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## Application Meta

### jModeltest 2.1

(c) 2011-onwards D. Darriba, G.L. Taboada, R. Doallo and D. Posada,  
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Mon Nov 16 15:34:22 CST 2015

Linux 3.19.0-33-generic, arch: amd64, bits: 64, numcores: 4

Citation: Darriba D, Taboada GL, Doallo R and Posada D. 2012. "jModelTest 2: more models, new heuristics and parallel computing". Nature Methods 9, 772.

Notice: This program may contain errors. Please inspect results carefully.

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## Settings

Arguments =

Input Alignment: "/home/neal/Desktop/Dropbox/systematics\_ZOOL6305\_F2015/excercises/unit18\_Bayesian/primates\_alnMuscle.nex"

NumTaxa = 50

Length = 1,140

Phyml version = 3.0

Phyml binary = PhyML\_3.0\_linux64

Candidate models = 24

number of substitution schemes = 3

including models with equal/unequal base frequencies (+F)

including models with/without a proportion of invariable sites (+I)

including models with/without rate variation among sites (+G) (nCat = 4)

Optimized free parameters (K) = Substitution parameters + 97 branch lengths + topology

Base tree for likelihood calculations = Maximum Likelihood

Tree topology search operation = NNI

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## Model Optimization Results

ID	Name	Partition	-lnL	p	fA	fC	fG	fT	ti/tv	R(a)	R(b)	R(c)	R(d)	R(e)	R(f)	p-inv	shape
1	<a href="#">JC</a>	000000	29706.0609	98	-	-	-	-	-	-	-	-	-	-	-	-	-
2	<a href="#">JC+I</a>	000000	27321.9274	99	-	-	-	-	-	-	-	-	-	-	-	0.3810	-
3	<a href="#">JC+G</a>	000000	26725.6697	99	-	-	-	-	-	-	-	-	-	-	-	-	0.4250
4	<a href="#">JC+I+G</a>	000000	26617.8007	100	-	-	-	-	-	-	-	-	-	-	-	0.3640	1.5540
5	<a href="#">F81</a>	000000	28905.6536	101	0.1831	0.2427	0.1252	0.4490	-	-	-	-	-	-	-	-	-
6	<a href="#">F81+I</a>	000000	26560.9000	102	0.1963	0.2705	0.1169	0.4163	-	-	-	-	-	-	-	0.3800	-
7	<a href="#">F81+G</a>	000000	25833.4109	102	0.1632	0.3525	0.1060	0.3783	-	-	-	-	-	-	-	-	0.4200
8	<a href="#">F81+I+G</a>	000000	25716.6602	103	0.1627	0.3478	0.1062	0.3833	-	-	-	-	-	-	-	0.3580	1.2920
9	<a href="#">K80</a>	010010	27872.2024	99	-	-	-	-	2.7170	-	-	-	-	-	-	-	-

