

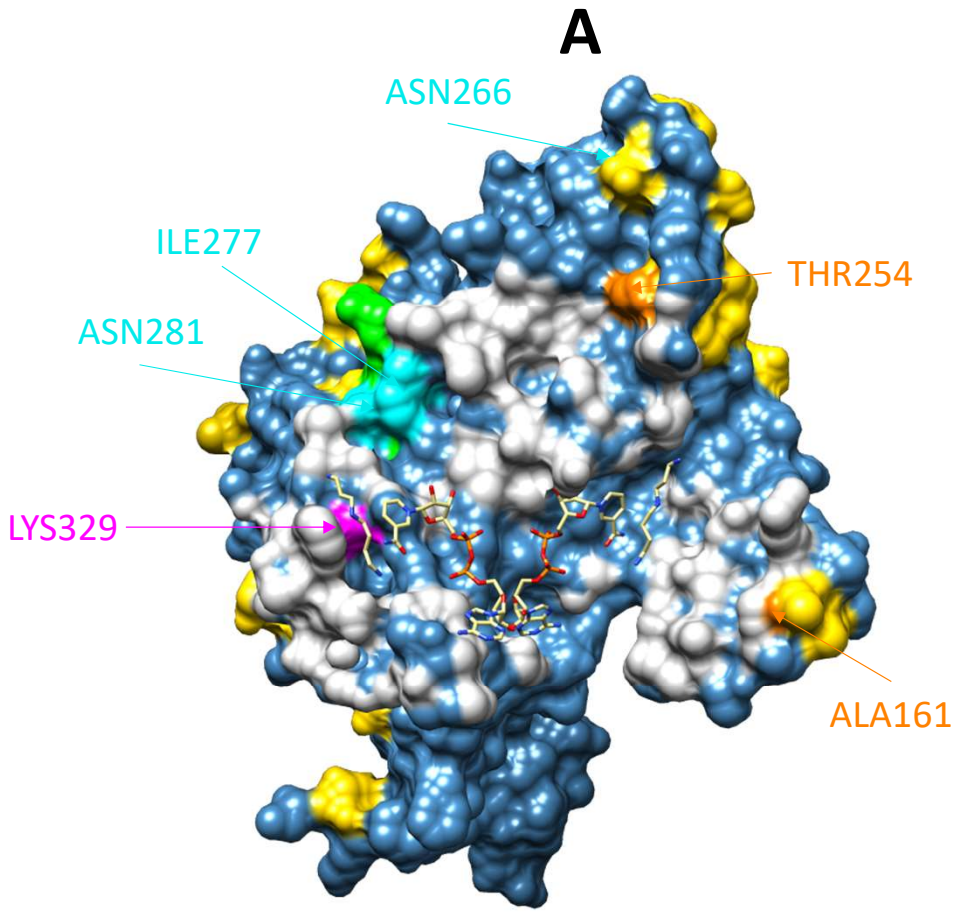
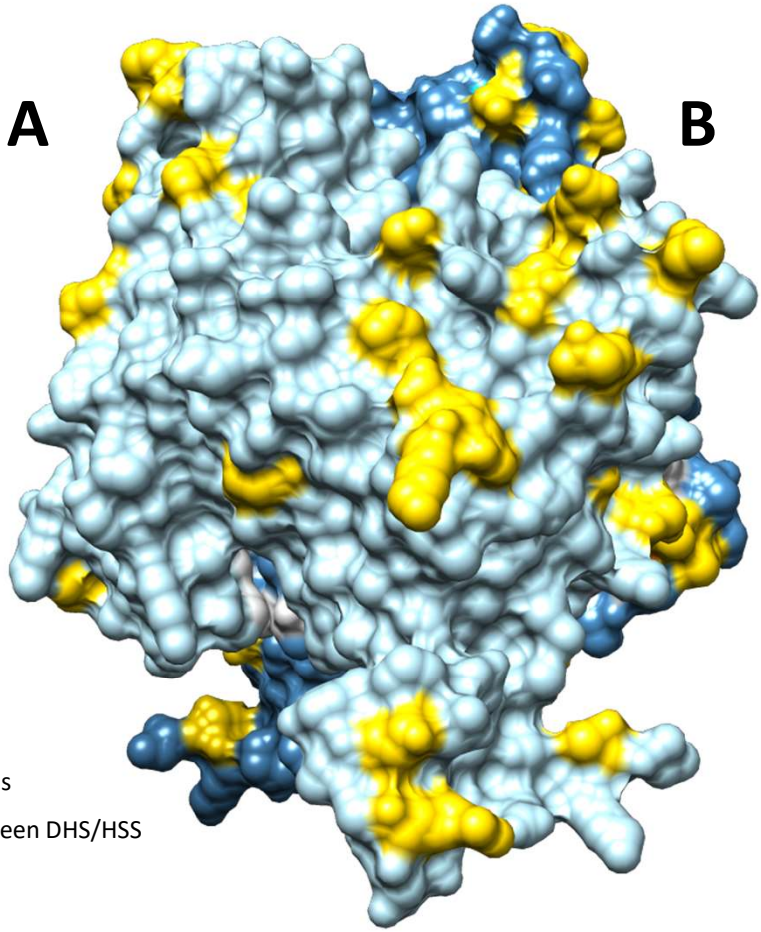
Supplemental figure 3. **Homology models.**

Shown are the surface representation of the A-B dimer and the A monomer from

- *Ipomoea neei* DHS & HSS
- *Ipomoea alba* DHS & HSS
- *Camonea umbellata* DHS & HSS
- *Distimake quinquefolius* individuuum 1 and 2, DHS & HSS

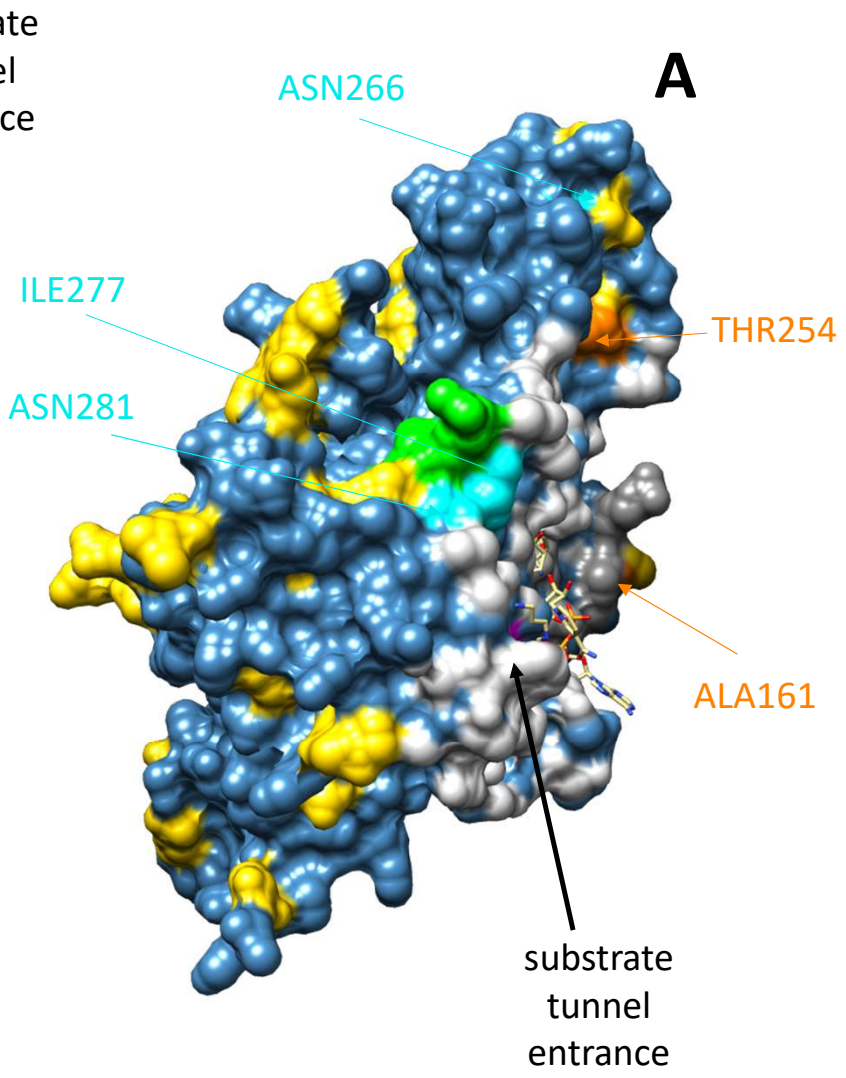
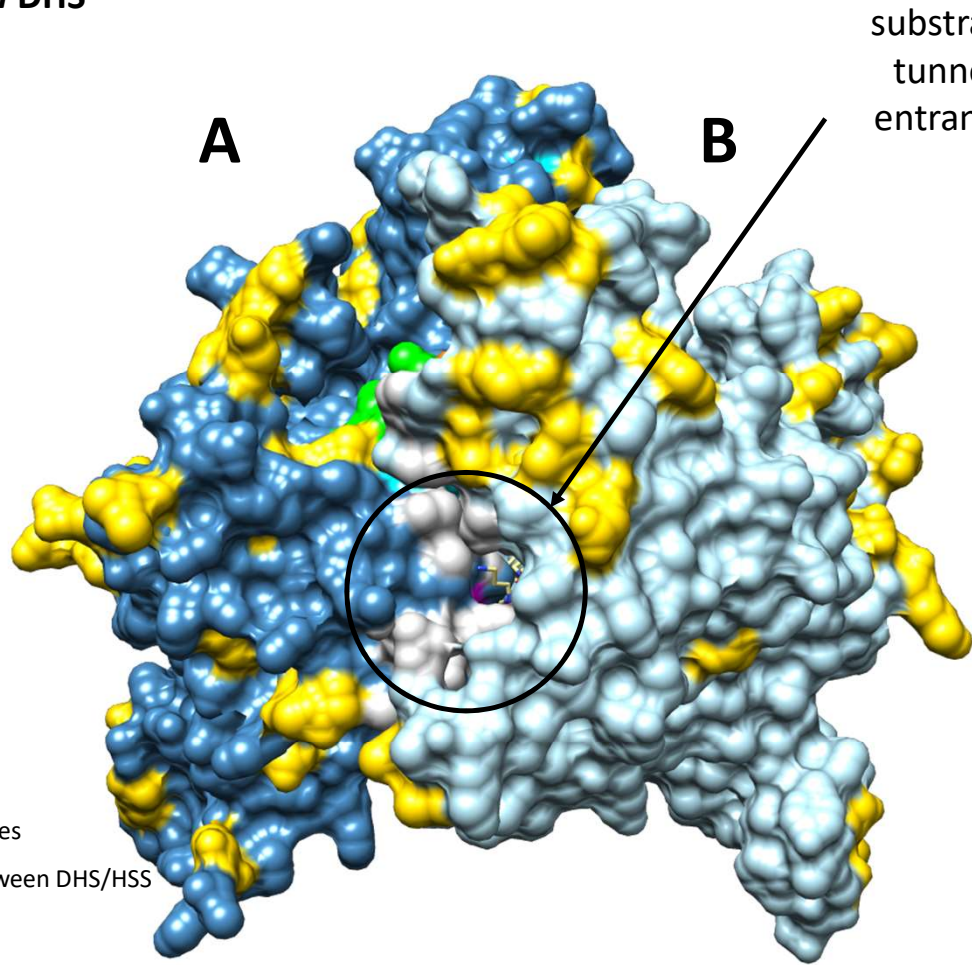
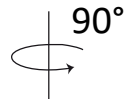
Residues that differ between the corresponding DHS and HSS pairs from one species are colored in yellow. If these residues are additionally located in the interface of the A-B dimer, they are colored in orange. The interface area of chain A is colored in light gray with the catalytic lysine in purple. The location of the extended HSS motif and the conserved RAM motif is indicated. The substrate entrance tunnel is highlighted in slide 3.

Ipomoea neei DHS



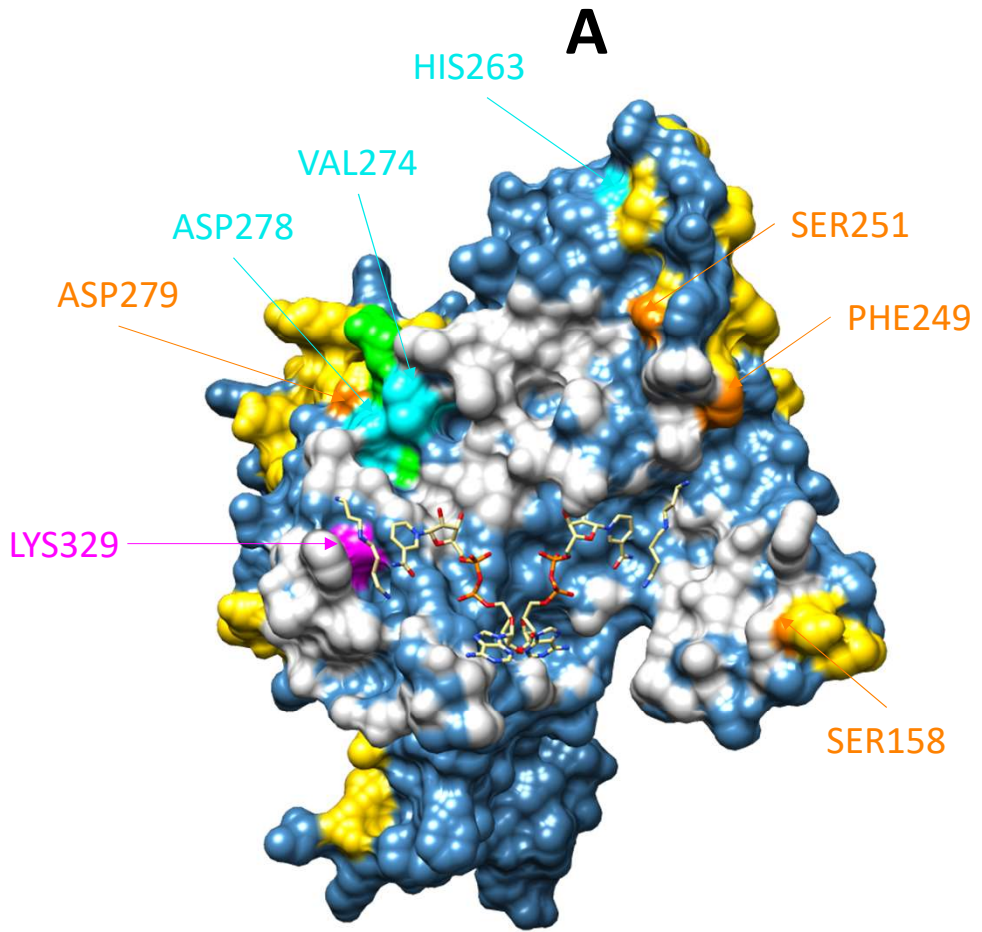
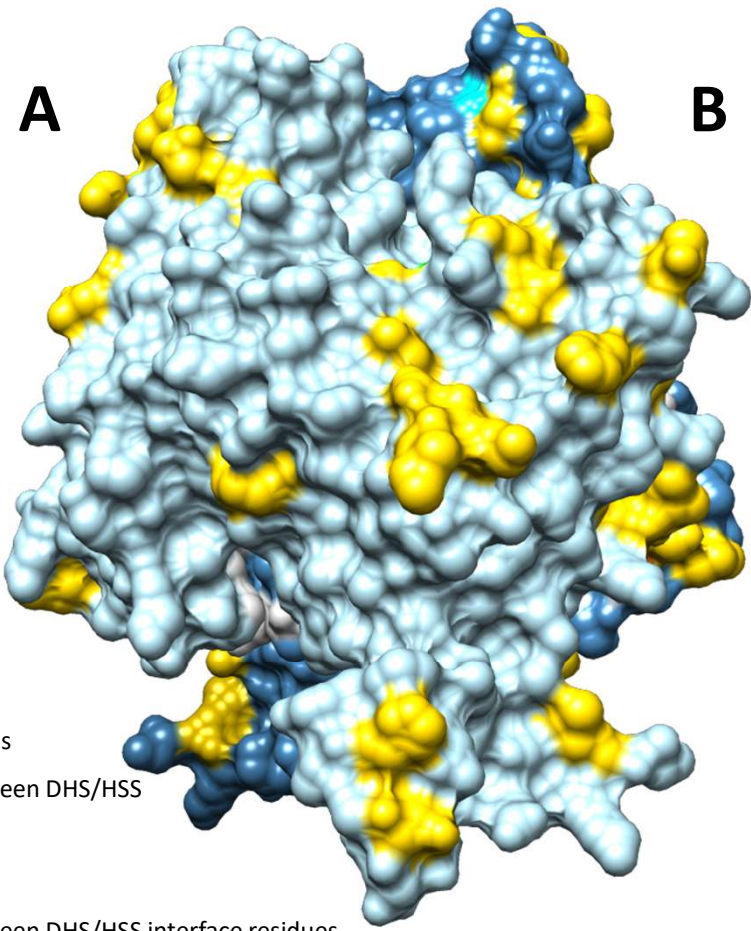
- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

