

GENE MUTATIONS

CODONS

		SECOND LETTER					
		A	C	G	U		
F I R S T L E T E R	A	AAA-your	ACA-breath	AGA- beetles	AUA-rock	A	T H I R D L E T E R
		AAC-mother	ACC-have	AGC- the	AUC-band	C	
		AAG-wears	ACG-be	AGG-are	AUG-start	G	
		AAU-dresses	ACU-this	AGU- best	AUU-an	U	
	C	CAA-old	CCA-when	CGA- puppies	CUA-I	A	
		CAC-rubber	CCC-biology	CGC-water	CUC-love	C	
		CAG-breaks	CCG-is	CGG-every	CUG-roll	G	
		CAU-pulled	CCU-course	CGU-day	CUU-course	U	
	G	GAA- stop	GCA- all	GGA-door	GUA-a	A	
		GAC-demented	GCC-much	GGC-to	GUC-love	C	
		GAG- drink	GCG-fun	GGG-future	GUG-taking	G	
		GAU-and	GCU-education	GGU-father	GUU-nothing	U	
	U	UAA-we	UCA-together	UGA-around	UUA-DNA	A	
		UAC-in	UCC-must	UGC-you	UUC-code	C	
		UAG-so	UCG-be	UGG-read	UUG-for	G	
		UAU-this	UCU-informed	UGU- stop	UUU-live	U	

1. Find the sentence corresponding to this DNA sequence.

TACATTTCCCGTCTGGCTCACTGAGGACTAATTCGTAAAAAC GGG GCCGCAACA

2. A mutation has occurred where G has been changed to A such that the sequence reads

TACATTTCCCGTCTGGCTCACTGAG**A**ACTAATTCGTAAAAACGGGGCCGCAACA

Find the corresponding sentence.

3. Another mutation has arisen so that the DNA sequence now reads

TACATTTCCCGTCTG**T**CTCACTGAGGACTAATTCGTAAAAAC GGG GCCGCAACA

Find the corresponding sentence.

4. Another mutation has arisen when an extra thymine is added so that the DNA sequence now reads

TACATTTCCCGTCTGGCTCACTGAGGACT**T**AATTCGTAAAAACGGGGCCGCAACA

Find the corresponding sentence.

5. An adenine has now been removed so that the DNA sequence now reads

TACATTTCCCGTCTGGCTCCTGAGGACTAATTCGTAAAAACGGGGCC GCAACA

Find the corresponding sentence.

6. What is the effect of substituting one nucleotide for another?

7. Explain the difference between 1 and 2.

8. What is the effect of inserting or deleting a nucleotide?

9. What is another way this effect can be observed?

10. Which type of mutation do you think is the least serious?