



Program*

Wednesday August 21, 2024 – Day 1

8.00	Registration
9.00	Welcome: Falko Schlottig, Director, FHNW School of Life Sciences
9.15	Opening Keynote: Prof. Dr. David Grainger, University of Utah (USA) <i>Allogenic mesenchymal cell sheet properties in regenerative medicine strategies</i>
	Session 1: mRNA Chaired by: Oya Tagit (CH)
9.55	Keynote 1: Prof. Dr. Chantal Pichon, University of Orleans (FR) <i>Messenger RNA vaccines and therapeutics</i>
10.35	Coffee break
11.05	Invited talk 1: Dr. Tilo Netzer, Lonza (CH) <i>Optimizing GMP manufacturing of mRNA Lipid Nanoparticles</i>
11.35	Contributed talk: tbc
11.55	Contributed talk: tbc
12.15	Lunch, posters, exhibition, and networking
	Session 2: Biomaterials Chaired by: Simone Schuerle (CH)
13.20	Keynote 2: Prof. Dr. Suzie Hwang Pun, University of Washington (USA) <i>Biomaterials for cancer immunotherapy applications</i>
14.00	Contributed talk 4179: Dr. Ekaterina Umnyakova, University of Basel (CH) <i>Complement Modulation on Biosurfaces: Click Chemistry Approach for Natural Regulators Recruitment</i>
14.20	Contributed talk 4162: Dr. Céline Labouesse, ETH Zürich (CH) <i>Granular biomaterials as bioactive sponges for the sequestration and release of signaling molecules</i>



Wednesday August 21, 2024 – Day 1 Afternoon

	Flash poster presentations: Biomaterials, Bioprinting, Biofabrication, Biosensing
14.40	Flash poster 4113: Dr. <u>Edith Perret</u>, Empa (CH) <i>Local drug delivery with melt-spun liquid core fibers</i>
14.45	Flash poster 4165: <u>Léo Sifringer</u>, ETH Zürich (CH) <i>A soft, implantable nerve model on a chip towards biohybrid regenerative electronics</i>
14.50	Flash poster 4169: Dr. <u>Romy Marek</u>, FHNW (CH) <i>Enhancing the degradation behavior and osseointegration of resorbable Mg-Zn-Ca orthopedic screws by PEO surface treatment</i>
14.50	Flash poster 4173: <u>Paula De Dios Andres</u>, Inano (DK) <i>Interfacing Artificial Cells with Hepatocytes</i>
14.55	Flash poster tbc
15.00	Flash poster 4174: Dr. <u>Santosh Sadashiv Mathapati</u>, Translational Health Science and Technology Institute (IN) <i>Placental ecm hydrogels: a promising biomaterial</i>
15.05	Flash poster 4177: <u>Camillo Colli</u>, Politecnico di Milano (IT) <i>Thermoresponsive UCST nanoparticles for controlled drug delivery in cancer hyperthermia treatment</i>
15.10	Flash poster 4187: <u>Annina Stuber</u>, ETH Zürich (CH) <i>Sensing neurotransmitters with aptamer-modified nanopipettes at the interface of neuronal systems</i>
15.15	Coffee break
	Session 3: Biomaterials Chaired by: Katharina Maniura (CH)
15.45	Keynote 3: Prof. Dr. <u>Joachim Spatz</u>, Max Plank Institut (DE) <i>Bottom-up designs of synthetic cells, its application and skin models</i>
16.25	Invited talk 3: Dr. <u>Nicholas Reynolds</u>, La Trobe Institute for Molecular Sciences (AU) <i>Unravelling the role of amyloids in viral infections</i>
16.55	Contributed talk 4170: <u>Beatriz Moura</u>, University of Aveiro (PT) <i>Glycoengineered Bio-clickable Spheroidal Units for Generating Hierarchical Living Materials</i>
17:15	Poster Session and Welcome Apéro – Lobby
19.00	End of Day 1



Thursday August 22, 2024 – Day 2 Morning

8.00	Registration
8.30	Welcome
Technology pitches by sponsors	
8.40	1. Swiss Nanoscience institute
8.50	2. Oerlikon
Session 4: Computational approaches / Labs of the future Chaired by: Inge Wortel (NL)	
9.00	Keynote 4: Dr. Gregoire Altan-Bonnet, NCI-NIH (USA) <i>Building models of CAR-T signal integration, using automatized/dynamic high-dimensional dynamic profiling</i>
9.40	Invited talk 4: Prof. Dr. Dagmar Iber, ETH Zürich (CH) <i>Data-based, predictive models to understand cell signalling for tissue and organoids</i>
10.10	Contributed talk 4181: Dr. Vincent Hickl, Empa (CH) <i>Single-cell live imaging of bacterial infections at 3D surfaces</i>
10.30	Coffee break
11.00	Contributed talk 4098: Peng Xuan, Helmholtz-Zentrum Dresden-Rossendorf (DE) <i>Investigation of Dual-Targeting Tumor Spheroids with CAR T Cell Therapy in Hydrogel Microbeads</i>
Technology pitches by exhibitors	
11.20	1. IGZ Instruments
11.30	2. CSEM
11.40	3. Nanosurf
11.50	4. Quantum Design
12.00	Lunch, posters, exhibition and networking



