



Symposium

Session Symposium 1 Spheroid-based Approaches Integrated with Bioinspired Materials in Biofabrication

Day 1 Nov. 10 (Sun)

Time 15:30-17:00

Location Room 2

Chair Tim Woodfield, Heungsoo Shin, TBD

Presentation No	Presenter	Title
S01-1 (keynote)	Heungsoo Shin	Biomaterials-inspired spheroid engineering for tissue regeneration
S01-2	Seongheon Bae	Engineering orientation-controlled 3D vascularized tissue by spatially regulated positioning composite spheroids on 3D printed scaffold
S01-3	Carmine Gentile	Biofabrication of the Complex Microenvironment Typical of the Human Myocardium using Vascularised Cardiac Spheroids
S01-4	Mako Kobayashi	Preparation of ECM powder and cancer spheroids containing bioink for construction of cancer microenvironment
S01-5	Toshiyuki Yaguchi	Development of a Spheroid Floating Culture System Using Polymeric Aqueous Two-Phase Systems
S01-6	Withdraw	
S01-7	Julia Junghof	Heart organoids - a 3D model to elucidate the role of the epicardium in cardiac development and regeneration

Session Symposium 2 Biofabrication for Disease/cancer Study and Drug Testing

Day 2 Nov. 11 (Mon)

Time 9:00-10:30

Location Room 1

Chair Wei Sun, Yuan Pang, TBD

Presentation No	Presenter	Title
S02-1 (keynote)	Tim Woodfield	Biofabrication of Scalable Spheroid 3D in vitro Tissue Fusion and Disease Models
S02-2 (keynote)	Huayu Yang	Primary culture cell-based bioartificial organ construction
S02-3	Yeonju Song	Ex vivo reconstruction of 3D T cell-cancer cell interactions using porous jammed microgel-based bioprinting
S02-4	Tiankun Liu	Spheroid on-demand printing and drug screening of endothelialized hepatocellular carcinoma model at different stages
S02-5	Alice Salvadori	High-Definition Bioprinting of Microvasculature for a Liver-on-a-Chip Model
S02-6	Simon Sayer	Immune niche-on-a-chip enabled by in situ high-resolution 3D printing
S02-7	Meenakshi Suku	Engineering Innate Immunology in a Humanized, Functional, In Vitro Model of Healthy Myocardium

Session **Symposium 3** Robotics and Biohybrid Systems

Day 2 Nov. 11 (Mon)

Time 9:00-10:30

Location Room 2

Chair Gabriele Fortunato, Minghao Nie, TBD

Presentation No	Presenter	Title
S03-1 (keynote)	Carmelo De Maria	Advances and challenges in robotic-based in situ bioprinting
S03-2 (keynote)	Keel Yong Lee	Human Stem Cell-Based Biohybrid Robotics: Innovations and Pathways to Clinical Translation
S03-3	Inseon Kim	A Self-Renewing Biomimetic Skeletal Muscle Construct Engineered using Induced Myogenic Progenitor Cells
S03-4	Gabriele Maria Fortunato	High-accuracy robotic-based in situ bioprinting onto unknown and moving surfaces
S03-5	Takumi Ito	Microfluidic platform for single cell assembly with optically driven microtools
S03-6	Norbert Radacsi	Hybrid bioprinting and electrospinning technique for the fabrication of compliant vascular grafts
S03-7	Gabriele Maria Fortunato	Multi-material and multi-scale platform for robotic based in situ bioprinting

Session **Symposium 4** Fabrication of 3D-Cancer Models for Anticancer Drug Sensitivity Assay

Day 2 Nov. 11 (Mon)

Time 11:00-12:30

Location Room 2

Chair Michiya Matsusaki, Shiro Kitano, TBD

Presentation No	Presenter	Title
S04-1 (keynote)	Ryohei Katayama	Identification of molecular mechanisms of drug resistance using 3D-cancer models and genome wide knockout screening with patient derived cancer cells
S04-2	Sara Romanazzo	In-vitro 3D printed model to investigate the transformation of adipose-derived stem cells to a cancer-associated fibroblast phenotype
S04-3	Emanuele Mauri	Cell-customized formulation and printability assessment workflow of bioinks for 3D ovarian cancer model
S04-4	Goeun Yoon	3D Bioprinted Gastric Cancer Platform to Investigate Effects of Interstitial Flow in Tumor Microenvironment of Gastric Cancer
S04-5	Mario Moisés Alvarez	Advancing Cancer Models with Chaotic Bioprinting: A Study on Pre-Vascularized Tumor Niches
S04-6	Bram Soliman	Confinement induces drug resistance in breast cancer



