

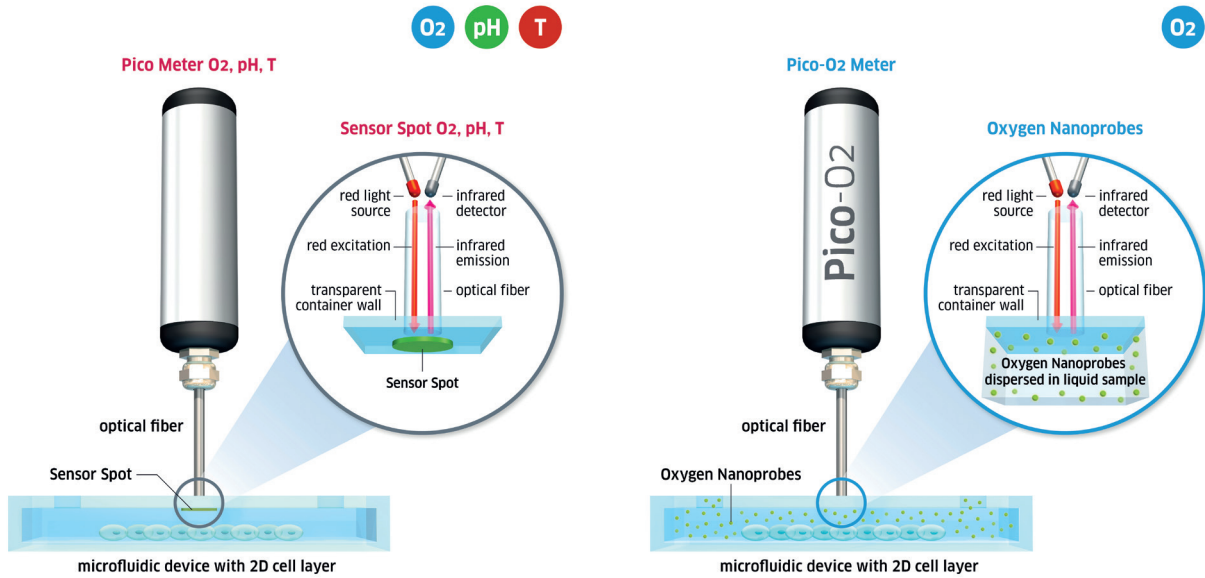
The Third Annual

Microphysiological Systems WORLD SUMMIT

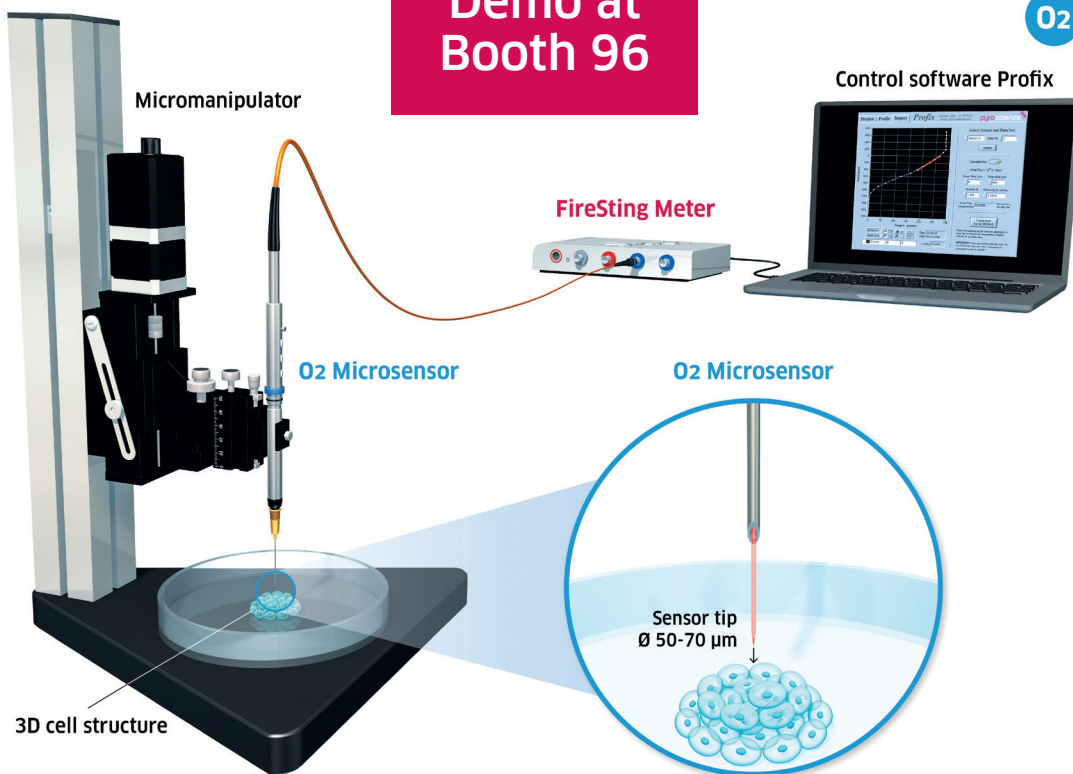
10th-14th June SEATTLE
2024 USA

Sensors for 2D & 3D Cell Cultures

Micro-invasive or contactless read-out



Demo at Booth 96



Hello Fellow Visionaries,

Welcome to another monumental chapter for the MPS World Summit!

This year, we gather in the dynamic city of Seattle from June 10-14 for our third MPS (Microphysiological Systems) World Summit. Reflecting on our journey from the inaugural sessions in New Orleans 2022, to tripling attendance in Berlin 2023 to the thriving community we see today, it's clear we have achieved something extraordinary.

In 2023, Berlin was a hub of innovation and collaboration maxing out our venue capacity. This year, we've expanded our horizons further, engaging 174 speakers from 664 abstracts from across the globe. We are grateful to our sponsors, the list of which has blossomed to 90, showcasing the widespread industry and academic support for MPS technologies.

But this summit in Seattle marks a poignant milestone – CAAT with Lena Smirnova and Thomas Hartung as PIs will be passing the torch to the International MPS Society, a body we fostered to champion the cause of microphysiological systems worldwide. This transition is a testament to our shared vision and the robust framework we've built together.

As we prepare to hand over stewardship, we're inviting members from over 38 countries to join us, turning this event into a truly global endeavor. Whether you're from academia, the pharmaceutical sector, or regulatory agencies, your contributions are pivotal to the continued evolution of MPS.

Join us for a program that promises to be as enriching as it is inspiring, highlighted by groundbreaking research presentations and engaging discussions. Let's celebrate the strides we've made in emulating human biology for better health outcomes and a safer environment.

Best,

The CAAT Team



Dear Colleagues and Friends,

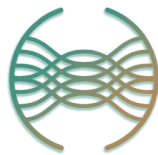
It is my great pleasure to welcome you all to the third annual Microphysiological Systems World Summit. Reflecting on our previous gatherings in New Orleans and Berlin, it is clear that our community has not only grown but thrived, showcasing exponential progress in both science and collaboration. These past events set a stage, allowing us to deepen our understanding and expand our networks within the Microphysiological Systems field.

This year marks a significant milestone for our community with the establishment of the International Microphysiological Systems Society. This new structure underpins our shared commitment to advance research, foster innovation, and promote best practices across the globe. The society is a testament to our collective efforts and a catalyst for future efforts in improving human health through revolutionary technologies.

Thank you for your ongoing contributions and commitment. I look forward to engaging discussions, insightful presentations, and the continued growth of our community.

Warmest regards,

Lena Smirnova, *iMPSS President*



INTERNATIONAL MPS SOCIETY
CONNECT, EXCHANGE, EDUCATE

Dear Colleagues,

Many of us have great memories from the 2nd MPS World Summit in Berlin, and it's hard to believe that a year has gone by already! This June we are bringing the event to Seattle and look forward to continuing the incredible momentum that the two first meetings have generated. Less than a decade ago, microphysiological systems were an emerging technology. Since then, the field has significantly progressed. Tissue chips and organoid models are increasingly used for solving real-world human health challenges, and the number of researchers who are involved in MPS-related projects is growing rapidly. The yearly MPS World Summit was initiated through funding from the National Center for Advancing Translational Sciences (NCATS) to serve as a catalyst for the global MPS community. As the annual meeting of the international MPS Society (IMPSS) it provides attendees with the opportunity to get up to date with the scientific progress, network with MPS investigators from all over the world, understand regulatory aspects around MPS, and evaluate technologies from commercial MPS providers.

This year's program is again tightly packed with outstanding talks, keynotes, roundtable discussions and social activities. Highlights include the Workshop for Advancing Standards and Regulatory Science for MPS and Microfluidic-based Medical Products on June 9-10, a campus tour and MPS networking event at the University of Washington on June 10, and a roundtable discussion on how AI drives the adoption of MPS in pharmaceutical drug development on June 11. Not to be missed is our Macro Party at the Foundry in the Fremont Neighborhood, a center of Seattle's counterculture (and home of the famous Fremont Troll). We are excited to have Acid Tongue, a great local Seattle band playing for us. They will unleash the party animals in us....and make us forget science for an evening!

The conference will take place at the spectacular Seattle Convention Center in downtown Seattle. The interior design celebrates the Pacific Northwest with suspended planks of reclaimed wood, a large outdoor Garden Terrace and sweeping views at Puget Sound. Close to the Convention Center you will find places that Seattle is known for. Explore Pike Place Market; get a latte at the original first Starbucks; stroll along the Seattle Waterfront with the Aquarium, Seattle Waterfront Park, and great Seafood restaurants. Maybe you want to take a Seattle Underground Tour or get on a water taxi to Alki Beach from which you can look across Elliott Bay at the Seattle skyline. The Monorail gets you from downtown to Seattle Center and the Space Needle. If time allows, explore the lakes, canals and beaches...and admire the mountains in the distance.

Save travels. We look forward to welcoming you in the Emerald City!

Danilo Tagle, Elaine Faustmann, Thomas Neumann
MPS WS 2024 Hosts



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HOSTS

Danilo Tagle is currently Director, Office of Special Initiatives at the National Center for Advancing Translational Sciences (NCATS) of the National Institutes of Health (NIH) where he coordinates efforts towards developing microphysiological systems or organs on chips. He also coordinates efforts on 3D bioprinting for drug discovery and development, on automated chemistry, on the use of electronic nose technology for disease diagnosis, and the clinical utility of secreted RNA in exosomes for biomarker and therapy development. Prior to joining NCATS in 2012, Dan was a program director for neurogenetics at the National Institute of Neurological Disorders and Stroke (NINDS, NIH), where he was involved in developing programs concerning genomics-based approaches for basic and translational research in inherited brain disorders. Prior to joining NINDS in 2001, Dan was an investigator and section head of molecular neurogenetics at the National Human Genome Research Institute (NHGRI, NIH) and has been involved in the highly collaborative effort toward the positional cloning of genes for Huntington's disease, ataxia-telangiectasia and Niemann-Pick disease type C. He has served on numerous committees, advisory boards, and editorial boards. Dan obtained his Ph.D. in molecular biology and genetics from Wayne State University School of Medicine in 1990. He was an NIH National Research Service Award postdoctoral fellow in human genetics at the University of Michigan. Dan has authored many scientific publications and has garnered numerous awards, including more recently the Roscoe O. Brady Award for Innovation and Accomplishment, and the Henry J. Heimlich Award for Innovative Medicine.

Danilo Tagle

National Center for Advancing Translational Sciences
(NCATS), National Institutes of Health (NIH), USA



HOSTS

Dr. Elaine M. Faustman, Ph.D. DABT, ATS, is Professor and Director of the Institute of Risk Analysis and Risk Communication, School of Public Health at the University of Washington, Seattle. She is an elected fellow of the American Association for the Advancement of Science and the Society for Risk Analysis. She has served on the USEPA Science Advisory Board, NIEHS National Advisory Environmental Health Sciences Council, NTP Board of Scientific Counselors and has served as the Secretary General for the International Union of Toxicology (IUTOX). Her research expertise is on identifying molecular mechanisms of developmental, reproductive, and neuro toxicants, characterizing in vitro techniques for toxicology assessment, and developing biological based dose-response models. She has over 250 peer reviewed research publications and reports. In 2007 she was recognized by the Humane Society of the United States and Proctor and Gamble Alternative Award for her work with in vitro models. In 2019 she received the Merit Award from the International Union of Toxicology for her intellectual contributions to the field and a career dedicated to mentoring scientists around the world. In 2023 she was awarded the Society of Toxicology Arnold J. Lehman Award for her contributions to the fields of regulatory toxicology and toxicology risk assessment. She is excited about welcoming the MPS to Seattle for their third meeting.

Elaine Faustman

Institute of Risk Analysis and Risk Communication, School of Public Health at the University of Washington, Seattle, USA



HOSTS

Dr. Neumann is an entrepreneur in the MPS space. His career started at the University of Halle, Germany, where he developed some of the first organoid models. At the University of Washington in Seattle, he developed a technology for generating perfusable living microtissues in microfluidic devices. In 2007 he founded Nortis, one of the first organ-on-chip companies which he led as CEO and CSO until recently. Dr. Neumann has been playing a prominent role in promoting the emergence and growth of the MPS field through scientific collaborations, involvement in MPS-focused consortia, and interactions with the NIH, FDA, NASA, and other organizations.

