

What is the role of phase separation in chromatin organization?

Chromatin is partitioned into subcompartments that differ from each other with respect to their compaction, molecular composition and biological function. One example are the micron-sized spherical heterochromatin foci that are present in several differentiated cell types. It has recently been proposed that phase separation is the driver of this type of chromatin organization. I will briefly introduce the different flavors of phase separation that might be at play, along with the strategies to detect them. I will then compare the different models to our recent experiments on DNA-based condensates in the test tube and on heterochromatin foci in living cells, and to our in silico analysis of cellular stoichiometries.

see also the two companion posters:

Cheryn ALI : What the composition of condensates teaches us about phase separation

Dominika LEWANDOWSKA : Visualizing heterochromatin formation on the single-molecule level

Auteur principal: ERDEL, Fabian (CBI Toulouse)

Orateur: ERDEL, Fabian (CBI Toulouse)