

Output results of CLIME (CLustering by Inferred Models of Evolution)

Dataset:

Num of genes in input gene set: 7
Total number of genes: 20834
Prediction LLR threshold: 0

The CLIME PDF output two sections:

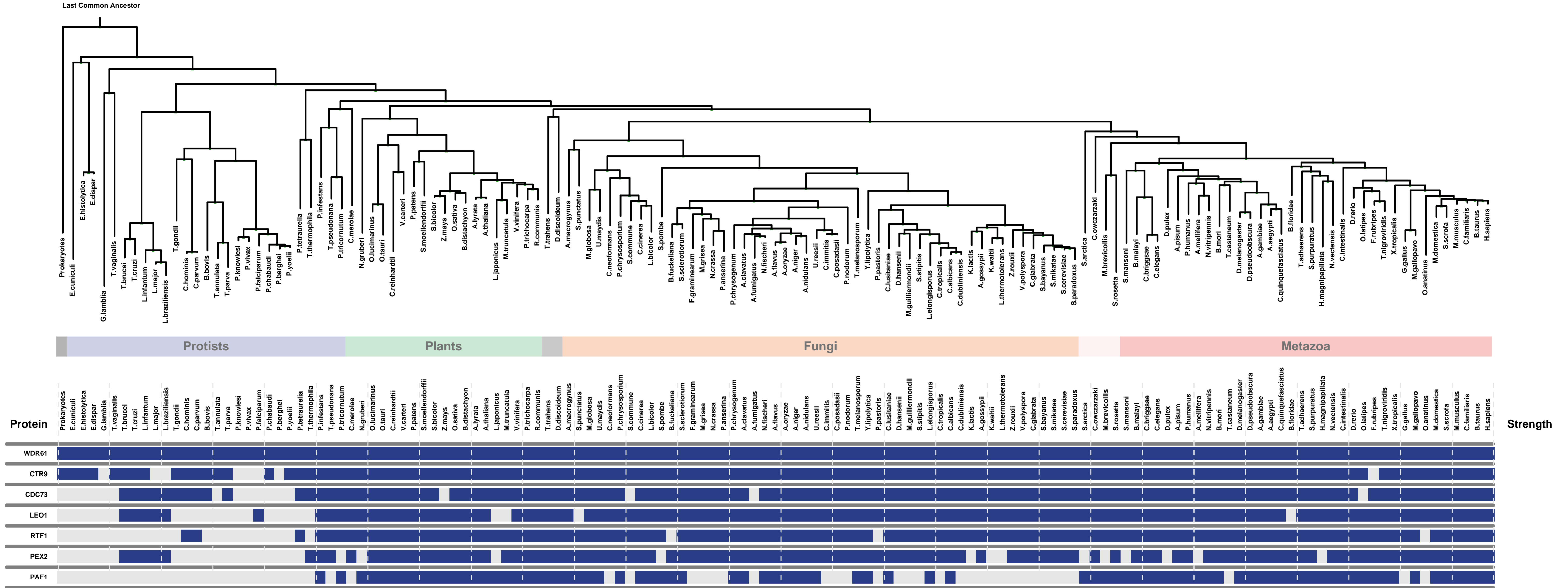
1) Overview of Evolutionarily Conserved Modules (ECMs)

- Top panel shows the predefined species tree.
- Bottom panel shows the partition of input genes into Evolutionary Conserved Modules (ECMs), ordered by ECM strength (shown at right), and separated by horizontal lines.
- Each row show one gene, where the phylogenetic profile indicates presence (blue) or absence (gray) of homologs in each species (column).
- Gene symbols are shown at left. Gray color indicates that the gene is a paralog to a higher scoring gene within the same ECM (based on BLASTP $E < 1e-3$).

2) Details of each ECM and its expansion ECM+

- Top panel shows the inferred evolutionary history on the predefined species tree. Branch color shows the gain event (blue) and loss events (red color, with brighter color indicating higher confidence in loss). Branches before the gain or after a loss are shown in gray.
- Bottom panel shows the input genes that are within the ECM (blue/white rows) as well as all genes in the expanded ECM+ (green/gray rows). The ECM+ includes genes likely to have arisen under the inferred model of evolution relative to a background model, and scored using a log likelihood ratio (LLR).
- PG indicates "paralog group" and are labeled alphabetically (i.e., A, B). The first gene within each paralog group is shown in black color. All other genes sharing sequence similarity (BLAST $E < 1e-3$) are assigned to the same PG label and displayed in gray.

