



Molecular phylogeny of living xenarthrans and the impact of character and taxon sampling on the placental tree rooting.

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Electronic Appendix:

Table-sup 1. Taxonomic sampling used for this study. Accession numbers are given for each sequence used. Sequences new to this study are marked with *.

Taxonomy	Species	Common name	ADRA2B	BRCA1 exon 11	VWF exon 28
MARSUPIALIA	<i>Didelphis virginiana</i>	Virginian Opossum	Y15943	—	—
	<i>Didelphis marsupialis</i>	Large American Opossum	—	AF284033	AF226848
	<i>Macropus giganteus</i>	Grey Kangaroo	—	—	AJ224670
	<i>Macropus rufus</i>	Red Kangaroo	AJ251183	AF497261	—
	<i>Vombatus ursinus</i>	Wombat	AJ427416	AF284031	AF497260
PLACENTALIA					
XENARTHRA					
CINGULATA					
Dasypodidae	<i>Dasypus novemcinctus</i>	Nine-banded Armadillo	AJ427366*	AF484222*	AJ278158
	<i>Dasypus kappleri</i>	Great Long-nosed Armadillo	AJ427367*	AF484223*	AJ427361*
	<i>Chaetophractus villosus</i>	Larger Hairy Armadillo	AJ315935	AF284000	AF076480
	<i>Euphractus sexcinctus</i>	Six-banded Armadillo	AJ427368*	AF484224*	AJ427364*
	<i>Zaedyus pichi</i>	Pichi	AJ427369*	AF484226*	AJ427365*
	<i>Tolypeutes matacus</i>	Southern Three-banded Armadillo	AJ427370*	AF484227*	AJ427362*
	<i>Cabassous unicinctus</i>	Southern Naked-tailed Armadillo	AJ427371*	AF484228*	AJ278159
	<i>Priodontes maximus</i>	Giant Armadillo	AJ427372*	AF484225*	AJ427363*
VERMILINGUA					
Myrmecophagidae	<i>Myrmecophaga tridactyla</i>	Giant Anteater	AJ427373*	AF484232*	AJ278157

FOLIVORA	<i>Tamandua tetradactyla</i>	Collared Anteater	AJ427374*	AF484230*	AJ278161
	<i>Cyclopes didactylus</i>	Pygmy Anteater	AJ315943	AF484231*	AJ278156
Bradyrodidae	<i>Bradypus tridactylus</i>	Pale-throated Three-toed Sloth	AJ251179	AF284002	U31603
Megalonychidae	<i>Choloepus didactylus</i>	Southern Two-toed Sloth	AJ427375*	AF484229*	AJ278160
AFROTHERIA					
CHRYSOCHLORIDAE	<i>Amblysomus hottentotus</i>	Hottentot Golden Mole	Y12526	AF284027	U97534
TENRECIDAE	<i>Echinops telfairi</i>	Lesser Hedgehog-tenrec	Y17692	AF284025	AF076478
MACROSCELIDEA					
Macroscelidae	<i>Elephantulus rufescens</i>	Rufous Elephant Shrew	—	AF284028	U31612
	<i>Macroscelides proboscideus</i>	Short-eared Elephant Shrew	Y12524	—	—
HYRACOIDEA					
Procaviidae	<i>Procavia capensis</i>	Common Rock Hyrax	Y12523	AF284023	U31619
PROBOSCIDEA					
Elephantidae	<i>Elephas maximus</i>	Asian Elephant	Y12525	AF284022	U31611
SIRENIA					
Dugongidae	<i>Dugong dugon</i>	Dugong	Y15947	AF284019	U31608
TUBULIDENTATA					
Orycteropodidae	<i>Orycteropus afer</i>	Aardvark	Y12522	AF284030	U31617
EUARCHONTOGLIRES					
SCANDENTIA					
Tupaiaidae	<i>Tupaia glis</i>	Common Tree Shrew	—	—	AF061063
	<i>Tupaia tana</i>	Large Tree Shrew	AJ251187	AF284006	—
DERMOPTERA					

