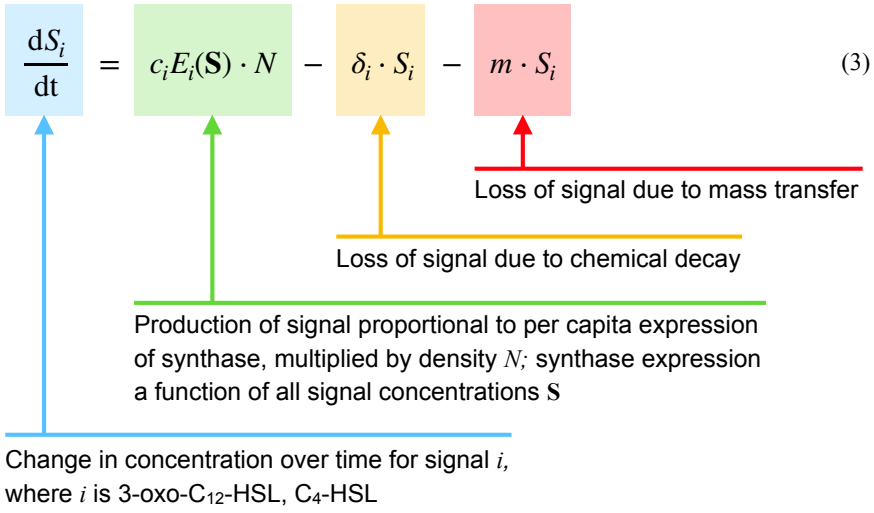
$\frac{dS_i}{dt} = c_i E_i(\mathbf{S}) \cdot N - \delta_i \cdot S_i - m \cdot S_i$
(3)
Loss of signal due to mass transfer
Loss of signal due to chemical decay
Production of signal proportional to per capita expression of synthase, multiplied by density N; synthase expression a function of all signal concentrations $\mathbf{S}$
Change in concentration over time for signal i, where i is 3-oxo-C_{12}-HSL, C_4-HSL