

**Biointerfaces International Zurich 2016 / August 23 – 25, 2016: Science Session Program 23, 24A, 25
 Separate Session Program 24B = Translational Workshop**

Tuesday, August 23		
08:00 – 09:00	Registration (University of Zurich, Entrance Hall)	
Conference Day 1 / KOH-B-10, floor B		
09:00 – 09:30	Welcome Address	Lino Guzzella , President ETH Zurich Nicholas D. Spencer , ETH Zurich (tbc) Jörg Güttinger , NTN “Innovative Surfaces”
/	Session 1: Regenerative Medicine & Stem Cell Technology (A) / KOH-B-10, floor B Chairs: Jeffrey A. Hubbell , University of Chicago, USA and Viola Vogel , ETH Zurich, CH	
09:30 – 10:10	Keynote 1	Simon P. Hoerstrup , University of Zurich & Wyss Translational Center, Zurich, CH <i>Cell based therapies for the heart</i> <u>Intro</u> : Viola Vogel, ETH Zurich
10:10 – 10:40	Coffee/Tea Break / Lichthof, floor D	
10:40 – 11:10	Invited Talk 1	Matthias Lutolf , EPFL, Lausanne, CH <i>Engineering organoid development in 3D artificial microenvironments</i>
11:10 – 11.30	Contributed Talk 1	Tessa Lühmann , University of Würzburg, DE <i>Interleukin-4 clicked surfaces drive M2 macrophage polarization</i>
11:30 – 11:50	Contributed Talk 2	Marta Bally , Chalmers University of Technology, Göteborg, SE <i>Sensor -based investigations of the role of cellular and viral carbohydrates in modulating the binding and release of herpes simplex viruses from its host</i>
11:50 – 13:20	Lunch & Poster Session & Exhibition / Lichthof & Foyer West, floor D	

Tuesday, August 23

/	Session 2: Regenerative Medicine & Stem Cell Technology (B) / KOH-B-10, floor B Chairs: Marcy Zenobi-Wong , ETH Zurich and Michael Raghunath , Zurich University of Applied Sciences, CH	
13:20 – 14:00	Keynote 2	Jeffrey A. Hubbell , University of Chicago, IL, USA <i>Engineering proteins and polymers for immunological tolerance</i> Intro: Marcy Zenobi-Wong, ETH Zurich, CH
14:00 – 14:30	Invited Talk 3	Heike Walles , University Hospital Würzburg, DE <i>Engineering of complex vascularized tissues and their application</i>
14:30 – 15:00	Invited Talk 4	Carsten Werner , Leibniz Institute of Polymer Research, Dresden, DE <i>Glycosaminoglycan-based, cell-instructive hydrogels</i>
15:00 – 15:30	Coffee/Tea Break / Lichthof, floor D	
/	Session 3: Micro/Nano-Engineered Interface (A) / KOH-B-10, floor B Chairs: Matthias Lutolf , EPFL, CH and Stefan Zauscher , Duke University, USA	
15:30 – 16:00	Invited Talk 5	Yukio Nagasaki , University of Tsukuba, Tsukuba, JP <i>A novel biointerface that suppresses blood coagulation and cell morphological changes by scavenging excess reactive oxygen species</i>
16:00 – 16:30	Invited Talk 6	Cornelia Palivan , University of Basel, Basel, CH <i>Polymer membranes decorated with biomolecules: Novel systems with medical potential</i>
16:30 – 16:50	Contributed Talk 3	Gabriel P. López , University of New Mexico, Albuquerque, NM, US <i>I'm Rubber and You're Glue: Soft Robotic Elastomeric Systems for Control of Bioadhesion</i>
16:50 – 17:10	Contributed Talk 4	Christine Dupont-Gillain , Université catholique de Louvain, BE <i>Tunable protein immobilization at interfaces based on polyelectrolyte-protein interactions</i>
17:10 – 18:50	Poster Session & Exhibition & Apéro / Lichthof, floor D, Foyer West, floor D	
/	Special Session 4: Evening Talks / KOH-B-10, floor B Chairs: Carsten Werner , Leibniz Institute of Polymer Research, DE and Simon P. Hoerstrup , University of Zurich & Wyss Translational Center, Zurich, CH	
18:50 – 19:30	Keynote 3	Andrés J. Garcia , Georgia Institute of Technology, Atlanta, GA, USA <i>Biofunctional materials for tissue repair</i>
19:30 – 20:20	Keynote 4	David J. Mooney , Harvard University, Cambridge, MA, USA <i>Engineering the microenvironment with biomaterials</i>
20:20 – 20:30	<i>General Discussion</i>	
20:30	End of session	

