1

1.a

DNA Identity Matrix

	Bat CoV	Bat CoV RATG13	MERS CoV	P-CoV	SARS-CoV2	SARS-CoV
Bat CoV	-	25.51	23.29	41.77	24.56	25.45
Bat CoV RATG13	25.51	-	30.44	75.94	92.68	67.57
MERSCoV	23.39	30.44	-	48.10	29.46	30.84
P-CoV	41.77	75.94	48.10	-	82.28	62.02
SARS-CoV2	24.56	92.68	29.46	82.28	-	65.37
SARS-CoV	25.45	67.57	30.84	62.02	65.37	-

Protein Identity Matrix

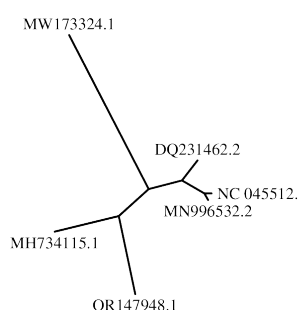|	Bat CoV	Bat CoV RATG13	MERS CoV	P-CoV	SARS-CoV	SARS-CoV2
Bat CoV	-	18.44	18.55	30.77	18.56	18.22
Bat CoV RATG13	18.44	-	23.40	84.61	74.58	97.47
MERSCoV	18.55	23.40	-	23.08	26.06	26.47
P-CoV	30.77	84.61	23.08	-	73.08	84.62
SARS-CoV	18.56	74.58	26.06	73.08	-	73.94
SARS-CoV2	18.22	97.47	26.47	84.62	73.94	-

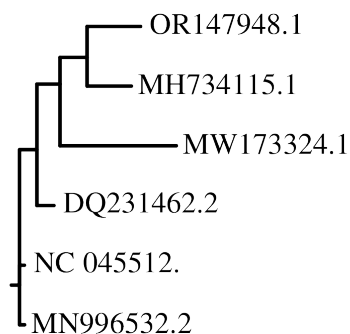## 1.b

2

Figure 1: No boostrap DNA pars tree
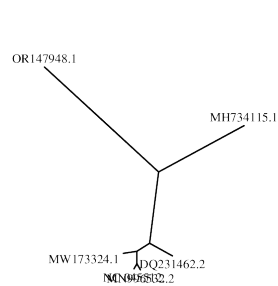

Figure 2: No boostrap DNA pars gram

Figure 3: No boostrap DNA ml tree
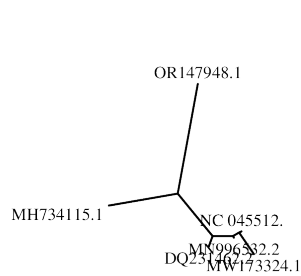

Figure 4: No boostrap DNA ml gram

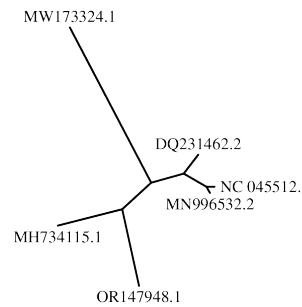Figure 5: No bootstrap DNA dist tree

Figure 6: No bootstrap DNA dist gram

Figure 7: boostrap DNA pars tree
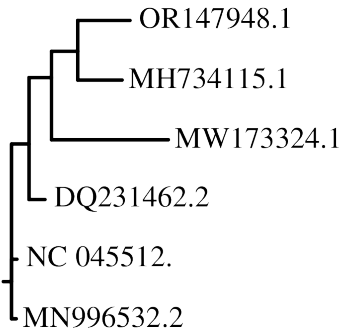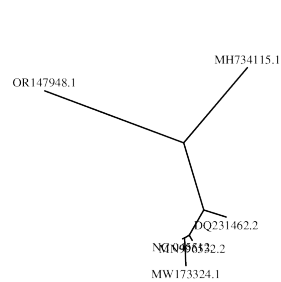

Figure 8: boostrap DNA pars gram

Figure 9: boostrap DNA ml tree
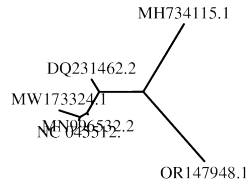

Figure 10: boostrap DNA ml gram

Figure 11: bootstrap DNA dist tree

Figure 12: bootstrap DNA dist gram
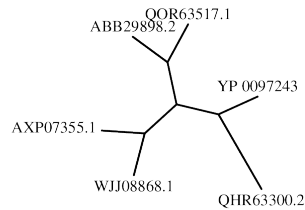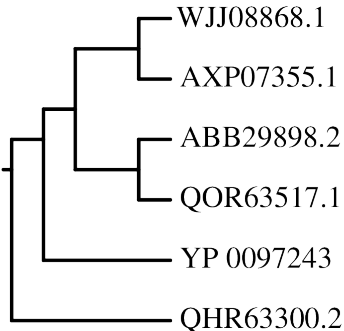

Figure 13: No boostrap prot pars tree
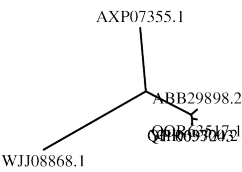

Figure 14: No boostrap prot pars gram

Figure 15: No boostrap prot ml tree
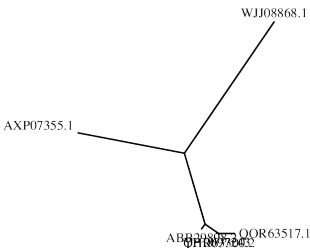

Figure 16: No boostrap prot ml gram
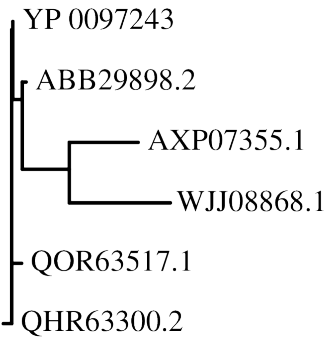

Figure 17: No bootstrap prot dist tree
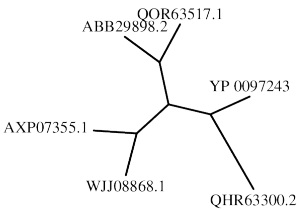

Figure 18: No bootstrap prot dist gram

Figure 19: boostrap prot pars tree

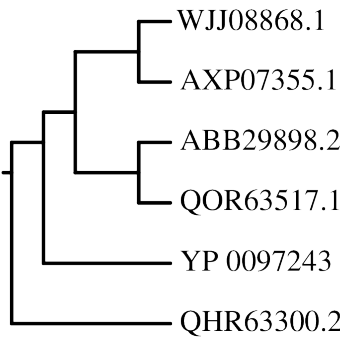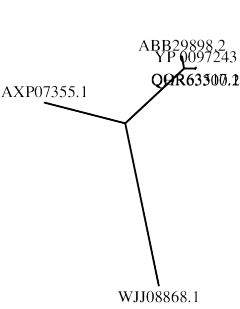Figure 20: boostrap prot pars gram

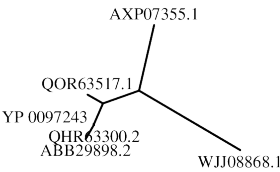Figure 21: boostrap prot ml tree

Figure 22: boostrap prot ml gram

Figure 23: bootstrap prot dist tree

Figure 24: bootstrap prot dist gram

2.a

2.b