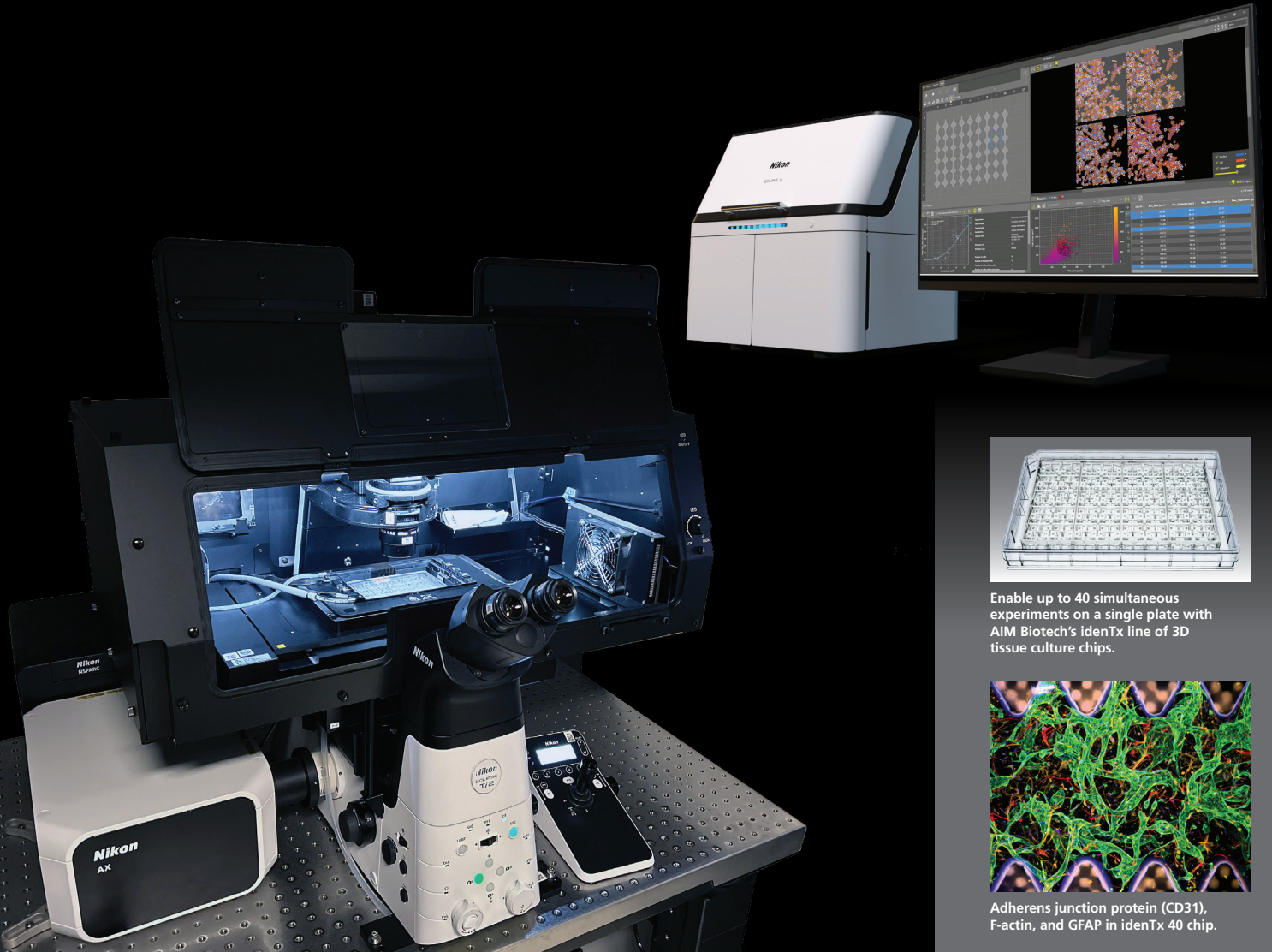


Thomas Neumann

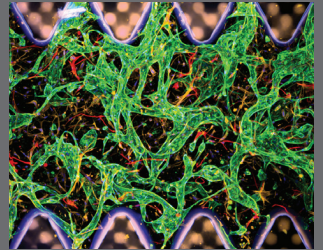
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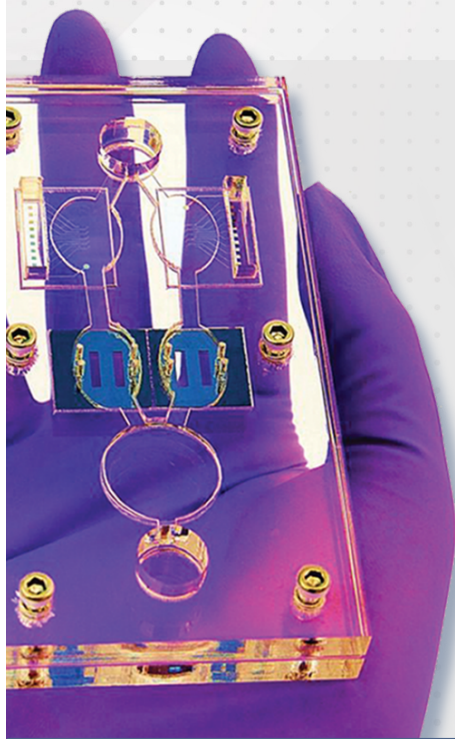
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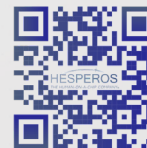
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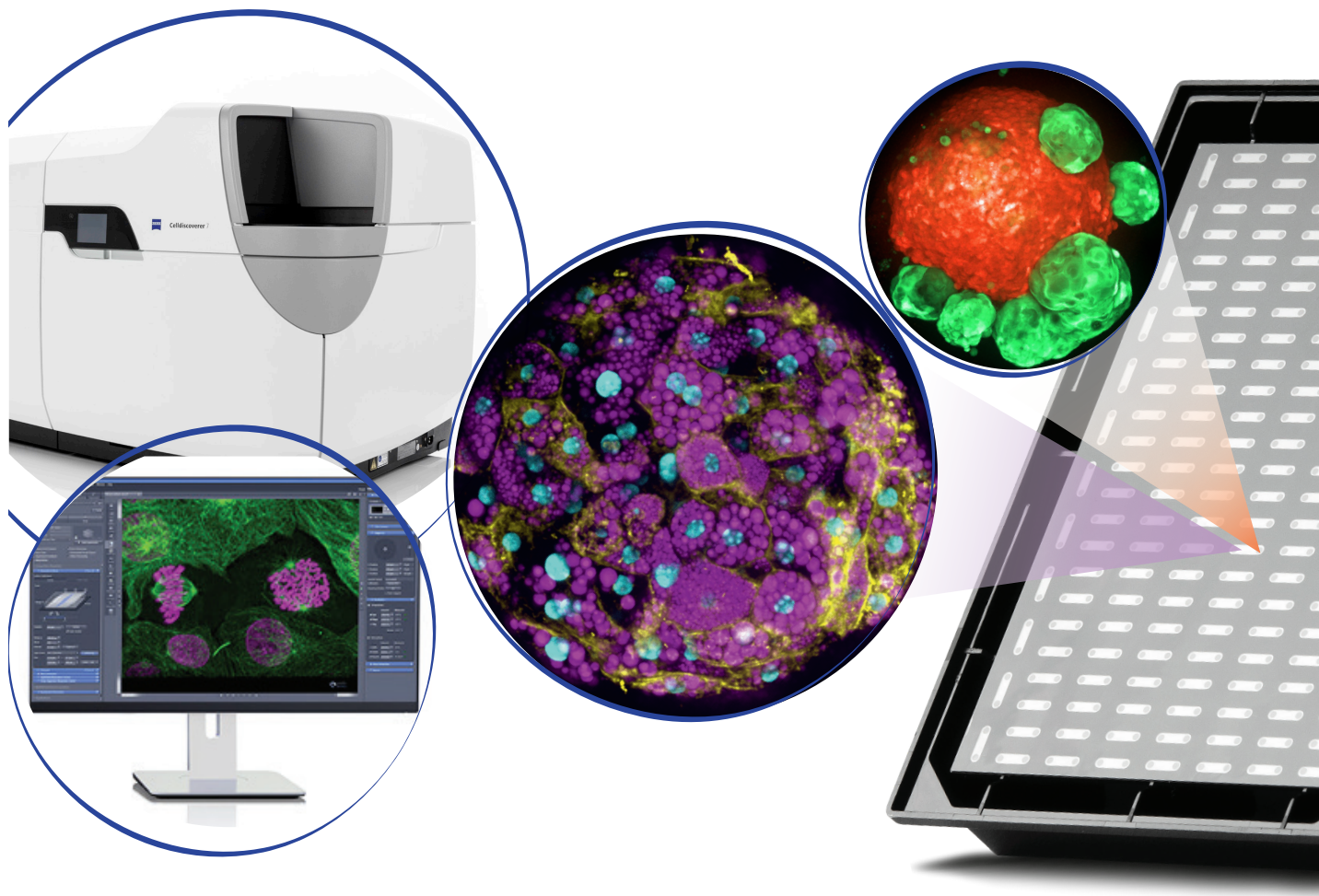


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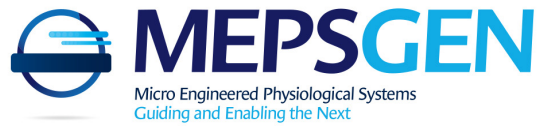
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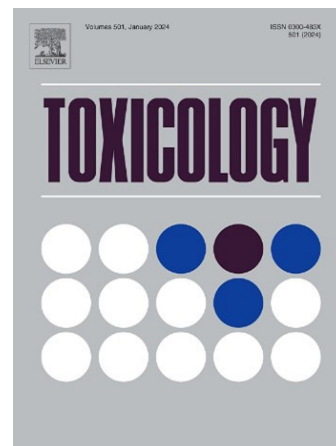


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PROGRAM AT A GLANCE

	Monday 10 th June	Tuesday 11 th June	Wednesday 12 th June	Thursday 13 th June	Friday 14 th June
Pre-MPS Workshop					
8:00	Sunday, 13:00-17:30 Monday, 08:30-16:30				Symposia 8:30-10:30
9:00	Workshop for Advancing Standards and Regulatory Science for MPS and Microfluidic-based Medical Products		Keynote 9:00-10:00 <i>Flex A</i>		1.6 2.7 3.7 4.7
10:00	Filling the Translational Gap: Pathophysiologic Considerations Enhance CIVM 10:30-12:00 Room 327		Poster Presentations/Coffee Break 10:00-11:30 <i>Flex C</i>		Coffee Break
11:00	Registration		Symposia 11:30-13:30		Symposia 11:00-13:00
12:00	Monday: 9:00-17:00 Tuesday to Thursday, 8:00-16:30	1.1 2.2 3.1 4.1	2.3 3.3 4.3	1.5 2.5 3.5 4.5	1.8 2.8 3.8 4.8
13:00	Educational Workshop 13:00-16:30 Track 1: 331-332 Tracks 2 & 3: 333-334		Lunch 13:30-14:30		Closing Ceremony and Keynote 13:00-15:00 <i>Flex A</i>
14:00	Educational Trip		Symposia 14:30-16:30		
15:00	Walk and Talk at the U: Interactive Educational Networking Event at the 'U' of Washington Monday, 09:00-13:00	1.2 2.1 3.2 4.2a 4.2b	1.4 2.4 3.4a 3.4b	1.7 2.6 3.6 4.6	
16:00			Poster Presentations/Coffee Break 16:30-18:00 <i>Flex C</i>		
17:00	Opening Ceremony and Keynote 17:00-19:00 <i>Flex A</i>				
18:00		MPS AI in Drug Dev. 18:00-19:00 <i>Flex C</i>			
19:00	KEY				
20:00	Track 1		Macro Party 20:00-01:00 <i>Fremont Foundry</i>		
21:00	Track 2				
22:00	Track 3				
	Track 4				
	Welcome Reception 19:00-21:00 <i>Garden Terrace</i>				

