

Research Project Proposal for Master's Degree

Discovering the principles of membrane-less organelles

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Duration: 6 months – 1 year

Number of students: 2

Project Summary:

Do you know there is a new type of biological matter that has been recently discovered? This novel state is driven by liquid-liquid phase separation and gives rise to membrane-less organelles. It is a true fundamental discovery and we are just beginning to understand how general it is, what mechanisms drive it and how it is regulated. Would you like to be part of the forefront research that contributes to change our basic understanding of cells? You can contribute to this effort together with us whether you come from physics, chemistry, biochemistry and/or biology.

→ The aim of the project is to explore whether some specific proteins can phase-separate, what the assembly principles are and what physiological consequences that creates.

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.