

# Program of the 2 day workshop: “Healthcare and Life Science & Entrepreneurship”

## Program Morning 29 April 2021

08.30	‘Doors’ open for zoom meeting	
09.00	Welcome & Opening by Chair(s) Winnie Svendsen and Heiner Linke	
9.20-9.50	1 <sup>st</sup> keynote <b>Anja Boisen</b> , <i>Technical University of Denmark, Lyngby, Denmark</i> , “Bringing microstructures to life”	
Start parallel workshop sessions		
	<b>Microfluidics</b> Moderator: <b>Julien Reboud</b>	<b>Surface functionalization, coating and dispensing;</b> Moderator: <b>Diego Mantovani</b>
9.50-10.10	<b>Julien Reboud</b> , <i>University of Glasgow</i> , “Microfluidics in Medical Devices – from Entrepreneurship to Open Innovation”	<b>Diego Mantovani</b> , <i>Department of Min-Met-Materials Eng., &amp; University Hospital Research Center, Canada</i> , “Diamond-like coatings: A scientific platform for multifunctional antibacterial coatings for health in an academic/entrepreneur R&D&I perspective”
10.10-10.30	<b>Amaury de Hemptinne</b> , <i>Vrije Universiteit Brussel, Belgium</i> , “Controlling the trajectory of magnetic particles in microfluidic devices for Layer-by-Layer coating”	<b>Damien Thiry</b> , <i>University of Mons, Belgium</i> , “The wrinkling concept applied to plasma-deposited polymer-like thin films: a promising approach for the fabrication of flexible electrodes”
10.30-10.50	<b>Piotr Garstecki</b> , <i>Bacteromic Sp. z o.o., Scope Fluidics S.A, Poland</i> , “Microfluidic methods in phenotypical and molecular diagnostics to curb AMR” <b>with virtual booth 2PPT slides by opening chair</b>	<b>Ghizlane Choukrani</b> , <i>Surflay Nanotec GmbH, Berlin, Germany</i> , “Controlled release of the immunomodulatory protein TNF under body-like flow conditions and tumor microenvironmental pH using vaterite nanoparticles”
10.50-11.10	<b>Loes Segerink</b> , <i>University of Twente, The Netherlands</i> , “Improving assisted reproductive technology using microfluidics”	<b>Sonja Voorn</b> , <i>Fontys University of Applied Sciences, The Netherlands</i> , “Developing medical phantoms and learning models”
11.10-11.30	<b>Maria Dimaki</b> , <i>DTU, Denmark</i> , “Numerical simulation as a tool for understanding and designing microfluidic based devices”	<b>Harald Doell</b> , <i>TSE Troller AG, Switzerland</i> , “Development of new products with optimized slot dies”
11.30-11.50	Coffee Break	
	<b>Cell-material interaction;</b> Moderator: <b>Valeria Chiono</b>	<b>Drug delivery</b> Moderator: <b>Ada-Ioana Bunea</b>
11.50-12.10	<b>Valeria Chiono</b> , <i>Politecnico di Torino, Turin, Italy</i> “Bioengineering strategies in the direct reprogramming of human cardiac fibroblasts towards the cardiac phenotype”	<b>Ada-Ioana Bunea</b> , <i>DTU Nanolab, Denmark</i> , “Microrobots for biomedical applications: where does light come in?”
12.10-12.30	<b>Jaap Koopman</b> , <i>Fibriant BV, Leiden, The Netherlands</i> , “Recombinant Human Fibrinogen: turning natural variation into product innovation”	<b>Francesca Costantini</b> , <i>Sapienza University of Rome, Italy</i> , “RNA amplification through an optoelectronic lab on chip: from plant virus to SARS-CoV-2 detection”
12.30-12.50	<b>Silvia Fare</b> , <i>Politecnico di Milano, Milan, Italy</i> , “Photocrosslinked GelMA/hyaluronic acid hydrogels as adipose tissue in vitro models”	<b>Lenka Zajickova</b> , <i>CEITEC - Central European Institute of Technology, Czech Republic</i> , “Plasma-processed nanofibrous electrospun mats as functional scaffolds or drug delivery systems”
13.00-14.10	Lunch break	

