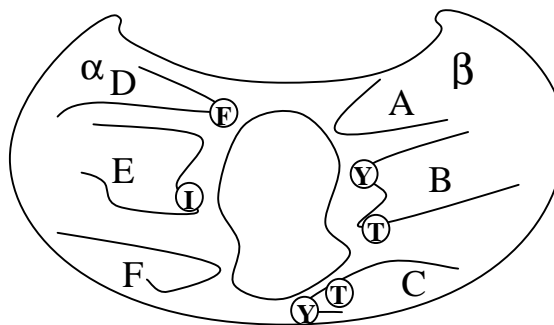
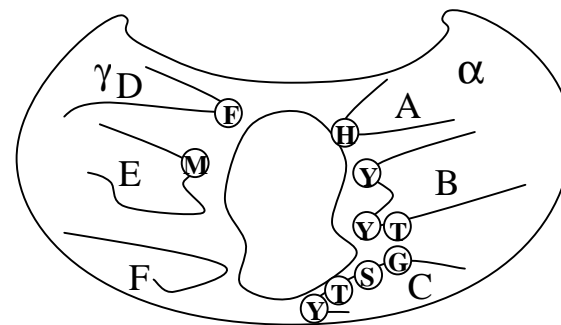


**nAChR agonist site**



**GABA<sub>A</sub> agonist site**



**GABA<sub>A</sub> benzodiazepine site**

	Loop A		Loop B		Loop C			Loop D			Loop E			Loop F																																			
	8	9	1	1	1	1	1	9	5	6	1	1	1	1	1	1																																	
	8	4	4	6	5	8	2	9	8	3	0	7	9	6	0	7																																	
nAChR α	P	D	L	V	L	Y	N	L	G	I	W	T	Y	D	Y	Y	T	C	C	P	D	T	P	Y	N	V	R	L	R	Q	Q	W	K	L	L	L	D	Y	T	G	K	I	M	W	T	D	L	S	T
nAChR γ	P	D	V	V	L	F	N	F	R	S	Q	T	Y	D	W	Q	L	T	K	D	D	T	D	F	N	V	W	I	F	I	Q	W	N	V	L	V	Y	N	D	G	S	M	Y	W	L	D	P	E	D
nAChR δ	P	D	I	V	L	Q	N	F	T	A	L	N	Y	D	P	D	K	F	P	N	G	T	N	Y	N	V	W	M	D	H	A	W	N	V	L	V	R	P	N	G	Y	V	T	W	L	D	P	E	A
GABA <sub>A</sub> R α1	P	D	T	F	F	H	N	F	G	S	Y	A	Y	T	G	I	V	Q	S	S	T	G	E	Y	D	V	F	F	R	Q	S	W	L	L	R	I	T	E	D	G	T	L	L	Y	T	D	G	S	R
GABA <sub>A</sub> R β2	P	D	T	Y	P	L	N	I	E	S	Y	G	Y	T	K	K	V	V	F	S	T	G	S	Y	T	M	Y	F	Q	Q	S	W	M	I	R	L	H	P	D	G	T	V	L	Y	G	D	N	A	V
GABA <sub>A</sub> R γ2	P	D	T	F	F	R	N	F	S	S	Y	G	Y	P	E	V	V	K	T	T	S	G	D	Y	D	I	F	F	A	Q	T	W	M	L	R	I	W	N	D	G	R	V	L	Y	T	D	T	R	S
gly α1	P	D	L	F	F	A	N	L	E	S	F	G	Y	T	C	T	K	H	Y	N	T	G	K	F	N	I	F	L	R	Q	Q	W	L	L	R	I	S	R	N	G	N	V	L	Y	S	D	V	Q	T
gly β1	P	D	L	F	F	A	N	L	E	S	F	G	Y	T	T	K	Y	Y	K	G	T	G	Y	Y	N	I	F	L	R	Q	K	W	L	L	F	I	F	R	D	G	D	V	L	V	S	D	T	Q	R
5HT <sub>3</sub> R	P	D	I	L	I	-	N	F	T	S	W	L	H	T	E	F	S	M	E	S	S	N	Y	Y	Y	I	W	Y	R	Q	Y	W	Y	V	Y	I	R	H	Q	G	E	V	Q	N	Y	D	V	Q	N

**Figure 1-3. Agonist and benzodiazepine binding sites of the nAChR family**

1. Model of the agonist sites of nAChR and GABA<sub>A</sub>R and the benzodiazepine site on the GABA<sub>A</sub>R showing the amino acids identified by either photoaffinity labeling or site-directed mutagenesis and their corresponding loops.
2. Sequence of the nAChR family subunits in the loop regions. Amino acids identified as contributing to the binding sites of agonist (○ ACh, □ GABA, △ glycine, ◇ serotonin) or benzodiazepine (■) are marked, as are conserved residues (■). The numbering of the *Torpedo* α subunit is shown above.