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

Dataset:

Num of genes in input gene set: 21
Total number of genes: 20834
Prediction LLR threshold: 0

The CLIME PDF output two sections:

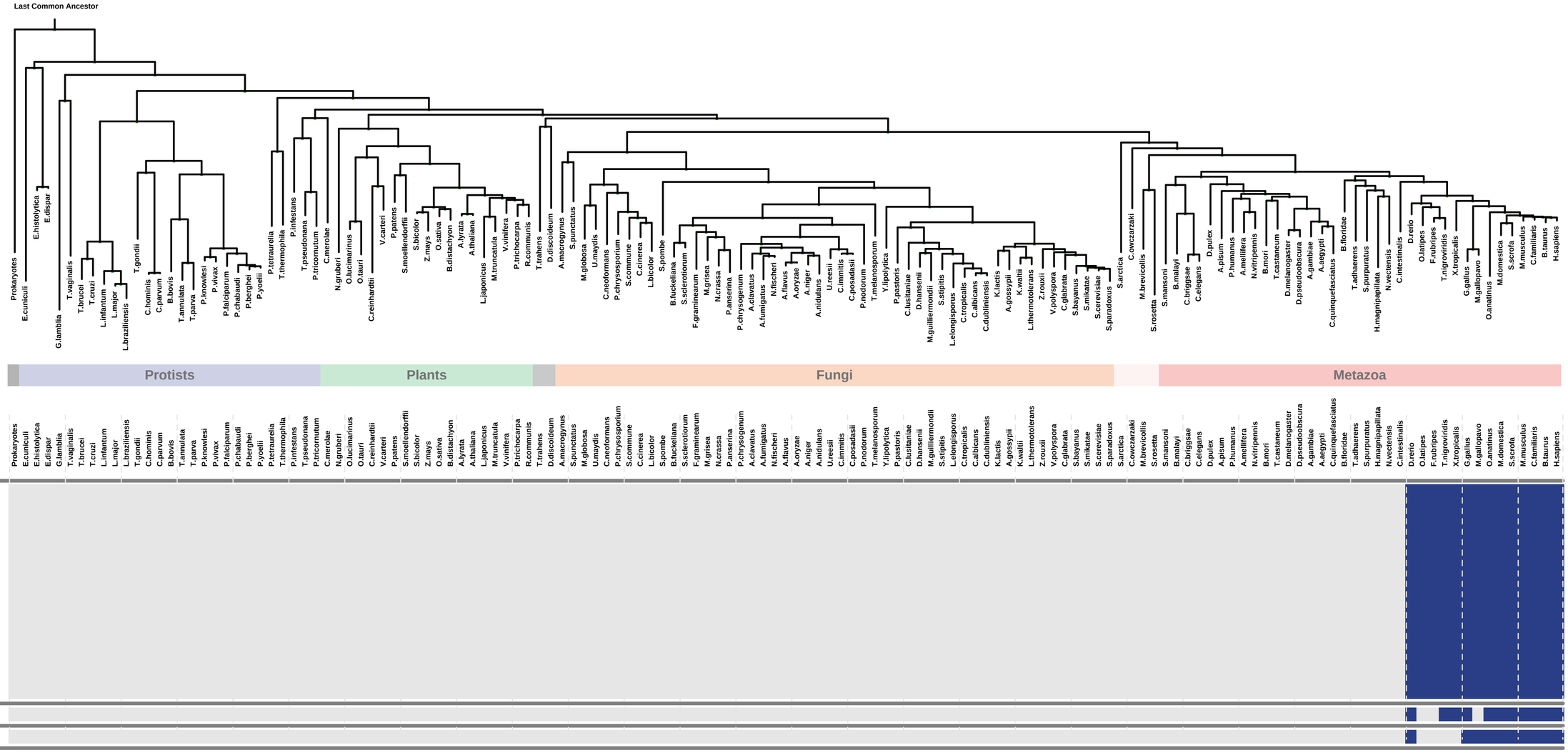
1) Overview of Evolutionarily Conserved Modules (ECMs)

