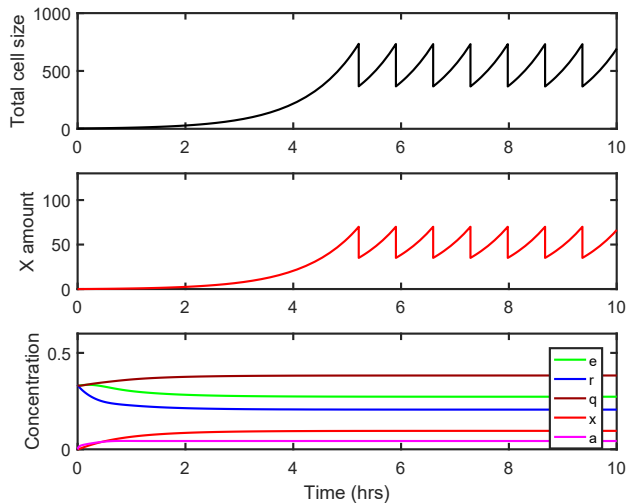


A

Model dynamics



B

Steady-state

$$\begin{aligned}
 e &= f_E (1 - a) \sim f_E && \text{Protein sector concentration} \\
 r &= f_R (1 - a) \sim f_R && = \\
 q &= f_Q (1 - a) \sim f_Q && \text{sector allocation fraction} \\
 x &= f_X (1 - a) \sim f_X && \times \\
 &&& \text{total protein concentration}
 \end{aligned}$$

$$\begin{aligned}
 &\text{Growth rate } \alpha \\
 &= k f_E (1 - a) = \sigma \left[f_R - \frac{r_i}{1 - a} \right] \frac{a}{a + a_{sat}}
 \end{aligned}$$

Balance between
precursor synthesis and protein synthesis

$$\begin{aligned}
 V_{div} &= \frac{X_{div}}{f_X (1 - a)} \sim \frac{X_{div}}{f_X} && \text{Size at division} \\
 &&& = \\
 &&& \text{X division threshold} \\
 &&& / \\
 &&& \text{X concentration}
 \end{aligned}$$