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

Dataset:

Num of genes in input gene set: 4
Total number of genes: 20834
Prediction LLR threshold: 0

The CLIME PDF output two sections:

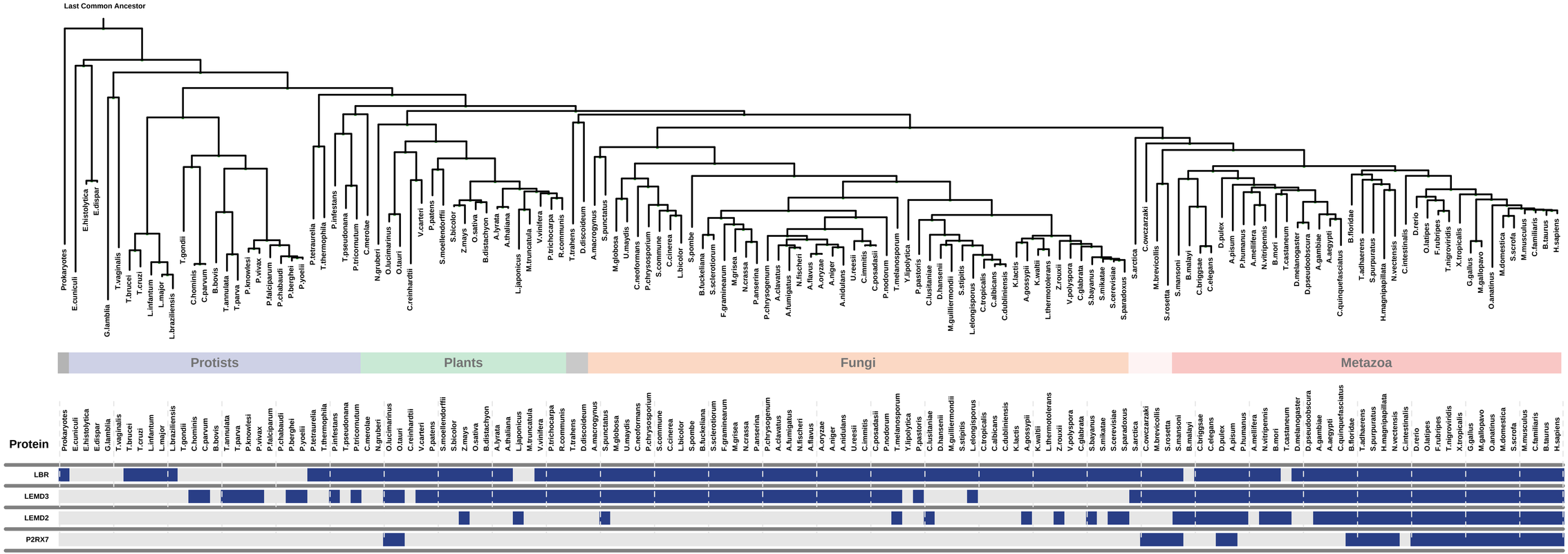
1) Overview of Evolutionarily Conserved Modules (ECMs)

- 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+

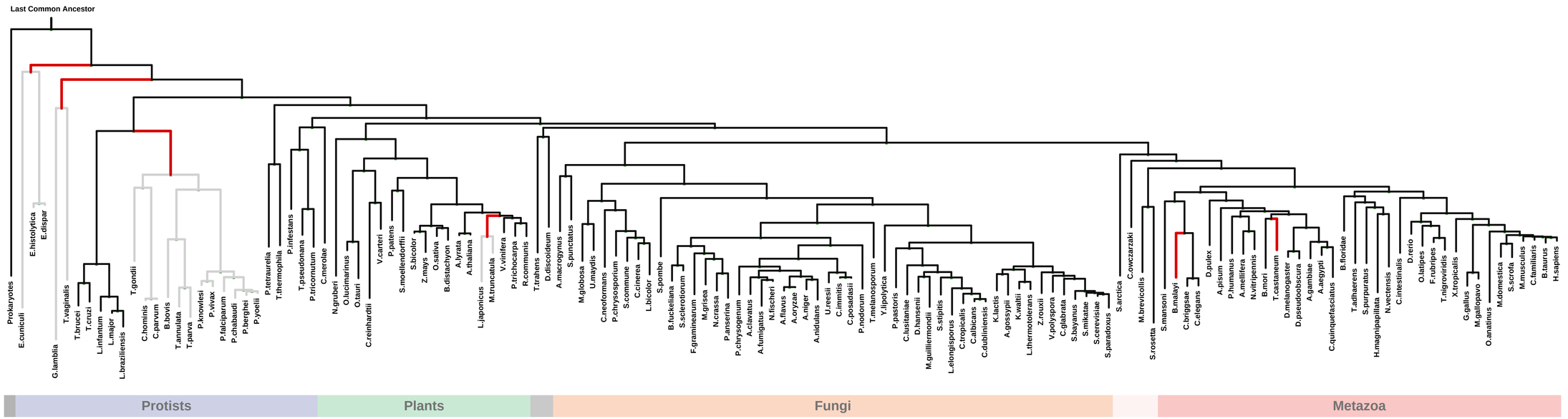
- Top panel shows the inferred evolutionary history on the predefined species tree. Branch color shows the gain event (blue) and loss events (red color, with brighter color indicating higher confidence in loss). Branches before the gain or after a loss are shown in gray.
- Bottom panel shows the input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

