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

Dataset:

Num of genes in input gene set: 3
Total number of genes: 20834
Prediction LLR threshold: 0

The CLIME PDF output two sections:

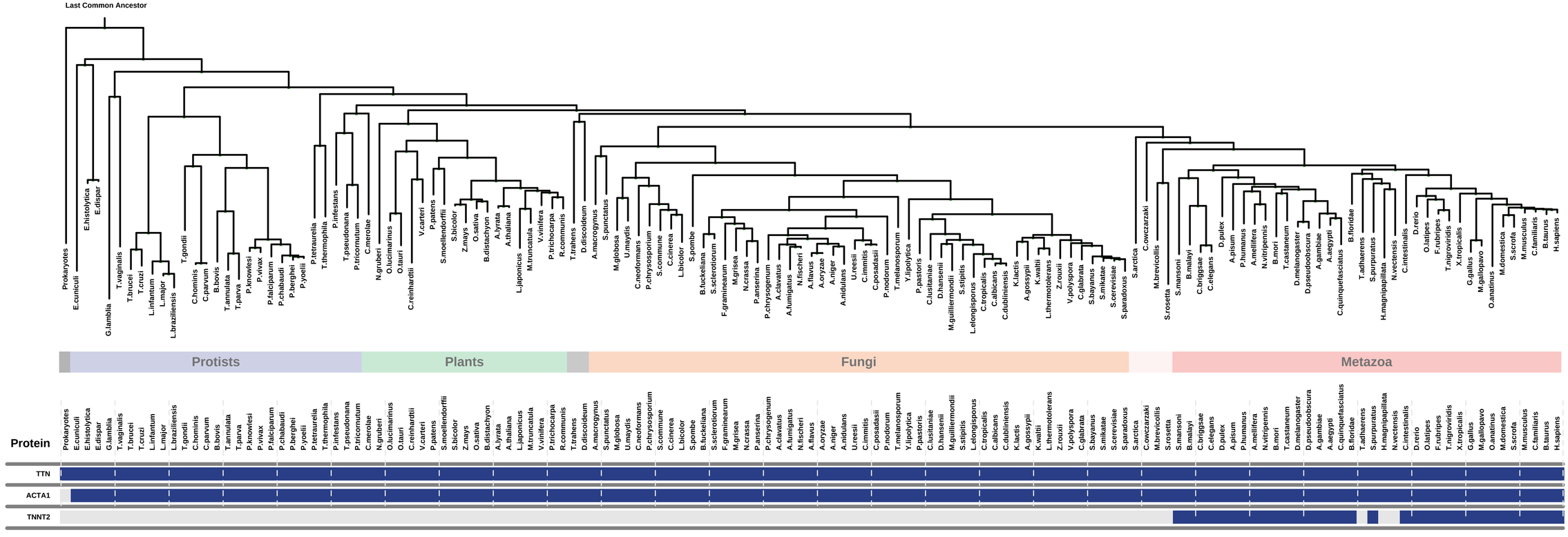
1) Overview of Evolutionarily Conserved Modules (ECMs)

- 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 "striated muscle thin filament", 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: condensed nuclear chromosome || 2: I band || 3: M band || 4: striated muscle thin filament || 5: Z disc