10	<a href="#">K80+I</a>	010010	25424.5133	100	-	-	-	-	2.9582	-	-	-	-	-	0.3810	-
11	<a href="#">K80+G</a>	010010	24748.4916	100	-	-	-	-	3.3196	-	-	-	-	-	-	0.4180
12	<a href="#">K80+I+G</a>	010010	24629.0831	101	-	-	-	-	3.3622	-	-	-	-	-	0.3620	1.3120
13	<a href="#">HKY</a>	010010	27275.3020	102	0.2492	0.2337	0.1207	0.3964	2.7199	-	-	-	-	-	-	-
14	<a href="#">HKY+I</a>	010010	24761.8904	103	0.3009	0.2892	0.0989	0.3110	3.1761	-	-	-	-	-	0.3800	-
15	<a href="#">HKY+G</a>	010010	23750.6770	103	0.3917	0.3546	0.0586	0.1951	8.8175	-	-	-	-	-	-	0.3010
16	<a href="#">HKY+I+G</a>	010010	23631.6489	104	0.3786	0.3561	0.0618	0.2036	6.5928	-	-	-	-	-	0.3330	0.6100
17	<a href="#">SYM</a>	012345	26985.9919	103	-	-	-	-	-	16.1408	20.9789	6.2898	2.0323	55.8223	1.0000	-
18	<a href="#">SYM+I</a>	012345	24671.0737	104	-	-	-	-	-	9.1388	14.1012	4.0323	0.9714	39.1603	1.0000	0.3790
19	<a href="#">SYM+G</a>	012345	24103.2459	104	-	-	-	-	-	5.6769	9.3705	3.0688	0.3593	31.9536	1.0000	-
20	<a href="#">SYM+I+G</a>	012345	23968.3895	105	-	-	-	-	-	5.4831	8.9990	3.0837	0.3696	32.0839	1.0000	0.3490
21	<a href="#">GTR</a>	012345	26672.7323	106	0.2087	0.1620	0.2095	0.4198	-	29.3800	32.1760	5.0322	3.5305	57.1920	1.0000	-
22	<a href="#">GTR+I</a>	012345	24577.7809	107	0.2754	0.2415	0.1476	0.3355	-	6.8069	16.5970	2.1511	1.3268	23.7577	1.0000	0.3800
23	<a href="#">GTR+G</a>	012345	23698.6475	107	0.4062	0.3558	0.0539	0.1840	-	0.0991	6.0959	0.2936	0.2880	5.8382	1.0000	-
24	<a href="#">GTR+I+G</a>	012345	23591.5401	108	0.3851	0.3640	0.0554	0.1955	-	0.1546	5.9045	0.3590	0.3203	4.9894	1.0000	0.3220

There are 22 different topologies. The following table shows the models supporting each topology and the rank according to each Information Criterion, as well as Robinson-Foulds and Euclidean distances with the tree of the best-fit model.

ID	Models	Topology		AIC	BI
0	HKY+I+G GTR+I+G	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Saguinus cruzlimai.KP182174.((Cebus albifrons.FJ529108. (Saimiri boliviensis.AJ315383.((Aotus azarai.DO098863. (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2))).Callithrix geoffroyi.HM368005)). (Tupaia belangeri.EU531776.((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999.((Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462))))). (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295))))).(((Euoticus elegantulus.AY441469. (Galago alleni.KP410660.Otolemur garnettii.AF271412)).(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)). (Nycticebus pygmaeus.AY441476.Loris lydekkerianus.KP410597). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970))))))):</a>	RANK	-	0
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	Weight	-	1.0000
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	RF	-	0
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	AVG Distance	-	4.6258
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	Distance VAR	-	2.1398
1	SYM+I+G	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	RANK	-	1
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	Weight	-	0.0000
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	RF	-	14
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	AVG Distance	-	1.1823
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	Distance VAR	-	0.0000
2	K80+I+G	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	RANK	-	2
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	Weight	-	0.0000
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	RF	-	16
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999. (Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).(Varecia variegata.AF081047. (Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955)).(Cheirogaleus crossleyi.AY605927. (Microcebus murinus.AF285557.(Allocebus trichotis.AY441461.Mirza coquereli.AY441462)))))))).</a>	AVG Distance	-	1.1663
		<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaus.AF295582). (Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625). (Chlorocebus aethiops.JX983730.(Macaca mulatta.U38272.(Mandrillus leucophaeus.JO068157. (Papio anubis.EU885420.Theropithecus gelada.EU885487))))). (Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259). (Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717. (Homo sapiens.HE647856.Pan troglodytes.X93338))))).((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174). (Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708)).Callicebus lugens.AF524888.2)). (Aotus azarai.DO098863.Cebus albifrons.FJ529108).Saimiri boliviensis.AJ315383)).(Tupaia belangeri.EU531776. (Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)). (Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))). (Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970).((Phaner furcifer.AY441456.(Lepilemur aeeclis.DO108999.</a>			

[illegible]

[illegible]