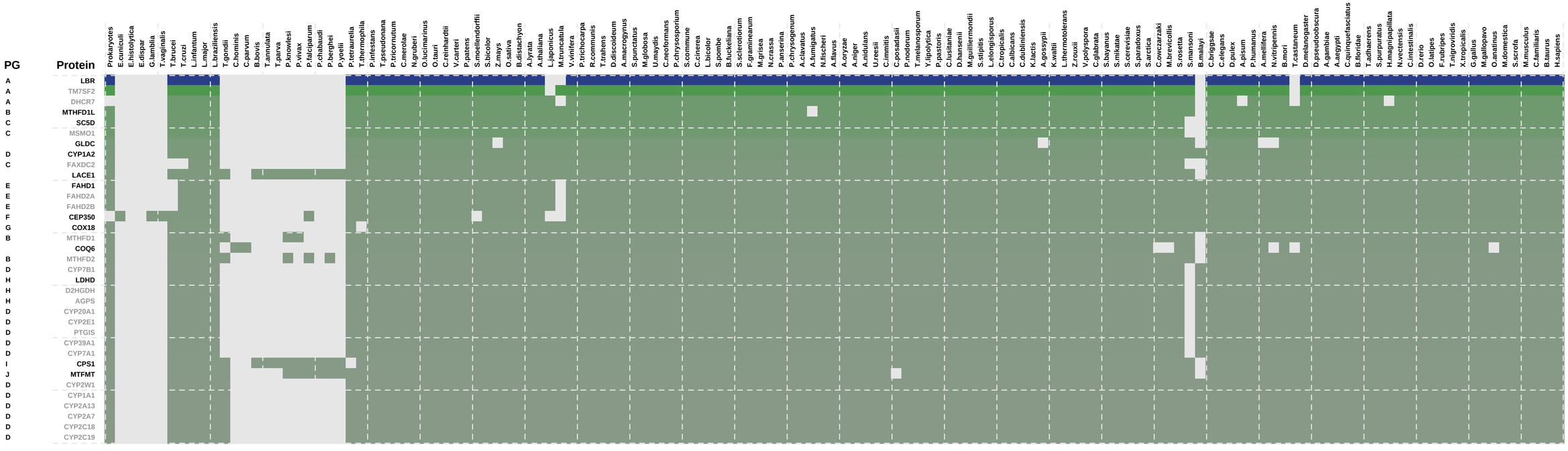
Overview of Evolutionarily Conserved Modules (ECMs)



ECM 1, Gene set "integral to nuclear inner membrane", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 189

