



## Conference Day 1—Monday, October 6, 2025

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

Session Title: Conference Plenary Session

Venue: Ran Room 1

**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**

**Human Disease Models: From Organ-on-Chip to AI Digital Twins**

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 [Fuji Room]**

**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 Fuji Room\*\***

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

Venue: Ran Room 1

## 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 [Fuji Room]**

## 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 [Fuji Room]**

**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 Fuji Room]

**19:45 Hands-On Demo Workshop**



**Particle Metrix Hands-On Demo on Using Zeta View Instrument Platform for Studying Extracellular Vesicles (EVs) and Nanoparticles**

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

[Held in the Fuji Room]

**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 [Fuji 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: Ran Room 1

### 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 [Fuji Room]

### 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 Fuji Room\*\***

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

Venue: Ran Room 1

### 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 [Fuji Room]**

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

**\*\*Panel Composed of Participants from Across Asia/Pacific Delivering Short Statements, Followed by Open Panel Discussion\*\***

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

**\*\*Held in the Ran Room 1\*\***



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

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 Fuji Room\*\***

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 [Fuji Room]**

**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\*\***