Overview of Evolutionarily Conserved Modules (ECMs)



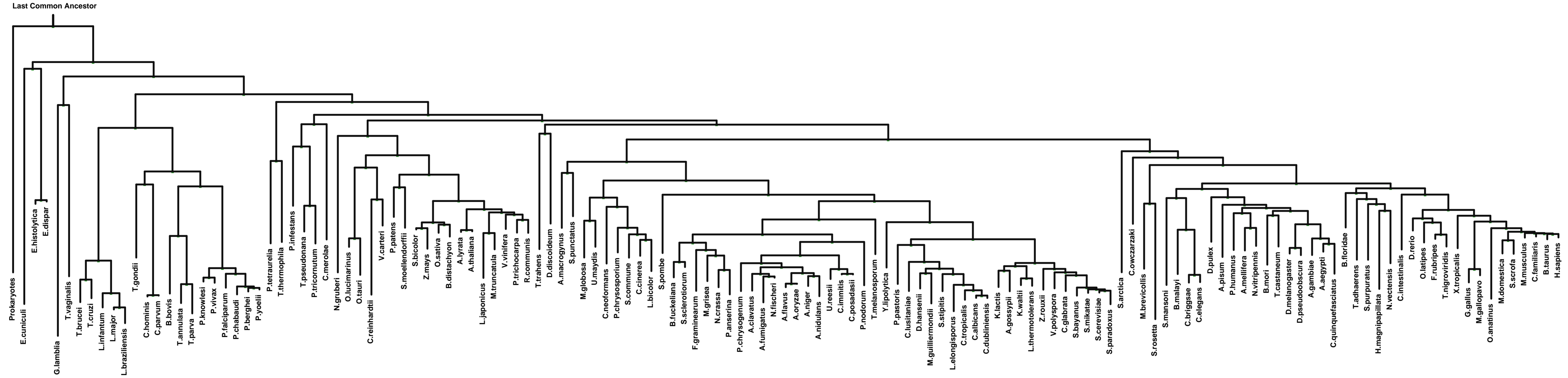
ECM 1, Gene set "Cdc73/Paf1 complex", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 0