14 SYM+I	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaeus.AF295582).((((Symphalangus syndactylus.GU321282.(Hylobates agilis.AJ010583.(Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259))))(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).(Aotus azarai.DQ098863.(Callicebus lugens.AF524888.2.(Cebus albifrons.FJ529108.Saimiri boliviensis.AJ315383))))))((Tupaia belangeri.EU531776.Tarsius wallacei.HM115970).((((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)).(Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))).Loris lydekkerianus.KP410597).((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))(Propithecus coquereli.HQ731531.(Indri indri.AY441455.Avahi cleesei.EF103295)).((Cheirogaleus crossleyi.AY605927.(Microcebus murinus.AF285557.(Mirza coquereli.AY441462.Allocebus trichotis.AY441461))))(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456)))))).Daubentonia madagasca.AY441444))))).(((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).Macaca mulatta.U38272).Chlorocebus aethiops.JX983730)).(Colobus angolensis.AF295583.Procolobus badius.AF294625)).Trachypithecus cristatus.AF295580)))));</a>		RANK	-	14
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaeus.AF295582).((((Macaca mulatta.U38272.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Mandrillus leucophaeus.IQ068157)).((((Symphalangus syndactylus.GU321282.(Hylobates agilis.AJ010583.(Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259))))(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).(Aotus azarai.DQ098863.Cebus albifrons.FJ529108).((Callicebus lugens.AF524888.2.Saimiri boliviensis.AJ315383))))))((Tupaia belangeri.EU531776.(((Avahi cleesei.EF103295.(Indri indri.AY441455).Propithecus coquereli.HQ731531)).(Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))(Cheirogaleus crossleyi.AY605927.(Allocebus trichotis.AY441461.(Microcebus murinus.AF285557.Mirza coquereli.AY441462)))))).Phaner furcifer.AY441456.Lepilemur aecelis.DQ108999))))).Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)).(Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))).Tarsius wallacei.HM115970.Daubentonia madagasca.AY441444))))).((Colobus angolensis.AF295583.Procolobus badius.AF294625)).Trachypithecus cristatus.AF295580)))));</a>		Weight	-	0.0000
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		RF	-	26
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		AVG Distance	-	1.4422
15 F81+I	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Nasalis larvatus.U62663.Pygathrix nemeaeus.AF295582).((((Symphalangus syndactylus.GU321282.(Hylobates agilis.AJ010583.(Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259))))(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).(Aotus azarai.DQ098863.Cebus albifrons.FJ529108).((Callicebus lugens.AF524888.2.Saimiri boliviensis.AJ315383))))))((Tupaia belangeri.EU531776.(((Avahi cleesei.EF103295.(Indri indri.AY441455).Propithecus coquereli.HQ731531)).(Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))(Cheirogaleus crossleyi.AY605927.(Allocebus trichotis.AY441461.(Microcebus murinus.AF285557.Mirza coquereli.AY441462)))))).Phaner furcifer.AY441456.Lepilemur aecelis.DQ108999))))).Loris lydekkerianus.KP410597.((Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412)).(Nycticebus pygmaeus.AY441476.(Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413))))).Tarsius wallacei.HM115970.Daubentonia madagasca.AY441444))))).((Colobus angolensis.AF295583.Procolobus badius.AF294625)).Trachypithecus cristatus.AF295580)))));</a>		RANK	-	15
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		Weight	-	0.0000
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		RF	-	28
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		AVG Distance	-	1.4221
16 F81+G	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		Distance VAR	-	0.0000
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		RANK	-	16
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		Weight	-	0.0000
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		RF	-	28
17 HKY	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		AVG Distance	-	1.4182
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		Distance VAR	-	0.0000
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY441476.(Euoticus elegantulus.AY441469.(Galago alleni.KP410660.Otolemur garnettii.AF271412))))).Tupaia belangeri.EU531776.((Varecia variegata.AF081047.(Eulemur albifrons.KF708205.(Hapalemur aureus.AY441446.Lemur catta.AF175955))))).((Allocebus trichotis.AY441461.Mirza coquereli.AY441462).((Microcebus murinus.AF285557.Cheirogaleus crossleyi.AY605927)).((Avahi cleesei.EF103295.(Propithecus coquereli.HQ731531.Indri indri.AY441455)).(Lepilemur aecelis.DQ108999.Phaner furcifer.AY441456))))))))).Pygathrix nemeaeus.AF295582.Nasalis larvatus.U62663)))));</a>		RANK	-	17
	<a href="#">(Presbytis entellus.AF012470.Semnopithecus entellus.AF293952.((Trachypithecus cristatus.AF295580.((Colobus angolensis.AF295583.Procolobus badius.AF294625)).((Mandrillus leucophaeus.IQ068157.(Papio anubis.EU885420.Theropithecus gelada.EU885487)).(Chlorocebus aethiops.JX983730.Macaca mulatta.U38272)).(((Bunopithecus hoolock.GU321286.Nomascus leucogenys.GU321259).((Hylobates agilis.AJ010583.Symphalangus syndactylus.GU321282)).(Pongo pygmaeus.X97717.(Homo sapiens.HE647856.Pan troglodytes.X93338))))((Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174).((Alouatta belzebul.AY374353.2.Ateles geoffroyi.HM222708).((Aotus azarai.DQ098863.Cebus albifrons.FJ529108)).(Callithrix geoffroyi.HM368005.Saguinus cruzlimai.KP182174)).((Daubentonia madagasca.AY441444.Tarsius wallacei.HM115970)).(Loris lydekkerianus.KP410597.((Arctocebus calabarensis.AY441474.Perodicticus potto.AF271413)).(Nycticebus pygmaeus.AY4</a>				

