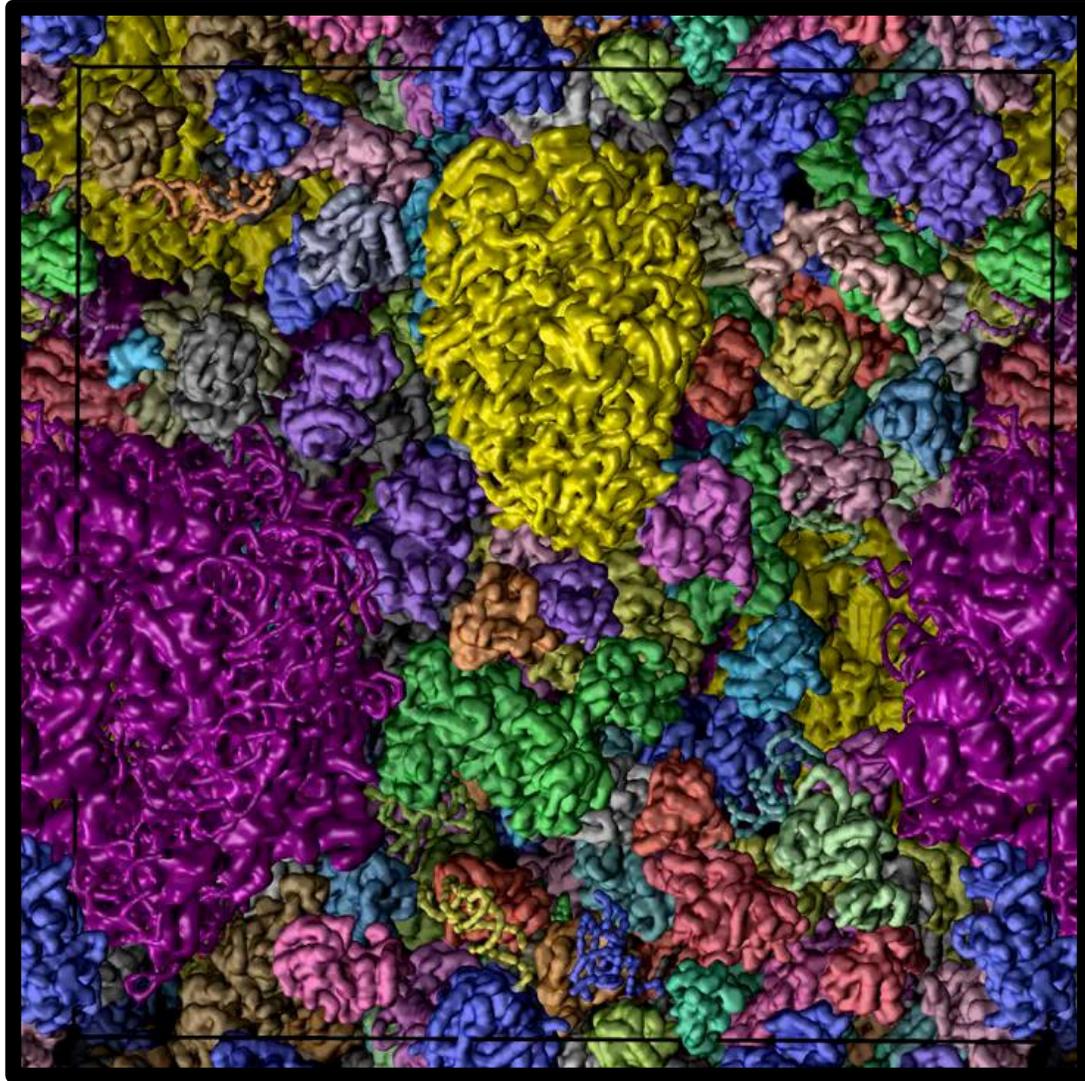


# Cytoplasm biophysical properties and their consequences on biological processes



Cell biologist (plant and yeast), experimentalist

Cytoskeleton dynamics and organization

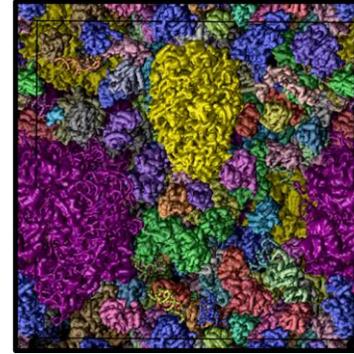
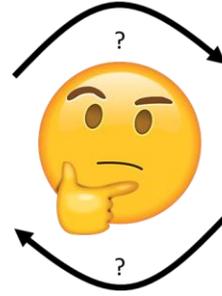
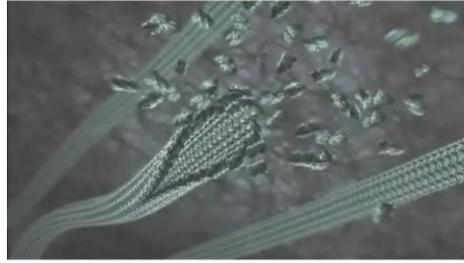