Session Symposium 5 Integrating Machine Learning into Biofabrication

Day 2 Nov. 11 (Mon)

Time 11:00-12:30

Location Room 3

Chair Khoon Lim, Andrew Daly, TBD

Presentation No	Presenter	Title
S05-1 (keynote)	Qing Li	Machine learning based prosthetic design and fabrication for animal models.
S05-2	Seongmin An	Label-Free Cell Separation Technique based on Live Cell Imaging and Machine Learning
S05-3	Kanika Singroha	AI AUGMENTED BIO-PRINTED HIGH-PERFORMANCE INVITRO DISEASE MODEL OF ORAL SUBMUCOUS FIBROSIS (PRE MALIGNANT CONDITION).
S05-4	Daniel Kelly	Development of closed-loop extrusion bioprinting technology using in-situ camera monitoring and convolutional neural networks
S05-5	Cheng Yuan Cui	Establishment of a fatty liver detection and drug prediction platform using a machine learning-based liver-on-a-chip system
S05-6	Filippo Bracco	Leveraging Transfer Learning for Efficient Bioprinting
S05-7	Daniel Nieto	Computer vision and Artificial Intelligence (IA) Techniques Applied to Top-Down Multimaterial DLP bioprinting

Session Symposium 6 Food Printing

Day 2 Nov. 11 (Mon)

Time 16:00-17:30

Location Room 1

Chair Gabor Forgacs, Tatsuya Shimizu, TBD

Presentation No	Presenter	Title
S06-1 (keynote)	Tatsuya Shimizu	Circular Cell Culture System for Cultivated Meat Production
S06-2 (keynote)	Michiya Matsusaki	Tailor-made Personalized Cultivated Wagyu Beef Meat by 3D Bioprinting
S06-3 (keynote)	Hidemitsu Furukawa	Sushi Printer and Gel-Based Projects in Biofabrication
S06-4	Afonso da Mota Veiga Gusmão	Manufacturing of Structured Cultured Fish Fillets: Design and Validation of a Cost-Effective 3D Bioprinter
S06-5	Petra j Kluger	Codifferentiation of printed muscle and fat spheroids in edible gellan gum for biofabricated cultured meat
S06-6	Susmita Ghosh	Development of a Cellulose-Based Hydrogel Blend for 3D Bioprinting of Carrot Callus as an Edible Construct

Session Symposium 7 New Biofabrication Strategies for Enhanced Tissue Culture

Day 2 Nov. 11 (Mon)

Time 16:00-17:30

Location Room 3

Chair Paul Delrot, Ravanbakhsh Hossein, TBD

Presentation No	Presenter	Title
S07-1 (keynote)	Kenneth Dalgarno	Reactive Jet Impingement Bioprinting with Fibre and Harvested Tissue Substrates for Enhanced Cultures
S07-2 (keynote)	Giorgia Montalbano	Multifunctional Biomimetic Systems for Tissue Regeneration and Advanced In Vitro Models
S07-3	Kristina Andelovic	Modulating Macrophage-MSC Crosstalk with Aligned Fibrillar 3D Topography for Enhanced Tissue Regeneration
S07-4	Mylene de Ruijter	3D Biofabrication of Photosynthetic ELMs for the Spatiotemporal Deposition of Oxygen in Large Tissue Constructs
S07-5	David Edward Robinson	Corneal Endothelial Grafts on Biosynthetic Scaffolds grown in 3D printed cell seeding and carrier devices
S07-6	Christos Boutopoulos	In-situ corneal repair using a drop-on-demand hand-held laser-assisted bioprinter
S07-7	Wojciech Swieszkowski	Microfluidic-assisted biofabrication technique to produce 3D hydrogel-based structures for tissue engineering

Session Symposium 8 Biofabrication for High Cell Density Tissues

Day 3 Nov. 12 (Tue)

