

# Sub- and supra-cellular mechanisms of tension buffering

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At the sub-cellular level, cells can buffer membrane tension by the assembly and disassembly of reservoirs [1]. At the tissue scale, recent measurements show that freestanding epithelial monolayers can withstand stretches of about 300% at nearly constant tension [2]. In this talk, I will discuss the sub- and supra-cellular mechanisms of tension buffering. Interestingly, despite the scale, structural, and molecular differences, there are conceptual commonalities in the way the plasma membrane and cell monolayers control their mechanical state.

[1] Sinha et al., *Cell*, 144, 402–413 (2011).

[2] E. Latorre, L. Casares, S.S. Kale, M. Gomez-Gonzalez, M. Uroz, L. Valon, M. Arroyo, X. Trepac, in preparation.