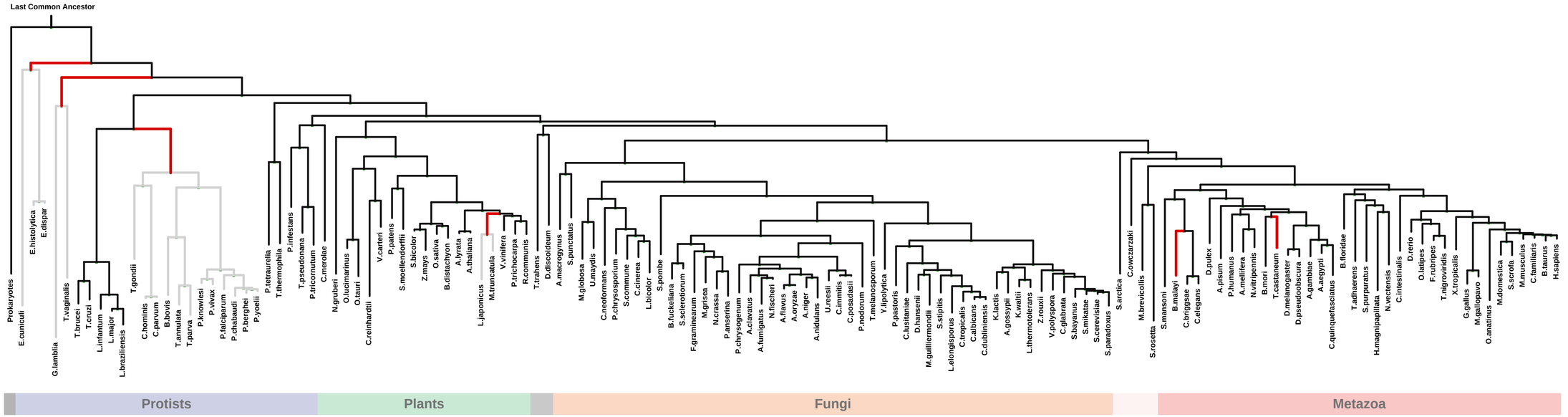


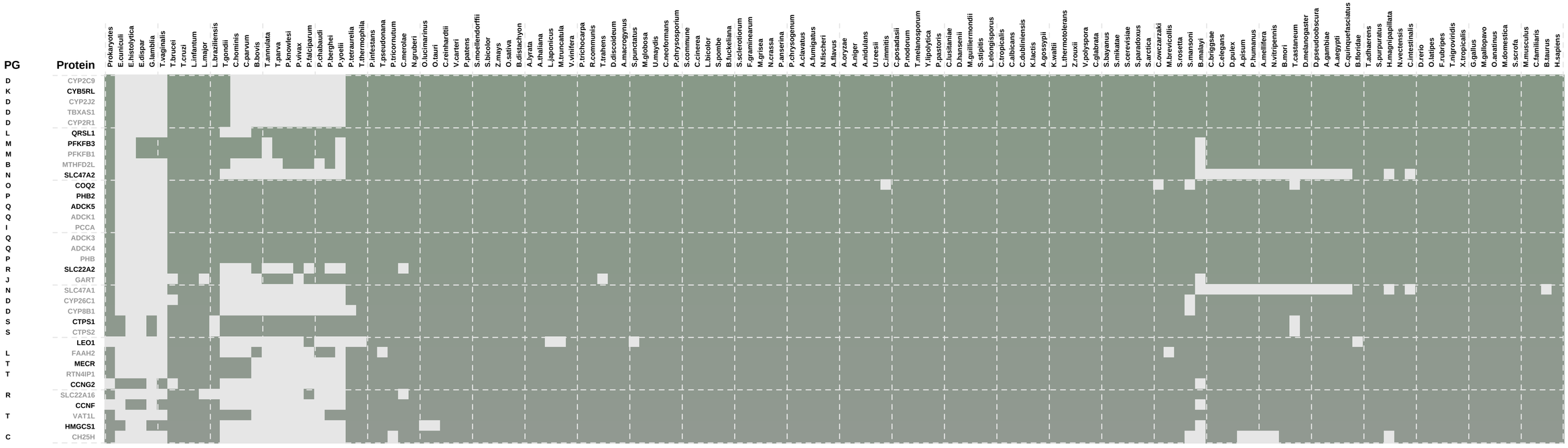


1: integral to nuclear inner membrane || 2: nuclear envelope || 3: nuclear membrane || 4: nuclear pore || 5: nuclear outer membrane || 6: spindle || 7: integral to mitochondrial inner membrane || 8: cell projection || 9: peroxisomal matrix || 10: peroxisomal membrane || 11: peroxisome || 12: intrinsic to endoplasmic reticulum membrane || 13: caveola || 14: mitochondrial nucleoid

ECM 1, Gene set "integral to nuclear inner membrane", Page 2

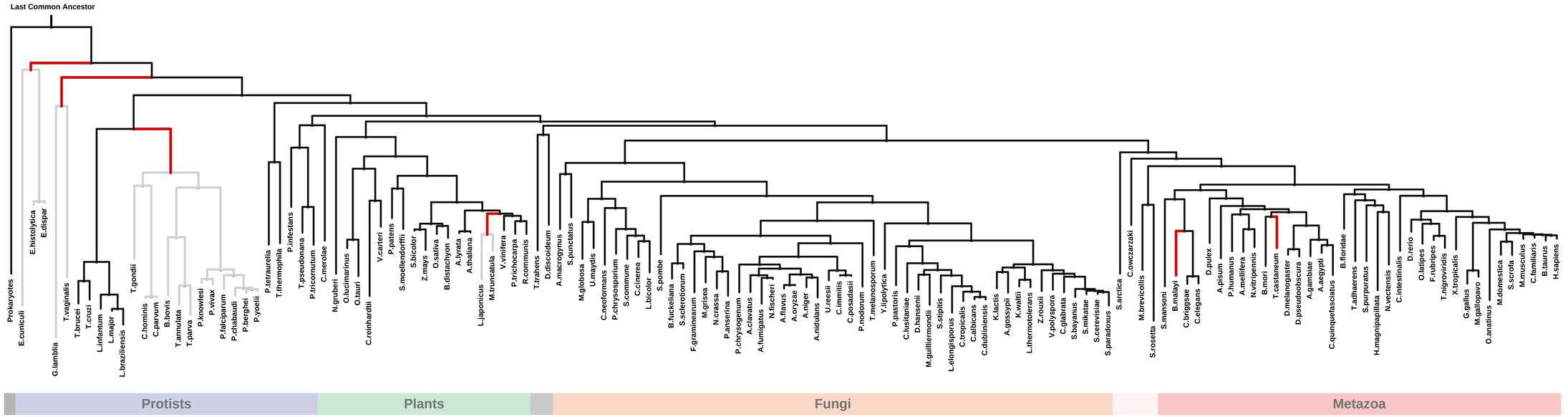
Num of ECM Genes: 1. Num of Predicted Genes: 189

