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

Dataset:

Num of genes in input gene set: 8
Total number of genes: 20834
Prediction LLR threshold: 0

The CLIME PDF output two sections:

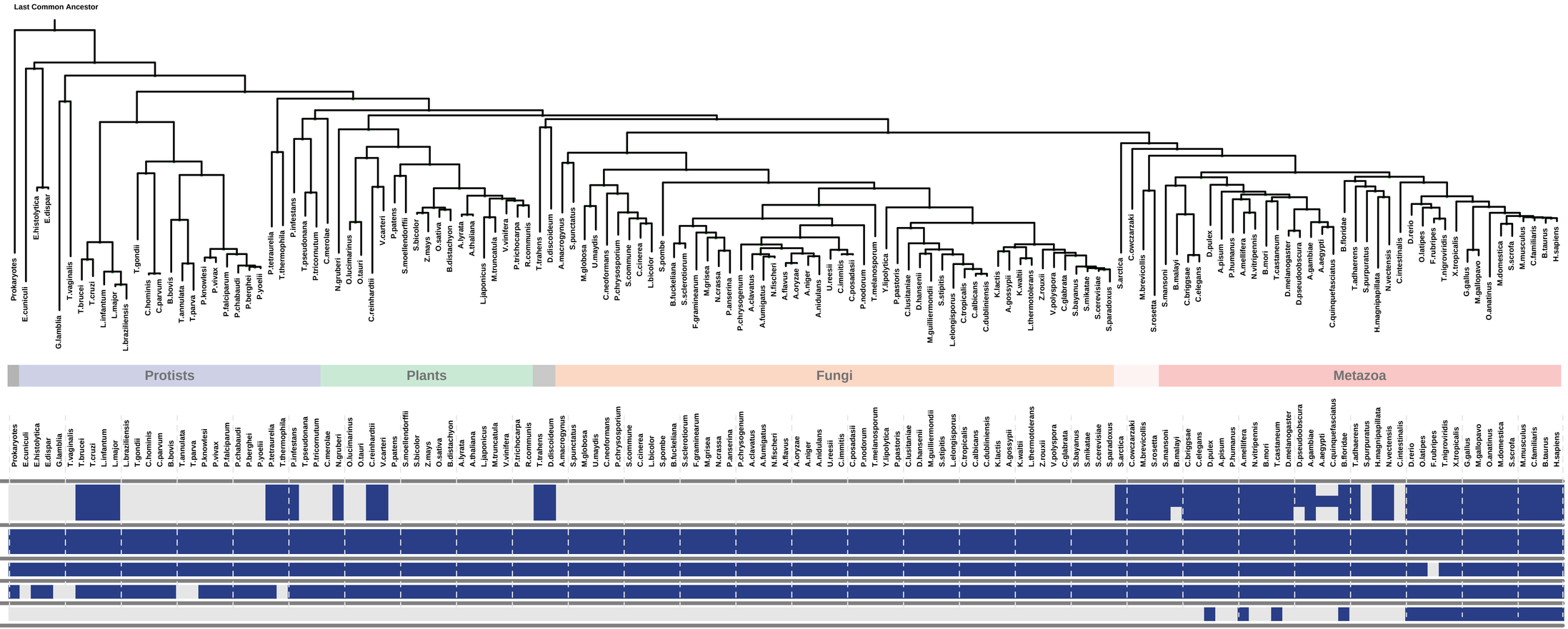
1) Overview of Evolutionarily Conserved Modules (ECMs)

- 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+

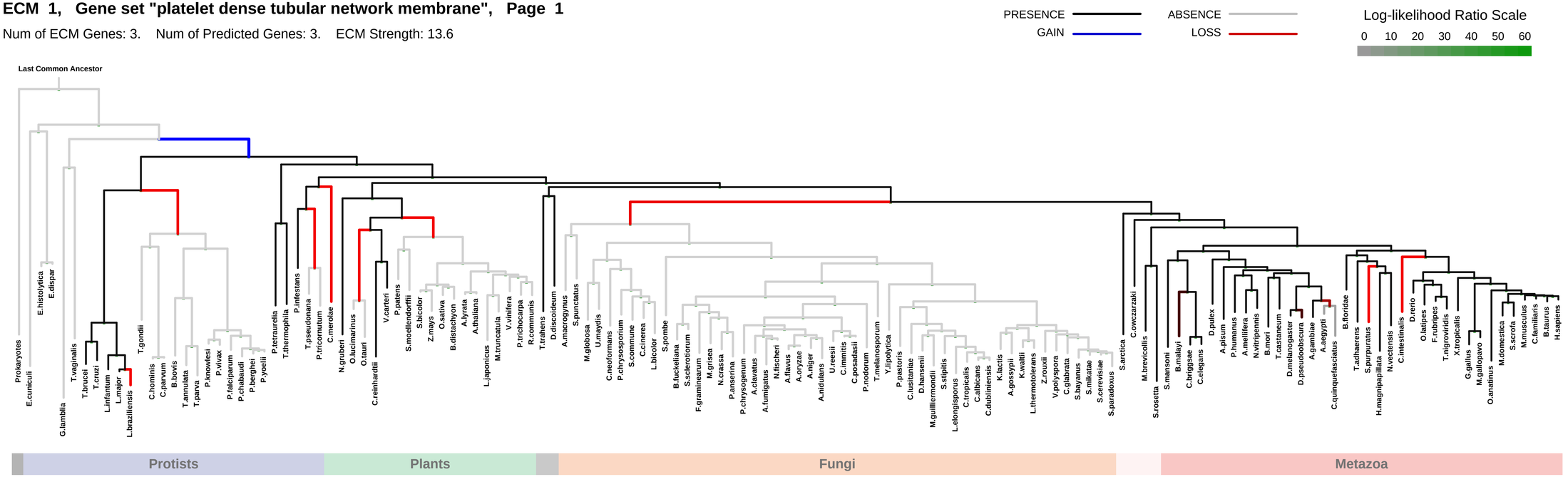
- Top panel shows the inferred evolutionary history on the predefined species tree. Branch color shows the gain event (blue) and loss events (red color, with brighter color indicating higher confidence in loss). Branches before the gain or after a loss are shown in gray.
- Bottom panel shows the input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

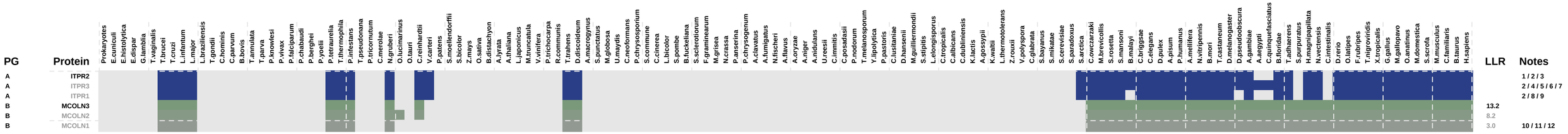
Overview of Evolutionarily Conserved Modules (ECMs)



ECM 1, Gene set "platelet dense tubular network membrane", Page 1

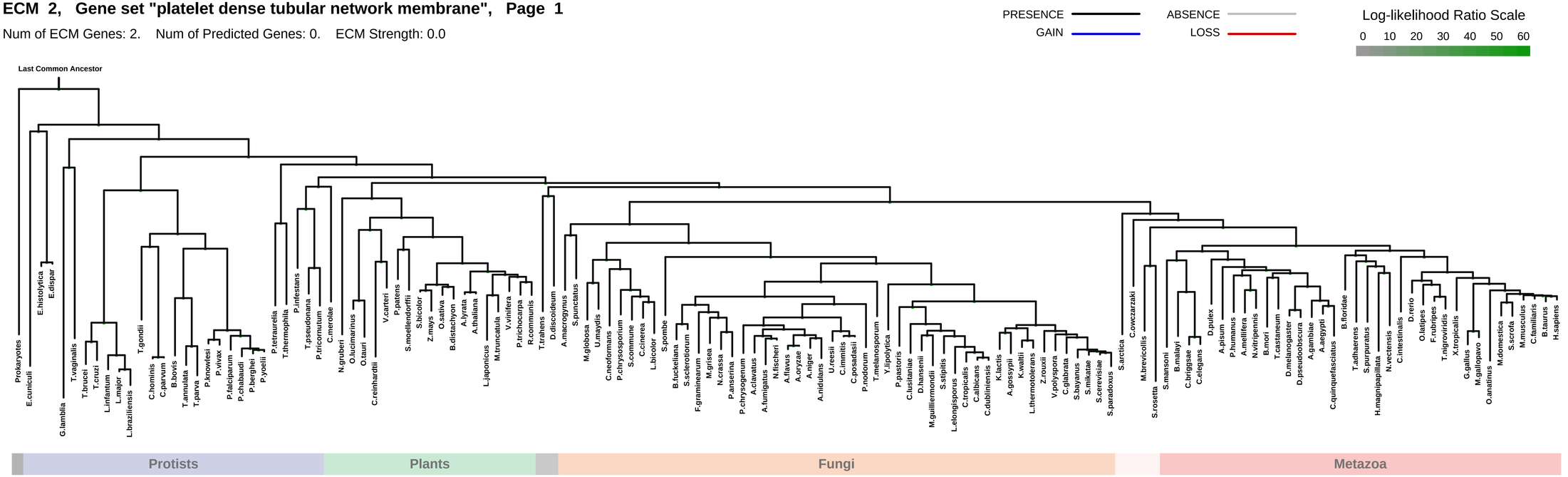
Num of ECM Genes: 3. Num of Predicted Genes: 3. ECM Strength: 13.6





ECM 2, Gene set "platelet dense tubular network membrane", Page 1

Num of ECM Genes: 2. Num of Predicted Genes: 0. ECM Strength: 0.0

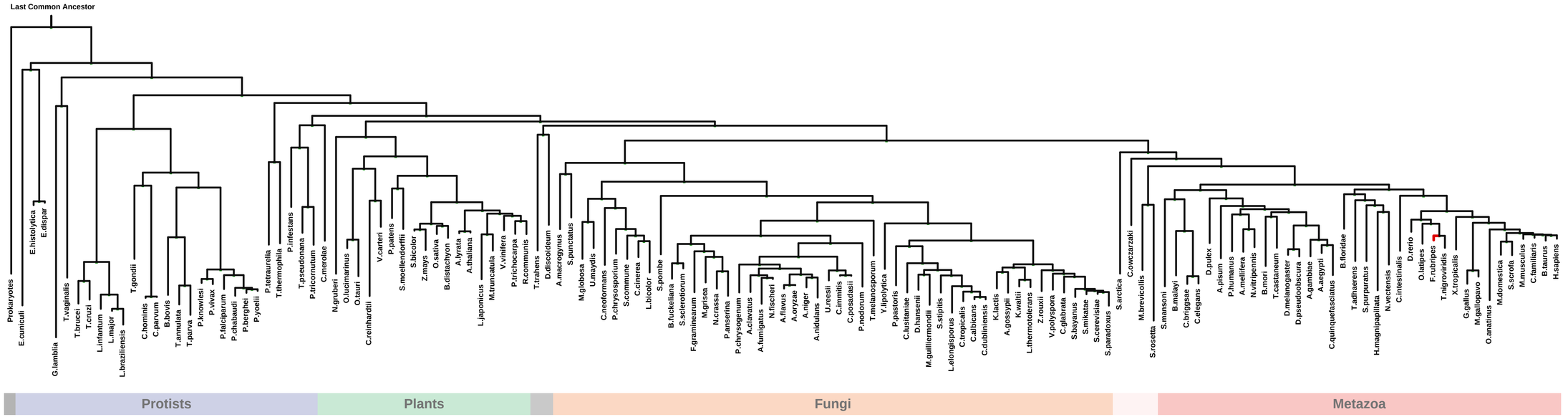


PG	Protein	LLR	Notes
A	ATP2A1		1 / 2 / 3 / 4 / 5 / 6 / 7
A	ATP2A2		5 / 6 / 7

1: calcium channel complex || 2: endoplasmic reticulum-Golgi intermediate compartment || 3: H zone || 4: I band || 5: platelet dense tubular network membrane || 6: sarcoplasmic reticulum || 7: sarcoplasmic reticulum membrane

