**Supplemental Material 1. Computation of intracellular tension from calculated traction stresses**

The intracellular tension is computed from the measured traction stresses by establishing a force balance inside the monolayer and enforcing Saint-Venant’s compatibility of strains. The traction stresses ($T\_{x}$ and $T\_{y}$) are taken as loads acting on the cells, which are modeled as a thin elastic membrane. The resulting governing equations for the intracellular stresses ($σ\_{xx}$,$ σ\_{xy}$, and$ σ\_{yy}$) are,

$$\frac{∂σ\_{xx}}{∂x}+\frac{∂σ\_{xy}}{∂y}=\frac{T\_{x}}{h}$$

$$\frac{∂σ\_{xy}}{∂x}+\frac{∂σ\_{yy}}{∂y}=\frac{T\_{y}}{h}$$

$$∇^{2}\left(σ\_{xx}+σ\_{yy}\right)=\frac{\left(1+ν\right)}{h}\left(\frac{∂T\_{x}}{∂x}+ \frac{∂T\_{y}}{∂y}\right)$$

Where $h=7μm$ is the thickness of the monolayer and $ν=0.45$ is the Poisson’s ratio. We defined the intracellular tension as the first invariant of the stress tensor ($σ\_{xx}$ +$ σ\_{yy}$).