Ipomoea neei DHS



- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

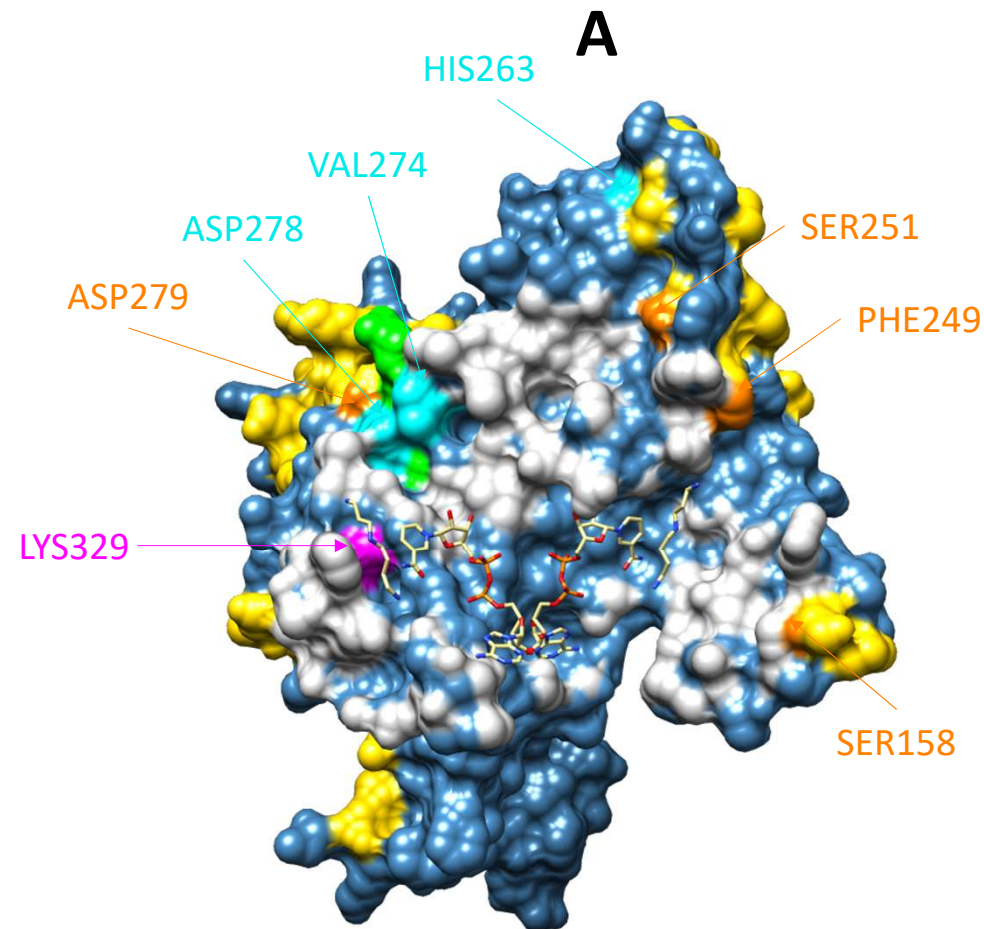
Ipomoea neei HSS



- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

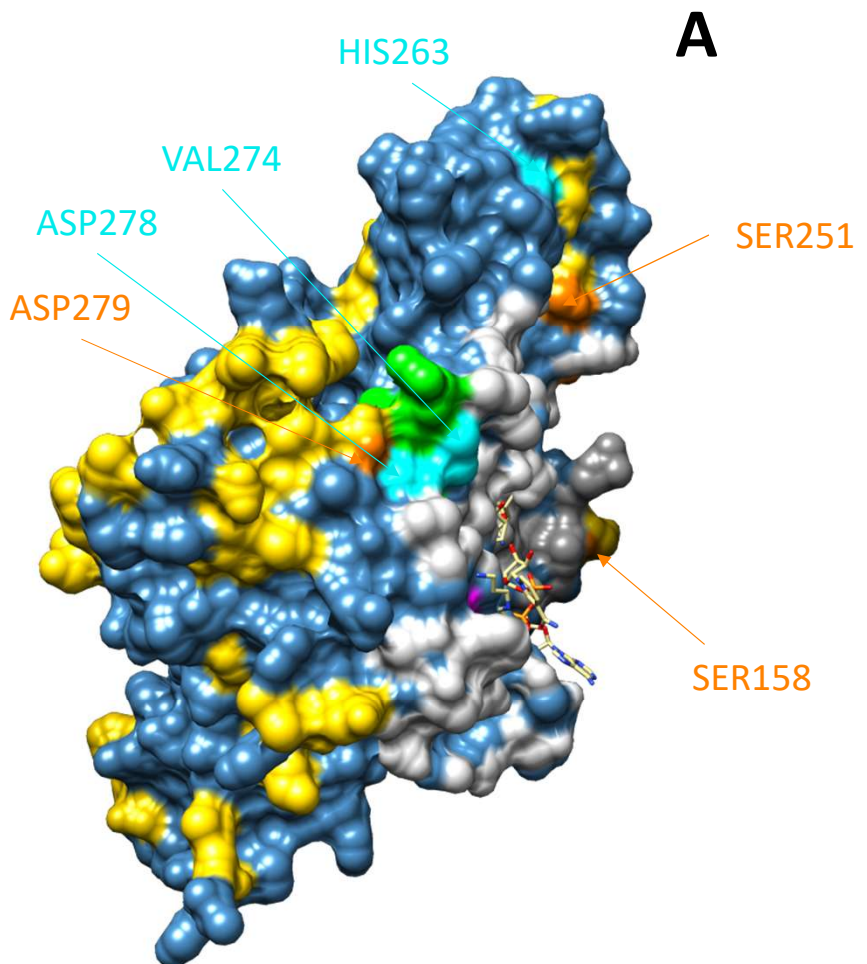
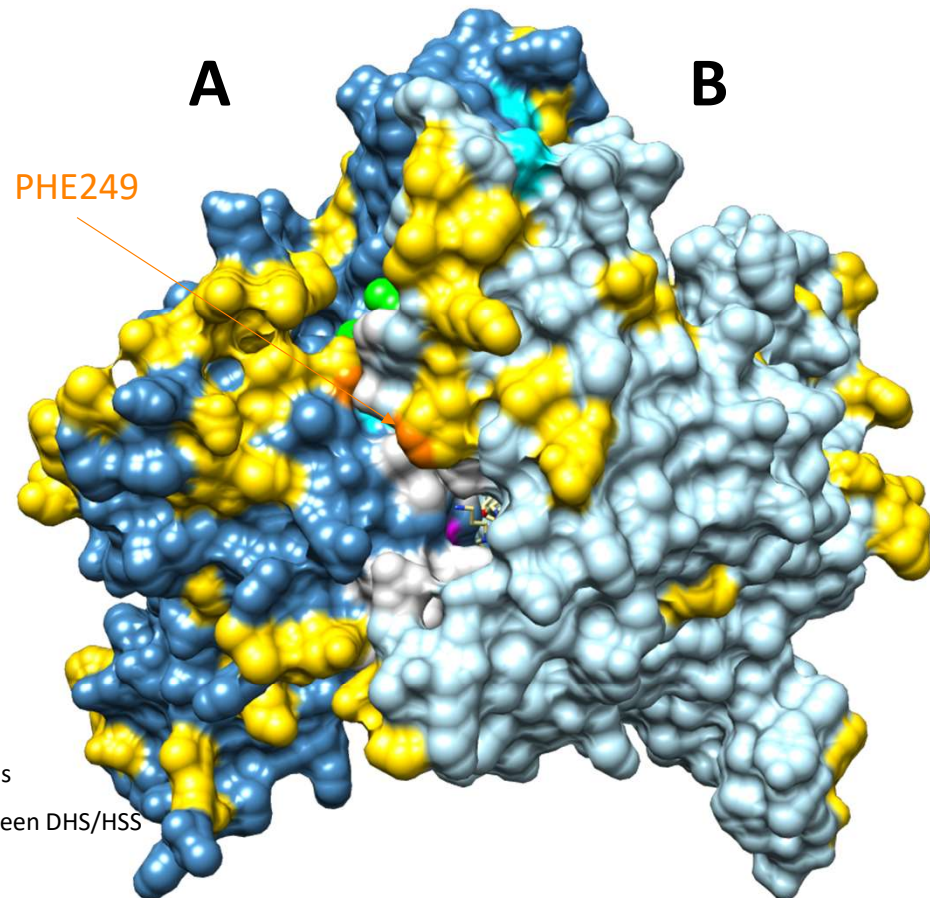
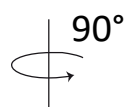
Ipomoea neei HSS

DHS	HSS
interface residues & different:	
Ala161	Ser158
<i>no interface residue</i>	Phe249
Thr254	Ser251
<i>no interface residue</i>	Asp279
extended HSS motif:	
Asn266	His263
Ile277	Val274
Asn281	Asp278



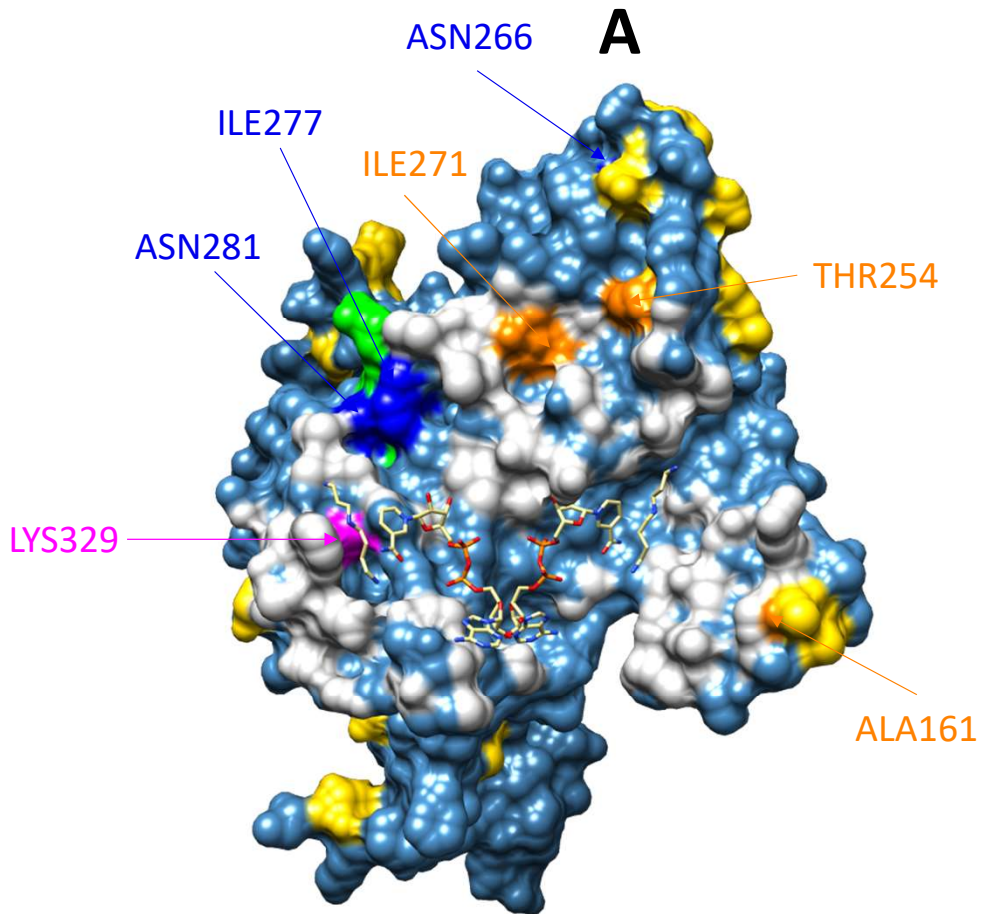
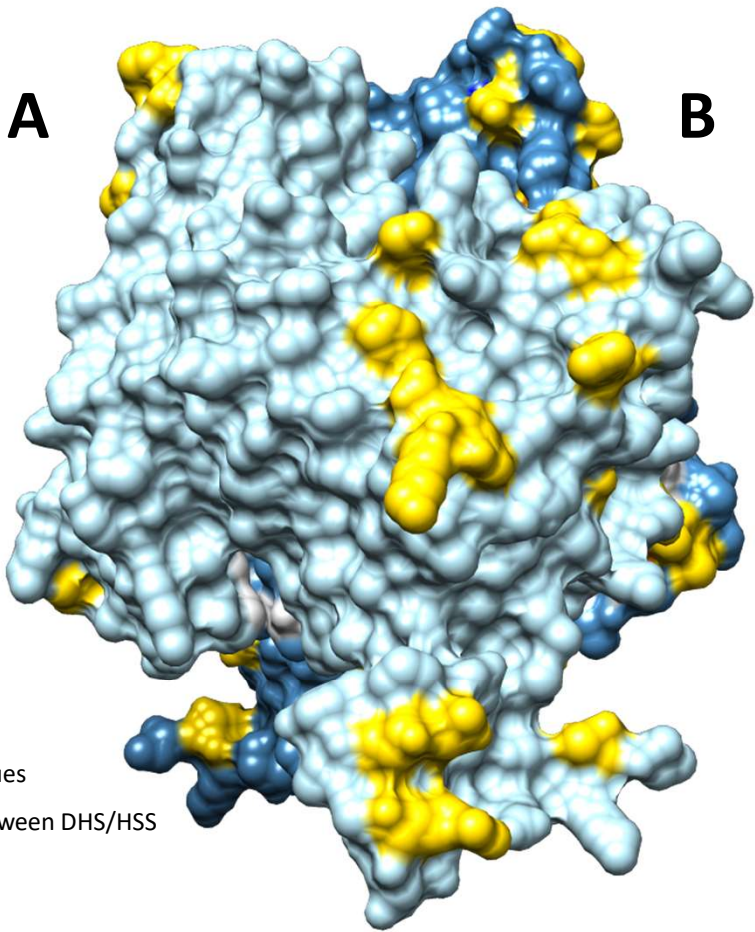
- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

