SEMINAIRE ISMO

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Surface stiffness of zebrafish embryo evaluated from responses to femtosecond laser impulse

Mechanical properties of cells and tissues closely link to their physiological functions, and are expected to be new type of bio-indicators. Atomic Force Microscope (AFM) is commonly used to characterize mechanical properties of micro-sized biological objects, and it generally detects integrated information of cells and tissues below AFM probe. However, mechanical properties of individual structural compartments should be more sensitive to their functions. We recently focus vibration response of biological objects, which would contain mechanical properties of propagation path inside them. The vibration was excited by impulsive stress wave induced by focusing femtosecond laser into water, and monitored by AFM cantilever put on the sample. In this work, we demonstrated impulse response of structured tissue. The characteristic of the impulse response was discussed in comparison to a conventional indentation method using AFM.

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Bât. 210 – Amphi 1 (2ème étage)

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