Cynocephalidae	<i>Cynocephalus variegatus</i>	Malayan Flying Lemur	AJ251182	AF019081	U31606
PRIMATES					
Hominidae	<i>Homo sapiens</i>	Human	M34041	L78833	X06828
LAGOMORPHA					
Leporidae	<i>Lepus crawshayi</i>	Jackrabbit	AJ427254	—	AJ224669
	<i>Lepus capensis</i>	Cape Hare	—	AF284005	—
RODENTIA					
Muridae	<i>Rattus norvegicus</i>	Brown Rat	M32061	AF036760	AJ224673
	<i>Mus musculus</i>	Domestic Mouse	M94583	U36475	AJ238390
Sciuridae	<i>Glaucomys volans</i>	Southern Flying Squirrel	—	AF284003	AJ224667
	<i>Sciurus vulgaris</i>	Eurasian Red Squirrel	AJ315942	—	—
Aplodontidae	<i>Aplodontia rufa</i>	Mountain Beaver	AJ427256	AF332045	AJ224662
Hystriidae	<i>Trichys fasciculata</i>	Long-tailed Porcupine	AJ427266	—	AJ224675
	<i>Hystrix africaeaustralis</i>	Cape Porcupine	—	AF284004	—
LAURASIATHERIA					
EULIPOTYPHILA					
Erinaceidae	<i>Erinaceus europaeus</i>	Western European Hedgehog	Y12521	AF284008	U97536
Talpidae	<i>Scalopus aquaticus</i>	Eastern Mole	AF496636	AF284007	AF076479
CHIROPTERA					
Pteropodidae	<i>Pteropus hypomelanus</i>	Variable Flying Fox	—	—	AF203777
	<i>Pteropus rayneri</i>	Solomons Flying Fox	AF337539	AF203751	—
	<i>Cynopterus sphinx</i>	Greater Short-nosed Fruit Bat	AJ251181	AF203750	U31605
Megadermatidae	<i>Megaderma lyra</i>	False Vampire Bat	AF337537	AF203749	U31616
Rhinolophidae	<i>Hipposideros commersoni</i>	Commerson's Roundleaf Bat	AF337538	AF203752	AF203778

Vespertilionidae	<i>Myotis velifer</i>	Cave Myotis	—	—	AF203775
	<i>Myotis daubentoni</i>	Daubenton's Bat	AF337540	AF203746	—
Molossidae	<i>Tadarida brasiliensis</i>	Brazilian Free-tailed Bat	AF337542	AF203747	U31623
Phyllostomidae	<i>Tonatia bidens</i>	Greater Round-eared Bat	AF337541	AF203745	U31622
PHOLIDOTA					
Manidae	<i>Manis sp.</i>	Pangolin	AJ251185	AF284009	U97535
CARNIVORA					
Felidae	<i>Felis catus</i>	Domestic Cat	AJ251174	AF284018	U31613
CETARTIODACTYLA					
Camelidae	<i>Lama glama</i>	Llama	—	AF284012	AF108835
	<i>Lama pacos</i>	Llama	AJ315941	—	—
Suidae	<i>Sus scrofa</i>	Domestic Pig	AJ251177	AF284014	S78431
Bovidae	<i>Bos taurus</i>	Domestic Cow	Y15944	AF284013	X63820
Hippopotamidae	<i>Hippopotamus amphibius</i>	Common Hippopotamus	AJ251178	AF284015	AF108832
Physeteridae	<i>Physeter catodon</i>	Sperm Whale	AJ427417	AF284016	AF108834
PERISSODACTYLA					
Equidae	<i>Equus asinus</i>	Donkey	—	—	U31610
	<i>Equus caballus</i>	Domestic Horse	Y15945	AF284010	—
Rhinocerotidae	<i>Ceratotherium simum</i>	White Rhinoceros	—	—	U31604
	<i>Diceros bicornis</i>	Black Rhinoceros	AJ251184	AF284011	—

