




International Conference on Biofabrication
Biofabrication
2015 November
 7-9, 2015
www.biofabrication2015.org

Utrecht, The Netherlands

Program at a glance

Saturday, November 7, 2015		
17:30-17:45	WELCOME & OPENING	
17:45-18:30	PLENARY LECTURE	
18:30-19:15	PLENARY LECTURE	
19:15-20:30	WELCOME RECEPTION & POSTER VIEWING	
Sunday, November 8, 2015		
09:00-09:45	PLENARY SESSION: Bottom up approaches	
10:15-11:45	FREE PAPER SESSION 1: Scaffold free biofabrication approaches	FREE PAPER SESSION 2: Scaffold-based approaches I
13:15-14:00	PLENARY SESSION: Cell electrospinning	
14:15-15:45	FREE PAPER SESSION 3: Engineered tissues and organs I	FREE PAPER SESSION 4: New Technologies
16:15-17:45	FREE PAPER SESSION 5: Engineered tissues and organs II	FREE PAPER SESSION 6: Scaffold based II
18:00-19:00	ISBF GENERAL ASSEMBLY	
19:00-20:00	POSTER VIEWING & DRINKS	
20:00-late	YOUNG SCIENTIST EVENT (sponsored by ISBF)	
Monday, November 9, 2015		
08:45-09:30	PLENARY SESSION : Clinical Translation	
10:00-11:30	FREE PAPER SESSION 7: New Materials I	FREE PAPER SESSION 8: Scaffold-based approaches III
13.15-14.45	FREE PAPER SESSION 9: Bioinspired biofabrication	FREE PAPER SESSION 10: In vitro models I
15.15-16.45	FREE PAPER SESSION 11: New materials II	FREE PAPER SESSION 12: In vitro models II
16.45-17.45	Closing ceremony, awards and presentation Biofabrication 2016	
20.00-23:00	CONFERENCE DINNER	




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Saturday, November 7, 2015

	Abstract code		Room
13:00-15:00		EDITORIAL BOARD MEETING – invitation only	Opzoomer kamer
15:00-17:00		ISBF BOARD MEETING – invitation only	Opzoomer kamer
16:00-18:00		REGISTRATION	Entrance
17:30-17:45		WELCOME & OPENING	Aula
17:45-18:30	PL1.1	PLENARY LECTURE: Lgr5 Stem Cell-based organoids in human disease <i>Prof. Hans Clevers</i>	Aula
18:30-19:15	PL2.1	PLENARY LECTURE: Biofabricating the interface between biology and electronics <i>Prof. Gregory Payne</i>	Aula
19:15-20:30		WELCOME RECEPTION & POSTER VIEWING	

Sunday, November 8, 2015

	Abstract code		
09:00-09:45	PL3.1	PLENARY SESSION: Bottom up approaches <i>Moderator: Dr. Roman Truckenmüller</i> PLENARY LECTURE: Cellular building blocks for 3D tissue fabrication <i>Prof. Sohji Takeuchi</i>	Aula
09:45-10:15		COFFEE BREAK	
10:15-11:45		FREE PAPER SESSION 1: Scaffold free biofabrication approaches <i>Moderators: Prof. Gabor Forgacs & Prof. Koichi Nakayama</i>	Kanunniken zaal
10:15-10:45	KL1.1	KEYNOTE LECTURE: Development of Scaffold-free 3D Tissue & Organ Fabrication by Bio-3D Printer <i>Prof. Koichi Nakayama</i>	
10:45	F1.1	Optimizing Cell Viability In Droplet-Based Cell Deposition <i>Claas Willem Visser</i>	
	F1.2	High-Throughput Engineering Of Single Cell Microniches With Tunable Size And Elasticity <i>Tom Kamperman</i>	
	F1.3	3D Direct Cell Bioprinting of Cells for Tissue Engineering <i>Bahattin Koc</i>	
	F1.4	Biofabrication of hair follicle using microfabricated PDMS spheroids chips <i>Chisa Yoshimura</i>	