PRESENCE ——— ABSENCE ———
GAIN ——— LOSS ———

Log-likelihood Ratio Scale

0 10 20 30 40 50 60



Protists Plants Fungi Metazoa

PG

Protein



1: Cdc73/Paf1 complex || 2: Ski complex || 3: transcriptionally active chromatin

LLR Notes

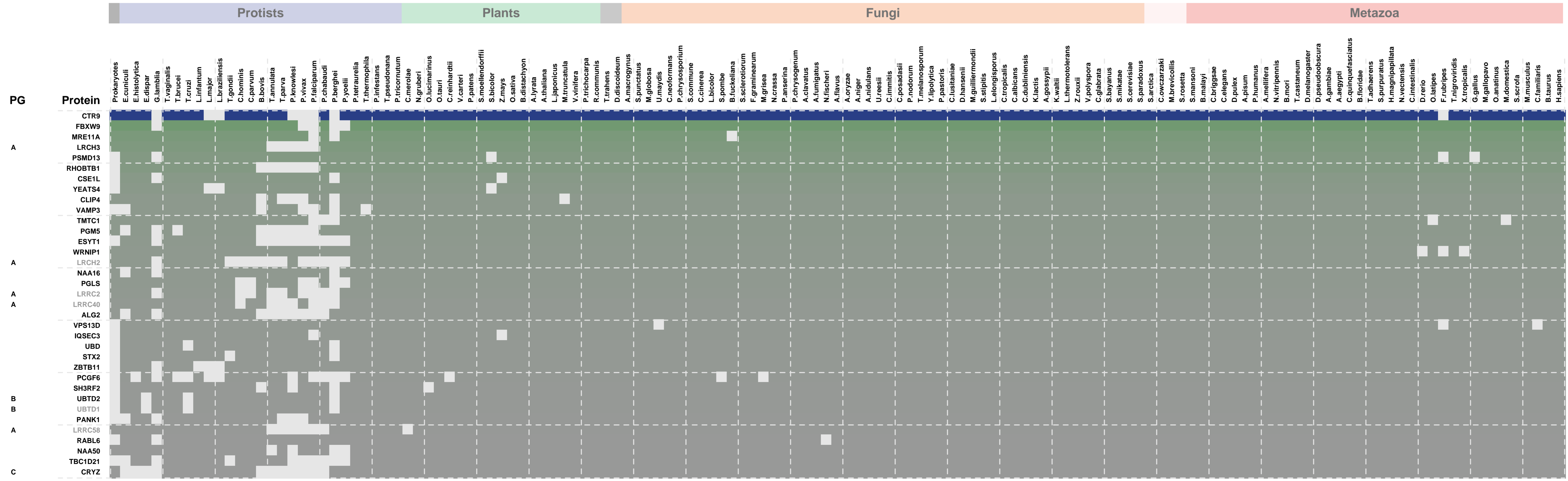
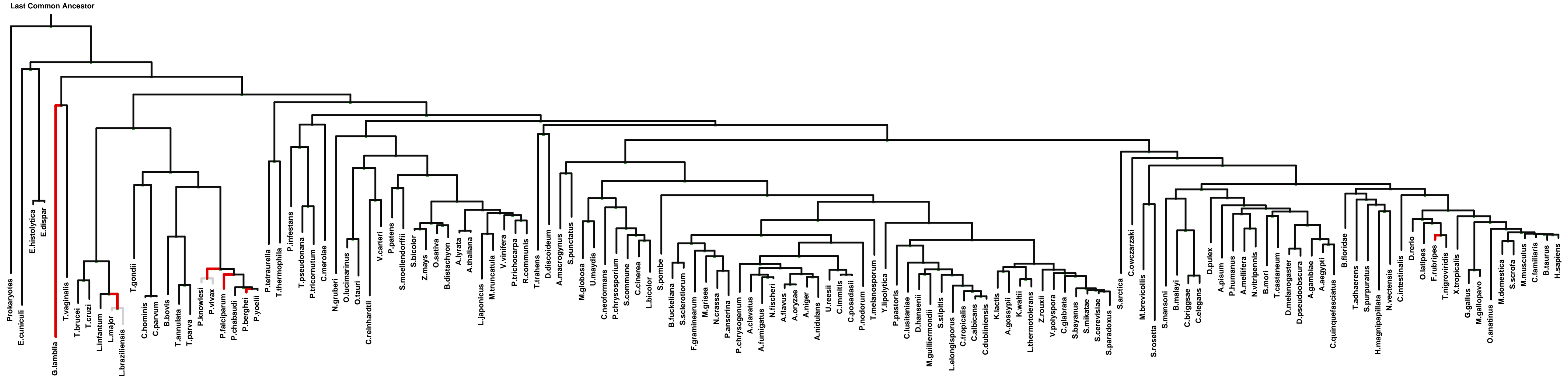
ECM 2, Gene set "Cdc73/Paf1 complex", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 35

PRESENCE ——— ABSENCE ———
GAIN ——— LOSS ———

Log-likelihood Ratio Scale

0 10 20 30 40 50 60



1: Cdc73/Paf1 complex || 2: nuclear speck || 3: transcriptionally active chromatin || 4: chromosome, telomeric region || 5: condensed nuclear chromosome || 6: Mre11 complex || 7: nuclear chromatin || 8: proteasome accessory complex || 9: proteasome complex || 10: proteasome regulatory particle || 11: nuclear pore || 12: NuA4 histone acetyltransferase complex || 13: nuclear matrix || 14: clathrin-coated vesicle || 15: clathrin-coated vesicle membrane || 16: neuron projection || 17: recycling endosome || 18: SNARE complex || 19: synapse || 20: cell-cell adherens junction || 21: costamere || 22: dystrophin-associated glycoprotein complex || 23: focal adhesion || 24: intercalated disc || 25: internal side of plasma membrane ||

