

# **Assignment 1**

## **Abstract:**

As a result of studying the genetic variants and mutations that occurred in 1200 genomes of SARS virus and presenting an analytical study, it was found that some mutations in the SARS genome do not happen randomly. And also found the most important good candidates for drug development and treatment of Covid-19 disease through research, where it was found that the coding region at the nucleotide level of NSP13 protein is relatively conserved compared to other protein regions in the ORF1ab gene.

## **Introduction:**

In December 2019, in the Wuhan region of China, the spread of the COVID-19 virus began as a result of the SARS-CoV-2 virus, as this virus and other pathogens spread rapidly and ferociously as a result of the genetic changes, including the sequence difference, adding unknown variables to the immune system.

Whereas, the variation in the genomic structure of the SARS COVID-19 genome occurs according to environmental conditions (ultraviolet rays ... minerals).

It has been scientifically proven that the highest rate of mutations among all living organisms is in viruses, especially single-stranded viruses .. The biggest difference that affects all mutation rates is DNA and RNA viruses. Despite the dangerousness of SARS (Covid-2), we discovered new chemicals and treatments for Covid-19 disease by studying the differences in the genetic sequence at the level of its nucleotides.