Thursday August 22, 2024 – Day 2 Afternoon

Technology pitches by exhibitors	
13.00	1. Bruker
13.10	2. CellnTec
13.20	3. Maxwell Biosystems
13.30	4. Milian
Session 5: Immune disease interfaces Chaired by: Li Tang (CH)	
13.40	Keynote 5: Prof. Dr. Carole Bourquin, University of Geneva (CH) <i>Nanomaterials for drug delivery in cancer and inflammation</i>
14.20	Invited talk 5: Dr. Inge Wortel, Radboud University (NL) <i>When motility matters: simulating host-pathogen interactions during Listeria invasion of the gut epithelium</i>
14.50	Contributed talk 4175: Emanuele Mauri, Politecnico di Milano (IT) <i>Advanced formulation of hyaluronan-based nanogels for targeted therapy in ovarian cancer</i>
15.10	Contributed talk 4176: Jannes Felsch, University of Basel (CH) <i>Protection of Biomaterials Against Immune-Mediated Complications: Using a Bacterial Surface Model to Evaluate the Efficacy of Complement Regulator-Recruiting Peptide Coatings</i>
15.30	Coffee break
Session 6: Mechanobiology and mechanoimmunology Chaired by: Michael Nash (CH)	
16.00	Keynote 6: Prof. Dr. Khalid Salaita, Emory University (USA) <i>DNA Mechanotechnology: nucleic acids that sense and generate molecular forces enable a new class of biomedical applications and diagnostics</i>
16.40	Contributed talk 4164: Tamara Zünd, ETH Zürich (CH) <i>Mechanobiological T cell stimulation using nanoporous confinement of microvilli induces T cell signaling leading to CD69 and Il-2 expression</i>
17.00	Contributed talk 4168: Prof. Dr. Anne Géraldine Guex, University of Basel (CH) <i>Mechanical compression and shear induce distinct macrophage polarisation and subsequent mesenchymal stromal cell differentiation</i>
17.20	End of Day 2
19.00	Conference Dinner in Basel (extra fee applies)



Friday August 23, 2024 – Day 3 Morning

8.00	Registration
8.30	Welcome
	Technology pitches by sponsors
8.40	<ul style="list-style-type: none">• Merck
	Session 7: Bioprinting and biofabrication Chaired by: Markus Rimann and Maurizio Gullo (CH)
9.00	Keynote 7: Prof. Dr. Massimo Mastrangeli, Delft University of Technology (NL) <i>Microelectromechanical organs-on-chip</i>
9.40	Invited talk 7: Prof. Dr. Bart Spee, Utrecht University (NL) <i>Liver adult stem cells for advanced in vitro models and whole organ engineering</i>
10.10	Contributed talk 4191: Prof. Dr. Laura Suter-Dick, FHNW (CH) <i>A “plug & play” microphysiological system to quantify the liver fibrosis aop in vitro</i>
10.30	Coffee break
11.00	Contributed talk 4095: Dr. Behnam Akhavan, University of Newcastle (AU) <i>Ion-Assisted Plasma Surface Bio-Functionalisation: Bio-Instructive Interfaces for Implantable Medical Devices</i>
	Session 8: Science to market Chaired by: Canet Acikgoz and Samantha Paoletti (CH)
11.20	Short pitches – 4 Swiss Start-ups
11.50	Panel – 4 Swiss Start-ups: <ul style="list-style-type: none">• Career Paths and Roles in a Start-Up• Regulatory• Financing and Acquisition• Science and Innovation
12.20	Lunch, posters, exhibition, and networking



Friday August 23, 2024 – Day 3 Afternoon

Session 9: Biosensing and diagnostics Chaired by: Oya Tagit and Simone Schuerle (CH)	
13.30	Contributed talk 4099: Dr. Jiangtao Zhou, ETH Zürich (CH) <i>An optical fiber-based nanomotion sensor for rapid antibiotic and antifungal susceptibility tests</i>
13.50	Contributed talk 4183: Alessandro Stumpo, FHNW and University of Basel (CH) <i>Raman microscopy: Enhancing Epidermal Growth Factor Receptor Targeting in Ovarian Cancer Cells through Surface Modifications of Gold Nanoparticles</i>
14.10	Closing Keynote (virtual): Prof. Dr. Molly Stevens, University of Oxford (UK) <i>Designing and translating materials for advanced therapeutics and biosensing</i>
14.50	Q&A with Dr. Stevens
15.00	Poster Prizes
15.10	Closing Remarks
15.15	End of the conference