ECM 3, Gene set "platelet dense tubular network membrane", Page 1

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

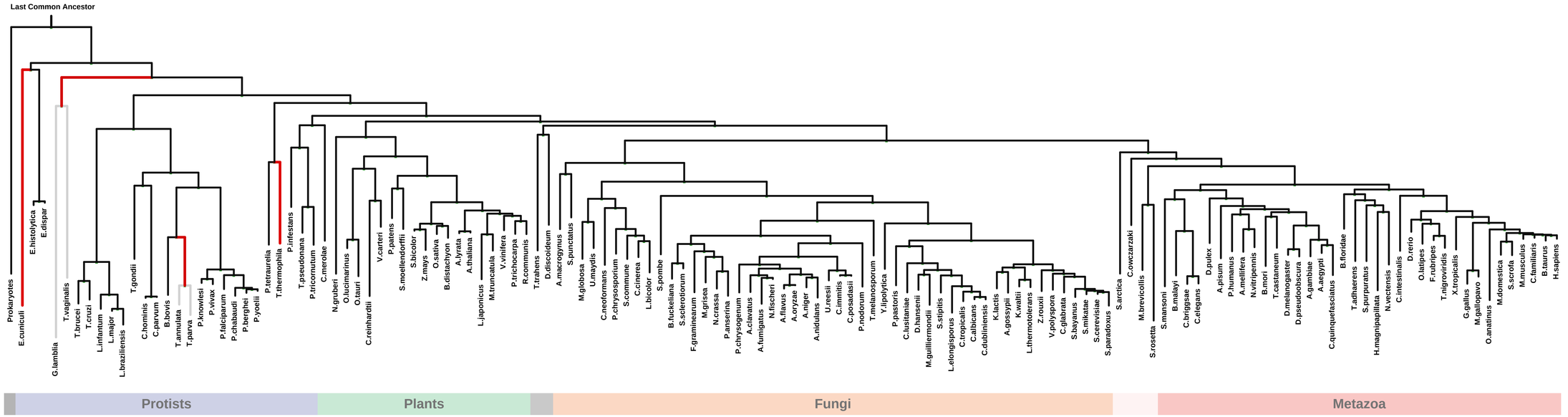


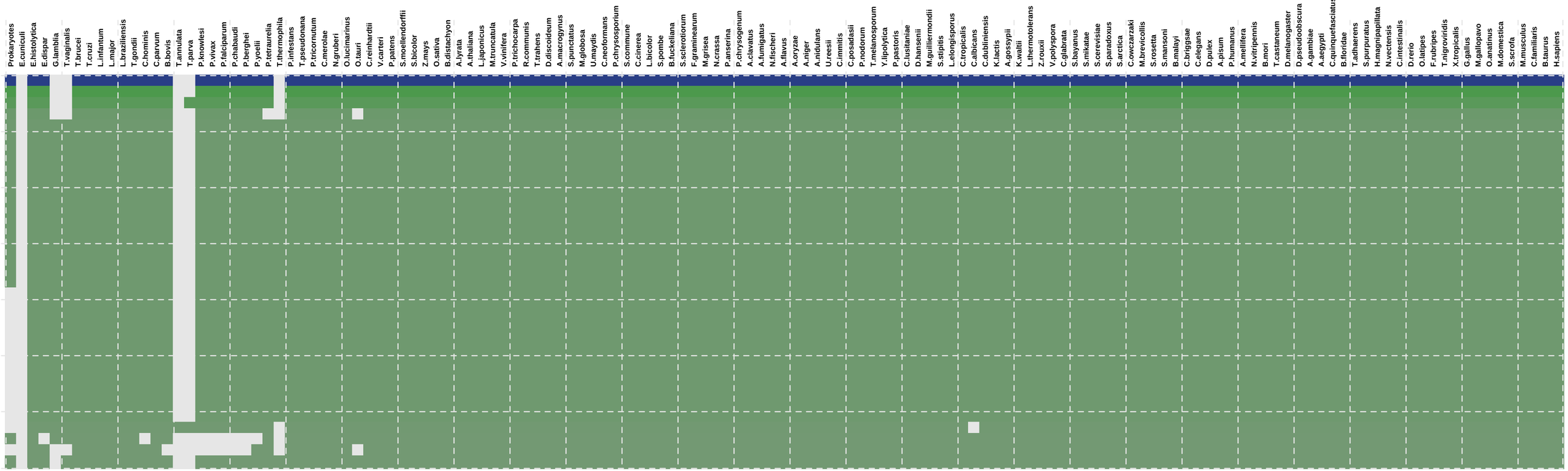
PG	Protein	Prokaryotes E.cuniculi E.histolytica E.dispar G.lamblia T.vaginalis T.brucei T.cruzi L.infantum L.major L.braziliensis T.gondii C.hominis C.parvum B.bovis T.annulata T.parva P.knowlesi P.vivax P.falciparum P.chabaudi P.berghei P.yoelii P.tetraurelia T.thermophila P.infestans T.pseudonana P.tricornutum C.merolae N.gruberi O.lucimarinus O.tauri C.reinhardtii V.carteri P.patens S.moellendorffii S.bicolor Z.mays O.sativa B.distachyon A.lyrata A.thaliana L.japonicus M.truncatula V.vinifera P.trichocarpa R.communis T.trahens D.discoideum A.macrogynus S.punctatus M.globosa U.maydis C.neoformans P.chrysosporium S.commune C.cinerea L.bicolor S.pombe B.fuckeliana S.sclerotiorum F.graminearum M.grisea N.crassa P.anserina P.chrysogenum A.clavatus A.fumigatus N.fischeri A.flavus A.oryzae A.niger A.nidulans U.reesii C.immitis C.posadasii P.nodorum T.melanosporum Y.lipolytica P.pastoris C.lusitaniae D.hansenii M.guilliermondii S.stipitis L.elongisporus C.tropicalis C.albicans C.dubliniensis K.lactis A.gossypii K.waltii L.thermotolerans Z.rouxii V.polyspora C.glabrata S.bayanus S.mikatae S.cerevisiae S.paradoxus S.arctica C.owczarzaki M.brevicollis S.rosetta S.mansoni B.malayi C.briggsae C.elegans D.pulex A.pisum P.humanus A.mellifera N.vitripennis B.mori T.castaneum D.melanogaster D.pseudoobscura A.gambiae A.aegypti C.quinquefasciatus B.floridae T.adhaerens S.purpuratus H.magnipapillata N.vectensis C.intestinalis D.rerio O.latipes F.rubripes T.nigroviridis X.tropicalis G.gallus M.gallopavo O.anatinus M.domestica S.scrofa M.musculus C.familiaris B.taurus H.sapiens	LLR	Notes
	ATP2A3			1 / 2 / 3 / 4

1: nuclear membrane || 2: platelet dense tubular network membrane || 3: sarcoplasmic reticulum || 4: sarcoplasmic reticulum membrane

ECM 4, Gene set "platelet dense tubular network membrane", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 500





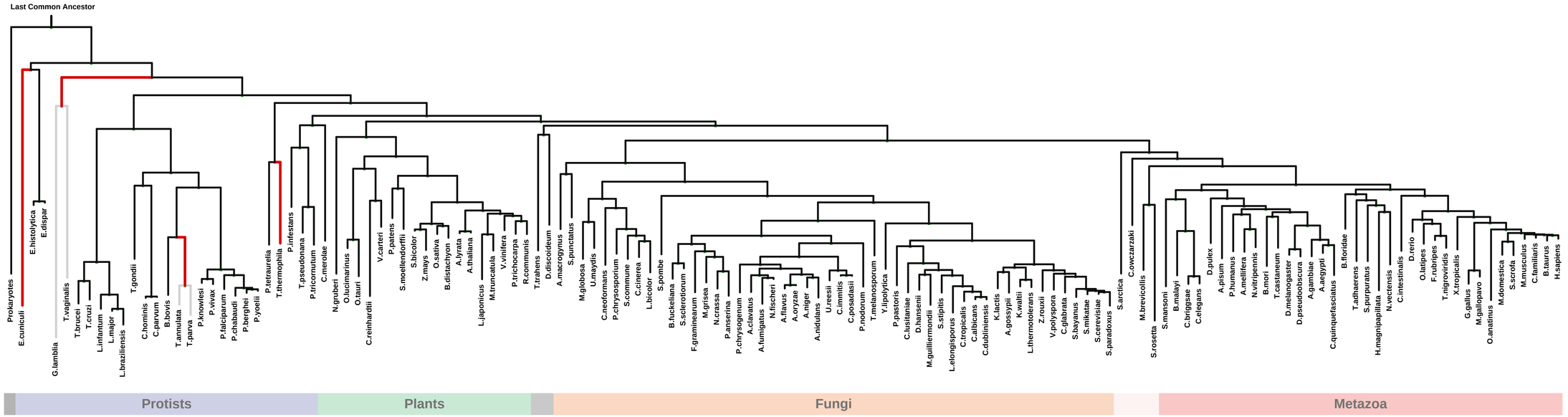
1: early endosome membrane || 2: endocytic vesicle || 3: endosome membrane || 4: lipid particle || 5: platelet dense tubular network membrane || 6: recycling endosome membrane || 7: cytoplasmic membrane-bounded vesicle ||
8: oligosaccharyltransferase complex || 9: brush border membrane || 10: extrinsic to internal side of plasma membrane || 11: heterotrimeric G-protein complex || 12: melanosome || 13: cleavage furrow || 14: lamellipodium || 15: midbody ||
16: microtubule cytoskeleton || 17: nuclear pore || 18: SCF ubiquitin ligase complex || 19: mitochondrial envelope

ECM 4, Gene set "platelet dense tubular network membrane", Page 2

Num of ECM Genes: 1. Num of Predicted Genes: 500

PRESENCE ABSENCE
GAIN LOSS

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



PG	Protein	LLR	Notes
H	UCHL3	16.3	
I	PFKFB2	16.0	
J	DNAJC6	15.7	
K	MCCC1	14.8	
L	SEC14L5	14.8	
M	IPO4	14.8	1
L	SEC14L1	14.8	
N	STX5	14.4	2 / 3
N	100510546	14.4	
	EBNA1BP2	14.3	
O	CUL5	13.6	4
	ABCC3	13.3	
H	UCHL5	13.2	5 / 6
	PTPLAD1	12.9	
P	LDHB	12.8	
F	LOC128322	12.1	
Q	SV2C	11.8	7
C	HSD17B4	11.6	8 / 9 / 10
R	AMPD3	11.5	
R	AMPD1	11.5	
R	AMPD2	11.5	
S	IMPA2	11.3	
T	TMED4	10.8	
T	TMED9	10.8	2 / 11 / 12
T	TMED2	10.8	2 / 11 / 13 / 14 / 15 / 16
E	GNA11	10.8	17 / 18
B	DUSP27	10.5	
U	ZADH2	10.3	10
V	SNX7	10.3	19
V	SNX30	10.2	
H	UCHL1	10.1	
W	PHLPP2	10.0	
X	VAMP3	9.7	3 / 20 / 21 / 22 / 23 / 24
Y	COX18	9.7	25
	MOCOS	9.7	

