**BIOINFORMATICS ASSIGNMENT 1 (Day 1 - 5)**

***Note: You will be added in a slack community of Bversity for further doubts and communications***

**1. Gene Name:** PANK2

**2. Function of the Gene:** This gene encodes a protein belonging to the pantothenate kinase family and is the only member of that family to be expressed in mitochondria. Pantothenate kinase is a key regulatory enzyme in the biosynthesis of coenzyme A (CoA) in bacteria and mammalian cells. It catalyses the first committed step in the universal biosynthetic pathway leading to CoA and is itself subject to regulation through feedback inhibition by acyl CoA species.

**3. NCBI accession number:** NC\_000020.11

**4. Forward Primer:** AGGTGCCCATAAACTCTGCT

**5. Reverse primer:** TCCCAACACAGCCCTCTAAG

**6. Features of primers:**

start len tm gc% any\_th 3'\_th hairpin seq

LEFT PRIMER 37116 20 59.00 50.00 0.00 0.00 0.00

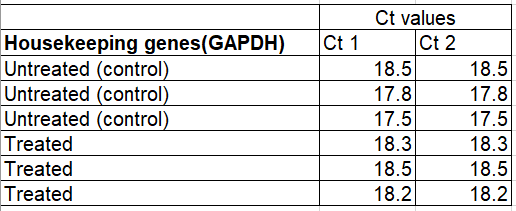
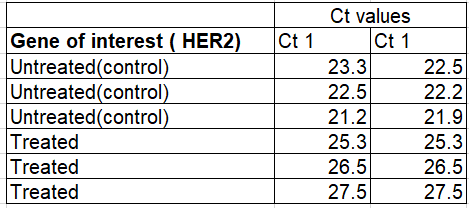
RIGHT PRIMER 37329 20 59.02 55.00 0.00 0.00 0.00

**7. Amplicon length and sequence:**

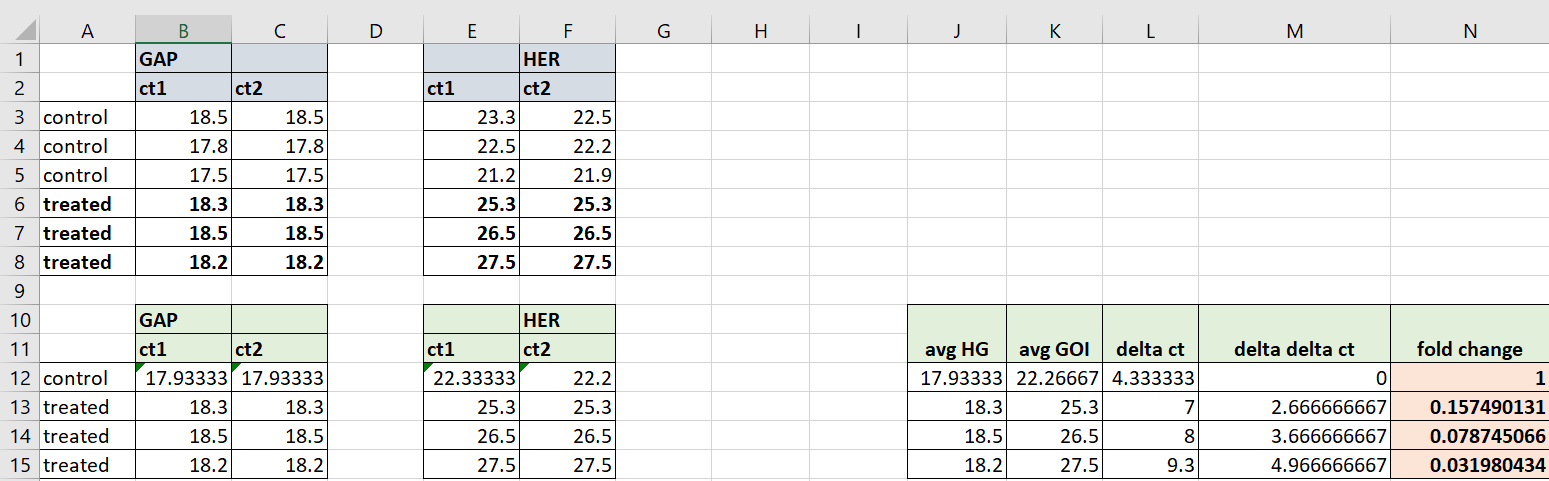
214**;**

AGGTGCCCATAAACTCTGCTGTTACCATTGCCACTTCCCTGTCTTAGCAGCTGTCCCTTTCAGTCTGCCCTCCACTAGTGGCCATGAAGGGGGCTGTGACCGTGGTCCAGGTGAGAAAGGAAGGCCTGAACTAAGATGGGAGGTGGGTGGCCAGAATGGAGAGGGGAGAAGTGGATGGCCAGAATGGAGAGATGCTTAGAGGGCTGTGTTGGGA

**qPCR Data analysis (DAY 5)**



The following data are results of qPCR from cancer cell lines. HER2 stands for human epidermal growth factor. It’s healthy in normal amounts, but too much may be a sign of a certain type of breast cancer. Calculate the 2 Delta Ct values for the following data and plot the values on a graph using graphpad prism.

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