Ipomoea neei HSS



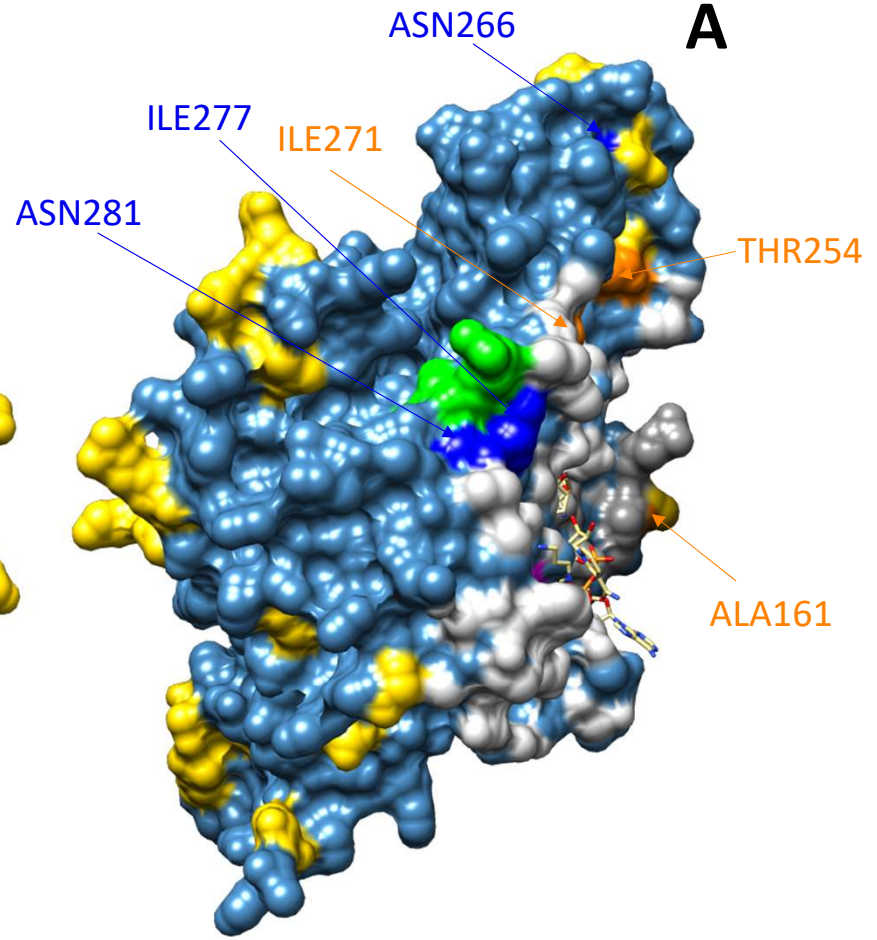
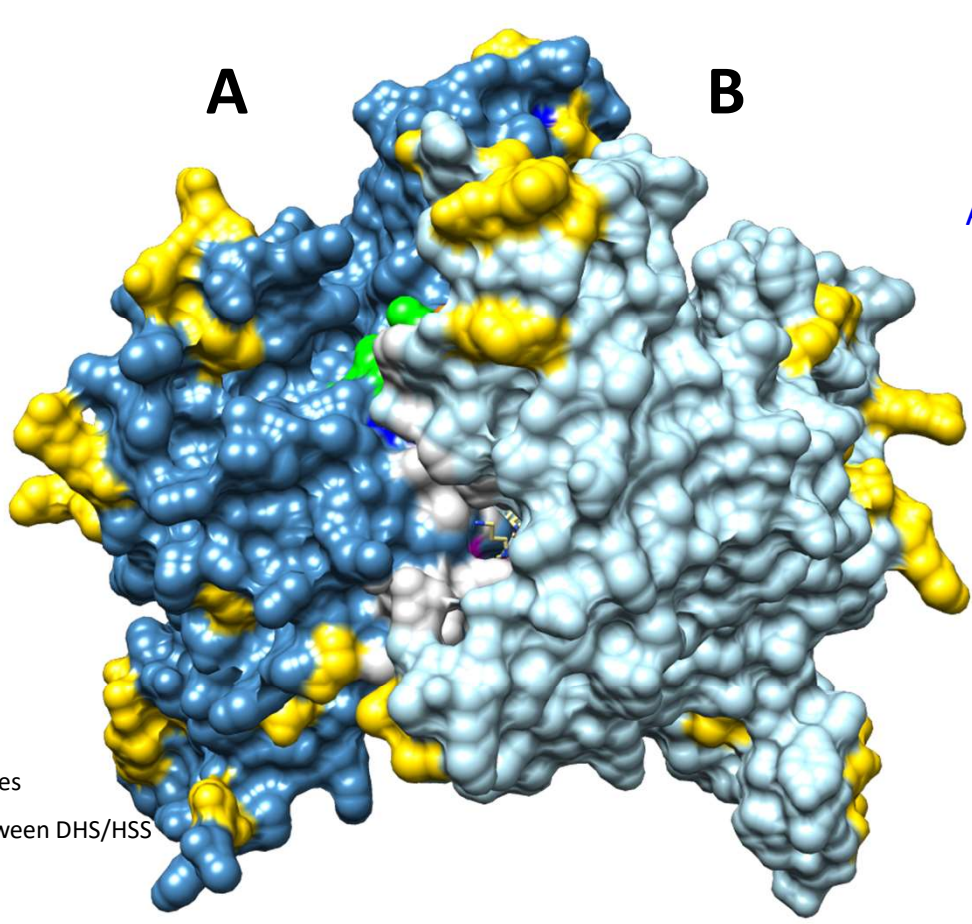
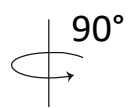
- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

Ipomoea alba DHS



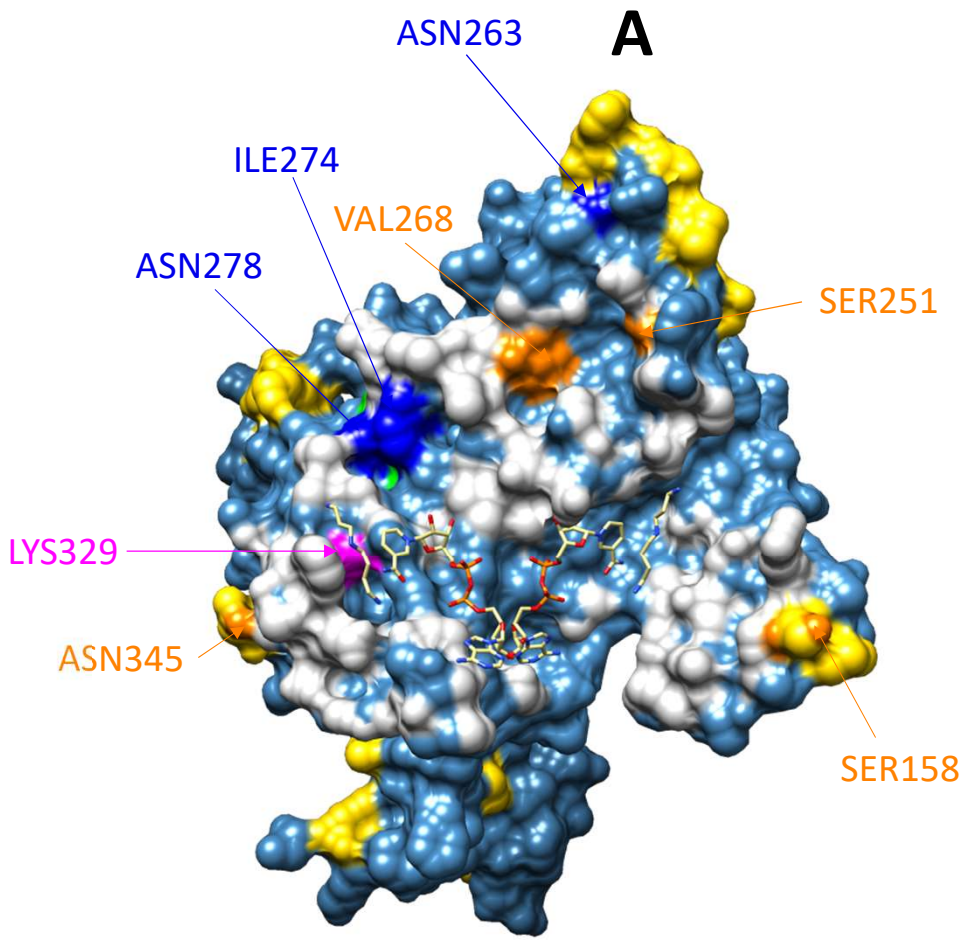
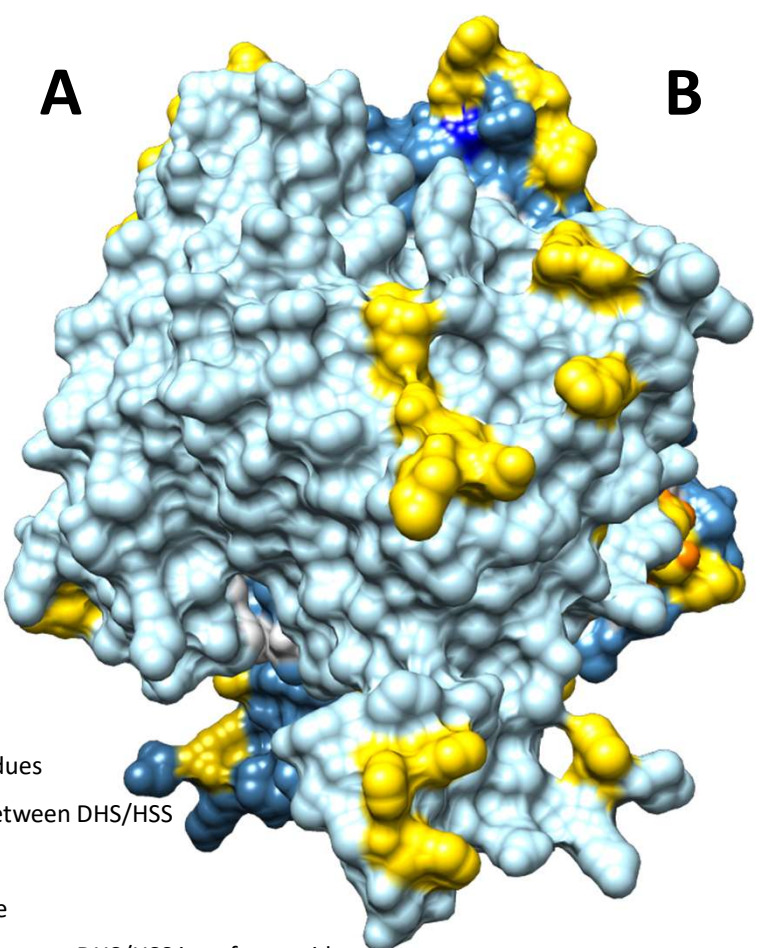
- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

Ipomoea alba DHS



- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

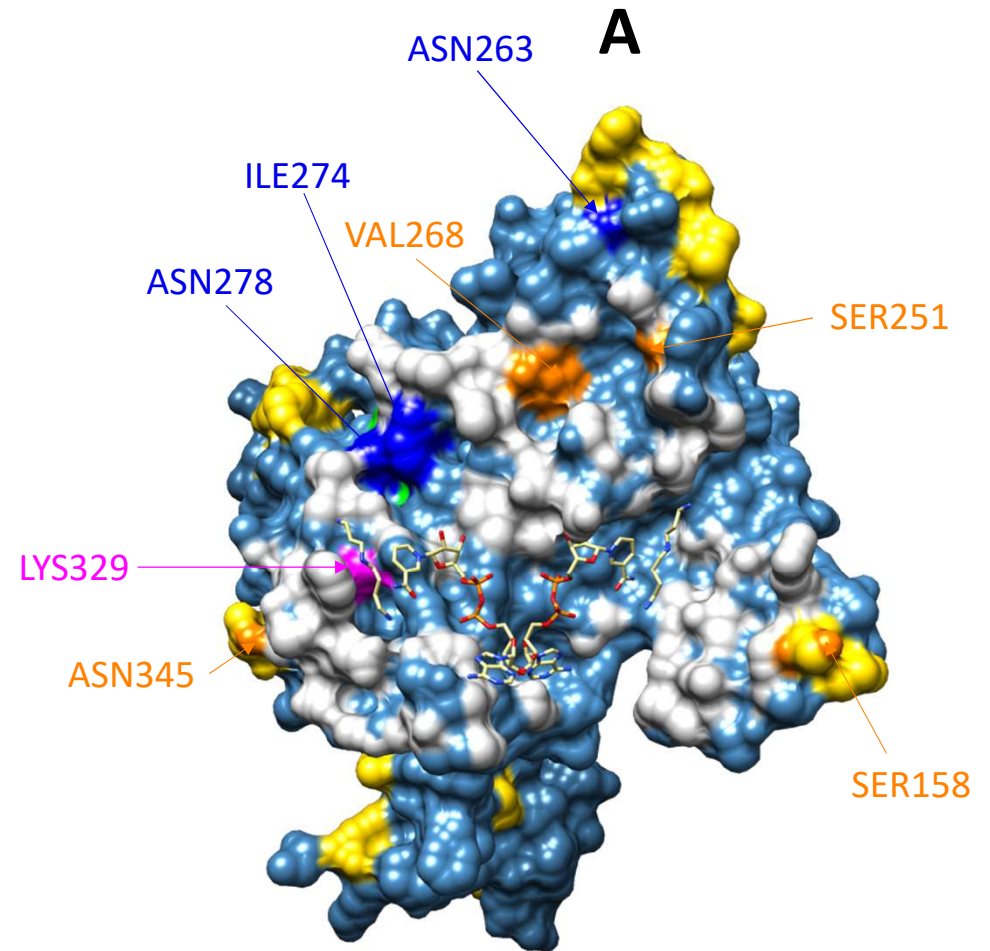
Ipomoea alba HSS



- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

Ipomoea alba HSS

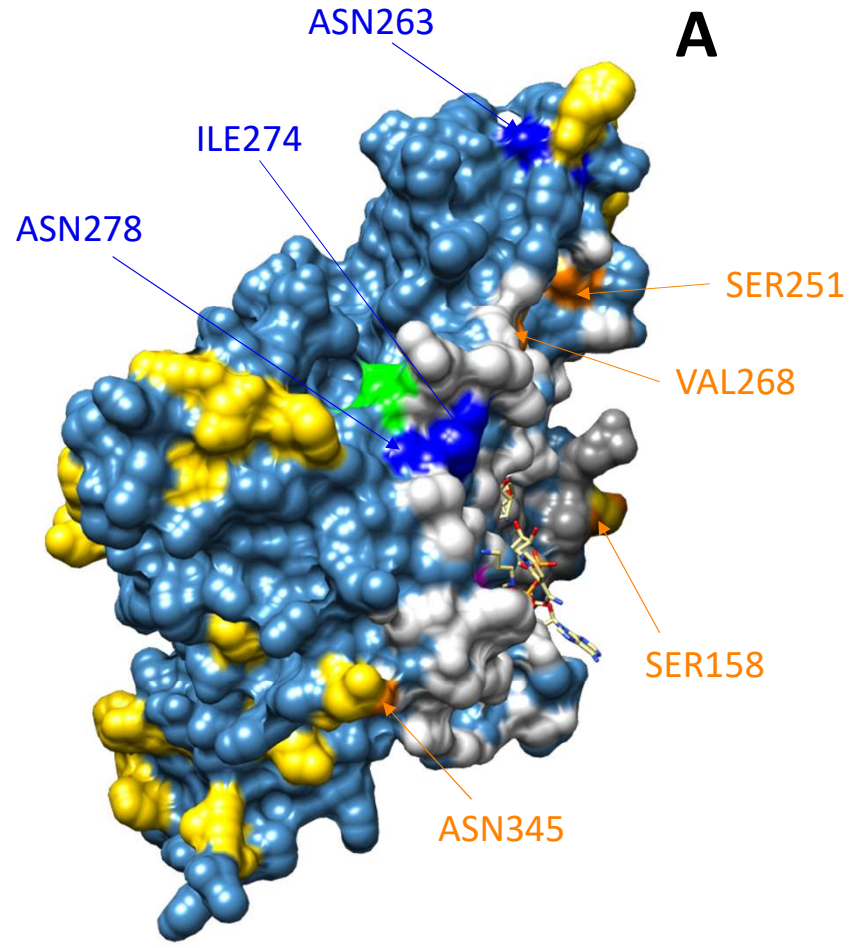
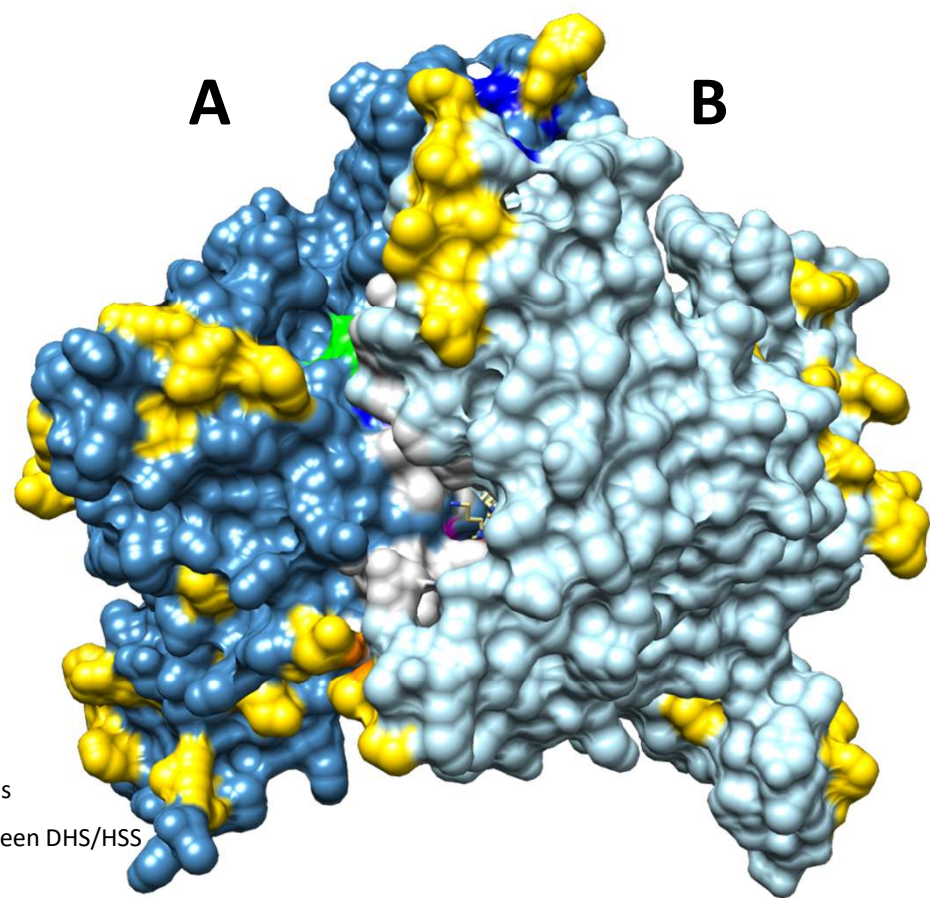
DHS	HSS
interface residues & different:	
Ala161	Ser158
Thr254	Ser251
Ile271	Val268
<i>no interface residue</i>	Asn345
extended HSS motif:	
Asn266	Asn263
Ile277	Ile274
Asn281	Asn278



- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

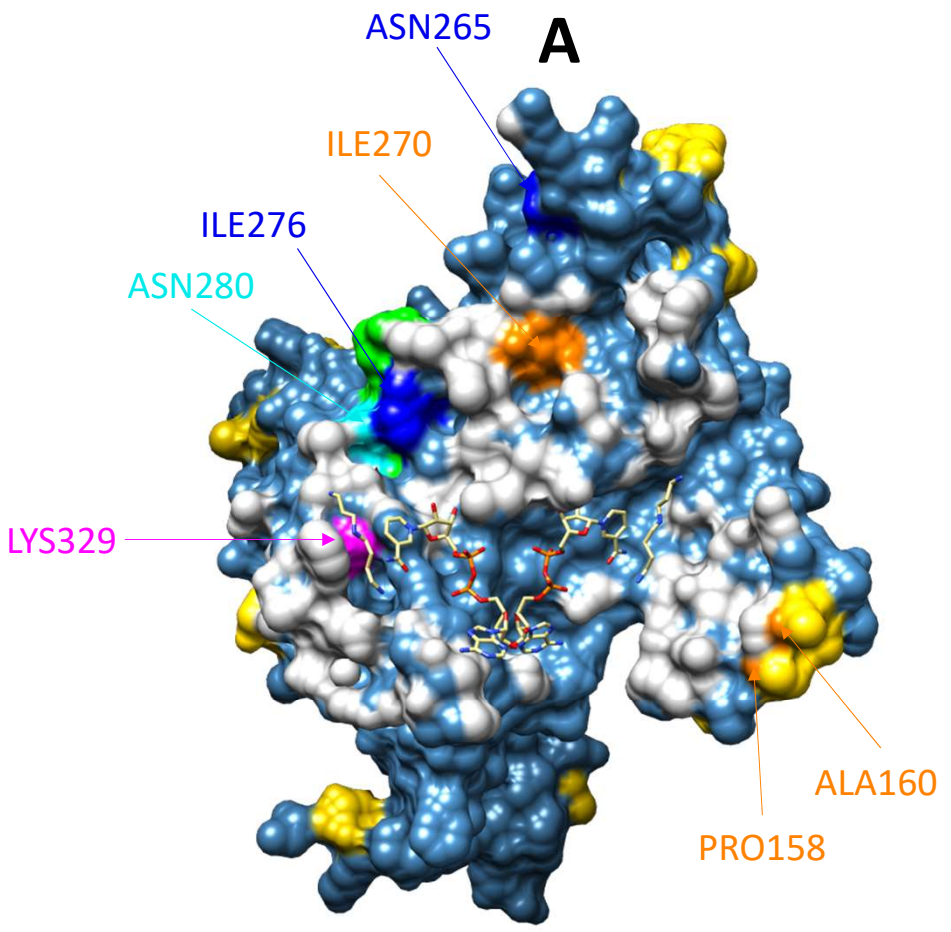
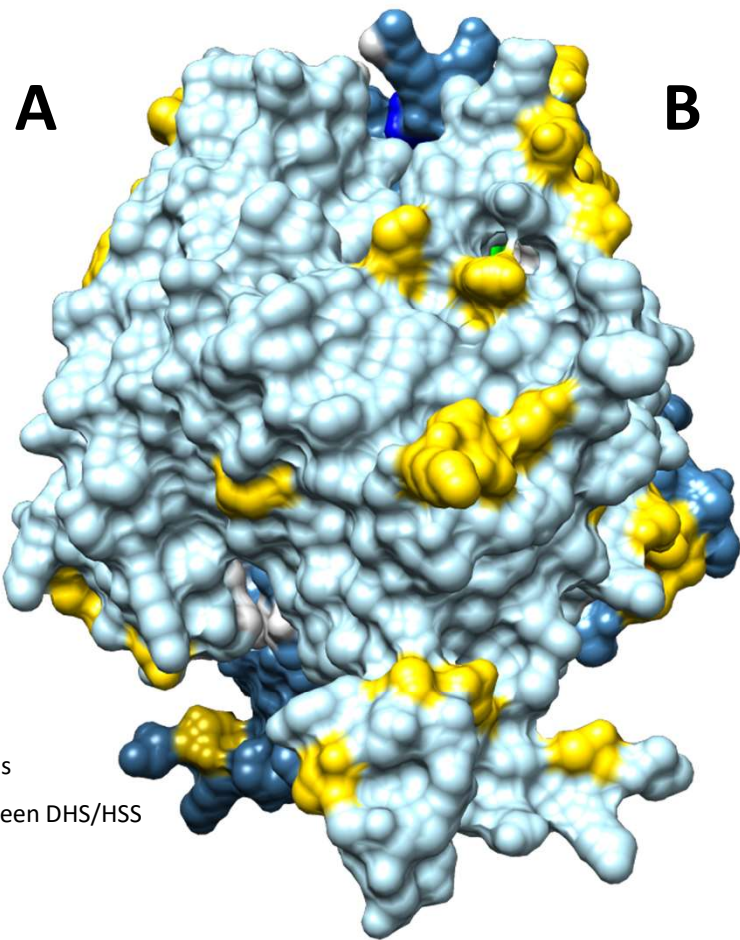
Ipomoea alba HSS

90°



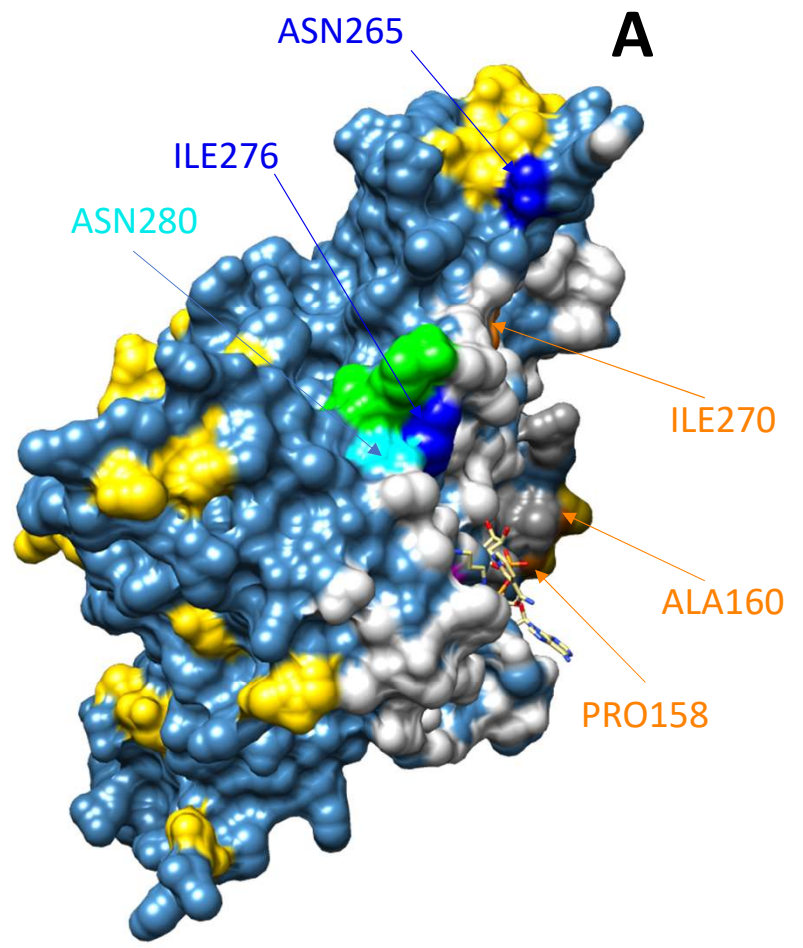
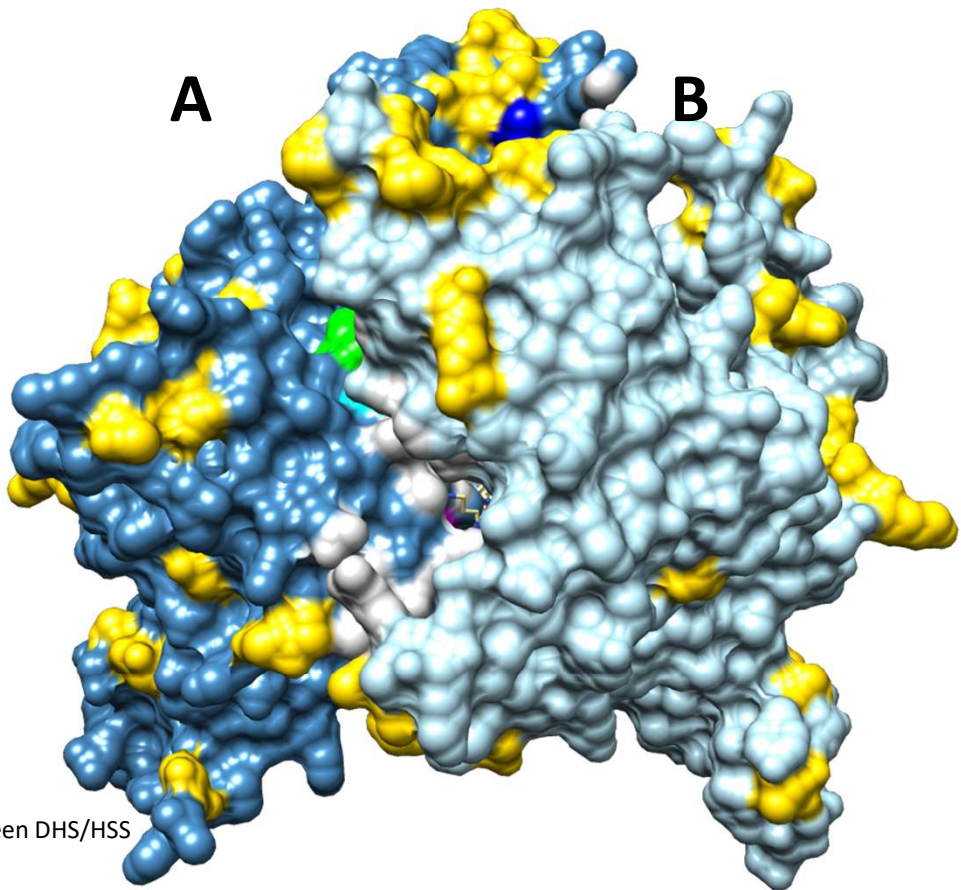
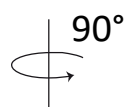
- grey interface residues
- yellow differences between DHS/HSS
- green RAM motif
- magenta catalytic lysine
- orange differences between DHS/HSS interface residues
- blue residues of extended HSS motif (if identical in DHS and HSS)
- cyan residues of extended HSS motif (if different in DHS and HSS)

Camonea umbellata DHS



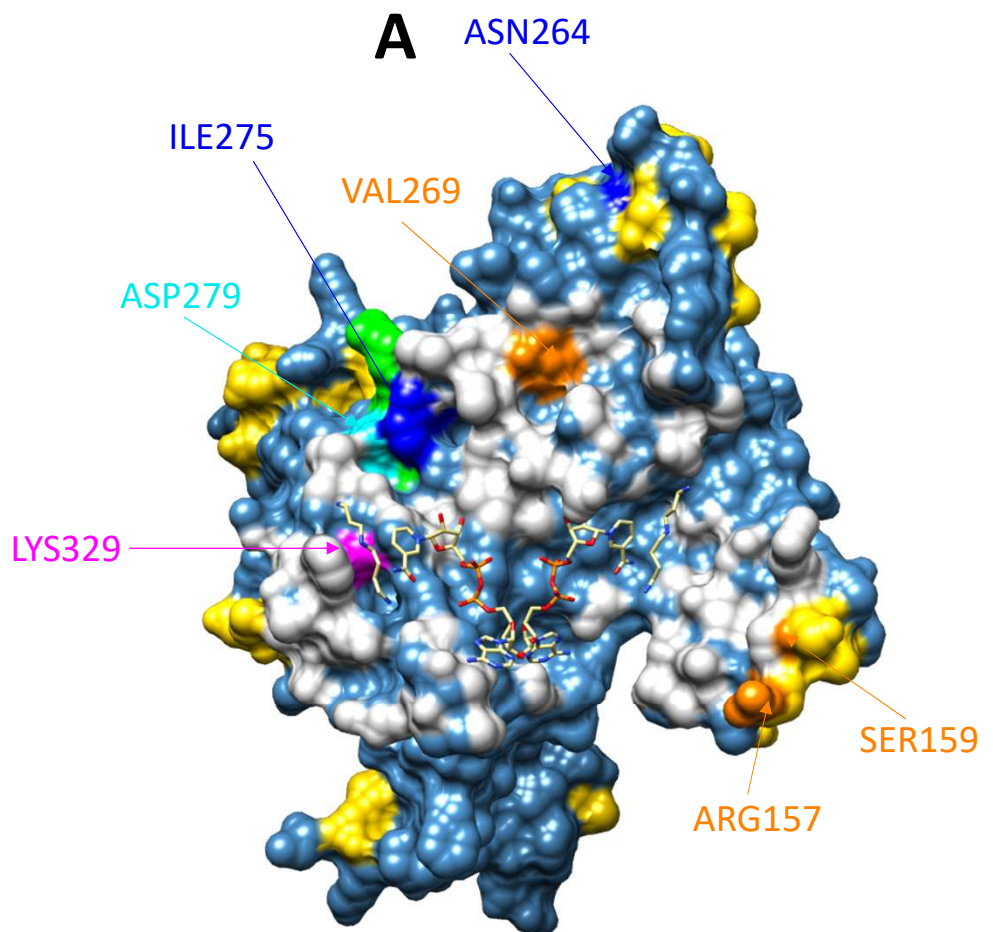
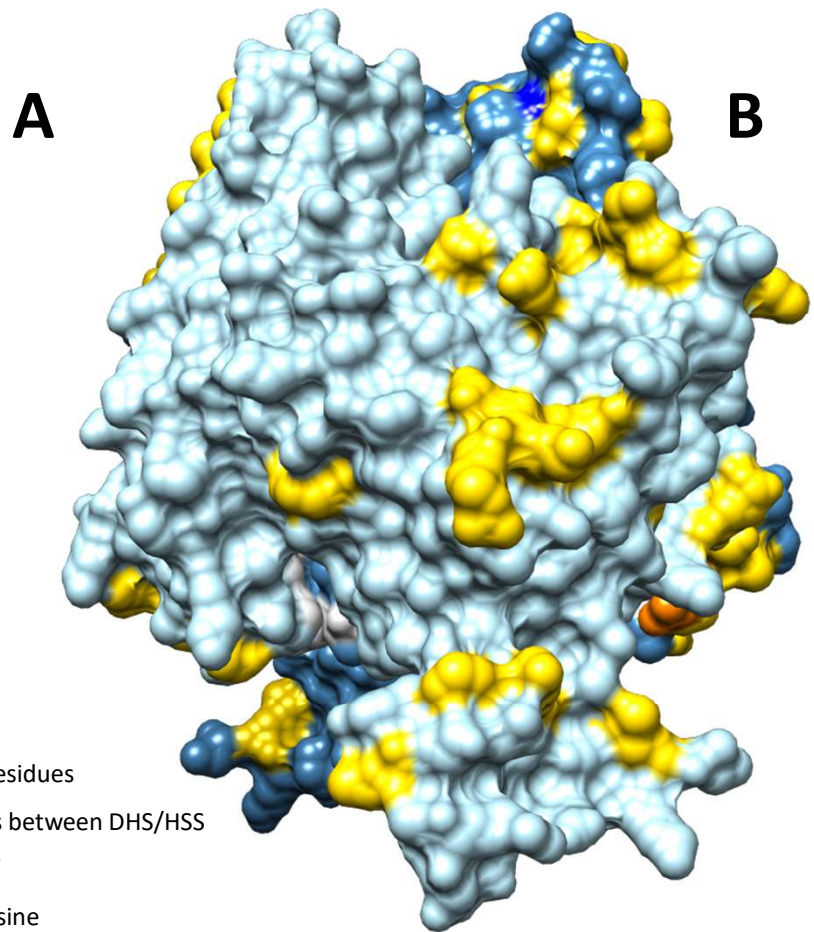
- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

