

# NanoInnovation 2024

## Laura Vettori's Biography

I just received my Doctor of Philosophy in Engineering at the School of Biomedical Engineering, at the Faculty of Engineering and Information Technology, at the University of Technology Sydney (UTS).

I received my Bachelor Degree in Biomolecular Sciences and Technology at the University of Trento (Italy) and my two-years Master Degree in Medical, Veterinary and Pharmaceutical Biotechnologies at the University of Parma (Italy).

After my Master, I performed an internship on 3D models of tumour cell spheroids and chemical synthesis at the Karlsruhe Institute of Technology (Germany) and I joined as a Visiting Researcher the Cardiovascular Regeneration Group (the University of Technology Sydney), led by Dr Carmine Gentile, working on tissue engineering and 3D bioprinting of vascularized cardiac tissues.

During my PhD, I worked on biofabricating novel hydrogel formulations based on natural polymers, for cardiac tissue engineering and biomedical applications. My project focused on 3D bioprinting of cardiac tissues using a protein extracted from silk cocoon thread and studying whether the addition of the protein was regulating the contractile activity of cardiac cells *in vitro* and improving the cardiac function of *in vivo* myocardial infarction models.