Subash Godar, PhD
SEA Staff Scientist
Rice University
sg165@rice.edu

Research Interests
I am a molecular biophysicist with 7+ years of experience in developing analytical biophysical assays to perform interdisciplinary studies on protein-protein interactions and conformational dynamics of small molecule binding DNA/RNA.

Strengths or Unique Resources
Using correlative force spectroscopy and optical microscopy techniques for biophysical characterizations

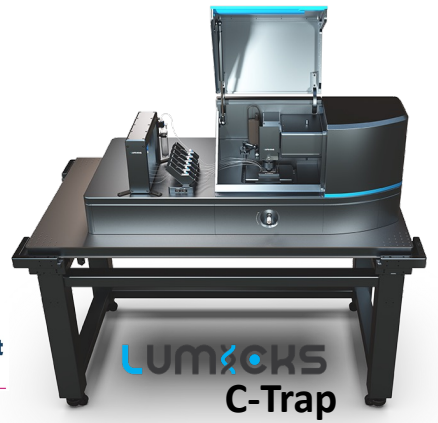
Type of collaborator you seek
Experimental or computational labs looking for experimental validation through direct force measurement in single molecule and cell targets and get trained on advanced optical microscopy system.

Publication List (https://qrco.de/bf8YKt)

Lab or Faculty website (https://qrco.de/bf8YJN)

LinkedIn (https://www.linkedin.com/in/subashgodar/)

SCAN ME

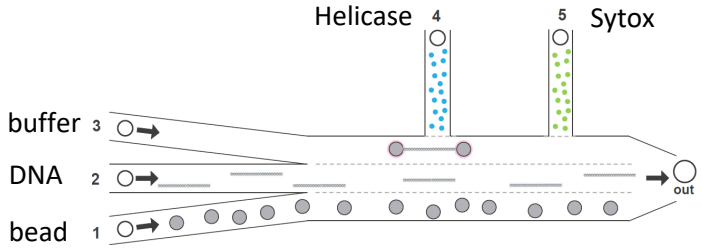


NSF Shared Equipment Authority

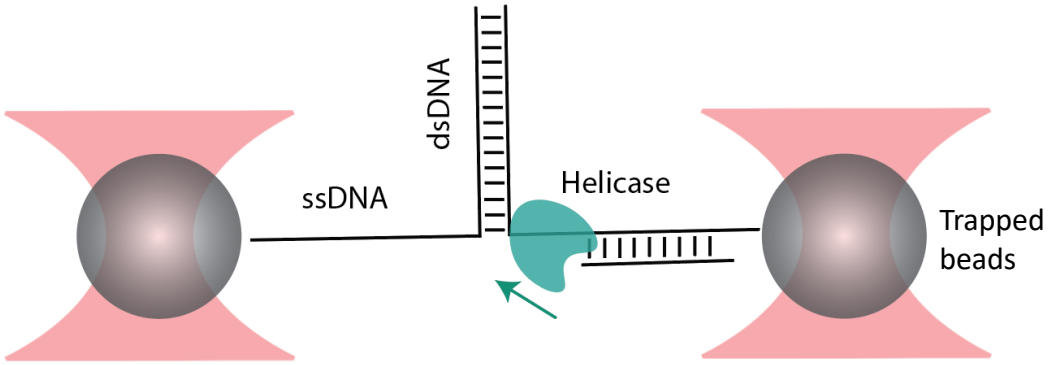
RICE UNIVERSITY

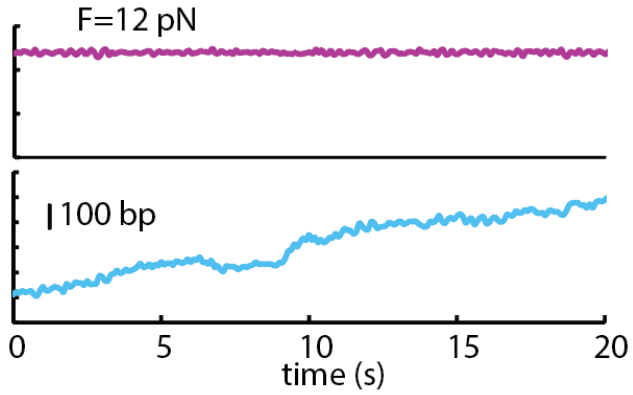
Optical tweezers in single molecule biophysics: DNA-Protein interactions