Camonea umbellata DHS



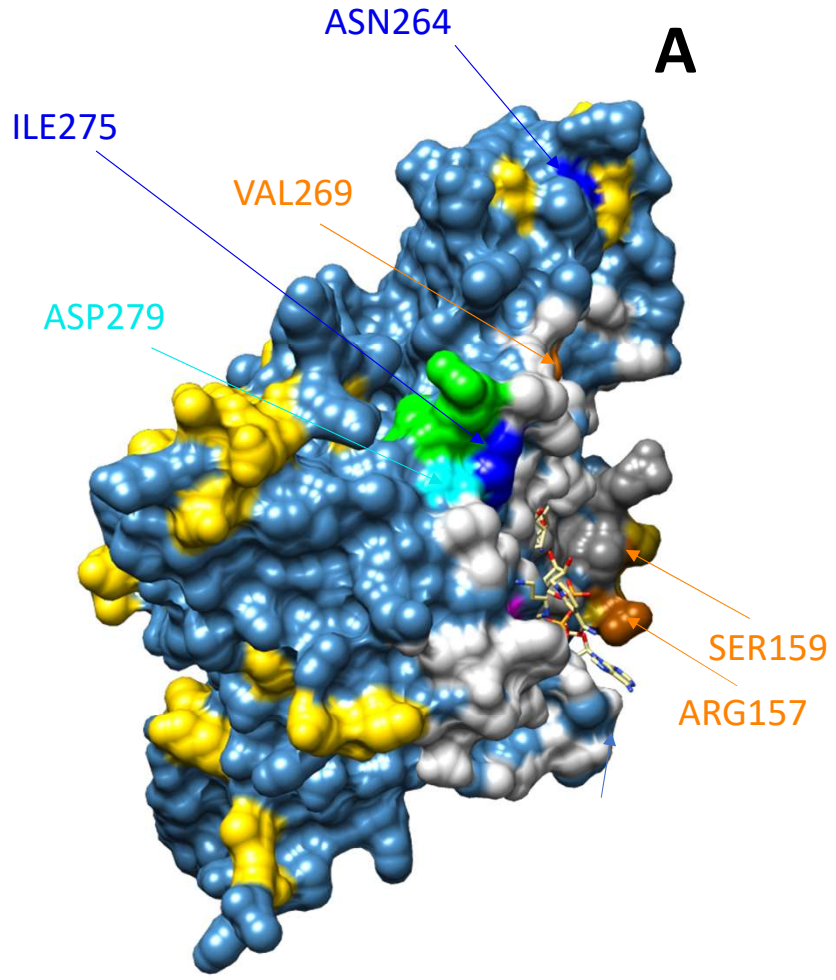
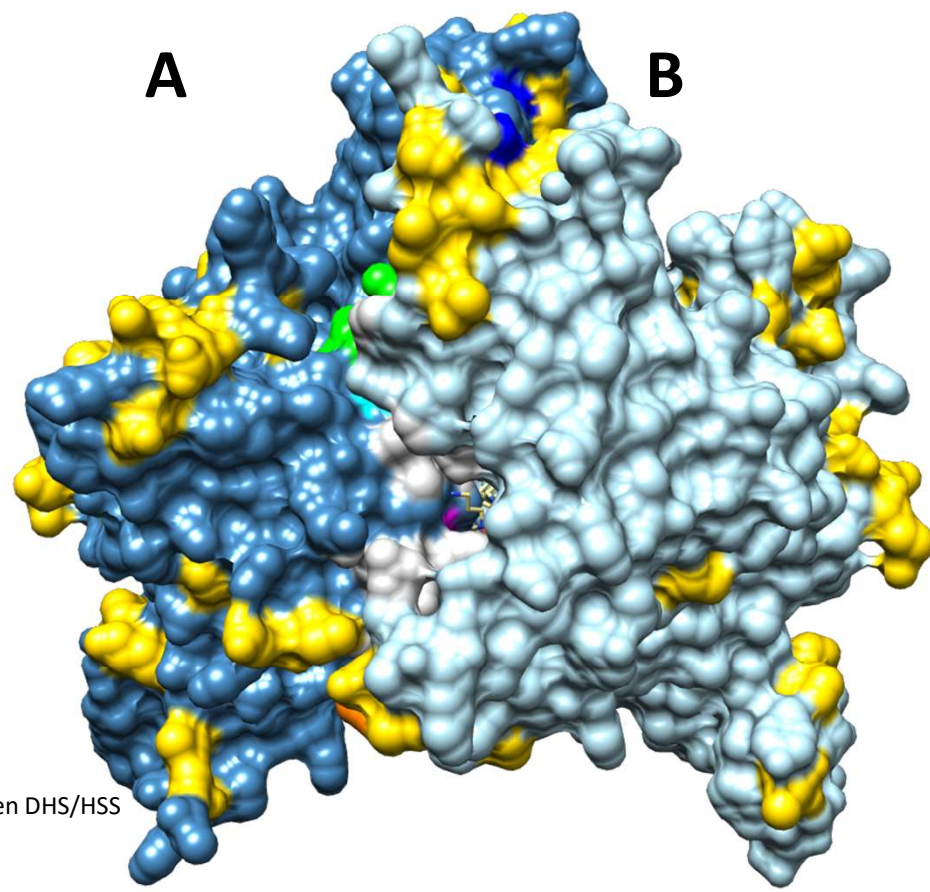
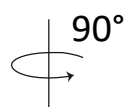
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- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
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- residues of extended HSS motif (if different in DHS and HSS)

Camonea umbellata HSS



- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
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- residues of extended HSS motif (if different in DHS and HSS)

Camonea umbellata HSS



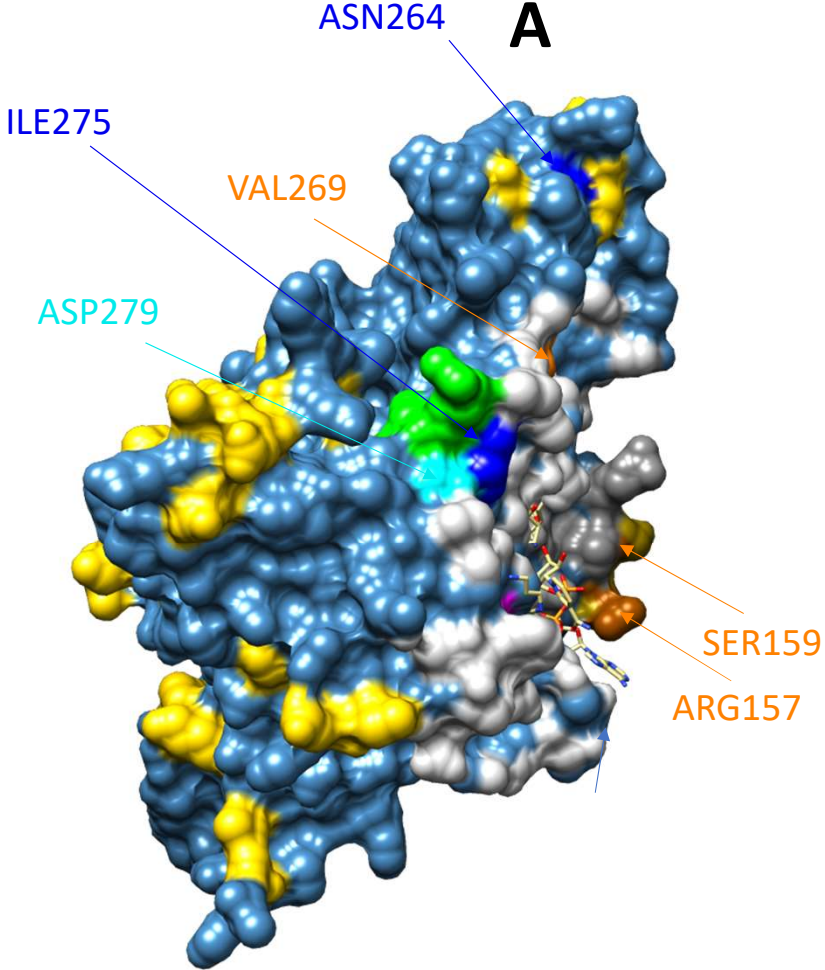
- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
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Camonea umbellata HSS

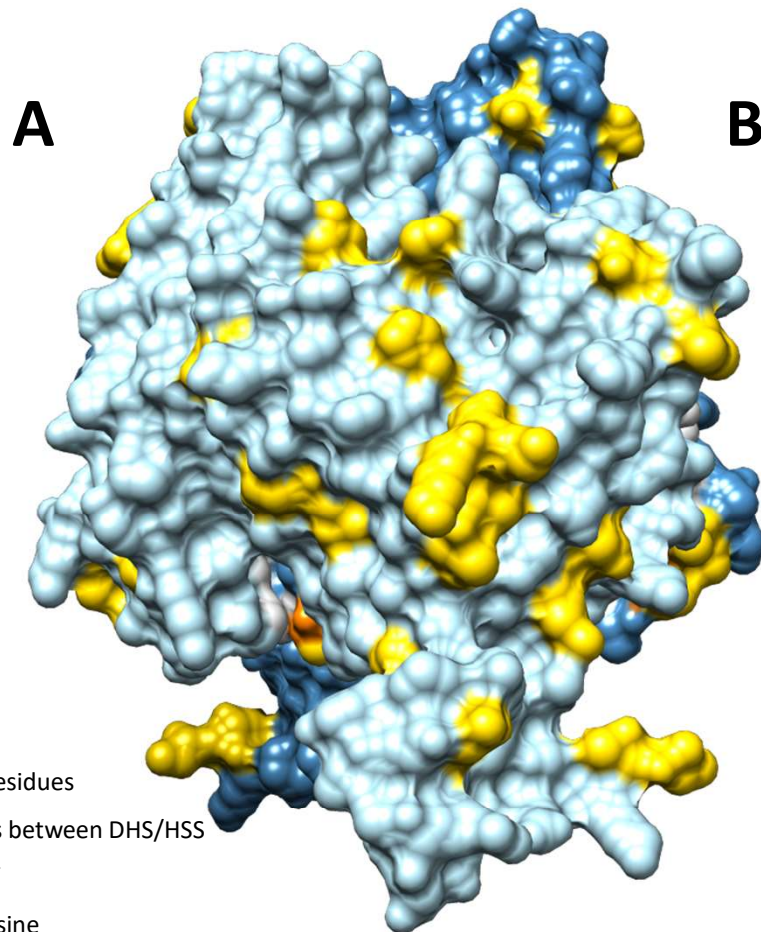
DHS	HSS
interface residues & different:	
Pro158	Arg157
Ala160	Ser159
Ile270	Val269