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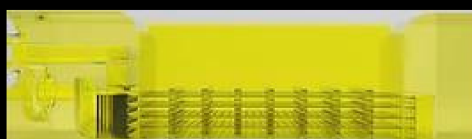
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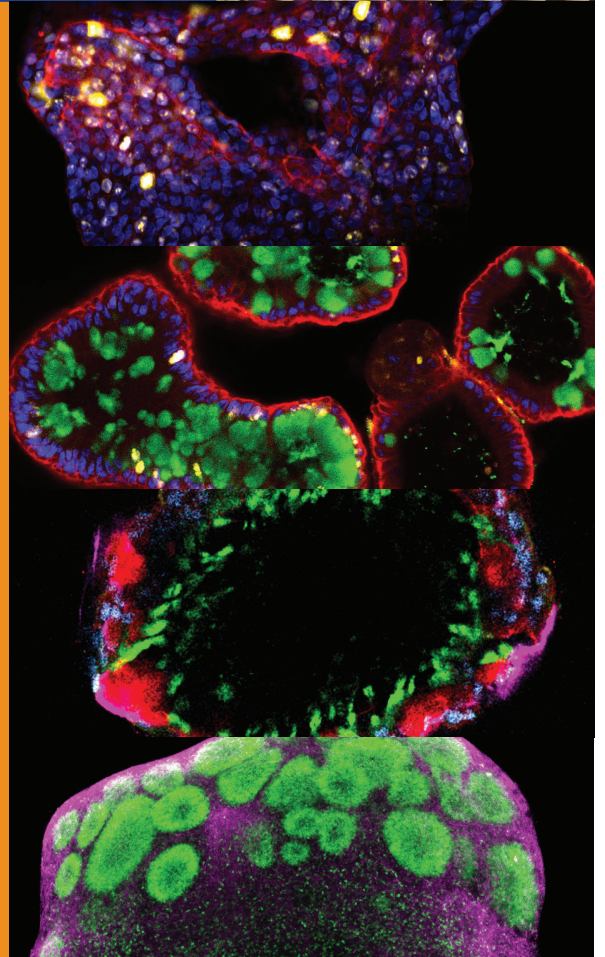
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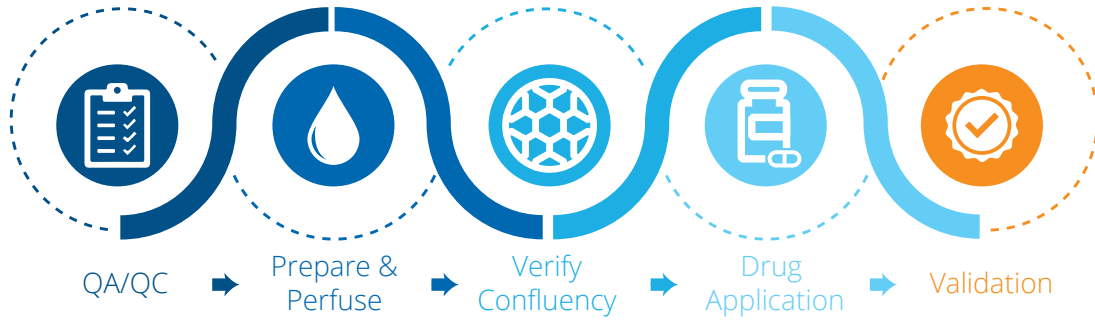
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PRE-MPS WORLD SUMMIT

Workshop: Advancing Standards and Regulatory Science for MPS and Microfluidic-based Medical Products

Sunday

13:00-17:30

Monday

8:30-16:30

Location: *Room 320-322*

Monday, June 10th

Educational Trip to the University of Washington

9:00-13:00

Walk and Talk at the U: Take a tour of the labs and meet local scientists working on MPS.

Satellite Session

10:30-12:00

Topic: Filling the Translational Gap: Pathophysiologic Considerations Enhance CIVM

Moderator(s): *Deidre Dalmas, GSK; Julia Kühnlenz, Bayer SAS*

Location: *Room 327*

Time	Speaker	Organisation	Title of Talk
10:30-11:00	Lindsay Tomlinson	Pfizer, USA	495, Bridging CIVM Context of Use and Traditional Toxicologic Pathology Assessments
11:00-11:15	Charles Havnar	Genentech, USA	268, Organoid Tissue Microarrays: An Improved FFPE Processing Approach for In Vitro Model Readouts
11:15-11:30	Akhemtzada Kargazhanov	University of Central Florida, USA	431, Evaluating the Neuromuscular Pathology in Alzheimer's Disease from Familial Mutations by Utilizing a Human NMJ Model
11:30-11:45	Maggie Qi	Massachusetts Institute of Technology, USA	505, Understanding Glaucoma Immunopathology by Building Retina-on-a-Chip
11:45-12:00	Speaker/Moderator Panel: Bridging the Gap Brainstorming		

Educational Workshop

13:00-16:30

Location: *Track 1 in Rooms 331-332; Tracks 2 & 3 in Room 334*

In 2024, we are thrilled to introduce a novel format for the Educational Session. We plan to elevate the educational experience by presenting three distinct education sessions, each catering to different facets of our field:

Track 1 – Hands-On Experience

Track 2 – Career in Academia

Track 3 – Career in Industry

24th NIH Tissue Chip Consortium Meeting

13:30-16:30

(Closed meeting for NIH funded investigators only.)

Location: *Room 327*

MPS WORLD SUMMIT PROGRAM

Monday, June 10th

Registration

9:00-17:00

Opening Ceremony

17:00-19:00

Keynote Speaker: Jonathan Himmelfarb, Mount Sinai Hospital
Topic: Human Kidney-on-a-Chip Microphysiological Systems for Drug Discovery and Development

Moderator: Danilo Tagle, NCATS

Topic: Human Kidney-on-a-Chip Microphysiological Systems for Drug Discovery and Development

Location: *Flex A*



Welcome Reception (*Garden Terrace*)

19:00-21:00



PROGRAM

* indicates a Young Investigator

Tuesday, June 11th

Registration

8:00-16:30

Exhibition Hall Hours

9:00-18:00

Keynote

9:00-10:00

Keynote Speaker: Ellen Fritsche, Swiss Centre for Applied Human Toxicology (SCAHT); DNTOX GmbH

Moderator: Adrian Roth, Roche

Topic: Revolutionizing Regulatory Safety with NAMs: A Transformative Journey

Location: Flex A



Poster Presentations/Coffee Break

10:00-11:30

Location: Flex C; Sessions: 1.1, 1.2., 1.3, 1.4

Symposia

11:30-13:30

Session 1.1 – MPS for cardiovascular diseases

Moderator(s): *Ishan Goswami, University of California, Berkeley; Huiting Zhang, AIST*

Location: Rooms 320-322

Time	Speaker	Organisation	Title
11:30-12:00	Kit Parker	Harvard University, USA	637, Lessons Learned Modeling the Heart In Vitro
12:00-12:20	Paola Occhetta	Politecnico di Milano, Italy	242, Beating heart-on-chip as a tool to elucidate clinical phenotype of patients affected by genetic cardiomyopathies
12:20-12:40	Ayesha Arefin*	Curi Bio, Inc., USA	296, Contractility-based Phenotypic Characterization of Duchenne Muscular Dystrophy in Human Engineered Heart Tissues
12:40-13:00	Kristin Bircsak	MIMETAS, Netherlands	531, A Novel Microfluidic Device for Modeling an Artery-on-a-Chip and Cardiovascular Diseases
13:00-13:20	George Truskey	Duke University, USA	577, Branched Chain Amino Acids Affect Disease Progression in a Vascular Microphysiological System

Session 2.2 – MPS for ADME modeling

Moderator(s): *Ming-I Huang, Aracari; Janny Pineiro, University of Florida*

Location: Rooms 323-325

Time	Speaker	Organisation	Title
11:30-12:00	Kazuya Maeda	Kitasato University, Japan	629, Use of human/animal crypt-derived intestinal stem cells and their differentiated cells for the evaluation of intestinal absorption and toxicity of drugs
12:00-12:20	James Gosset	Pfizer, USA	483, Leveraging expertise through collaboration toward the development of an organ-linked microphysiological system to inform human pharmacokinetics
12:20-12:40	Carrie German	CFD Research Corporation, USA	415, A synergistic in vitro-in silico framework pairing microphysiological systems and computational modelling for advancing translational research and drug/toxicity screening
12:40-13:00	Maria Proestaki*	Massachusetts Institute of Technology, USA	403, A New In Vitro Model of Human Skin Vasculature for the Subcutaneous Space
13:00-13:20	Yuji Ishida	PhoenixBio, Japan	417, Analysis of hepatocyte-derived humoral factors for maintaining hepatic functions using human hepatocytes isolated from humanized liver chimeric mice.

PROGRAM

* indicates a Young Investigator

Tuesday, June 11th

Symposia (Continued)

11:30-13:30

Session 3.1 – On the way to qualification & validation: MPS for a defined context of use and applicability domain

Moderator(s): *Qiang Shi U.S. Food and Drug Administration; Benoît Maisonneuve NETRI*

Location: *Flex A*

Time	Speaker	Organisation	Title
11:30-12:00	Murat Cirit	Javelin Biotech, USA	56, Pathway-based Similarity Measurement (PBSM) of Preclinical Models and Clinical Tissue Samples to Define Context of Use (CoU) Applications
12:00-12:20	Mark Schurdak	University of Pittsburgh Drug Discovery Institute, USA	488, Qualification of Patient-derived Biomimetic Liver MPS as Drug Development Tools for Drug Metabolism, Toxicity, Drug Efficacy Testing, and Clinical Trial Cohort Selection
12:20-12:40	Tomasz Kostrzewski	CN Bio, UK	257, Bridging the gap: human and preclinical animal microphysiological systems for assessing drug-induced liver injury (DILI) during drug development.
12:40-13:00	Shek Man Chim	Regeneron Pharmaceuticals, Inc., USA	371, Human Brain-Chip for disease modelling and therapeutic development
13:00-13:20	Matthias Gossmann	innoVitro GmbH, Germany	25, In Vitro Systems for the Assessment of Chronic Cardiotoxic Effects: News from the HESI Stem Cell Working Group

Session 4.1 – MPS for cell and gene therapy development

Moderator(s): *Abhinav Sharma, AbbVie; Ben Swenor, Emulate*

Location: *Rooms 327-329*

Time	Speaker	Organisation	Title
11:30-12:00	Samantha Atkins	Moderna, USA	596, Human Liver-on-a-Chip to Predict and De-Risk Lipid Nanoparticle Toxicities
12:00-12:20	Camilla Ceroni*	Doppl SA, Switzerland	134, Advancing immunotherapeutic approaches through co-culture of gastrointestinal organoids with CAR-T cells
12:20-12:40	Joseph Criscione*	Johns Hopkins University, USA	381, A microphysiological model of dystrophic cardiomyopathy for screening microdystrophin gene therapies
12:40-13:00	Debora B. Petropolis	Sanofi, USA	387, Micro physiological systems (MPS) for gene therapy hepatic delivery assessment: Using different liver systems to study the toxicity, uptake and intra-cellular trafficking of novel lipid nanoparticles (LNP) in liver cells.
13:00-13:20	Gabriel Neiman	University of California, Berkeley, USA	511, A cardiac microphysiological system for screening lipid nanoparticle/ mRNA complexes predicts in vivo efficacy for heart transfection

Lunch

13:30-14:30

Symposia

14:30-16:30

Session 1.2 – MPS for pulmonary diseases

Moderator(s): *Yaling Liu, Lehigh University; Young-Jae Cho, Seoul National University Bundang Hospital*

Location: *Rooms 323-325*

Time	Speaker	Organisation	Title
14:30-15:00	Kambeiz H. Benam	University of Pittsburgh, USA	606, Breathing New Life into Research: Innovating Human-Relevant Models for Pulmonary System

PROGRAM

* indicates a Young Investigator

Tuesday, June 11th

Symposia (Continued)

14:30-16:30

Session 1.2 – MPS for pulmonary diseases (cont.)

