Agenda

Monday, 2nd of December

Center for Biohybrid Medical Systems (CBMS), Seminar room 001, Forckenbeckstrasse 55, 52074 Aachen

Opening ceremony

10:00 - 10:40 CET
18:00 - 18:40 JST

Opening remarks

Tackling the future - Introduction to Science Tokyo
Prof. Nobuhiro Hayashi, Vice President for International Strategy and Engagement
Institute of Science Tokyo

Transformative microgels to build and grow 3D tissues
Prof. Laura De Laporte, DWI-Leibniz Institute for Interactive Materials,
RWTH Aachen University

In vitro human tissue models

Chair: Prof. Laura De Laporte, DWI-Leibniz Institute for Interactive Materials

10:40 - 11:00 CET
18:40 - 19:00 JST

Single cell genomics and human iPSC organoids to dissect mechanisms of kidney and heart disease
Prof. Rafael Kramann, Institute of Experimental Medicine and Systems Biology,
University Hospital RWTH Aachen

11:00 - 11:20 CET
19:00 - 19:20 JST

Integrated mammalian cell-microbe interactions using a microfluidic device
Prof. Yoh-ichi Tagawa, School of Life Science and Technology,
Institute of Science Tokyo

11:20 - 11:40 CET
19:20 - 19:40 JST

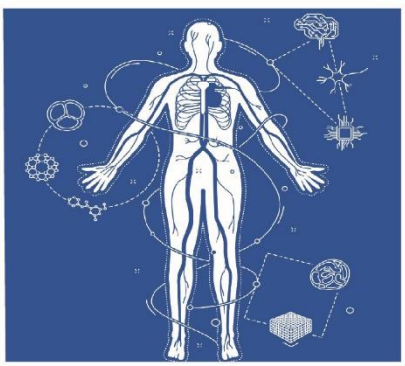
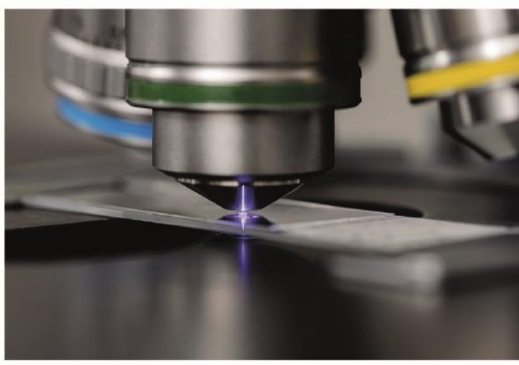
Engineering the tumor plasticity, vascularization, and metastatic propensity in vitro
Dr. Federica De Lorenzi, Institute of Experimental Molecular Imaging,
RWTH Aachen University

11:40 - 12:00 CET
19:40 - 20:00 JST

Discussion

12:00 - 13:30 CET
20:00 - 21:30 JST

Lunch

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In vivo regnerative systems

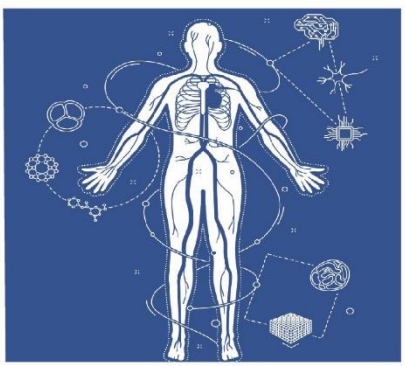
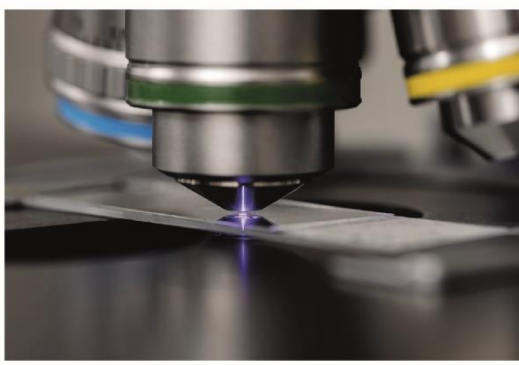
Chair: Prof. Stefan Jockenhövel, Insitute of Applied Medical Engineering

