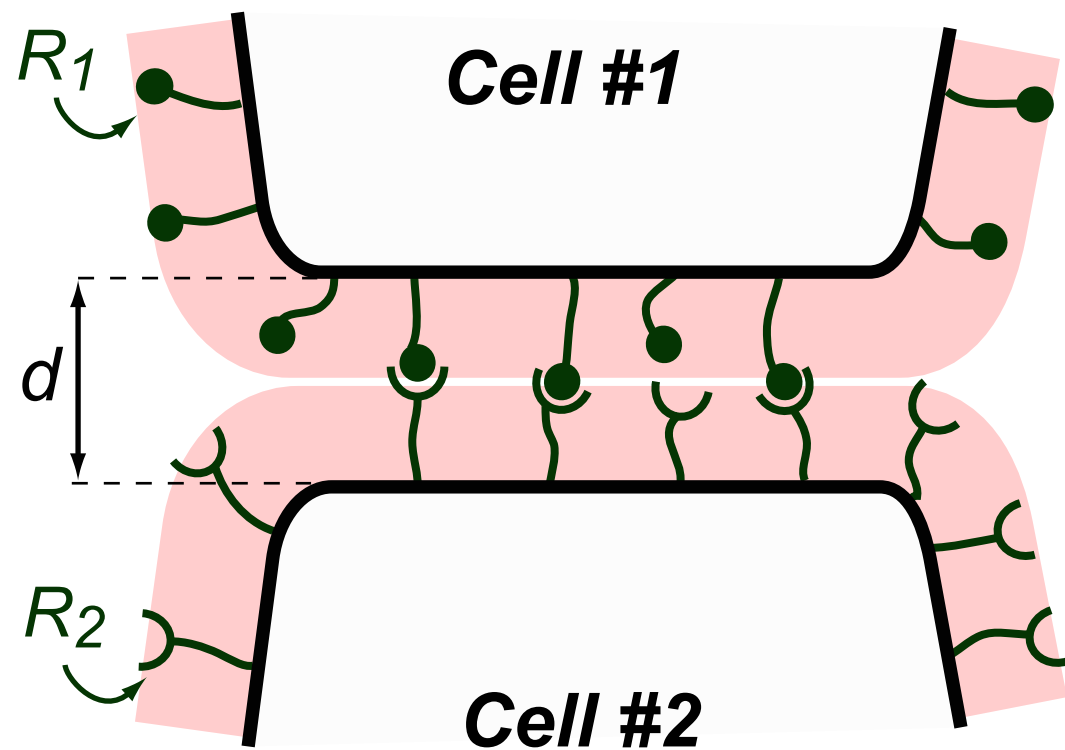


Equilibrium Model of Cell-Cell Adhesion



$\downarrow K_D(d)$
 \uparrow binding

$\uparrow \Gamma(d)$
 \downarrow repulsion

$$K_D(d) = K_{soln} \times \underbrace{(6 \cdot 10^{26})}_{\text{conversion factor}} \times \underbrace{(d \cdot A)}_{\text{contact volume}} \times \underbrace{e^{-\frac{\kappa \cdot (d-L)^2}{2k \cdot T}}}_{\text{bond stress}}$$

$$\Gamma(d) = \frac{\gamma}{d} \frac{A}{k \cdot T} e^{-d/\tau}$$

Steric Stabilization
+
Electrostatic Repulsion

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Receptor Threshold for Cell-Cell Adhesion