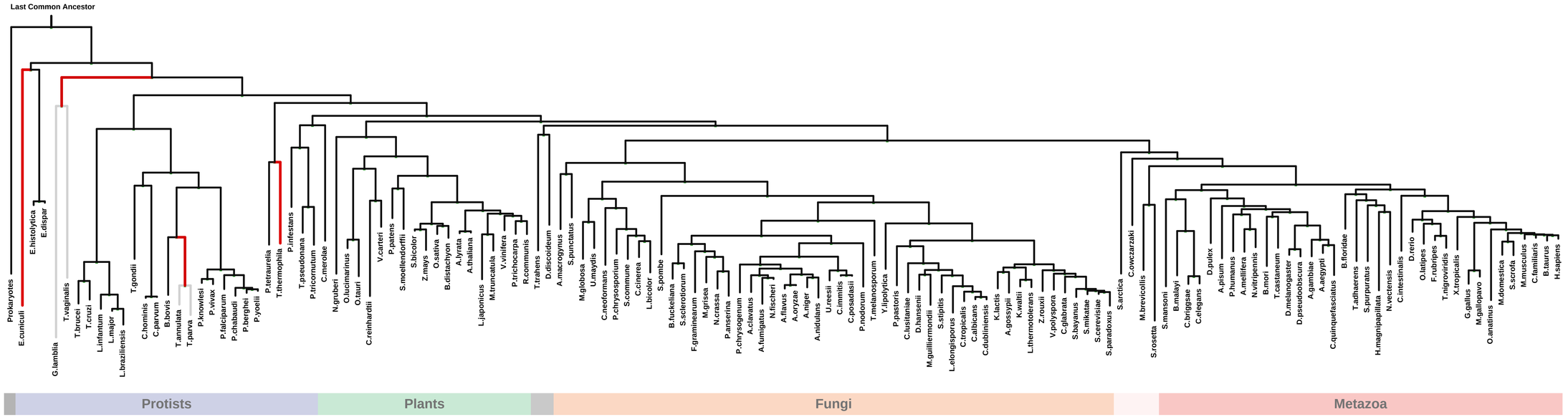
1: nuclear pore || 2: endoplasmic reticulum-Golgi intermediate compartment membrane || 3: SNARE complex || 4: Cul5-RING ubiquitin ligase complex || 5: Ino80 complex || 6: proteasome complex || 7: synaptic vesicle membrane ||
8: peroxisomal matrix || 9: peroxisomal membrane || 10: peroxisome || 11: endoplasmic reticulum-Golgi intermediate compartment || 12: trans-Golgi network transport vesicle || 13: COPI-coated vesicle || 14: COPI-coated vesicle membrane ||
15: Golgi cisterna membrane || 16: zymogen granule membrane || 17: extrinsic to internal side of plasma membrane || 18: heterotrimeric G-protein complex || 19: cytoplasmic vesicle membrane || 20: clathrin-coated vesicle || 21: clathrin-coated vesicle membrane ||

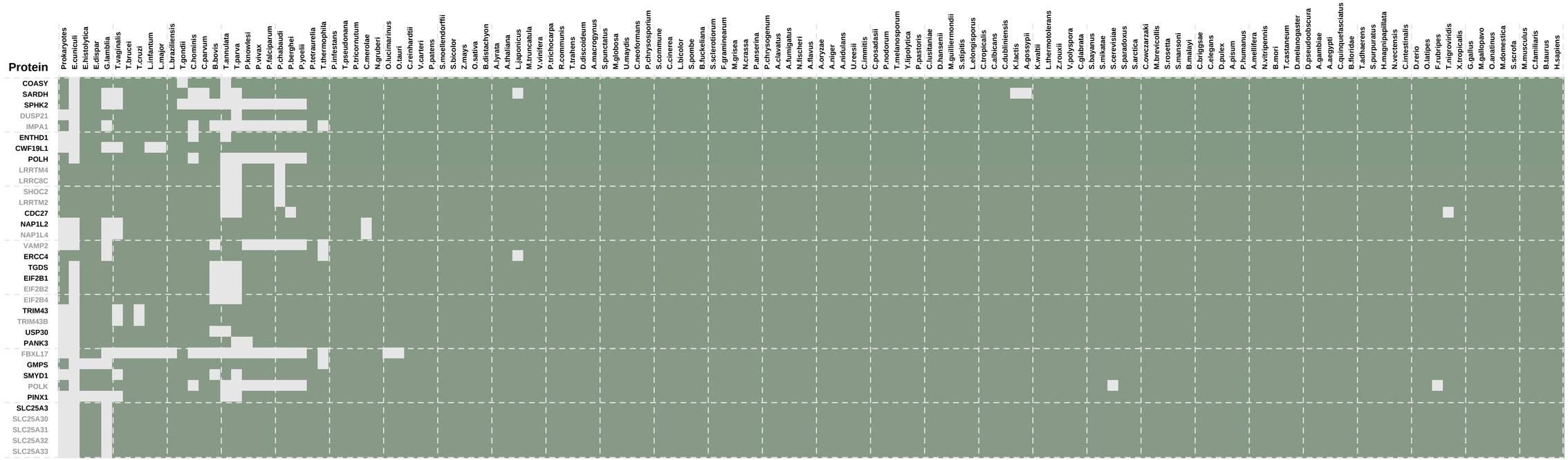
ECM 4, Gene set "platelet dense tubular network membrane", Page 3

Num of ECM Genes: 1. Num of Predicted Genes: 500

PRESENCE ABSENCE
GAIN LOSS

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



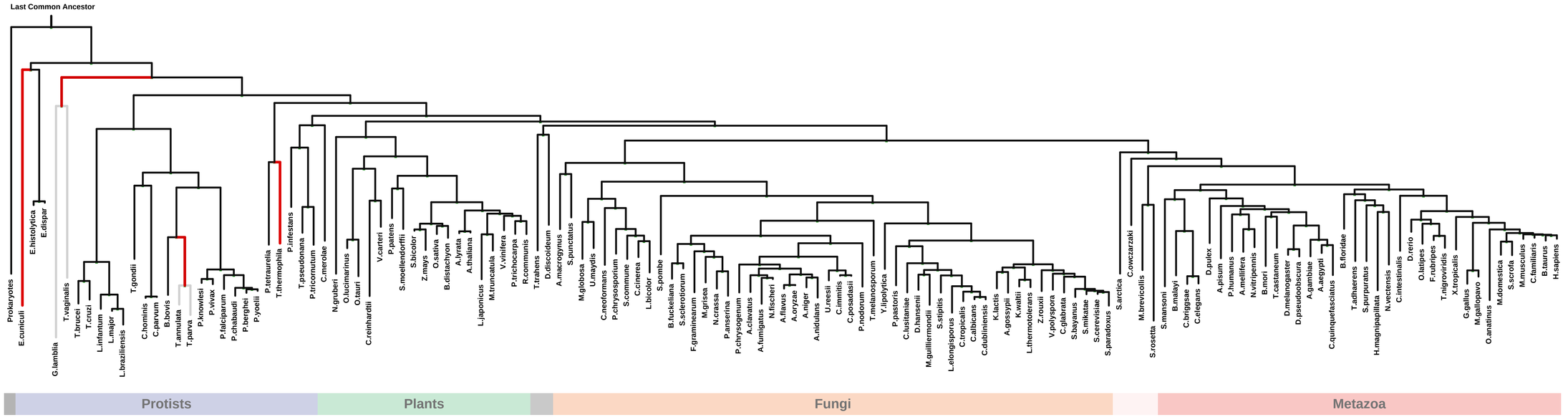


PG	Protein	LLR	Notes
	COASY	9.7	1
	SARDH	9.6	
	SPHK2	9.6	2
B	DUSP21	9.6	
S	IMPA1	9.5	3
Z	ENTHD1	9.3	
a	CWF19L1	9.3	
b	POLH	8.9	
W	LRRTM4	8.7	4
W	LRRC8C	8.7	
W	SHOC2	8.7	5
W	LRRTM2	8.7	4
c	CDC27	8.6	6 / 7 / 8
d	NAP1L2	8.6	9
d	NAP1L4	8.6	9
X	VAMP2	8.6	10 / 11 / 12 / 13 / 14 / 15 /
	ERCC4	8.4	19 / 20 / 21
e	TGDS	8.4	
f	EIF2B1	8.4	22 / 23
f	EIF2B2	8.4	23
f	EIF2B4	8.4	23
g	TRIM43	8.3	
g	TRIM43B	8.3	
	USP30	8.3	1
h	PANK3	8.0	
G	FBXL17	7.9	
	GMPS	7.7	
i	SMYD1	7.7	
b	POLK	7.7	
	PINX1	7.7	7 / 19 / 24 / 25 / 26
j	SLC25A3	7.6	
j	SLC25A30	7.6	
j	SLC25A31	7.6	27 / 28
j	SLC25A32	7.6	
j	SLC25A33	7.6	

1: mitochondrial outer membrane || 2: lysosomal membrane || 3: axon || 4: postsynaptic membrane || 5: protein phosphatase type 1 complex || 6: anaphase-promoting complex || 7: spindle || 8: spindle microtubule || 9: chromatin assembly complex ||
10: clathrin-coated vesicle || 11: clathrin-sculpted gamma-aminobutyric acid transport vesicle membrane || 12: clathrin-sculpted glutamate transport vesicle membrane || 13: clathrin-sculpted monoamine transport vesicle membrane || 14: endocytic vesicle membrane ||
15: neuron projection || 16: secretory granule membrane || 17: SNARE complex || 18: synaptic vesicle membrane || 19: chromosome, telomeric region || 20: nuclear chromosome, telomeric region || 21: nucleotide-excision repair complex ||

ECM 4, Gene set "platelet dense tubular network membrane", Page 4

Num of ECM Genes: 1. Num of Predicted Genes: 500



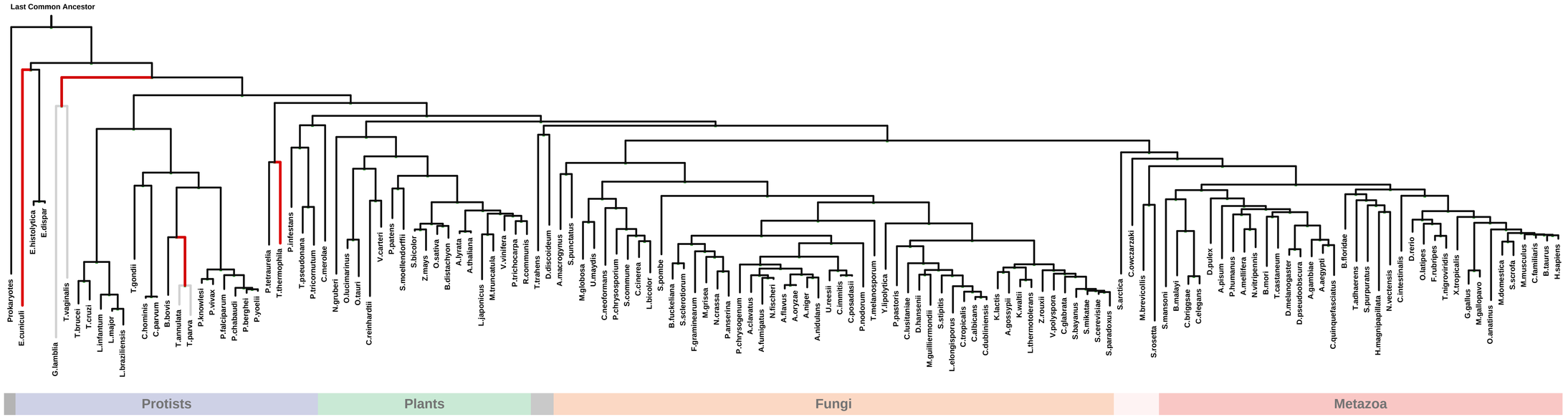
PG	Protein	LLR	Notes
j	SLC25A34	7.6	
j	SLC25A36	7.6	
j	SLC25A37	7.6	
j	SLC25A38	7.6	
j	SLC25A39	7.6	
j	SLC25A4	7.6	1
j	SLC25A40	7.6	
j	SLC25A41	7.6	
j	SLC25A42	7.6	
j	SLC25A43	7.6	
j	SLC25A44	7.6	
j	SLC25A45	7.6	
j	SLC25A48	7.6	
j	SLC25A5	7.6	2 / 3
j	SLC25A6	7.6	4
k	**EIF2A**	**7.6**	5
	PRMT8	**7.6**	
l	**CHMP2A**	**7.6**	6
	RBM15B	**7.6**	
A	ITSN2	7.6	
C	DECR2	7.6	7
	CHKA	**7.6**	
m	**SF3B3**	**7.6**	8 / 9 / 10 / 11
k	EIF3B	7.6	12
j	SLC25A1	7.6	
j	SLC25A10	7.6	
j	SLC25A11	7.6	
j	SLC25A12	7.6	
j	SLC25A13	7.6	
j	SLC25A14	7.6	
j	SLC25A15	7.6	
M	TNPO1	7.6	13
M	TNPO2	7.6	13
j	SLC25A16	7.6	
j	SLC25A17	7.6	7 / 14 / 15

