$$E_0 \propto \frac{k_{syn}}{k_{deg}}$$

$$E_{max} = \rho \cdot \frac{k_{syn}}{k_{RL}}$$

$$\text{Response (R)} = E_0 + E_{max} \cdot \frac{L}{EC_{50} + L}$$

$$\propto \frac{k_{syn}}{k_{deg}} + E_{max} \cdot \frac{L}{EC_{50} + L}$$

$$\propto \frac{k_{syn}}{k_{deg}} + \rho \cdot \frac{k_{syn}}{k_{e(RL)}} \cdot \frac{L}{EC_{50} + L}$$

$$\text{Efficacy } R_{max} = E_0 + E_{max}$$

$$\text{Potency } EC_{50}$$

Response (R)

Ligand concentration (L) [log scale]