

ADVANCED MICROFLUIDICS FOR CANCER DIAGNOSIS

There is a strong need in developing and applying innovative approaches in the fields of cancer clinics and diagnosis. In this context, Microfluidics is considered as a candidate technology that can help answering to fundamental and applied questions.

Besides, as reported a few years ago by Nicole Pamme (Lab Chip 2005), the combination of microfluidics and magnetism emerges as highly valuable combination for a wide range of applications.

This has been demonstrated in many cases by using magnetism for pumping liquid or ferrofluids for valving or directly by working with magnetic (nano or micro) particles as solid support for bioreactions.

In this seminar, I will present some recent work performed in our team based on the combination of magnetic particles and microfluidics for both cellular and molecular bioanalysis.