

Presenter:

Gilles Gnacadja

<http://math.GillesGnacadja.info/>

Title:

The “No Ligand Depletion” Assumption Is Unnecessary and Can Be Misleading

Abstract:

Binding equilibrium concentrations in receptor-ligand interactions are routinely calculated with formulas that assume the non-depletion of ligands. This can result in discrepancies and is unnecessary, as we demonstrate for the allosteric ternary complex model. The method can be used within curve-fitting algorithms to estimate binding parameters, e.g.  $K_d$  and  $\alpha$ , without concerns as to whether it is legitimate to assume that each ligand has equal total and equilibrium concentrations.