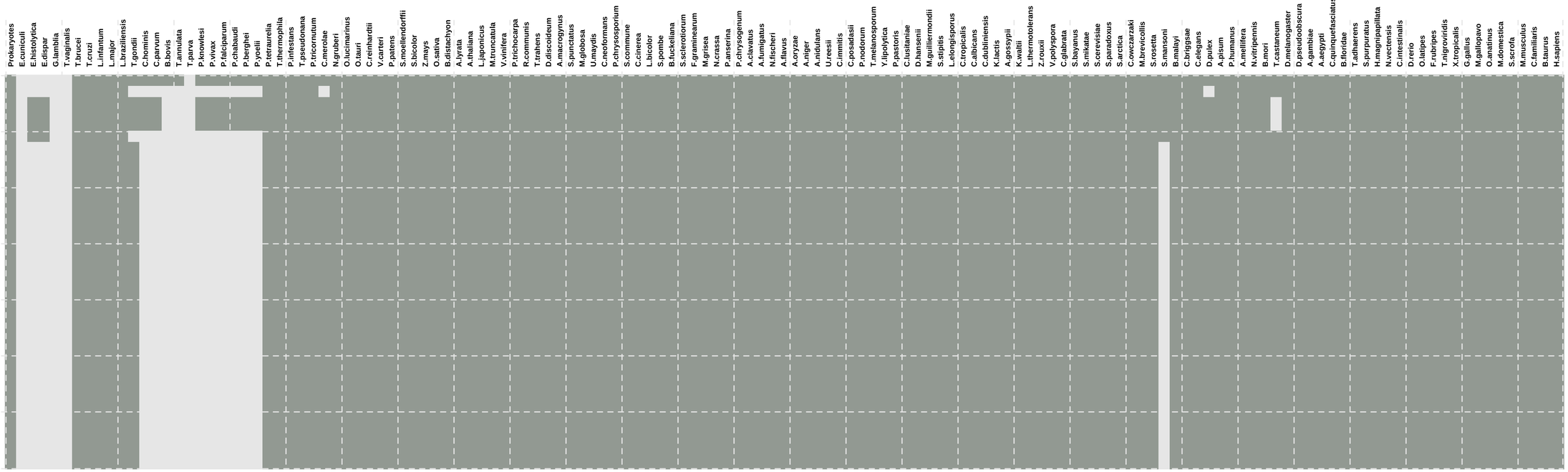




ECM 1, Gene set "integral to nuclear inner membrane", Page 3

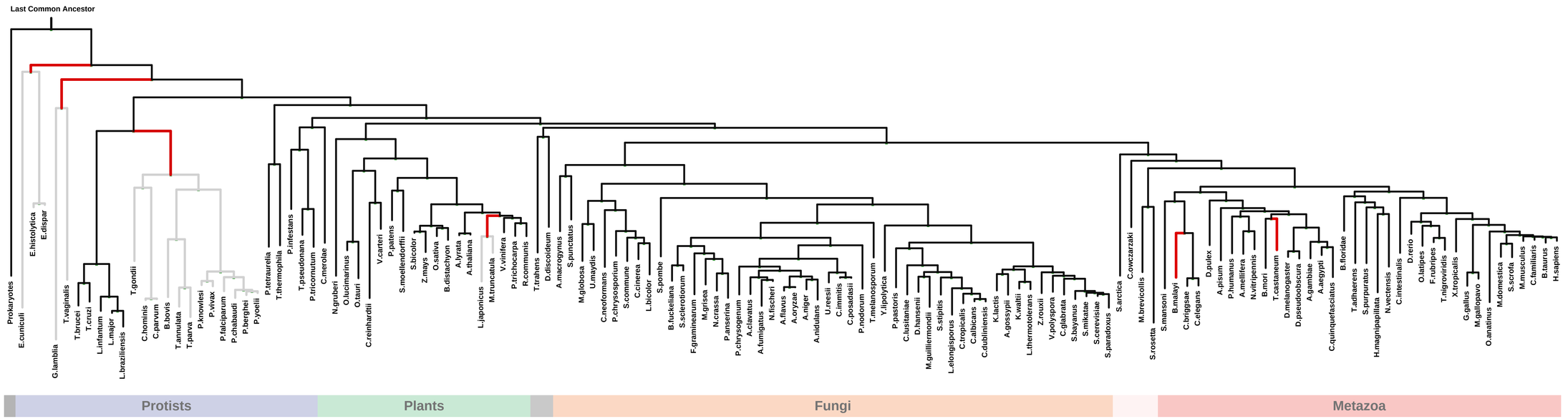
Num of ECM Genes: 1. Num of Predicted Genes: 189

