

Chemical potential

20

chemical potential

drug in solid

solubility

drug in solution

drug concentration

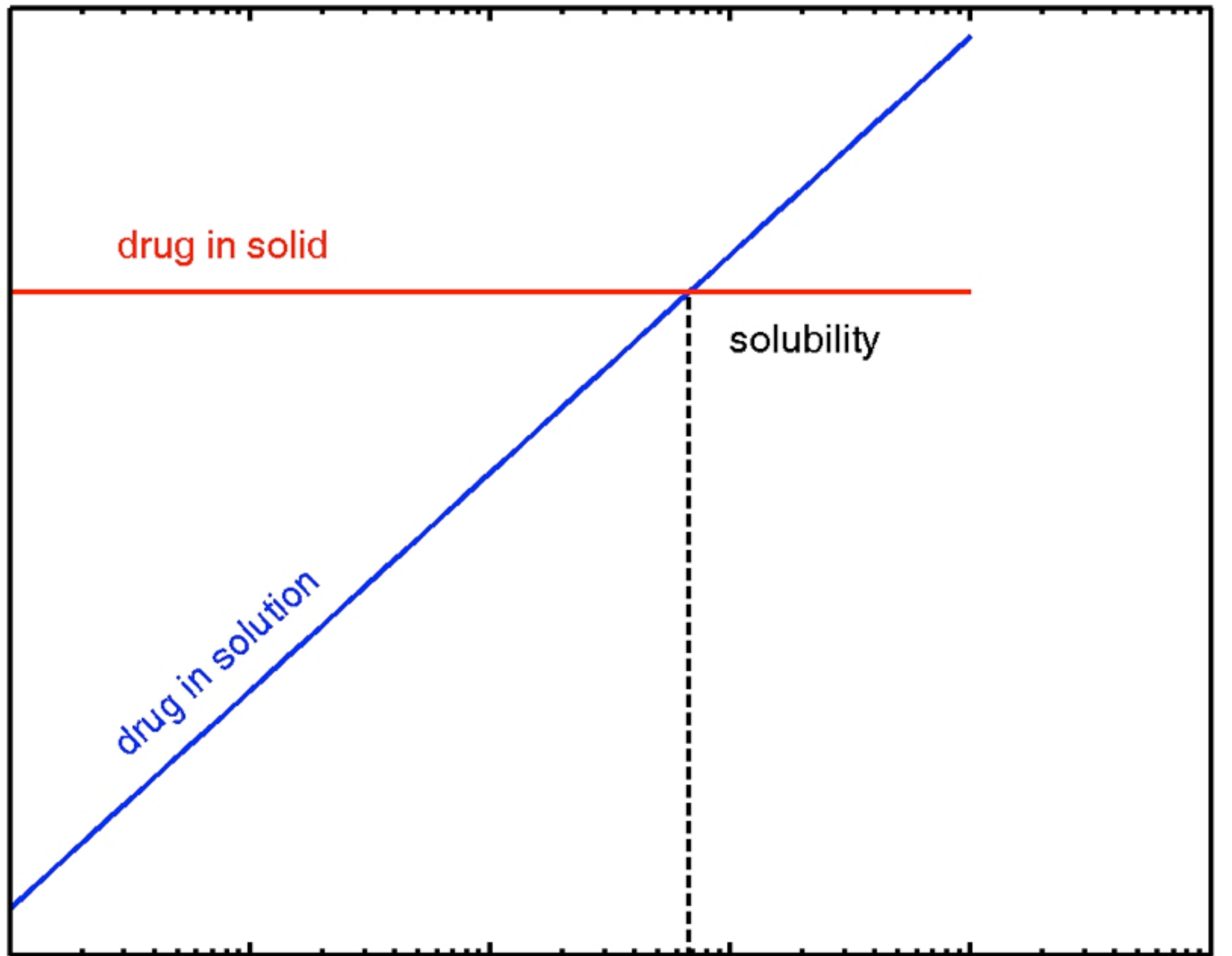
10^{-4}

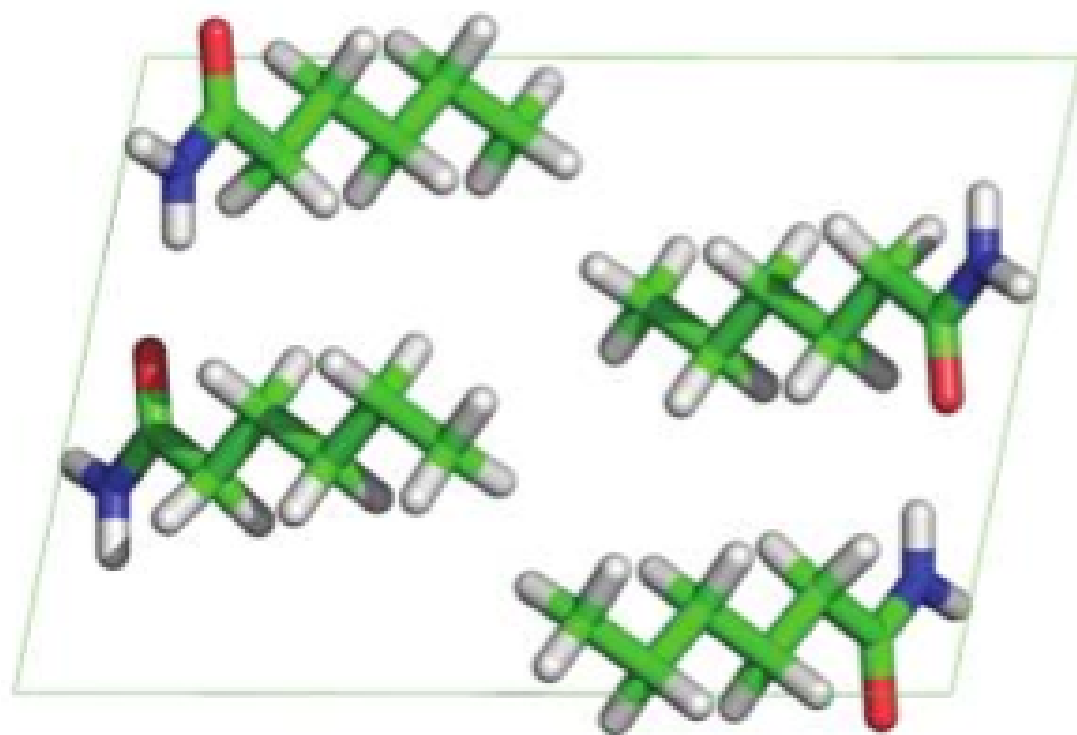
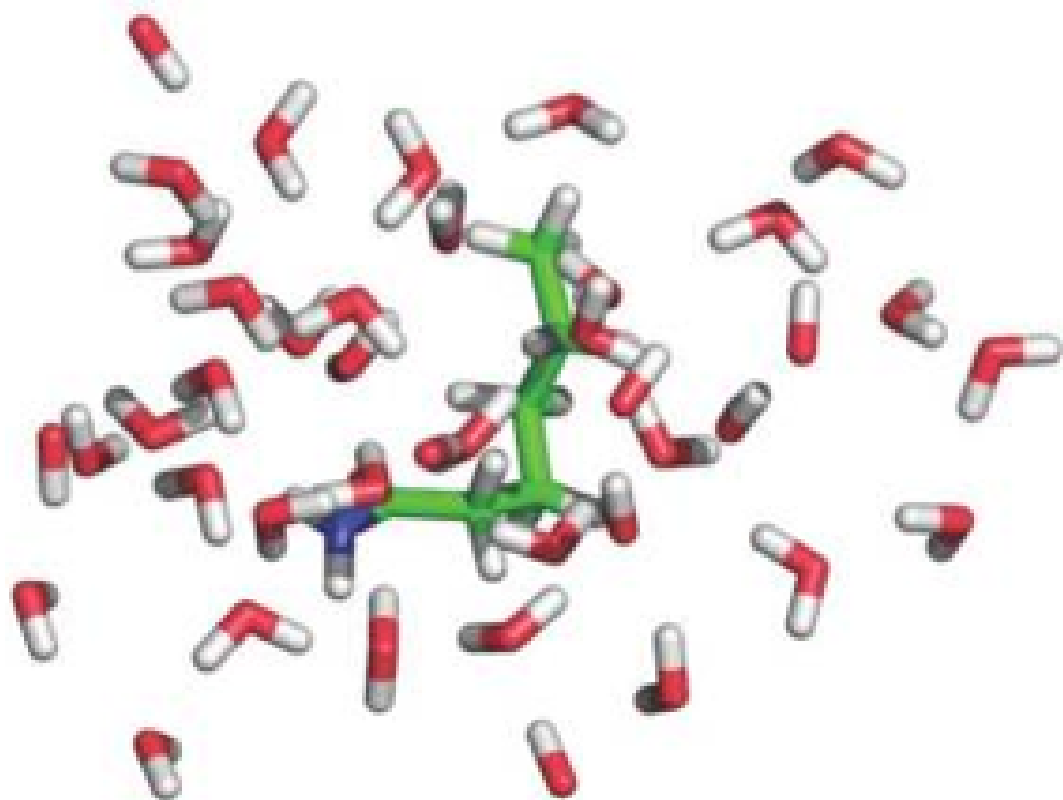
10^{-3}