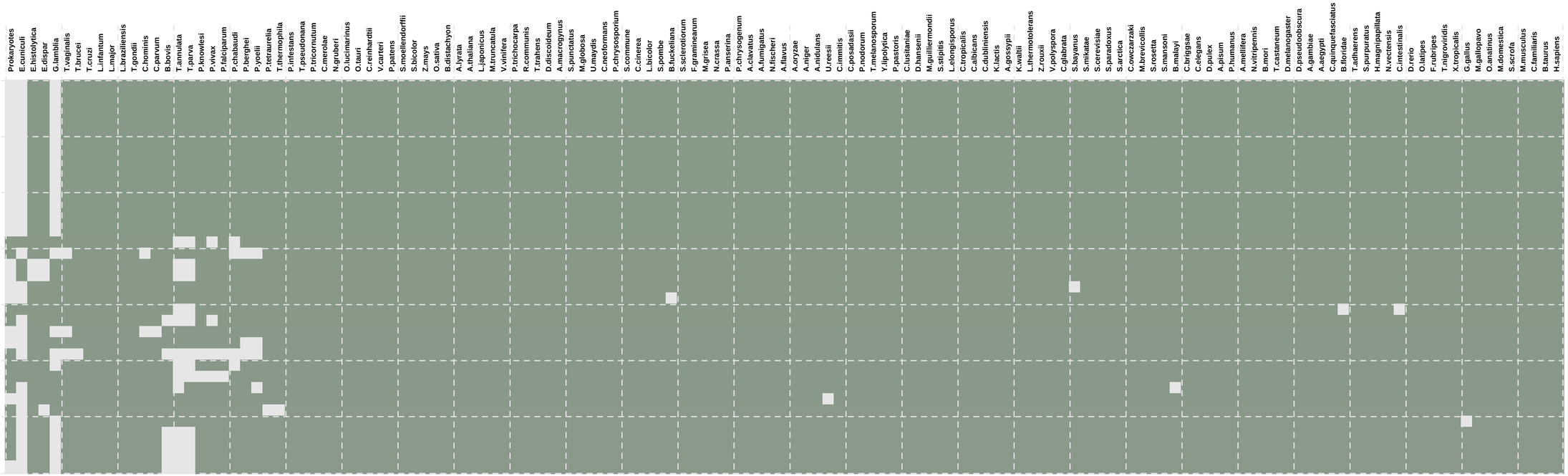
1: mitochondrial outer membrane || 2: mitochondrial nucleoid || 3: MMXD complex || 4: mitochondrial inner membrane presequence translocase complex || 5: eukaryotic translation initiation factor 2 complex || 6: late endosome membrane || 7: peroxisome || 8: catalytic step 2 spliceosome || 9: small nuclear ribonucleoprotein complex || 10: spliceosomal complex || 11: U12-type spliceosomal complex || 12: eukaryotic translation initiation factor 3 complex || 13: nuclear pore || 14: integral to peroxisomal membrane || 15: peroxisomal membrane

ECM 4, Gene set "platelet dense tubular network membrane", Page 5

Num of ECM Genes: 1. Num of Predicted Genes: 500

PRESENCE ABSENCE
GAIN LOSS
Log-likelihood Ratio Scale
0 10 20 30 40 50 60



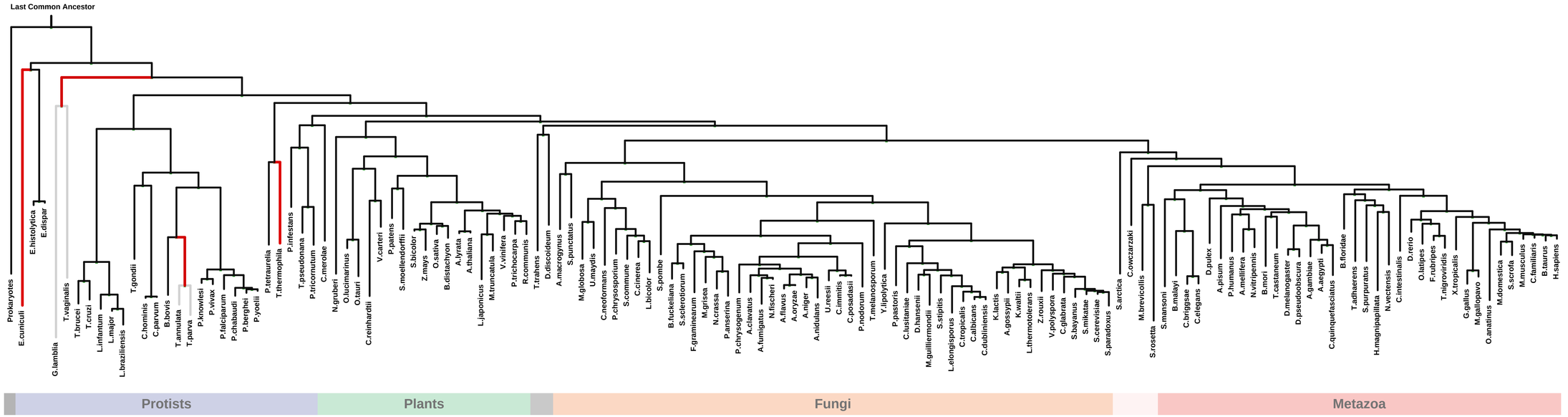


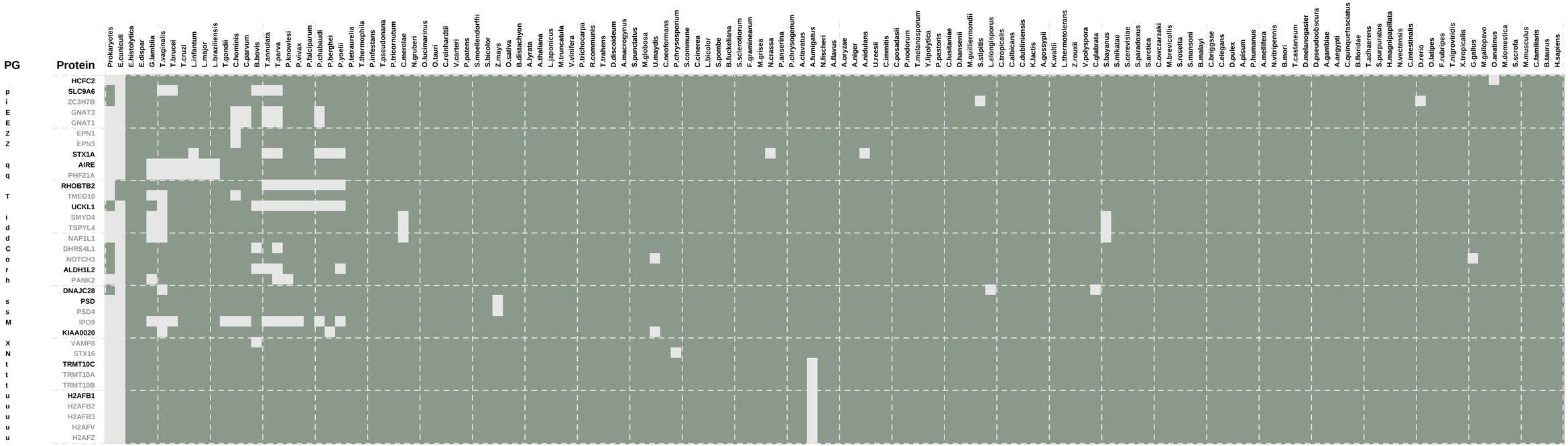
PG	Protein	LLR	Notes
j	SLC25A18	7.6	
j	SLC25A19	7.6	
j	SLC25A2	7.6	
j	UCP1	7.6	
j	UCP2	7.6	
j	UCP3	7.6	
j	SLC25A20	7.6	
j	SLC25A21	7.6	
j	SLC25A22	7.6	
j	SLC25A26	7.6	
j	SLC25A28	7.6	
j	100508457	7.6	
j	100510457	7.6	
j	SLC25A29	7.6	
C	HSD11B1L	7.4	
Q	SV2B	7.4	1 / 2
n	**CYB5A**	**7.2**	**3**
n	CYB5B	7.2	3
g	TRIM22	7.1	4 / 5
g	BRCA1	7.1	6 / 7 / 8 / 9 / 10 / 11 / 12 /
	TBC1D31	**7.1**	
e	GALE	7.1	
	RANBP9	**7.0**	**15**
	STON1-GTF2A1L	**7.0**	
U	ADH6	7.0	
W	LRRC10	7.0	16
W	LRCH3	6.9	
I	PFKFB4	6.7	
	CAPS	**6.6**	
o	**UACA**	**6.6**	**17 / 18**
c	NAA15	6.6	
C	BDH2	6.6	
C	DHRS1	6.6	
C	DCXR	6.6	19 / 20
X	VAMP7	6.6	21 / 22 / 23 / 24 / 25 / 26 /

1: acrosomal vesicle || 2: synaptic vesicle membrane || 3: mitochondrial outer membrane || 4: Cajal body || 5: nuclear speck || 6: BRCA1-A complex || 7: BRCA1-BARD1 complex || 8: chromosome || 9: filamentous actin ||
10: focal adhesion || 11: gamma-tubulin ring complex || 12: ribonucleoprotein complex || 13: ruffle || 14: ubiquitin ligase complex || 15: microtubule associated complex || 16: myofibril || 17: apoptosome || 18: nuclear envelope ||
19: brush border || 20: microvillus || 21: apical part of cell || 22: late endosome membrane || 23: lysosomal membrane || 24: neuron projection || 25: phagocytic vesicle || 26: phagocytic vesicle membrane || 27: SNARE complex ||