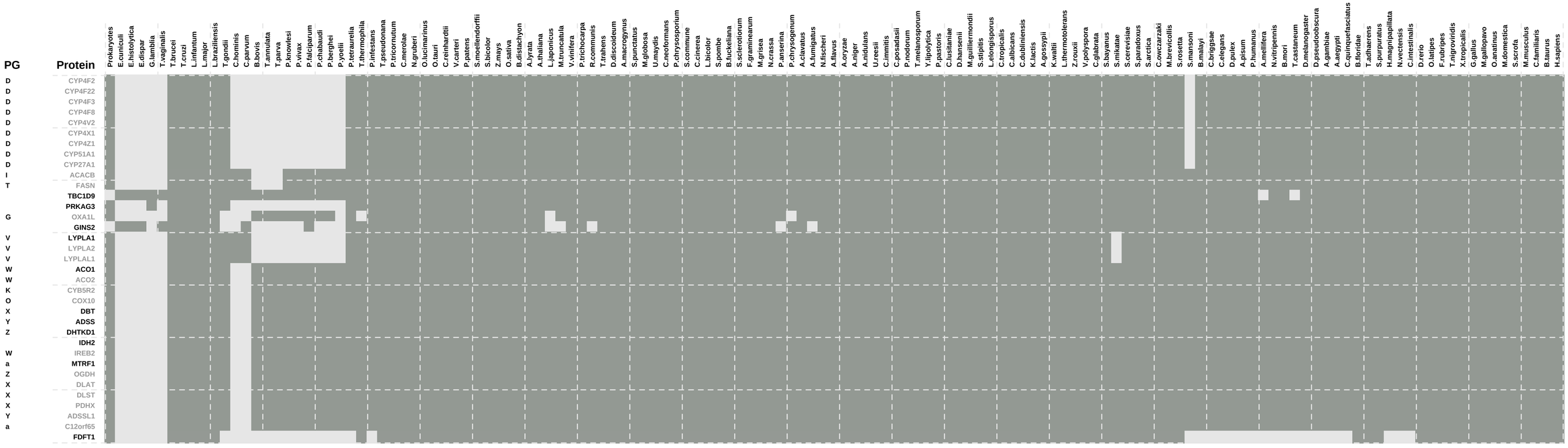




ECM 1, Gene set "integral to nuclear inner membrane", Page 4

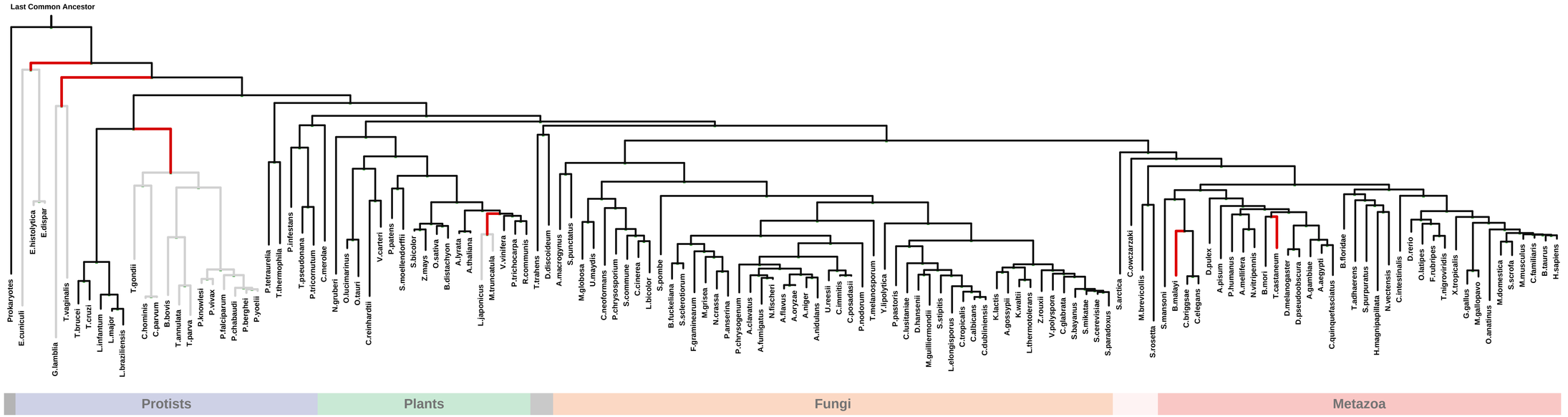
Num of ECM Genes: 1. Num of Predicted Genes: 189

