

Research Project Proposal for Master's Degree

## How cells sense force?

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Duration: 6 months – 1 year

Number of students: 2

### Project Summary:

Do you know cells can sense mechanical forces? Have you wondered how macroscopic forces affect the conformation of molecules? Would you like to discover how cells convert mechanical inputs into biochemical signals? Would you be interested to understand how the malfunction of that 'mechano-transduction' leads to cancer? Come on, and join the lab. Learn about the real force and how we sense it.

→ The aim of the project is to elucidate the mechanisms of mechanotransduction associated with the actin cytoskeleton and the Hippo signaling pathway.

To carry out this project you will need/learn to do molecular biology, protein biochemistry, in vitro assays, fluorescence microscopy, cell imaging, computer modeling and/or optics.