19	GTR+I	<p><a href="#">(Pongo pygmaeus.X97717,(Homo sapiens.HE647856,Pan troglodytes.X93338))),</a> <a href="#">(((Callithrix geoffroyi.HM368005,Saguinus cruzlimai.KP182174),((Alouatta belzebul.AY374353.2,Ateles geoffroyi.HM222708),</a> <a href="#">((Callicebus lugens.AF524888.2,(Cebus albifrons.FJ529108,Saimiri boliviensis.AJ315383)),Aotus azarai.DQ098863))),</a> <a href="#">(((Daubentonia madagasca.AY441444,(Tupaia belangeri.EU531776,Tarsius wallacei.HM115970)),(Varecia variegata.AF081047,</a> <a href="#">(Eulemur albifrons.KF708205,(Hapalemur aureus.AY441446,Lemur catta.AF175955))),((Propithecus coquereli.HQ731531,</a> <a href="#">(Indri indri.AY441455,Avahi cleesei.EF103295))),((Cheirogaleus crossleyi.AY605927,(Microcebus murinus.AF285557,</a> <a href="#">(Mirza coquereli.AY441462,Allocebus trichotis.AY441461))),((Lepilemur aecclis.DQ108999,Phaner furcifer.AY441456)))).</a> <a href="#">(((Euoticus elegantulus.AY441469,(Galago alleni.KP410660,Otolemur garnettii.AF271412)),(Nycticebus pygmaeus.AY441476,</a> <a href="#">(Arctocebus calabarensis.AY441474,Perodicticus potto.AF271413))),Loris lydekkerianus.KP410597))));</a></p>	RF	-	28
			AVG Distance	-	1.4044
			Distance VAR	-	0.0000
			RANK	-	20
20	JC+I	<p><a href="#">(Presbytis entellus.AF012470,Semnopithecus entellus.AF293952,((Trachypithecus cristatus.AF295580,</a> <a href="#">(Procolobus badius.AF294625,Colobus angolensis.AF295583),(((Macaca mulatta.U38272,</a> <a href="#">(Papio anubis.EU885420,Theropithecus gelada.EU885487))),</a> <a href="#">(Chlorocebus aethiops.JX983730,Mandrillus leucophaeus.JQ068157))),(((Symphalangus syndactylus.GU321282,</a> <a href="#">(Hylobates agilis.AJ010583,(Bunopithecus hoolock.GU321286,Nomascus leucogenys.GU321259))),((Pongo pygmaeus.X97717,</a> <a href="#">(Homo sapiens.HE647856,Pan troglodytes.X93338))),(((Alouatta belzebul.AY374353.2,Ateles geoffroyi.HM222708),</a> <a href="#">(Aotus azarai.DQ098863,(Saimiri boliviensis.AJ315383,(Cebus albifrons.FJ529108,Callicebus lugens.AF524888.2))),</a> <a href="#">(Saguinus cruzlimai.KP182174,Callithrix geoffroyi.HM368005)),(Tupaia belangeri.EU531776,((Loris lydekkerianus.KP410597,</a> <a href="#">((Euoticus elegantulus.AY441469,(Galago alleni.KP410660,Otolemur garnettii.AF271412)),(Nycticebus pygmaeus.AY441476,</a> <a href="#">(Arctocebus calabarensis.AY441474,Perodicticus potto.AF271413))),((Varecia variegata.AF081047,</a> <a href="#">(Eulemur albifrons.KF708205,(Hapalemur aureus.AY441446,Lemur catta.AF175955))),((Indri indri.AY441455,</a> <a href="#">(Propithecus coquereli.HQ731531,Avahi cleesei.EF103295))),((Cheirogaleus crossleyi.AY605927,(Allocebus trichotis.AY441461,</a> <a href="#">(Microcebus murinus.AF285557,Mirza coquereli.AY441462))),((Lepilemur aecclis.DQ108999,Phaner furcifer.AY441456)))).