ECM 4, Gene set "platelet dense tubular network membrane", Page 6

Num of ECM Genes: 1. Num of Predicted Genes: 500

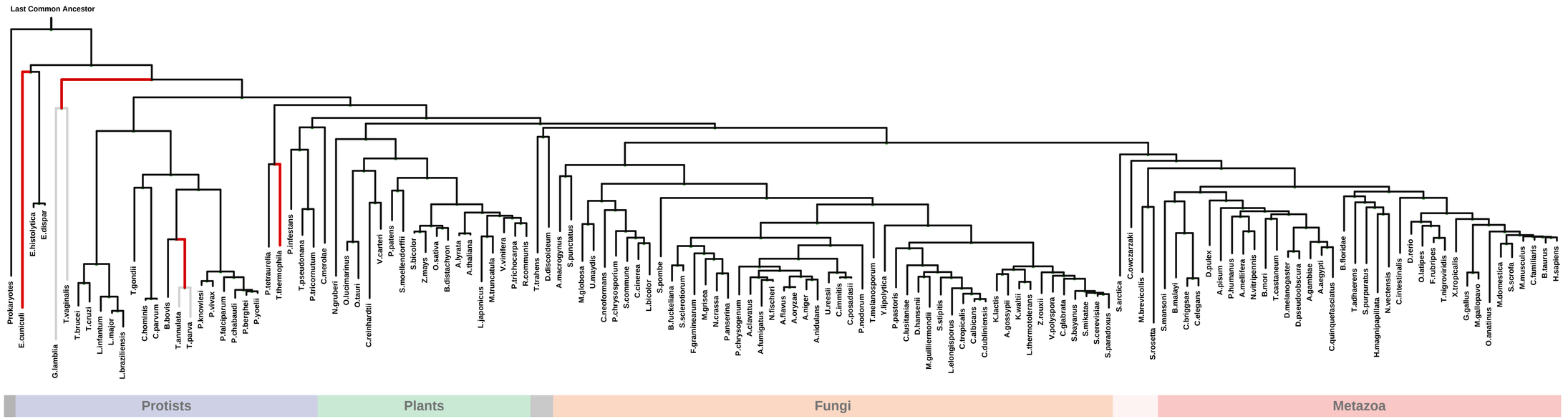


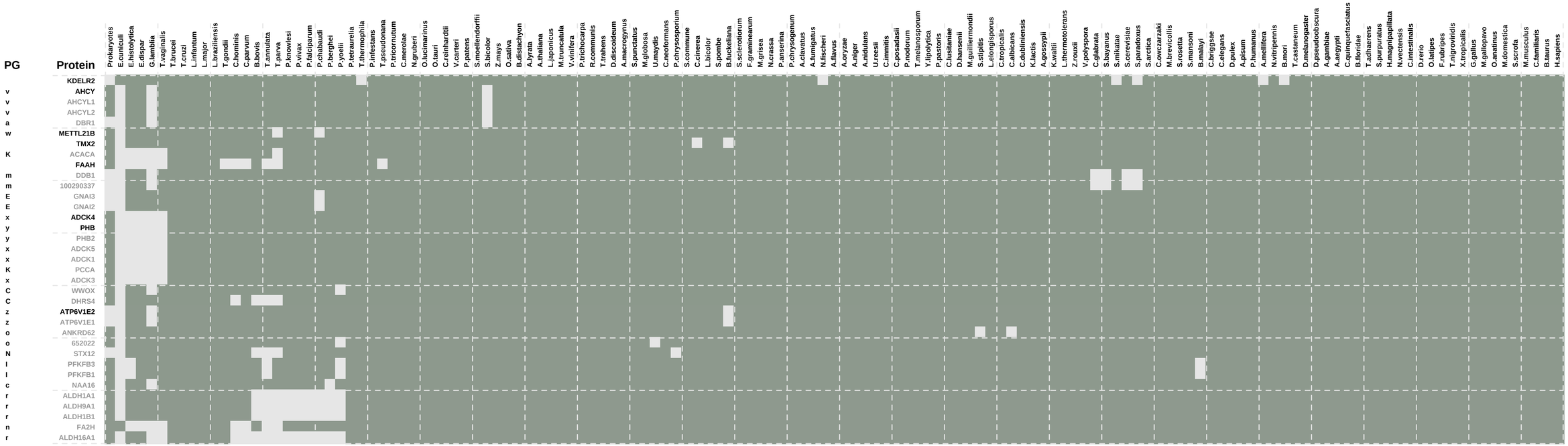


1: early endosome membrane || 2: recycling endosome membrane || 3: extrinsic to internal side of plasma membrane || 4: heterotrimeric G-protein complex || 5: photoreceptor inner segment || 6: photoreceptor outer segment || 7: photoreceptor connecting cilium ||
8: photoreceptor outer segment membrane || 9: coated pit || 10: clathrin-coated vesicle || 11: actomyosin || 12: neuron projection || 13: secretory granule || 14: SNARE complex || 15: synaptic vesicle membrane || 16: synaptobrevin 2-SNAP-25-syntaxin-1a complex ||
17: synaptobrevin 2-SNAP-25-syntaxin-1a-complexin I complex || 18: actin cytoskeleton || 19: histone deacetylase complex || 20: cis-Golgi network || 21: COPI-coated vesicle || 22: endoplasmic reticulum-Golgi intermediate compartment ||

ECM 4, Gene set "platelet dense tubular network membrane", Page 7

Num of ECM Genes: 1. Num of Predicted Genes: 500





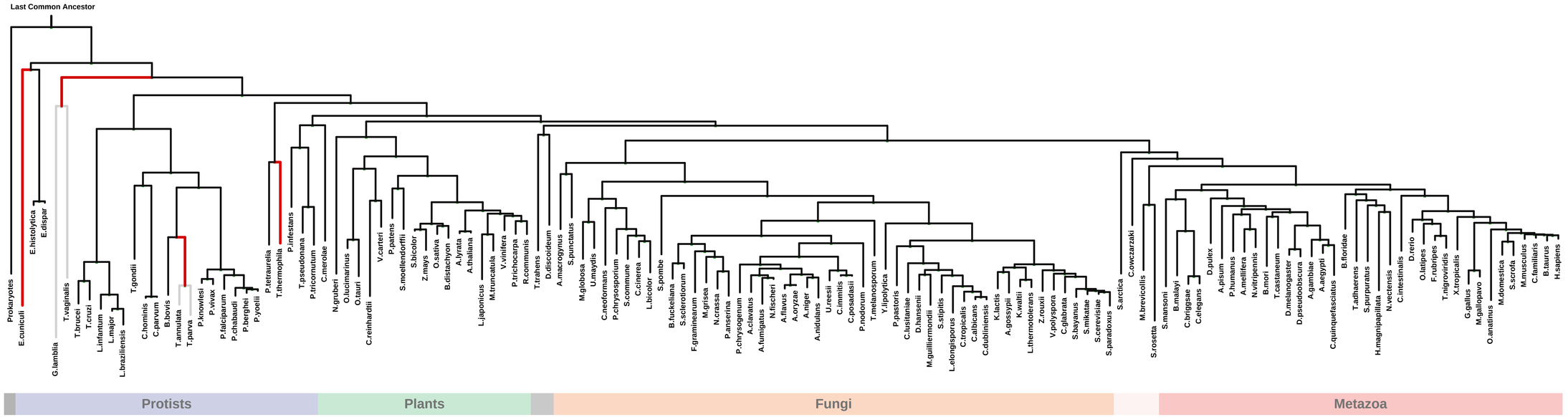
1: cis-Golgi network || 2: melanosome || 3: endomembrane system || 4: organelle membrane || 5: Cul4A-RING ubiquitin ligase complex || 6: Cul4B-RING ubiquitin ligase complex || 7: Cul4-RING ubiquitin ligase complex || 8: extrinsic to internal side of plasma membrane || 9: heterotrimeric G-protein complex || 10: membrane raft || 11: midbody || 12: zymogen granule || 13: microvillus || 14: peroxisomal membrane || 15: peroxisome || 16: acrosomal vesicle || 17: proton-transporting two-sector ATPase complex, catalytic domain || 18: endosome || 19: proton-transporting two-sector ATPase complex || 20: BLOC-1 complex || 21: endosome membrane || 22: phagocytic vesicle || 23: SNARE complex

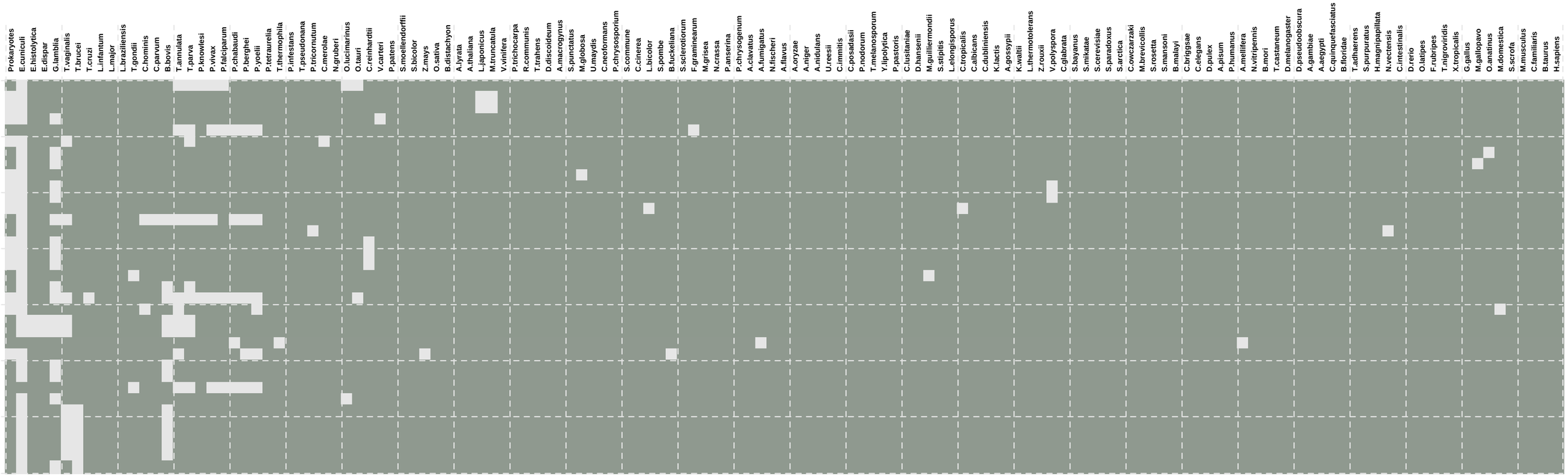
ECM 4, Gene set "platelet dense tubular network membrane", Page 8