ECM 2, Gene set "striated muscle thin filament", Page 1

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

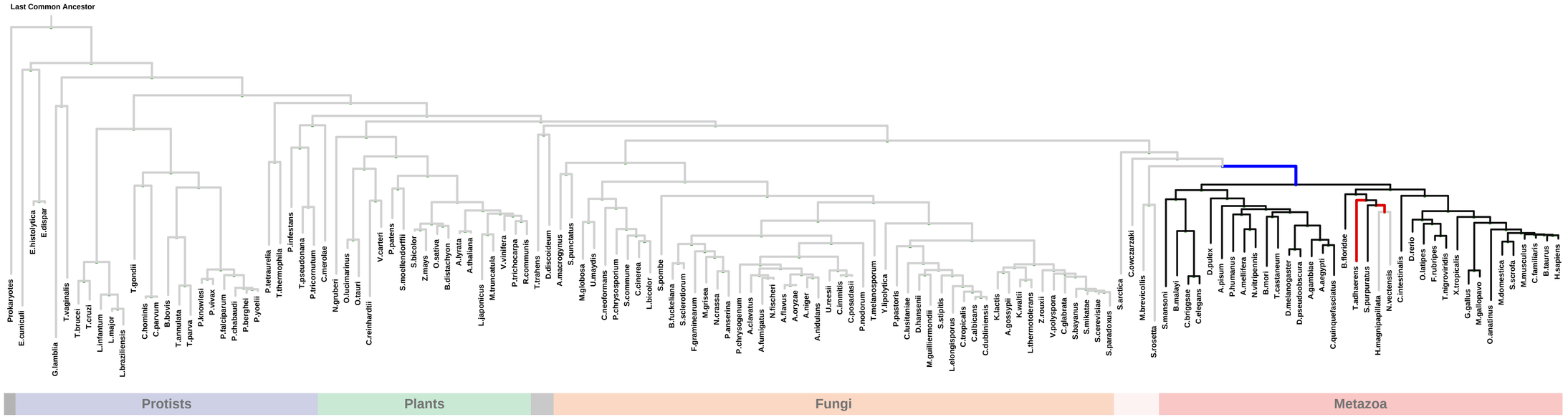
PRESENCE — GAIN — ABSENCE — LOSS

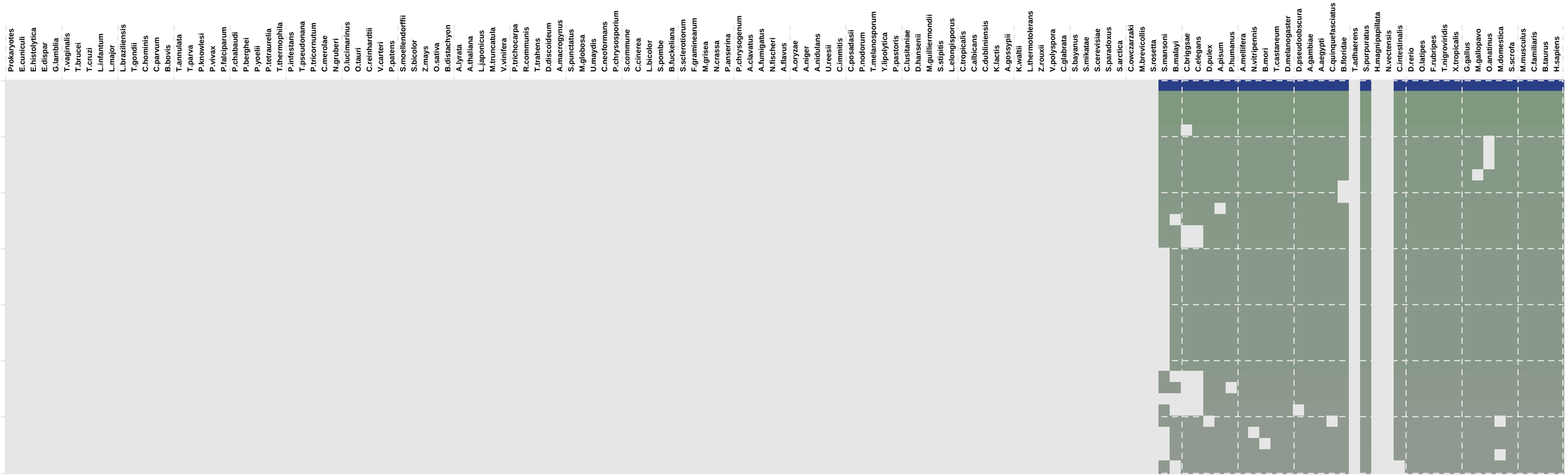
Log-likelihood Ratio Scale: 0 10 20 30 40 50 60

1: actin cytoskeleton || 2: actin filament || 3: sarcomere || 4: stress fiber || 5: striated muscle thin filament

ECM 3, Gene set "striated muscle thin filament", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 105



