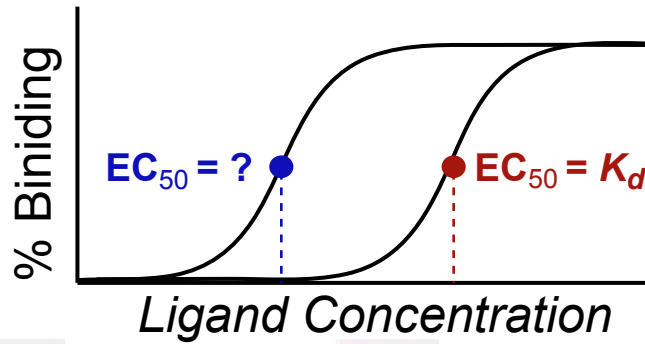


The Spectrum of Multivalent/Avidity Enhancement of Drugs

Multi-valent Ligand



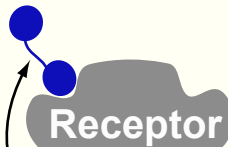
Mono-valent Ligand



Practically Science.com

Minimum:
"statistical"

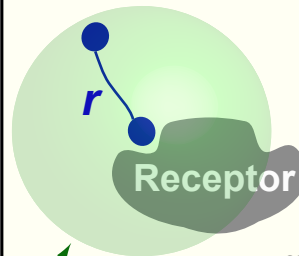
$$EC_{50} = K_d / 2$$



linker
too short

General Case:
"effective concentration"

$$EC_{50} = K_d \frac{K_d}{\text{effective conc.}}$$



$$\frac{\text{moles receptor}}{\text{search volume}} = \frac{1 / N_A}{\frac{4}{3} \pi r^3}$$

Maximum:
"multiplicative"

$$EC_{50} = (K_d)^2$$



perfect
geometry