Martina MARCOTULLI - CV

Martina Marcotulli is a PhD student in Biochemistry at the Italian Institute of Technology (CLN2S@Sapienza) in Rome, graduated in Chemistry (BSc) and Industrial Chemistry (MSc) at Sapienza university in Rome. After a course of study focused on general chemistry, during her MSc Martina became passionate about the study of biomaterials applied to tissue engineering and regenerative medicine. Her MSc thesis focused on the production and microfluidic printing of oil-in-water emulsions in order to create functionally graded porous structures (3D Microfluidic Biofabrication Lab at IIT-CLN2S) under the supervision of Dr Gianluca Cidonio and Prof Andrea Barbetta. Right after her MSc graduation she has a 3-month internship (Erasmus+ Traineeship) at the "Digital manufacturing of biomimetic systems" lab at the IChF Institute of Physical Chemistry (Warsaw, Poland) in collaboration with Dr Marco Costantini, where Martina continues to develop and engineer a microfluidic device for biofabricating tissues by printing oil-in-water emulsions. From November 2021, Martina starts a PhD in Biochemistry at the 3D Microfluidic Biofabrication Lab at IIT-CLN2S, where she is working on stimulating human bone marrow stem cells (HBMSCs) with low-intensity pulsed ultrasound (LIPUS) to generate next-generation bone implants and repair skeletal defects. Simultaneously, Martina is developing and characterising biocompatible water-in-water emulsions to 3D print anisotropic porous structures to guide the cell orientation of specific cells such as muscular or cardiac cells.