Moderator(s): *Yaling Liu, Lehigh University; Young-Jae Cho, Seoul National University Bundang Hospital*

Location: *Rooms 323-325*

Time	Speaker	Organisation	Title
15:00-15:20	Lenitza Nieves López*	Genentech, USA	160, Model-omics of in vitro cystic fibrosis airway models: a tool for model selection
15:20-15:40	Chiao Hwei Lee*	University of Melbourne, Australia	186, Unravelling the tug-of-war between cell shape, substrate stiffness and fibrogenic agent in driving fibrogenesis in lung fibroblast cells
15:40-16:00	Chak Hon Luk*	The Francis Crick Institute, UK	283, An immunocompetent human iPSC-derived multicellular Alveolus-on-Chip reveals early pathological events of M. tuberculosis infection
16:00-16:20	Elena Cambria*	Massachusetts Institute of Technology, USA	402, Lung microvasculature-on-chip to study the effect of myofibroblasts on vasculogenesis and angiogenesis in fibrosis

Session 2.1 – MPS to model physiological barriers

Moderator(s): *Tamara Zietek, Doctors Against Animal Experiments; Erin Gallagher, DEVCOM Chemical Biological Center*

Location: *Rooms 327-329*

Time	Speaker	Organisation	Title
14:30-15:00	Sarah Hedtrich	Berlin Institute of Health at Charité; University of British Columbia, Germany; Canada	591, Human (disease) models to tackle inflammatory & genetic diseases of human epithelia
15:00-15:20	Alexander Sotra*	McMaster University, Canada	28, Colon epithelium barrier with vascularized crypts to model inflammatory bowel disease
15:20-15:40	Dieter Groneberg	Fraunhofer Institute for Silicate Research ISC; Fraunhofer Translational Center Regenerative Therapies, Germany	344, Improving Physiological Relevance: Integrating hiPSC-Based Skin Organoids into an OoC
15:40-16:00	Alessandro Bentivogli*	Berlin Institute of Health at Charité, Germany	443, Development of a multi-tissue-on-chip setup to map the inter-organ crosstalk of the gut-lung axis
16:00-16:20	Ana Mora-Boza*	Georgia Institute of Technology, USA	512, Stem Cell-derived Gut on Chip Model with Controlled Permeability for In Vitro Recapitulation of Inflammatory Processes

Session 3.2 – NIA symposium on human in vitro systems for aging research

Moderator(s): *Rebecca Fuldner, NIH; Zane Martin, NIH/NIA/ERP*

Location: *Rooms 320-322*

Time	Speaker	Organisation	Title
14:30-15:00	James Hickman	Hesperos, Inc., USA	541, Human-on-a-chip systems for use in neurological disease and aging research
15:00-15:20	Li-Huei Tsai	Massachusetts Institute of Technology, USA	455, Using Engineered 3D Immuno-Glial-Neurovascular Human Brain Model to Study Alzheimer's Disease Risk Genes
15:20-15:40	George Murphy	Center for Regenerative Medicine, Boston University Medical Campus, USA	493, Uncovering the mechanisms of exceptional longevity through iPSC-based modeling of resiliency
15:40-16:00	Tracy Young-Pearse	Brigham and Women's Hospital, Harvard Medical School, USA	471, Identification of molecular pathways associated with genetic risk for Alzheimer's Disease and related dementias using human iPSCs

PROGRAM

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Tuesday, June 11th

Symposia (Continued)

14:30-16:30

Session 3.2 – NIA symposium on human in vitro systems for aging research (cont.)

Moderator(s): *Rebecca Fuldner, NIH; Zane Martin, NIH/NIA/ERP*

Location: *Rooms 320-322*

Time	Speaker	Organisation	Title
16:00-16:20	Siobhan Malany	University of Florida, USA	547, Comprehensive transcriptome-wide analysis and biomonitoring of donor derived Skeletal Muscle MPS for Drug Testing

Session 4.2a – Round Table: Synthetic hydrogels to enhance MPS and organoid function

Moderator(s): *Linda Griffith, Massachusetts Institute of Technology; Kevin Healy, UC Berkeley*

Location: *Flex A*

Time	Panelist	Organisation
14:30-15:30	Linda Griffith	Massachusetts Institute of Technology, USA
	Kevin Healy	University of California, Berkeley, USA
	Bill Murphy	University of Wisconsin, USA

Session 4.2b – Panel: MPS and space

Moderator(s): *Danilo Tagle, NCATS; Aakash Patel, University of Central Florida*

Location: *Flex A*

Time	Panelist	Organisation
15:30-16:30	Dmitriy Krepkiy	National Center for Advancing Translational Sciences, National Institutes of Health, USA
	Lynn Clary	National Aeronautics and Space Administration (NASA), USA
	Michael Roberts	International Space Station National Laboratory (ISS National Lab), USA

Poster Presentations/Coffee Break

16:30-18:00

Location: *Flex C; Sessions 1.5, 1.6, 1.7, 1.8*

MPS AI in Drug Development

18:00-19:00

Moderator: *Isaac Bentwich, Quris AI*

Location: *Flex A*

Time	Speakers	Organisations
18:00-19:00	Thomas Neumann	University of Washington, USA
	Philip Hewitt	Merck, USA
	Thomas Hartung	Johns Hopkins University, USA

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Wednesday, June 12th

Registration

8:00-16:30

Exhibition Hall Hours

9:00-18:00

Keynote

9:00-10:00

Keynote Speaker: Roger Kamm, Massachusetts Institute of Technology

Topic: MPS to study the brain and subcutaneous tissue

Location: Flex A



Poster Presentations/Coffee Break

10:00-11:30

Location: Flex C; Sessions: 2.1, 2.2, 2.3

Symposia

11:30-13:30

Session 1.3 – MPS for cancer research

Moderator(s): Elaine Faustman, University of Washington; Stephanie Hachey, University of California, Irvine

Location: Rooms 327-329

Time	Speaker	Organisation	Title
11:30-12:00	Riccardo Barrile	University of Cincinnati, USA	639, Bioprinting Paths to Decode Drug Resistance Dynamics in Glioblastoma
12:00-12:20	Sheena Kerr	University of Wisconsin-Madison, USA	102, Engineering the metastatic prostate cancer bone niche: a microphysiological system to report patient-specific treatment response.
12:20-12:40	Carly Strelez	Ellison Institute of Technology, USA	174, Using a patient-derived organoid-on-chip platform to model the colorectal cancer tumor microenvironment and cancer progression.
12:40-13:00	Maxine Lam	Institute of Molecular and Cell Biology (IMCB), Singapore	197, A microphysiological model for glioblastoma and the blood-brain barrier for studying chemotherapy and cell therapy resistance.
13:00-13:20	Sarah Shelton	Massachusetts Institute of Technology, USA	263, Modeling Concurrent Metastasis and Thrombosis

Session 2.3 – Sensors in MPS

Moderator(s): Philip Hewitt, Merck; Virgilio Valente, Toronto Metropolitan University

Location: Rooms 320-322

Time	Speaker	Organisation	Title
11:30-12:00	Feng Guo	Indiana University Bloomington, USA	585, Brain Organoid Computing for Artificial Intelligence
12:00-12:20	Mahdi Ghazal	MaxWell Biosystems, Switzerland	670, Advancing Neural Organoid Studies with Next-Gen Electrophysiology
12:20-12:40	Julia Marzi*	NMI Natural and Medical Sciences Institute, Germany	42, Targeting cellular interactions and metabolism in situ by combining advanced imaging techniques with organ-on-chip platforms
12:40-13:00	Alexander Guttenplan*	National Institute of Standards and Technology (NIST), USA	320, Instrumented Stretchable Porous Membranes for Barrier Tissue Models with Real-Time Measurement and Biomimetic Cyclic Strain

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Wednesday, June 12th

Symposia (Continued)

11:30-13:30

Session 2.3 – Sensors in MPS (cont.)

Moderator(s): *Philip Hewitt, Merck; Virgilio Valente, Toronto Metropolitan University*

Location: *Rooms 320-322*

Time	Speaker	Organisation	Title
13:00-13:20	Kevin Roehm	CFD Research Corporation, USA	375, Microphysiological, bioreactor based agnostic hazard sensor

Session 3.3 – Case studies of MPS use that informed drug development

Moderator(s): *Seiichi Ishida, National Institute of Health Sciences, Japan; Yiguang Zhu, Johns Hopkins University*

Location: *Rooms 323-325*

Time	Speaker	Organisation	Title
11:30-12:00	Heather Hsu	Inipharm, USA	450, Nonclinical development of INI-822, a small molecule inhibitor of HSD17B13 in Phase 1 clinical testing: Use of a MPS to measure anti-fibrotic effects
12:00-12:20	Mario Beilmann	Boehringer Ingelheim, Germany	150, Application of New Approach Methodologies (NAMs) for human risk Assessment: A series of case studies from the pharmaceutical industry
12:20-12:40	Taraka Sai Pavan Grandhi	GSK, USA	137, A Microphysiological Assay for Studying T-Cell Chemotaxis, Trafficking and Tumor Killing
12:40-13:00	Guilia Raggi	AlveoliX AG, Switzerland	241, Patient-derived lung-on-chip for safety assessment of cancer immunotherapy
13:00-13:20	Kevin E. Healy	Organos, Inc., USA	537, Arrhythmogenic Drug Evaluation in a High Throughput 3D Cardiac Microtissue System

Session 4.3 – MPS for drug discovery, from target identification to candidate selection

Moderator(s): *Hitoshi Naraoka, Astellas; Maria Proestaki, Massachusetts Institute of Technology*

Location: *Flex A*

Time	Speaker	Organisation	Title
11:30-12:00	Rhiannon Hardwick	Bristol Myers Squibb, USA	590, Characterizing GI and Liver MPS Models for Use in Discovery Toxicology Applications
12:00-12:20	Massimo Alberti	REVIVO BioSystems, Singapore	173, Next-generation in vitro testing: Microfluidic Models for Ageing, Wound Healing, and Oral Tissue Analysis in Safety, Efficacy, and Permeation Studies.
12:20-12:40	Rahul Cherukuri*	Texas A&M University, USA	282, Development of 3D bio-printed Organ-on-Chip for high throughput screening of drug molecules at the fetomaternal interface.
12:40-13:00	Meagan Makarczyk*	University of Pittsburgh, USA	435, An Innervated Synovium-Cartilage Chip for Modeling Joint Inflammation and Associated Pain
13:00-13:20	Gregory Segala*	FluoSphera SA, Switzerland	558, Integrated multi-tissue systemic assays for the reliable prediction of drug efficacy and safety during early drug discovery

Lunch

13:30-14:30

Wednesday, June 12th

Symposia

14:30-16:30

Session 1.4 – MPS for rare diseases

Moderator(s): *Marize Valadares, Golas University; Dallas Nash, University of Central Florida*

Location: *Rooms 323-325*

Time	Speaker	Organisation	Title
14:30-15:00	Yu Shrike Zhang	Harvard Medical School, USA	444, Engineering High-Content Human-based Rare Disease Models: from Chip Designs to Biology
15:00-15:20	D. Walker Hagan*	Hesperos, Inc., USA	472, A Human-on-a-Chip® CMT2S model for the evaluation of personalized medicine
15:20-15:40	Yung-Yao Lin	Blizard Institute, Queen Mary University of London, UK	124, Engineering human pluripotent stem cell-derived 3D skeletal muscle for modelling Duchenne muscular dystrophy and drug testing
15:40-16:00	Nicholas Geisse	Curi Bio, Inc., USA	396, A Turnkey Platform for in vitro Human 3D Engineered Muscle Tissue Modeling of Duchenne Muscular Dystrophy
16:00-16:20	Jason Ekert	UCB Pharma, USA	321, Development and implementation of 3D neuromuscular disease models for early drug discovery

Session 2.4 – Bioconvergence: Artificial Intelligence, machine learning, and MPS

Moderator(s): *Soumya Mitra, AbbVie; Kevin Liu, Hesperos, Inc.*

Location: *Rooms 320-322*

Time	Speaker	Organisation	Title
14:30-15:00	Kerstin Kleinschmidt-Doerr	Merck KGaA, Germany	595, Time for Some Paradigm Shifts - Animal Testing at a Turning Point
15:00-15:20	Thibault Honegger	NETRI, France	246, Digital Signature Library: using neurons as universal bio-digital sensors
15:20-15:40	Jose L. Cadavid*	Massachusetts Institute of Technology, USA	390, Data-driven systems biology framework for rational design of cues and in vitro / in vivo translation of microphysiological systems
15:40-16:00	William Bogen*	Hesperos, Inc., USA	465, Design and implementation of a custom machine learning model for segmentation of electrophysiological cardiomyocyte responses in organ-on-a-chip applications
16:00-16:20	Holly Kimko	AstraZeneca, UK	530, Combining Organoids and Mathematical Modelling to make quantitative assessments of clinical safety risks in the gastrointestinal tract

Session 3.4a – Round Table: Separating the tangible from the aspirational in using CIVM/MPS to augment data to support regulatory decision making

Moderator(s): *Jason Ekert, UCB Pharma; Rhiannon Hardwick, Bristol Myers Squibb*

Location: *Flex A*

Time	Panelists	Organisations
14:30-15:30	Hugo Vargas	Amgen, USA
	Matthew Wagoner	Takeda Pharmaceuticals, Japan
	Prathap Mahalingaiah	AbbVie, USA
	Peter Loskill	Eberhard Karls University Tübingen, Germany
	Lindsay Tomlinson	Pfizer, USA

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Wednesday, June 12th

Symposia (Continued)

14:30-16:30

Session 3.4b – Plenary: Regulatory perspective on MPS-based IND submission

Moderator(s): *Nicholas King & Graham Marsh, Critical Path Institute*

Location: *Flex A*

Time	Panelist	Organisation
15:30-16:30	Kazushige Maki	Astellas Pharma Inc., Japan
	Ajit Dash	Genentech, USA
	York Tomita	US Food and Drug Administration, USA
	Sonja Beken (recorded)	European Medicines Agency, Netherlands
	Sofia Batista (recorded)	European Food Safety Authority, Italy
	Monica Piergiovanni	EU Commission, Italy

Session 4.4 – MPS for drug safety

Moderator(s): *Pedro Caetano-Pinto, Griefswald University; Mathieu Vincken, University of Brussels*

Location: *Rooms 327-329*

Time	Speaker	Organisation	Title
14:30-15:00	Lindsay Marshall	The Humane Society of the United States, USA	518, An analysis of US National Institutes of Health-supported research projects using microphysiological systems.
15:00-15:20	Olivier Frey	InSphero AG, Switzerland	255, Mitigation of liver toxicity effects of bispecific T cell Engagers in immune-competent liver-tumor co-culturing high-throughput platform
15:20-15:40	Shay Soker	Wake Forest University School of Medicine, USA	311, 3D Bioprinted Liver-on-a-chip for Drug Cytotoxicity Screening
15:40-16:00	Chris Hughes	Aracari Biosciences, USA	369, The vascularized Gravity-driven Organ Chip (GO-Chip): the microphysiological system for testing vascular injury
16:00-16:20	Sonja Gill	AstraZeneca, UK	494, Integration of humanized in vitro bone marrow MPS data with QST modelling enables clinical haematotoxicity predictions of oncology drug combination palbociclib and capivasertib

Poster Presentations/Coffee Break

16:30-18:00

Location: *Flex C; Sessions: 2.4, 2.5, 2.6, 2.7, 2.8 and 3.1, 3.5 and 5.1*

Macro Party

20:00-01:00

Location: *Fremont Foundry, 154 N 35th St, SEATTLE, WA 98103*

Featuring: *Acid Tongue, an American garage band heavily influenced by classic soul, punk & psychedelic rock.*

See page 41 for more details.