</a> <a href="#">(Daubentonia madagasca.AY441444,Tarsius wallacei.HM115970)))).</a> <a href="#">(Pygathrix nemaus.AF295582,Nasalis larvatus.U62663));</a></p>	RF	-	30
			AVG Distance	-	1.4355
			Distance VAR	-	0.0000
			RANK	-	21
21	K80+I	<p><a href="#">(Presbytis entellus.AF012470,Semnopithecus entellus.AF293952,((Trachypithecus cristatus.AF295580,</a> <a href="#">(Procolobus badius.AF294625,Colobus angolensis.AF295583),(((Alouatta belzebul.AY374353.2,Ateles geoffroyi.HM222708),</a> <a href="#">((Callicebus lugens.AF524888.2,(Cebus albifrons.FJ529108,Saimiri boliviensis.AJ315383)),Aotus azarai.DQ098863))),</a> <a href="#">(Saguinus cruzlimai.KP182174,Callithrix geoffroyi.HM368005)),(((Loris lydekkerianus.KP410597,</a> <a href="#">((Euoticus elegantulus.AY441469,(Galago alleni.KP410660,Otolemur garnettii.AF271412)),(Nycticebus pygmaeus.AY441476,</a> <a href="#">(Arctocebus calabarensis.AY441474,Perodicticus potto.AF271413))),((Indri indri.AY441455,</a> <a href="#">(Propithecus coquereli.HQ731531,Avahi cleesei.EF103295))),((Mirza coquereli.AY441462,</a> <a href="#">(Microcebus murinus.AF285557,Allocebus trichotis.AY441461)),Cheirogaleus crossleyi.AY605927),</a> <a href="#">(Lepilemur aecclis.DQ108999,Phaner furcifer.AY441456)),(Varecia variegata.AF081047,(Eulemur albifrons.KF708205,</a> <a href="#">(Hapalemur aureus.AY441446,Lemur catta.AF175955)))).</a> <a href="#">(Daubentonia madagasca.AY441444,</a> <a href="#">(Tarsius wallacei.HM115970,Tupaia belangeri.EU531776)))).</a> <a href="#">(Pongo pygmaeus.X97717,</a> <a href="#">(Homo sapiens.HE647856,Pan troglodytes.X93338)),(Symphalangus syndactylus.GU321282,(Hylobates agilis.AJ010583,</a> <a href="#">(Bunopithecus hoolock.GU321286,Nomascus leucogenys.GU321259)))).</a> <a href="#">(Macaca mulatta.U38272,</a> <a href="#">(Mandrillus leucophaeus.JQ068157,</a> <a href="#">(Papio anubis.EU885420,Theropithecus gelada.EU885487))),Chlorocebus aethiops.JX983730))),</a> <a href="#">(Pygathrix nemaus.AF295582,Nasalis larvatus.U62663));</a></p>	RF	-	30
			AVG Distance	-	1.4030
			Distance VAR	-	0.0000
			RANK	-	21

