

# フロンティア frontiers2026 symposium

January 14-16, 2026

'frontiers2026' Symposium on **NanoBioEngineering** - EPFL, Lausanne, Switzerland



Wed, January 14, 2026		venue: EPFL room SV1717 & SV building lobby	time	duration	cumul.
Welcome, Opening Words	Aleksandra Radenovic, Professor and Vice-Dean for Research, EPFL School of Engineering		09.00 h	00:10	
	<b>Opening Session</b>				
Yasuteru Urano, UTokyo	<i>Development of Novel Small-Molecule Based Theranostics Technologies for Cancer</i>		09.10 h	00:25	
Akira Matsumoto, ISCT	<i>Crafting Molecular Precision: Designer Boronolectins in Polymer Bioengineering</i>		09.35 h	00:25	
Nako Nakatsuka, EPFL	<i>Chemical Nanotechnologies for Human Health</i>		10.00 h	00:25	01:25
	break		10.25 h	00:30	
	<b>Session A - Biomaterials &amp; Drug Discovery-Design-Delivery</b>				
Christoph Merten, EPFL	<i>Microfluidics in Drug Discovery and Personalized Cancer Therapy</i>		10.55 h	00:25	
Sascha Keller, UTokyo	<i>Development of Novel (Aza)Quinone Methide-Based Small-Molecule Anticancer Prodrugs</i>		11.20 h	00:25	
Mitsuki Nagaura, UTokyo	<i>Longitudinal Wave Emission During Crack Propagation in Hydrogels</i>		11.45 h	00:15	01:05
	buffet lunch		12.00 h	01:30	
Tsukuru Masuda, UTokyo	<i>Analysis of Wetting in Structure Controlled Polymer Brushes: Machine Learning Modeling &amp; Spreading Dynamics</i>		13.30 h	00:25	
Ruka Ito, UTokyo	<i>Quantification of Polymer Gel Inhomogeneity Based on Osmotic Pressure Toward Homogeneous Network Structure</i>		13.55 h	00:15	
Kazuya Kanemoto, ISCT	<i>Development of a Novel Disulfurating Reagent</i>		14.10 h	00:25	01:05
	short break		14.35 h	00:20	
Hiroaki Itoh, UTokyo	<i>Exploring Functions of Peptidic Natural Products Through Total Synthesis</i>		14.55 h	00:25	
Mao Hori, ISCT	<i>Enzyme-Triggered Assembly of Artificial Nucleocapsids</i>		15.20 h	00:15	
Hirokazu Tamamura, ISCT	<i>Prevention of the Spread of Virus Infection in Global Societies: Antiviral Agents From HIV to SARS-CoV-2</i>		15.35 h	00:25	
Ryunosuke Chiba, UTokyo	<i>Betta splendens: A Novel Fish Vertebrate Model for Exploring Sleep Function and Regulation</i>		16.00 h	00:15	01:20
	<b>Poster Session in SV building lobby (with drinks &amp; snacks)</b>		16.15 h	01:45	
	End (Day One)			18.00 h	

Thur, January 15, 2026		venue: EPFL room SV1717 & SV building lobby	time	duration	cumul.
	<b>Session B - Molecular Engineering</b>				
Hiroyuki Kagechika, ISCT	<i>Development of Novel Vitamin D Derivatives and Their Application as Rodenticides</i>		09.00 h	00:25	
Sahand Rahi, EPFL	<i>Light-Directed Evolution of Dynamic, Multi-State Proteins</i>		09.25 h	00:25	
Kenichi Yamamoto, ISCT	<i>Synthesis of Peptidomimetics Based on a Choroalkene Structure and Their Application to Amyloid-Beta Aggregation Inhibitors</i>		09.50 h	00:15	
Makoto Nakakido, UTokyo	<i>Generation and Engineering of Single Domain Antibodies</i>		10.05 h	00:25	01:30
	short break		10.30 h	00:20	
Yutaro Miura, ISCT	<i>Development of Antibody-Drug Conjugates (ADCs) as HIV Entry Inhibitors</i>		10.50 h	00:15	
Kotaro Ochiai, ISCT	<i>Development of Ferrocene-Based Steroid Hormone Receptor Antagonists</i>		11.05 h	00:15	
Parth Bibekar, EPFL	<i>A Structure Transformer for Molecular Engineering</i>		11.20 h	00:15	
Markus Jeschek, EPFL	<i>DNA Recorders for Data-Driven Engineering of New Enzymes and Biosensors</i>		11.35 h	00:25	01:10
	group picture		12.00 h	00:15	
	buffet lunch + posters		12.15 h	01:45	
				14.00 h	
	<b>Session C - Medical Systems &amp; Device Engineering</b>				
Masashi Ikeuchi, ISCT	<i>Precision Mechanical Medicine - From the Bench to the Clinic</i>		14.00 h	00:25	
Kenji Shimazoe, UTokyo	<i>Recent Development and Prospects of Nuclear Medical Quantum Imaging</i>		14.25 h	00:25	
Hirokazu Kaji, ISCT	<i>Development of Microphysiological Systems for Human Placental Modeling</i>		14.50 h	00:25	
Yoshikazu Nakajima, ISCT	<i>Multi-Agent Orchestration Framework for Next Generation AI</i>		15.15 h	00:25	01:40
	Lab Visits		16.00 h	02:00	
	End (Day Two)			18.00 h	

Friday, January 16, 2026		venue: EPFL room SV1717	time	duration	cumul.
	<b>Session D - Biosensing &amp; Bioimaging</b>				
Yujia Zhang, EPFL	<i>'Swiss Army Knife' Droplets for Ionic Biointerfaces</i>		09.00 h	00:25	
Sumire Kaimori, UTokyo	<i>Characterisation of Multi-Specific Molecular Recognition by SLRP Proteins</i>		09.25 h	00:15	
Hiroki Tsuchiya, UTokyo	<i>Development of a Highly Multiplexed Immunoassay Using Nanoparticle Size and Fluorescent Color as Identification Labels</i>		09.40 h	00:15	
Florian Schueder, EPFL	<i>Development of Smart DNA Probes for Multiplexed Super-Resolution Microscopy</i>		09.55 h	00:25	01:20
	break		10.20 h	00:30	
Kenta Itani, ISCT	<i>Biofluorometric Sensing and Imaging of Human-Borne Gaseous Chemicals for Non-Invasive Metabolism Monitoring</i>		10.50 h	00:15	
Marcos Penedo, EPFL	<i>OpenSPM: A Modular Framework for Smart and Adaptive Microscopy</i>		11.05 h	00:15	
Seiichi Ohta, UTokyo	<i>Diagnostic Imaging/Sensing Platform Based on Size- And Surface-Controlled Conjugated Polymer Nanoparticles</i>		11.20 h	00:25	
	<b>Poster Award Announcement</b>		11.45 h	00:05	
Closing Remarks & Farewell	Hiroyuki Kagechika, Professor and Director of Laboratory for Biomaterials and Bioengineering, ISCT		11.50 h	00:05	01:05
	End of Symposium			11.55 h	