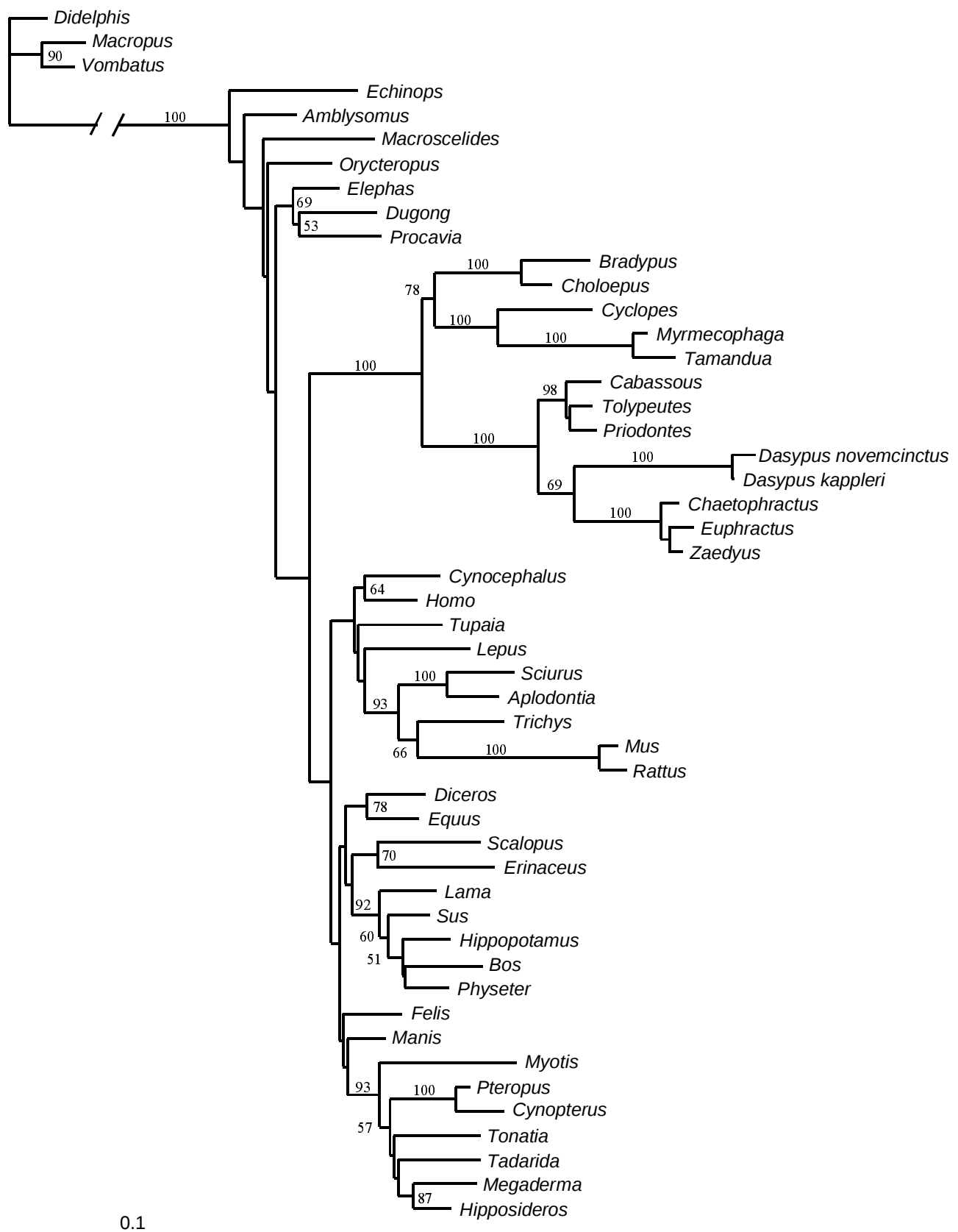


Fig-sup 1. Maximum likelihood phylogram of placental mammal relationships using only 1st and 2nd codon positions of ADRA2B (768 sites). The branch leading to the marsupial outgroup (*Didelphis*, *Macropus*, and *Vombatus*) was reduced by half. ML bootstrap proportions (100 replications) > 50% are indicated at each node. GTR + Γ_8 ML parameters estimated with PAUP*: rate matrix (AC: 2.18, AG: 5.76, AT: 0.73, CG: 1.37, CT: 3.65, GT: 1.00), $\alpha = 0.42$.