Biointerfaces International Zurich 2016 / August 23 – 25, 2016: Session Program

Wednesday, August 24 (Session 24A)		
08:00 – 08:30	Registration (University of Zurich, Entrance Hall)	
	Conference Day 2 / KOH-B-10, floor B & video transmission to KOL-G-201 (Aula), floor G (for keynotes Messersmith and Derda)	
08:30 – 9:10	Keynote 5	Phillip B. Messersmith , University of California, Berkeley, CA, USA <i>Bioinspired polyphenol coatings</i> Intro: Martin Ehrbar, University Hospital Zurich, CH
/	Session 5: Bioinspired/Responsive Surfaces / KOH-B-10, floor B Chairs: Andrés J. Garcia , Georgia Institute of Technology, Atlanta, USA & Phillip B. Messersmith , U California, Berkeley, USA	
09:10 – 9:40	Invited Talk 7	Aránzazu del Campo , Leibniz Institute for New Materials, Saarbrücken, DE <i>Directing cells with light</i>
09:40 – 10:10	Invited Talk 8	Emmanuel Delamarche , IBM Research Laboratory, Zurich, CH <i>Microfluidics in the open space for multimodal analysis of tissue sections and adherent cells</i>
10:10 – 10:40	Coffee/Tea Break / Lichthof, floor D	
10:40 – 11:10	Invited Talk 9	Ali Miserez , Nanyang Technological University, Singapore, SG <i>Protein coacervation as a mechanism to create robust biointerfaces</i>
11:10 – 11:30	Contributed Talk 5	Christof M. Niemeyer , Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, DE <i>DNA-Surface Technology – Beyond transcript profiling and genotyping (tbc)</i>
10:30 – 11:50	Contributed Talk 6	Jan Müller , ETH Zurich, CH <i>CMOS High-throughput electrophysiology system to analyze neurons at subcellular and network levels</i>
11:50 – 13:10	Lunch & Poster Session & Exhibition / Lichthof, floor D, Foyer West, floor D	

Wednesday, August 24 (Session 24A)

/	Session 6: Bioanalytics & Diagnostics / KOH-B-10, floor B Chairs: Janos Vörös , ETH and University of Zurich, CH & Michael Mayer , Adolphe Merkle Institute, University of Fribourg, CH	
13:10 – 13:50	Keynote 6	Fredrik Höök , Chalmers University of Technology, Göteborg, SE <i>Optofluidics characterization of individual virions and extracellular vesicles with deterministic sorting capacity</i> <u>Intro</u> : Janos Vörös, ETH and University of Zurich
13:50 – 14:20	Invited Talk 10	Marko Loparic , Nuomedis AG, Liestal, CH <i>The nanomechanical signature of cancer: Novel diagnostic and prognostic biomarker</i>
14:20 – 14:50	Invited Talk 11	Christof Fattinger , Roche Innovation Center Basel, Basel, CH <i>Focal Molography: The coherent detection of biomolecular interactions</i>
14:50 – 15:20	Coffee/Tea Break / Lichthof, floor D	
/	Session 7: Micro/Nano-Engineered Interfaces (B) / KOH-B-10, floor B Chairs: Yukio Nagasaki , University of Tsukuba, JP & Aránzazu del Campo , Leibniz Institute for New Materials, Saarbrücken, DE	
15:20 – 15:50	Invited Talk 12	Michael Mayer , Adolphe Merkle Institute, University of Fribourg, CH <i>Nanopores with bio-inspired surface coatings for single protein analysis</i>
15:50 – 16:20	Invited Talk 13	Esther Amstad , EPFL, Lausanne, CH <i>Drops: A tool to structure materials</i>
16:20 – 16:50	Invited Talk 14	Stefan Zauscher , Duke University, Durham, NC, USA <i>Biomolecular synthesis of ssDNA and its interactions in solution and with surfaces</i>
16:50 – 17:00	<i>Short break (no servings)</i>	
17:00 – 17:40	Keynote 7	Ratmir Derda , University of Alberta, Edmonton, CA <i>From simple diagnostic platforms to genetically-encoded discovery of serological diagnostics</i> <u>Intro</u> : Fredrik Höök, Chalmers University of Technology, Göteborg, SE
18:30 – 23:00	Conference Dinner (Restaurant “Die Waid”, Zurich)	