Time 9:00-10:30

Location Room 1

Chair Daiki Murata, Simon Sayer, TBD

Presentation No	Presenter	Title
S08-1 (keynote)	Mark Skylar-Scott	Towards Biofabrication of Densely Cellular Tissues at Organ Scale
S08-2 (keynote)	Junji Fukuda	Hair regenerative medicine using tissue engineering approaches
S08-3	Ayaka Kadotani	Proposition of Unit Construction Method to Fabricate Full-scale Kidney Organoid with Parenchyma and Interstitium
S08-4	Luiz E. Bertassoni	Towards Engineering of High-Complexity Tissues and Organs - Multiplex Single-Cell Bioprinting of Heterogeneous 3D Tissues with Subcellular Spatial Precision
S08-5	Fatma Ozdemir	Impact of Cell Density on an Enhanced 3D Bioprinted ACI/MACI Model
S08-6	Ziqi Huang	High-density stem cells-laden 3D printed-scaffold for immediate transplantation therapy with vascularized tissue remodeling
S08-7	Wing Tai Tung	Reactive jet impingement bioprinting of high cell density co-culture gels for more representing cardiac tissue model



Session **Symposium 9**

Advanced Vascularized Tissue Printing:
 Pioneering the Future of Medical Innovation

Day 3 Nov. 12 (Tue)

Time 9:00-10:30

Location Room 2

Chair Hyun-Wook Kang, Sungjune Jung, TBD

Presentation No	Presenter	Title
S09-1(keynote)	Jinah Jang	Bioprinting Technology for Advanced Tissue Therapy
S09-2(keynote)	Sungjune Jung	Bioprinting of 3D Lung Models for Disease Modeling, Preclinical Drug Evaluation and Toxicology
S09-3	Gabriel Größbacher	In-situ Perfusion of Volumetrically Printed Vascular Scaffolds
S09-4	Yongcong Fang	Engineering Complex Organs with Biomimetic Vessel Networks by the Sequential Printing in Reversible Ink Template (SPIRIT) Strategy
S09-5	Julia Eichermüller	Testing of different hydrogel constellations for glomerular 3D co-culture in vitro to be used for further vascularization in rat AV loop model
S09-6	Betty Cai	One-Step Bioprinting of Endothelialized, Self-Supporting Arterial and Venous Networks
S09-7	Gabriel Groessbacher	Volumetric Bioprinting of Multi-scale Vasculature via Photopolymerization-induced Phase Separation for Vascularized Engineered Tissues

Session **Symposium 10**

Biofabrication Technologies
 for Cardiovascular Applications

Day 3 Nov. 12 (Tue)

Time 9:00-10:30

Location Room 3

Chair Elena De-Juan-Pardo, Manuel Mazo-Vega, TBD

Presentation No	Presenter	Title
S10-1 (keynote)	Manuel Mazo-Vega	Melt electrowriting for next generation human cardiac engineered tissues: Insights on a single cell resolution
S10-2 (keynote)	Khoon Lim	Light activated bioinks with spatiotemporal presentation of physical cues for vascularisation
S10-3	Ankita Pramanick	4D bioprinting shape-morphing tissues in granular support hydrogels: Sculpting structure and guiding maturation
S10-4	Kilian Maria Arthur Mueller	Hybrid Biofabrication of an Anatomically and Mechanically Accurate Mitral Valve Scaffold for in situ Tissue Engineering via Multiscale Fiber Deposition
S10-5	Manuel M. Mazo Vega	Melt electrowriting, induced pluripotent stem cells and advanced transcriptomics: towards next generation human cardiac engineered tissues
S10-6	Flaviana Falci	BioChord: biomimetic engineered chordae tendineae for chordal repair and regeneration
S10-7	Hwanyong Choi	Development of Cardiac Chamber-Shaped 4D-Printed Structure Mimicking Myocardial Fiber Orientation Using Magnetic Polarity Patterning

Session Symposium 11

Biofabrication Strategies for the Development of Advanced 3D in Vitro Models

Day 3 Nov. 12 (Tue)**Time** 15:10-16:40**Location** Room 1**Chair** Lorenzo Moroni, Matteo Moretti, TBD

Presentation No	Presenter	Title
S11-1 (keynote)	Matteo Moretti	Biofabricated In Vitro Models of Vascularized Tissues
	Lorenzo Moroni	An advanced bioprinted 3D in vitro model of thyroid gland for screening endocrine-disrupting chemicals
S11-2	Ariel Cantoral-Sánchez	Chaotic 3D-Printing for the Development of Structured Cocultures: A New Tool to Study Microbiota Dynamics
S11-3	Marième Gueye	Hybrid Supramolecular-Covalent Gelatin Bioresins Enabling Enhanced Cell Migration and Self-Assembly in Volumetric Bioprinted Constructs
S11-4	Lee Seok-Hyeon	Matrix Stiffness and ECM Interactions Promote CSC-like Reprogramming via PI3K-Akt and YAP in 3D In-bath Printing with Hybrid Inks
S11-5	Francesca Diletta Spagnuolo	A 4D bioprinting platform to engineer anisotropic musculoskeletal tissues by spatially patterning microtissues into temporally adapting support baths
S11-6	Withdraw	
S11-7	Lucia G. Brunel	Embedded 3D bioprinting of collagen inks into microgel baths to control hydrogel microstructure and cell phenotype

