

CV MARIA SERENA CHIRIACÒ

Maria Serena Chiriaco (1984) gained her master degree cum laude in Human Biology in 2008 at Università del Salento; from May 2009 to June 2012, she attained her PhD on the “Smart Systems and Technologies” course at Università del Salento, Scuola Superiore ISUFI, Lecce, at the end of which she discussed her PhD thesis entitled “Protein EIS biosensors for on-chip diagnostics”.

Currently, she works as a permanent Senior Researcher at Nanotec Lecce. She gained high-level experience in the field of Lab-On-Chip devices for on-field diagnostics. Her skills vary from the design, fabrication and applications of electrochemical sensors to microfluidics and on-chip pre-treatments of biological samples, as confirmed by the publication of valuable papers in the field. The biological applications of the developed microfluidic and sensing platforms range from diagnostic tools to study biorecognition events (antigen/antibody, cell-cell, aptamer-antigen) to the detection of allergens or toxins, to the on-chip separation and sorting of biological objects and extracellular vesicles. She also has expertise in optical, laser and soft lithography and in employing photosensitive polymeric materials for microfluidic applications. She acquired skills in the realization of tools for the analysis of extracellular vesicles and in particular their sorting and entrapment on specifically-functionalized biochip. In 2019, she has been Principal investigator in SMILE Project (H2020 – EU Attract Program) in collaboration with STMicroelectronics and Unit Responsible in a PRIN2017 Project, both dealing with the realization of on-chip diagnostic tools. Recently (2020-2023), she led a Work Package of TITAN Project (Tumor ImmunoTherApy by Nanotechnology) dealing with the integration of microfluidic and sensing tools into lab-On-Chips for high-quality CAR-T cells production. Currently, she is the PI of a PRIN2022 Project (RESOLVE – innovative platfoRm based on fiEld-flow-fractionation and Sample On-chip detection to unravel extraceLlular Vesicles hEterogeneity) in collaboration with University of Bologna and Ospedale San Raffaele.