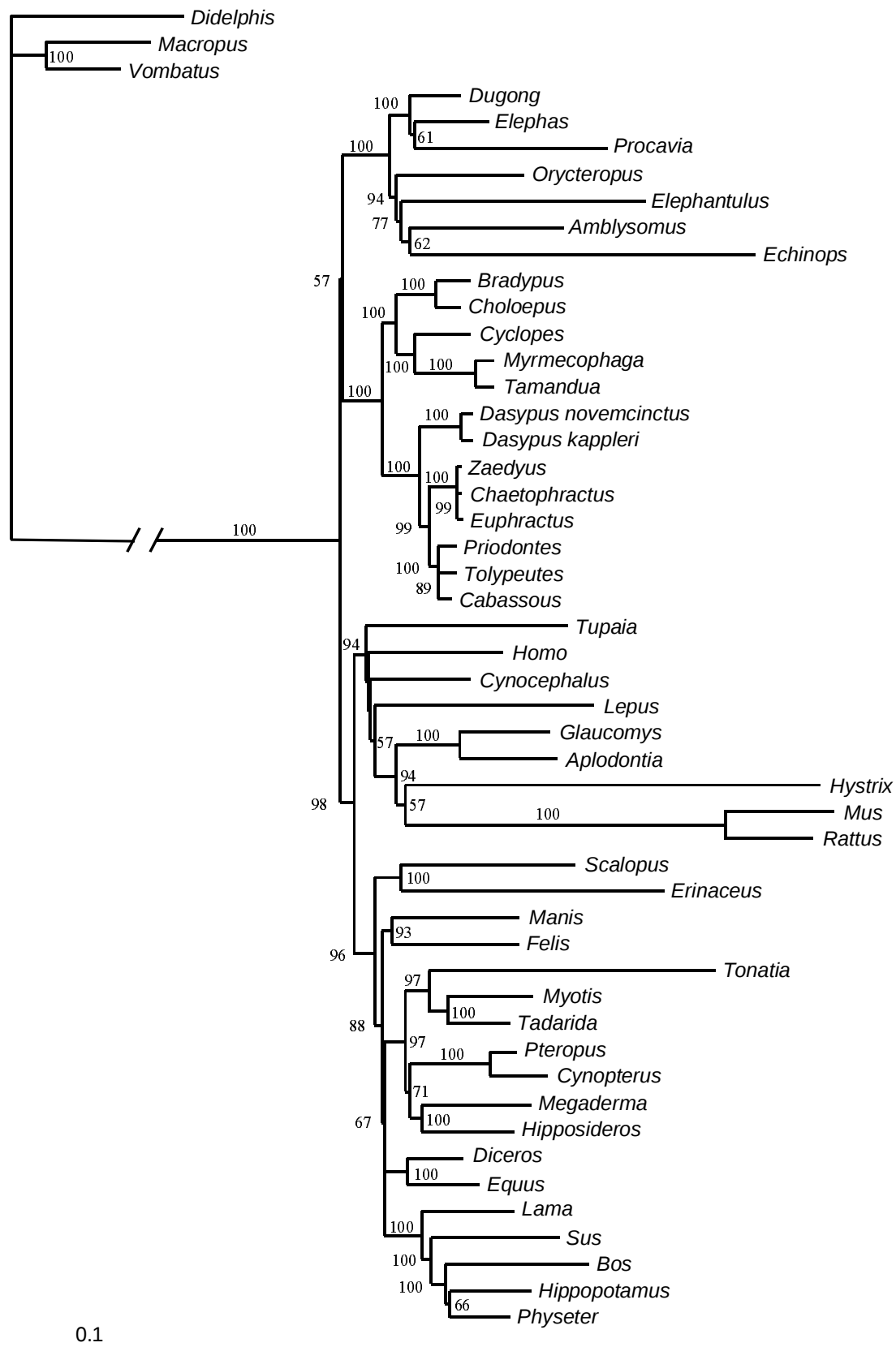


Fig-sup 2. Maximum likelihood phylogram of placental mammal relationships using all codon positions of BRCA1 (2788 sites). The branch leading to the marsupial outgroup (*Didelphis*, *Macropus*, and *Vombatus*) was reduced by half. ML bootstrap proportions (100 replications) > 50% are indicated at each node. GTR + Γ_8 ML parameters estimated with PAUP*: rate matrix (AC: 1.11, AG: 4.15, AT: 0.63, CG: 1.3, CT: 4.91, GT: 1.00), $\alpha = 2.66$.