Session Symposium 12

Biofabrication of the Head-maxillo-facial Region

Day 3 Nov. 12 (Tue)**Time** 15:10-16:40**Location** Room 2**Chair** Makoto Ikeya, Mikihiro Kajiya, TBD

Presentation No	Presenter	Title
S12-1 (keynote)	Mikihiro Kajiya	Development of Periodontal Tissue Regenerative Therapy Using Mesenchymal Stem Cells and Bio-3D Printer
S12-2 (keynote)	Souta Motoike	Modeling jawbone development and disease with human pluripotent stem cell-derived organoids
S12-3	Philipp Fisch	Tissue engineered auricular cartilage for the treatment of microtia
S12-4	Masahide Taguchi	Creating 3D constructs with cranial neural crest-derived cell lines using a bio-3D printer
S12-5	Alexander Perry	A bioprinting approach using gelatin methacryloyl and lysyl oxidase-like 2 to generate nasal cartilage



Presentation No	Presenter	Title
S12-6	Esma Bahar Tankus	3D Bioprinting of Osteochondral Units with Human Nasal Chondrocytes Using a Granular Composite of Hyaluronic Acid, Collagen, and Hydroxyapatite
S12-7	Ayaka Nanmo	Partial reprogramming of human adult dermal papilla cells for hair regenerative medicine

Session Symposium 13 ISBF Early Career Researcher Symposium

Day 3 Nov. 12 (Tue)

Time 15:10-16:40

Location Room 3

Chair Andrew Daly, Liliang Ouyang, TBD

Presentation No	Presenter	Title
S13-1 (keynote)	Gabriella Lindberg	A Career Journey Across Continents: Integrating Academic Research with Clinical Practice in Biofabrication
S13-2 (keynote)	Grissel Trujillo de Santiago	Navigating Challenges and Innovations in a Career in Biofabrication: Lessons from Chaotic Bioprinting
S13-3 (keynote)	Geraldine Echue	Publishing in Wiley Journals: An Editor's Perspective
S13-R-01	Donatella Di Lisa	Advanced functional 3D bioprinted brain tissue model
S13-R-02	Andrea Andolfi	Chitosan Ink functionalized with gold nanoparticles for 2D and 3D Biofabrication in Neural Tissue Engineering
S13-R-03	Anna Rederer	Biofabrication of an artificial glomerular filtration barrier
S13-R-04	Nele Pien	From Structure to Function: How Polymeric Reinforcements Shape Vascular Wall Models
S13-R-05	Alessio Amicone	Biomechanical characterization of multi-scale triphasic PCL melt electrowritten scaffolds with PVA gel infiltration for articular cartilage repair
S13-R-06	Sven Dieter Heilig	Fabricating microfibrillar fiber bundles as cell-guiding additive for bioprinting
S13-R-07	Stephan Schandl	Surface Modification of Polyester-based Microscaffolds: Towards the Biofunctionalization in the Third Strategy of Tissue Engineering
S13-R-08	Jawaher Darweish AlYammahi	3D Printing of ColMA Hydrogel Reinforced with Date Pomace-Derived Nanocellulose for Bone Tissue Engineering
S13-R-09	Yanis Taege	Serial Production of Topographies with Optimized Cell-Material Interaction by Organically-inspired, AI-generated Micro- and Nanosurfaces
S13-R-10	Ronan Tiu	Computational Simulations of Object Engulfment by Cellular Aggregates ('Spherophagy')

Session Symposium 14 Advances in Light-based Biofabrication

Day 4 Nov. 13 (Wed)

Time 9:00-10:30

Location Room 1

Chair Riccardo Levato, Sandra van Vlierberghe, TBD

Presentation No	Presenter	Title
S14-1(keynote)	Aleksandr Ovsianikov	High-Resolution 3D Printing, Breaking the Resolution Limits in Biofabrication
S14-2(keynote)	Jason A Burdick	Advances in DLP-printing of Engineered Hydrogels
S14-3	Riccardo Levato	Context-aware Volumetric Biorinting
S14-4	Riccardo Levato	High Throughput Volumetric Bioprinting of an Endocrine Pancreas with Functional Human iPSC-Derived Islets Organoids
S14-5	Núria Ginés Rodríguez	Leveraging Laser-Induced forward transfer (LIFT) for engineering minute vascular structures for biofabricated constructs
S14-6	Quinn van Hilst	Ruthenium(II) tris-bidentate complexes as potential multifunctional photoinitiators for light-based biofabrication
S14-7	Camillo Colli	Thermoresponsive Hyaluronic Acid as smart bioink for 3D printing in digital light and two-photon polymerization for osteoarthritis applications

