NOEMI CORBEZZOLO

Biomedical Engineer

Profile

Enthusiastic biomedical engineer with great interest in nanotechnology and tissue engineering. I am a determinate, ambitious and hard-working person able to quickly learn and apply new techniques. My engineering background has equipped me with exellent logical thinking, problem-solving, analytical and communication skills.

Computer skills

- **Operating systems** (Windows, Mac)
- **Programming** (C++, Java)
- **Softwares** (Matlab, LaTex, MS office, SolidWorks, ImageJ, Minitab, Simulink)

Technical skills

- Infrared Spectroscopy
- Ultraviolet-Visible Spectroscopy
- Fourier Transform Infrared Spectroscopy
- Transmission Electron Microscope
- Optical Microscopy
- Fluorescence Microscopy
- Dynamic Light Scattering
- Cell culture

Language

English (advanced user)
Italian (mother tounge)

Experience

Postgraduate Researcher
Oct 2022 – Mar 2023

Biomedical Laboratory | Newcastle upon Tyne

I worked on my master thesis project at Herschel Annex BioFab laboratory, Newcastle University. The aim of the work was to develop multifunctional silica mesoporous-based nanoparticles with improved **antioxidant properties** for regenerative medicine. In order to achieve this goal, ultrasound-assisted extraction method (**UAE**) was used for antioxidant compounds recovery from **cocoa** and **coffee biomass**; then a green Layer-by-Layer (**LbL**) strategy was used to functionalize the nanoparticles. The work included the extraction process optimization, chemical and physical characterization and biocompatibility assessment of both antioxidant extracts and engineered nanoparticles.

Skills: Design of Experiment development | Statistic Analysis | Cell-based Analysis | Fluorescence and Optical Microscope

Education

Master in Biomedical Engineering | Bionanotechnology
2020 – 2022

Politecnico di Torino

Relevant modules: Bionanotechnolgy | Regenerative medicine | Bioreactors | Biomedical signals processing | Artificial Inteligence in medicine | Biomimetic systems | Hands-on training in biomedical nanotechnologies and advanced therapies
Thesis: From biomass to nanomaterials: a green Layer-by-Layer strategy for developing multifunctional silica mesoporous-based nanoparticles with improved antioxidant properties for regenerative medicine
Final Grade: 100/110 | Upper second-class honours

Bachelor in Biomedical Engineering
2015 – 2019

Università di Bologna

Thesis: Analisi dello sviluppo del controllo motorio di bambini in età scolare durante task di Natural Walking e Tandem Walking
Final Grade: 94/110 | Lower second-class honours

Projects

- Construction of a classifier capable capable of classifying into benign or malignant suspicious masses of breast tissue

- Design of a bioreactor for the production of hyaline cartilage