

European Social Fund Plus 2021/2027

FSE+

PPO 2023 S.P. 22/23

Support for higher education within the regional university

With Decree No. 17895/GRFVG of April 19, 2023, the Friuli Venezia Giulia Region published the Notice regarding the submission of operations for Specific Program No. 22/23, which aims to support higher education within the regional university system.

Line A – PhD Programmes

Specific Programme 22/23, through the funding of doctoral scholarships, contributes to the achievement of the objectives of the Sustainable Smart Specialisation Strategy (S4). It supports the development or strengthening of integration with the regional production system and/or research organisations, through coordination and collaboration mechanisms with regional enterprises or research bodies, or by leveraging the potential for technology transfer of processes, products, applications, or, more broadly, research outcomes.

- Notice **2023**
- **39th cycle**
- Unique Project Code (CUP) **J93C23001490008**
- Project **2023/1578/8**

Doctoral Programme in **Nanotechnology**

“Investigation of optofluidic techniques for cells detection and isolation in biological fluids”

The PhD research project, to be developed in collaboration with the company ALIFAX, aims to detect bacteria and other cells in biological fluids such as serum, urine, and mucus through the use of metallic nanoparticles. These nanoparticles will serve a dual purpose: as markers for digital holographic microscopy techniques and as sensors for surface-enhanced Raman spectroscopy (SERS).

The research activities will primarily be conducted at the CNR-IOM laboratories in Basovizza and at the Raman Spectroscopy Laboratory of the Department of Engineering and Architecture at the University of Trieste, with testing periods carried out directly at ALIFAX's research and development laboratories in Nimis (UD).

The outcome of the study will result in new detection techniques and measurement protocols, and will be the subject of patents and scientific publications in international journals.