13:30 - 13:50 CET 21:30 - 21:50 JST	Generation of human pluripotent stem cells derived for regenerative medicine and drug discovery Prof. Shoen Kume, School of Life Science and Technology, Institute of Science Tokyo
13:50 - 14:10 CET 21:50 - 22:10 JST	Bioinspired cardiovascular implants - protein engineering meets textile technologies Dr. Alicia Fernández Colino, Institute of Applied Medical Engineering RWTH Aachen University
14:10 - 14:30 CET 22:10 - 22:30 JST	Molecular design of activatable Raman probes for multiplexed bioimaging Prof. Mako Kamiya, School of Life Science and Technology, Institute of Science Tokyo
14:30 - 14:50 CET 22:30 - 22:50 JST	Transformative tools for targeted drug delivery Prof. Twan Lammers, Institute for Experimental Molecular Imaging RWTH Aachen University
14:50 - 15:10 CET 22:50 - 23:10 JST	Discussion

Special topics

Chair: Tatsuya Mizukoshi, Director of Science Tokyo ANNEX Aachen

15:10 - 15:30 CET 23:10 - 23:30 JST	Entrepreneurship education specialized in medical welfare Prof. Tohru Yagi, School of Engineering, Institute of Science Tokyo
15:30 - 16:00 CET 23:30 - 00:00 JST	Coffee break

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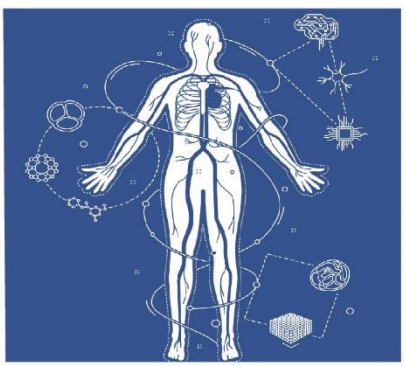
Monday, 2nd of December

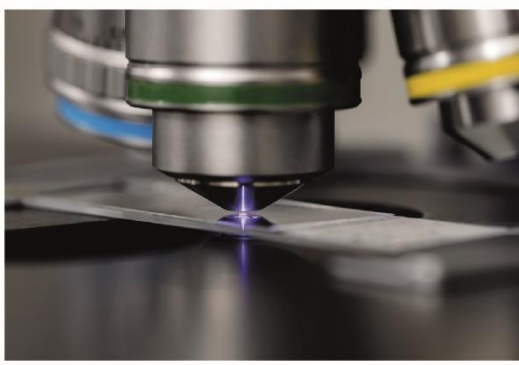
Center for Biohybrid Medical Systems (CBMS), Seminar room 001, Forckenbeckstrasse 55, 52074 Aachen

Biontronics

Chair: Prof. Nobuhiro Hayashi, School of Life Science and Technology

16:00 - 16:20 CET 00:00 - 00:20 JST	Bio-integrated electronics for directing living body Prof. Toshinori Fujie, School of Life Science and Technology, Institute of Science Tokyo
16:20 - 16:40 CET 00:20 - 00:40 JST	Organic neuromorphic biointerfaces: from material production to implantable probes Prof. Francesca Santoro, Neuroelectronic Interfaces Teaching and Research Area RWTH Aachen University
16:40 - 17:00 CET 00:40 - 01:00 JST	AI proteomics, paradigm shift in two-dimensional electrophoresis instrument in the century of AI Prof. Nobuhiro Hayashi, School of Life Science and Technology, Institute of Science Tokyo
17:00 - 17:20 CET 01:00 - 01:20 JST	Proteomics of post-translation modifications: unraveling the mechanisms of organ cross talk Prof. Joachim Jankowski, Institute for Molecular Cardiovascular Research University Hospital RWTH Aachen
17:20 - 17:40 CET 01:20 - 01:40 JST	Discussion
18:30 CET 02:30 JST	Dinner





