

## Tasks

1. Extract the nucleotide sequences as well as the corresponding translated amino acid sequences of the following genes from the accession numbers listed below

*mecC* - CP028165.1

*sul2* - MZ465529.1

*tuf* - CP031196.1

2. Identify and download the multiple sequence alignments of the top 50 homologs for each genes above using  $\geq 90\%$  coverage and similarity.

Advance level (Optional)

3. Construct the phylogenetic tree using the sequence alignments in no (2) and infer the number of gene families or clusters.