Session Symposium 15

Day 4 Nov. 13 (Wed)

It Take Two to Tango: Coupling Microfluidics and 3D Bioprinting to Fabricate Hierarchical Functional Constructs

Time 9:00-10:30

Location Room 2

Chair Gianluca Cidonio, Grissel Trujillo de Santiago, TBD

Presentation No	Presenter	Title
S15-1 (keynote)	Y. Shrike Zhang	Microfluidics-integrated bioprinting for tissue biofabrication
S15-2 (keynote)	Mario Moisés Alvarez	Microfluidics without walls: The non-intuitive applications of chaotic flows in bioprinting and biofabrication
S15-3	Grissel Trujillo de Santiago	Chaos-assisted production of micro-architected spheres (CAPAS)
S15-4	Thomas Robinson	Interplay Between Cross-linking Chemistry and Architecture Driving Cellular Reorganization
S15-5	Lana Van Damme	Investigation of Adipogenesis and Angiogenesis in Gelatin-Based Scaffolds for Adipose Tissue Engineering: An In Vivo Study in Mice
S15-6	Gianluca Cidonio	Hierarchical assembly of multi-tissue interfaces via microfluidic-based 3D bioprinting approaches
S15-7	Nathaly Chicaiza Cabezas	A versatile gelatin-based hydrogel system for multiplatform biofabrication of complex vascularized 3D models



Session **Symposium 16** Muskoskeletal

Day 4 Nov. 13 (Wed)

Time 9:00-10:30

Location Room 3

Chair Masahiro Yamada, Heidi Declercq, TBD

Presentation No	Presenter	Title
S16-1(keynote)	Masahiro Yamada	Biofabrication of a biohybrid dental implant by combining the Kengan method with biomimetic nanotechnology
S16-2(keynote)	Heidi Declercq	Biofabrication of vascularized myogenic tissue using self-assembling spheroids
S16-3	Sara Grasselli	Bioengineered Cartilage as Novel Scaffold for Bone Engineering via Endochondral Ossification
S16-4	Pavan Kumar Reddy Gudeti	Accessible and Dynamic: Additive Manufacturing and Mechanical Stimulation for Tendon Regeneration
S16-5	Hye Yun Jeong	Next-Generation Sequencing-based Profiling of Anti-inflammatory Mechanisms in Decellularized Cartilage Extracellular Matrix
S16-6	Theresa Kühn	Bioinks for two-photon 3D printing towards endoscopic intravital skeletal muscle regeneration
S16-7	Ilona Uzieliene	The Significant Role of Physioxia in Enhancing Chondrogenic Differentiation of Human Mesenchymal Stromal Cell Sheets for Cartilage Regeneration During Osteoarthritis

Session **Symposium 17** Biofabrication for Stem Cells and Organoids Culture

Day 4 Nov. 13 (Wed)

Time 14:00-15:30

Location Room 1

Chair Yasuyuki Sakai, Yuan Pang, TBD

Presentation No	Presenter	Title
S17-1 (keynote)	Shoen Kume	Metabolic control of pluripotent stem cells for efficient differentiation
S17-2 (keynote)	Qi Gu	How to design biomaterials and processes to optimize the functionality of manufactured organs
S17-3	Jasmin Cic	Engineered small intestinal organoid-microtissues to probe collective cell migration in vitro
S17-4	Marième Gueye	MODELING A HEALTHY HEMATOPOIETIC NICHE WITH STROMAL VASCULAR ORGANOID AND VOLUMETRIC BIOPRINTING
S17-5	Daiki Fukai	Microenvironment Compartmentalization with Micro frame Device for Analyzing iPSCs Differentiation
S17-6	Hyerin Yoo	Stem cell spheroids-encapsulated antioxidant hydrogel enhances regeneration of radiation-damaged salivary gland
S17-7	Jun-hyeog Jang	Bio-Functionalization of Titanium Surfaces with Recombinant Fibronectin and Elastin Fragments for Enhanced Osteogenic Differentiation of Human Mesenchymal Stem Cells