

### Sunday, October 19, 2025

18:00 - 20:00	- Opening of the conference desk Welcome aperitif	<ul><li>Distribution of badges and handbook</li><li>Panels for posters are ready</li></ul>
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Monday, October 20, 2025

	Chair:Albert van den Berg	
09:00 - 09:05	Opening and Welcome	
09:05 - 09:45	Keynote Opening Lecture: Yoon-Kyoung Cho, UNIST, KR Centrifugal Discs and Droplet Microfluidics for Precision Diagnostics	MI
09:45 - 10:05	Trevor Kalkus, Heidelberg University, DE Enabling the Next Generation of Soft Robotics by 3D Printing Complex Iontronics	M2
10:05 - 10:25	Elise Bou, Univ.Grenoble-Alpes, CNRS, GrenobleINP, LMGP & G2ELAB, FR Fast, controlled magnetophoretic 2D transport of magnetic nanoparticles on simple micro-patterned substrates in passive micro-fluidic chips.	М3

Coffee break

	Chair: Charles Baroud	
11:00 - 11:20	Enrico Turato, Lund University, SE Passive Viscoelastic Fluidic Components	M4
11:20 - 11:40	Jana Hecking, University of Twente, NL Multi-Heart Plate – Tissue Engineered hiPSC based Cardiac Chambers for Volumetric Performance Measurements	M5
11:40 - 12:00	Poster snapshots, session A	

#### Lunch break at the hotel (included in the registration)

	Chair: Andrew deMello	_
14:00 - 14:30	Invited: David Issadore, University of Pennsylvania, USA Optofluidic Droplet Assays for High-Throughput, Multiplexed Quantification and Sorting of Single Extracellular Vesicles at Single-Molecule Resolution	M6
14:30 - 14:50	Riccardo Reale, University of Rome Tor Vergata, IT Tackling Syringe Sedimentation in Nano- and Bio- manufacturing: An Integrated Modelling and Hardware Approach	M7
14:50 - 15:10	Radhika Nambannor Kunnath, Chalmers University of Technology, SE High-throughput Optical DNA Mapping for Bacterial Diagnostics	M8

Coffee break

	Chair:Jonathan West	
15:50 - 16:30	<u>Keynote</u> : Liesbet Geris, KU Leuven & Univ. de Lièges, BE  Modeling Complexity: In Silico–In Vitro Synergies for Understanding and Engineering Regeneration	М9
16:30 - 17:00	Poster snapshots, session B	
17:00 - 18:30	Poster Session in the poster area / Exhibition Reception / drinks	
19:30 - 22:00	Conference Dinner at Hotel Mona (included in the registration)	



### Tuesday, October 21, 2025

	Chair : Jonas Tegenfeldt	
9:00- 9:30	Poster snapshots, Session C	
09:30 - 10:00	Invited: Nako Nakastuka, EPFL, CH Nanoscale DNA-Based Biosensors to Decode the Brain	T1
10:00 - 10:20	Fred Jordan, FinalSpark, CH Neuroplatform: Internet access to Brain organoids for Research in Biocomputing	T2
10:20 - 10:40	Andrew Hanna, University of Pennsylvania, USA Automated and Parallelized Microfluidic Generation of Large and Precisely-defined Lipid Nanoparticle Libraries	Т3

#### Coffee break

	Chair: Yegan Erdem	
11:10 - 11:30	François-Xavier Gauci, Université Côte-d'Azur-CNRS-Inst. de Physique Nice, FR Biomimetic Leaf-on-cheap to Investigate Embolism in Plants	<i>T4</i>
11:30 - 11:50	Etienne Boulais, MIT, USA Precise Transport Models for Investigating Lipid Nanoparticle Self- Assembly in Microfluidic Mixers	<i>T5</i>
11:50 - 12:20	Poster snapshots, Session D	

