

Supplementary tables with data obtained from models 1-10 clustering as cluster 1-3

Supplementary Table 1. Selected models of the His6: A β peptide complex forming the Cluster 1					
Cluster 1	Receptor (A β peptide)	Ligand (His6)	H-bond	Salt bridges	Binding Energy Δ^iG kcal/mol
Model 1	HIS13, LYS16, LEU17, PHE20, ALA21, VAL24, GLY25, LYS28, ILE31, LEU34, MET35, GLY38, VAL39, ALA42	HIS1, HIS3, HIS4, HIS5, HIS6	GLY38:HIS6 ALA42:HIS6	ALA42: HIS6	-6.6
Model 4	LYS16, LEU17, VAL18, PHE20, ALA21, GLU22, VAL24, GLY25, SER26, LYS28, ILE31, LEU34, MET35	HIS1, HIS2, HIS3, HIS4, HIS5, HIS6	LEU17:HIS4 ALA21:HIS3	GLU22: HIS1	-4.3
Model 7	LYS16, LEU17, VAL18, PHE20, ALA21, GLU22, ASP23, VAL24, GLY25, LYS28, ALA30, ILE31, GLY33, LEU34, MET35	HIS1, HIS2, HIS3, HIS4, HIS5, HIS6	ALA21:HIS3		-6.8
Model 8	HIS13, LYS16, LEU17, VAL18, PHE20, ALA21, VAL24, GLY25, LYS28, ILE31, LEU34, MET35, GLY38, VAL39, ALA42	HIS1, HIS2, HIS3, HIS4, HIS5, HIS6	GLY38:HIS3		-6.6
Selected amino acids constituting the interacting interface	LYS16, LEU1, PHE20, ALA21, VAL24, GLY25, LYS2, ILE31, LEU34, MET35,	HIS1, HIS3, HIS4, HIS5, HIS6			-6.8

Supplementary Table 2. Selected models of the His6: A β peptide complex forming the Cluster 2

Cluster 2	Receptor (A β peptide)	Ligand (His6)	H-bond	Salt bridges	Binding Energy Δ^iG kcal/mol
Model 2	ASP1, ALA2, GLU3, HIS6, ASP7, TYR10, HIS14	HIS1, HIS2, HIS3, HIS4, HIS5, HIS6			-1.4
Model 5	ALA2, GLU3, HIS6, ASP7, TYR10, HIS14, LEU17	HIS1, HIS2, HIS3, HIS5, HIS6	HIS6: HIS5 HIS6:HIS6 GLY9:HIS1 GLY9:HIS1 TYR10:HIS1		-4.1
Model 9	GLU3, PHE4, HIS6, ASP7, TYR10, HIS14, GLN15, LEU17, VAL18	HIS1, HIS2, HIS5, HIS6	GLU3:HIS5 HIS6:HIS5 ASP7:HIS6	GLU3:HIS6 GLU11:HIS2	-4.8
Model 10	ALA2, GLU3, HIS6, ASP7, TYR10, HIS14	HIS1, HIS2, HIS3, HIS4, HIS6	ALA2:HIS3 GLU3:HIS2 GLU3:HIS1 ASP7:HIS2 GLY9:HIS6	GLU3:HIS1 ASP7:HIS2	-3.3

Selected
amino acids
constituting
the
interacting
interface

GLU3, HIS6,
ASP7,
TYR10,
HIS14

HIS1,
HIS2,
HIS6

-4.8

Supplementary Table 3. Selected models of the His6: A β peptide complex forming the Cluster 3

Cluster 3	Receptor (A β peptide)	Ligand (His6)	Binding Energy Δ^iG kcal/mol		
Model 3	GLY9, TYR10, VAL12, HIS13, HIS14, LEU17, VAL18	HIS1, HIS2, HIS3, HIS4, HIS5, HIS6	TYR10: HIS6 HIS14:HIS4		-2.6
Model 6	ASP7, SER8, GLY9, GLU11, VAL12, GLN15, LYS16, PHE19	HIS1, HIS2, HIS6	GLN15:HIS3 ASP7:HIS2 GLN15:HIS2	ASP7:HIS2 ASP7:HIS2 GLU11:HIS2 GLU11:HIS2	-1.7
Selected amino acids constituting the interacting interface	GLY9, VAL18	HIS1, HIS2, HIS6			-2.6