Num of ECM Genes: 1. Num of Predicted Genes: 500

PRESENCE ABSENCE
GAIN LOSS

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

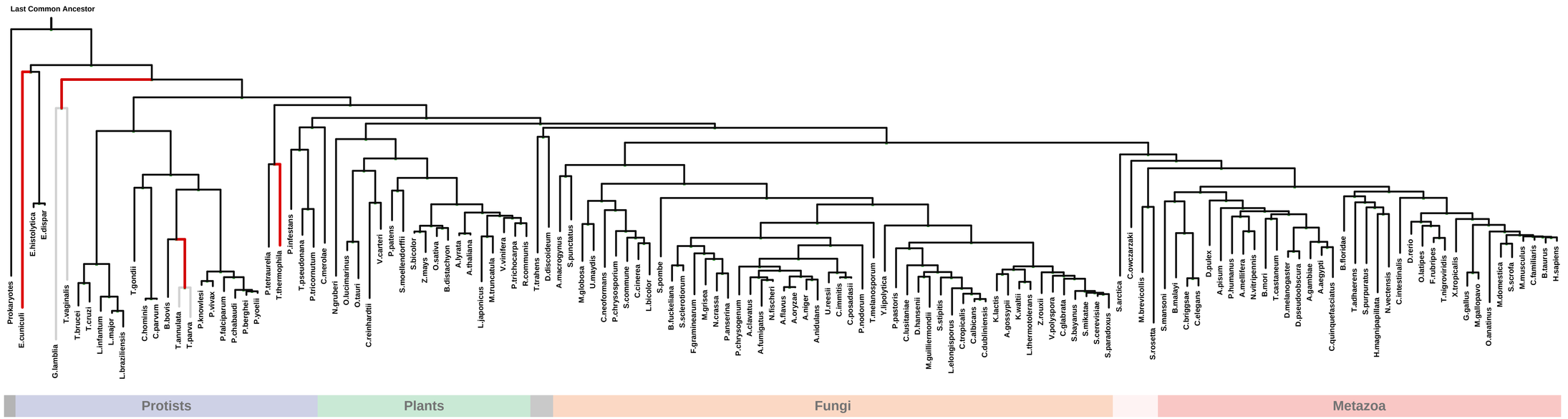


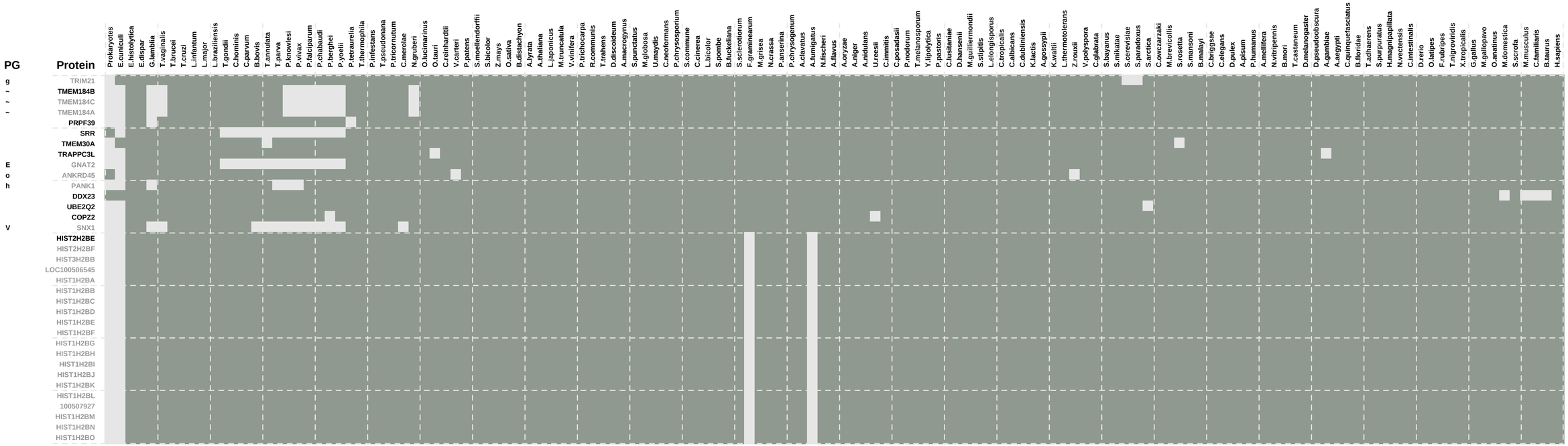


1: endosome || 2: endosome membrane || 3: retromer complex || 4: vesicle || 5: GARP complex || 6: BBSome || 7: centriolar satellite || 8: centriole || 9: cilium membrane || 10: microtubule basal body || 11: motile cilium ||
12: nonmotile primary cilium || 13: pericentriolar material || 14: early endosome || 15: HOPS complex || 16: late endosome || 17: late endosome membrane || 18: lysosomal membrane || 19: invadopodium membrane || 20: lamellipodium ||
21: lamellipodium membrane || 22: coated pit || 23: endocytic vesicle || 24: neuron projection || 25: synapse || 26: chromosome || 27: Golgi stack || 28: clathrin-coated vesicle || 29: endomembrane system || 30: glycogen granule ||

ECM 4, Gene set "platelet dense tubular network membrane", Page 9

Num of ECM Genes: 1. Num of Predicted Genes: 500





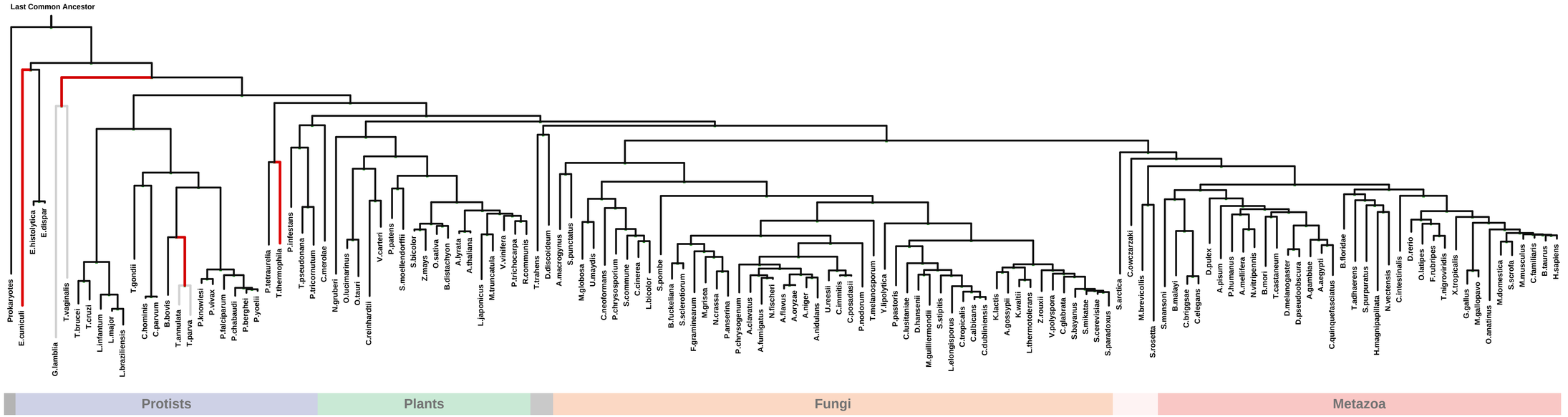
1: cytoplasmic mRNA processing body || 2: ribonucleoprotein complex || 3: SCF ubiquitin ligase complex || 4: apical part of cell || 5: extrinsic to internal side of plasma membrane || 6: heterotrimeric G-protein complex || 7: photoreceptor inner segment || 8: photoreceptor outer segment || 9: photoreceptor outer segment membrane || 10: cell periphery || 11: catalytic step 2 spliceosome || 12: U5 snRNP || 13: cis-Golgi network || 14: COPI vesicle coat || 15: early endosome membrane || 16: endosome membrane || 17: nucleosome || 18: extrinsic to plasma membrane

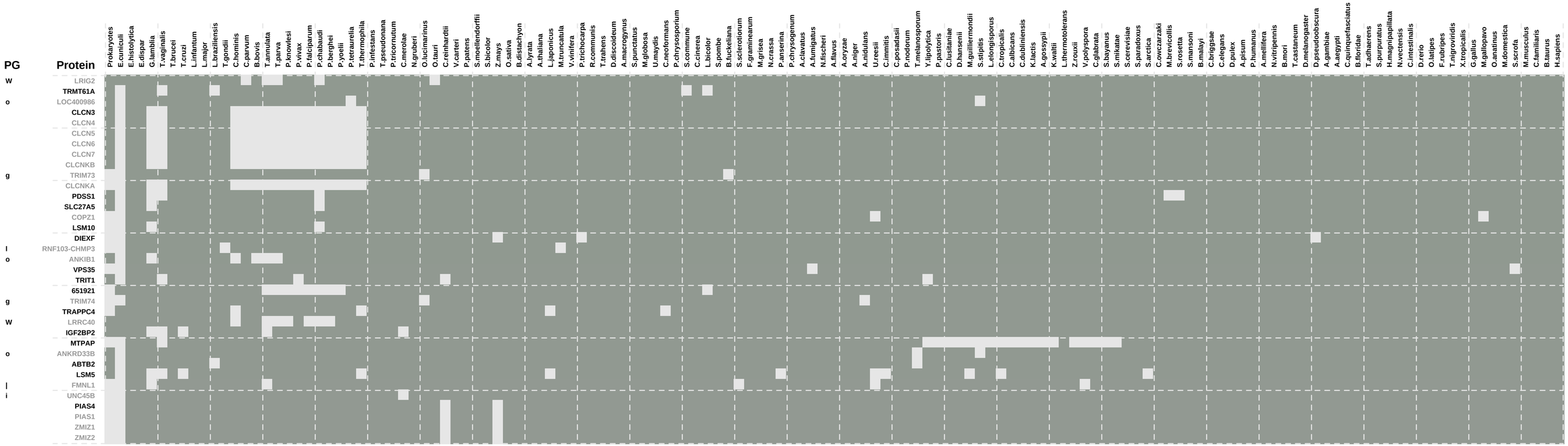
ECM 4, Gene set "platelet dense tubular network membrane", Page 10

Num of ECM Genes: 1. Num of Predicted Genes: 500

PRESENCE ABSENCE
GAIN LOSS

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

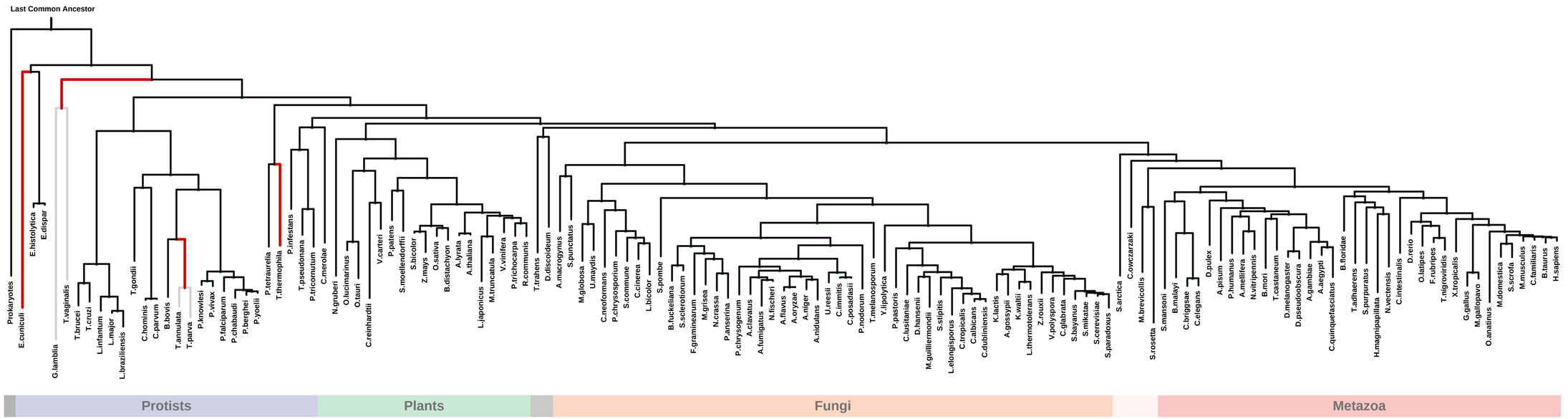


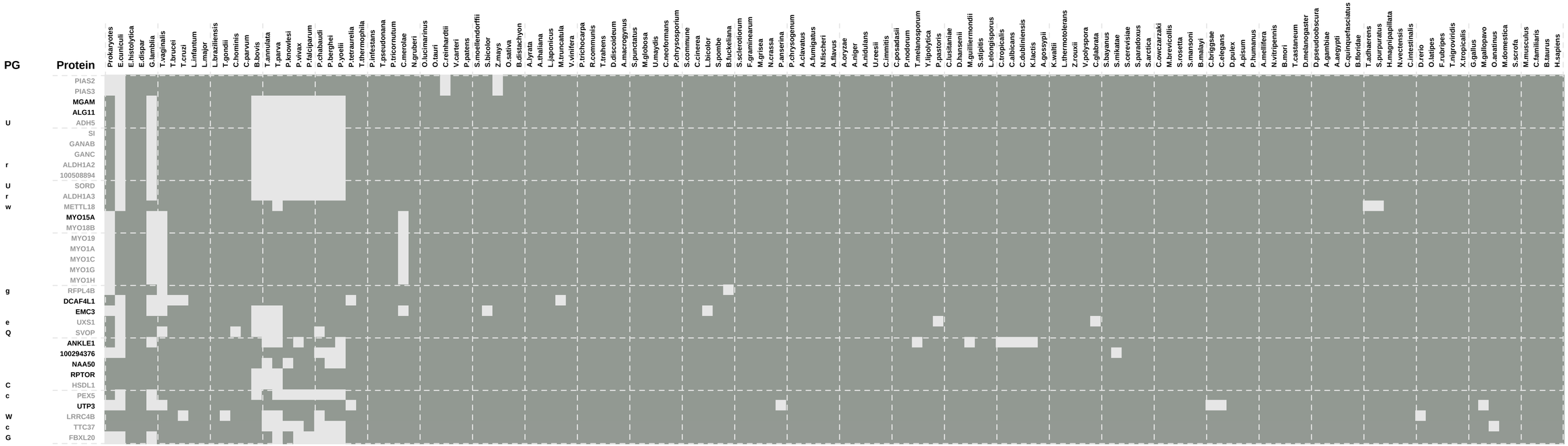


1: tRNA (m1A) methyltransferase complex || 2: early endosome || 3: early endosome membrane || 4: late endosome || 5: late endosome membrane || 6: transport vesicle membrane || 7: vesicle membrane || 8: apical part of cell ||
9: endosome membrane || 10: cytoplasmic vesicle || 11: lysosomal membrane || 12: chloride channel complex || 13: basal plasma membrane || 14: integral to endoplasmic reticulum membrane || 15: COPI vesicle coat || 16: Cajal body ||
17: U7 snRNP || 18: endosome || 19: dendrite || 20: Golgi stack || 21: synapse || 22: synaptic vesicle || 23: TRAPP complex || 24: cytoskeletal part || 25: ribonucleoprotein complex || 26: bleb || 27: cell cortex ||