14.10-14.40	2 <sup>nd</sup> keynote: <b>Regina Luttge</b> , Eindhoven University of Technology, The Netherlands, "Nervous system-on-chip: From moonshot to forward engineering of applications"	
	<b>Entrepreneurship</b> Moderator <b>Regina Luttge</b>	<b>NanoMedicine;</b> Moderator <b>Dietmar Appelhans</b>
14.40-15.00	<b>Martin Holmboe</b> , <i>Futurebox, Denmark</i> , "Best practice for accelerating startups: The Futurebox philosophy"	<b>Dietmar Appelhans</b> , <i>Leibniz-Institut für Polymerforschung Dresden e.V, Germany</i> , "Compartmentalized space for enzymatic cross-talks and overcoming enzyme inhibitions"
15.00-15.20	<b>Jens Friholm</b> , <i>DTU Skylab, Denmark</i> , "Supporting the DTU Life science entrepreneurs"	<b>Stephan Block</b> , <i>Freie Universität Berlin, Germany</i> , "Mobility-Based Quantification of Single Virus-Receptor Interactions"
15.20-15.40	<b>Kushagr Punyani</b> , <i>Spermosens AB, Lund, Sweden</i> , "Getting sperms JUNO-Checked for In Vitro Fertilisation"	<b>Magdalena Kowalska</b> , <i>CERN, Geneva, Switzerland</i> , "Novel techniques for biological studies and medical diagnosis using unstable isotopes"
15.40-16.00	Coffee Break	

	<b>Analytics, detection and imaging (1<sup>st</sup>)</b> Moderator: <b>Fredrik Westerlund</b>	<b>Title Lab On Chip (LoC), Organ on a Chip (OoC) Tissue Engineering, regenerative medicine (1<sup>st</sup>)</b> Moderator: <b>Gil Lee</b>
16.00-16.20	<b>Fredrik Westerlund</b> , <i>Chalmers University of Technology, Sweden</i> , "High-resolution identification of bacteria and their plasmids using optical DNA mapping"	<b>Gil Lee</b> , <i>University College Dublin, Ireland</i> , "On-chip separation and detection of viruses with superparamagnetic beads"
16.20-16.40	<b>Jochen Guck</b> , <i>Max Planck Zentrum für Physik und Medizin, Erlangen, Germany</i> , "Physical phenotyping at rates of 1,000 cells/sec for functional blood cell diagnostics"	<b>Séverine Le Gac</b> , <i>University of Twente, The Netherlands</i> , "Tumor-on-a-chip models to study nanomedicine penetration"
16.40-17.00	<b>Karin Schütze</b> , <i>CellTool GmbH, Germany</i> , "Advanced cell analysis using gentle Raman-Trapping-Microscopy"	TBA (to be announced)
17.00-17.20	<b>Max Maletta</b> , <i>ThermoFisher, The Netherlands</i> , "The role of cryo-EM in fighting back diseases and the Covid-19 epidemic"	<b>Bahareh Azimi</b> , <i>Univ of Pisa, Italy</i> , "Surface-functionalized cellulose tissue for skincare applications"

	<p><b>Lab On Chip (LOC), Organ on a Chip Tissue Engineering, regenerative medicine (2<sup>nd</sup>)</b> Moderator: <b>Serena Danti</b></p>	<p><b>Human diagnostics</b> Moderator: <b>Elisabete Fernandes</b></p>
08.30-08.50	<p><b>Serena Danti</b>, <i>University of Pisa, Italy</i>, “3D printed barium titanate/polyhydroxybutyrate scaffolds for bone tissue engineering”</p>	<p><b>Elisabete Fernandes</b>, <i>INL, Portugal</i>, “Patient stratification for treatment decisions: the challenges behind the optimization of a PoC platform”</p>
08.50-09.10	<p><b>Elena Martínez</b>, <i>Institute for Bioengineering of Catalonia, Spain</i>, “Biomimetic models of intestinal tissue: promoting cellular self-organization through bio fabrication techniques”</p>	<p><b>Alexios Paul Tzannis</b>, <i>IMT Masken undTeilungen AG, Switzerland</i>, “Advanced detection schemes in Consumables for Life Science and Diagnostics by including surface functionalisation in microfluidic flow cells; challenges and opportunities”</p>
09.10-09.30	<p><b>Joost Lötters</b>, <i>Bronkhorst High-Tech BV, Ruurlo, The Netherlands</i>, “Flow control system for organ on a chip application”</p>	TBA
09.30-09.50	<p><b>Stephanie Descroix</b>, <i>Institut Curie, PSL Research University, CNRS, Paris, France</i>, “Development of an gut on chip recapitulating gut complexity”</p>	TBA
09.50-10:10	<p><b>Lucy Kind</b>, <i>University of Applied Sciences &amp; Arts, Switzerland</i>, “Biomimetic Matrix from self-assembling peptides with high potential for dental regeneration”</p>	TBA
10.10-10.20	Coffee Break	
10.20-10.50	<p>3<sup>rd</sup> keynote: <b>Heiner Linke</b>, <i>Lund University, Sweden</i>, “Highly sensitive optical detection of biomarkers using light-guiding nanowires”</p>	
	<p><b>NanoBio surfaces, biosensing</b> Moderator: <b>Heiner Linke</b></p>	<p><b>Drug Delivery and -Screening</b> Moderator <b>Anders Koustrup Niemann</b></p>
10.50-11.10	<p><b>Fouzia Boulmedais</b>, <i>Université de Strasbourg, CNRS, France</i>, “Release-killing polyphenol based multilayer film applied as antibacterial coating”</p>	<p><b>Anders Koustrup Niemann</b>, <i>Danish Technological Institute, Denmark</i>, “Development of calibration procedures for drug delivery devices”</p>
11.10-11.30	<p><b>Michael Daniele</b>, <i>NCSU, United States</i>, “Wearables and Implantables: Enabling Technologies to Move Biosensing from the Benchtop to the User”</p>	<p><b>Richard Hoogenboom</b>, <i>Ghent University, Belgium</i>, “Poly(2-oxazoline)s for drug delivery”</p>
11.30-11.50	TBA	<p><b>Steffen Cosson</b>, <i>Cellenion SASU, Lyon, France</i>, “spheroONE - an automated high throughput spheroid isolation and manipulation technology”</p>
12.00-12.20	Coffee Break	