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	F1.5	Cell sheet engineering of the glomerular capillary wall <i>Rachel Saunders</i>	
10:15-11:45		FREE PAPER SESSION 2: Scaffold-based approaches I <i>Moderators: Prof. Brian Derby & Dr. Ferry Melchels</i>	Aula
10:15-10:45	KL2.1	KEYNOTE LECTURE: Biomaterials for biofabrication <i>Ferry Melchels</i>	
10:45	F2.1	Biofabrication of anatomically shaped implants for regeneration of the rabbit humeral head <i>Jetze Visser</i>	
	F2.2	Bioprintable hydrogels for vascularized bone constructs <i>Loek Loozen</i>	
	F2.3	Tissue spheroids encaged into microscaffolds (lockyballs) as a promising bottom-up strategy in biofabrication and bioprinting <i>Vladimir Mironov</i>	
	F2.4	Development of polymer/hydrogel scaffold using hybrid bioprinting system <i>Lee JunHee</i>	
	F2.5	Biofabrication of scaffolds for middle ear repair <i>Carlos Mota</i>	
11:45-13:00		LUNCH BREAK/EXHIBITION/POSTER VIEWING	
12:00-13:00		Lunch Symposium Brightlands – InSciTe Welcome to InSciTe <i>Dr. Danielle Curfs, InSciTe</i> LS1.1 XS-GRAFT: the engineering of vascular access grafts <i>Dr. Patricia Y.W. Dankers, TU/e</i> LS1.2 SynCart <i>Dr. Rene van Donkelaar, TU/e</i> LS1.3 The Ocular Coil Drug delivery Comfort trial <i>Prof. dr. Rudy Nuijts, MUMC+</i>	Kanunniken zaal
13:15-14:00	PL4.1	PLENARY SESSION: Cell electrospinning <i>Moderator: Dr. Lorenzo Moroni</i> PLENARY LECTURE: Direct tissue engineering approaches for regenerative biology and medicine <i>Prof. Suwan Jayasinghe</i>	Aula
14:15-15:45		FREE PAPER SESSION 3: Engineered tissues and organs I <i>Moderators: Prof. Vladimir Mironov & Prof. William Shu</i>	Aula
14:15-14:45	KL3.1	KEYNOTE LECTURE: Bioprinting of Mouse Thyroid Gland <i>Vladimir Mironov</i>	
14:45	F3.1	Bioprinting de novo cartilage with extracellular matrix-based bioink <i>Matti Kesti</i>	




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	F3.2	Computational-informed design and biofabrication of 3D spatially patterned constructs for bone tissue engineering <i>Aurélie Carlier</i>	
	F3.3	Rapid Formation of the Bone Marrow-like Tissue <i>Nobuhiko Kojima</i>	
	F3.4	3D multicell simulation during the self-formation of thyroid follicles: a computational approach for the biofabrication of tissues <i>Vladimir Mironov</i>	
	F3.5	3D plotting of a biphasic scaffold consisting of a calcium phosphate cement and a growth factor loaded hydrogel blend <i>Tilman Ahlfeld</i>	
14:15-15:45		FREE PAPER SESSION 4: New Technologies <i>Moderators: Dr. Arnold Gillner & Dr. Tim Woodfield</i>	Kanunniken zaal
14:15-14:45	KL4.1	KEYNOTE LECTURE: 3D-Biofabrication by Laser Cell Printing and Ultra High Resolution Additive Manufacturing <i>Arnold Gillner</i>	
14:45	F4.1	Additive manufacturing of scaffolds with sub-micron filaments via melt electrospinning writing <i>Gernot Hochleitner</i>	
	F4.2	Versus picosecond pulses for laser-induced forward transfer of biomaterials <i>dr. Raphaël Devillard</i>	
	F4.3	Bioprinting of Encapsulated Pancreatic Islets <i>Dirk Jan Cornelissen</i>	
	F4.4	Innovative biofabrication of 3D conductive scaffolds for cardiac tissue modelling <i>Giovanni Vozzi</i>	
	F4.5	Assessment of electromagnetic device for label-free magnetic cell assembly <i>Yoshitake Akiyama</i>	
15:45-16:15		COFFEE BREAK	
16:15-17:45		FREE PAPER SESSION 5: Engineered tissues and organs II <i>Moderators: Prof. Wei Sun & Prof. James Yoo</i>	Aula
16:15-16:45	KL5.1	KEYNOTE LECTURE: Bioprinted Engineered Tissues for Translational Applications <i>James Yoo</i>	
16:45	F5.1	Prevention of apoptosis in epithelial-cell-spheroids <i>Wakako Motoyama</i>	
	F5.2	Bioprinting of human pluripotent stem cells and their directed differentiation for the generation of 3D liver-like micro-tissues <i>Alan Faulkner-Jones</i>	
	F5.3	Design and fabrication of a biomimetic oriented scaffold with multi-branch network for myocardial tissue engineering. <i>Yongcong Fang</i>	



