

FEDERICA POTERE, Ms

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Education

M.S., Biomechanics and Biomaterials at Politecnico di Milano 2017-2019

Thesis Title: Mechanical stimulation of engineered tissues in bioprinted silicone scaffolds and its synergy with scaffold micro-architecture

Advisors: Prof. Federica Boschetti and Prof. Joao Soares

B.S. Biomedical Engineering at Politecnico di Milano 2014-2017

Thesis Title: Quantification of stress level induced by controlled protocols

Advisor: Prof. Anna Maria Bianchi

Principal subjects covered and skills acquired

Fundamentals of statistics and biomedical signals

Chemical bioengineering

Biomechanics

Bioelectromagnetism and biomedical instrumentation

Fundamentals of computer science and medical informatics

Mechanics of continues and structures

Mechanics applied to machines

Fundamentals of automatic

Biomaterials

Biomachines

Biomechanical Design

Mathematical and numerical methods

Mechanics of biological structures

Endoprostheses

Advanced Modeling Approaches for Cardiovascular

Technologies for regenerative medicine

Clinical Technology assessment

Medical Robotics and Technologies for computer aided Surgery laboratory

Positions and Employment

Internship: Research Assistant at VCU Virginia Commonwealth University Aug-Sep 2018
Project title: studies about the evaluation of mass and elastic modulus change of degradable electrospun pcl scaffolds for tissue engineering in Dr Soares' Engineered Tissue Multiscale Mechanics & Modeling Laboratory.

Master thesis at VCU Virginia Commonwealth University- Mechanical and nuclear department - Engineered Tissue Multiscale Mechanics and Modeling Laboratory (ETM3), led by Dr. Joao Soares Feb-Nov 2019
Project title: Mechanical stimulation of engineered tissues in bioprinted silicone scaffolds and its synergy with scaffold micro-architecture

Research Intern: Research Assistant at VCU Virginia Commonwealth University Jan-June 2020
Mechanical and Nuclear Department- Collage of Engineering
Project title: In Vivo implantation of PCL scaffolds in mice and studies of the inflammatory response of the body

Other relevant Experience

Member and treasurer of 'Biomedical Engineering Association' (BEA), an association of biomedical engineers recognized by Politecnico di Milano with the purpose of creating exchange networks between companies and undergraduate and graduate students

Member of IEEE, the world's largest technical professional organization for the advancement of technology.

Volunteer at the Italian Red Cross

Volunteer at the AIRC, the Italian Association for Cancer Research

Laboratory skills

Electro-spinning of PCL scaffolds,

3D-printing of silicone scaffolds,

Mechanical characterization of scaffolds,

Imaging of scaffolds with SEM,

Analysis of scaffold microstructure with ImageJ,

Experimental techniques associated with wet lab work and cell culture,

Extraction of vascular smooth muscle cells from rats,

Different techniques to seed scaffolds with VSMCs,

Western blotting of VSMC biomarkers for their characterization,

Histology and immunofluorescence of VSMC (plated and in scaffolds)

Federica Potere

Polymerase chain reaction (PCR)

Computer skills

ECDL certificate (European Computer Driving License);

Programming languages: c++, Java, Android Studio;

Other Softwares: Solidworks, R, MATLAB;

Microsoft: Word, PowerPoint, Excel;

Mac: Pages, Keynote, Numbers.

ImageJ

Language skills

Italian- Mother tongue

Fluent in English

Additional Interests

Hobbies: horse riding, volunteering, traveling and knowing other cultures.