Wednesday, August 24 (Session 24B)

08:00 – 08:30	Registration (University of Zurich, Entrance Hall)	
	Conference Day 2 Plenary Talk KOH-B-10, floor B, video transmission to KOL-G-201 (Aula), floor G	
08:30 – 9:10	Keynote 5	Phil Messersmith , University of California, Berkeley, USA <i>Bioinspired Polyphenol Coatings</i>
/	Session 5B: Science-to-Market (1) Pitching Science to Market: KOL-G-201 (Aula), floor G Chairs: Sally McArthur, Professor, Swinburne University of Technology, AU / Marcos Garcia Pedraza, Managing Partner, orgart VENTURES AG, CH	
09:10 – 9:35	Sally McArthur , Professor, Swinburne University of Technology, AU <i>ARC Training Centre in Biodevices: A new model for developing Innovative and Entrepreneurial PhD graduates</i>	
09:35 – 10:10	<p>Pavel Levkin, Karlsruhe Institute of Technology & AquArray GmbH, DE <i>Droplet-Microarray cell screening platform: from superhydrophobicity to personalized medicine</i></p> <p>Jonas Pollard, Adolphe Merkle Institute, University of Fribourg, CH <i>Easy MaDe: Easy Malaria Detection</i></p> <p>Simone Bottan, Wyss Translational Center Zurich & Hylomorph AG, CH <i>HYLOCARE – solving the problem of fibrosis in implantable medical devices</i></p> <p>Silvia Angeloni Suter, CSEM & SiMPLInext, CH <i>SiMPLInext: delivering on the promise of permeable support systems for cell culture</i></p> <p>Thomas Crouzier, Grenoble Institute of Technology, Grenoble, FR & KTH, Stockholm, SE <i>APIOS: rebirth of a familiar biologic through better delivery</i></p> <p>Gediminas Mikutis, ETH Zurich & Haelixa GmbH, CH <i>Intelligent DNA-based tracing solutions for product authentication, industrial tracking and liability management</i></p>	
10:10 – 10:40	Coffee/Tea Break (Lichthof, floor D)	
/	Session 5B (continued): Science-to-Market (2) Startup Companies: Ways to Success KOL-G-201 (Aula), floor G Chairs: Marcos Garcia Pedraza, Managing Partner, orgart VENTURES AG , CH / David W. Grainger, Professor, University of Utah, US	
10:40 – 11:50	<p>Melanie Aregger, Chief Operating Officer, Insphero AG, CH <i>From 3D cell cultures to drug screening and diagnostics</i></p> <p>Simone Carlo Rizzi, Director of Products & Innovation, QGel SA, CH <i>A journey to advanced cell-based assays: Crossing the barrier to industrialization</i></p> <p>Vincent Forster, Chief Executive Officer & Founder, Versantis AG, CH <i>Lisposomal dialysis: A new hope for liver disease patients and beyond</i></p> <p>Luc Talini, Chief Executive Officer, Alvéole SA, FR <i>A new way to easily photopattern proteins for cell-based assays</i></p>	