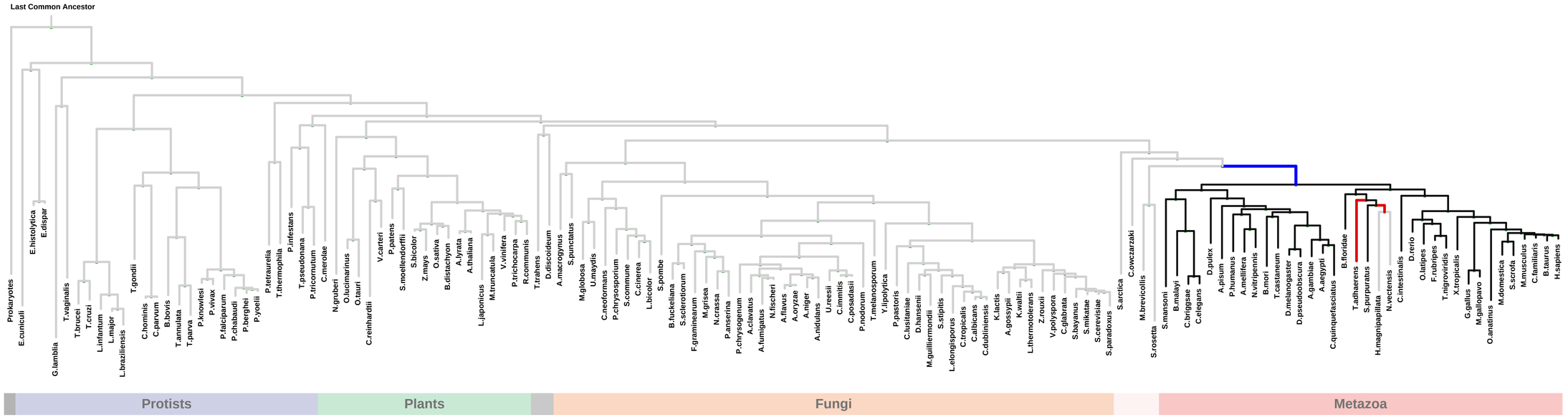


PG	Protein	LLR	Notes
A	TNNT2		1 / 2 / 3
B	DCST2	10.9	
C	TNNI2	10.9	3
C	TNNI3	10.9	1 / 3
	ERBB3	9.5	4 / 5 / 6 / 7
D	LOC100130849	8.1	
	LOC402269	8.1	
D	100510302	8.1	
B	DCST1	8.1	
E	PROX2	8.0	
E	PROX1	8.0	
F	LOC100508969	7.5	
	SDC1	7.4	8 / 9 / 10 / 11 / 12
G	GPM6B	7.1	13
	FBXO28	7.1	
H	OLFML3	6.7	
I	EFNA1	6.7	14
I	EFNA5	6.7	15 / 16
H	OLFM2	6.7	
C	TNNI1	6.7	3
H	OLFML1	6.7	
H	OLFML2A	6.7	17
J	TSC22D2	6.7	
J	TSC22D3	6.7	
	100508475	6.7	
H	OLFML2B	6.7	17
A	TNNT3	5.6	3
G	GPM6A	5.0	18 / 19 / 20 / 21
	TEX28	4.6	
	GMNN	4.4	
	RABEP2	4.2	22
	SH3BGR	4.1	
	TMEM47	4.1	23
	TAX1BP3	4.0	
	NDUFB5	3.8	24

1: sarcomere || 2: striated muscle thin filament || 3: troponin complex || 4: basolateral plasma membrane || 5: lateral plasma membrane || 6: postsynaptic membrane || 7: receptor complex || 8: external side of plasma membrane ||
9: focal adhesion || 10: Golgi lumen || 11: lysosomal lumen || 12: uropod || 13: membrane raft || 14: anchored to plasma membrane || 15: anchored to external side of plasma membrane || 16: caveola || 17: extracellular matrix ||
18: axonal growth cone || 19: dendritic spine || 20: filopodium || 21: neuron projection || 22: early endosome || 23: cell-cell junction || 24: mitochondrial respiratory chain complex I

