WEDNESDAY, JUNE 12			
10:00 AM - 11:30 AM			
Poster Board Number	**Abstract ID**	**Presenter**	**Title**
TRACK 2: Modeling, fabrication and manufacturing of MPS			
SESSION: 2.1 MPS to model physiological barriers			
152	12	Yoshihiro Umehara	A simple method for mimicking the in vivo oxygen concentration in cell culture insert-type MPS during co-cultivation of anaerobic/microaerobic microbes
153	14	Shinji 杉浦	Development of a shear stress loading culture system for vascular endothelial cells using a pressure-driven microphysiological systems
154	23	Julia Co	Suspended hydrogel culture as a method to scale up intestinal organoids
155	50	Lydia Baldwin	Modular Microfluidics for Modelling Disease; iterative improvement, ease of use & reliability
156	52	Larissa Tofani	Development of a microfluidic gut-on-a-chip as an alternative for animal model in drug absorption assay
157	66	Natalia Andrea Moreno Sierra	Bioengineering human pluripotent stem cell-derived skeletal muscle-on-chips for disease modelling and drug discovery.
158	75	Kaoru Sato	Indispensable roles of the scaffold materials in humanized three dimensional (3D) blood brain barrier (BBB) network microphysiological system (MPS), “BBB-NET”
159	79	Sayaka Deguchi	Construction of the human iPS cell-derived multilayered small intestine model by reproducing interstitial flow on the microfluidic device
160	92	Holly Bachas Brook	Development of a functional 3D eccrine sweat gland model
161	97	Katherine Boylin	Advancing Human Intestinal Organoid Culture: Overcoming Limitations through Suspension Bioreactor Systems
162	117	Pai-Wen Wang	Modeling ischemic strokein vitro via photogeneration thrombosis on a chip
163	152	Bryan Schellberg	In-situ monitoring of epithelial inflammation and recovery in a gut-on-a-chip via automated, noninvasive bioluminescence sensing
164	154	Verena Vogel	A macro lab-on-desk system addressing pharmacokinetics – a possibility for a proof of concept before miniaturization
165	170	Priscilla Lee	Modeling the lymphatic vessel using microfluidic technology to study immune response in vitro
166	172	Alexa Rabeling	Investigating neural tube development using anin vitrostem cell-based model
167	225	Wenxin Cao	Development of an Artificial Mucus Barrier for the in vitroStudy of Host-Microbe Interaction in Small Intestine
168	235	Mariana Costa	Bioengineered gut perfusable organoids with in vivo-like complexity and function for precision medicine applications
169	239	Alice Salvadori	Towards enhanced organs-on-chips: two-photon laser patterning of microvascular structures for physiological and inflammatory in vitro models
170	251	Louis Widom	Pericytes contribute basement membrane proteins in a human stem cell-derived blood-brain barrier model
171	258	Wisarut Kiratitanaporn	Microfabrication of an Open-Top Platform Recapitulating 3D Architecture of Vascularized Epithelial Tissues via Synergistic Use of Stereolithography and Bioprinting
172	362	Sami Farajollahi	A transendothelial electrical resistance (TEER) module for measuring vascular barrier resistance in 3D hydrogels
173	373	Katherine Daniel	A photonic biosensor-integrated tissue chip platform for simultaneous real-time apical and basal cytokine sensing in a human skin model
174	376	Serah Kang	Human blood-brain-barrier spheroids as an in vitro model of delivery to the brain
175	392	Yasuyuki Sakai	Oxygen-permeable advancements in liver organoid microphysiology: a novel co-culture approach with hIPSC-derived cells
176	420	Jun-Ha Hwang	3D Microphysiological System for Reconstitution of Human Blood-Brain-Barrier Function
177	422	Sohyeon Jeong	Vascularized Organoids-on-a-Chip for Drug Screening
178	424	YongTae Kim	ProMEPS: a Paradigm Change in Automated Microphysiological System Modeling
179	449	Dr. Jennifer Sun	Next-generation Perfusable Organ-chip Platforms for Drug Discovery and Cosmetic Testing
180	469	Joseph Ciurca	Applications of translational QSP modeling for the interpretation of Human-on-a-Chip systems
181	476	Yui Sato	Development of a novel collagen membrane for the study of cell-cell interactions
182	486	Annika Winter	Towards Immunity on Chip - Immune Cell Perfusion of an IPSC-derived Intestinal Model
183	487	Jeremy Newton	Tunable In Situ Synthesis of Ultra-thin Extracellular Matrix-Derived Membranes
184	540	Mandy B. Esch	Pumpless microfluidic valve creating multiple physiological flow patterns
185	561	Brian Johnson	Microplate micromachining for microphysiological model fabrication
186	574	Andres Armenta	Unraveling the role of three-dimensional curvature on renal epithelial cell function in a proximal tubule microphysiological system
SESSION: 2.2 MPS for ADME modeling			
187	62	Chikara Miyake	Development and Application of a Fully Automated Culture System for Pressure-Driven Microphysiological Systems
188	76	Makoto Yamanaka	Development of a liver chip that can evaluate biliary excretion of pharmaceuticals using hepatocytes
189	112	Hiroko Toyoda	Gut and liver-on-plate: evaluation of a cell culture system emulating the first-pass effect
190	301	Oluwole Akinosho	Optimization of stem cell derived kidney organoid differentiation for application in the HUMIMIC Chip4
191	382	Eimear O'Mahony	Elucidating oregano oil-drug interactions using intestinal enteroids
192	391	Christopher Arian	Utilizing Enteroid Monolayers Towards the Prediction of Natural Product-Drug Interactions.