	<p>Kaspar Cottier, Chief Technology Officer & Founder, Creoptix AG, CH <i>Creoptix: From interferometry to applications in drug discovery</i></p> <p>Kilian Imfeld, Chief Technology Officer & Founder, 3Brain GmbH, CH <i>High-resolution microelectrode arrays for electrophysiology</i></p> <p>Pascal Behr, Chief Executive Officer & Founder, Cytosurge AG, CH <i>FluidFM - From single cell analysis to micro 3D printing</i></p>
11:50 – 13:10	Lunch & Poster Session & Exhibition (Lichthof, floor D, Foyer West, floor D)
/	<p>Session 6B: Science-to-Market (3) Corporate Ventures: Future Markets KOL-G-201 (Aula), floor G Chairs: Andreas Hafner, Senior Innovation Manager, Academic Partnership Developer, BASF AG, CH / Samuele Tosatti, Chief Executive Officer, SuSoS AG, CH</p>
13:10 – 14:25	<p>Charlie Olson, Senior Vice President and General Manager - Medical Device Business Unit, SurModics Ltd., US <i>Next Generation Coating Technologies for New Clinical Needs</i></p> <p>Canet Acikgoz, Key Account Manager Precision Components, Oerlikon Surface Solutions AG, CH <i>Make a healthy choice with anti-microbial PVD coatings</i></p> <p>Eric Markweg, Head of Customer Affairs, Tetra Gesellschaft für Sensorik, Robotik und Automation mbH, DE <i>Producing large size scaffolds for bone regeneration by utilizing a industrial Two - Photon - Polymerization Process Unit</i></p> <p>Andrea Montali, Director R&D Biomaterials, DePuy Synthes, CH <i>Translating Innovation into Product Development – Hurdles, Pitfalls, Promises and Rewards</i></p> <p>Adrian Roth, Head Mechanistic Safety, Pharmaceutical Sciences (PS), Roche Innovation Center Basel, CH <i>From Science to Clinics: mimicking human relevant drug response in organ-like cell systems</i></p>
14:25 – 14:50	<p>Panel Discussion, KOL-G-201 (Aula), floor G Participants: Pascal Behr, Cytosurge AG, CH / Andreas Hafner, BASF AG, DE / Charlie Olson, SurModics Ltd., US / Helmut Rudigier, Oerlikon Surface Solutions AG, CH / Axel Bolte, HBM Partners AG, CH Discussion Leader: Marcos Garcia Pedraza, orgart VENTURES AG, CH</p>
14:50 – 15:20	Coffee/Tea Break (Lichthof, floor D)
15:00 – 16:30	<p>CTI Start-up: CTI Entrepreneurs' Roundtable (For Entrepreneurs in CTI Start-up Program), KOL-G-212 Guests: Andreas Emmenegger, CFO, Molecular Partners AG, CH / Axel Bolte, Venture Capitalist, HBM Partners AG, CH Discussion Leader: Marcos García Pedraza, orgart VENTURES AG, CH</p>

Wednesday, August 24 (Session 24B)

/	Session 7B: Science-to-Clinics (1) Crossing Borders – Building Bridges KOL-G-201 (Aula), floor G, Chairs: Gabriela Senti , Director Research and Education, Head Clinical Trials Center, University Hospital Zurich / Katharina Maniura , Empa and ETH Zurich	
15:20 – 16:10	Hans-Florian Zeilhofer , University Hospital Basel, Oral & Maxillofacial Surgery <i>Bridges to cross: from discovery to clinical evaluation to industrial application: technical and financial challenges</i> Beatrice Beck Schimmer , University Hospital Zurich <i>How can we encourage and motivate young researchers to cross barriers?</i>	
/	Session 7B: Science-to-Clinics (2) EU Opportunities for individual researchers KOL-G-201 (Aula), floor G Chair: Michael Stucky , Wyss Translational Center Zurich	
16:10 – 16:25	Sibylla Martinelli , National Contact Point (NCP): Marie Skłodowska-Curie Actions, Euresearch <i>EU Opportunities to support individual researchers - a focus on career development</i>	
16:25 – 16:50	Session 7B: Science-to-Clinics (3) Panel Discussion with all Speakers and Chairpersons of this session, KOL-G-201 (Aula), floor G Discussion Leaders: Gabor Szekely , ETH Zurich & Gabriela Senti , University Hospital Zurich	
16:50 – 17:00	Short break (no servings)	
	Conference Day 2 Plenary Talk KOH-B-10, floor B, video transmission to KOL-G-201 (Aula), floor G	
17:00 – 17:40	Keynote 7	Ratmir Derda , University of Alberta, Edmonton, CAN <i>From simple diagnostic platforms to genetically-encoded discovery of serological diagnostics</i>
18:30 – ca. 23:00	Conference Dinner (Restaurant “Die Waid”, Zurich)	

