



## Master Thesis project

# Study of the impact of chromatin remodelling on the mechanical properties of cell nuclei

Understanding the mechanisms that promote cell migration and eventually tumor metastasis is crucial to contrast cancer proliferation. The mechanical properties of the cell nucleus likely play an important role in cell migration. The project objective is to investigate how the mechanical properties of the nuclei of primary macrophage and genetically modified fibroblasts are influenced by remodelling of the chromatin nuclear content; to this purpose, the student will perform Atomic Force Microscopy (AFM) –based nanomechanical measurements on living cells with modified nuclei. Static and frequency dependent mechanical measurements (micro-rheology) will be performed. In collaboration with Ospedale San Raffaele (Prof. M. Bianchi, Chromatin Dynamics Unit).

Puricelli et al., Rev. Sci. Instrum. 86, 033705 (2015), DOI: [10.1063/1.4915896](https://doi.org/10.1063/1.4915896)