#### Lunch break at the hotel (included in the registration)

	Chair: Séverine Le Gac	
14:00 - 14:30	Invited: Ashleigh Theberge, Washington University, USA Bioanalytical Systems for Translational Research: From Microscale Cell Culture Platforms to Biofluid Self-sampling Tools	Т6
14:30 - 14:50	Vladimir Sincari, Inst. of Macromolecular Chemistry CAS, CZ Microfluidic Fabrication of Smart Gel-Core Giant Unilamellar Vesicles Responsive to Tumor Microenvironment pH (~6.7) for Biomedical Applications	<i>T7</i>

#### Coffee break

	Chair: Bastien Venzac	
15:40 - 16:00	Nicolai Winter-Hjelm, ETH Zürich, CH Engineered Neural systems to Investigate Mechanisms and Network Adaptations in Neurodegenerative Diseases	T8
16:00 - 16:15	Govind Kaigala, University of British Columbia, Vancouver, CA In Situ Phenotype-Guided Platform for Multi-Modal Spatiotemporal Profiling of Live Cells	
16:15 - 16:40	Poster snapshots, Session E	
17:00 - 19:00	Posters session in the poster area / Exhibition Reception / drinks	



### Wednesday, October 22, 2025

	Chair: David Lake	
09:00 - 09:20	Sagar Agnihotri, Uppsala University, SE  Droplet Microfluidics with Image texture-based Detection of Bacterial  Heteroresistance in Isolates from Bloodstream Infections	WI
09:20 - 09:40	Hans Wyss, TU Eindhoven, NL Microfluidic Platform for Controlled Generation and Trapping of Membraneless Water-in-Water Droplets	W2
09:40 - 10:00	Muhammad Zia Ullah Khan, Technical University of Munich, DE Single Immune-Cancer Cell Interaction Profiling in a Parallelized Multi-Trap Microfluidic Device	W3

#### Coffee break

	Chair: Albert van den Berg	_
10:40 - 11:00	Annina Stuber, ETH Zürich, CH Double-pore Aptamer-functionalized Nanopipettes Towards Multiplexed Neurotransmitter Sensing	W4
11:00 - 11:20	Simon Sayer, UpNano GmbH/TU Wien, AT Immune Niche-on-a-chip Enabled by in Situ High-resolution 3D Printing	W5
11:20 - 12:00	Invited Keynote Closing Lecture: Marc Madou, Tecnológico de Monterrey, MX Listening to Trees in the Myawaki Forest Using Redox Amplifiers	
12:00 - 12:15	Award ceremony for Poster Prizes and closing of the conference	





	Poster session A - Monday, October 20 , 2025			
		Title of abstract		
A2	Laura de Heus University of Twente, NL	Local oxygen levels in 3D vessel-on-chips as a function of chip materials, medium refreshment intervals and vascular architecture		
A4	Joanna Konopka Warsaw University of Technology, PL	Vascularized Breast Tumor Models - in search of physiological relevance for angiogenesis studies		
A5	Kareem Al Nahas Max Planck Institute of Biochemistry, DE	Automated Synthetic Cell-based Screening for Designed Proteins with Complex Functions		
A7	Nikita Norkin EPFL, CH	Imaging-Guided Analysis of Tumor Tissue Dissection Using Microengineered Instruments		
A8	Rashin Mohammadi ETH Zürich, CH	Ultra-High-Throughput Viscoelastic Squeezing for Mechanoporation and Efficient Intercellular Delivery		
A9	Alp Yetisgin Sabanci University, TR	Thrombolytic Potential of "Hydrodynamic Cavitation on a Chip" Concept		
A10	Zuzanna Iwon-Szczawinska Warsaw University of Technology, PL	Microfluidic platform for 2D and 3D culture and differentiation of human induced pluripotent stem cells into cardiomyocytes		
A11	Duomei Tian CPCV, Département de Chimie, Ecole Normale Supérieure, PSL University, Sorbonne Université, CNRS, FR	Rocking- and diffusion-based culture of tumor spheroids-on-a-chip		
A12	lanis Drobecq LAAS-CNRS, FR	3D-printed nanofibrillar ECM models with tunable porosity and mechanics		
A13	Emmie Schoutens Eindhoven University of Technology, NL	Enhancing organ-on-chip platforms with giant magneto-resistive flow sensors		