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	F5.4	Challenges in biofabrication of alginate based matrices for bone tissue regeneration: aspects of degradation and application of co-culture <i>Rainer Detsch</i>	
	F5.5	A comparison of different hydrogels for 3D bioprinting of hybrid mechanically reinforced constructs for cartilage tissue engineering <i>Susan Critchley</i>	
16:15-17:45		FREE PAPER SESSION 6: Scaffold based II <i>Moderators: Prof. Michael Gelinsky & Dr. Paul Wieringa</i>	Kanunniken zaal
16:15-16:45	KL6.1	KEYNOTE LECTURE: Novel approaches to bioprinting by means of multi-channel 3D plotting <i>Michael Gelinsky</i>	
16:45	F6.1	Kinetics of tissue spheroids spreading on synthetic fluorescent electrospun matrices <i>Vladimir Mironov</i>	
	F6.2	Bioprinted soft tissue models for compound testing <i>Markus Rimann</i>	
	F6.3	Layer-by-Layer Microfabrication of Cellularized Poly (lactic acid) Constructs for Bone Tissue Engineering <i>Vera Guduric</i>	
	F6.4	Fabrication of multimaterial scaffolds for improved ligament-to-bone fixation <i>Jiankang He</i>	
	F6.5	Computational Design of Biotransportation Network for Biofabrication <i>Qing Li</i>	
18:00-19:00		ISBF GENERAL ASSEMBLY	Aula
19:00-20:00		POSTER VIEWING & DRINKS	
20:00-late		YOUNG SCIENTIST EVENT (sponsored by ISBF)	
Monday, November 9, 2015			
	Abstract code		
08:45 – 09:30	PL5.1	PLENARY SESSION : Clinical Translation <i>Moderator: Prof. Daniel Saris</i> PLENARY LECTURE: Cartilage engineering research and its application <i>prof. Yilin Cao</i>	Aula
09:30-10:00		COFFEE BREAK	
10:00-11:30		FREE PAPER SESSION 7: New Materials I <i>Moderators: Dr. Debby Gawlitta & Prof. Juergen Groll</i>	Kanunniken zaal




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10:00-10:30	KL7.1	KEYNOTE LECTURE: (Supra-)Molecular Strategies towards Printable Hydrogels <i>Juergen Groll</i>	
10:30	F7.1	3D Bioprinting of human chondrocytes and induced pluripotent stem cells in nanocellulose bioink for customized cartilage tissue engineering <i>Daniel Hägg</i>	
	F7.2	Bioprinting of mechanically strong cell-laden fibres <i>Jing Yang</i>	
	F7.3	3D plotting of cell-laden alginate/methylcellulose blends – a simple and versatile method for diverse bioprinting approaches <i>Anja Lode</i>	
	F7.4	Cell encapsulation for bio-ink formulation <i>Ricardo Ribeiro</i>	
	F7.5	Biodegradable Thermoplastic Elastomers for use in Biofabrication <i>Aysun Güney</i>	
10:00-11:30		FREE PAPER SESSION 8: Scaffold-based approaches III <i>Moderators: Prof. Peter Dubruel & Prof. Qing Li</i>	Aula
10:00-10:30	KL8.1	KEYNOTE LECTURE: (Bio)polymers as elegant tools for scaffold-based 3D printing: case-study of PCL and gelatin <i>Prof. Peter Dubruel</i>	
10:30	F8.1	3D hydrogel scaffolds for cartilage tissue engineering <i>Alicja Kosik</i>	
	F8.2	A novel method using 3D printing to maintain implant shape for ear cartilage reconstruction <i>Dafydd Owen Visscher</i>	
	F8.3	Reinforced gelatin hydrogels for cartilage repair: from in vitro testing to implantation in the equine knee joint <i>Jetze Visser</i>	
	F8.4	Biofabrication of reinforced 3D-constructs using pre-cross-linked two-component hydrogels <i>Maarten Blokzijl</i>	
	F8.5	Biofabrication of tissue engineered cartilage constructs via an automated 3D micro-tissue assembly system <i>Tim Woodfield</i>	
11:30-13:00		LUNCH BREAK/EXHIBITION/POSTER VIEWING	