- 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+

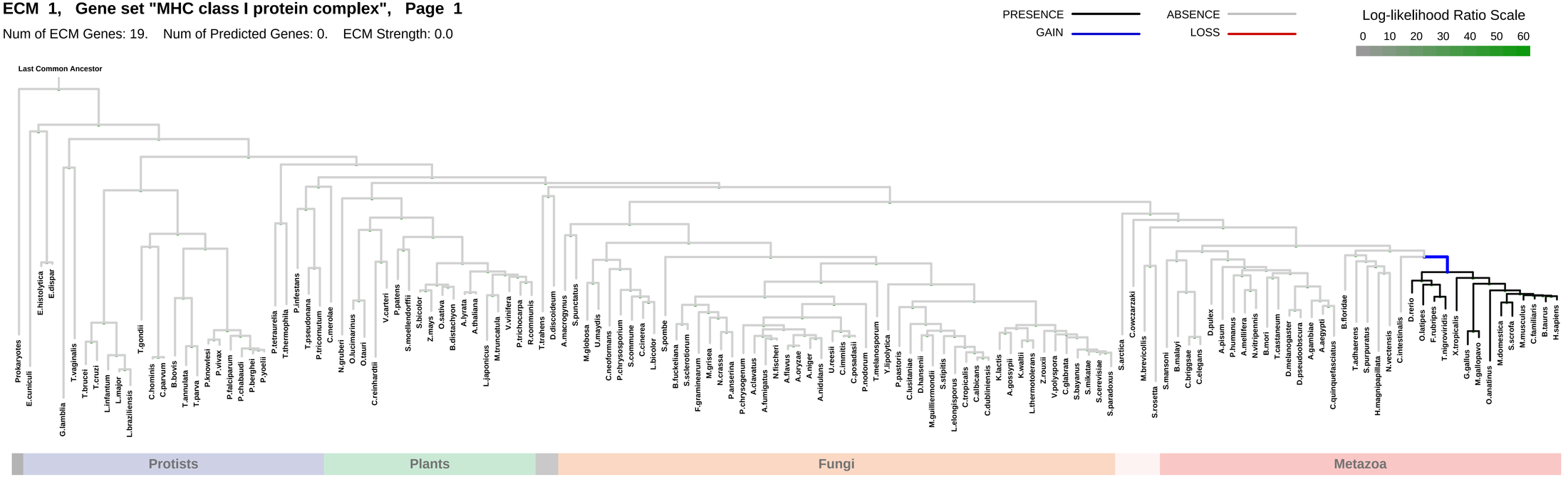
- Top panel shows the inferred evolutionary history on the predefined species tree. Branch color shows the gain event (blue) and loss events (red color, with brighter color indicating higher confidence in loss). Branches before the gain or after a loss are shown in gray.
- Bottom panel shows the input 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 "MHC class I protein complex", Page 1

Num of ECM Genes: 19. Num of Predicted Genes: 0. ECM Strength: 0.0



PG	Protein	LLR	Notes
A	AZGP1		1
A	B2M		1 / 2 / 3 / 4 / 5 / 6 / 7
A	CD1A		1 / 8
A	FCGRT		1
A	HFE		1 / 9 / 10 / 11 / 12 / 13
A	HLA-A		1 / 3 / 5 / 7 / 14
A	HLA-B		1 / 3 / 5 / 7 / 14
A	HLA-C		1 / 3 / 5 / 7 / 14
A	HLA-E		1 / 3 / 5 / 7 / 14
A	HLA-F		1 / 3 / 5 / 7 / 14
A	HLA-G		1 / 3 / 5 / 7 / 14
A	MICA		1
A	MICB		1
A	MR1		1
A	RAET1G		1
A	RAET1L		1 / 15
A	ULBP1		1 / 15
A	ULBP2		1 / 15
A	ULBP3		1 / 15

1: MHC class I protein complex || 2: early endosome lumen || 3: early endosome membrane || 4: endoplasmic reticulum lumen || 5: ER to Golgi transport vesicle membrane || 6: external side of plasma membrane || 7: phagocytic vesicle membrane ||
8: endosome membrane || 9: apical part of cell || 10: basal part of cell || 11: cytoplasmic vesicle || 12: early endosome || 13: recycling endosome || 14: integral to lumenal side of endoplasmic reticulum membrane || 15: anchored to membrane