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Tuesday, 3rd of December

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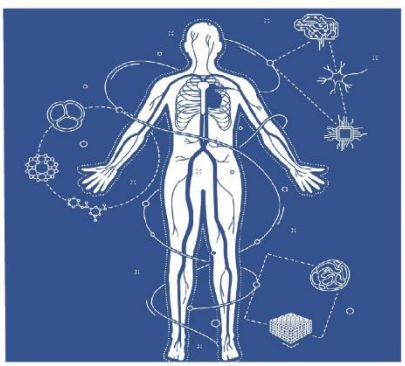
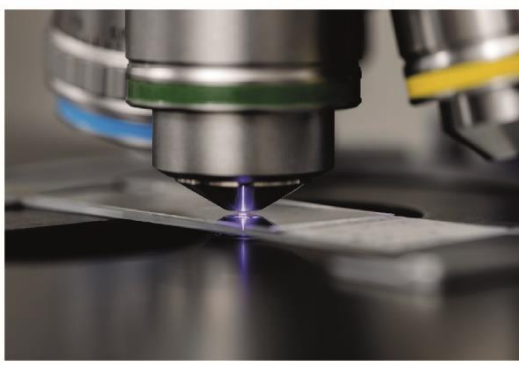
Advanced biofabrication

Chair: Prof. Fabian Kiessling, Institute for Experimental Molecular Imaging

08:45 - 09:05 CET 16:45 - 17:05 JST	Transferring industrial production paradigms on high-throughput cell fabrication Prof. Robert Schmitt, Chair of Intelligence in Quality Sensing RWTH Aachen University
09:05 - 09:25 CET 17:05 - 17:25 JST	Overview and future perspective of dental zirconia research Prof. Masanao Inokoshi, Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
09:25 - 09:45 CET 17:25 - 17:45 JST	Advanced in biofabrication to improve the interaction of biomedical materials with their biological environment Prof. Horst Fischer, Chair of Dental Prosthetics, Implantology, and Biomaterials, University Hospital RWTH Aachen,
09:45 - 10:05 CET 17:45 - 18:05 JST	Design and application of self-assembled protein nanofibers Prof. Ayae Sugawara-Narutaki, Laboratory for Biomaterials and Bioengineering, Institute of Integrated Research, Institute of Science Tokyo
10:05 - 10:25 CET 18:05 - 18:25 JST	Discussion
10:25 - 10:40 CET 18:25 - 18:40 JST	Coffee break

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Microsurgery

Chair: N.N.

10:40 - 11:00 CET 18:40 - 19:00 JST	Translational microsurgery in tissue engineering: advancing reconstruction from lab to clinic Prof. Justus Beier, Department of Plastic Surgery University Hospital RWTH Aachen
11:00 - 11:20 CET 19:00 - 19:20 JST	Current practices and future prospects in peripheral nerve injury treatment Prof. Koji Fujita, HealthTech Design Office, Center for Medical Innovation, Institute of Science Tokyo
11:20 - 11:40 CET 19:20 - 19:40 JST	Automated surgical planning and robot-assisted reconstruction in cranio-maxillofacial surgery Prof. Frank Hölzle, Department of Oral and Macillofacial Surgery University Hospital RWTH Aachen
11:40 - 12:00 CET 19:40 - 20:00 JST	Polymer 3D microfabrication and its application to minimally invasive infertility treatment Prof. Masashi Ikeuchi, Laboratory for Biomaterials and Bioengineering, Institute of Integrated Research, Institute of Science Tokyo
12:00 - 12:20 CET 20:00 - 20:20 JST	Discussion
12:20 - 13:30 CET 20:20 - 21:30 JST	Lunch
Afternoon	Laboratory tour / individual meetings