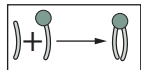


CELL WALL AND MEMBRANE SYNTHESIS

(A)

fatty acid synthesis

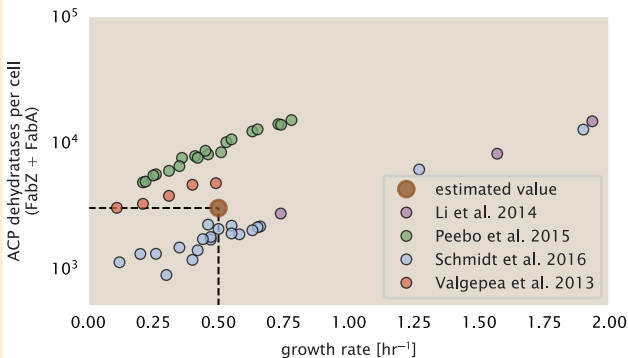


$$r_{\text{ACP dehydratase}} \approx 1 \text{ lipid / sec}$$

Ruppe & Fox 2018
Heath et al. 1996
Fiers et al. 2016

$$N_{\text{lipids}} \approx 2 \times 10^7 \text{ BNID:102996}$$

$$N_{\text{ACP dehydratases}} \approx \frac{2 \times 10^7 \text{ lipids}}{1 \text{ cell}} \times \frac{1 \text{ sec}}{1 \text{ lipid}} \times \frac{1 \text{ cell}}{6000 \text{ sec}} \approx 3000 \text{ ACP dehydratases}$$



(B)

peptidoglycan synthesis

?