ECM 4, Gene set "platelet dense tubular network membrane", Page 11

Num of ECM Genes: 1. Num of Predicted Genes: 500

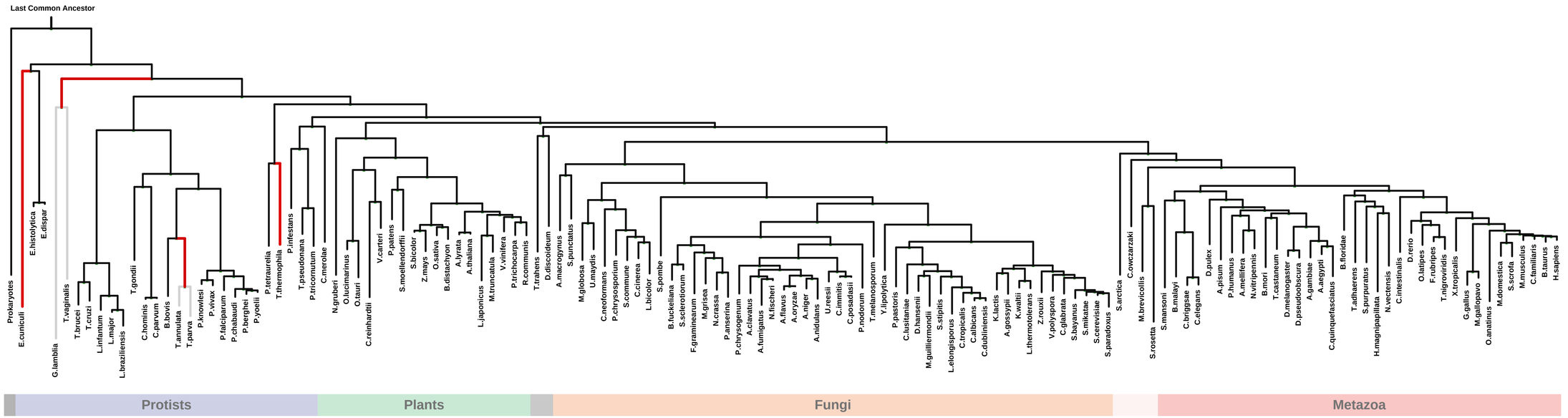




1: nuclear speck || 2: PML body || 3: dendrite || 4: synapse || 5: brush border || 6: membrane raft || 7: endoplasmic reticulum lumen || 8: melanosome || 9: cilium || 10: flagellum || 11: mitochondrial membrane ||
12: myosin complex || 13: stereocilium || 14: sarcomere || 15: unconventional myosin complex || 16: mitochondrial outer membrane || 17: basal plasma membrane || 18: basolateral plasma membrane || 19: cortical actin cytoskeleton ||
20: filamentous actin || 21: lateral plasma membrane || 22: microvillus || 23: nuclear pore || 24: stereocilium membrane || 25: stress fiber || 26: ER membrane protein complex || 27: Golgi cisterna membrane || 28: synaptic vesicle ||

ECM 4, Gene set "platelet dense tubular network membrane", Page 12

Num of ECM Genes: 1. Num of Predicted Genes: 500

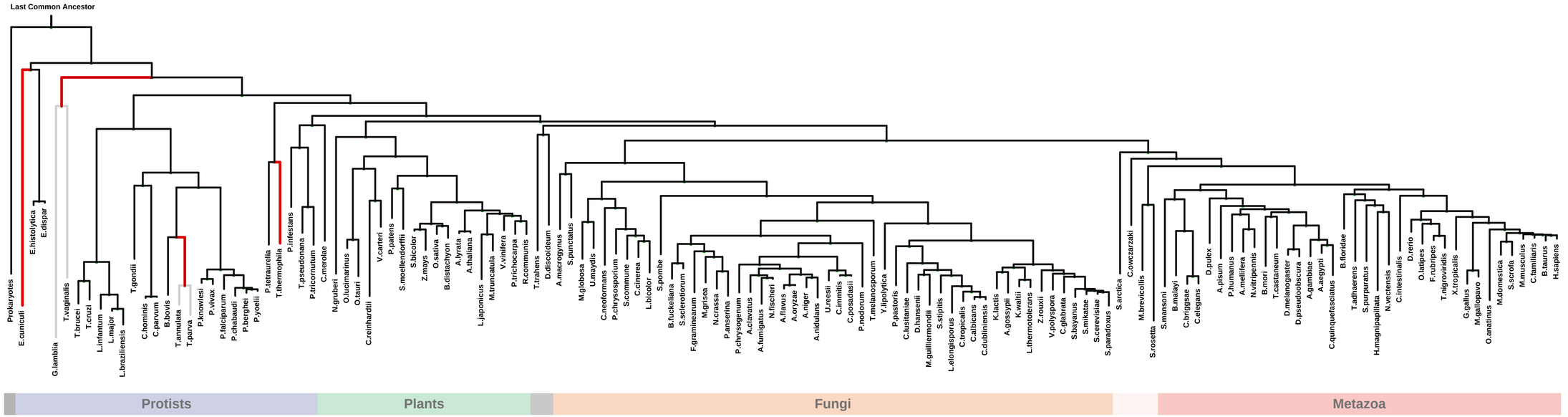


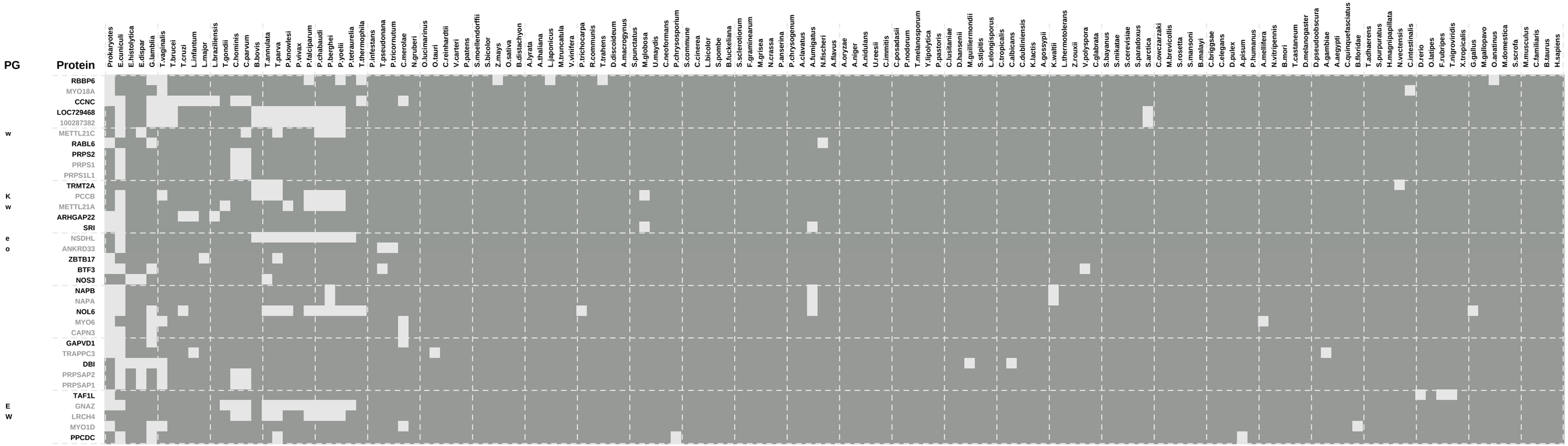
PG	Protein	LLR	Notes
	AGPAT1	2.7	
	NFX1	2.6	
	ECHS1	2.6	
H	BAP1	2.6	1
o	729549	2.5	
o	ANKRD26	2.5	2
	NACA2	2.5	
	NACAD	2.5	
	ZC3H4	2.5	
	SLC38A6	2.5	
d	TSPYL5	2.5	
o	ANKRD36	2.4	
}	UBXN2B	2.4	
o	KANK4	2.4	
p	SLC9A2	2.4	
i	SMYD2	2.4	
A	MCTP2	2.3	
	DGKA	2.3	
O	CUL2	2.3	3
O	CUL4A	2.3	4 / 5
V	SNX11	2.3	
A	RASA4	2.3	6
	ALG2	2.2	
	PDCD2L	2.2	
E	GNAQ	2.2	7 / 8 / 9
E	GNA14	2.2	7 / 8
	ZC3H8	2.1	
	YEATS2	2.1	10
	EIF4G2	2.1	11
	XAB2	2.0	12
	DPYD	2.0	
c	PEX5L	2.0	13 / 14 / 15 / 16
q	KMT2E	1.9	17 / 18
Y	OXA1L	1.8	19 / 20 / 21
	PPCS	1.8	

1: PR-DUB complex || 2: actin filament || 3: Cul2-RING ubiquitin ligase complex || 4: Cul4A-RING ubiquitin ligase complex || 5: Cul4-RING ubiquitin ligase complex || 6: intrinsic to internal side of plasma membrane || 7: extrinsic to internal side of plasma membrane || 8: heterotrimeric G-protein complex || 9: nuclear membrane || 10: Ada2/Gcn5/Ada3 transcription activator complex || 11: eukaryotic translation initiation factor 4F complex || 12: catalytic step 2 spliceosome || 13: cell tip || 14: dendrite || 15: intracellular cyclic nucleotide activated cation channel complex || 16: peroxisomal membrane || 17: MLL5-L complex || 18: nuclear speck || 19: integral to mitochondrial membrane || 20: mitochondrial membrane || 21: mitochondrial respiratory chain

