

(A) density maintenance theory

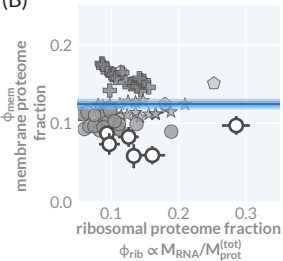
$$\frac{S_A}{V} = \frac{\text{membrane proteome fraction} \cdot \phi_{mem} \cdot \text{density ratio}}{2 \left[1 + \frac{M_{RNA}}{M_{prot}^{(tot)}} - \phi_{mem} - \phi_{peri} \right]}$$

surface-to-volume ratio

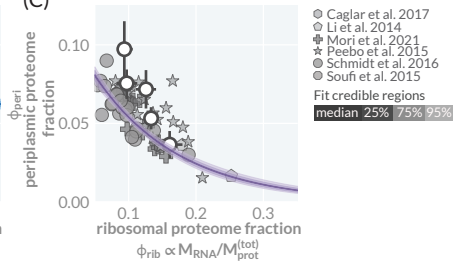
RNA-to-protein ratio

periplasmic proteome fraction

(B)



(C)



(D)

