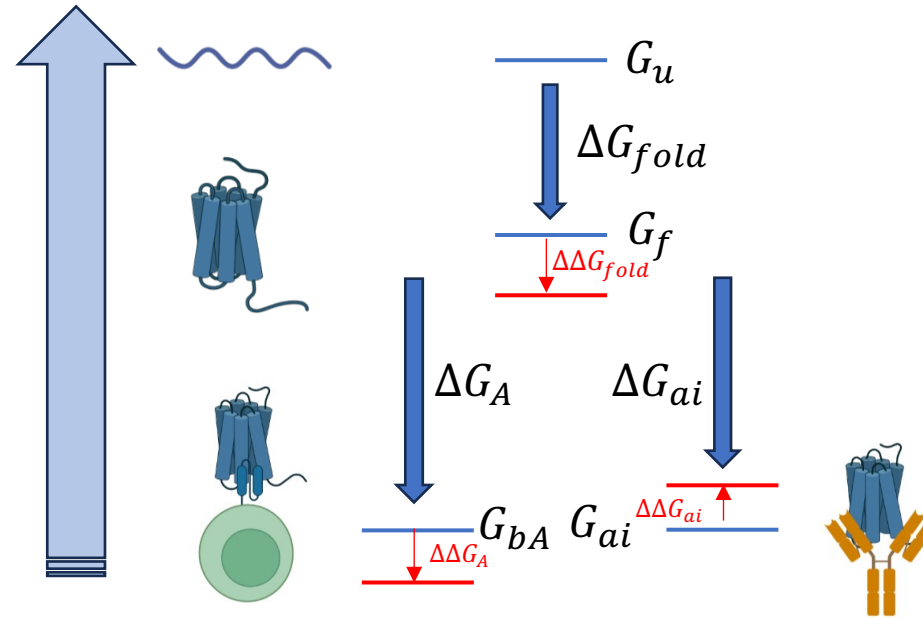


Mutation on RBD leads to **mutant**

Free Energy



**Mutant** may have:

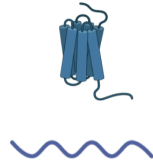
- 1- improved folding stability
- 2- improved binding to ACE2
- 3- decreased binding to antibody

**Mutant** multiplies



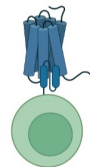
Wildtype

**Mutant**



Folded RBD

Unfolded RBD



RBD bound to  
ACE2



RBD bound to  
antibody



Energy state  
for wildtype  
and **mutant**