10^{-2}

10^{-1}

10^0





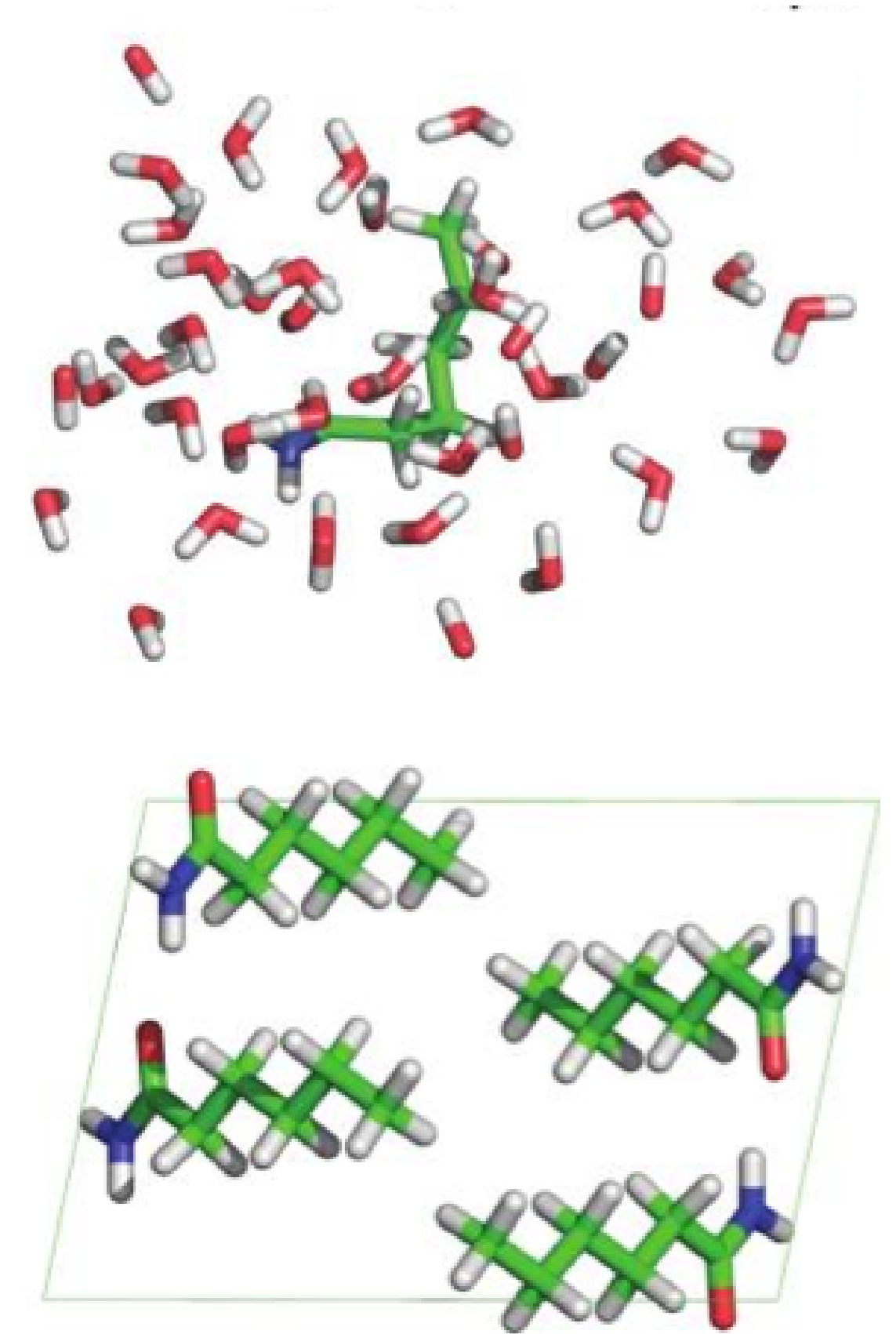