A14	Mukesh Kumar Sivakumar Microfluidics Innovation Center, FR	High-Precision Flow Control: Bringing New Possibilities for Compartmentalisation of Complex Chemical Systems
	Xiangping Li RheinMain University of Applied Sciences, DE	Lung Carcinoma on a Chip with Nano calorimetry



	Poster session B - Monday, October 20 , 2025		
		Title of abstract	
B2	Yukina Partington ETH Zürich, CH	Base Gap Switches as Transcriptional Regulators and Their Applications as Biosensors	
В3	Xinne Zhao Helmholtz Centrum Dresden Rossendorf, DE	Nanoliter reactors for real time monitoring of the biomolecular markers in clinical diagnostics	
B4	Tommaso Bo Eindhoven University of Technology (TU/e), NL	Multiplexed Microfluidic System for Continuous Sweat Monitoring in Athletes	
В5	Noah Al-Khulaifi Lund University, SE	Optical biosensing in unprocessed fresh human blood using semiconductor nanowires	
В8	Martina Renggli CSEM SA, CH	Versatile sensor packaging and integration for microfluidic diagnostics	
В9	Fadilah Sfouq Aleanizy King Saud University- College of Pharmacy, SA	Antivirulence effect of mBTL loaded calcium alginate nanoparticles against Pseudomonas aeruginosa	
B10	Lotte Vermeulen Eindhoven University of Technology, NL	Continuous particle-based biosensors with single-molecule resolution: how diffusion processes limit the signal	
B12	Luis Mario Leal Garza Chalmers University of Technology, SE	De novo assembly of yeast genomes using Optical Genome Mapping	
B13	Zuzana Kadlecova HEPIA, HES-SO, CH	Liposomes vs. LNPs: the encapsulation of peptides for the pulmonary treatment of respiratory syncytial virus	
B15	Yimin Yang Technical University of Munich, DE	Lab on Capillary Towards Instrument-free Immunoassay	



	Poster session C - Tuesday, October 21, 2025		
		Title of abstract	
C2	Hasti Honari Institut Curie, FR	Droplet microfluidics for collagen-assisted breast cancer spheroid formation and nanoparticle-mediated photothermal therapy	
С3	Yasaman Asgari Tehran University of Medicine Sciences, IR	Laser-CNC-Fabricated Microfluidic Systems Enable Cost-Effective and Enhanced Monodisperse Synthesis of Core–Shell Iron Oxide Nanoparticles	
С6	Kévin Maltez Cavalheiro University of Liège, BE	Electric-field driven coalescence and electrospraying of trapped droplets in microfluidic well arrays	
C8	Tom Seltmann University Heidelberg, DE	Droplet Microfluidics for Scalable Production of ECM Capsules	
С9	Domenico Catucci Université Paris-Cité, FR	Nucleus deformation and recovery in microfluidic device: role of vimentin	
C10	Savitashva Shringi Ecole Normale Supérieure, FR	Vascularized dermis-on-chip using cell sheet technology	
C11	Elizaveta Maksimova University of Basel, CH	Quantification of Azides on the Surface of Nanoparticles: Toward Precise Bioconjugation	
C15	Thao Phuong Doan-Nguyen National Institute for Materials Science, JP	Simple methods to produce ultrasmall nanoparticles in miniemulsions	

	King Saud University- College of	Fabrication and characterization of an oral nanoparticles Daclatasvir dihydrochloride
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# NANO BIO TECH 2025 NanoBioTech-Montreux