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Thursday, June 13th

Registration **8:00-16:30**

Exhibition Hall Hours **9:00-18:00**

Keynote **9:00-10:00**

Keynote Speaker: Milica Radisic, University of Toronto, Canada
Moderator: Thomas Hartung, Johns Hopkins University
Topic: Biofabrication of advanced heart and kidney-on-a-chip models
Location: *Flex A*



Poster Presentations/Coffee Break **10:00-11:30**

Location: *Flex C; Sessions 4.1, 4.3*

Symposia **11:30-13:30**

Session 1.5 – MPS to model pre- and postnatal conditions or reproductive disorders

Moderator(s): *Shuo Xiao, Rutgers University; Vinidhra Shankar (MERLN Institute for Technology-Inspired Regenerative Medicine)*

Location: *Rooms 327-329*

Time	Speaker	Organisation	Title
11:30-12:00	Lauren Richardson*	The University of Texas Medical Branch, USA	138, Placenta organ-on-chip studies evaluating endocrine-disrupting compounds and their impact on human placental function.
12:00-12:20	Eva Veiss*	CEA Paris-Saclay, France	305, Contribution of microfluidic in modeling Human vascularized brain organoids in the context of neonatal hypoxia-ischemia
12:20-12:40	Hannes Campo*	Northwestern University, USA	355, Engineering a custom in vitro follicle microarray compatible with the LATTICE microfluidic platform to support follicle development and ovulation.
12:40-13:00	Brad Hansen*	University of Washington, USA	386, Mirroring Testicular Development In Vitro: Insights for Reproductive and Developmental Toxicology
13:00-13:20	Ellen Kan*	Massachusetts Institute of Technology, USA	409, Influence of stromal “progesterone resistance” on microvascular function in a microfluidic model of endometriosis

Session 2.5 – MPS for infectious diseases and vaccine development

Moderator(s): *Jakson Luk, The Francis Crick Institute; Yunhao Zhai, Wyss Institute*

Location: *Rooms 320-322*

Time	Speaker	Organisation	Title
11:30-12:00	Simon GP Funnell	UK Health Security Agency (UKHSA), UK	63, Assessment of the virulence and human tissue tropism of SARS-CoV-2 variants in different MPS platforms including one to investigate human neurological disorders
12:00-12:20	Sushma M. Bhosle	National Institutes of Health, USA	148, MPS meets One Health: Zoonotic Nipah virus infection of lung chips from pigs or humans
12:20-12:40	Amanzhol Kurmashev*	ETH Zürich, Switzerland	204, High-resolution imaging platform to unravel pathophysiological mechanisms of Pseudomonas aeruginosa infections of the human upper airway epithelium
12:40-13:00	Shay Ferdosi*	GSK, USA	367, Lymph node on a chip as a dynamic cell model for pre-clinical vaccine research

Thursday, June 13th

Symposia (Continued)

11:30-13:30

Session 2.5 – MPS for infectious diseases and vaccine development (cont.)

Moderator(s): *Jakson Luk, The Francis Crick Institute; Yunhao Zhai, Wyss Institute*

Location: *Rooms 320-322*

Time	Speaker	Organisation	Title
13:00-13:20	Remigiusz Walocha*	Institut Pasteur, France	458, Impact of mechanical forces and microenvironment on colonic homeostasis and SARS-CoV-2 invasion

Session 3.5 – Standards for MPS validations

Moderator(s): *Vania Silverio INESC MN; Kasturi Mahadik, Centre for Predictive Human Model Systems*

Location: *Rooms 323-325*

Time	Speaker	Organisation	Title
11:30-12:00	Monica Piergiovanni	European Commission - Joint Research Centre, Italy	470, Qualification principles to scientifically assess MPS-based methods for use in regulatory contexts
12:00-12:20	Seiichi Ishida	Sojo University, Japan	72, Japanese approach to the proposal of an OECD Test Guideline using Gut-Liver MPS for the first pass effect analysis as a Context of Use of toxicokinetic simulator in chemical risk assessment
12:20-12:40	Graham Marsh	Critical Path Institute, USA	350, A framework to support FDA qualification of complex in vitro models for use in regulatory submissions
12:40-13:00	Hiroki Nakae	Japan bio Measurement & Analysis Consortium	45, Standardization for MPS - Evaluation of Plastic Material used for Microfluidics
13:00-13:20	Vania Silverio	INESC MN, Portugal	291, Development of technical procedures for traceable and accurate measurements of volume and flow related quantities in microfluidic devices

Session 4.5 – In vitro clinical trials and precision medicine: real, digital and MPS twins

Moderator(s): *Thomas Neumann, University of Washington; Nicolas Butelet, NeuCyte, Inc.*

Location: *Flex A*

Time	Speaker	Organisation	Title
11:30-12:00	Mark Miedel	University of Pittsburgh Drug Discovery Institute, USA	473, Toward Precision Medicine for Metabolic Dysfunction-Associated Steatotic Liver Disease Comparing Wildtype and a High-Risk PNPLA3 Variant in a Human Biomimetic Liver Microphysiology System
12:00-12:20	Adrian Roth	F. Hoffmann-La Roche Ltd, Switzerland	83, Patient-derived Skin Micro-Organospheres Recapitulate Clinical Response to Immunotherapy
12:20-12:40	Oscar Silfvergren*	Linköping University, Sweden	94, Knowledge-driven drug development: from microphysiological systems to humans using scalable digital twins
12:40-13:00	Yu-Chieh Yuan*	Xellar Biosystems, USA	146, High-throughput drug efficacy screening with 3D microfluidic cancer model powered by high-content imaging for precision medicine
13:00-13:20	Aakash Patel*	University of Central Florida, USA	289, A multi-organ human-on-a-chip system modeling chronic opioid overdose rescue efficacy and off-target toxicity

Lunch

13:30-14:30

PROGRAM

* indicates a Young Investigator

Thursday, June 13th

Symposia

14:30-16:30

Session 1.7 – MPS for metabolic and endocrine disorders

Moderator(s): *Yi-Chin Toh, Queensland University of Technology; Alexa Rabeling, University of Cape Town*

Location: *Rooms 320-322*

Time	Speaker	Organisation	Title
14:30-15:00	Peter Loskill	Eberhard Karls University Tübingen, Germany	594, Leveraging Organ-on-Chip technology to model key players of metabolic and endocrine disorders
15:00-15:20	Katharina Schimek	TissUse GmbH, Germany	89, Modelling diabetes-on-chip: Functional coupling of pancreas and liver spheroids for evaluating the effect of diabetes drugs
15:20-15:40	Andreas Stahl	University of California, Berkeley, USA	440, Adipocyte inflammation is the primary driver of hepatic insulin resistance in a human iPSC-based microphysiological system
15:40-16:00	Morgan Chandler*	MIMETAS, USA	315, A high-throughput kidney-on-a-chip platform for chronic kidney disease therapy discovery
16:00-16:20	Heta Lad*	University of Toronto, Canada	582, Engineered 3D human skeletal muscle culture model reveals the pathogenic effects of patient-specific humoral factors in ICU-acquired weakness.

Session 2.6 – MPS for organ crosstalk (3+ organs)

Moderator(s): *Sarah Hedtrich, Berlin Institute of Health at Charité & University of British Columbia; Dawn Lin*

McMaster University

Location: *Rooms 327-329*

Time	Speaker	Organisation	Title
14:30-15:00	Mandy Esch	National Institute of Standards and Technology (NIST), USA	536, Prototyping multi-organ MPS with near-physiological amounts of liquid
15:00-15:20	Anna Fritschen*	Technical University of Darmstadt, Germany	37, Automated high-throughput 3D-bioprinting platform for the creation of vascularized Organs-on-a-Chip
15:20-15:40	Martin Raasch*	Dynamic42 GmbH, Germany	220, Harnessing digital twins for precision pharmacokinetics in pregnancy models using a three-organ-on-chip interactome model.
15:40-16:00	Zilin Zhang*	Southeast University, China	405, Monitoring of Cell Crosstalks in a Multi-Organ Microphysiological System
16:00-16:20	Elizabeth Blaber*	Rensselaer Polytechnic Institute, USA	523, Understanding the impact of spaceflight on the brain-liver-gut-axis: Using novel tools to adapt liver organoids to spaceflight conditions.

Session 3.6 – Driving MPS adoption: Successful partnerships between developer and applicant

Moderator(s): *Kasper Renggli, PMI R&D; Ayesha Arefin, Curi Bio*

Location: *Flex A*

Time	Speaker	Organisation	Title
14:30-14:50	Paul Vulto	MIMETAS, Netherlands	669, Partnering with pharma: How MPS supports the next wave of immune oncology programs
14:50-15:10	Abhinav Sharma*	AbbVie, USA	32, Humanized Platforms to Investigate the impact of Therapeutic Intervention on Inflammation Driven Barrier Disruption in Inflammatory Bowel Disease
15:10-15:30	Andre Rodrigues*	University of California, Berkeley, USA	38, Qualification of a Human 3D Liver-on-Chip Model: Establishing a Cross-pharma trial to evaluate ADME and Toxicity Predictions in Pre-clinical Development.

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Thursday, June 13th

Symposia (Continued)

14:30-16:30

Session 3.6 – Driving MPS adoption: Successful partnerships between developer and applicant (cont.)

Moderator(s): *Kasper Renggli, PMI R&D; Ayesha Arefin, Curi Bio*

Location: *Flex A*

Time	Speaker	Organisation	Title
15:30-15:50	Stephanie Zhang*	Merck KGaA, USA	158, A Gut-on-a-Chip model to predict oral absorption using Caco-2 and biopsy-derived intestinal organoids
15:50-16:10	Daniel A. Tadesse	U.S. Food and Drug Administration, USA	467, Coculture of normal human intestinal colonoids with and without complex human microbiota under a physiologically-relevant environment in an intestine-chip model
16:10-16:30	Megan LaFollette*	3Rs Collaborative, USA	426, 3RsC Microphysiological Systems initiative: Advancing MPS education and technology through collaboration

Session 4.6 – MPS to define physiologically-relevant doses

Moderator(s): *Chrisna Gouws, North-West University; Sriram Bharath Gugulothu, Indian Institute of Science*

Location: *Rooms 323-325*

Time	Speaker	Organisation	Title
14:30-15:00	Cathy Yeung	University of Washington, USA	599, Predicting human renal clearance by coupling kidney MPS and physiologically-based pharmacokinetic (PBPK) models
15:00-15:20	Evita van de Steeg	TNO, Netherlands	270, Proof of concept study: equivalent ADME gene expression in pediatric intestinal organoids compared to its original intestinal tissue
15:20-15:40	Sei Hien Lim	AIM Biotech, Singapore	201, A 3D in vitro human BBB model for the assessment of transport and toxicity of brain-targeting compounds
15:40-16:00	Dowlette-Mary Alam El Din*	Center for Alternatives to Animal Testing; Johns Hopkins University, USA	475, Chronic low-dose domoic acid exposure influences neuronal network function in hiPSC derived brain organoids
16:00-16:20	Gaurab Kc	Novartis Institutes for BioMedical Research, USA	538, Rat and human hepatocyte multi-spheroids for prediction of hepatic clearance of low turnover compounds

Poster Presentations/Coffee Break

16:30-18:00

Location: *Flex C; Sessions: 4.4, 4.5, 4.6, 4.7, 4.8*

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Friday, June 14th

Symposia

8:30-10:30

Session 1.6 – MPS to model neurodevelopment

Moderator(s): *Mubeen Goolam, University of Cape Town; Evelyn Zarate-Sanchez, University of California Davis*