extended HSS motif:	
Asn265	Asn264
Ile276	Ile275
Asn280	Asp279

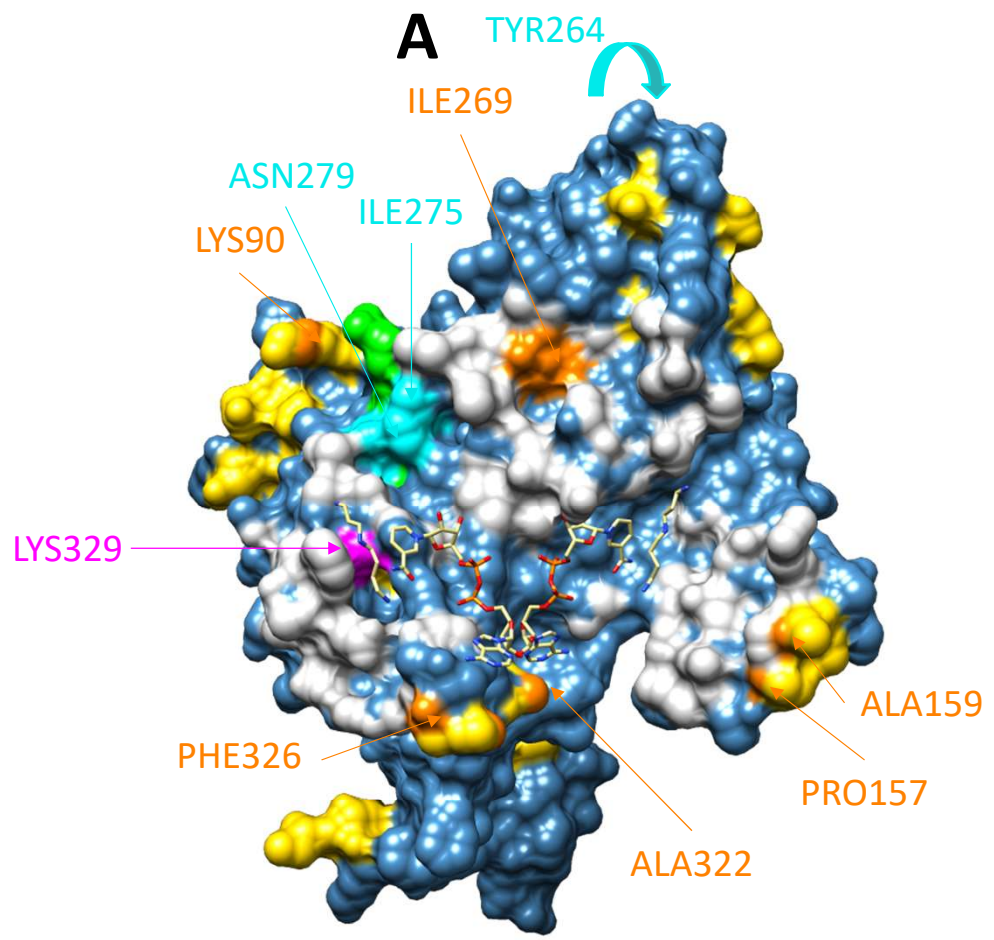
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- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
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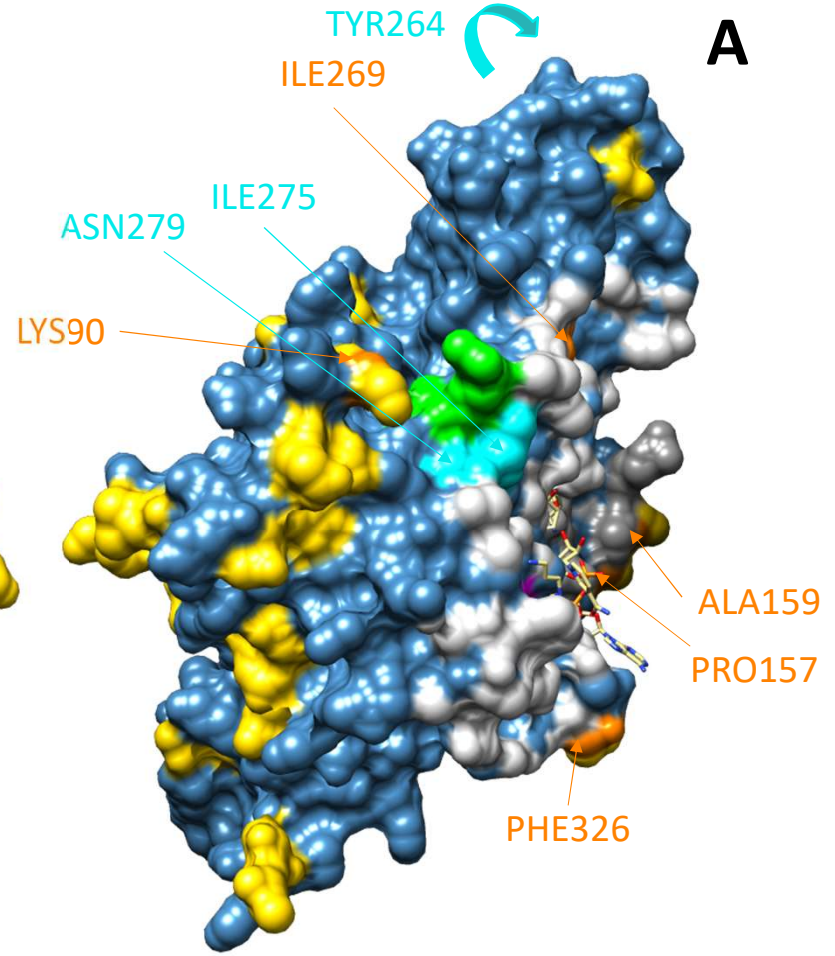
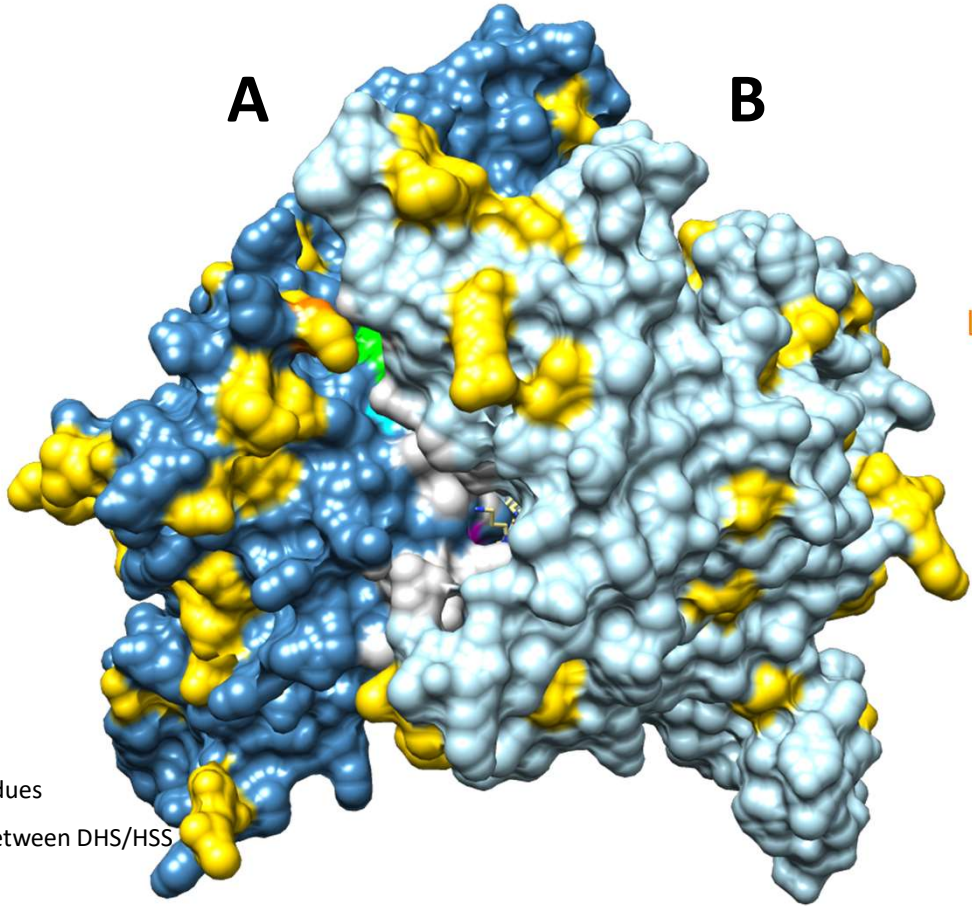
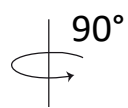
Distimake quinquefolius 1 DHS



- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)



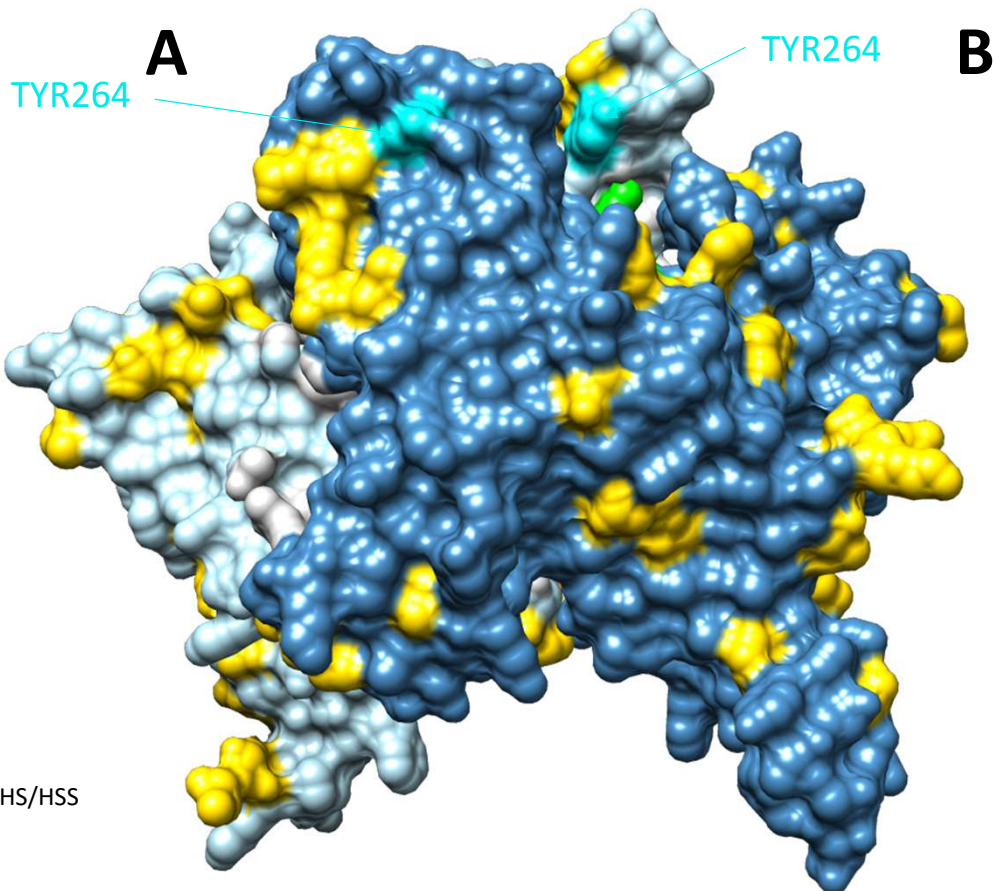
Distimake quinquefolius 1 DHS



- grey interface residues
- yellow differences between DHS/HSS
- green RAM motif
- magenta catalytic lysine
- orange differences between DHS/HSS interface residues
- blue residues of extended HSS motif (if identical in DHS and HSS)
- cyan residues of extended HSS motif (if different in DHS and HSS)

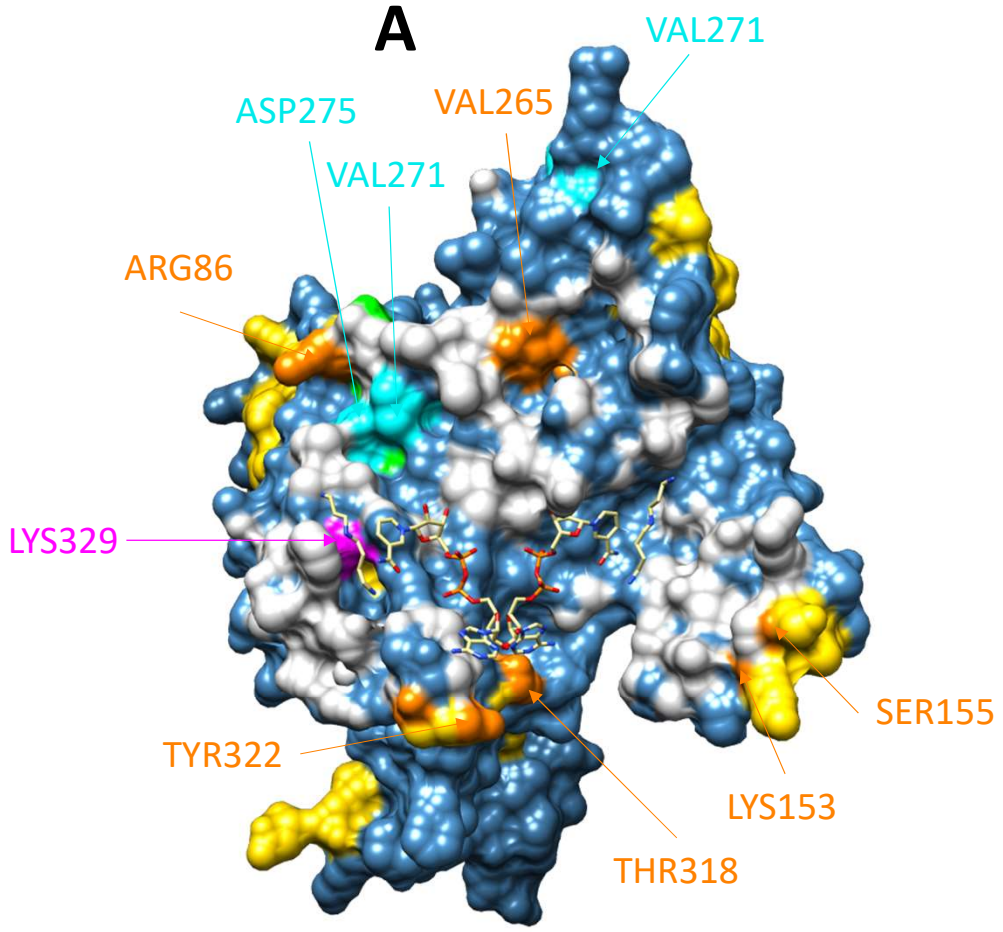
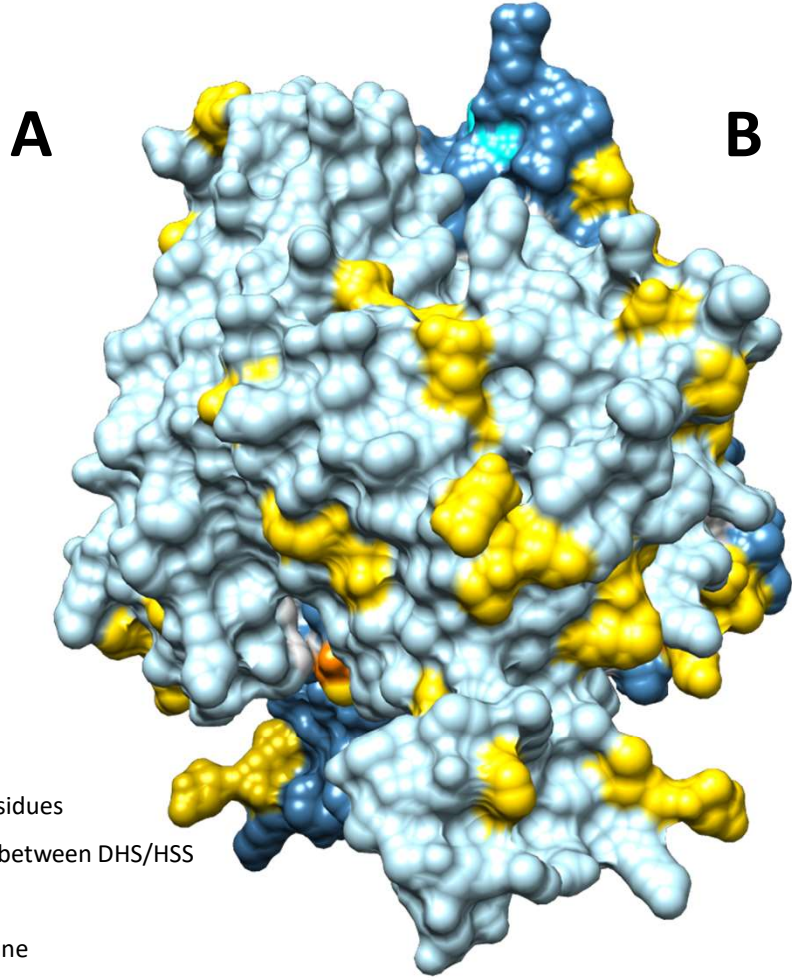
Distimake quinquefolius 1 DHS