	Poster session D - Tuesday, October 21, 2025		
		Title of abstract	
D1	Biranche Tandon EPFL, CH	Exploring the potential of mechanical and electrical stimulation of the nasal cavity in people with olfactory impairment	
D3	Raul Flores Berdines Université Paris Cité, FR	Soft thermoplastic elastomer compartmentalized chip for neurofluidics: a study to assess axonal growth in extracellular vesicle-based assays	
D4	Dariush Ashtiani TU Delft, NL	Microfabricated sample carriers for cryo-electron tomography of neuronal cells	
D5	Hanna Karlsson-Fernberg Chalmers University of Technology, SE	Micro- and Nanoscale Fabrication of Miniaturized High-Channel-Count Neuroprosthetic Implants: Enhancing Biocompatibility and Signal Fidelity in Peripheral Nerve Interfaces	
D6	Sara Falghera Université Paris Cité, FR	Miniaturized Asymmetrical Flow Field Flow Fractionation (AF4) for size separation and purification of biotherapeutics	
D8	Alexandra Banbanaste EPFL, CH	Aptamer integration via click chemistry into organic electrochemical transistors (OECTs)	
D9	Fulwah Yahya Alqahtani King Saud University- College of Pharmacy, SA	Effect of C7-3 peptide-loaded chitosan nanoparticles against multidrug- resistant Neisseria gonorrhoea	
D10	Aurora De la O Espadas FEMTO-ST, FR	Microfluidic methods to investigate particle corona formation	
D11	Xinyue Lan CPCV, Département de Chimie, Ecole Normale Supérieure, PSL University, Sorbonne Université, CNRS, FR	Enhanced organ-on-chip culture by electrospinning and hot embossing	
D13	Pawel Romanczuk Warsaw University of Technology, PL	A reproducible 3D Blood–Brain Barrier (BBB) model using double-VFP for inflammation and drug testing	
D14	Ghulam Destgeer Technical University of Munich, DE	Single cell lactate secretion analysis using particle templated droplets	

D15		Green-Synthesized Silver-Calcium Oxide Nanocomposites:
פוע	Najran University, SA	Comparative Biological Activities of Marjoram and Purslane Extracts



	Poster session E - Tuesday, October 21, 2025		
		Title of abstract	
E2	Juliette Behra Instrumat AG, CH	Specific, versatile, fast and cost-effective method to characterize extracellular vesicle (EV) size and concentration using nanoparticle tracking analysis (NTA)	
E3	Federica Caselli University of Rome Tor Vergata, IT	Real-time impedance-activated dielectrophoretic actuation for reconfigurable manipulation of single flowing particles	
E4	Arthur Salles Université Paris Cité,CNRS,UMR 8236 Laboratoire LIED, FR	Microfluidics recirculation of cancer cells in a context of metastasis.	
E5	Micaela Siria Cristofori EPFL, CH	Multi-fraction Cell Sorting Using Fluid Dynamics and Electrokinetics	
E7	Sandra Hernandez Escobar EPFL, CH	Towards Flexible Aptamer-Field Effect Transistor Neuroprobes for Simultaneous Electrophysiology and Neurochemical Sensing	
Е9	Anna Schreiber Université Paris Cité-NABI/UTCBS, FR	Microwell-based thermoplastic microfluidic platform for parallelized colorectal cancer spheroids formation and high-content characterization	
E10	Elham Akbari Lund University, SE	Shape and Softness Alter Particle sorting in deterministic lateral displacement: An experimental and simulation study	
E11	Esra Yilmaz Lund University, SE	Unraveling Breast Cancer Heterogeneity: Microfluidic Sorting and Bioassay-Based Functional Analysis	
E12	Tao Zhang EPFL, CH	Microfluidic synthesis of alumina particle-laden beads via capillary number tuning for varying particle concentrations	
E13	Yuwei Liu Microfluidics Innovation Center, FR	Hydrodynamic flow focusing with feedback control for characterizing low-speed performance across variable viscosity liquids	

Ī	E14	Suraj Maurya	Capillary-Driven Dual-Mode Imaging Flow Cytometry for Malaria
	E14	BFH and EPFL, CH	Detection and Quantification