Location: Rooms 327-329

Time	Speaker	Organisation	Title
8:30-9:00	Lena Smirnova	Johns Hopkins University, USA	503, Human biomarker research, brain MPS and novel bioinformatic approach to identify brain-specific extracellular vesicles' RNA as biomarkers of disease
9:00-9:20	Jana B. Petr*	ETH Zürich, Switzerland	243, PHIRIOS: A microfluidic platform for long-term, high-resolution imaging of organotypic tissue slices to study astrocyte dynamics
9:20-9:40	Tyler Nelson	Air Force Research Laboratory, USA	333, Advancing Microphysiological Systems for Holistic Warfighter Assessment
9:40-10:00	Kaihua Chen*	University of Rochester, USA	389, Investigating Impact of a "Cytokine Storm" on Astrogliosis at Human Blood-Brain Barrier in a Microfluidic Model of Sepsis
10:00-10:20	Feiyu Yang*	Johns Hopkins University, USA	399, Localized passive diffusion-based gradient generator for dorsal-ventral and rostral-caudal patternings of brain organoids

Session 2.7 – Modeling diversity and population health with MPS

Moderator(s): *Olivier Frey, InSphero; Maren Schenke, Johns Hopkins University*

Location: Flex A

Time	Speaker	Organisation	Title
8:30-9:00	Ivan Rusyn	Texas A&M University, USA	600, Modeling Human Genetic Diversity Using Cell-Based Experimental Models: Can we Make These Models Microphysiological?
9:00-9:20	Edward Kelly	University of Washington, USA	668, Modeling Population Diversity Risk to Kidney Stone Disease Using a Kidney Microphysiological System in Microgravity
9:20-9:40	Chad Deisenroth	U.S. Environmental Protection Agency, USA	13, Technical Evaluation and Standardization of the Human Thyroid Microtissue Assay
9:40-10:00	Sophie Zaaijer	Cornell Tech, USA	507, Ancestry Matters: why building inclusivity into MPS models is critical for the future of biomedicine
10:00-10:20	Ashley Martier*	Tulane University, USA	565, Toward microphysiological models of sex-specific effects in diabetic retinopathy

Session 3.7 – Food, cosmetics and consumer products' industry experience in MPS implementation

Moderator(s): *Adeel Ahmed, University of Wisconsin - Madison; Breanne Kincaid, Johns Hopkins University*

Location: Rooms 323-325

Time	Speaker	Organisation	Title
8:30-9:00	Marisa Meloni	Vitroscreen, Italy	618, 3D scaffold free human spheroids applications in cosmetics and nutritionals: why not?

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Friday, June 14th

Symposia (Continued)

8:30-10:30

Session 3.7 – Food, cosmetics and consumer products' industry experience in MPS implementation (cont.)

Moderator(s): *Adeel Ahmed, University of Wisconsin - Madison; Breanne Kincaid, Johns Hopkins University*

Location: Rooms 323-325

Time	Speaker	Organisation	Title
9:00-9:20	Johanna Ritter*	Beiersdorf AG, Germany	229, Microphysiological Systems (MPS) in Dermatology: Systemic Skin Aging in a Two Organ MPS
9:20-9:40	Gretchen Mahler	Binghamton University, USA	260, A small intestine on a chip for assessing the impact of food additives
9:40-10:00	Robert Moyer	Battelle, USA	326, In vitro evaluation of inhalation toxicity induced by 2,3-pentanedione vapor using a VITROCELL 48 2.0 Plus exposure system and air-liquid interface (ALI) airway model
10:00-10:20	Ji Eun Lee	MEPSGEN, South Korea	421, 3D Human Skin Tissue Modeling in a Manufactured Microphysiological System

Session 4.7 – MPS to model physiological barriers 2

Moderator(s): *Monica Piergiovanni, EU Commission; Holly Bachas Brook, Queen Mary Univ. of London*

Location: Rooms 320-322

Time	Speaker	Organisation	Title
8:30-9:00	Jennifer Fang	Tulane University, USA	535, Progress towards generation of a physiological organ-on-a-chip model of the outer blood-retinal barrier
9:00-9:20	Satoshi Fujita	National Institute of Advanced Industrial Science and Technology (AIST), Japan	217, Microfluidic based BBB-MPS chip with 3D microvascular network
9:20-9:40	Bowie P. Lam*	Texas A&M University, USA	286, Development of double-tapered placental organ-on-chip using two-photon polymerization technique for label-free real-time cell monitoring
9:40-10:00	Noah Goshi*	Lawrence Livermore National Laboratory, USA	513, An Instrumented Neurovascular Unit for Non-Invasive Monitoring of Blood-Brain Barrier and Neural Function
10:00-10:20	Minh Tran*	Sungkyunkwan University, South Korea	572, Microengineered Blood-Choroid plexus Barrier (BCB) system for studying neurodegenerative disease.

Coffee Break

10:30-11:00

Symposia

11:30-13:00

Session 1.8 – MPS for immune response and diseases

Moderator(s): *Crystal W. Burke, US Army Medical Research; University of British Columbia; Clara Ramón-Lozano, DIIVT*

Location: Rooms 327-329

Time	Speaker	Organisation	Title
11:00-11:30	Marc Ferrer	National Center for Advancing Translational Sciences, National Institutes of Health, USA	178, Biofabrication of an immunocompetent three-dimensional (3D) skin tissue equivalents as a pre-clinical testing platform for inflammatory skin diseases.
11:30-11:50	Daniel Penarete*	Jackson Laboratory for Genomic Medicine, USA	141, Advanced Intestine Chip to Interrogate the Host-Microbiome Crosstalk
11:50-12:10	Annika Winter	TissUse GmbH, Germany	233, TB Organoid Model – towards an MPS-based assay to test TB vaccines and treatment modalities

Friday, June 14th

Symposia (Continued)

11:00-13:00

Session 1.8 – MPS for immune response and diseases (cont.)

Moderator(s): *Crystal W. Burke, Berlin Institute of Health at Charité; University of British Columbia; Clara Ramón-Lozano, DIIVT*

Location: *Rooms 327-329*

Time	Speaker	Organisation	Title
12:10-12:30	Michael Rupar*	Hesperos, Inc., USA	498, Implementation of a Human Cell-Based Malaria-on-a-Chip Phenotypic Disease Model for Drug Efficacy Evaluation
12:30-12:50	Evelyn Zarate-Sanchez*	University of California, Davis, USA	515, 3D In Vitro Model of Human Bone Marrow Recapitulates Granulopoiesis

Session 2.8 – MPS to model metabolism and transport

Moderator(s): *Sangeeta Khare, U.S. Food and Drug Administration; Cathy Yeung, University of Washington*

Location: *Rooms 323-325*

Time	Speaker	Organisation	Title
11:00-11:30	Tomoki Imaoka	Daiichi Sankyo Co., Ltd., Japan	592, Application of Microphysiological Systems in ADME Sciences: Case Studies of Intestinal Absorption and Renal Secretion
11:30-11:50	Yi-Chin Toh	Queensland University of Technology, Australia	428, Localized oxygen control in a microfluidic osteochondral interface model recapitulates bone-cartilage crosstalk during osteoarthritis
11:50-12:10	Siiri Suominen*	Tampere University, Finland	385, Establishing physiologically relevant liver zonation in iPSC-derived hepatocyte-like cells through oxygen gradient modulation
12:10-12:30	Seunggyu Kim*	Massachusetts Institute of Technology, USA	407, Microfluidic digital twin model for lymphatic drainage of peptide drugs
12:30-12:50	Niels B. Larsen	Technical University of Denmark, Denmark	496, Recapitulating liver oxygen gradients, zonation, and toxicity patterns in a 3D printed massively microperfused MPS culture platform

Session 3.8 – MPS toward high throughput screening of chemicals

Moderator(s): *Kristin Bircsak, MIMETAS; Dharaminder Singh, CN Bio*

Location: *Flex A*

Time	Speaker	Organisation	Title
11:00-11:30	Jan Lichtenberg	InSphero, Switzerland	638, Enhancing High-Throughput Screening with Versatile 3D Microtissue Models
11:30-11:50	Randolph Ashton	University of Wisconsin-Madison, USA	281, RosetteArray™ platform for quantitative high-throughput screening of human developmental neurotoxicity and modeling of neurodevelopmental disorders
11:50-12:10	Corey Rountree	AxoSim, Inc., USA	90, Human NerveSim® is a Peripheral Nerve Model for High-Throughput Functional Neurotoxicity and Neuroprotection Assays
12:10-12:30	Jonas Goldowsky	CSEM, Switzerland	118, OrganEYEzer - High-throughput Sorting of Organoids for Drug Screening
12:30-12:50	Vinidhra Shankar*	Institute for Technology-Inspired Regenerative Medicine, Netherlands	368, High-throughput screening of teratogens using a stem cell-derived embryo model in microwell arrays to predict developmental toxicity

PROGRAM

* indicates a Young Investigator

Friday, June 14th

Symposia (Continued)

11:00-13:00

Session 4.8 – MPS to model neurodegeneration

Moderator(s): *Kenneth Hawkins, University of Central Florida; Tatsuya Osaki, Massachusetts Institute of Technology*

Location: *Rooms 320-322*

Time	Speaker	Organisation	Title
11:00-11:30	Cristina Zivko*	Johns Hopkins University School of Medicine, USA	348, Drug response heterogeneity targeting neuropsychiatric symptoms and distinctive proteomic profiling for Alzheimer's Disease patient stratification using iPSC-derived hindbrain organoids
11:30-11:50	Noo Li Jeon	Seoul National University, South Korea	196, High-Throughput Peripheral Nervous System-on-a-Chip for Studying Demyelinating Diseases.
11:50-12:10	Michelle Trempel*	University of Rochester, USA	332, Modeling pericyte loss in CNS disease using the μ SiM platform to understand post-operative delirium superimposed on dementia
12:10-12:30	Sarah Spitz*	Massachusetts Institute of Technology, USA	363, A vascularized midbrain organoid model for studying the role of the senescent blood-brain-barrier in Parkinson's Disease
12:30-12:50	Dallas Nash*	University of Central Florida, USA	394, Investigation into the effect of APOE4 iPSC derived astrocytes on the blood brain barrier through in vitro models.

Keynote

13:00-14:00

Keynote Speaker: Kim Homan, Genentech

Moderator: Lena Smirnova, Johns Hopkins University

Topic: MPS use in drug development: How new models slot into the preclinical paradigm

Location: *Flex A*



Closing Ceremony

14:00-15:00

Location: *Flex A*

Closing ceremony, awards ceremony and iMPSS member meeting.

SOCIAL EVENTS

Monday, June 10th

Welcome Reception

19:00-21:00

Free and open to all attendees! No registration.

Tuesday, June 11th

Tai Chi

7:00-8:00

Ming-I Huang from Aracari Biosciences, will lead the Tai Chi program as she has volunteered for several summers at New York City's Bryant Park.

She will start with a set of Chi Kung exercises designed to coordinate movement with deep breathing techniques to improve your ability to relax and to manage stress among many other benefits. These are developed by Grandmaster C. K. Chu and are good for all levels and ages. The program will end with a full set of Yang style Tai Chi short form for those looking for more Tai Chi experiences.

Wednesday, June 12th

Macro Party

An unforgettable night of vibrant music awaits at the Fremont Foundry, locally known as "The Center of the Universe." Enjoy sweeping views of the Seattle skyline accompanied by Acid Tongue's psychedelic rock sound and immersive light show. The party continues with tireless dancing and lively beats provided by Seattle DJs throughout the night. *Tickets are an add-on to your registration!*

Band: Acid Tongue

Acid Tongue is an American garage band heavily influenced by classic soul, punk & psychedelic rock. Formed in a damp Seattle basement, the band immediately hit the road, extensively touring the US & Europe and refining their unique brand of rock & roll. Consisting of a core duo—singer/songwriter Guy Keltner & drummer/vocalist Ian Cunningham—the band also includes numerous touring & studio musicians scattered between Paris, New York, London, Mexico City, & Los Angeles, with a rotating roster that seems to grow larger by the day.

Sunset DJ Set

20:00-22:00

Acid Tongue and Immersive Light Show

21:00-23:00

Dancing DJ Set

23:00-01:00



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Pathogens



Immune cells

Application areas

- / Tissue Barrier Models - Transport Studies
- / Immune Cell Perfusion & Migration
- / Drug Safety Profiling
- / Antibody Safety and Target Profiling
- / Host-Microbiome Interaction
- / Infection & Disease Modelling



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Founded in 2018, Beijing Daxiang Biotech Co., Ltd. (referred to as "Daxiang Bio") is a leading high-tech company that specializes in the research, development, and production of human Organoids-on-Chips in China. Daxiang Bio is committed to promoting and leading the widespread application of Organoids-on-Chips in the fields of new drug R&D, disease modeling, and personalized precision medicine.

Daxiang Bio's core team comes from top universities in China and overseas, including Peking University, Tsinghua University, Purdue University, University of Chinese Academy of Sciences, etc. It hopes to provide drug development solutions that are more accurate, more efficient and more economical, and an innovative and bionic clinical precision medicine standardization platform to promote the development of human health.

