

Beyond the Diffraction Limit: Illuminating Extracellular Vesicle Heterogeneity with Super-Resolution Microscopy

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My main research interests lie at the crossroads of biophysics, nanotechnologies, and advanced imaging. I explore how microfluidics and super-resolution microscopy can be combined to study extracellular vesicles (EVs) and engineer innovative therapeutic nanovectors. After studying at ENS Paris-Saclay and completing my PhD at Institut Curie/LAAS on magnetic fluidized beds for ultrasensitive bioanalysis, I carried out an MSCA-funded postdoctoral fellowship at McGill University and Institut Curie, developing microfluidic platforms for EV extraction and single-particle characterization using DNA-PAINT. I am currently a researcher at CNRS / Université Paris Cité, focusing on hybrid nanovectors for targeted mRNA delivery in regenerative medicine. Over the years, I have authored 14 publications (8 as first author) and co-invented 3 patents. I am also passionate about science communication and regularly take part in outreach initiatives such as Women in Science or Pint of Science.