

(A) density maintenance theory

$$\frac{S_A}{V} = \frac{\kappa \psi_{mem}}{2(1 - \psi_{mem} - \psi_{peri} + \beta \phi_{rib})}$$

cytoplasm-membrane density ratio κ membrane proteome partition ψ_{mem}

surface-to-volume ratio $\frac{S_A}{V}$ periplasmic proteome partition ψ_{peri} RNA-protein ratio $\beta \phi_{rib}$

uncertainty: 95%, 68%, mean, $\approx 1\sigma$, $\approx 2\sigma$