Cell mechanics

Cytoplasm biophysics

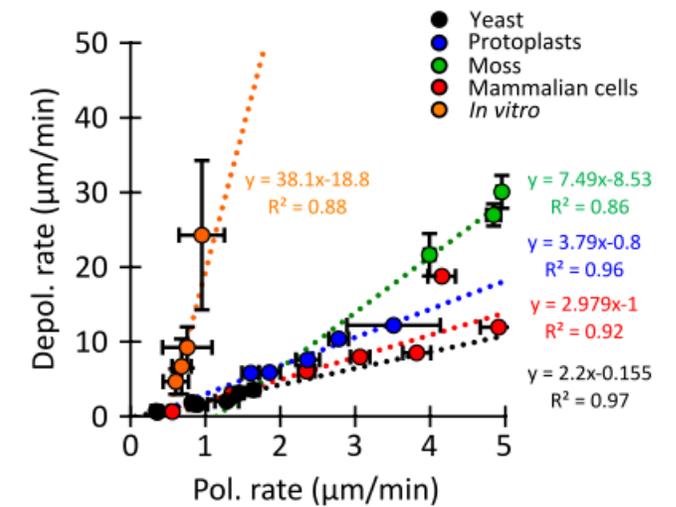
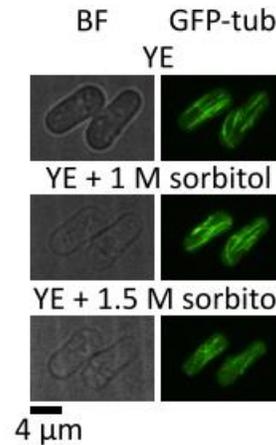
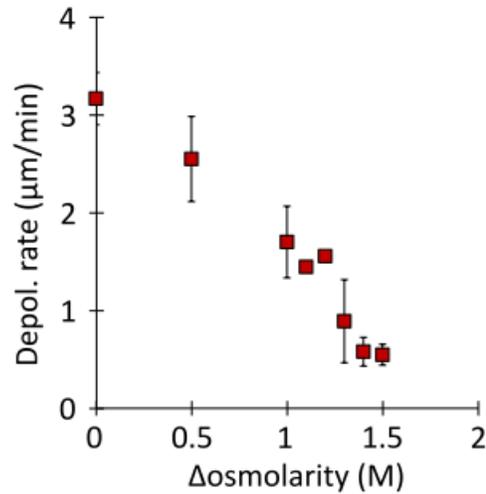
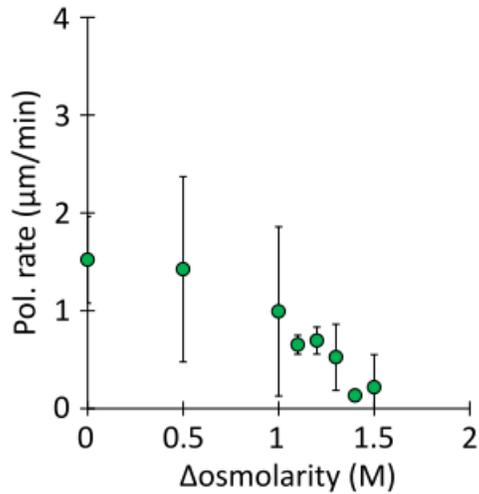
Cytoplasm = complex + dynamic + contains most of the metabolic processes

Does the cytoplasm properties affect the biological processes it harbors?

