

Problem Set 7: Genomics

Background

This problem set will introduce you to working hands-on with some introductory genomic tools.

Instructions

1. Download the complete sequence of the GenBank entry with the accession number `MT903460.1` as a FASTA file.
2. Translate the DNA sequence to amino acids using a translation tool. Describe how you translated DNA to amino acids, which parameters and values are adjustable with your tool? Provide the amino acid sequence for six different translations. Why six?
3. Using BLAT and the UCSC Genome Browser, align the sequence to the SARS-CoV-2 genome and view the alignment. Take a screenshot of your browser window and attach it to the report.
4. Where did the sequence align in the SARS-CoV-2 genome?

The report

Develop a report (I recommend a Word (or other text editor) document) for your problem set that includes answers to all of the questions posed above, showing plots where appropriate.

Save your report as a PDF file and submit your report through the course 2GW site.

Due date

Friday, Week 7