

BIOINFORMATICS ASSIGNMENT 1

(DAY 1 TO DAY 5)

1. Gene Name: **TP53**
2. Function of the Gene: This gene encodes a **tumor suppressor protein** containing transcriptional activation, DNA binding, and oligomerization domains. The encoded protein responds to diverse cellular stresses to regulate expression of target genes, thereby inducing **cell cycle arrest, apoptosis, senescence, DNA repair, or changes in metabolism**. Mutations in this gene are associated with a variety of human cancers.
3. NCBI accession number: **NC_000017.11**
4. Forward Primer: **TTGTAATGCAGGGCTGAGGA**
5. Reverse Primer: **CTGCTCCCACCTCCTGTAA**
6. Primer Features:
 - %GC content: **50-55%**
 - Temperature: **59 degree Celsius**
 - Primer length: **20**
7. Amplicon length: **208**
 - Amplicon Sequence: **19214**

QPCR Data Analysis (DAY 5)

	House keeping genes		Gene of Intrest		avera ge ct value of HG		Avera ge ct value of GOI		delta ct value		delta delta ct value		Fold change	
	R1	R2	R1	R2										
cont rol	18.5	18.5	23.3	22.5	18.5		22.9		4.4		0		1	
Sam ple 1	18.3	18.3	25.3	25.3	18.3		25.3		7		2.6		0.1649 38489	
Sam ple2	18.5	18.5	26.5	26.5	18.5		26.5		8		3.6		0.0824 69244	
Sam ple3	18.2	18.2	27.5	27.5	18.2		27.5		9.3		4.9		0.0334 92921	