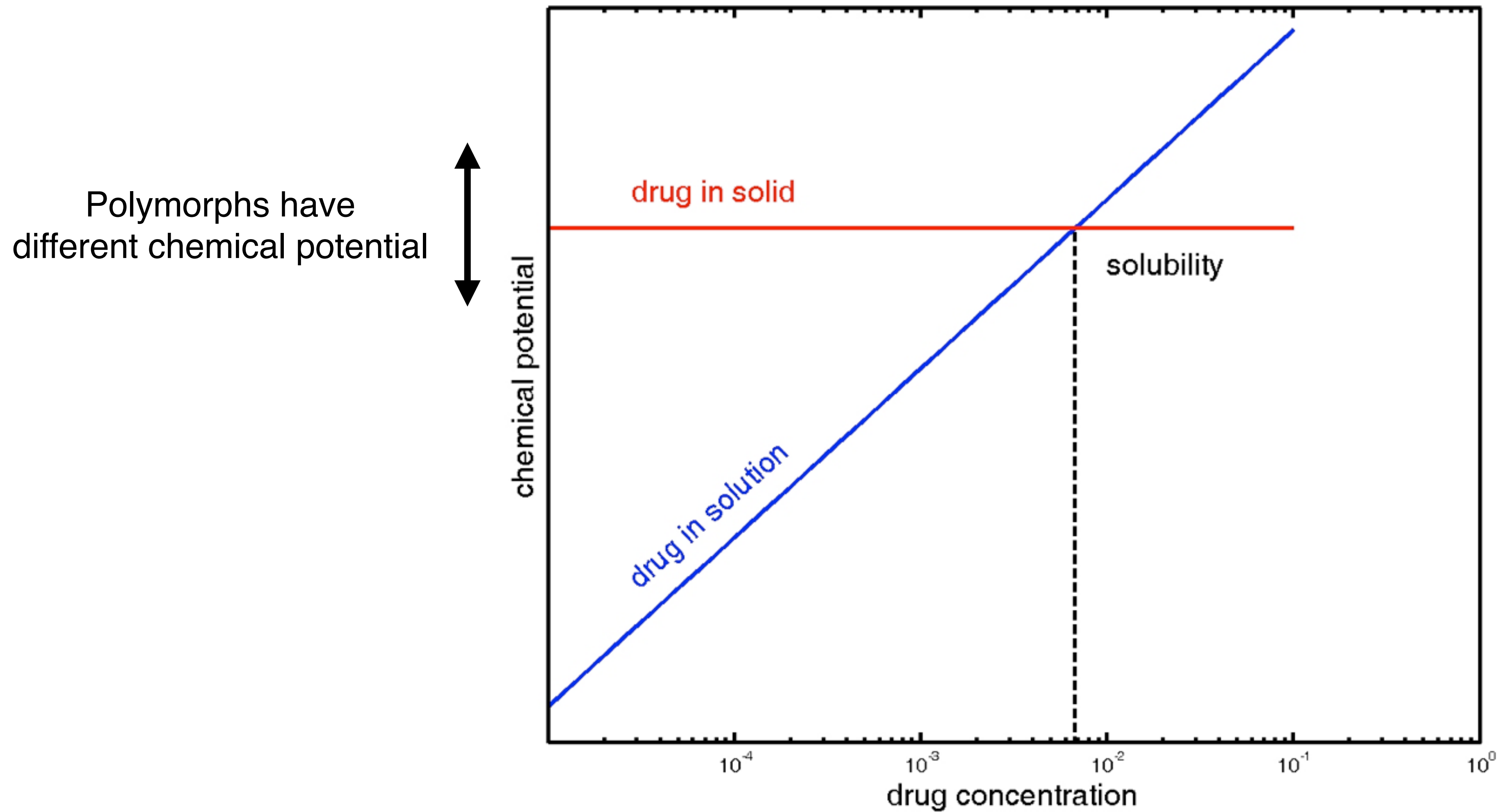
Polymorphs have
different chemical potential



