**Assigment 5**

Answers

3.

**Alignment with MUSCLE**

muscle -in bats\_ace2.fasta -out bats\_ace2\_aligned.fasta

**Phylogenetic Tree with RAxML**

raxmlHPC -s bats\_ace2\_aligned.fasta -n bats\_tree -m GTRGAMMA -p 12345 -# 100

4. Species that are closest to the “Flying fox”

* *Dobsonia viridis*
* *Syconycteris australis*
* *Cynopterus sphinx*
* *Epomophorus wahlbergi*
* *Rousettus leschenaultia*

A close-up of a graph

AI-generated content may be incorrect.

5. Phylogenies are useful for understanding evolutionary relationships between species, which can be important considering recent events like climate change and pathogen outbreaks. In this assignment, ACE2 is a key receptor for viruses (like SARS-CoV-2), so studying ACE2 evolution in bats can help understand viral spillover risks. It helps identify which bat species might serve as potential virus reservoirs.