

The mechanism of dynamin in membrane constriction - From static snapshots to a dynamic model

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Dynamin is a mechano-chemical GTPase that assembles at the neck of clathrin-coated vesicles and catalyzes membrane scission in a GTPase-dependent reaction. Here, I will describe previous structural data on dynamin from our and other groups. I will then explain our efforts toward translating the structural snapshots into a dynamic model of membrane constriction. We incorporated our experimental rate measurements and single molecule FRET-based force measurements into a model that resolves individual powerstrokes within a protein filament wound around a deformable membrane tube.