

Pre-test _____

Post-test _____

Test for Designer Proteins

Name _____ Teacher _____

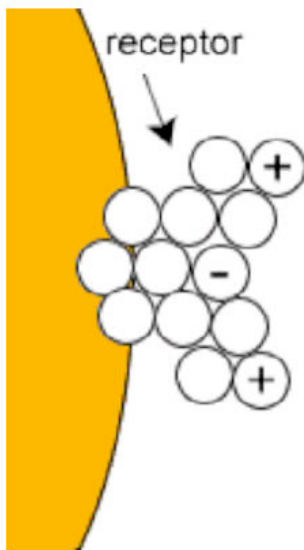
Date _____ Class _____

Genetic Code

Each triplet of nucleotides is a DNA codon for one of twenty amino acids shown as a single letter code.

TTT → F	TCT → S	TAT → Y	TGT → C	ATT → I	ACT → T	AAT → N	AGT → S
TTC → F	TCC → S	TAC → Y	TGC → C	ATC → I	ACC → T	AAC → N	AGC → S
TTA → L	TCA → S	TAA → Stop	TGA → Stop	ATA → I	ACA → T	AAA → K	AGA → R
TTG → L	TCG → S	TAG → Stop	TGG → W	ATG → M	ACG → T	AAG → K	AGG → R
CTT → L	CCT → P	CAT → H	CGT → R	GTT → V	GCT → A	GAT → D	GGT → G
CTC → L	CCC → P	CAC → H	CGC → R	GTC → V	GCC → A	GAC → D	GGC → G
CTA → L	CCA → P	CAA → Q	CGA → R	GTA → V	GCA → A	GAA → E	GGA → G
CTG → L	CCG → P	CAG → Q	CGG → R	GTG → V	GCG → A	GAG → E	GGG → G

Key: Pink=Hydrophobic
Blue= Hydrophilic
Red = positive
Green = Negative.



1. Explain why the distribution of charge might be critical to the shape and function of the receptor.

2. Use the Genetic Code above to design a sequence of a protein that would bind will to the receptor shown on the left.

3. Explain why you use DNA genetic code to design a protein. (Use other side if necessary)