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Thursday, August 25		
8.00 – 08:20	MORNING TALK KOL-G-201 (Aula), floor G	Rosamund Daw , Senior Editor, Physical Sciences Nature, London, GB <i>Publishing interdisciplinary research: making an impact</i>
Conference Day 3 / KOH-B-10, floor B		
/	Session 8: Biotribology / KOH-B-10, floor B, Chairs: Nicholas D. Spencer , ETH Zurich, CH & Joanna Aizenberg , Harvard University, Cambridge, MA, USA	
08:30 – 9:10	Keynote 8	Gregory Saywer , University of Florida, Gainesville, FL, USA <i>Slippery physics of soft matter</i> <u>Intro:</u> Nicholas D. Spencer, ETH Zurich
9:10 – 9:40	Invited Talk 15	Charles Scales , Johnson & Johnson Vision Care Inc., Jacksonville, FL, USA <i>Robust and physiologically relevant characterisation methods for contact lens medical devices: a step into better understanding of tribological impact in the eye</i>
9:40 – 10:10	Invited Talk 16	Rowena Crockett , Empa, Dübendorf, CH <i>Influence of polysaccharide chain conformation on friction and adhesion</i>
10:10 – 10:40	Coffee/Tea Break / Lichthof, floor D	
/	Session 9: 3D Cell Culture / Engineered Tissue Model / KOH-B-10, floor B Chairs: Joachim Rychly , University of Rostock, DE & Daniela Rusu , MINES Douai, FR	
10:40 – 11:10	Invited Talk 17	Barbara Rothen-Rutishauser , Adolphe Merkle Institute, University of Fribourg, CH <i>Lung tissue engineering to study the pulmonary administration of drugs - opportunities and challenges</i>
11:10 – 11:40	Invited Talk 18	Ursula Graf-Hausner , Zurich University of Applied Sciences, Wädenswil, CH <i>Tissue engineering for medicine and pharma</i>
11:40 – 12.00	Contributed Talk 7	Elia Janett , University of Fribourg, CH <i>A conformationally unstable DNA-based biosensor for the fast detection of bacteria</i>
12:00 – 12:30	Invited Talk 19	Janos Vörös , ETH and University of Zurich, CH <i>Creating well-defined neuron networks in 2D and 3D</i>
12:30 – 13:20	Lunch & Poster Session & Exhibition / Lichthof, floor D, Foyer West, floor D	
13:20 – 13:40	Poster Prizes Announcement / KOH-B-10, floor B	

Thursday, August 25

/	Session 10: Bacteria at Interfaces / KOH-B-10, floor B Chairs: Sally McArthur , Swinburne University, Melbourne, AU & Gabriel Lopez , University of New Mexico, USA	
13:40 – 14:10	Invited Talk 20	Viola Vogel , ETH Zurich, CH <i>Fighting bacterial infections: The nanomechanics of a macrophage attack</i>
14:10 – 14:40	Invited Talk 21	David W. Grainger , University of Utah, Salt Lake City, UT, USA <i>Translational barriers to antimicrobial medical technologies</i>
14:40 – 15:10	Invited Talk 22	Reto Luginbuehl , RMS Foundation, Bettlach, CH <i>Development of Antimicrobial Medical Devices: Caught between Scientific Excellency and Industrial Constrains</i>
15:10 – 15:40	Coffee/Tea Break / Lichthof, floor D)	
/	Session 11: Drug Delivery Systems / KOH-B-10, floor B Chairs: David W. Grainger , University of Utah, Salt Lake City, USA & Aylvin Dias , DSM Biomedical, Geelen, NL	
15:40 – 16:10	Invited Talk 23	Sebastian Koltzenburg , BASF SE, Ludwigshafen, DE <i>Solubilization of brick dust – Chemistry, physics and processes</i>
16:10 – 16:40	Invited Talk 24	Aylvin Dias , DSM Biomedical, Geelen, NL <i>Tunable amino acid based biodegradable polyesteramides for drug delivery</i>
16:40 – 17:20	Keynote 9	Joanna Aizenberg , Harvard University, Cambridge, MA, USA <i>Slippery interfaces: A new concept in anti-biofouling materials</i> <u>Intro:</u> David W. Grainger, University of Utah, USA
17:20 – 17:30	Closing	
/	End of Conference	