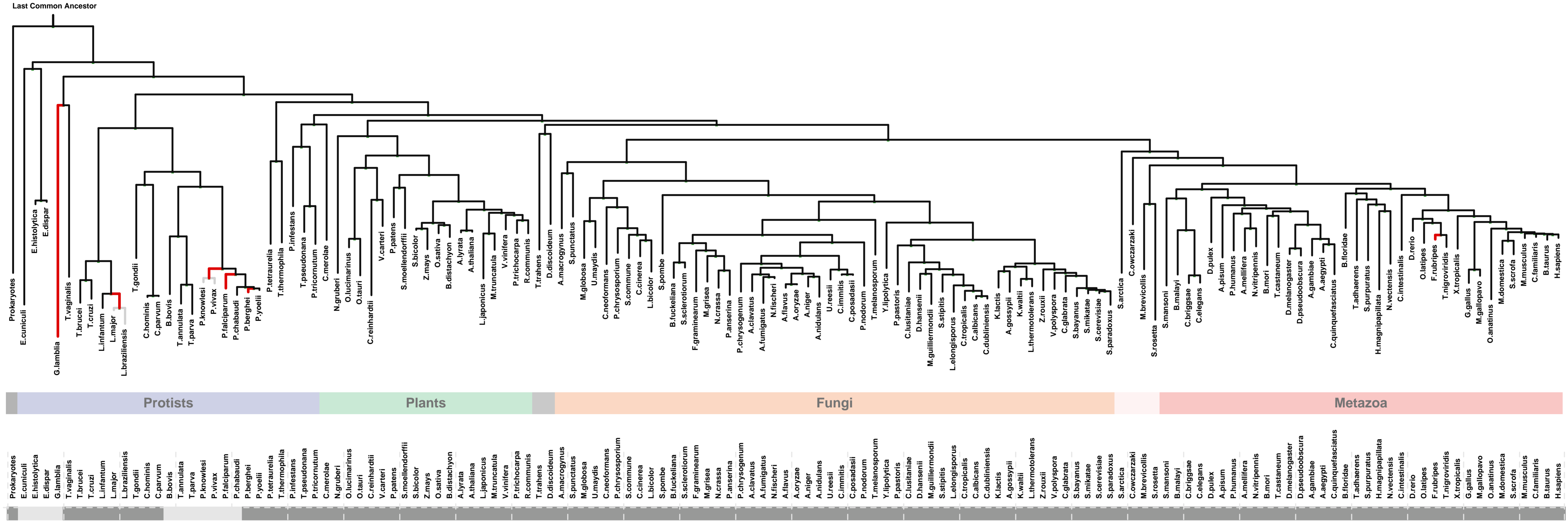
ECM 2, Gene set "Cdc73/Paf1 complex", Page 2