DNA unzipping by Helicase



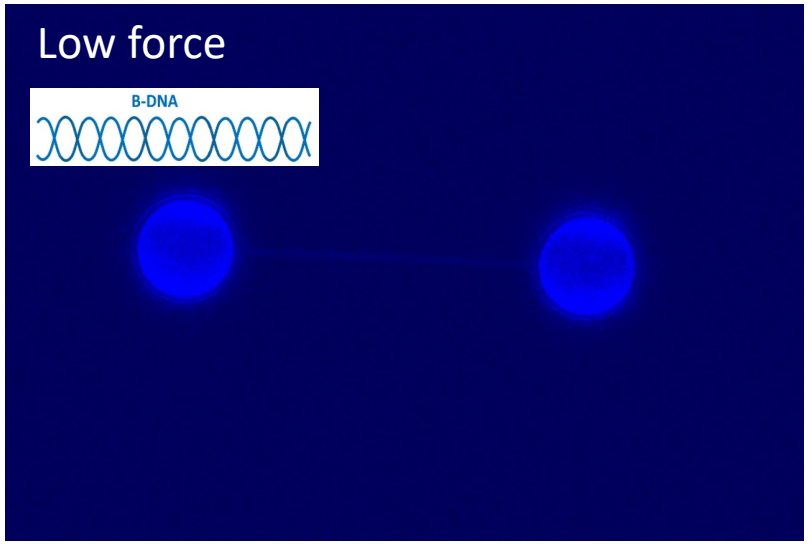
LUMICKS microfluidics for high through put DNA dumbbell assembly