	<b>Bio Materials</b> Moderator: <b>Evelien Smits</b>	<b>Lab On Chip (LOC), Organ on a Chip Tissue Engineering, regenerative medicine (3<sup>rd</sup>)</b> Moderator: <b>Patrizia Cinelli</b>
<b>12.20-12.40</b>	<b>Evelien Smits</b> , <i>University of Antwerp, Belgium</i> , "Combination of different sources of reactive oxygen species in 2D and 3D glioblastoma multiforme cultures"	<b>Patrizia Cinelli</b> , <i>University of Pisa</i> , "Degradability and biodegradability of commodities plastics"
<b>12.40-13.00</b>	<b>Gianluca Ciardelli</b> , <i>Politecnico di Torino – DIMEAS, Italy</i> , "Tailored biomaterials: advanced tools to enhance cancer understanding and treatment"	TBA
<b>13.00-13.20</b>	<b>Inna Kurganskaya</b> , <i>University of Bremen, Germany</i> , "Biomineralization: concepts, pitfalls and state-of-the-art"	TBA
<b>13.20-14.20</b>	Lunch break	

<b>14.20</b>	Workshop session	
	<b>Biomolecules, Bioprinting</b> Moderator: <b>Felix Löffler</b>	<b>Analytics, detection and imaging (1<sup>st</sup>)</b> Moderator: <b>Sina Saxer</b>
<b>14.20-14.40</b>	<b>Felix Löffler</b> , <i>Max Planck, Potsdam, Germany</i> , “Laser-assisted parallel synthesis of biomolecules and nanomaterials in polymer nanoreactors”	<b>Sina Saxer</b> , <i>University of Applied Sciences &amp; Arts, Switzerland</i> , “The impact of a tailored surface chemistry for nanodevices in diagnostics”
<b>14.40-15.00</b>	<b>Zarah Korb</b> , <i>University of Basel, Switzerland</i> , “Understanding organisation and structure in adaptable, bio-based polymer networks in complex environments”	<b>Oilibhe Pabsch</b> , <i>JPK BioAFM, Bruker Nano GmbH, Germany</i> “AFM tools for quantitative nanomechanics on living cells and tissues”
<b>15.00-15.20</b>	<b>Maria Cristina Righetti</b> , <i>CNR and IPCF Pisa, Italy</i> , “Semi-crystalline Biopolymers: Properties of the Constrained Amorphous Interphase”	TBA
<b>15.20-15.40</b>	<b>Benjamin Richter</b> , <i>Nanoscribe, Germany</i> , “3D micro printing by means of two-photon polymerization as the key enabling technology for life science applications”	TBA
<b>15.40-16.00</b>	<b>Itedale Namro Redwan</b> , <i>CELLINK, Gothenburg, Sweden</i> “3D Bioprinted Human Tissue Models for Pharmaceutical and Cosmetic Product Testing»	TBA
<b>16.00-16.30</b>	Plenary Closure Hugo de Haan , Winnie Svendsen, Heiner :Linke	