

Innovative technologies for *in vitro* diagnosis and monitoring in cancer: towards personalized care

Lorena DIÉGUEZ - *International Iberian Nanotechnology Laboratory, Portugal*

Early dissemination of cancer is difficult to detect by traditional imaging and pathological methods. While the presence of cancer material in body fluids is well known, current techniques for the isolation, analysis and characterization of these biomarkers are not efficient enough to be fully applied in clinical routine.

Microfluidics presents numerous advantages for the handling of biological samples, as it provides careful control of fluids in the microscale. When it comes to biomarkers enrichment, microfluidics has demonstrated superior sensitivity and enhanced recovery compared to traditional methods.

In this talk, we present our innovative technology for integrated isolation and analysis of circulating biomarkers, their validation in clinical settings, and the efforts for the regulatory approval and translation to the market.