

I am a PhD candidate in Nanoscience at the Scuola Normale Superiore, in collaboration with the Istituto Italiano di Tecnologia.

My research interests span nanomedicine, drug delivery, biomedical nanomaterials, microfluidics, and New Approach Methodologies for animal-free research (the 3Rs principle).

My doctoral project focuses on the synthesis, functionalization, characterization, and validation of hybrid nanoarchitectures designed to improve boron delivery for Boron Neutron Capture Therapy, developed in part through international collaborations with partners in Japan and China.

I have built solid experience in: synthesis of boron and noble-metal nanomaterials, hybrid and polymeric nanocarriers, and their functionalization; characterization through various analytical, microscopy and spectroscopy techniques; development and use of the in vitro and in ovo CAM alternative cancer models; and fabrication of microfluidic devices for nanocarrier synthesis.

I hold a Bachelor's degree in Clinical Engineering and a Master's degree in Nanotechnology Engineering from La Sapienza, with a thesis on the synthesis of chitosan nanocapsules for aloemodin delivery.

I also have a real interest in technology transfer, entrepreneurship, and startups, which I have developed further through dedicated training programs (EELISA, IIT, Tuscany Health Ecosystem).