From Ref [8]

From Ref[1]

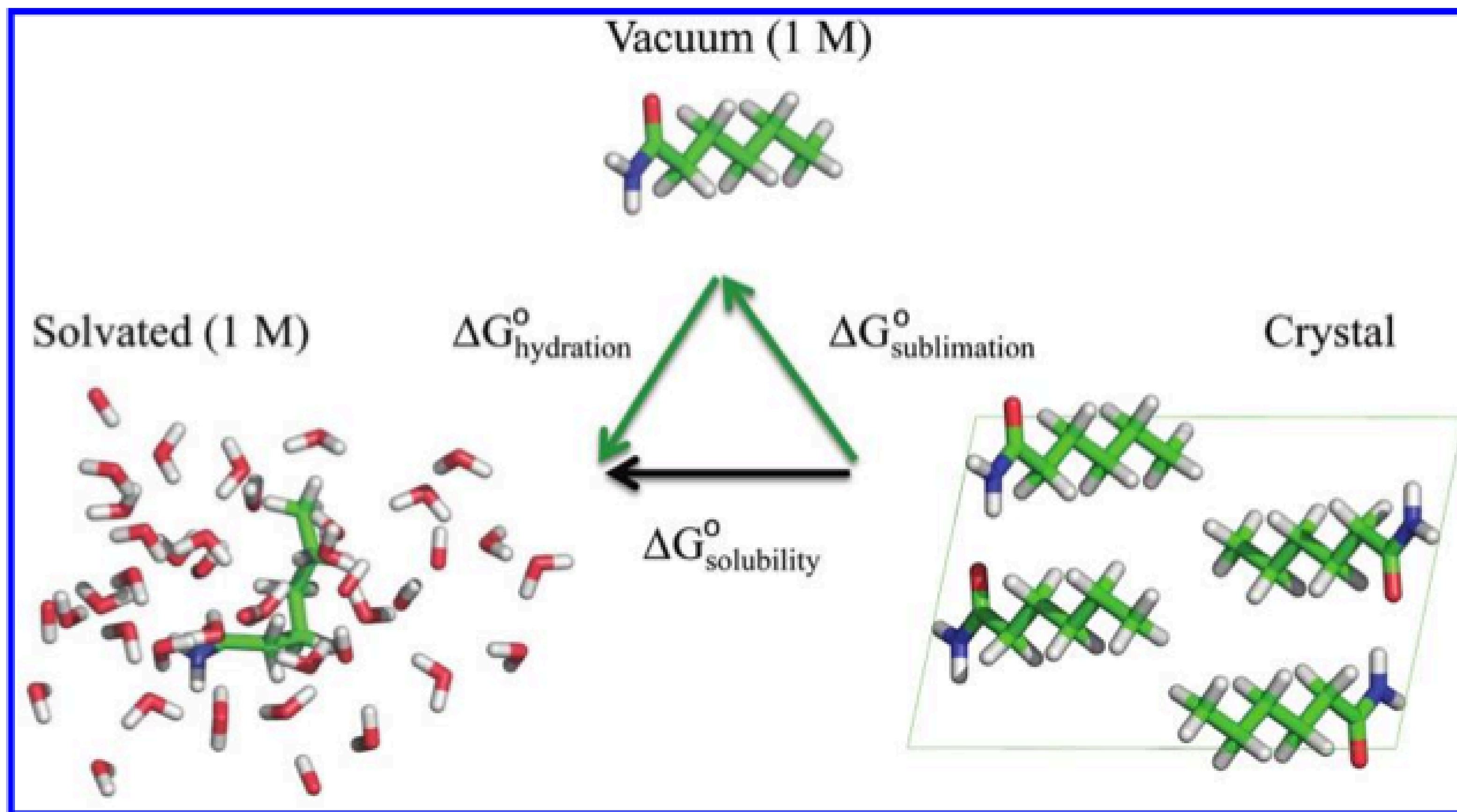
Chemical potential determines solubility



From Ref [8]

From Ref [1]

A thermodynamic cycle for solubility



From Ref [8]. Note that solubility \neq solvation or hydration.
Hydration + sublimation free energies calculated with alchemical free energy methods.