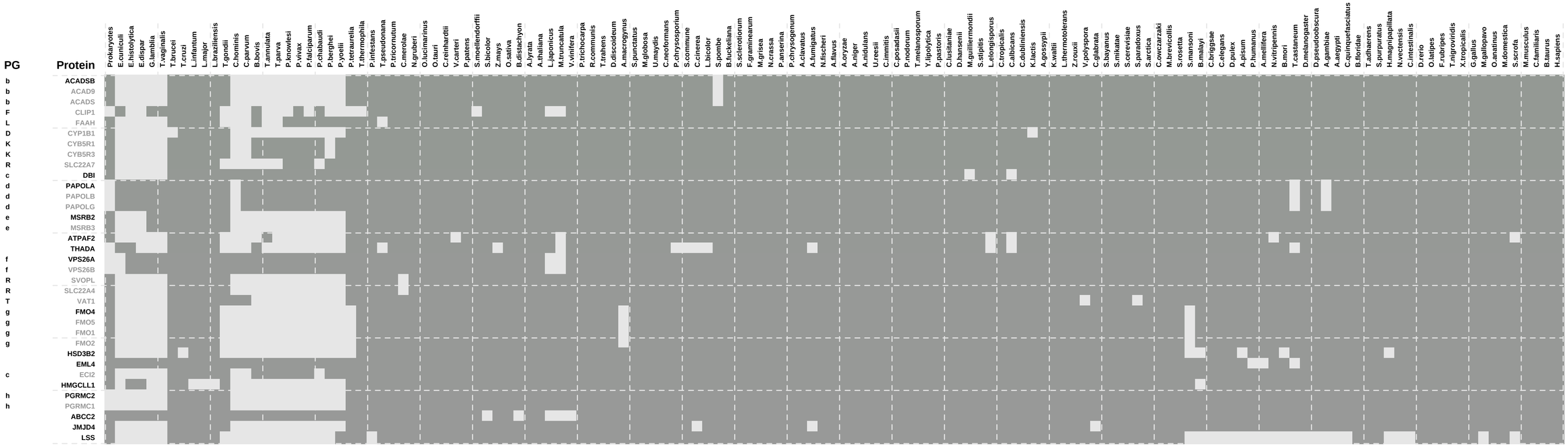




ECM 1, Gene set "integral to nuclear inner membrane", Page 5

Num of ECM Genes: 1. Num of Predicted Genes: 189

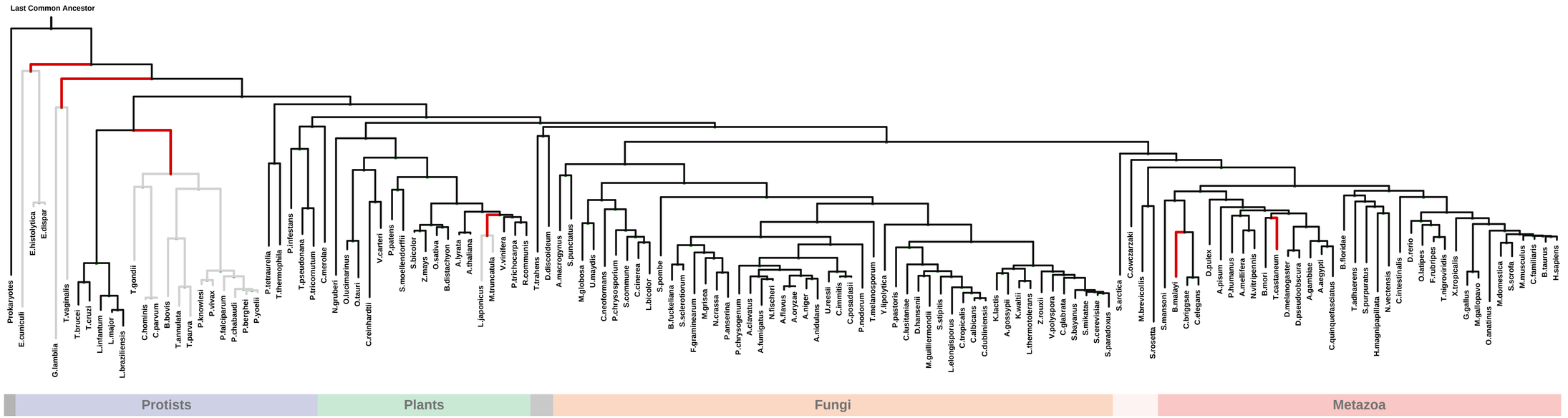


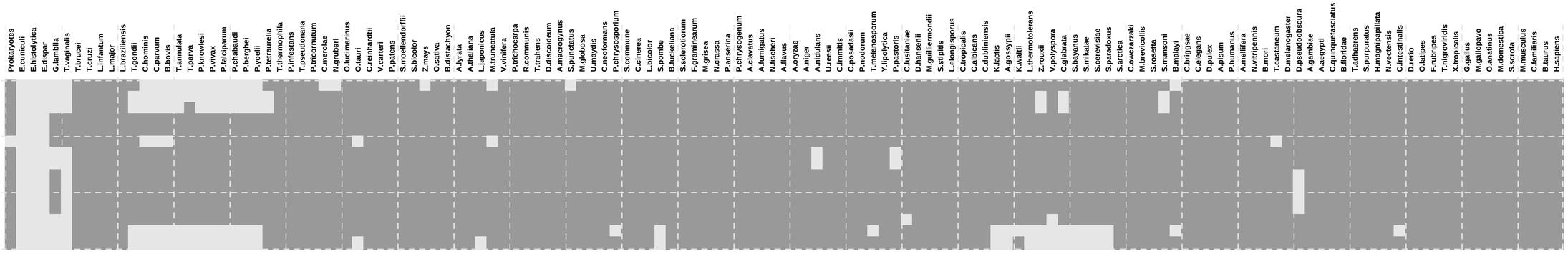


1: dendrite || 2: cytoplasmic microtubule || 3: cytoplasmic vesicle membrane || 4: endosome || 5: intermediate filament || 6: kinetochore || 7: microtubule cytoskeleton || 8: microtubule plus end || 9: ruffle || 10: endomembrane system ||
11: organelle membrane || 12: hemoglobin complex || 13: lipid particle || 14: mitochondrial outer membrane || 15: basolateral plasma membrane || 16: nuclear speck || 17: endosome membrane || 18: retromer complex || 19: vesicle ||
20: intrinsic to endoplasmic reticulum membrane || 21: endoplasmic reticulum lumen || 22: mitochondrial intermembrane space || 23: mitochondrial membrane || 24: smooth endoplasmic reticulum membrane || 25: peroxisomal matrix ||

