

OS11: Microfluidics and Microphysiological Modeling

November 12, 2025

EX-4A

- OS11-1 **Numerical Simulation for Suspension Rheology of Deformable Microswimmers**
15:15-15:35 Kiyoto Kubo, Toshihiro Omori, Takuji Ishikawa (Tohoku University, Japan)
- OS11-2 **Numerical Simulation on the Migration of a Soft Particle in non-Newtonian Channel Flow**
15:35-15:55 Rikuto Ishida, Tomohiro Fukui (Kyoto Institute of Technology, Japan)
- OS11-3 **Simulating Occlusive Tumor Behavior Under Flow in a Tapered Vessel-on-a-chip Model**
15:55-16:15 Si-Ying Xu (National Cheng Kung University, Taiwan), Kazuki Sone (Tohoku University, Japan), Ting-Yuan Tu (National Cheng Kung University, Taiwan), Kenichi Funamoto (Tohoku University, Japan)
- OS11-4 **Development of a Perfusion Culture System for Organoid Chips to Mimic Human Placental Structures**
16:15-16:35 Kinoka Kubo (Tokyo University of Agriculture and Technology, Japan), Kenichi Funamoto (Tohoku University, Japan), Daisuke Yoshino (Tokyo University of Agriculture and Technology, Japan)

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- OS11-5 **Advances in 3D-Printed Microfluidic Devices: Methods, Materials, and Applications** *(Invited)*
9:00-9:45 Michinao Hashimoto (Singapore University of Technology and Design, Singapore)
- OS11-6 **Nanofluid Droplet Generation and Osmosis-Induced Shrinking in a Single Microfluidic Device towards Continuous Reflective Pigment Production**
9:45-10:05 Keisuke Kurioka, Tom A. J. Welling, Kosuke Inoue, Hikaru Namigata, Kanako Watanabe, Keishi Suga, Kenichi Funamoto, Daisuke Nagao (Tohoku University, Japan)
- OS11-7 **The Phase Field and Level Set Methods Applied to Droplet Formation in T-Junction Microchannel**
10:05-10:25 Muhammad Alif Wahab Adhichahya, Ridho Irwansyah, Harinaldi (Universitas Indonesia, Indonesia)
- 10:30-10:45 BREAK
- OS11-8 **Microfluidic Experiment on the Response of a Vascular Endothelial Monolayer to Inflammatory and Severe Hypoxic Stimuli**
10:45-11:05 Kazuki Sone, Ai Funatsu (Tohoku University, Japan), So Sampei (Tohoku University Hospital, Japan), Kenichi Funamoto (Tohoku University, Japan)

- OS11-9
11:05-11:25 **Observation of the Migration of Neutrophil-like HL-60 Cells under Controlled Dissolved Gas Concentrations by Using a Microfluidic Device**
Taishi Nakamura, Kenichi Funamoto (Tohoku University, Japan)
- OS11-10
11:25-11:45 **The Behavior of the Multi-microalgae in the Microchannel**
Cheng-His Chuang, Jhih-Xian Shiu (National Taiwan Ocean University, Taiwan)
- OS11-11
11:45-12:05 **Evaluation of Chondrogenesis in 3D Micromass Culture by Using Microfluidic Devices**
Shohei Yanagita, Kenichi Funamoto (Tohoku University, Japan)