ECM 2, Gene set "MHC class I protein complex", Page 1

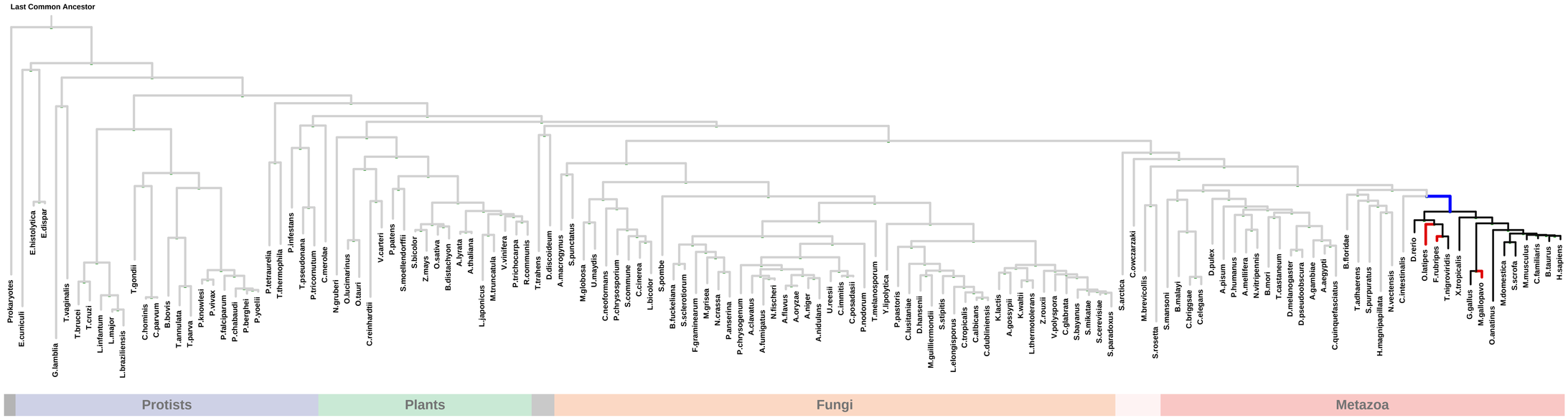
Num of ECM Genes: 1. Num of Predicted Genes: 49

PRESENCE ABSENCE

GAIN LOSS

Log-likelihood Ratio Scale

0 10 20 30 40 50 60

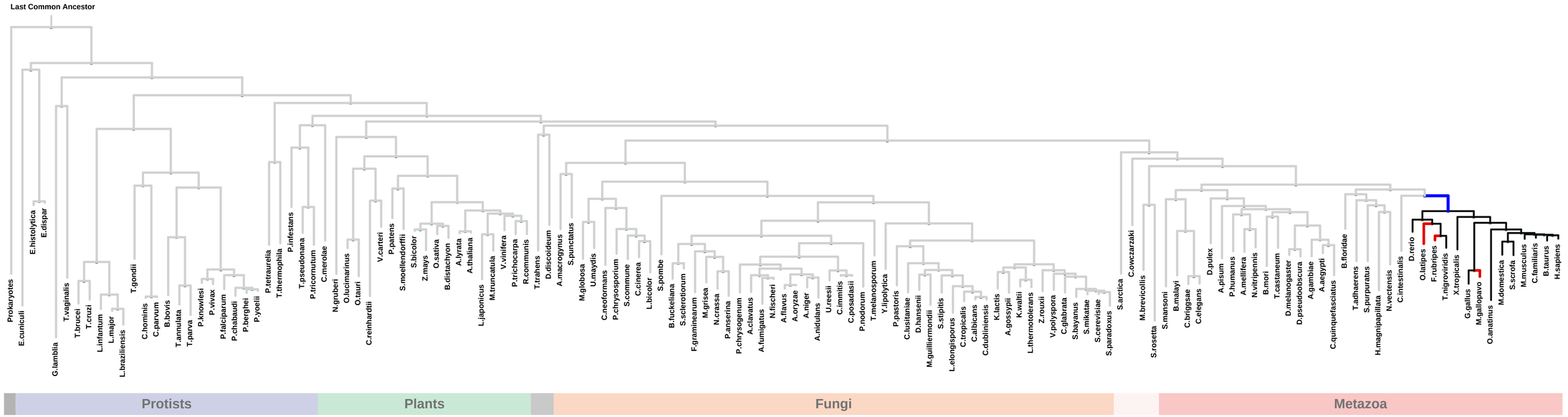


PG	Protein	LLR	Notes
	RAET1E		1
	LOC646543	21.7	
	SRGN	12.5	2 / 3 / 4
A	LOC100129626	11.1	
A	TOMM5	11.1	5
A	100510530	11.1	
	SNAPC5	7.5	
	CEP68	7.3	
	RIPPLY3	7.3	
	FCER1G	7.3	6 / 7
	FXYD1	7.3	8
B	TMSB15A	7.3	
B	TMSB15B	7.3	
C	LILRA1	7.3	
	100287712	7.3	
C	100510144	7.3	
C	100510200	7.3	
C	LILRB2	7.3	
	CAST	6.8	
D	GKN2	6.0	
	C1orf174	6.0	
	NPPA	6.0	2
	C1orf168	6.0	
D	SFTPC	5.2	9 / 10
	MS4A18	4.5	
	BRICD5	4.5	
	FOXP1	4.5	
	MS4A18	4.5	
	C1orf172	4.5	
	AKAP7	4.4	11 / 12 / 13 / 14
	COX8A	3.9	
	ALB	3.8	3 / 15
	RAD51AP1	3.8	
E	CCDC71	3.8	
E	CCDC71L	3.8	