Num of ECM Genes: 1. Num of Predicted Genes: 35

PRESENCE ——— ABSENCE ———
GAIN ——— LOSS ———

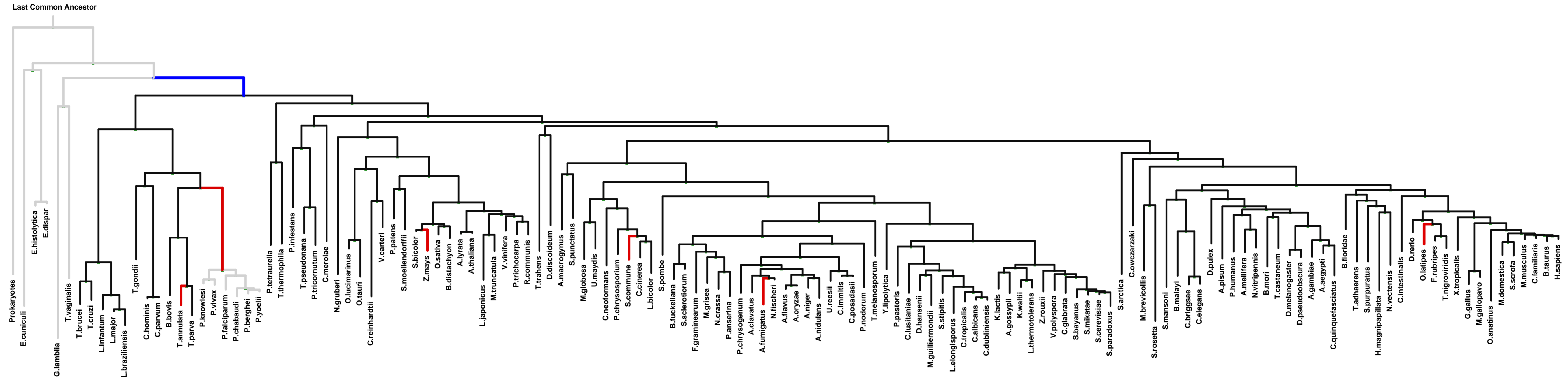
Log-likelihood Ratio Scale

0 10 20 30 40 50 60



ECM 3, Gene set "Cdc73/Paf1 complex", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 3



PG	Protein	Prokaryotes	Protists	Plants	Fungi	Metazoa	LLR	Notes
	CDC73							
	SLC25A52						3.8	
	UFL1						2.1	
	PPCS						0.1	

1: Cdc73/Paf1 complex

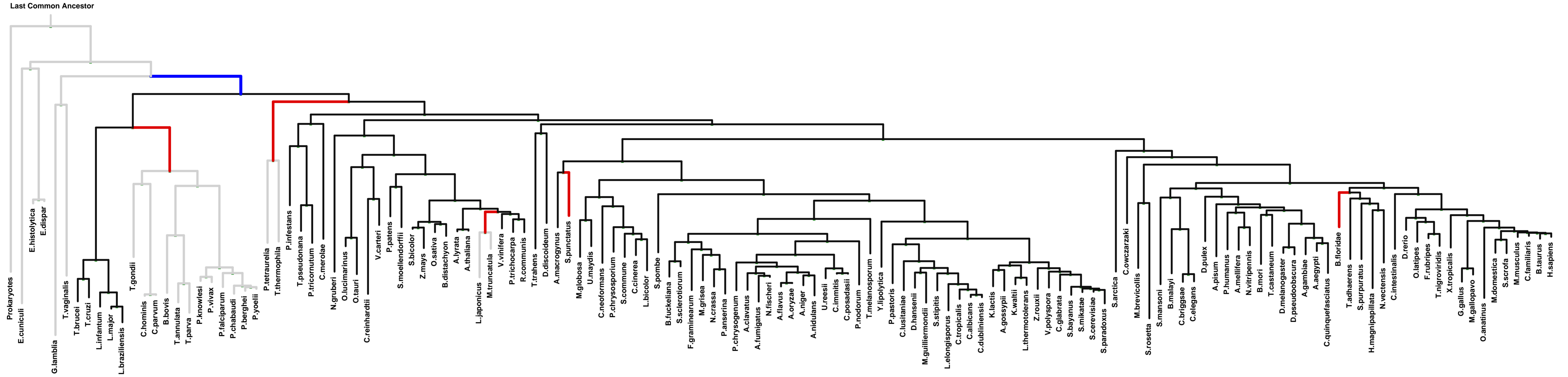
ECM 4, Gene set "Cdc73/Paf1 complex", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 9

PRESENCE ——— ABSENCE ———
GAIN ——— LOSS ———

Log-likelihood Ratio Scale

0 10 20 30 40 50 60



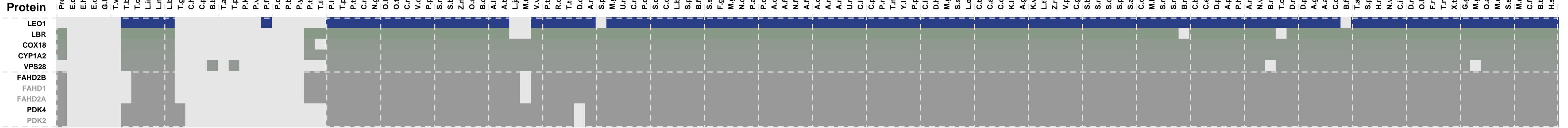
Protists

Plants

Fungi

Metazoa

PG



LLR Notes

1
7.2 2/3/4/5
3.9 6
2.5
1.7 7/8/9
0.3
0.3
0.3
0.0
0.0 10

1: Cdc73/Paf1 complex || 2: integral to nuclear inner membrane || 3: nuclear envelope || 4: nuclear membrane || 5: nuclear pore || 6: integral to mitochondrial inner membrane || 7: endosome || 8: endosome membrane || 9: late endosome membrane || 10: pyruvate dehydrogenase complex

