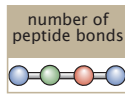
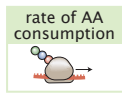
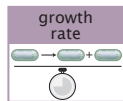
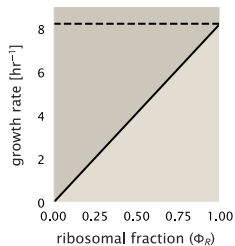


(A)

## translation-limited growth rate



— maximum r-protein synthesis rate — maximum growth rate  $\lambda$



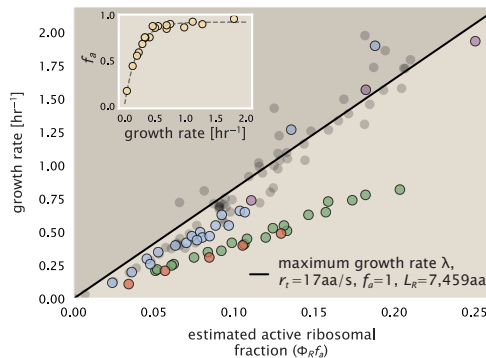
$$\lambda = \frac{R \times r_t \times f_a}{N_{\text{pep}}}$$

$$\approx \frac{r_t}{L_R} \times \Phi_R \times f_a$$

$$r_t = 17 \text{ aa/s}$$

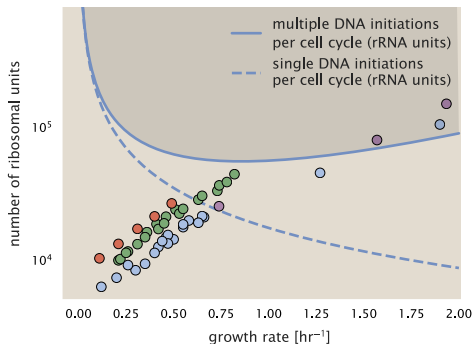
$$L_R = 7,459 \text{ aa}$$

$$f_a = 1$$



(B)

## limitations on rRNA synthesis



- Li et al. 2014
- Schmidt et al. 2016
- Peebo et al. 2015
- Valgeopea et al. 2013
- non-proteomic data from literature