenary Presentation
Advancing Flow and Health Diagnostics with Integrated Microfluidic Platforms
Amy Shen, Professor and Provost, Okinawa Institute of Science and Technology Graduate University (OIST), Japan

11:00 Mid-Morning Coffee and Tea Break in the Exhibit Hall and Networking with Exhibitors and Poster Presenters [Ozora Exhibit Hall]

11:30 Plenary Presentation
Real-Time Microfluidic Devices for Healthcare – Applications in the NICU
Martyn Boutelle, Professor of Biomedical Sensors Engineering, Imperial College London, United Kingdom

12:00 Plenary Presentation

Biomedical Intelligence Enabled by Robotic-Microfluidic Interface

Tingrui Pan, Yangtze River Chair Professor, University of Science and Technology of China

12:30 Networking Lunch in the Exhibit Hall -- Network with Colleagues, View Posters and Engage with Exhibitors

****Japanese Bento Lunch Served in the Ozora Exhibit Hall****

Session Title: Technology Trends in Lab-on-a-Chip and Microfluidics Fields

Venue: Tsuru A

13:30 Keynote Presentation

Electrokinetic Separation of Extracellular Vesicles

Levent Yobas, Professor, Department of Electronic and Computer Engineering, Department of Chemical and Biological Engineering, Hong Kong University of Science and Technology, Hong Kong

14:00 Technology Spotlight Presentation

From Idea to Device: Rethinking Microfluidics with Design-Driven Prototyping and Novel Materials

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



14:30 Electrochemical Analysis of 3D Cell Spheroids on an Integrated Microfluidic Device

Liang Zhao, Associate Professor, Beijing University of Technology, China

15:00 Mid-Afternoon Coffee and Tea Break in the Exhibit Hall and Networking with Exhibitors and Poster Presenters [Ozora Exhibit Hall]

15:30 Decentralizing and Standardizing Blood Processing Using Label-Free Microfluidics

Han Wei Hou, Associate Professor, School of Mechanical and Aerospace Engineering, Nanyang Technological University Singapore

16:00 Microfluidic-based Engineered Lipid Nanoparticle Production for RNA Delivery

Masatoshi Maeki, Associate Professor, Hokkaido University, Japan

16:30 A Deep Dive into the Lipid Nanoparticles (LNPs) Field and Current State of Research

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

17:00 Nanoparticle Manipulation by Using Thermoplasmonics

Masahiro Motosuke, Professor, Tokyo University of Science, Japan

17:30 Technology Spotlight Presentation

Robust Characterization of Extracellular Vesicles Using the ZetaView® X40 and Novel Fluorescent Antibodies

Sven Kreutel, CEO, Particle Metrix, Inc., Germany and United States of America



18:00 Technology Spotlight Presentation

Enabling Precision at Scale: The Microfluidic Consumables Journey with STRATEC Consumables

Masaya Kakuta, Consultant STRATEC Consumables, Japan



**18:30 Networking Reception with Japanese Beer and Sake -- Engage with Exhibitors, Colleagues and View Posters
[Ozora Exhibit Hall]**

19:30 Close of Day 1 Conference -- Main Conference Programming

19:45 Hands-On Demo Workshop



Eden Microfluidics Design to Prototyping of Microfluidics Chips -- On-site Demo

****Design It, Make It, Test It: A Hands-On Microfluidics Prototyping Experience with FLUI'DEVICE and Flexdym****

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

[Held in the Ozora Exhibit Hall]

20:45 Close of Day 1 of the Conference

Conference Day 2—Tuesday, October 7, 2025

08:00 Coffee, Tea and Networking in the Exhibit Hall [Ozora Room]

Session Title: Microphysiological Systems (MPS): Current Status and Emerging Themes --
Organs-on-Chips -- Collaborative Models from Across Asia and Around the
World Driving Research Activities

Venue: Tsuru A

09:00 Industrial Implementation of MPS: Japan's Efforts and Proposal of Collaboration with Asian Countries

Seiichi Ishida, Guest Researcher, National Institute of Health Sciences, Professor, Sojo University, Japan

09:30 Testing and Qualification of Microphysiological Systems Through Academia-Industry-Government Collaboration

Ivan Rusyn, University Professor, Texas A&M University, United States of America

10:00 Translation Centers for MPS: Towards Regulatory Qualification as Drug Development Tools

Danilo Tagle, Director, Office of Special Initiatives, National Center for Advancing Translational Sciences at the NIH (NCATS), United States of America

10:30 Mid-Morning Coffee and Tea Break in the Exhibit Hall and Networking with Exhibitors and Poster Presenters [Ozora Exhibit Hall]

11:00 Development of hiPSC-Derived Microphysiological Systems (MPS) to Emulate Viral Pathogenesis

Ryuji Yokokawa, Professor, Department of Micro Engineering, Kyoto University, Japan