ECM 3, Gene set "striated muscle thin filament", Page 2

Num of ECM Genes: 1. Num of Predicted Genes: 105

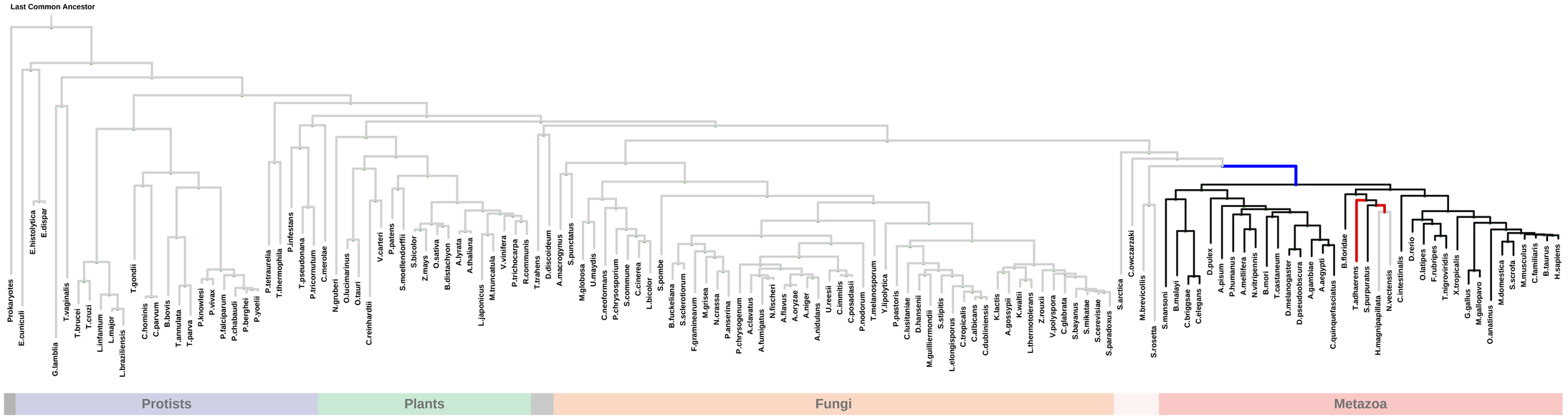


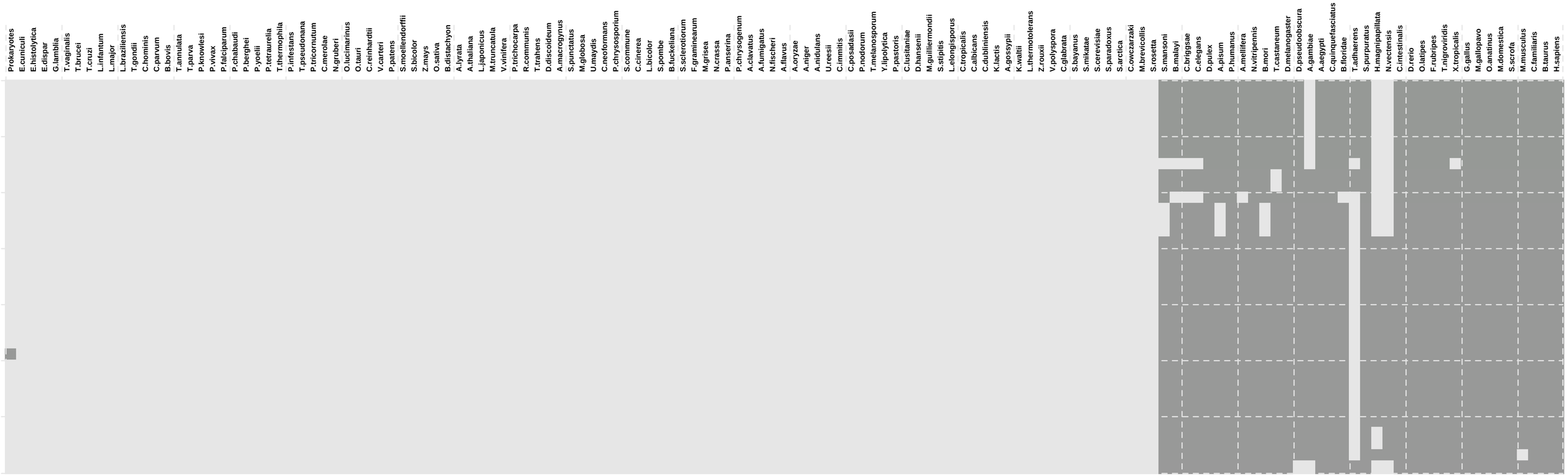
PG	Protein	LLR	Notes
	TWSG1	3.4	
F	LGALSL	3.3	
F	LGALS1	3.3	1 / 2
F	LGALS12	3.3	
	MRPL51	3.0	3 / 4
	MYOD1	2.6	5 / 6
	BAG5	2.6	7
	CCR10	2.4	
K	C1QTNF2	2.1	8
K	C1QTNF3	2.1	8
K	C1QTNF4	2.1	
K	C1QTNF5	2.1	8
K	C1QTNF6	2.1	8
K	C1QTNF7	2.1	8
K	C1QTNF8	2.1	8
	TEDDM1	2.1	
K	CBLN2	2.1	
K	CBLN3	2.1	9
K	CBLN4	2.1	9
K	C1QC	2.1	8
K	COL10A1	2.1	8 / 10 / 11
K	COL8A1	2.1	1 / 11 / 12
K	COL8A2	2.1	1 / 2 / 8 / 11 / 12
K	C1QL1	2.1	8
K	C1QL2	2.1	8
K	C1QL3	2.1	8
K	C1QL4	2.1	8
A	TNNT1	2.1	13
K	CBLN1	2.0	9
	TMEM9B	2.0	
	FAM195A	2.0	
	EVPLL	1.8	
	CPLX1	1.5	9 / 14 / 15
L	FABP5	1.2	
L	FABP7	1.2	16

