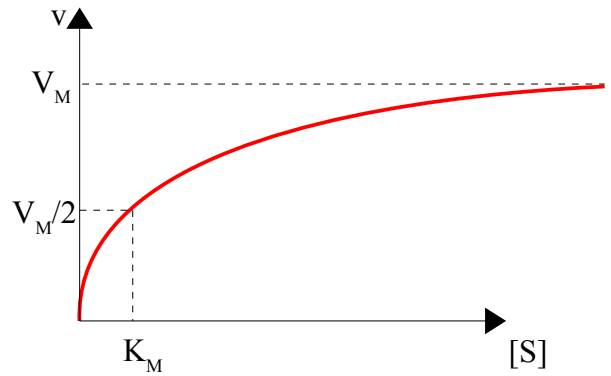


FICHE REVISION ENZYMOLOGIE

Equation de Michaelis-Menten :

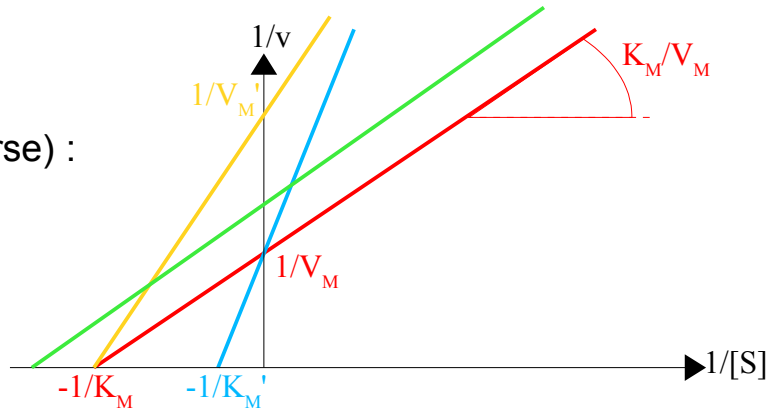
$$v = V_M \frac{[S]}{K_M + [S]} = V_M \times \frac{1}{1 + \frac{K_M}{[S]}}$$

$M.s^{-1}$ (pointing to v)
 M (pointing to K_M)



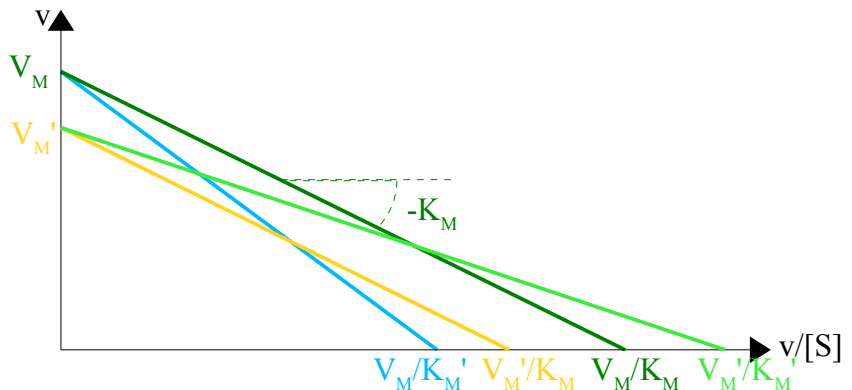
Lineweaver-Burk (ou double inverse) :

$$\frac{1}{v} = \frac{1}{V_M} + \frac{K_M}{V_M} \times \frac{1}{[S]} \quad \left(= \frac{S + K_M}{V_M [S]} \right)$$



Eadie-Hoffstee :

$$v = V_M - K_M \frac{v}{[S]}$$



$$k_{cat} = \frac{V_M}{[Et]}$$

$M.s^{-1}$ (pointing to V_M)
 M (pointing to $[Et]$)

$$\text{efficacité} = \frac{k_{cat}}{K_M} \quad M^{-1}.s^{-1}$$

Inhibitions compétitive : $V_M =$ $K_M \uparrow$ $\rightarrow K_M' = K_M \left(1 + \frac{[I]}{K_I} \right)$

non compétitive : $V_M \downarrow$ $K_M =$ $\rightarrow V_M' = \frac{V_M}{1 + \frac{[I]}{K_I}}$

incompétitive : $V_M \downarrow$ $K_M \downarrow$ $\rightarrow K_M' = \frac{K_M}{1 + \frac{[I]}{K_I}}$

Ces 3 équations sont à replacer dans celle de Michaelis-Menten...