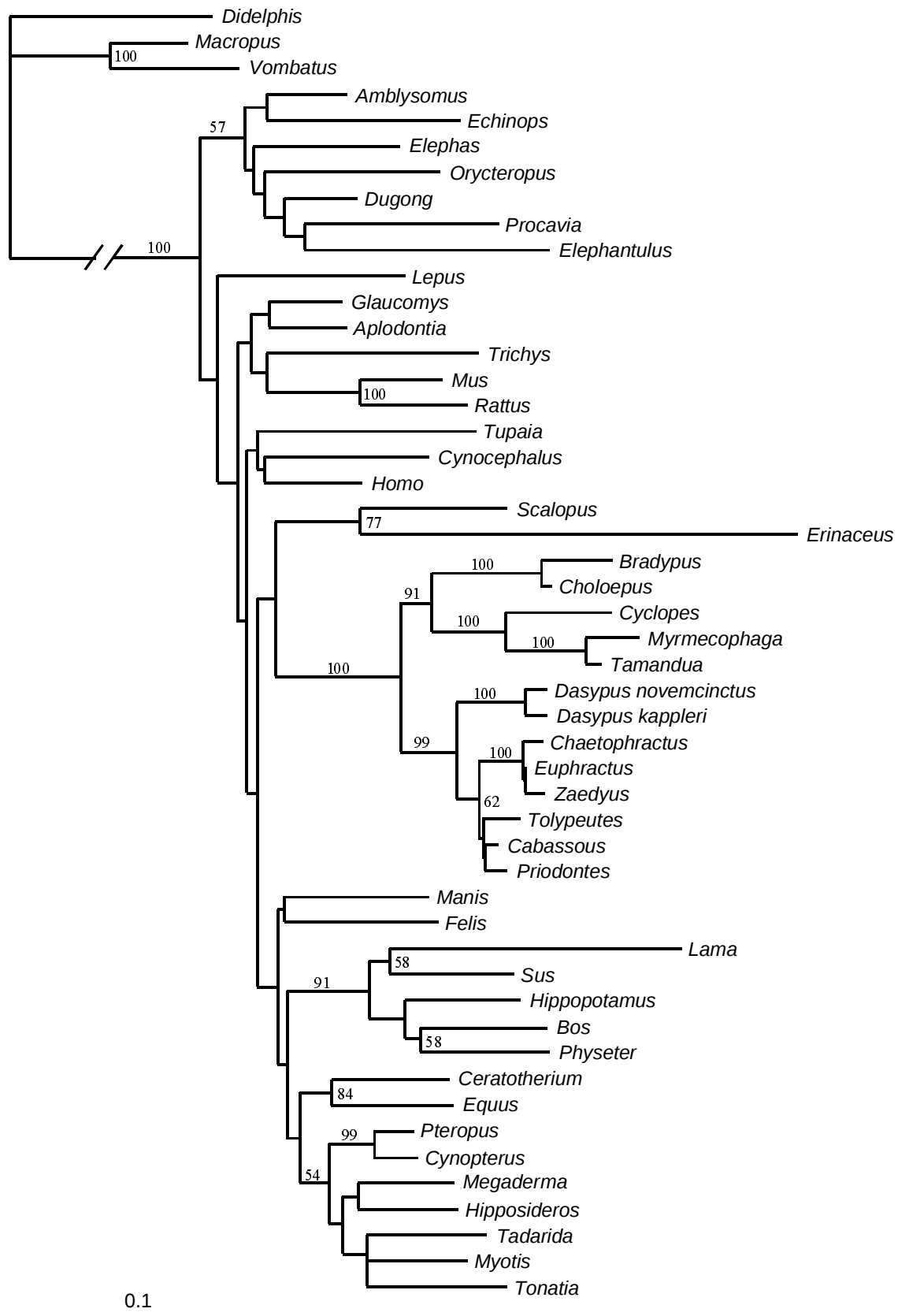


Fig-sup 3. Maximum likelihood phylogram of placental mammal relationships using only 1st and 2nd codon positions of VWF (794 sites). The branch leading to the marsupial outgroup (*Didelphis*, *Macropus*, and *Vombatus*) was reduced by half. ML bootstrap proportions (100 replications) > 50% are indicated at each node. GTR + Γ_8 ML parameters estimated with PAUP*: rate matrix (AC: 2.11, AG: 6.31, AT: 1.31, CG: 2.41, CT: 5.59, GT: 1.00), $\alpha = 0.54$.