

## **Using nanodiagnostics to evaluate circulating biomarkers**

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Circulating biomarkers have acquired relevance in recent years as they enable non-invasive monitoring of patients at different stages of the disease, from prevention and early diagnosis to therapy selection, enabling the realization of precision medicine. However, the isolation and analysis of these biomarkers is complicated and requires sophisticated sample preparation and biosensing tools.

Microfluidic technologies allow the precise manipulation of liquids at small scale and have become critical for the separation/isolation or extraction of circulating biomarkers from body fluids. On the other hand, the integration of nanobiosensors in diagnostics enables the evaluation of these biomarkers with very high sensitivity and multiplex-ability.

In this talk, I will present our recent work for the efficient enrichment and multiplex characterization of circulating biomarkers, and the translation of these technologies to the clinic.