

$$\frac{dS_t}{dt} = \boxed{\eta(T)} - \alpha_0 S_t - \alpha_f F \quad (4)$$

$$\frac{dD_t}{dt} = \boxed{K_d S_f - \alpha_d D_t} \quad (2)$$

$$\frac{dF}{dt} = \boxed{\frac{K_d \cdot \alpha_s}{\alpha_f} S_f - \alpha_d F} \quad (3) \quad \left(F = \frac{\alpha_s}{\alpha_f} D_t\right)$$

$$\frac{dP_{fold}}{dt} = K_{fold} U : D - K(T) P_{fold}$$

**Figure S2.** Connection of flux modules to the differential equations describing the reduced qualitative model. (1) FF flux module, (2) SEQ-FB flux module, (3) DEG-FB flux module, and (4)  $\sigma^{32}$  amplifier flux module. The concentration of  $S_f$  integrates the effects of  $D$ ,  $P_{fold}$ , and  $F$ , calculated from the algebraic equations.