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12.00-13.00		Lunch Symposium HydroZONES	Kanunniken zaal
	LS1.1	Rheology: an attractive tool to predict 3D-printability of thermo-sensitive hydrogels <i>Anna Abbadessa</i>	
	LS1.2	Bioink reinforcement using gels based on amphiphilic triblock copolymers <i>Maarten Blokzijl</i>	
	LS1.3	Bioinks for cartilage biofabrication based on thermo-sensitive polymer combined with polysaccharides <i>Vivian Mouser</i>	
13.15-14.45		FREE PAPER SESSION 9: Bioinspired Biofabrication <i>Moderators: Dr. Roman Truckenmüller & Prof. Tao Xu</i>	Kanunniken zaal
13.15-13.45	KL9.1	KEYNOTE LECTURE: Technology and biomedical applications of advanced microwell arrays – from 3d cell culture to bottom-up tissue engineering <i>Roman Truckenmüller</i>	
13.45	F9.1	Fabrication of scaffold mimicking the architecture of articular cartilage using direct-write electrospinning <i>Honglin Chen</i>	
	F9.2	3D Bioprinting of Branched Artery Model With Live Cells <i>Bahattin Koc</i>	
	F9.3	Controlled assembly of engineered micro-objects and bone marrow stromal cells as a bottom-up tissue engineering approach <i>Anne Leferink</i>	
	F9.4	Investigation on the influence of laser wavelength and pulse duration on the laser-induced forward transfer of cells <i>Hyungkook Jeon</i>	
	F9.5	Muscle-neuron co-culture on poly (lactic acid) ultra-thin films for biohybrid actuation <i>Lorenzo Vannozzi</i>	
13.15-14.45		FREE PAPER SESSION 10: In vitro models I <i>Moderator: Dr. Carlos Mota & Prof. Paul Dalton</i>	Aula
13.15-13.45	KL10.1	KEYNOTE LECTURE: Building three-dimensional tissue models: an overview <i>Jaqueline Ablas</i>	
13.45	F10.1	A 3D bioprinted bone marrow niche to study normal hematopoiesis and bone-residing malignancies <i>Maaïke Braham</i>	
	F10.2	Open-air Chamber Inkjet head for stable ejection of cell suspensions <i>Manabu Seo</i>	
	F10.3	Three-dimensional bioprinting of embryonic stem cells <i>Liliang Ouyang</i>	
	F10.4	Combining bioprinting and microcarrier technology for osteochondral tissue engineering <i>Riccardo Levato</i>	




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	F10.5	Cardiac fibroblast laden gelatin methacrylate hydrogels: a mimicry for cardiac fibrosis? <i>Janine Deddens</i>	
14.45-15.15		COFFEE BREAK	
15.15-16.45		FREE PAPER SESSION 11: New materials II <i>Moderators: Mr. Giovanni Vozzi & Prof. Marcy Zenobi-Wong</i>	Kanunniken zaal
	F11.1	Cell-loaded spider silk hydrogels as novel inks for biofabrication <i>Tomasz Jüngst</i>	
	F11.2	The crosslinking of hyaluronan controlled by photochemically removable protecting groups <i>Tomáš Bobula</i>	
	F11.3	Hydroxyapatite containing inks for 3D bone bioprinting <i>Michael Muller</i>	
	F11.4	Mapping the biofabrication window of gelatin methacrylamide and gellan gum hybrid hydrogels <i>Vivian Mouser</i>	
	F11.5	Crosslinked Poly(trimethylene carbonate) Structures with Icarin-loaded Poly (ϵ -caprolactone) Microspheres prepared by Stereolithography <i>Mike Geven</i>	
	F11.6	3D Powder Printing of Magnesium Phosphate Bone Cements with Strontium Substitution <i>Susanne Meiniger</i>	
	F11.7	Novel cross linked gelatin microspheres for cell and drug delivery to be used in bio-printing process <i>Nicola Contessi</i>	
15.15-16.45		FREE PAPER SESSION 12: In vitro models II <i>Moderator: Dr. Jacqueline Alblas</i>	Aula
	F12.1	Micro and meso-scale human vascularized organ-specific models to study cancer cell extravasation <i>Matteo Moretti</i>	
	F12.2	3D bioprinting-based in vitro biofabrication and in vivo regeneration of adipose tissue, liver and embryonic tissues <i>Rui Yao</i>	
	F12.3	Multimaterial Tandem Electrospinning for Spatially Modulated Neural Guidance <i>Paul Andrew Wieringa</i>	
	F12.4	Epicardial application of cardiac progenitor cells in a 3D-printed gelatin/hyaluronic acid patch preserves cardiac function after myocardial infarction <i>Dries Feyen</i>	




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	F12.5	Developing an in vitro oviduct model: Post-printing treatment of tubular transwell constructs influences oviduct epithelial cell survival <i>Heiko Henning</i>	
	F12.6	Epithelial-to-Mesenchymal Transition in the in vitro cervical tumor model established by three-dimensional printing of Hela cells <i>Rui Yao</i>	
	F12.7	Finding the Balance between Oxygen Inhibition and Cell Viability in Biofabrication of Photopolymerised Hydrogels <i>Khoon Lim</i>	
16.45-17.45		Closing ceremony, awards and presentation Biofabrication 2016	
20.00-23:00		CONFERENCE DINNER	