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:

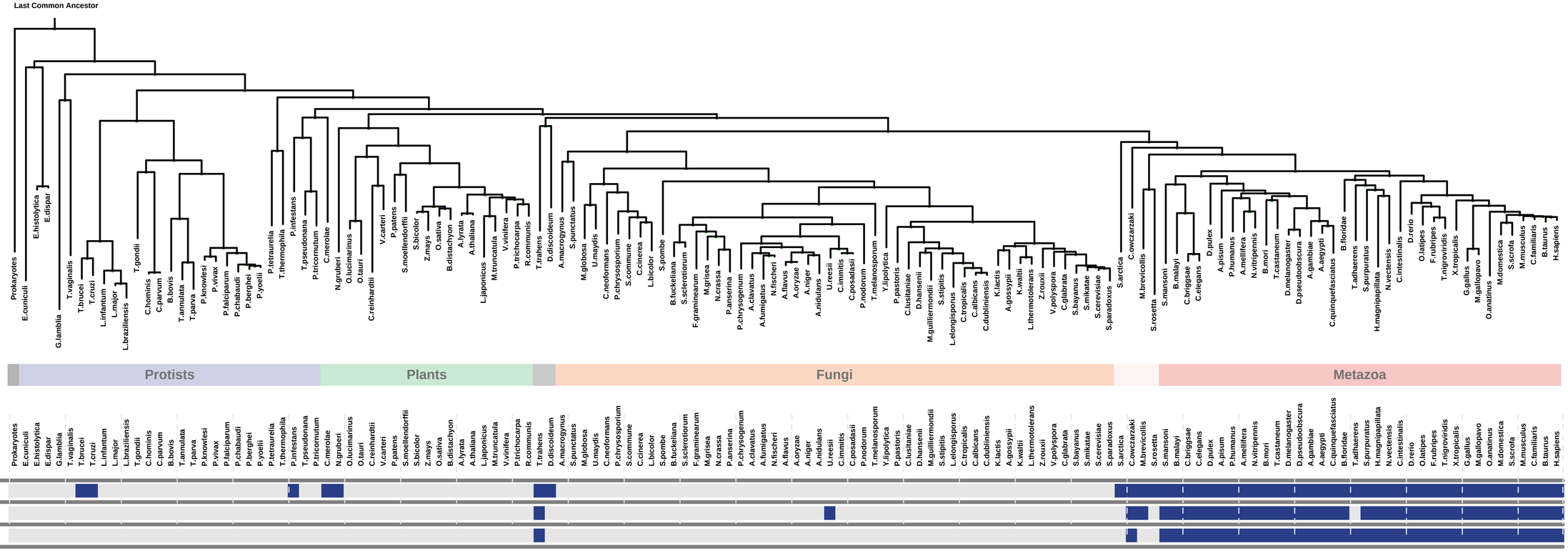
1) Overview of Evolutionarily Conserved Modules (ECMs)

- 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+

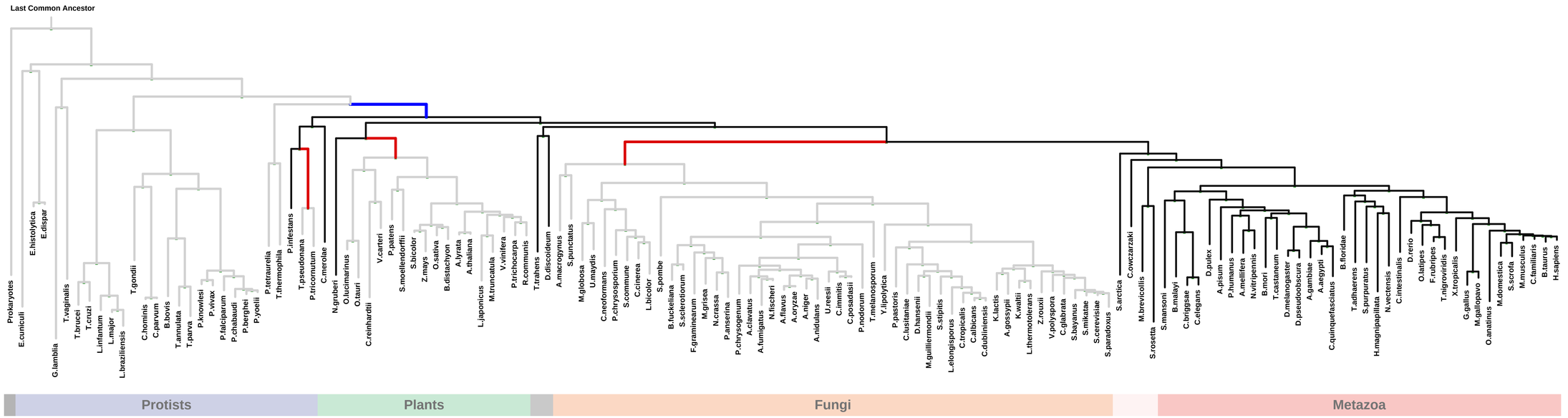
- Top panel shows the inferred evolutionary history on the predefined species tree. Branch color shows the gain event (blue) and loss events (red color, with brighter color indicating higher confidence in loss). Branches before the gain or after a loss are shown in gray.
- Bottom panel shows the input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