# Understand how the biophysical properties of the cytoplasm affect cellular processes



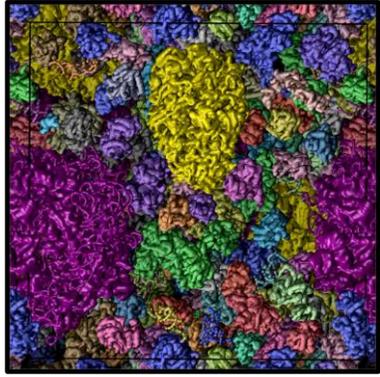
How are cellular processes (such as cytoskeleton dynamics) affected by the cytoplasm biophysical properties?



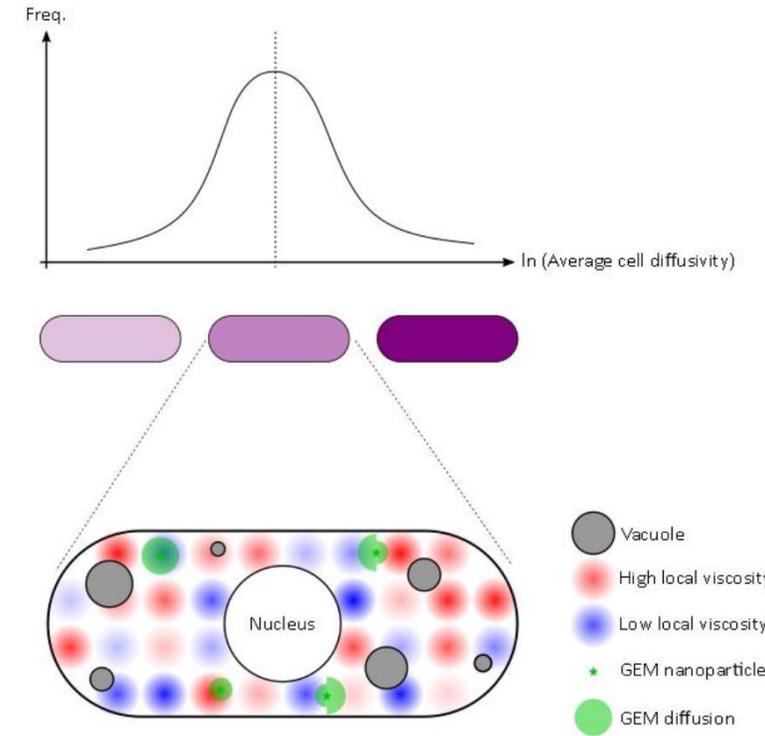
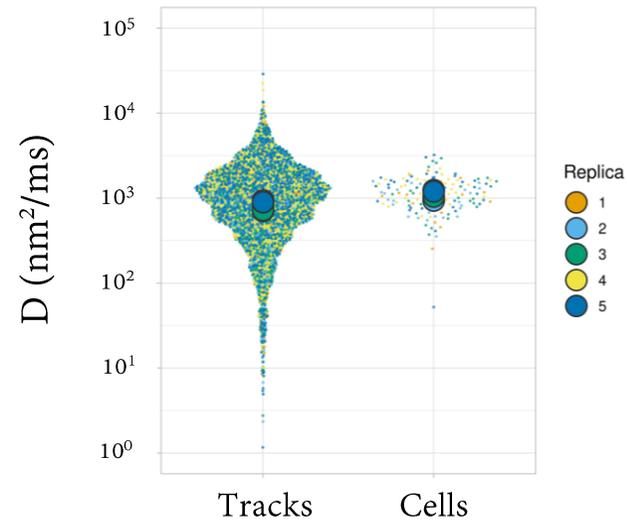
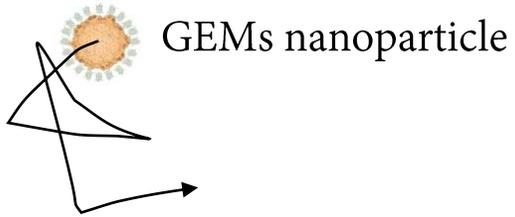
Microtubule dynamics slows down with increasing cytoplasm concentration (viscosity)

# Get a better understanding of the biophysical properties of the cytoplasm

Collab. with the  
Theriot lab, UW



Is the cytoplasm homogeneous? Heterogeneous?



GEMs diffusivity is highly heterogeneous, both between cells and within cells