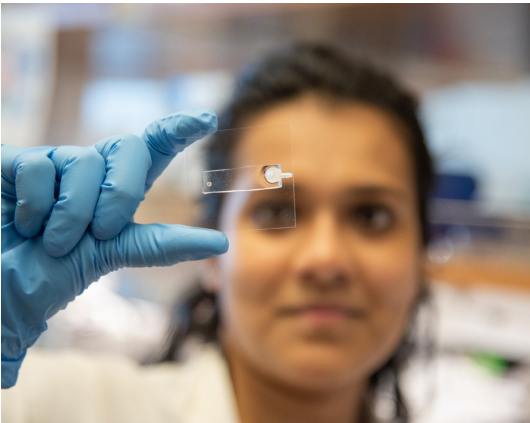


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For nearly 40 years, IFER and NAVS have been working in partnership to advance scientific methods that have the potential to replace the use of animals in testing and research. Together, we are proud to once again support the MPS World Summit. And together, we are ushering in a new era of scientific excellence that is better for humans and for animals.

- Graduate Fellowships of up to \$15,000 are awarded each year to promising early-career researchers for their work developing and using non-animal methods and models. These fellowships are eligible for renewal annually for up to three years.
- IFER and NAVS collaborate within the scientific community and with regulatory agencies to identify areas of research and testing that would benefit from the development and use of MPS devices.
- NAVS is introducing high school students to MPS devices and other non-animal models as part of its new curriculum, "Animal Use in Science: Exploring the 3Rs."

For more information, visit [IFER.org/MPS-Summit](https://www.ifer.org/MPS-Summit)

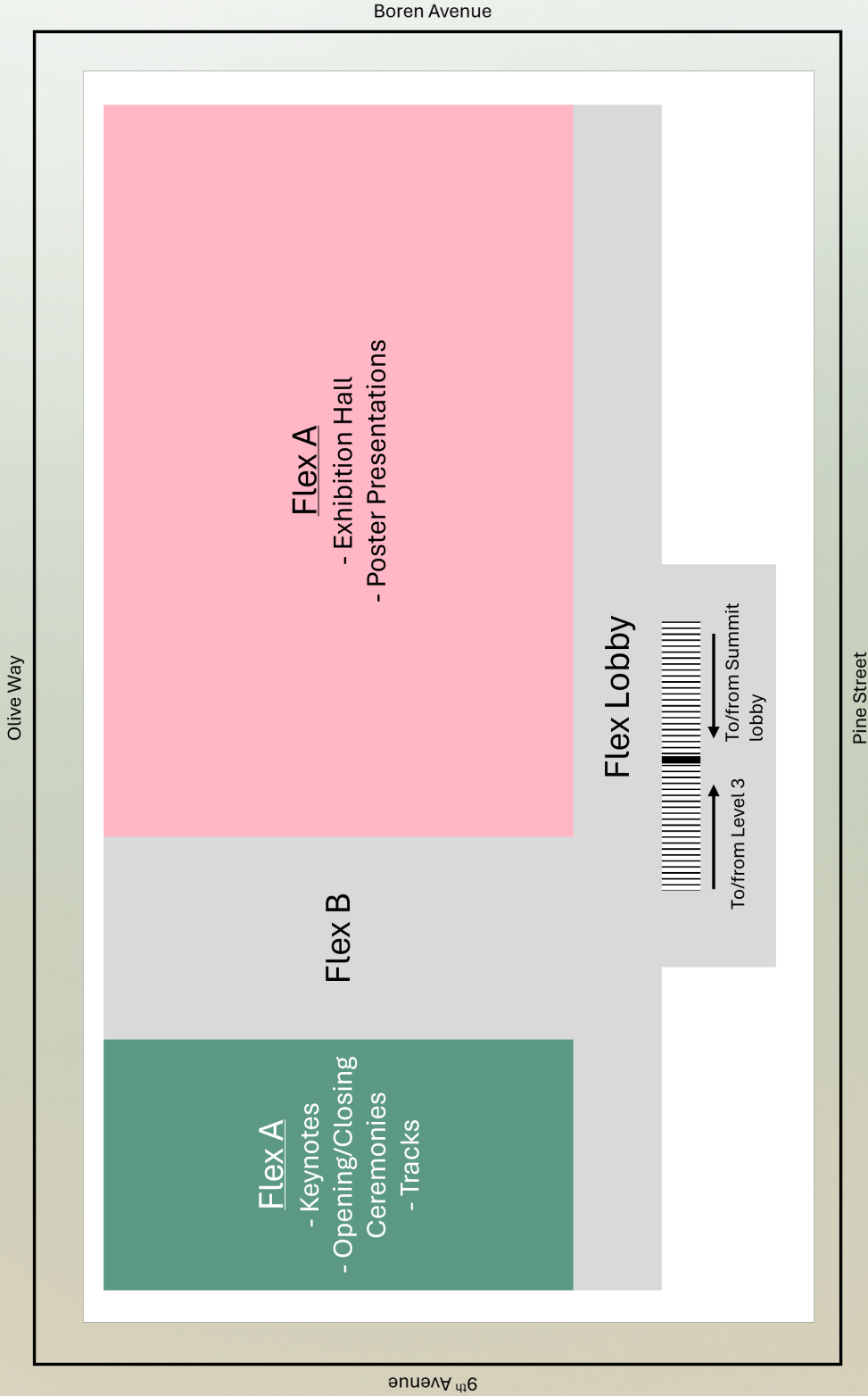
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MAPS

Venue

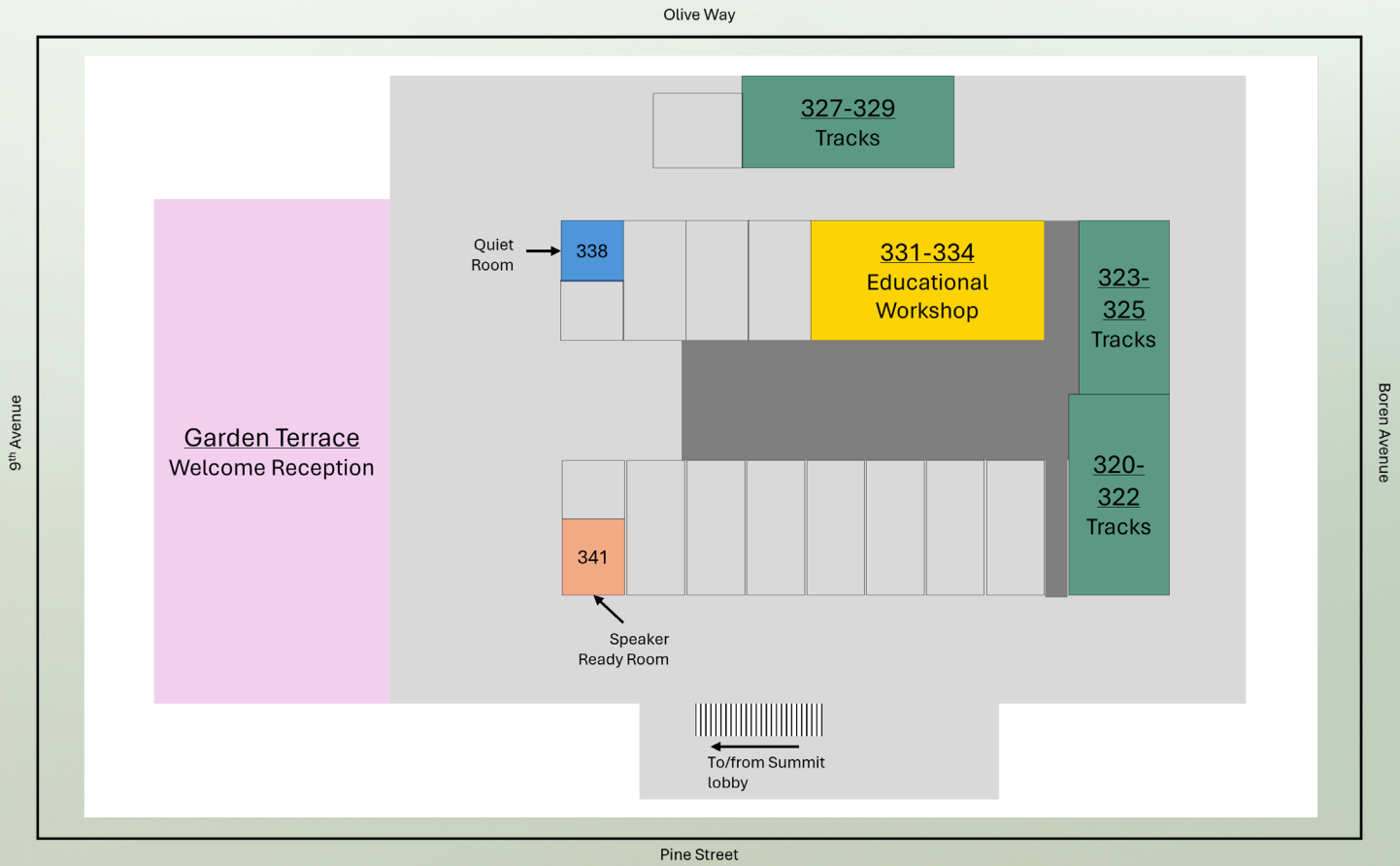
Flex



MAPS

Symposia & Workshop

Level 3



Poster Presentations

Tuesday June 11th

10:00-11:30					
Board	ID	Presenter	Board	ID	Presenter
1	71	Jingyi Zhu	39	199	Jose Antonio Reales-Calderon
2	81	Bettina Lickiss	40	207	Giulia Amos
3	104	Pimonrat Ketsawat-somkron	41	209	Chrisna Gouws
4	163	Alessia Moruzzi	42	210	Atsuya Kitada
5	528	Kevin Healy	43	228	Lisa Hoelting
6	570	Kevin Shani	44	230	Thomas Sommermann
7	626	WITHDRAWN	45	237	Simon Sayer
8	651	Christopher J Hatch	46	285	Kimia Abedi
9	662	Sabrina Staples	47	292	Adeel Ahmed
10	44	Yun-Chen Wu	48	298	Angelo Massaro
11	67	Jeffrey Morgan	49	300	Arturs Abols
12	99	Thomas Shupe	50	361	Shay Soker
13	183	Deborah Ramsey	51	372	Marie Floryan
14	192	Satoshi Ikeo	52	378	Jerome Lacombe
15	231	Marize Valadares	53	423	Zhipeng Dong
16	240	Lea De Maddalena	54	438	Haru Yamamoto
17	245	Young-Jae Cho	55	463	Sadegh Ghorbani
18	322	McLendon Patrick	56	514	Stephanie J Hachey
19	442	Konrad Schmidt	57	532	Martin Stano
20	510	Janny Pineiro-Llanes	58	543	Rajul Bains
21	546	Madeline Eiken	59	567	G. Wills Kpeli
22	661	Yuncheng Man	60	607	Ngan Phung
23	8	Yaling Liu	61	623	Emily Hutchison
24	29	Pedro Pinto	62	627	HONGYAN YUAN
25	40	Pooja Sawant	63	633	Simona Campora
26	47	Olivier UWISHEMA	64	665	Lisa F Horowitz
27	55	Sirjana Pun	65	666	Tran Ngoc Huyen Nguyen
28	57	Rachel Perez	66	159	Nina Stelzer
29	60	Hannah Graf	67	213	Ilka Maschmeyer
30	88	Keqian Nan	68	288	Amelie Reigl
31	95	Thomas Richardson	69	388	Jennifer Harder
32	96	Curran Shah	70	436	Xiufang Guo
33	123	Maryna Somova	71	562	Kenneth Hawkins
34	130	Julia Alber	72	650	Jan Lichtenberg
35	135	Mariana Viso	362	437	Yuki Kobayashi
			363	445	Honoka Hashizume