1: extracellular matrix || 2: proteinaceous extracellular matrix || 3: mitochondrial large ribosomal subunit || 4: mitochondrial ribosome || 5: myofibril || 6: nuclear chromatin || 7: inclusion body || 8: collagen || 9: synapse ||
10: cell cortex || 11: endoplasmic reticulum lumen || 12: basement membrane || 13: troponin complex || 14: dendrite || 15: synaptobrevin 2-SNAP-25-syntaxin-1a-complexin I complex || 16: cell projection

ECM 3, Gene set "striated muscle thin filament", Page 3

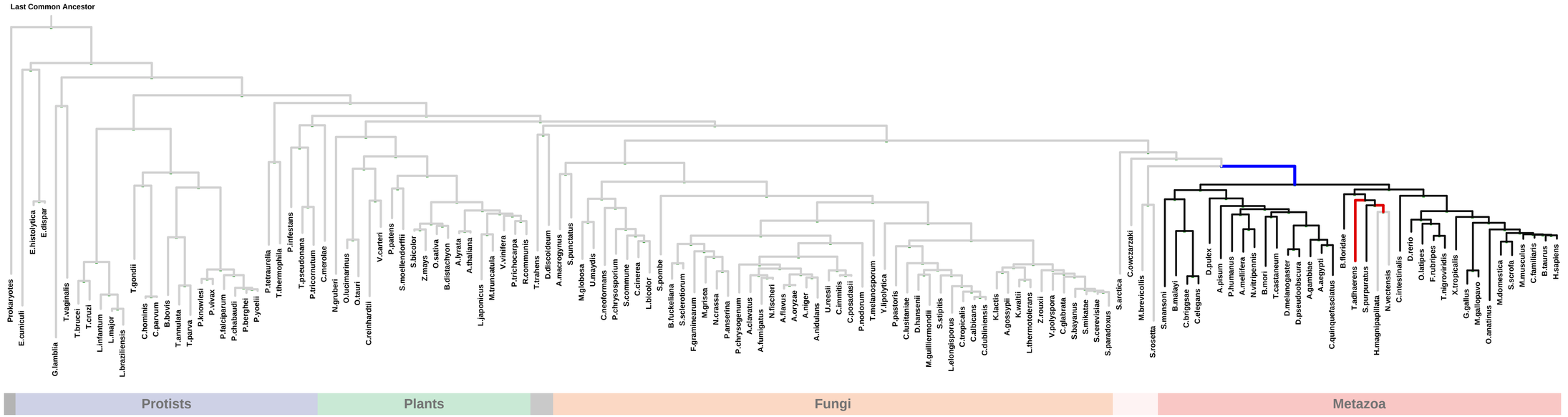
Num of ECM Genes: 1. Num of Predicted Genes: 105





ECM 3, Gene set "striated muscle thin filament", Page 4

Num of ECM Genes: 1. Num of Predicted Genes: 105



PG	Protein	LLR	Notes
L	FABP2	0.0	1 / 2

1: apical cortex || 2: microvillus