1: MHC class I protein complex || 2: mast cell granule || 3: platelet alpha granule lumen || 4: zymogen granule || 5: mitochondrial outer membrane translocase complex || 6: external side of plasma membrane || 7: Fc-epsilon receptor I complex ||
8: chloride channel complex || 9: lamellar body || 10: multivesicular body || 11: exocytic vesicle || 12: lateral plasma membrane || 13: sarcoplasmic reticulum || 14: T-tubule || 15: basement membrane

ECM 2, Gene set "MHC class I protein complex", Page 2

Num of ECM Genes: 1. Num of Predicted Genes: 49

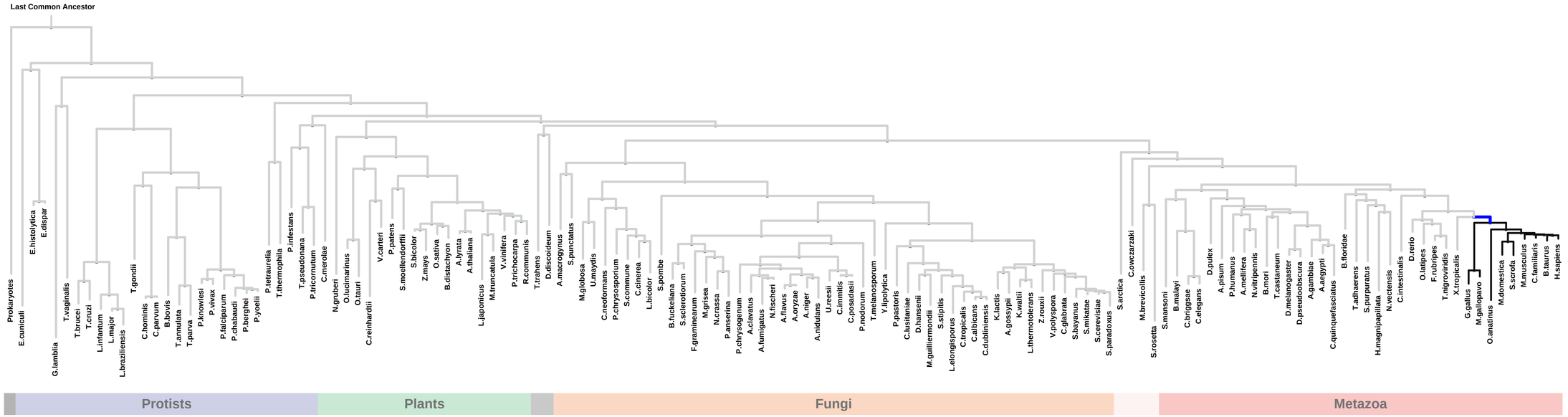


PG	Protein	LLR	Notes
	AJAP1	3.5	1 / 2
	C1orf210	3.1	
	BAALC	2.5	
	PARM1	1.9	3 / 4 / 5
	MLLT11	1.9	
	GRP	1.8	
	CENPW	1.8	6 / 7 / 8 / 9
	SGOL2	1.7	6 / 7 / 10
	DEXI	1.5	
	CRLF2	1.3	
	HMGN3	1.2	11
	EID1	0.9	
	SNX21	0.9	12
	FANCG	0.2	13
	GLYAT	0.2	

1: adherens junction || 2: basolateral plasma membrane || 3: early endosome || 4: endosome membrane || 5: late endosome || 6: chromosome, centromeric region || 7: condensed chromosome kinetochore || 8: kinetochore ||
9: nuclear matrix || 10: mitotic cohesin complex || 11: chromatin || 12: cytoplasmic vesicle membrane || 13: Fanconi anaemia nuclear complex

ECM 3, Gene set "MHC class I protein complex", Page 1

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



PG	Protein	LLR	Notes
	PROCR		1

1: MHC class I protein complex