

The European Strategic Cluster Partnership for Smart Specialization Investment in Medical Technologies

Webinar – “3D printing of medical devices: Innovative projects across Europe”

Date	May 23th 2019
11.00 – 11.10	Welcome: Introduction of the „S3martMed“ project <i>by Emilie Romeo, Lyonbiopole (Auvergne-Rhône-Alpes)</i>
11.10 – 11.30	Bio-based Biomaterials: Modified Gelatins for Printing, Spraying, Coating. <i>by Dr. Kirsten Borchers, Fraunhofer IGB (Baden-Württemberg)</i> <ul style="list-style-type: none">• Gelatin solutions with adjusted viscosities• Chemically cross-linked hydrogels with adjusted stiffness and swelling• Stabilized cell function in 3D environment: bone, cartilage, capillary networks• Processing of cells and matrix: ink-jet, dispensing, stereolithography• Pro-angiogenic coatings
11.30 – 11.50	Presentation of the French 3d.FAB platform, <i>by Dr. Christophe Marquette, (Auvergne-Rhône-Alpes)</i> <ul style="list-style-type: none">• Its recent structuration toward translational research with the Hospice Civil de Lyon and• Its activity within the medical device development field using additive manufacturing.

11.50 – 12.10

3D Printing and Rapid Prototyping

by Mateusz Pawlik, CEO, Medical Engineer, CABIOMEDE
(Upper Silesia)

- R&D on demand for medical, sport and rehabilitation industry by means of 3D printing applications in a way of custom-made mass scale manufacturing.

12.10– 12.15

Q & A

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Speakers

Dr Kirsten Borchers

Scientist at the University of Stuttgart, Institute of Interfacial Engineering and Plasmatechnology, IGVP



Kirsten Borchers graduated from Free University of Berlin and Karlsruhe Institute of Technology and received a diploma in physics and biology. Due to her special interests in developing novel materials she focused on biofunctionalisation of nanoparticles and the printing of 3D microarrays during her PhD at the University of Stuttgart.

Since 2007 she developed new (bio)materials at the **Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB** Stuttgart and is currently scientist at the Institute of Interfacial Engineering and Plasmatechnology, IGVP, University of Stuttgart.

During the webinar, she will give a comprehensive insight into her research and experience in the development of new materials for use as tissue and organ replacement.

Dr Christophe A. Marquette

Research Director

Deputy Director of the Institut de Chimie et Biochimie Moléculaires et Supramoléculaires
Université Lyon 1 - CNRS 5246 ICBMS



Christophe Marquette received the Doctorat de spécialité in Biochemistry (1999) from the Université Claude Bernard-Lyon 1. After a two years post-doctoral fellowship at the Concordia University (Canada, Qc), he integrated the Centre National de la Recherche Scientifique (CNRS) in 2001.

He is presently permanent **Research Director** and **Deputy Director** at the Institut de Chimie et Biochimie Moléculaires et Supramoléculaires (ICBMS, UMR5246, CNRS-Université Lyon1) and is in charge of the Biochips and Micro-arrays Group, dealing with biology/surface interaction and 3D printing of living cells. Since 1998, he is author or co-author of more than 115 articles, 13 book chapters, 7 patents and more than 100 communications.

He is also the cofounder and R&D director of the AXO Science Company.

He is also the founder of the unique 3d.FAB platform, specialised in additive manufacturing technologies for Life Science (<http://fabric-advanced-biology.univ-lyon1.fr/>).

He will talk during this WEBINAR about the French 3d.FAB platform, its recent structuration toward translational research with the Hospice Civil de Lyon and its activity within the medical device development field using additive manufacturing.