193	412	Shiny Amala Priya Rajan	Closing the Translational Gap in Drug Development: Humanized Multi-Tissue Chip for Enhanced Pharmacokinetic and Toxicological Profiling
194	552	Ze Zhong Wang	A hyaluronic acid-based hydrogel culture platform for iPSC-derived midbrain neuronal culture

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			SESSION: 2.2 MPS for ADME modeling
195	636	Gretchen Mahler	A mammary epithelium on a chip for predicting lofexidine secretion into breast milk
			SESSION: 2.3 Sensors in MPS
196	70	Yuji Nashimoto	Integrating a screen-printed electrochemical sensor with a microfluidic device toward real-time monitoring of lactate changes
197	93	Srikanya Kundu	3D bioprinted functional neural circuitry models for drug screening
198	100	Seunggyu Jeon	Biosensor-Integrated Multi-Organ-on-a-Chip Platform for Real-Time Monitoring of Organoid Function
199	107	Kimiharu Oba	A barrier-on-chip with electrochemical impedance spectroscopy and electrochemiluminescence imaging
200	110	Yoshinobu Utagawa	Cell culture devices with porous membrane electrodes for in-situ electrochemical cell analysis
201	113	Alastair Stewart	High-Throughput, Miniaturized Rapid- Response Aptamer-Based Sensor Platform for Real-Time Monitoring of Amino Acids and pH in Cell Culture Systems
202	115	Tomomi Kaneko-Goto	Development of a bilayered microfluidic chip with transepithelial electrical resistance (TEER) measurement function for drug assay
203	187	Virgilio Valente	Integrated Planar Patch Clamp/Microelectrode Array System for Single-Cell Electrophysiology
204	190	Yoshikazu HIRAI	Topology-Optimized Electrode Design for Accurate TEER Measurements in Microfluidic Organ-on-a-Chip Devices
205	211	Manuel Carrasco Yagüe	Monitoring Cellular Spatiotemporal Dynamics through Machine Learning-Enhanced Multi-Electrode Impedance Spectroscopy
206	212	Hendrik Erfurth	Oxygen saturation measurement in photolithographically produced blood vessels in a multi-organ chip
207	226	Albert van Breemen	Cost-Effective Manufacturing of Microphysiological Systems
208	309	Angela Murchison	Miniaturized iPSC-derived AD/ADRD Microphysiological Systems Platforms for High-Throughput Drug Screening
209	314	Zohreh Izadifar	A multifunctional sensor integrated Organ Chip for continuous monitoring of physiological tissues metabolic functions
210	319	Roberts Rimsa	Improved TEER measurement consistency with external electrodes in PDMS-free organ on chips
211	335	John Cognetti	A multiparametric electrochemical sensor chip for real-time monitoring of metabolic dysfunction in a neurovascular chip model
212	347	Zhanping Ren	Automated Fabrication and Large-Scale Integration of Human Muscle Tissue Chips with Magnetic Force Sensor Array
213	377	Soo Jin Choi	Organoid-conforming microelectrode arrays for recording cardiac electrophysiology across 3D surfaces
214	383	Byunggik Kim	Self-adapting stretchable electronics for long-term electrophysiological mapping of human cardiac organoids
215	441	Konstanze Brandauer	Advancing In Situ Monitoring to Validate Intestinal Barrier Integrity: A Microphysiological Approach

WEDNESDAY, JUNE 12 4:30 PM - 6:00 PM			
Poster Board Number	**Abstract ID**	**Presenter**	**Title**
TRACK 2: Modeling, fabrication and manufacturing of MPS			
SESSION: 2.4 Bioconvergence: Artificial Intelligence, Machine Learning, and MPS			
216	125	Emanuel Behling	Raman microspectroscopy discriminates different bacteria species in a three-dimensional airway mucosa on a chip model
217	169	Ian Jan	Devising Novel Microarray-based Platform to Screen and Sort Gastruloids
218	346	Dharaminder Singh	Developed the model, built the assay, now a focus on throughput! The Liver-48, an MPS designed for industry adoption.