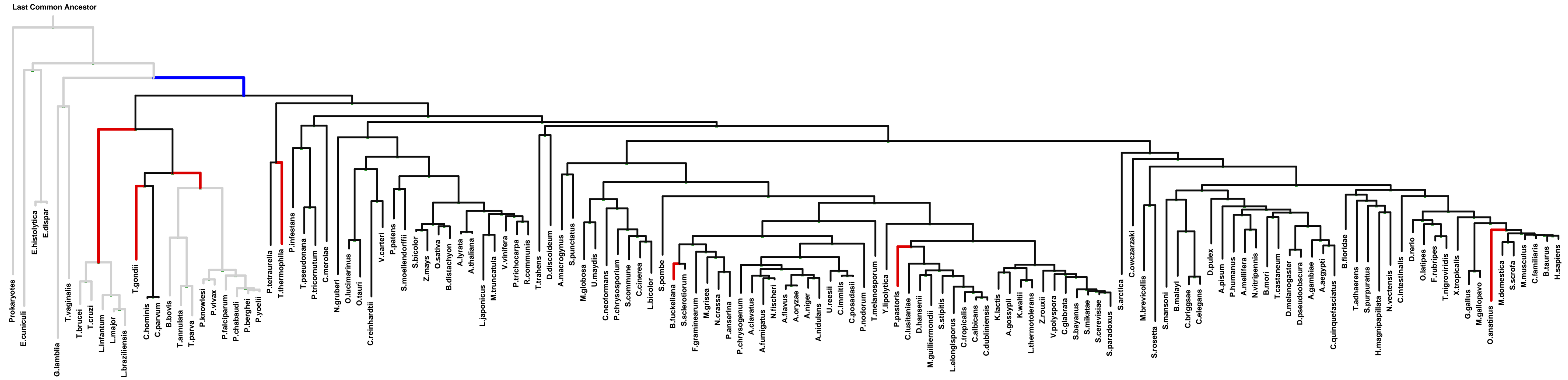
ECM 5, Gene set "Cdc73/Paf1 complex", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 3

