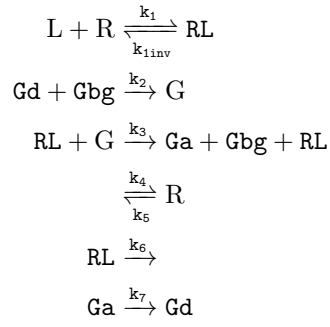


# GPCR ODE

November 6, 2024



$$\frac{dR(t)}{dt} = k_4 + k_{1inv}RL(t) - k_5R(t) - k_1R(t)L(t) \quad (1)$$

$$\frac{dL(t)}{dt} = k_{1inv}RL(t) - k_1R(t)L(t) \quad (2)$$

$$\frac{dRL(t)}{dt} = -k_{1inv}RL(t) - k_6RL(t) + k_1R(t)L(t) \quad (3)$$

$$\frac{dGd(t)}{dt} = k_7Ga(t) - k_2Gd(t)Gbg(t) \quad (4)$$

$$\frac{dGbg(t)}{dt} = -k_2Gd(t)Gbg(t) + k_3G(t)RL(t) \quad (5)$$

$$\frac{dG(t)}{dt} = k_2Gd(t)Gbg(t) - k_3G(t)RL(t) \quad (6)$$

$$\frac{dGa(t)}{dt} = -k_7Ga(t) + k_3G(t)RL(t) \quad (7)$$