219	482	Samuel Coeyman	Tracking Remodeling and Mechanics in Engineered Heart Tissues In Vitro Using Machine Learning-Based Image Processing
220	613	Wei Tian	Exploring Heart Development via Artificial Intelligence-Integrated Single-Cell Multi-Omics Data Analysis
SESSION: 2.5 MPS for infectious diseases and vaccine development			
221	177	Josie McAuliffe	Assessing Inhibition of Cytomegalovirus Infection by Neutralizing Antibodies in a Human Placenta Microphysiological Model
222	215	Kenjiro Muta	Visual and quantitative validation of dengue virus infection in a liver organ-on-a-chip
223	261	Emily Jones	Development of a triple-organ-chip microphysiological system for human disease modelling.
224	269	Ashley Zani	Characterization of RNA lipid nanoparticles (LNPs) in 3D bioprinted human skeletal muscle tissue
225	279	Sungjin Kim	Evaluating the effects of amniotic fluid motion on the amnion membrane using an amnion membrane (AM) organ-on-chip (OOC)
226	352	Catalina Gaviria	3D human skin equivalents for viral infection with skin-tropic viruses
227	400	Adya Panchal	Efficient and Scalable Microfabrication of Blood Vessel-Chip Using Stereolithography 3D Printing
228	419	Djuro Raskovic	Optimizing fluorescent labeling of primary CD4+ T cells for measuring lymphocyte motility
229	628	Qinghua Wu	SARS-CoV-2 pathogenesis in angiotensin II induced heart-on-a-chip disease model and extracellular vesicle screening
230	645	Charles Shoemaker	Development of Human Microphysiological Models for the Evaluation of Viral Pathogenesis Biomarkers
SESSION: 2.6 MPS for organ crosstalk (3+ organs)			
231	33	Mitsumasa Taguchi	Advancing microphysiological system through quantum beam technology
232	219	Gilles Weder	Acoustofluidics for 3D manipulation of organoids
233	559	Ishan Goswami	Development of a hiPSC-derived type 2 diabetes mellitus microphysiological system
SESSION: 2.7 Modeling diversity with MPS			
234	356	Cecilia Gonzalez Sanchez	Human-Derived Biomaterials to Fully Support Microphysiological Systems
SESSION: 2.8 MPS to model metabolism and transport			
235	176	Tamihide Matsunaga	Improvement of culture method of human induced pluripotent stem cell-derived intestinal epithelial cells and their application to a gut and liver-on-plate
236	179	Reiko Onuki-Nagasaki	Characterization of the primary intestinal cells or human iPS cell-derived small intestinal epithelial-like cells on non-PDMS microphysiological system (Fluid3D-X® TEER)
237	180	Mizuki Kitamura	Cytochrome P450 induction study on a gut and liver-on-plate
238	202	Anne-Katrin Bothe	A microphysiological liver-on-chip model for antibody validation in consideration of the FcRn recycling pathway
239	250	Shiori Tamura	Co-culture system of bacteria and intestinal epithelial tissue with both anaerobic and aerobic conditions
240	324	Priyatanu Roy	Inducing perfusable microvasculature in the commercial PhysioMimix platform
241	384	Moo-Yeal Lee	Reproducible generation of human liver organoids (HLOs) on a pillar plate platform via microarray 3D bioprinting
242	456	Go Sugahara	Establishment of a Stepwise In Vitro Culture System for Sustained Fate and Functional Maintenance of Human Hepatocytes
243	477	Xumei Gao	Multiplexed Microplate-based Physiological Emulation with Superfusion, Mechanical Stimulation, and Metabolite Measurement
244	624	Viesturs Sints	Non-Newtonian flow in Organ-on-a-Chip Systems
245	640	Takuya Okazaki	Effect of oxygen supply using InnoCell™ on co-culture systems with cup inserts.
TRACK 3: MPS Validation, qualification, meet regulatory requirements			
SESSION: 3.1 On the way to qualification and validation: MPS for a defined context of use and applicability domain			
246	17	Logan Porter	The validation of Perfused Organ Panel MPS with synthetic hemoglobin, Blood Substitute, for drug-induced liver injury
247	41	Huiting Zhang	A rapid and noninvasive approach for vascular quantification of 3D blood-brain barrier model
248	86	Michelle Ma	Developing robust & long-term viable complex in vitro model for modeling hepatocellular diseases
249	151	Tomasz Kostrzewski	Defining validation criteria for a primary jejunum and primary hepatocyte dual-organ MPS: a promising tool for more predictive studies of human drug ADME and oral bioavailability
250	185	Matthew Howes	Assessing the distribution of dietary fatty acids and sugars into Emulate S-1 organ-chips.