PRESENCE ——— ABSENCE ———
GAIN ——— LOSS ———

Log-likelihood Ratio Scale

0 10 20 30 40 50 60

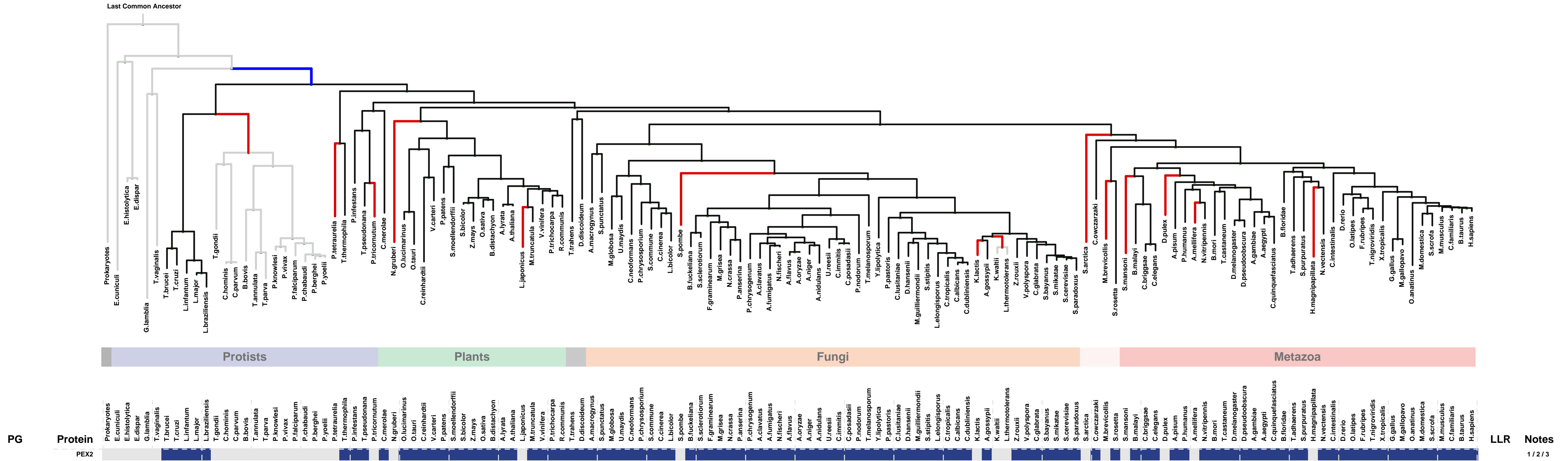


PG	Protein	Prokaryotes	Protists	Plants	Fungi	Metazoa	LLR	Notes
A	RTF1						1	
A	UBXN1						9.3	2/3/4
A	EPC2						5.8	5
A	EPC1						4.4	5/6/7

1: Cdc73/Paf1 complex || 2: Cdc48p-Npl4p-Ufd1p AAA ATPase complex || 3: dendrite || 4: proteasome complex || 5: Piccolo NuA4 histone acetyltransferase complex || 6: NuA4 histone acetyltransferase complex || 7: nuclear membrane

ECM 6, Gene set "Cdc73/Paf1 complex", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 0



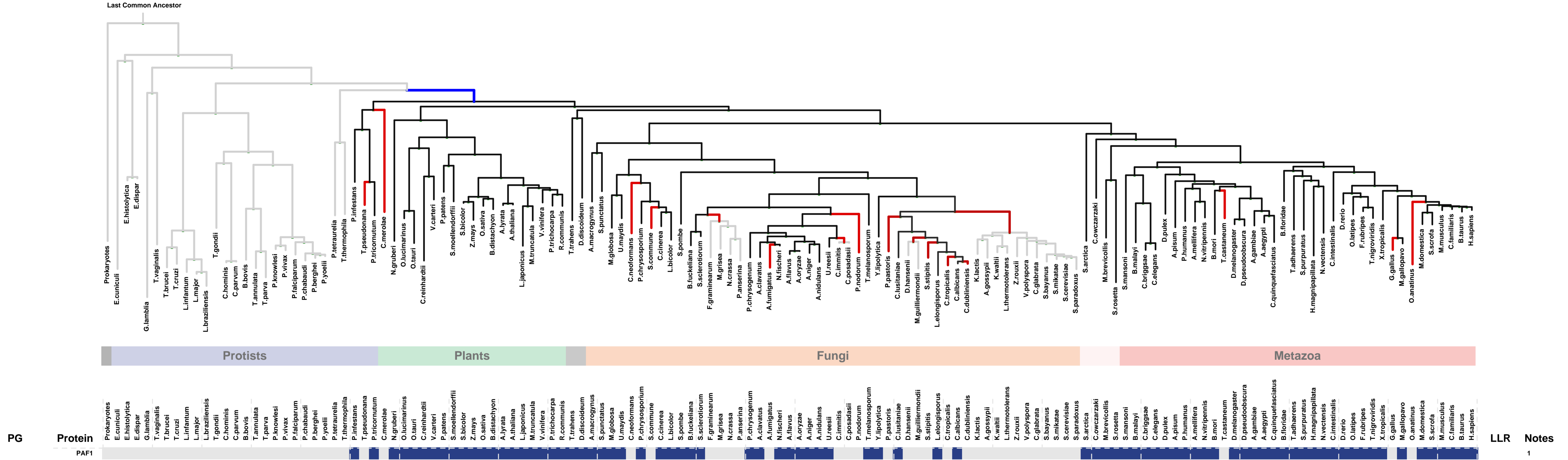
ECM 7, Gene set "Cdc73/Paf1 complex", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 0

PRESENCE ——— ABSENCE ———
GAIN ——— LOSS ———

Log-likelihood Ratio Scale

0 10 20 30 40 50 60



1: Cdc73/Paf1 complex