



MPS World Summit: Systems Engineering of Microphysiological Systems

Virtual event - December 9th 2021, 9 am – 1 pm EST

<https://mpsworldsummit.com>

Registration is open via [ZOOM](#)

Program

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| 9:00 am - 9:05 am | Welcome, Thomas Hartung, JHU |
| 9:05 am – 9:35 am | Keynote: Donald Ingber , Wyss Institute, Harvard University
<i>Human Organ Chips as Tools for Therapeutic Discovery and Clinical Mimicry</i> |
| 9:35 am – 10:55 am | MPS Hardware and enabling Technologies (15 min talk, 5 min Q&A)
*Young investigator award nominee
<u>9:35am-9:55am</u> Melissa Mendoza , Binghamton University, USA
<i>Early and Late Calcific Aortic Valve Disease-on-a-chip</i>
<u>9:55am-10:15am</u> Christopher W. McAleer , Hesperos, Inc. USA
<i>Multi-Organ System for the Evaluation of efficacy and off-target toxicity of Anti-Cancer Therapeutics</i>
<u>10:15am-10:35am</u> James Tronolone* , Texas A&M University, USA
<i>A machine-learned microvasculature optimizes physiological insulin secretion in a vascularized pancreas-chip</i>
<u>10:35am-10:55am</u> Kenta Shinha* , Tokai University, Japan
<i>Microphysiological system (MPS) platforms with high operability and pumping capability for commercialization</i> |
| 10:55 am – 11 am | Break |

- 11 am – 12:20 pm **Cell models and applications for MPS (15 min talk, 5 min Q&A)**
*Young investigator award nominee
- 11:00am-11:20am **Devin Mair***, Johns Hopkins University, USA
Microgravity-Induced Mitochondrial Dysfunction in Human iPSC-Based 3D Cardiac Microphysiological System
- 11:20am-11:40am **Zhong (Alan) Li***, University of Pittsburgh, USA
Synovial Joint-on-a-chip System for Modeling Osteoarthritic Features and Predicting Drug Efficacy
- 11:40am-12:00pm **Michelle Brouwer**, MIMETAS, The Netherlands
Modelling T Cell-Vasculature co-culture in a high-throughput microfluidic platform
- 12:00pm-12:20pm **Colette Bichsel**, Roche, Switzerland
Engineering the neurovascular unit in vitro to improve drug delivery to the brain
- 12:20 pm – 12:25 pm **Voting for the best presentation by young investigator**
- 12:25 pm – 12:55 pm **Panel discussion and Q&A**
Panel participants:
Adrian Roth, Roche - moderator
Linda Griffith, MIT
Alysson Moutri, University of California San Diego
Peter Loskill, Tuebingen University
Uwe Marx, TissUse,
Yasuyuki Sakai, University of Tokyo
- 12:55 pm – 1 pm Young Investigator Travel Award Announcement, closing remarks