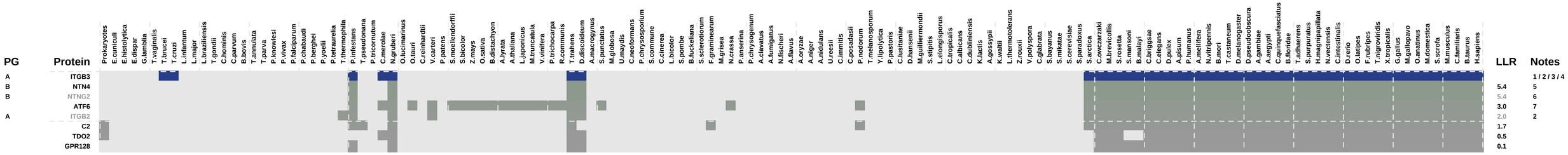
Overview of Evolutionarily Conserved Modules (ECMs)



ECM 1, Gene set "alphav-beta3 integrin-vitronectin complex", Page 1

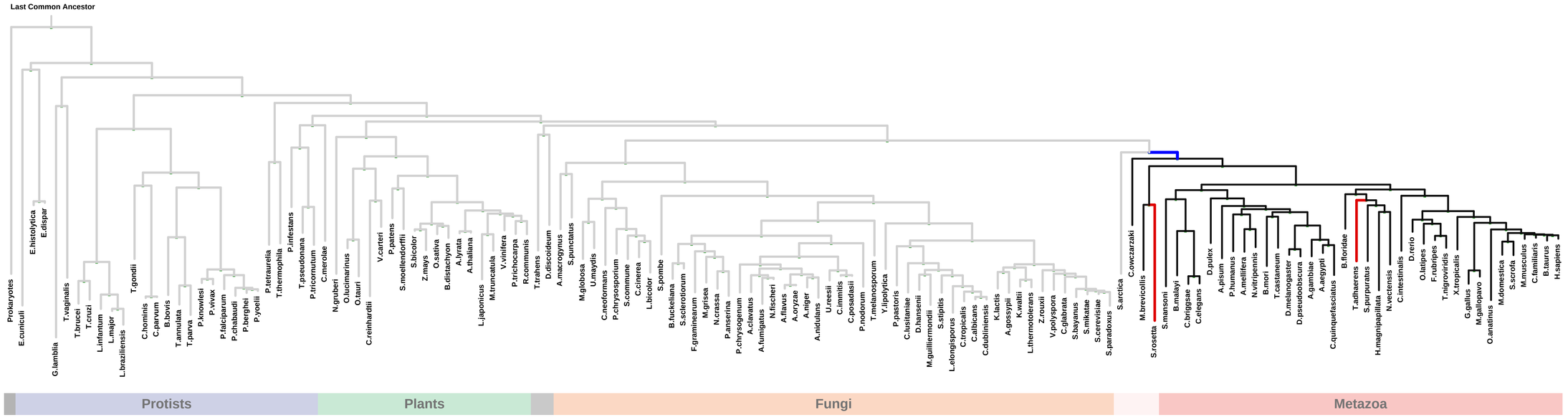
Num of ECM Genes: 1. Num of Predicted Genes: 7

