

Additional file 10

Supplementary results - phylogenetic analysis using nuclear gene orthologs

Table. Availability of 18 nuclear gene orthologs across 20 Hyloidea families. For each of the 18 nuclear genes [1] extracted from the *Pristimantis euphronides* HANNO annotation, homologous sequences were retrieved from NCBI GenBank across 20 Hyloidea families. ✓, at least one GenBank CDS or partial CDS sequence available for that family and gene; –, no sequence available. The 12 genes retained after alignment quality filtering are listed first, followed by six excluded genes (marked with †). *P. euphronides* (a) sequences were extracted from the HANNO annotation of the scaffolded genome assembly (this study). *Rana temporaria* (b) sequences were extracted from the reference genome GCF_905171775.1 (outgroup, Ranidae; not Hyloidea). Family-level taxonomy follows the NCBI Taxonomy database (taxdump, downloaded 17 April 2025; taxonkit v0.19.0 [2]).

Family	BDNF	BMP2	CXCR4	MC1R	NTF3	POMC	RAG2	RHO	SIAH1	SLC8A3	TNS3	TYR	CRYBA1†	MYC†	MYH6†	RAG1†	SLC8A1†	ZFX†	Total
Allophrynidae	–	–	–	–	–	✓	–	–	–	✓	–	✓	–	–	–	✓	–	–	4
Alsodidae	–	–	✓	–	–	✓	✓	✓	✓	✓	–	✓	✓	–	–	✓	✓	–	10
Aromobatidae	✓	✓	✓	–	✓	✓	✓	✓	✓	✓	–	✓	–	–	–	✓	✓	✓	13
Batrachylidae	–	–	✓	–	–	✓	✓	–	–	✓	–	–	✓	–	–	✓	✓	–	7
Brachycephalidae	–	–	✓	–	–	✓	–	–	✓	✓	✓	✓	–	–	–	✓	✓	–	8
Bufonidae	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	✓	✓	✓	17
Centrolenidae	✓	✓	✓	–	✓	✓	–	✓	–	✓	–	✓	–	–	–	✓	✓	✓	11
Ceratophryidae	✓	✓	✓	–	✓	✓	✓	✓	✓	✓	–	✓	–	–	–	✓	✓	✓	13
Craugastoridae	–	–	✓	–	–	✓	✓	✓	✓	✓	–	✓	–	✓	–	✓	✓	–	10
Cycloramphidae	–	–	✓	–	–	✓	–	✓	✓	✓	–	✓	–	✓	–	✓	✓	–	9
Dendrobatidae	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	✓	✓	✓	17
Eleutherodactylidae	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	18
Heleophrynidae	✓	–	✓	–	–	✓	✓	–	–	✓	–	–	–	–	–	✓	✓	–	7
Hemiphractidae	–	–	✓	–	–	✓	✓	–	–	✓	–	–	–	–	–	✓	✓	–	6
Hylidae	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	✓	✓	✓	17
Hylodidae	✓	✓	✓	–	✓	✓	–	✓	✓	✓	–	✓	–	✓	–	✓	✓	✓	13
Leptodactylidae	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	✓	✓	✓	17
Rheobatrachidae	–	–	–	–	–	–	–	–	–	✓	–	–	–	–	–	–	✓	–	2
Rhinodermatidae	–	–	✓	–	–	✓	✓	–	–	✓	–	–	–	–	–	✓	–	–	5
Strabomantidae	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	✓	–	✓	✓	–	15
<i>P. euphronides</i> (a)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	18
<i>R. temporaria</i> (b)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	18
Hyloidea families	11	10	18	6	10	19	14	13	13	20	7	15	7	9	1	19	18	9	
GenBank sequences	181	121	1,574	57	119	4,294	72	1,095	798	274	363	3,365	918	202	478	5,424	485	76	

References

1. Portik DM, Streicher JW, Wiens JJ. Frog phylogeny: A time-calibrated, species-level tree based on hundreds of loci and 5,242 species. *Mol Phylogenet Evol.* 2023 Nov;188:107907.
2. Shen W, Ren H. TaxonKit: A practical and efficient NCBI taxonomy toolkit. *J Genet Genomics.* 2021 Sep 20;48(9):844-850.