ECM 1, Gene set "integral to nuclear inner membrane", Page 6

Num of ECM Genes: 1. Num of Predicted Genes: 189



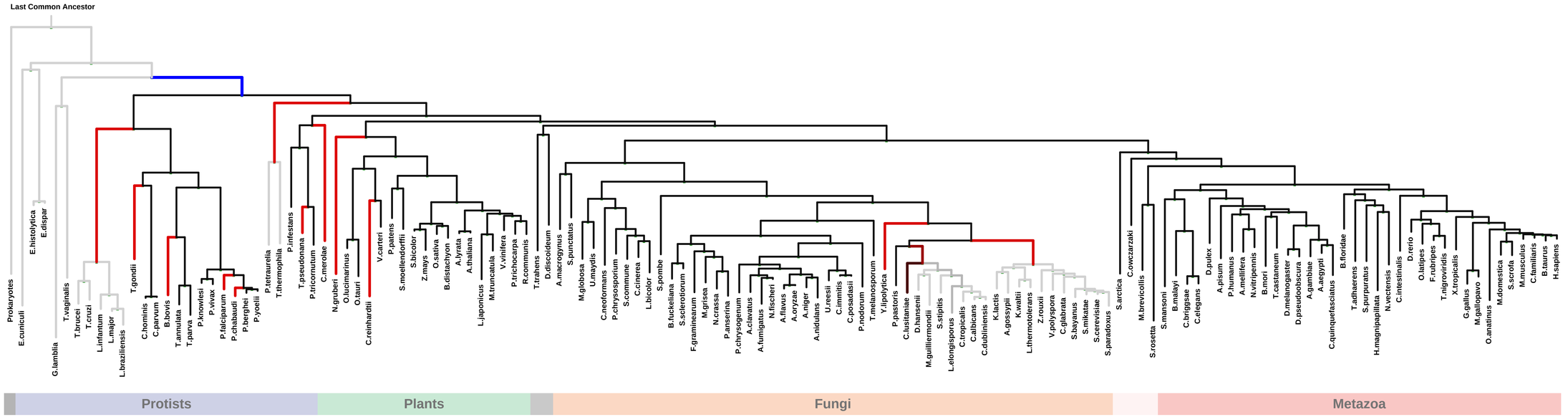


PG	Protein	LLR	Notes
	CACNA1D	0.2	1 / 2
i	NOX3	0.2	3
i	CYBB	0.2	3 / 4
	IBTK	0.2	
	METAP1D	0.2	
	LCMT2	0.2	
j	GMPR2	0.1	
j	GMPR	0.1	
k	CNNM4	0.1	
k	CNNM1	0.1	
k	CNNM2	0.1	5
k	CNNM3	0.1	
	EWSR1	0.1	
	NDUFAF6	0.0	
	NDUFA9	0.0	6 / 7

1: voltage-gated calcium channel complex || 2: Z disc || 3: NADPH oxidase complex || 4: phagocytic vesicle membrane || 5: basolateral plasma membrane || 6: mitochondrial membrane || 7: mitochondrial respiratory chain complex I

ECM 2, Gene set "integral to nuclear inner membrane", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 2