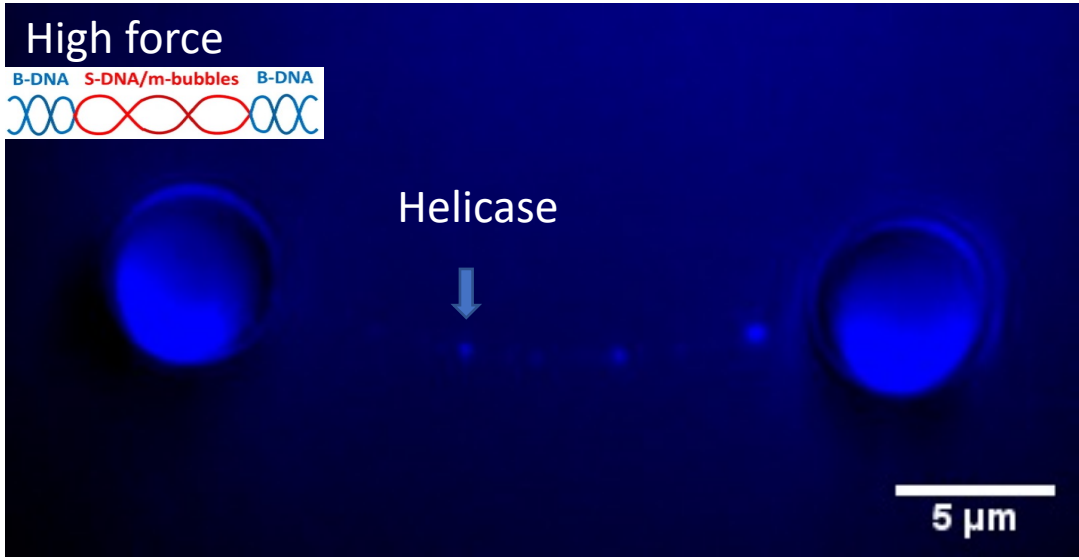




DNA unzipping traces at constant force set by force clamp

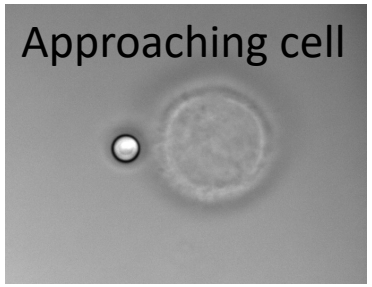
At low force, the double stranded DNA structure is intact where as at higher force (above overstretching force), single stranded DNA bubbles are formed allowing the helicase proteins to bind.

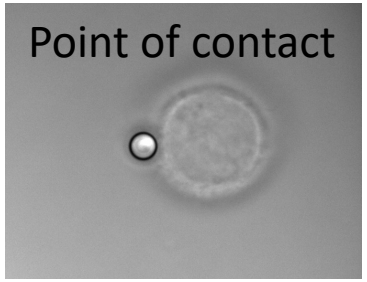


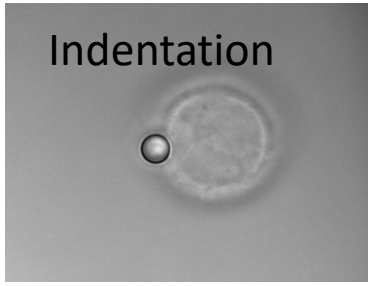


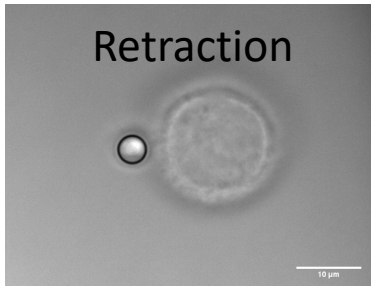
Sample from Yang Gao's Lab

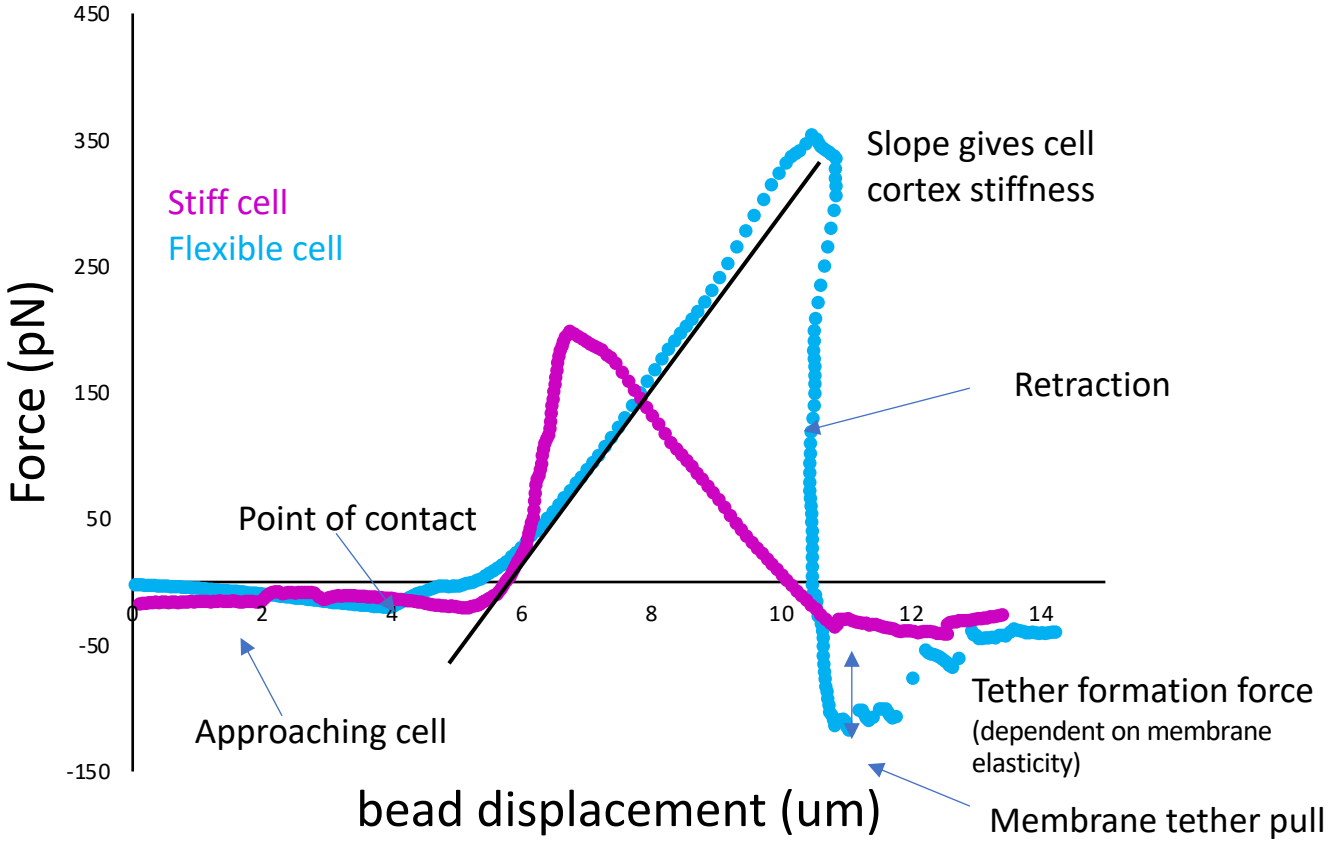
Mechanosensitivity: Cell indentation assay to probe cell stiffness and signaling pathway