ECM 4, Gene set "platelet dense tubular network membrane", Page 13

Num of ECM Genes: 1. Num of Predicted Genes: 500

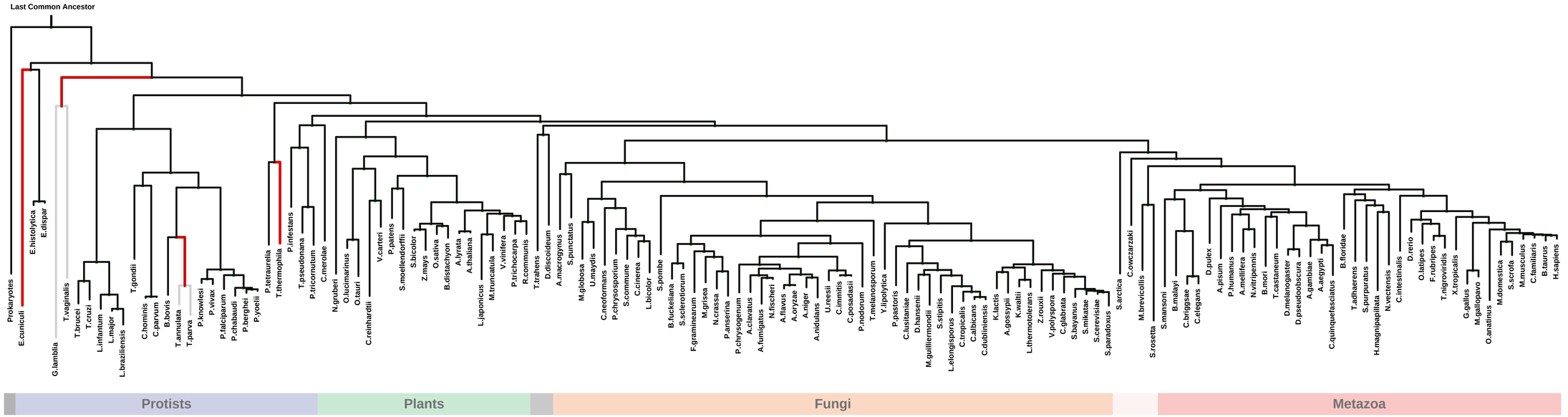


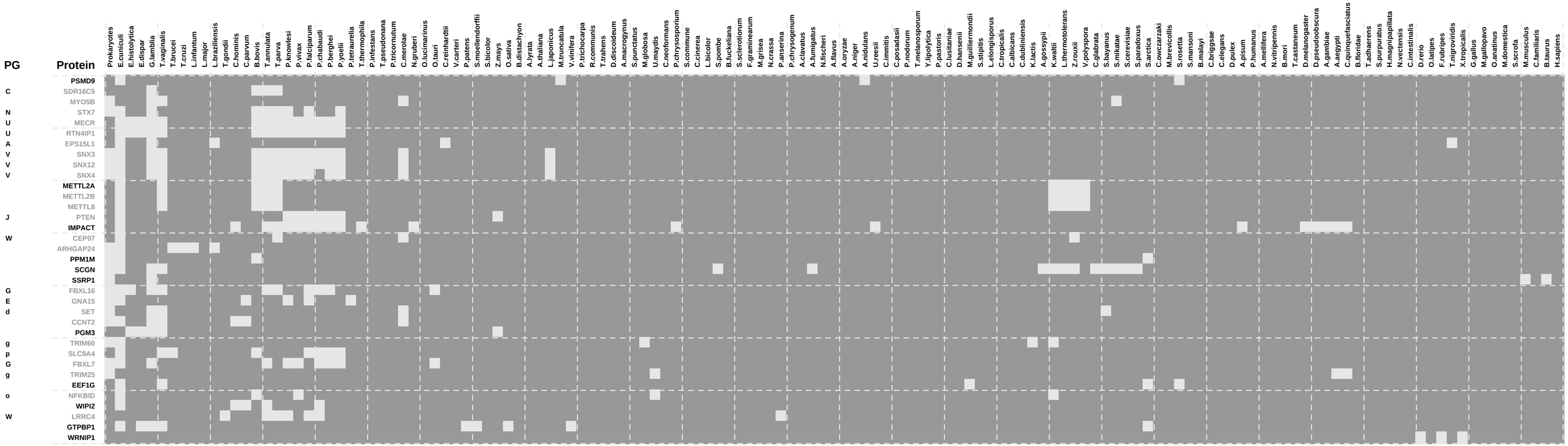


1: chromosome || 2: microtubule organizing center || 3: actomyosin || 4: endoplasmic reticulum-Golgi intermediate compartment || 5: myosin complex || 6: DNA-directed RNA polymerase II, holoenzyme || 7: mediator complex ||
8: sarcoplasmic reticulum membrane || 9: vesicle || 10: Z disc || 11: lipid particle || 12: apical part of cell || 13: caveola || 14: endocytic vesicle membrane || 15: synaptobrevin 2-SNAP-25-syntaxin-1a complex || 16: condensed nuclear chromosome ||
17: axon || 18: cell cortex || 19: clathrin-coated endocytic vesicle || 20: clathrin-coated vesicle membrane || 21: coated pit || 22: cytoplasmic membrane-bounded vesicle || 23: endocytic vesicle || 24: filamentous actin || 25: microvillus ||

ECM 4, Gene set "platelet dense tubular network membrane", Page 14

Num of ECM Genes: 1. Num of Predicted Genes: 500

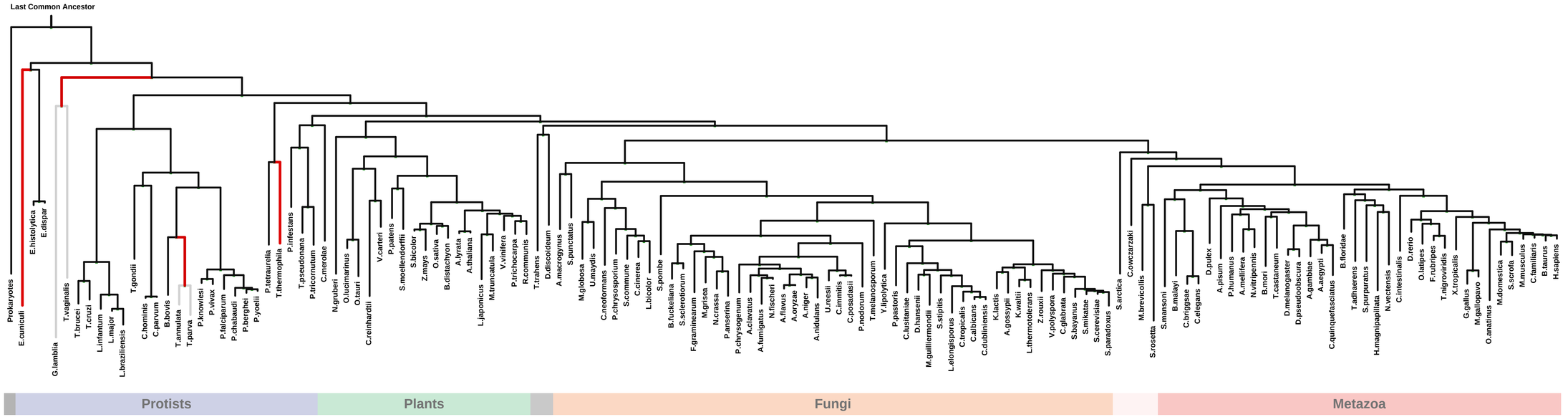


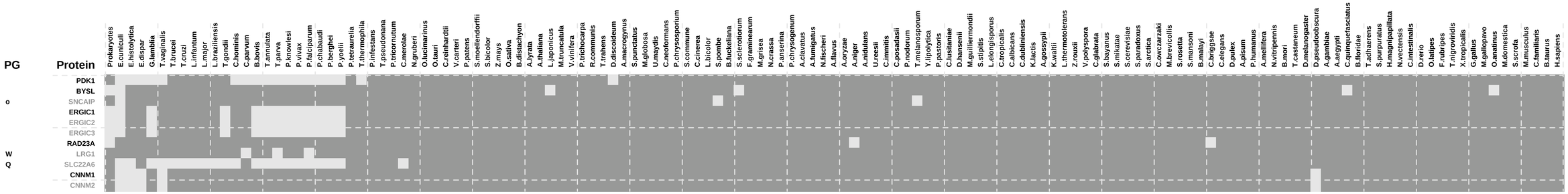


1: proteasome regulatory particle || 2: proteasome regulatory particle, base subcomplex || 3: cytoplasmic vesicle membrane || 4: dendritic spine || 5: myosin complex || 6: early endosome membrane || 7: late endosome membrane ||
8: lysosomal membrane || 9: SNARE complex || 10: coated pit || 11: early endosome || 12: endosome membrane || 13: cytoplasmic dynein complex || 14: cell projection || 15: internal side of plasma membrane || 16: myelin sheath adaxonal region ||
17: neuron projection || 18: PML body || 19: Schmidt-Lanterman incisure || 20: focal adhesion || 21: transport vesicle membrane || 22: chromosome || 23: extrinsic to internal side of plasma membrane || 24: heterotrimeric G-protein complex ||

ECM 4, Gene set "platelet dense tubular network membrane", Page 15

Num of ECM Genes: 1. Num of Predicted Genes: 500

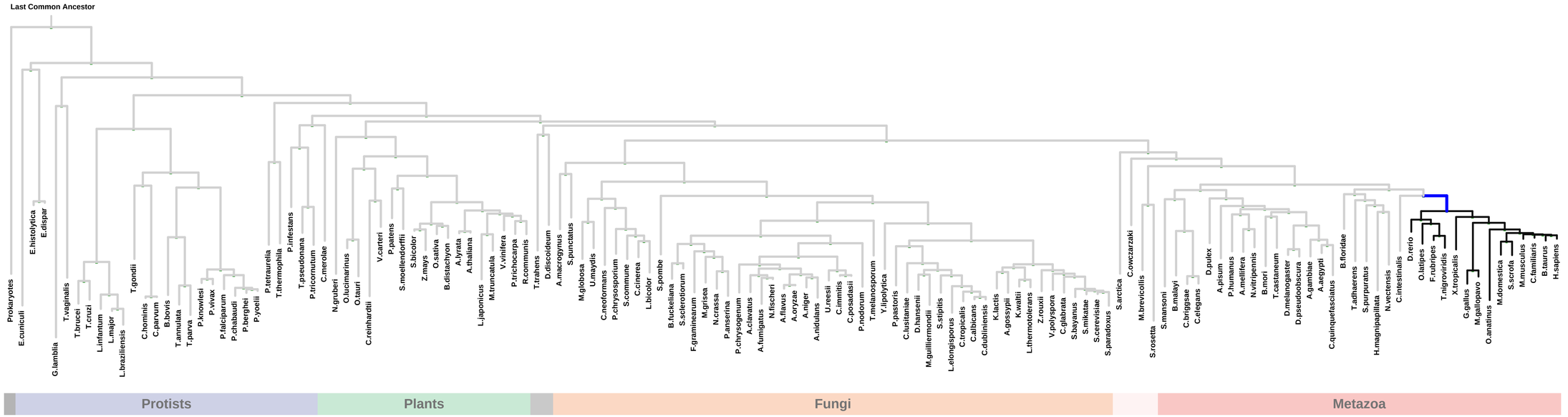




1: pyruvate dehydrogenase complex || 2: presynaptic membrane || 3: endoplasmic reticulum-Golgi intermediate compartment || 4: endoplasmic reticulum-Golgi intermediate compartment membrane || 5: proteasome complex || 6: basolateral plasma membrane || 7: caveola

ECM 5, Gene set "platelet dense tubular network membrane", Page 1

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



PG	Protein	Prokaryotes E.cuniculi E.histolytica E.dispar G.lamblia T.vaginalis T.brucei T.cruzi L.infantum L.major L.braziliensis T.gondii C.hominis C.parvum B.bovis T.annulata T.parva P.knowlesi P.vivax P.falciparum P.chabaudi P.berghei P.yoelii P.tetraurelia T.thermophila P.infestans T.pseudonana P.tricornutum C.merolae N.gruberi O.lucimarinus O.tauri C.reinhardtii V.carteri P.patens S.moellendorffii S.bicolor Z.mays O.sativa B.distachyon A.lyrata A.thaliana L.japonicus M.truncatula V.vinifera P.trichocarpa R.communis T.trahens D.discoideum A.macrogynus S.punctatus M.globosa U.maydis C.neoformans P.chrysosporium S.commune C.cinerea L.bicolor S.pombe B.fuckeliana S.sclerotiorum F.graminearum M.grisea N.crassa P.anserina P.chrysogenum A.clavatus A.fumigatus N.fischeri A.flavus A.oryzae A.niger A.nidulans U.reesii C.immitis C.posadasii P.nodorum T.melanosporum Y.lipolytica P.pastoris C.lusitaniae D.hansenii M.guilliermondii S.stipitis L.elongisporus C.tropicalis C.albicans C.dubliniensis K.lactis A.gossypii K.waltii L.thermotolerans Z.rouxii V.polyspora C.glabrata S.bayanus S.mikatae S.cerevisiae S.paradoxus S.arctica C.owczarzaki M.brevicollis S.rosetta S.mansoni B.malayi C.briggsae C.elegans D.pulex A.pisum P.humanus A.mellifera N.vitripennis B.mori T.castaneum D.melanogaster D.pseudoobscura A.gambiae A.aegypti C.quinquefasciatus B.floridae T.adhaerens S.purpuratus H.magnipapillata N.vectensis C.intestinalis D.rerio O.latipes F.rubripes T.nigroviridis X.tropicalis G.gallus M.gallopavo O.anatinus M.domestica S.scrofa M.musculus C.familiaris B.taurus H.sapiens	LLR	Notes
	MRVI1			1 / 2

1: platelet dense tubular network membrane || 2: sarcoplasmic reticulum