

Biointerfaces International Zurich 2021 Conference, August 18 – 19, 2021
Online Session Program

Online Conference Day 1 – Wednesday, August 18

10.00 – 10.10	Welcome & Introduction Seminar	Tina Bürki , Empa, St. Gallen, CH
10.10 – 10.40	Seminar	Matthias Lutolf , Swiss Federal Institute of Technology, Lausanne, CH Next generation organs-on-a-chip <i>Organoids, stem cells, self-organisation, tissue engineering, organs-on-a-chip</i>
10.40 – 10.50	Discussion	
10.50 – 11.20	Seminar	Thorsten Ochsenreiter , University of Berne, Berne, CH Scientific integrity – Why do we care Melanie Röthlisberger , University of Zurich, Zurich, CH The how and why to open science <i>Plagiarism, honesty in communication, reproducibility, objectivity, misconduct / open science in research, open data, caveats for young scientists</i>
11.20 – 11.30	Discussion	
From 11.30	Ask Anything (Chat rooms)	Sally McArthur , Swinburne University of Technology, Melbourne, AU <i>(Young) participants to ask any question (e.g., related to career planning, publication, collaborations, funding, work/life balance and more</i>
13.00 – 13.10	Welcome words	Katharina Maniura , Empa, St. Gallen, CH
13.10 – 13.40	Lecture I	Marcy Zenobi-Wong , ETH Zurich, Zurich, CH Microgels as building blocks for tissue engineering
13.40 – 13.50	Discussion	
13.50 – 14.20	Lecture II	Jason A. Burdick , University of Pennsylvania, Philadelphia, US Embedded 3D bioprinting within hydrogel suspension media
14.20 – 14.30	Discussion	

14.30 – 14.40	Break	
14.40 – 15.00	Impulse Lecture	Adrian Roth , F. Hoffmann-La Roche AG, Basel, CH <i>Advanced human cell models for drug discovery, development and personalized medicine</i>
15.00 – 16.00	Panel Discussion: <i>Progress in cell-based in-vitro assays for drug development, substance toxicity testing, regenerative medicine – supporting 3R initiatives</i>	Swiss institutional representatives: <ul style="list-style-type: none"> • Kathy Riklin, Swiss Competence Centre 3R (3RCC), CH • Silvia Frey, Animalfree Research, CH Industry representatives: <ul style="list-style-type: none"> • Fred Züllli, Mibelle AG, CH • Heinz Ruffner, Novartis AG, CH • Adrian Roth, F. Hoffmann-La Roche AG, CH International institutional representatives: <ul style="list-style-type: none"> • Madhu Lal-Nag (tbc), U.S. Food and Drug Administration, US
16.00 – 17.00	Poster Session	
17.00 – 17.30		David W. Grainger , University of Utah, Salt Lake City, US <i>tba (Topic: Critical overview of biointerfacial challenges and unmet needs)</i>
17.30 – 17.40	Discussion	
17.40 – 17.50	Break	
17.50 – 18.20	Lecture III	Sarah Köster , University Göttingen, Göttingen, DE <i>Nonlinear mechanics of cytoskeletal biopolymers</i>
18.20 – 18.30	Discussion	
18.30 – 19.00	Lecture IV	Andrés J. Garcia , Georgia Institute of Technology, Atlanta, US <i>Biosynthetic hydrogels for regenerative medicine</i>
19.00 – 19.10	Discussion	

Online Conference Day 2 – Thursday, August 19

10.00 – 10.30	Seminar	Viola Vogel , ETH Zurich, Zurich, CH Extracellular cues in health and disease <i>Mechanobiology of cells and extracellular matrix, how forces switch protein functions with powerful physiological consequences</i>
10.30 – 10.40	Discussion	
10.40 – 11.10	Seminar	Martina Stenzel , University of New South Wales, Sydney, AU Nanoparticulate drug delivery systems for cancer therapy <i>Nanoparticles, mechanism of drug loading, behaviour of nanoparticles in a biological system (in vitro and in vivo)</i>
11.10 – 11.20	Discussion	
11.20 – 13.00	Exhibitor Session	
13.00 – 13.30	Lecture V	Shulamit Levenberg , Technion - Israel Institute of Technology, Haifa , IL Bioprinting vascularized 3D Tissue constructs
13.30 – 13.40	Discussion	
13.40 – 14.10	Lecture VI	Núria Montserrat Pulido , Institute of Bioengineering of Catalonia, Barcelona, ES Engineering kidney organoids to understand kidney development and disease
14.10 – 14.20	Discussion	
14.20 – 14.30	Break	
14.30 – 15.00	Invited Talk	tba
15.00 – 15.30	Lecture VII	Peter Loskill , University of Tübingen, Tübingen, DE Recapitulating complex human biology in vitro: Microphysiological systems and organ-on-chip technology
15.30 – 15.40	Discussion	
15.40 – 16.10	Lecture VIII	Morgan Alexander , The University of Nottingham, Nottingham, UK Cell instructive materials for next generation medical devices: Microtopography opportunities
16.10 – 16.20	Discussion	
16.20 – 16.30	Break	

16.30 – 17.00	Lecture IX	Jianping Fu , University of Michigan, Ann Harbor, US <i>Bottom-up synthetic embryology for understanding early human development</i>
17.00 – 17.10	Discussion	
17.10 – 17.40	Lecture X	Romana Schirhagl , University of Groningen, Groningen, NL <i>Nanoscale MRI for measuring free radical generation in living cells</i>
17.40 – 17.50	Discussion	
17.50 – 18.20	Lecture XI	Tatiana Segura , Duke University, Durham, US <i>tba (Topic: Functional material-biology interfaces (to tissue, cells, bacteria, enzymes/proteins, ...))</i>
18.20 – 18.30	Discussion	
18.30 – 19.00	Lecture XII	Sarah Heilshorn , Stanford University, Stanford, USA <i>Engineered Protein Matrices for Precision Medicine</i>
19.00 – 19.10	Discussion	
19.10 – 19.20	Closing Remarks	Katharina Maniura , Empa, St. Gallen, CH