251	191	Taku Satoh	The gaps between laboratory prototypes and industrial products regarding MPS devices as equipment.
252	218	Stéphanie Boder-Pasche	MicroHisto: automated high-throughput microhistology workflow relying on coplanar hydrogel embedding of 3D cell models
253	316	Yousif Abuhamad	Characterization of the long-term toxic response of proximal tubule epithelial cells in a microphysiological system
254	334	Vania Silverio	Accelerating cell-based high-throughput screening with a novel standardized 96-wells fluidic system with interchangeable cell culture

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SESSION: 3.1 On the way to qualification and validation: MPS for a defined context of use and applicability domain			
255	342	Bryan McQueen	Advancing Microphysiological Systems through Qualification: RepliGut® Model applications in Pharmacology and Toxicology Screening
256	434	Yiguang Zhu	Advancing Validation Methodologies and Regulatory Acceptance of Microphysiological Systems
257	461	Haley L. Moyer	Comparative Analysis of Caco-2 Cells and Human Enteroids (Jejunal or Duodenal) in Gel- and Membrane-Based Barrier Models of Intestinal Permeability
258	464	Courtney Sakolish	Onboarding and Testing of Microphysiological Systems: Experience of the TEX-VAL Consortium
259	466	Unho Jin	Testing of Reproducibility and Functionality of the Blood-Brain Barrier Microphysiological System: Comparative Analysis of Sources of Human Blood Microvascular Endothelial Cells Cultured with or without Neuronal Cells in Static and Fluidic Conditions
260	500	Alexandra S. Lysinger	Standardization of hiPSC derived brain MPS cytoarchitecture
261	544	Sumin Lee	Dynamic live cell imaging in microfluidic chips using low-coherence holotomography
262	587	Emma Arnesdotter	The European approach to the development of Next Generation Risk Assessment
263	611	Saskia Aan	hDMT INFRA: a unique infrastructure bringing human organ and disease models closer to application.
SESSION: 3.5 Standards for MPS validations			
264	73	Shoka Takebayashi	Avoiding problems and optimizing conditions for seeding human hepatocytes into MPS using PXB-Shizuku® medium
265	77	Takahiro Yoshioka	Enhancement of cell viability in hepatocyte culture using the membrane up-and-down perfusion MPS chip: Fluid3D-X®
266	630	Morteza Roodgar	Closing the Translational Gap: Nonhuman Primate MPS as a Complementary Platform to Human MPS.
267	655	Eric Safai	The Translational Organ-on-Chip Platform (TOP) Starter Kit: An ISO-compliant, Reconfigurable Design for Plug-and-play Testing
268	635	Soumya Mitra	Development of On-chip Functional Blood and Lymphatic Microvasculature
TRACK 5: Incubator ideas			
SESSION: 5.1 Incubator ideas: MPS of different organs or diseases			
269	53	Thayná Avelino	Advancing In Vitro Skin Models: A 3-Layered Bioprinted Human Skin Equivalent with Hypodermis
270	166	Cintia D. S. Horinouchi	3D bioprinting of mesenchymal stem cells containing hydrogels for tissue modeling
271	181	Raghda Shahin	Convert suspension-type human primary hepatocytes to pleatable-type human primary hepatocytes as a novel in vitro pharmacokinetic model to be used in microphysiological systems for induction and efflux transporter assay at an affordable price.
272	481	Sangeeta Khare	A novel ex vivo system for microbiome-xenobiotics interaction as the first step of the decision tree for the gastrointestinal toxicity assessment
273	497	Zhan Shu	Multi-organ-on-chip device for modeling opioid reinforcement and withdrawal, and the negative affective component of pain: a therapeutic screening tool
274	616	Jungkyu (Jay) Kim	High-fidelity Microphysiological Systems for Investigating Corneal Dysfunction and Glaucoma
275	10	Kasturi Mahadik	Adoption of Microphysiological Systems for preclinical research in India is contingent upon their economics, among other challenges
276	664	Karina Orlowska	TCDD induces less of periportal markers in human mixed-cell type liver spheroids
78	614	Ana Collins-Smith	Microfluidic Device Successfully Replaces Traditional Models of Pregnancy Associated Drug Pharmacokinetic Studies