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# BIC Selection Results

## Model selected

Model	GTR+I+G
partition	012345
-lnL	23591.5401
K	108
freqA	0.3851
freqB	0.3640
freqC	0.0554
freqD	0.1955
ti/tv	-
p-inv	0.3220
gamma	0.5400

## Best model tree

(Presbytis\_entellus.AF012470:0.06260053,Semnopithecus\_entellus.AF293952:0.05440159,  
(Nasalis\_larvatus.U62663:0.16290054,Pygathrix\_nemaus.AF295582:0.20398718):0.03883014,(Trachypithecus\_cristatus.AF295580:0.14817784,  
(Colobus\_angolensis.AF295583:0.26762624,Procolobus\_badius.AF294625:0.11875615):0.08215646,((Chlorocebus\_aethiops.JX983730:0.17721358,  
(Macaca\_mulatta.U38272:0.16408439,(Mandrillus\_leucophaeus.JQ068157:0.19374179,  
(Papio\_anubis.EU885420:0.08840545,Theropithecus\_gelada.EU885487:0.09785766):0.12214898):0.03054510):0.03694287):0.08609634,  
(((Bunopithecus\_hoolock.GU321286:0.09072429,Nomascus\_leucogenys.GU321259:0.12723698):0.01926343,  
(Hylobates\_agilis.AJ010583:0.11451740,Symphalangus\_syndactylus.GU321282:0.09281593):0.01112729):0.16578181,(Pongo\_pygmaeus.X97717:0.24586594,  
(Homo\_sapiens.HE647856:0.12688076,Pan\_troglodytes.X93338:0.09283822):0.09422574):0.08054602):0.13099623,((Saguinus\_cruzlimai.KP182174:0.19052271,  
(Cebus\_albifrons.FJ529108:0.30176911,(Saimiri\_boliviensis.AJ315383:0.41648963,((Aotus\_azarai.DQ098863:0.16353371,  
(Alouatta\_belzebul.AY374353.2:0.11591793,Ateles\_geoffroyi.HM222708:0.15864525):0.06051363):0.02197544,Callicebus\_lugens.AF524888.2:0.26614217):0.01798854,  
(Tupaia\_belangeri.EU531776:0.66162977,(((Euoticus\_elegantulus.AY441469:0.19363998,  
(Galago\_alleni.KP410660:0.10374593,Otolemur\_garnettii.AF271412:0.13626362):0.04491254):0.19637809,  
(Arctocebus\_calabarensis.AY441474:0.28614203,Perodicticus\_potto.AF271413:0.23422826):0.18021497):0.03827714,  
(Nycticebus\_pygmaeus.AY441476:0.27833015,Loris\_lydekkerianus.KP410597:0.40761398):0.06780500):0.19340257,

[Display best model tree in PhyloWidget](#)

