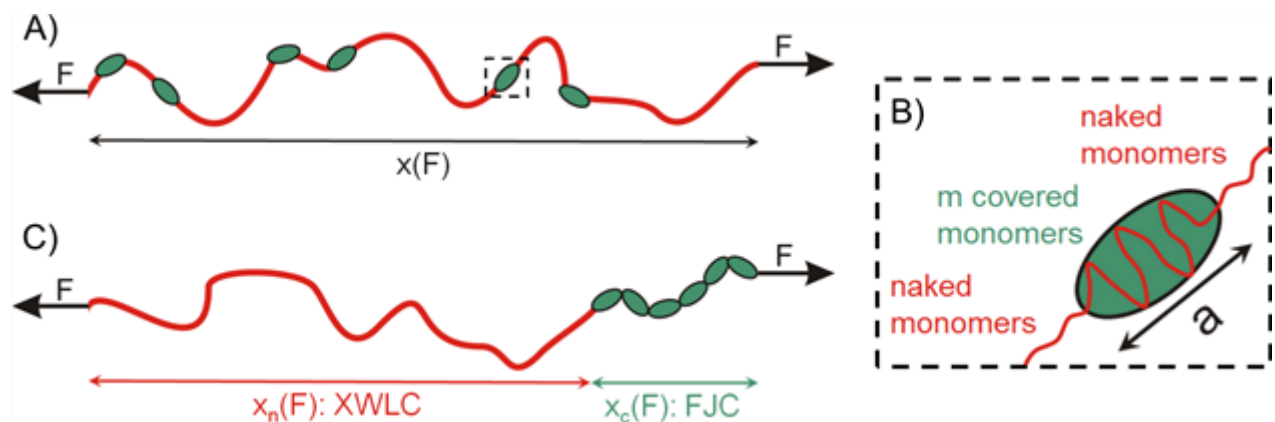


Single-stranded DNA-binding protein kinetics: theory and experiments.

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Single-stranded DNA-binding proteins (SSBs) play a key role in genome maintenance, binding and organizing single-stranded DNA (ssDNA) intermediates. Optical tweezers show that the human mitochondrial SSB (HmtSSB) (and also E. Coli SSB) binds to preformed ss-DNA in two major modes, depending on salt and SSB protein concentration [1,2]. The kinetics presents transitions between modes [1-3], which still require a full understanding at high coverages with the development of models with a correct binding site counting [4,5]. This model development has revealed two potential sources of cooperativity, enhancement of the binding or inhibition of the release due to the presence of neighboring bound SSB [5].



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