160°



- interface residues
- differences between DHS/HSS
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- differences between DHS/HSS interface residues
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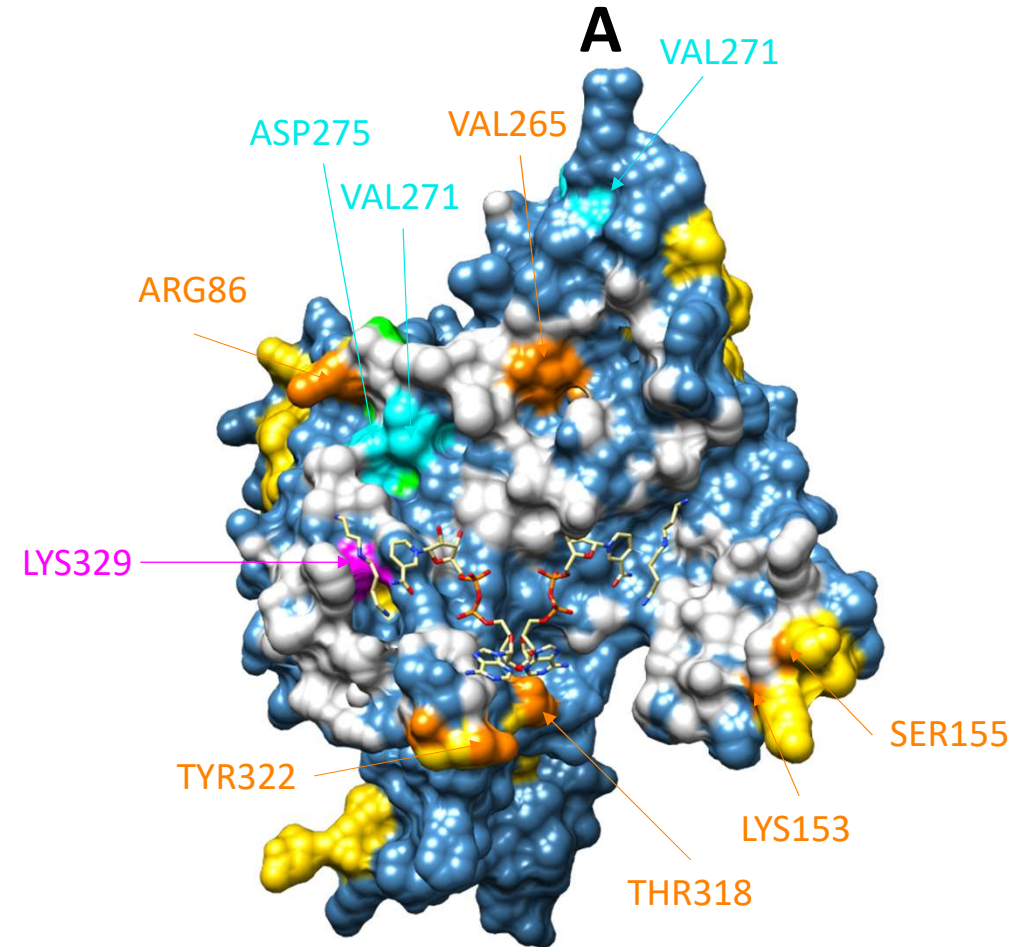
Distimake quinquefolius 1 HSS



- interface residues
- differences between DHS/HSS
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- catalytic lysine
- differences between DHS/HSS interface residues
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Distimake quinquefolius 1 HSS

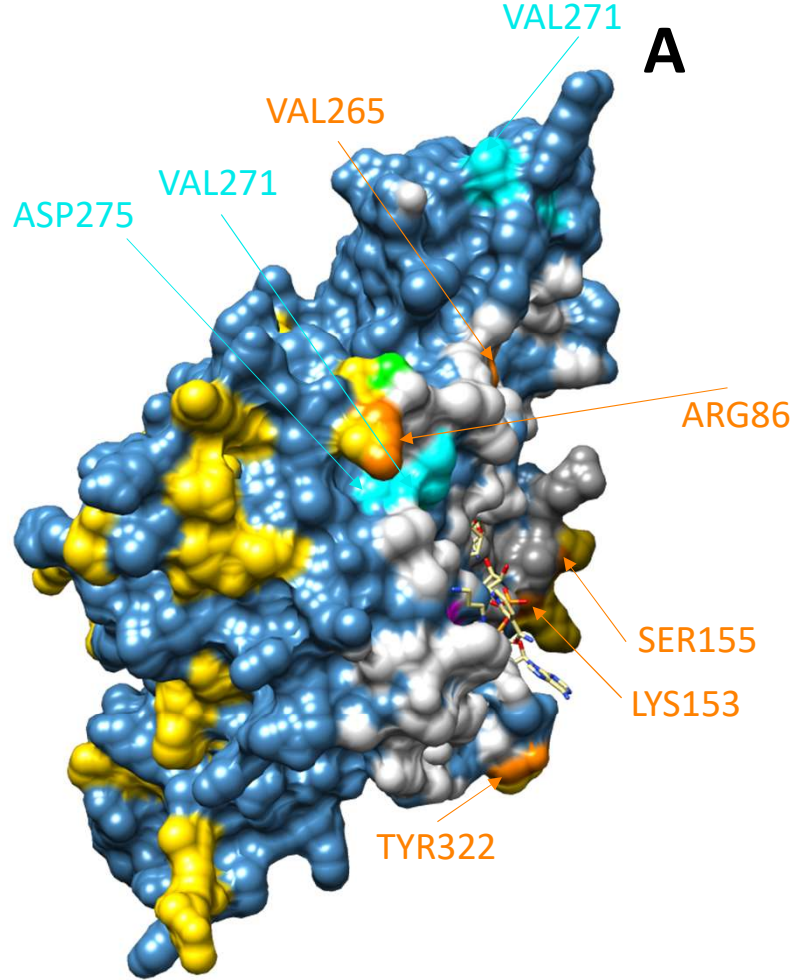
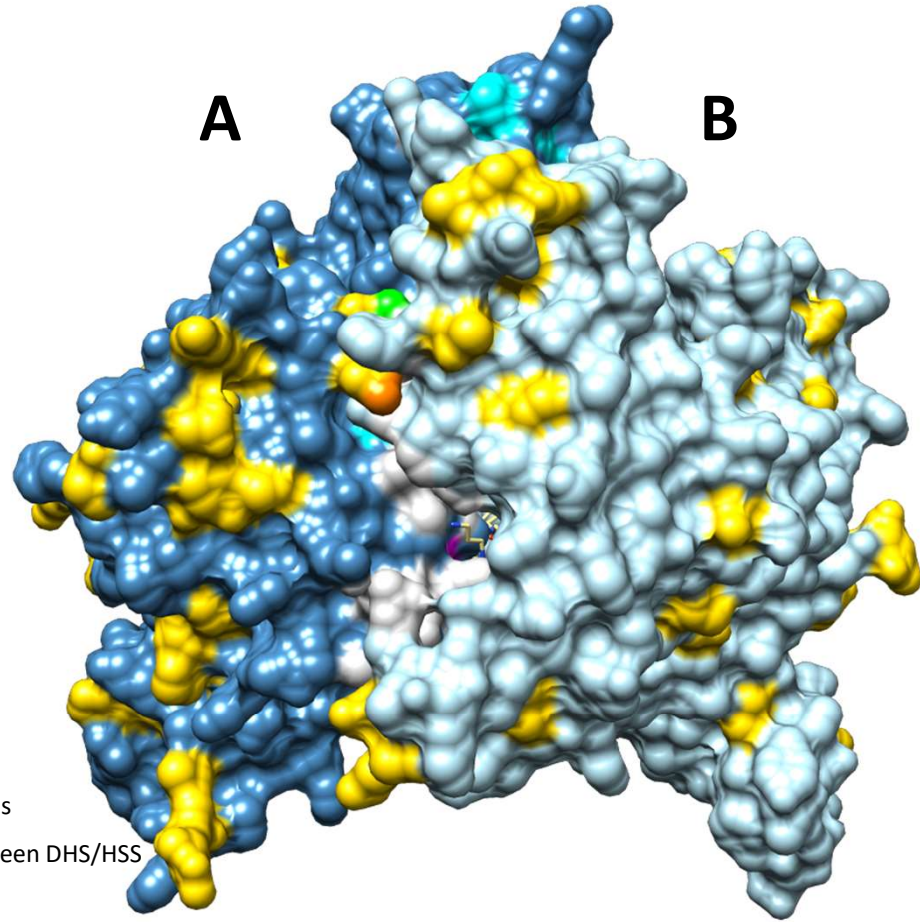
DHS	HSS
interface residues & different:	
Lys90	Arg86
Pro157	Lys153
Ala159	Ser155
Ile269	Val265
Ala322	Thr318
Phe326	Tyr322
extended HSS motif:	
Tyr264	His260
Ile275	Val271
Asn279	Asp275



- interface residues
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- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
- residues of extended HSS motif (if different in DHS and HSS)

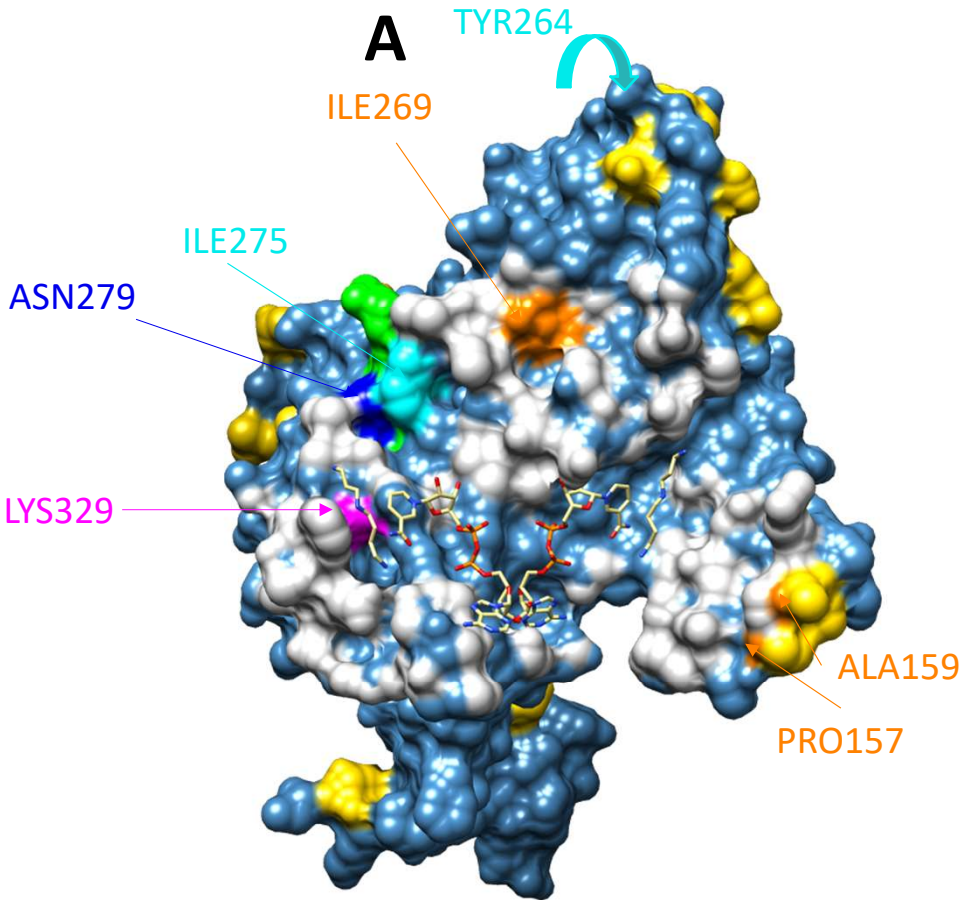
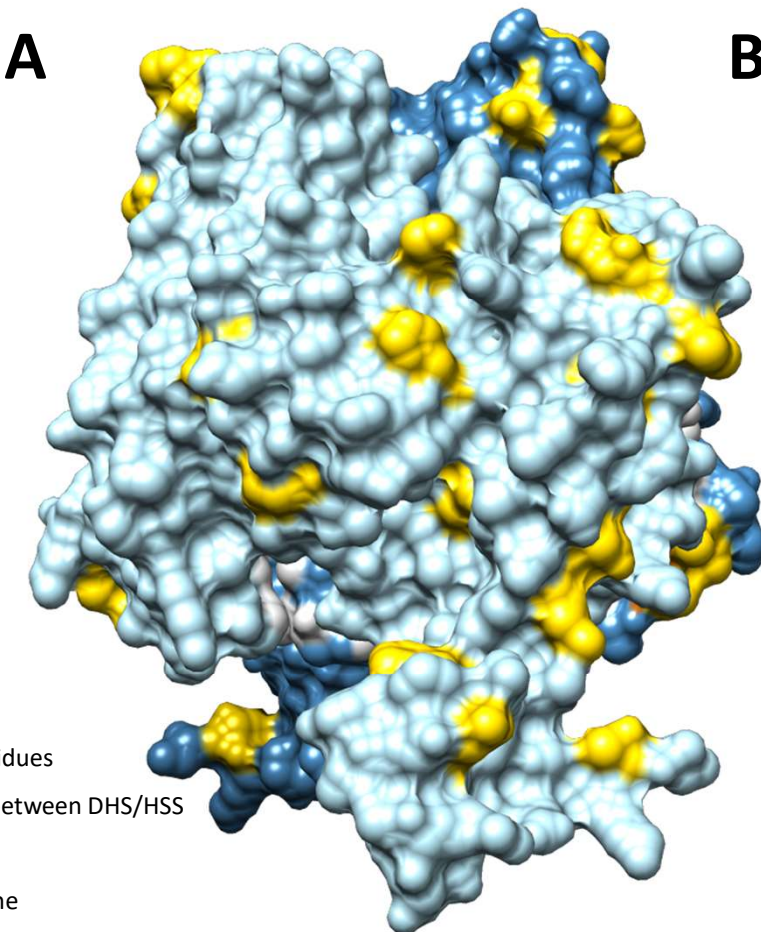
Distimake quinquefolius 1 HSS

90°

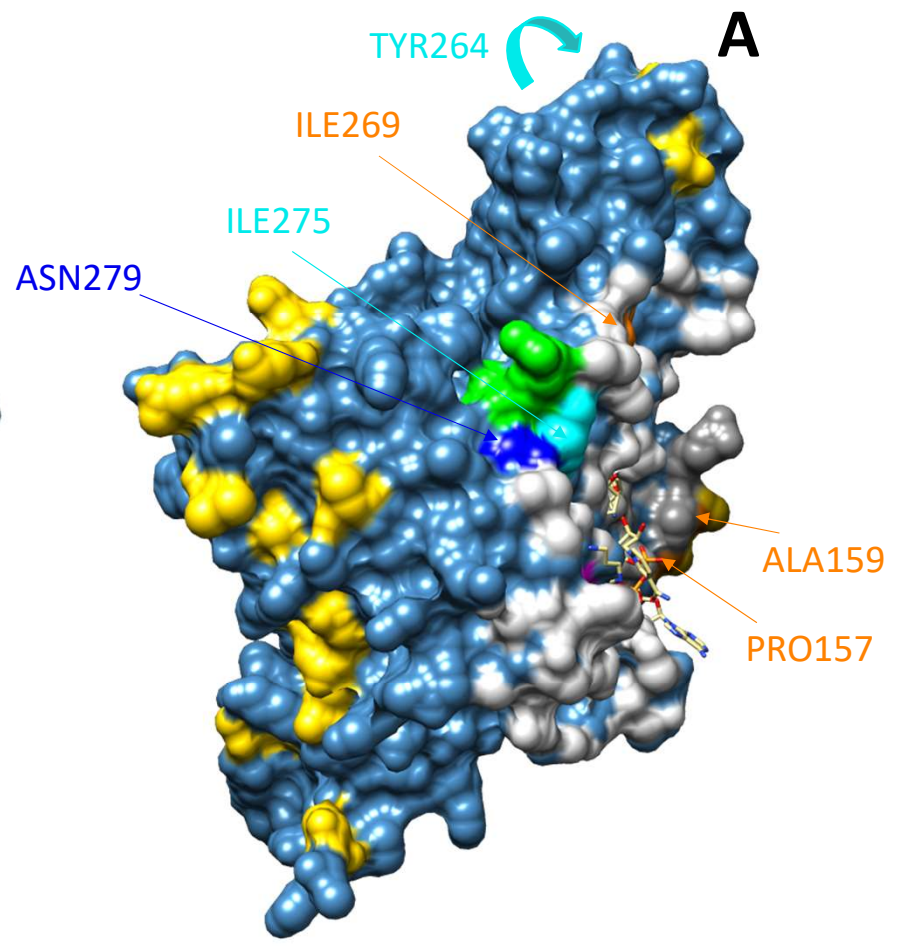
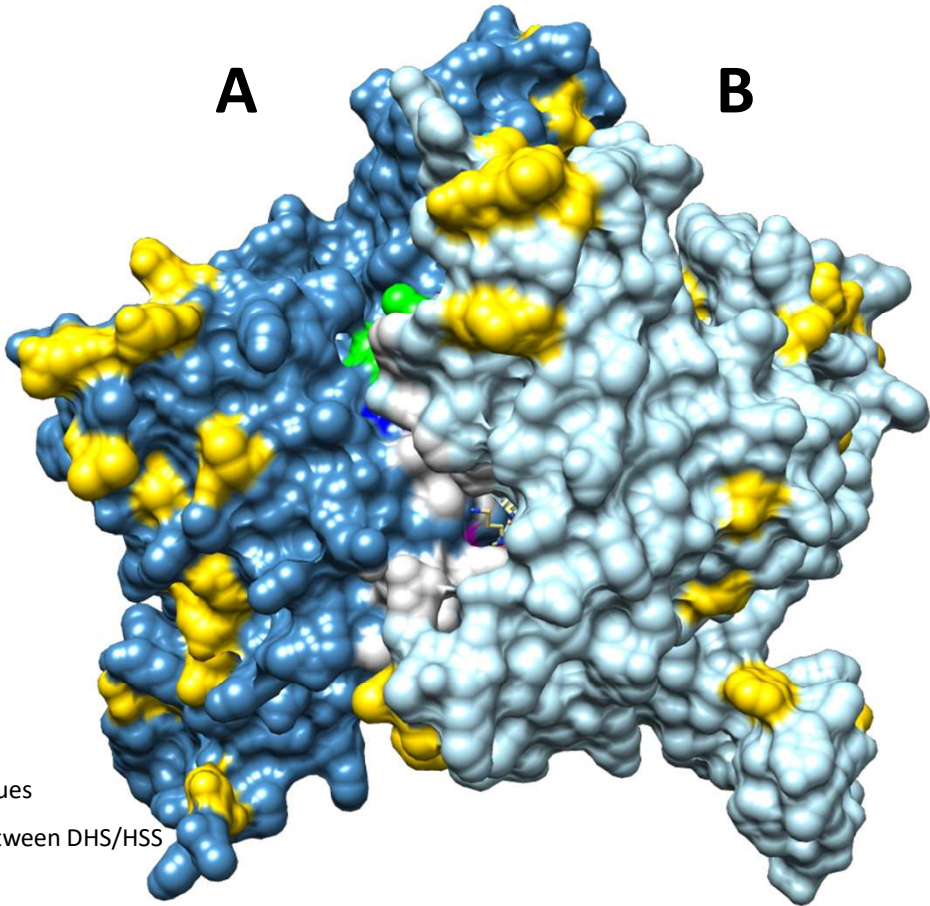
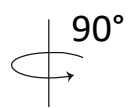