16:30-18:00					
Board	ID	Presenter	Board	ID	Presenter
73	4	Sun Min Kim	114	406	Erin Tevonian
74	87	Odysseas Chaliotis	115	413	Sakai Yasuyuki
75	295	Samantha Holt	116	634	Rachelle Baun
76	343	Linda Griffith	117	641	Ute Wölfle
77	365	Shuo Xiao	118	643	Susan Grepper
78	614	Ana Collins-Smith	119	652	Francisco Conceição
79	617	Mi T. M. Soe	120	5	Trinath Jamma
80	24	Mubeen Goolam	121	18	Dawn Lin
81	80	Stuart Prime	122	22	Tim Kaden
82	82	Yukari Shigemoto-Mogami	123	31	Kylie Gallagher
83	103	Krysten Jones	124	43	Fuki Yokoi
84	108	Hong Nam Kim	125	59	Joel P Joseph
85	120	Benoit G. C. Maisson-nueve	126	84	Moritz Pfeiffenberger
86	129	Patrick C Hurley	127	91	Huddleston Mary Elizabeth
87	139	Sourabh Sharma	128	109	Ryuji Yokokawa
88	157	Eric Reed	129	116	Kayenat Aryeh
89	167	Emma Drabbe	130	122	Kevin Bewley
90	168	Kaveena Autar	131	143	Alexandra Damerau
91	249	Florian Larramendy	132	153	Naomi Coombes
92	265	Mahdi Ghazal	133	164	Kevin J. Pollard
93	338	Maria Grisales	134	188	Noo Li Jeon
94	349	Francesca MiPramotton	135	198	Jenna Kastenschmidt
95	353	Maren Schenke	136	206	Sarah Heub
96	395	Nicholas Geisse	137	247	Bhumi Suthar
97	427	Tatsuya Osaki	138	252	Shuai Shao
98	468	Zhanhe Liu	139	254	Elena Müller
99	499	Alex Rittenhouse	140	293	Crystal Burke
100	504	Lise Harbom	141	351	Hosein Mirazi
101	521	Gülden Akçay	142	358	Isabelle Linares
102	522	Ikuro Suzuki	143	366	Robin Houssier
103	539	Jennifer Lawson	144	379	Samantha Holt
104	542	Alexandra Maertens	145	398	Yunhao Zhai
105	554	Itzy E. Morales Pantoja	146	408	Arvind R. Srivatsava
106	568	Prashant Hariharan	147	492	Vidhya Vijayakumar
107	601	Vincent Truong	148	516	Evan Cirves
108	615	Spencer Seiler	149	529	James N. Wilking
109	619	Emma Warrner	150	597	Marla Dubau
110	625	Peter Udall	151	612	Hediye Cinar
111	236	Giulia Raggi	362	437	Yuki Kobayashi
112	323	Ana Carolina Figueira	363	445	Honoka Hashizume
113	364	Trivia Frazier			

Full schedule:



Poster Presentations

Wednesday June 12th

10:00-11:30					
Board	ID	Presenter	Board	ID	Presenter
152	12	Yoshihiro Umehara	184	540	Mandy B. Esch
153	14	Shinji 杉浦	185	561	Brian Johnson
154	23	Julia Co	186	574	Andres Armenta
155	50	Lydia Baldwin	187	62	Chikara Miyake
156	52	Larissa Tofani	188	76	Makoto Yamanaka
157	66	Natalia A. M. Sierra	189	112	Hiroko Toyoda
158	75	Kaoru Sato	190	301	Oluwole Akinosho
159	79	Sayaka Deguchi	191	382	Eimear O'Mahony
160	92	Holly Bachas Brook	192	391	Christopher Arian
161	97	Katherine Boylin	193	412	Shiny Amala Priya Rajan
162	117	Pai-Wen Wang	194	552	Ze Zhong Wang
163	152	Bryan Schellberg	195	636	Gretchen Mahler
164	154	Verena Vogel	196	70	Yuji Nashimoto
165	170	Priscilla Lee	197	93	Srikanya Kundu
166	172	Alexa Rabeling	198	100	Seunggyu Jeon
167	225	Wenxin Cao	199	107	Kimiharu Oba
168	235	Mariana Costa	200	110	Yoshinobu Utagawa
169	239	Alice Salvadori	201	113	Alastair Stewart
170	251	Louis Widom	202	115	Tomomi Kaneko-Goto
171	258	Wisarut Kiratitanaporn	203	187	Virgilio Valente
172	362	Sami Farajollahi	204	190	Yoshikazu HIRAI
173	373	Katherine Daniel	205	211	Manuel Carrasco Yagüe
174	376	Serah Kang	206	212	Hendrik Erfurth
175	392	Yasuyuki Sakai	207	226	Albert van Breemen
176	420	Jun-Ha Hwang	208	309	Angela Murchison
177	422	Sohyeon Jeong	209	314	Zohreh Izadifar
178	424	YongTae Kim	210	319	Roberts Rimsa
179	449	Dr. Jennifer Sun	211	335	John Cognetti
180	469	Joseph Ciorca	212	347	Zhanping Ren
181	476	Yui Sato	213	377	Soo Jin Choi
182	486	Annika Winter	214	383	Byunggik Kim
183	487	Jeremy Newton	215	441	Konstanze Brandauer

16:30-18:00					
Board	ID	Presenter	Board	ID	Presenter
216	125	Emanuel Behling	247	41	Huiting Zhang
217	169	Ian Jan	248	86	Michelle Ma
218	346	Dharaminder Singh	249	151	Tomasz Kostrzewski
219	482	Samuel Coeyman	250	185	Matthew Howes
220	613	Wei Tian	251	191	Taku Satoh
221	177	Josie McAuliffe	252	218	Stéphanie Boder-Pasche
222	215	Kenjiro Muta	253	316	Yousif Abuhamad
223	261	Emily Jones	254	334	Vania Silverio
224	269	Ashley Zani	255	342	Bryan McQueen
225	279	Sungjin Kim	256	434	Yiguang Zhu
226	352	Catalina Gaviria	257	461	Haley L. Moyer
227	400	Adya Panchal	258	464	Courtney Sakolish
228	419	Djuro Raskovic	259	466	Unho Jin
229	628	Qinghua Wu	260	500	Alexandra S. Lysinger
230	645	Charles Shoemaker	261	544	Sumin Lee
231	33	Mitsumasa Taguchi	262	587	Emma Arnesdotter
232	219	Gilles Weder	263	611	Saskia Aan
233	559	Ishan Goswami	264	73	Shoka Takebayashi
234	356	Cecilia Gonzalez Sanchez	265	77	Takahiro Yoshioka
235	176	Tamihide Matsunaga	266	630	Morteza Roodgar
236	179	Reiko Onuki-Nagasaki	267	655	Eric Safai
237	180	Mizuki Kitamura	268	635	Soumya Mitra
238	202	Anne-Katrin Bothe	269	53	Thayná Avelino
239	250	Shiori Tamura	270	166	Cintia D. S. Horinouchi
240	324	Priyatanu Roy	271	181	Raghda Shahin
241	384	Moo-Yeal Lee	272	481	Sangeeta Khare
242	456	Go Sugahara	273	497	Zhan Shu
243	477	Xumei Gao	274	616	Jungkyu (Jay) Kim
244	624	Viesturs Sints	275	10	Kasturi Mahadik
245	640	Takuya Okazaki	276	664	Karina Orłowska
246	17	Logan Porter	78	614	Ana Collins-Smith

Full schedule:



Poster Presentations

Thursday June 13th

10:00-11:30					
Board	ID	Presenter	Board	ID	Presenter
347	609	Leah Saylor	375	502	Mridu Malik
348	621	Qiang Shi	376	579	Mary McElroy
349	622	Carolina Lucchesi	377	589	Gabriel Kaatz
350	642	May Freag	378	142	Julia Kühnlenz
351	649	Madhu Nag	379	189	Kazunori Shimizu
352	659	Seyoum Ayehunie	380	224	Katharina Nitsche
353	663	Anjli Venkateswaran	381	632	Xiaoqing Li
354	114	Aruni Premaratne	382	602	Vincent Truong
355	136	Camilla Ceroni	383	654	Akhmetzada Kargazhanov
356	140	Ramkumar Menon	384	3	Mathieu Vinken
357	155	Ana Mesic	315	303	Martha Iveth Garcia
358	182	El Li Tham	385	9	Alastair Stewart
359	244	Mariana Costa	386	20	Jong Seob Choi
360	248	Katharina Schimek	387	203	Hiroshi Kimura
361	262	Hendrik Erfurth	388	277	Sohyun Park
362	437	Yuki Kobayashi	389	280	Will Allen
363	445	Honoka Hashizume	390	329	Kristina Bartmann
364	7	Kasper Renggli	391	354	Tingjie Zhan
365	127	Chrisna Gouws	392	380	Moo-Yeal Lee
366	264	Kenta Shinha	393	490	Hiroaki Kii
367	275	Janny Pineiro-Llanes	394	534	Kevin Healy
368	276	Alicia Henn	395	553	Nayere Taebnia
369	284	Evita Mulder	396	556	Jinchul Ahn
370	313	Ben Swenor	397	569	Seung-cheol Shin
371	325	Nicolas Butelet	398	581	Breanne Kincaid
372	327	Saskia Schmidt	399	588	Kai Huang
373	359	Erin Gallagher	400	610	David Kukla
374	410	Ke Hu	401	647	Sierra Boyd

16:30-18:00					
Board	ID	Presenter	Board	ID	Presenter
277	15	Yung-Te Hou	313	290	Nadeem Wajih
278	121	Thierry Poumeyrol	314	302	Bill Murphy
279	162	Passley Hargrove-Grimes	315	303	Martha Iveth Garcia
280	253	Hajime Miyashita	316	310	Anicc Harriot
281	308	Scott Heyward	317	317	Fong Cheng Pan
282	526	Marisa Meloni	318	328	Gwen Fewell
283	563	Yeju Jeong	319	331	Ashley Helser
284	631	Bokyong Kim	320	336	Elizabeth Boazak
285	19	Takeshi Hori	321	341	Kim Haupt
286	30	Emmanuel Guedj	322	360	Aakash Patel
287	34	Daiju Yamazaki	323	414	Anish Mahadeo
288	39	Aaron Schatz	324	432	Paul Vulto
289	64	Clara Ramón-Lozano	325	447	Rui Sun
290	65	Nicholas Coungeris	326	452	Yuzuru Ito
291	74	Kotaro Aoi	327	454	Charlie Childs
292	98	Ananth Kumar Kammala	328	474	Aiping Bai
293	101	Julien Roth	329	478	Sangho Lee
294	105	Yoshiyuki Arata	330	491	Massimiliano Berardi
295	106	Chia-Hsien Hsu	331	501	Gauri Kulkarni
296	126	Evita van de Steeg	332	506	Subhra Nag
297	128	Katja Graf	333	524	M Miedel
298	131	Paul Vulto	334	533	Queeney Dasgupta
299	132	Marize Valadares	335	545	Christine Fisher
300	145	Kevin Pollard	336	576	Victor Zhang
301	156	Oksana Sirenko	337	580	Ludovico Buti
302	161	Timothy Leach	338	583	Marcin Krzykawski
303	165	Terry Riss	339	593	Agnes Badu-Mensah
304	195	Salvi Kambarova	340	644	Dennis McDuffie
305	205	Kazuhiro Tetsuka	341	646	Cécile Thion
306	216	Freya Woods	342	648	Charles Havnar
307	221	Shweta Bendre	343	656	Aisha Amari
308	223	Lea Lara de Maddalena	344	657	Raibatak Das
309	227	Xiaobo Han	345	658	Evan F Cromwell
310	232	Colin Brown	346	660	Anne Yau
311	266	Michelle Ballabio	215	441	Konstanze Brandauer
312	274	Maria Clapés Cabrer			

Full schedule:

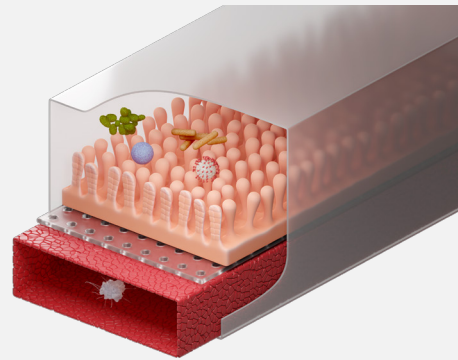


Cellbox Labs

Vascularized organ on a chip platform for more precise drug discovery.
The combination of hardware and software allows for flexible experiment design and significantly reduces hands-on time

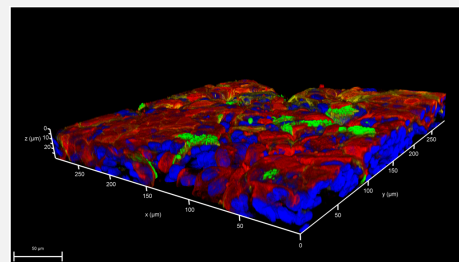
Microfluidic chips:

- Suitable for drug discovery with non-absorbing material
- Mass manufactured with high reproducibility and precision
- Controlled gas environment for hypoxia conditions



Automated cell culturing system:

- Stand-alone tabletop system
- Capacity for up to 24 chips
- Individually addressable channels
- Integrated bright-field microscopy



Gut on chip

<https://www.cellboxlabs.com/>



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spheroONE enables:

- **Spheroid, organoid or tumoroid isolation** from bulk culture to individual sorted 3D models
- User-defined size, shape and number, for **highly homogeneous plates from heterogeneous populations**
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- Maximized cellular aggregate **viability and functionality**



NOVEL CONCEPT
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BioStellar™ Plate

- ✓ Co-culture up to 4 organs
- ✓ Stirrer based pump integrated microfluidic plate
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Lingking Organchip, Lingking Health

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Complete Organ-on-a-chip Technology System



Organoids



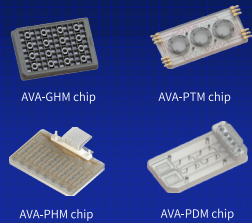
Organ Chips



Smart Equipment

Product Introduction

Organs on Chips



AVA-GHM chip

AVA-PTM chip

AVA-PHM chip

AVA-PDM chip

Smart Equipment



High Throughput Imaging System

Mini Incubator

Flow-Perfusion System

Organ Pre-treatment System (Desktop)

Kits & Biomaterials



Tumor Organoids

Hydrogel



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