Homework 5
Phylogenetic trees

Problem 1 – Create a phylogenetic tree for gorilla, human, chimpanzee, orangutan, and gibbon.

1. Go to Genbank (www.pubmed.gov) and get the amino acid sequence for alpha-hemoglobin for gorilla, human, chimpanzee, orangutan, and gibbon.
2. Go to http://cbcsrv.watson.ibm.com/Tmsa.html and perform an multiple alignment for these sequences.
3. Take the results and create a phylogentic tree for these species from the web site http://www.genebee.msu.su/services/phtree_reduced.html
4. How does this compare to the phylogenetic tree presented in class two weeks ago? Account for any differences or similarities. How much would you trust the results generated from this exercise? How would you increase the reliability of these results?

Exercise

1. Find RNA sequence for any RNA gene.
2. Use software from the following two sites to find structure

http://www.genebee.msu.su/services/rna2_reduced.html

http://www.bioinfo.rpi.edu/applications/mfold