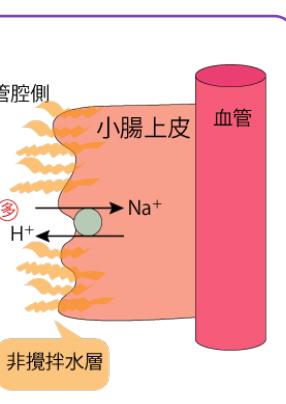
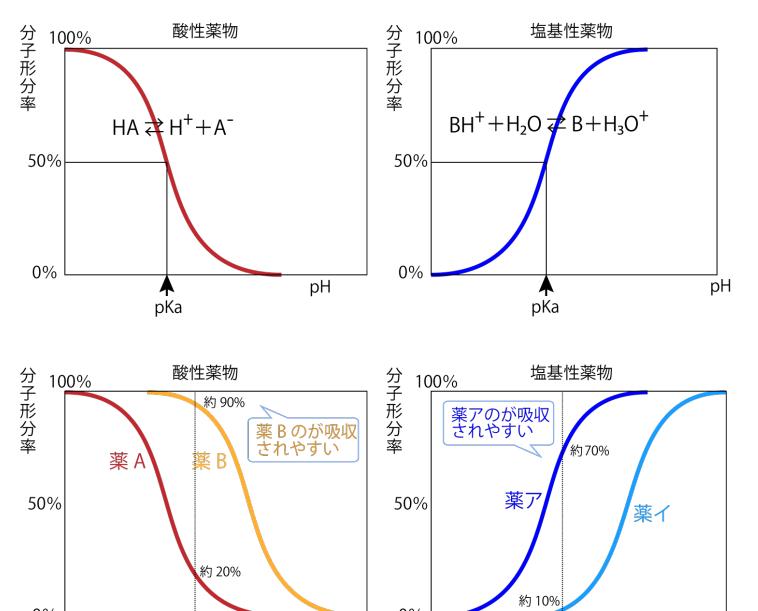


$$\text{分子分率} = \frac{1}{1 + 10^{pH - pK_a}} \quad pH = pK_a + \log \frac{[A^-]}{[HA]} \quad \text{酸性}$$

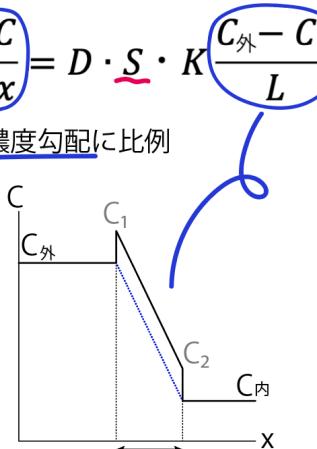
$$\text{分子分率} = \frac{1}{1 + 10^{pK_a - pH}} \quad pH = pK_a + \log \frac{[B]}{[BH^+]} \quad \text{盐基}$$



周囲よりpH↓→分子分率異なる  
酸性薬だと分率高くなる

# 基本は フィックの法則

$$J = D \cdot S \cdot \frac{dC}{dx} = D \cdot S \cdot K \frac{C_{\text{外}} - C_{\text{内}}}{L}$$



透過速度 = 膜面積と濃度勾配に比例

The diagram illustrates passive diffusion across a lipid bilayer membrane. On the left, an arrow labeled "濃い C<sub>外</sub>" (high concentration outside) points towards the membrane. The membrane itself is depicted as a stack of orange hexagonal shapes representing fatty acid tails. To the right, another arrow labeled "薄い C<sub>内</sub>" (low concentration inside) points away from the membrane. Above the membrane, the label "面積 S" (area) is positioned above the top layer, and "透過速度 J" (permeation rate) is shown with an arrow pointing to the right. The overall thickness of the membrane is indicated by a double-headed arrow at the bottom labeled "膜厚 |".

$$J = D \cdot S \cdot \frac{dC}{dx} = D \cdot S \cdot K \frac{C_{\text{外}} - C_{\text{内}}}{L}$$

J:透過速度 D:拡散係数 S:膜面積 C:濃度 L:膜厚 K:分配係数

分子サイズ	大きいと通りにくい
水素結合	水素結合能高い官能基 あると通りにくい
脂溶性	分配係数（オクタノール/水）

アミノ酸、グルコースなどは  
通りにくいので、担体介在輸送で

影響因子

## 单纯拡散

pH分配仮説

藥劑-生物膜透過

