

```

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356   "AIC-c":12923.31524090407,
357   "Confidence Intervals":{
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363   "Log Likelihood":-6413.456800779904,
364   "Rate Distributions":{
365     "Substitution rate from nucleotide A to nucleotide C":0
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367     "Substitution rate from nucleotide A to nucleotide G":1,
368     "Substitution rate from nucleotide A to nucleotide T":0
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370     "Substitution rate from nucleotide C to nucleotide G":0
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372     "Substitution rate from nucleotide C to nucleotide T":1
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374     "Substitution rate from nucleotide G to nucleotide T":0
375       .230594853422287,
376     "non-synonymous/synonymous rate ratio":0.008593681136758865
377   },
378   "display order":1,
379   "estimated parameters":48
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381 "input":{
382   "file name":"/Users/sergei/Dropbox/Talks/VEME-2021/data
383     /WestNileVirus_NS3.fas",
384   "number of sequences":19,
385   "number of sites":619,
386   "partition count":1,
387   "trees":{
388     "0": "(HNY1999,NY99_EQHS,NY99_FLAMINGO,((((((RABENSBURG_ISOLATE
389       ,(WNFCG,SPU116_89)Node11)Node9,KUNCG)Node8,(ETHAN4766,(CHIN_01
390       ,EG101)Node17)Node15)Node7,(((ITALY_1998_EQUINE,PAAN001)Node22
391       ,(R097_50,VLG_4)Node25)Node21,KN3829)Node20)Node6,AST99)Node5
392       ,PAH001)Node4,IS_98)Node3,MEX03)"
393   }
394 },
395 "test results":{
396   "non-synonymous/synonymous rate ratio":{
397     "LRT":2512.583763184408,
398     "p-value":0
399   }
400 }

```

WNV NS3

Model	Log L	# p	dN/dS	LRT	p-value
<i>Null</i>	-7668.7	49	1		
Alternative	-6413.5	50	0.009 [0.007-0.011]	2512.6	~0

Very strongly conserved

HIV-1 env

Model	Log L	# p	dN/dS	LRT	p-value
<i>Null</i>	-2078.3	40	1		
Alternative	-2078.2	41	1.122 [0.94-1.33]	0.33	~0.6

Not significantly different from neutral

SARS-CoV-2
spike

Model	Log L	# p	dN/dS	LRT	p-value
<i>Null</i>	-9311.0	176	1		
Alternative	-9292.0	177	0.54 [0.48-0.61]	37.94	~0

Very strongly conserved