

DOWNLOAD THESE PAPERS using an ip address from unipi. Next week we will have group discussions to answer questions on mechanobiology.

- Sensors 2010, 10, 9948-9962; doi:10.3390/s101109948
 - Microsystems for cellular force measurement: a review - <http://dx.doi.org/10.1088/0960-1317/21/5/054003>
 - The Forces Behind Cell Movement: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1893118/>
 - Review on Cell Mechanics: Experimental and Modeling Approaches
 - Physically based principles of cell adhesion mechanosensitivity in tissues. <http://iopscience.iop.org/article/10.1088/0034-4885/75/11/116601>
1. The difference between cell adhesion force and traction force
 2. Does a cell stay adherent after it is dead?
 3. How big is the force between an integrin and an RGD ligand?
 4. How big is the force that a cell exerts on a surface?
 5. How do you think the mechanical properties of an integrin or a collagen molecule modulate this force?
 6. Make a table of methods used to measure cell forces, with columns specifying a) method b) force resolution c)space resolution d) time resolution
 7. Estimate the force of adhesion of endothelial cells in the aorta, given that the maximum shear stress in the region of curvature is 4 Pa.