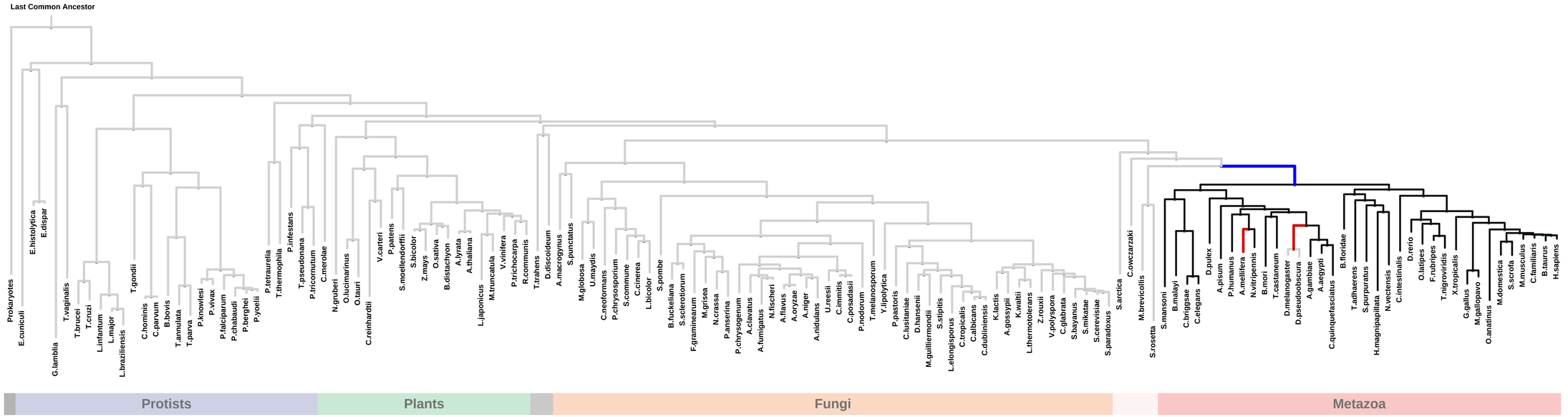


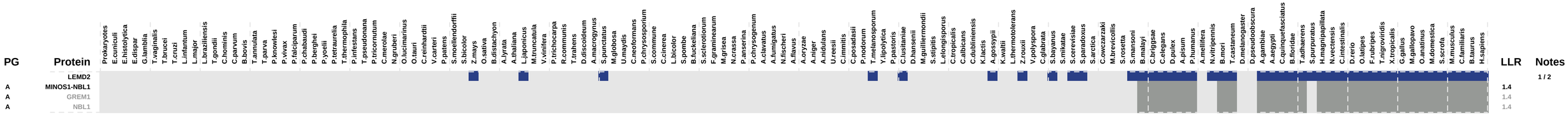
PG	Protein	LLR	Notes
	LEMD3		1 / 2
	MRPL22	5.4	3
	SLC17A4	0.4	

1: integral to nuclear inner membrane || 2: nuclear inner membrane || 3: large ribosomal subunit

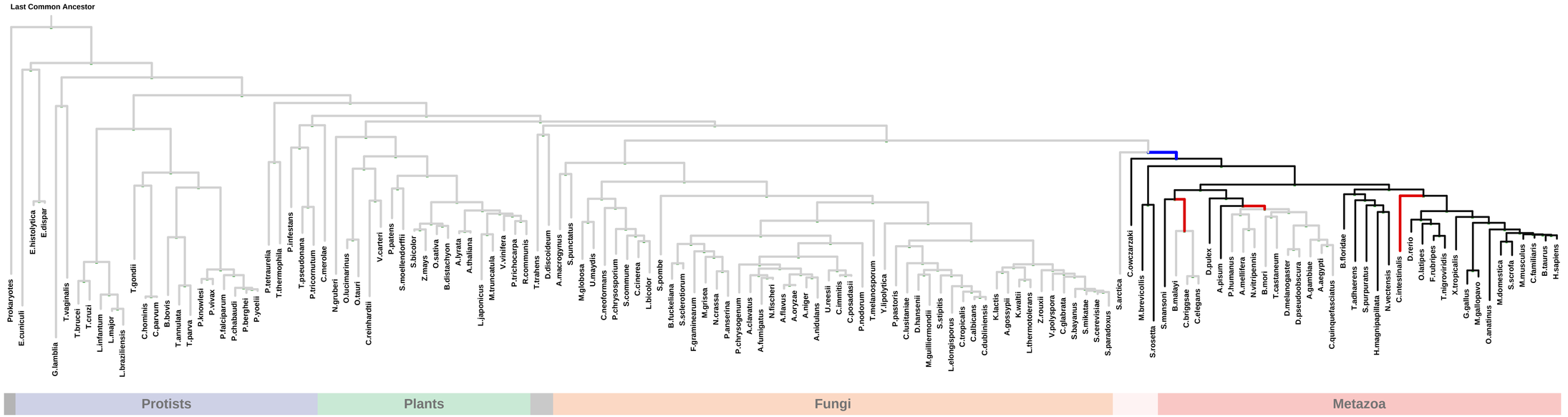
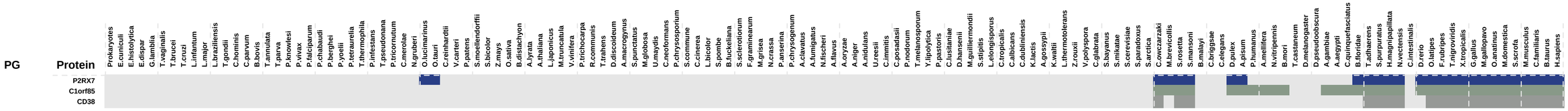
ECM 3, Gene set "integral to nuclear inner membrane", Page 1

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





1: integral to nuclear inner membrane || 2: nuclear membrane

ECM 4, Gene set "integral to nuclear inner membrane", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 2