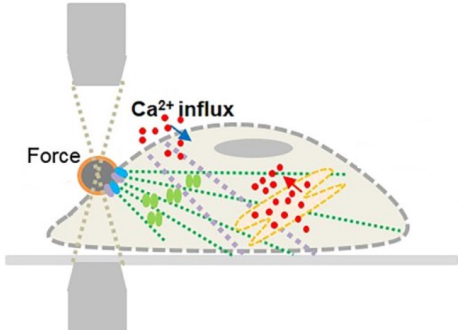




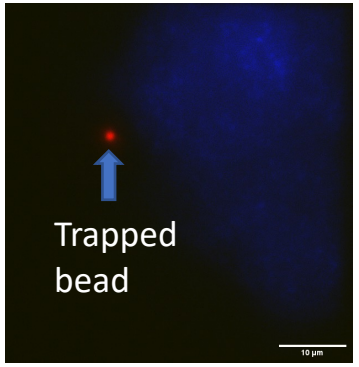




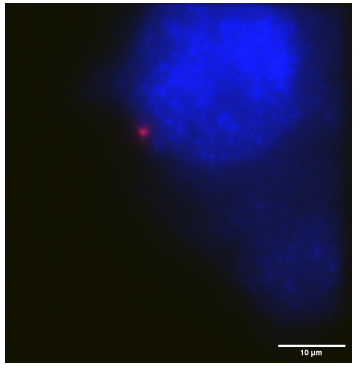
Sample from Gang Bao's Lab



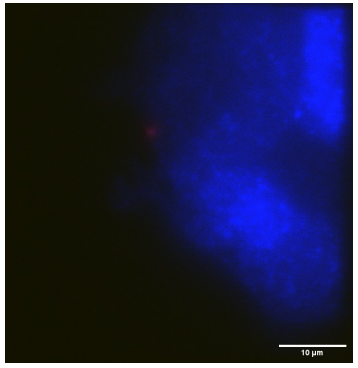
Approaching cell



Point of contact



Retraction



Ca2+ released upon mechanical stimulation is mediated by mechanical support of cytoskeleton and actomyosin contractility

Sample from Tour Lab