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- differences between DHS/HSS
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Distimake quinquefolius 2 DHS



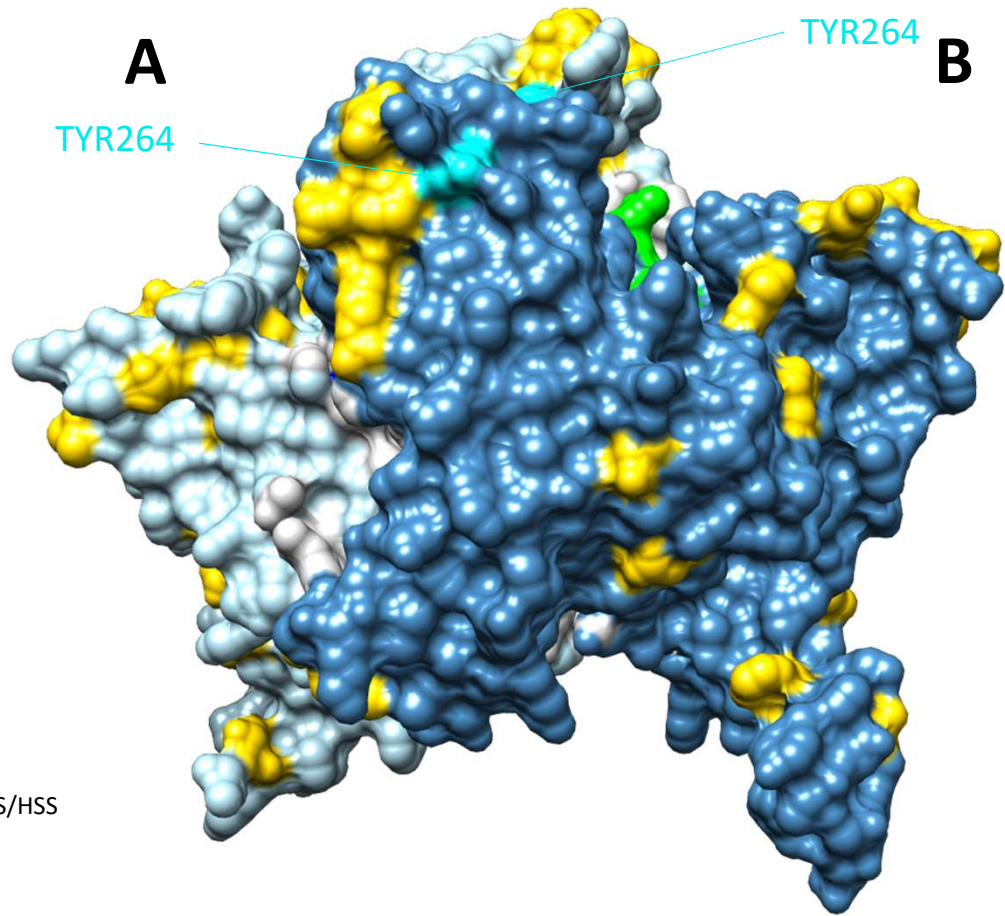
Distimake quinquefolius 2 DHS



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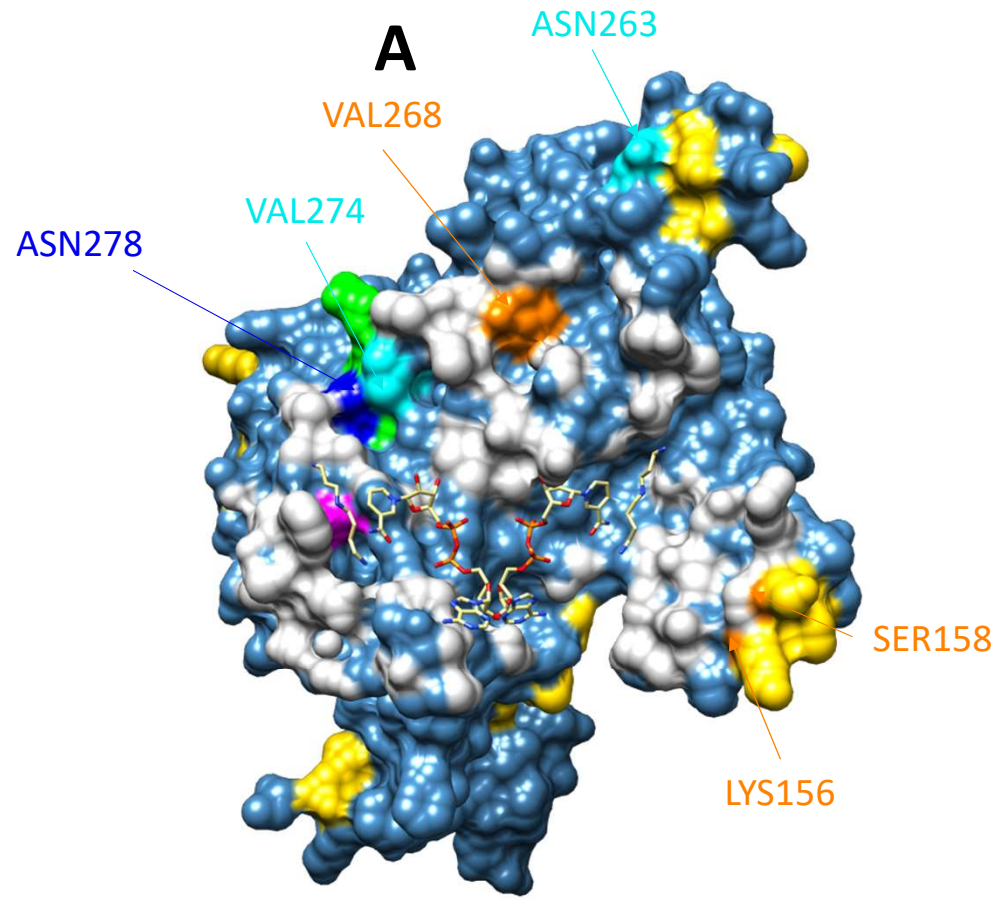
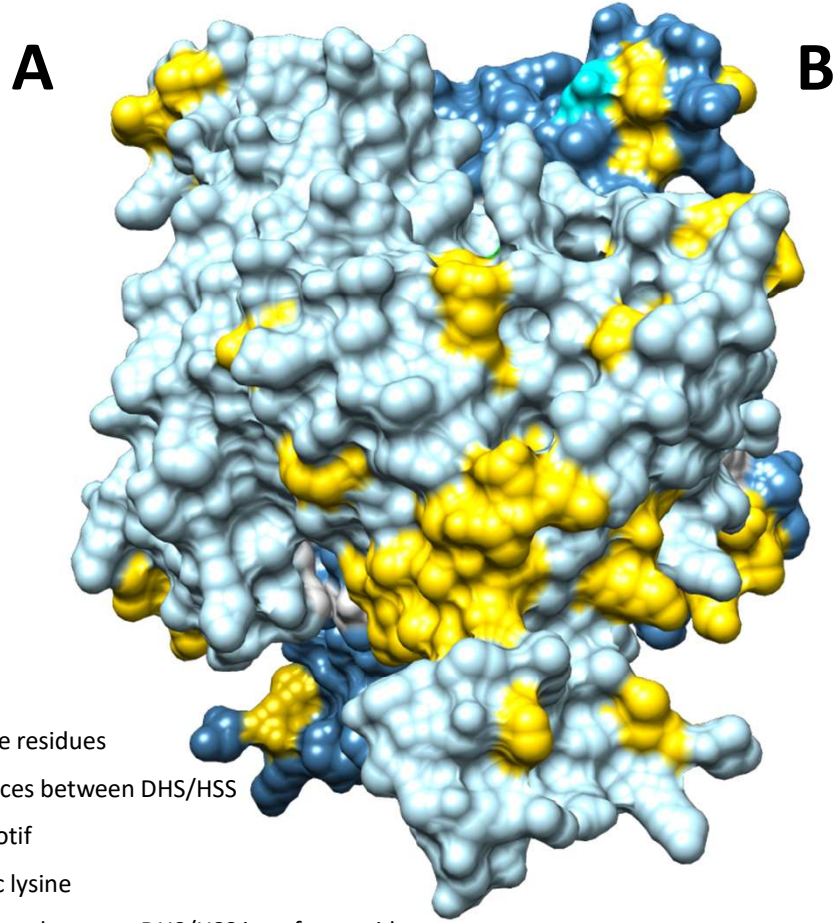
Distimake quinquefolius 2 DHS

160°



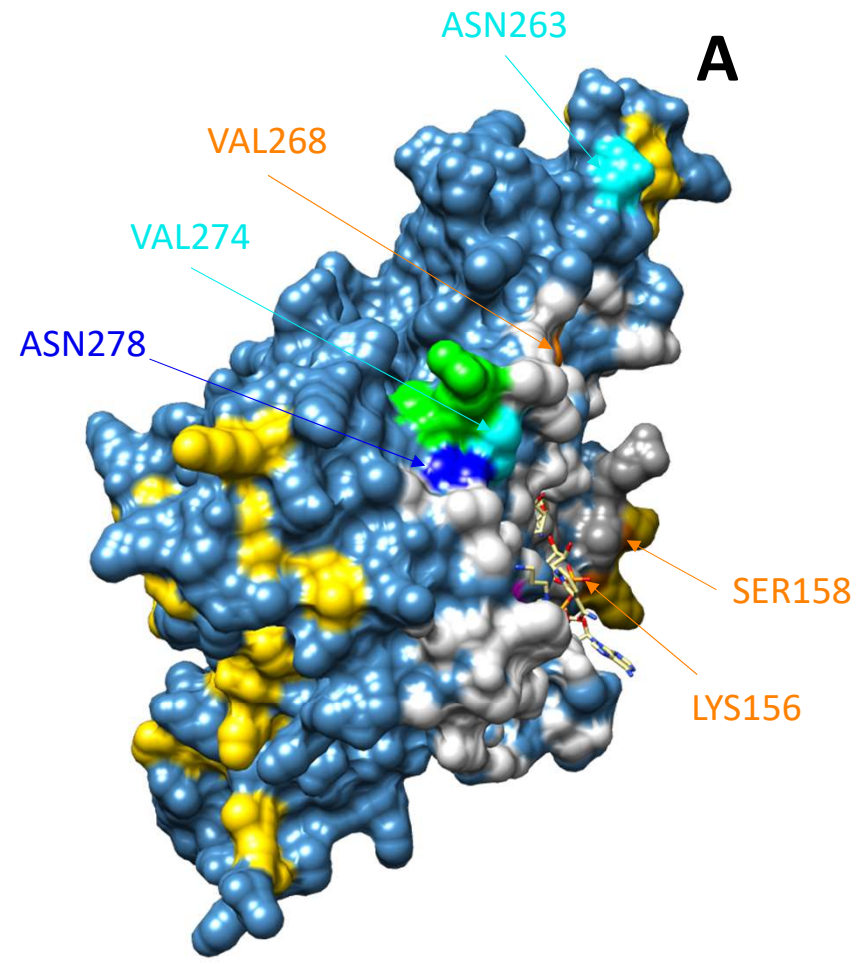
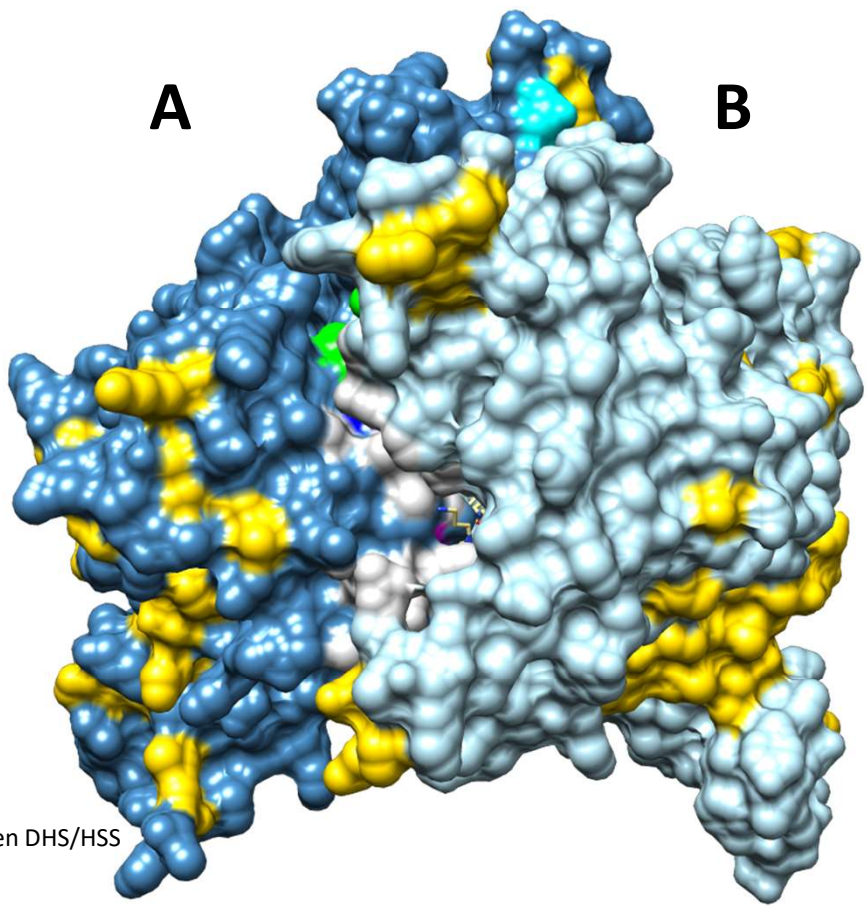
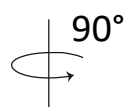
- interface residues
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- RAM motif
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Distimake quinquefolius 2 HSS



- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
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Distimake quinquefolius 2 HSS



- interface residues
- differences between DHS/HSS
- RAM motif
- catalytic lysine
- differences between DHS/HSS interface residues
- residues of extended HSS motif (if identical in DHS and HSS)
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