11:30 MPS and NAMs Initiatives in Korea and OK-MPS Project

Sang-Hoon Cha, Professor, ChungBuk National University, Republic of Korea

12:00 Networking Lunch in the Exhibit Hall -- Network with Colleagues, View Posters and Engage with Exhibitors

****Japanese Bento Lunch Served in the Ozora Exhibit Hall****

Session Title: Application Areas for Lab-on-a-Chip and Microfluidics Platforms

Venue: Tsuru A

13:00 Hypoxia Tolerance Mechanisms in Head and Neck Squamous Cell Carcinoma

Celia Gonzalez Maroto, Kings College London and Queen Mary University of London, United Kingdom

13:30 Optimizing Chemotherapy Penetration in Glioblastoma Using Ultrasmall Nanoparticles and Tumor Organoid Models

Taskeen Janjua, Next Gen CCQ Research Fellow, The University of Queensland, Australia

14:00 Technology Spotlight Presentation

Advancing Organ-on-a-Chip Technology: Integrating Ultrathin Parylene C Membranes for Enhanced Physiological Fidelity



Yexian Wu, Executive Vice President, HiComp Microtech, China

14:30 Ultrasensitive Electrochemical Cortisol Detection via Microfluidic NanoMIP-Functionalized Laser-Induced Graphene Electrodes

Mark Sullivan, Staff Scientist, Micro/Bio/Nanofluidic Unit, Okinawa Institute of Science and Technology (OIST), Japan

15:00 1D and 2D Barcode Strategies for Semiquantitative Signal Readout of Colorimetric Microfluidic Paper-Based Analytical Devices

Daniel Citterio, Professor, Department of Applied Chemistry, Faculty of Science and Technology, Keio University, Japan

15:30 Mid-Afternoon Coffee and Tea Break in the Exhibit Hall and Networking with Exhibitors and Poster Presenters [Ozora Exhibit Hall]

16:00 Single Cell Mechano Phenotyping and Sequencing

Hirofumi Shintaku, Professor, Institute for Life and Medical Sciences, Kyoto University, Japan

16:30 Microfluidic Chip Combined with Mass Spectrometer for Single Cell Analysis

Jin-Ming Lin, Professor, Department of Chemistry, Tsinghua University, China

17:00 Closing Keynote Presentation

Translating Microfluidic Innovation from Deformability Cytometry to Lab-on-a-Particle Interrogation of Cell-Cell Communication

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

17:30 Panel Discussion

Panel Discussion on MPS Efforts in the Asia/Pacific Moderated by Professor Seiichi Ishida, Guest Researcher, National Institute of Health Sciences, Professor, Sojo University, Japan

18:00 Close of Conference

Parallel Track on Day 2 [Tuesday, October 7, 2025] of the Conference



08:00 Coffee, Tea and Networking in the Exhibit Hall [Ozora Room]

09:00 Chairperson's Welcome and Introduction to the Conference and Topics Addressed
Mei He, Associate Professor, University of Florida, United States of America

09:15 Translation of Extracellular Vesicles from Bench to Bedside
Andreas Möller, Professor, Director, JC STEM Lab of Personalized Cancer Medicine, Prince of Wales Hospital, Chinese University of Hong Kong

09:45 Exploring the Frontiers of EV Research by Bridging Basic Science and Biomedical Applications
Hang Hubert Yin, Professor, Tsinghua University, China

10:15 Label-Free Microfluidics Technologies for Extracellular Vesicles Isolation
Han Wei Hou, Associate Professor, School of Mechanical and Aerospace Engineering, Nanyang Technological University Singapore

10:45 Mid-Morning Coffee and Tea Break and Networking in the Exhibit Hall
[Ozora Exhibit Hall]

11:30 Keynote Presentation
Study of Common Mechanisms of Cancer EV Secretion
Takahiro Ochiya, Distinguished Professor, Tokyo Medical University, Japan

12:00 Networking Lunch in the Exhibit Hall -- Network with Colleagues, View Posters and Engage with Exhibitors
****Japanese Bento Lunch Served in the Ozora Exhibit Hall****

13:30 Extracellular Vesicles as Biomarkers: A New Frontier in Medical Diagnostics
Banishree Saha, Associate Director, Early Clinical Development, Takeda Pharmaceuticals, United States of America

14:00 Spatiotemporal Visualization of Extracellular Vesicle Transfer at Early Metastatic Niche

Nao Nishida-Aoki, Assistant Professor, Waseda Institute for Advanced Studies (WIAS), Waseda University, Japan

14:30 Site-specific Targeting for Drug Delivery and EV Therapeutics in Regenerative Medicine

Danilo Tagle, Director, Office of Special Initiatives, National Center for Advancing Translational Sciences at the NIH (NCATS), United States of America

15:00 Mid-Afternoon Coffee and Tea Break in the Exhibit Hall and Networking with Exhibitors and Poster Presenters

15:30 Bioengineering of Extracellular Vesicles for Precision Medicine

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

16:00 Panel Discussion Chaired by Professor Mei He, Conference Chairperson

****Emerging Trends in Extracellular Vesicle Research and Application Areas****