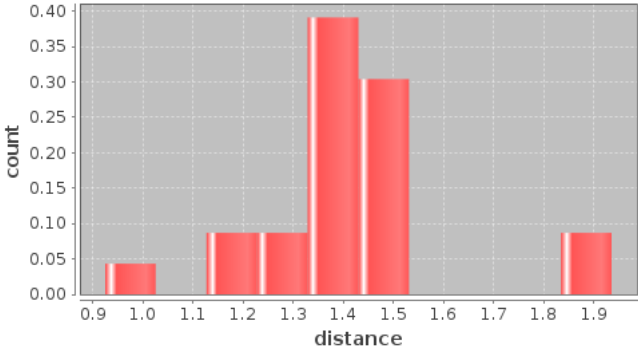
Model	-lnL	K	BIC	delta	weight	cumWeight
<a href="#">GTR+I+G</a>	23591.5401	108	47943.2689	0.0000	1.0000	1.0000
<a href="#">HKY+I+G</a>	23631.6489	104	47995.3312	52.0623	0.0000	1.0000
<a href="#">GTR+G</a>	23698.6475	107	48150.4448	207.1760	0.0000	1.0000
<a href="#">HKY+G</a>	23750.6770	103	48226.3488	283.0799	0.0000	1.0000
<a href="#">SYM+I+G</a>	23968.3895	105	48675.8513	732.5824	0.0000	1.0000
<a href="#">SYM+G</a>	24103.2459	104	48938.5252	995.2564	0.0000	1.0000
<a href="#">GTR+I</a>	24577.7809	107	49908.7117	1965.4428	0.0000	1.0000
<a href="#">K80+I+G</a>	24629.0831	101	49969.0833	2025.8144	0.0000	1.0000
<a href="#">SYM+I</a>	24671.0737	104	50074.1808	2130.9120	0.0000	1.0000
<a href="#">K80+G</a>	24748.4916	100	50200.8616	2257.5927	0.0000	1.0000
<a href="#">HKY+I</a>	24761.8904	103	50248.7755	2305.5067	0.0000	1.0000
<a href="#">K80+I</a>	25424.5133	100	51552.9050	3609.6361	0.0000	1.0000
<a href="#">F81+I+G</a>	25716.6602	103	52158.3152	4215.0463	0.0000	1.0000
<a href="#">F81+G</a>	25833.4109	102	52384.7776	4441.5088	0.0000	1.0000
<a href="#">F81+I</a>	26560.9000	102	53839.7558	5896.4870	0.0000	1.0000
<a href="#">JC+I+G</a>	26617.8007	100	53939.4798	5996.2109	0.0000	1.0000
<a href="#">GTR</a>	26672.7323	106	54091.5756	6148.3067	0.0000	1.0000
<a href="#">JC+G</a>	26725.6697	99	54148.1790	6204.9101	0.0000	1.0000
<a href="#">SYM</a>	26985.9919	103	54696.9785	6753.7096	0.0000	1.0000
<a href="#">HKY</a>	27275.3020	102	55268.5599	7325.2911	0.0000	1.0000
<a href="#">JC+I</a>	27321.9274	99	55340.6943	7397.4254	0.0000	1.0000
<a href="#">K80</a>	27872.2024	99	56441.2443	8497.9754	0.0000	1.0000
<a href="#">F81</a>	28905.6536	101	58522.2244	10578.9555	0.0000	1.0000
<a href="#">JC</a>	29706.0609	98	60101.9226	12158.6538	0.0000	1.0000

-lnL: negative log likelihood  
K: number of estimated parameters  
BIC: Bayesian Information Criterion  
delta: BIC difference  
weight: BIC weight  
cumWeight: cumulative BIC weight

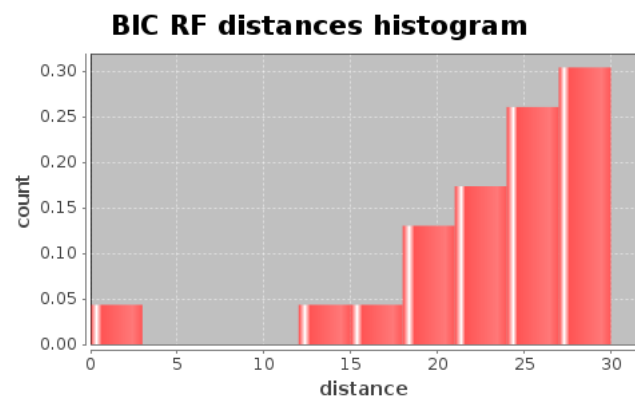
Confidence interval

There are 24 models in the 100.00% confidence interval:  
GTR+I+G HKY+I+G GTR+G HKY+G SYM+I+G SYM+G GTR+I K80+I+G SYM+I K80+G HKY+I K80+I F81+I+G F81+G F81+I JC+I+G GTR JC+G SYM HKY  
JC+I K80 F81 JC

BIC euclidean distances histogram



Euclidean distances histogram from each model optimized tree to [GTR+I+G tree](#).



Robinson-Foulds distances histogram from the different topologies to [GTR+I+G topology](#).

## PAUP block

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PAUP\* Commands Block:

If you want to load the selected model and associated estimates in PAUP\*,  
attach the next block of commands after the data in your PAUP file:

[!

Likelihood settings from best-fit model (GTR+I+G) selected by BIC  
with jModeltest 2.1.7 v20150220 on Mon Nov 16 15:34:22 CST 2015]

BEGIN PAUP;

Lset base=(0.3851 0.3640 0.0554 ) nst=6 rmat=(0.1546 5.9045 0.3590 0.3203 4.9894) rates=gamma shape=0.5400 ncat=4 pinvar=0.3220;  
END;

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⚡ [jModelTest 2.1](#). D.Darriba, G.L.Taboada, R.Doallo and D.Posada

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