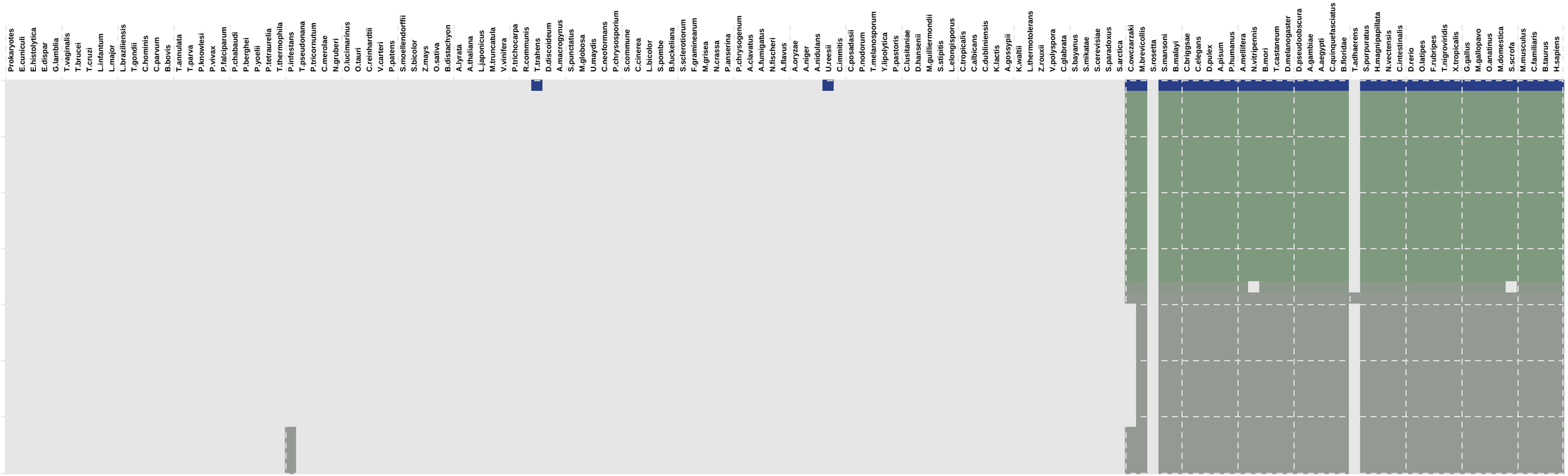




ECM 2, Gene set "alphav-beta3 integrin-vitronectin complex", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 47

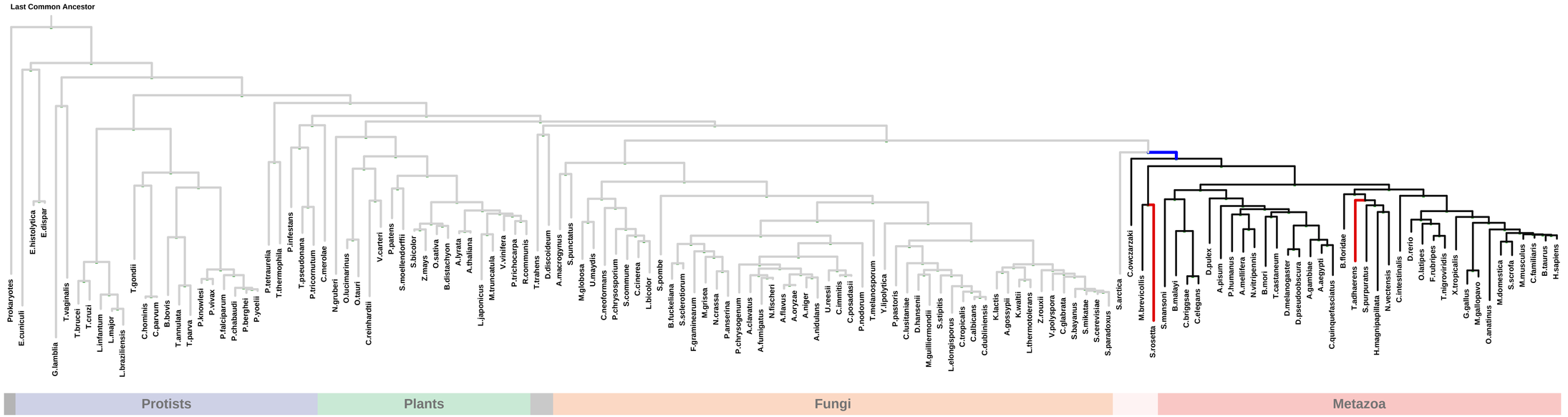


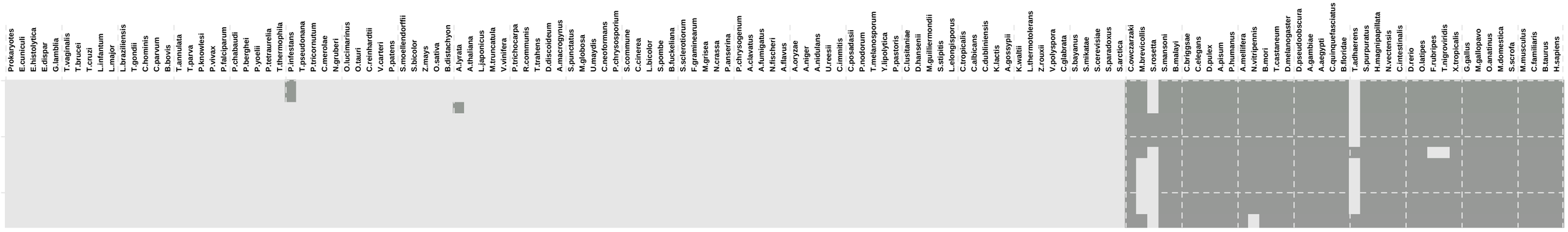


1: alphav-beta3 integrin-vitronectin complex || 2: extracellular matrix || 3: acetylcholine-gated channel complex || 4: postsynaptic membrane || 5: chloride channel complex || 6: axon || 7: integral to synaptic vesicle membrane ||
8: dendrite || 9: neuronal cell body membrane || 10: presynaptic membrane || 11: receptor complex || 12: synaptic cleft || 13: dendrite membrane || 14: microtubule cytoskeleton || 15: calcium channel complex || 16: synapse ||
17: neuromuscular junction || 18: postsynaptic density || 19: external side of plasma membrane

ECM 2, Gene set "alphav-beta3 integrin-vitronectin complex", Page 2

Num of ECM Genes: 1. Num of Predicted Genes: 47



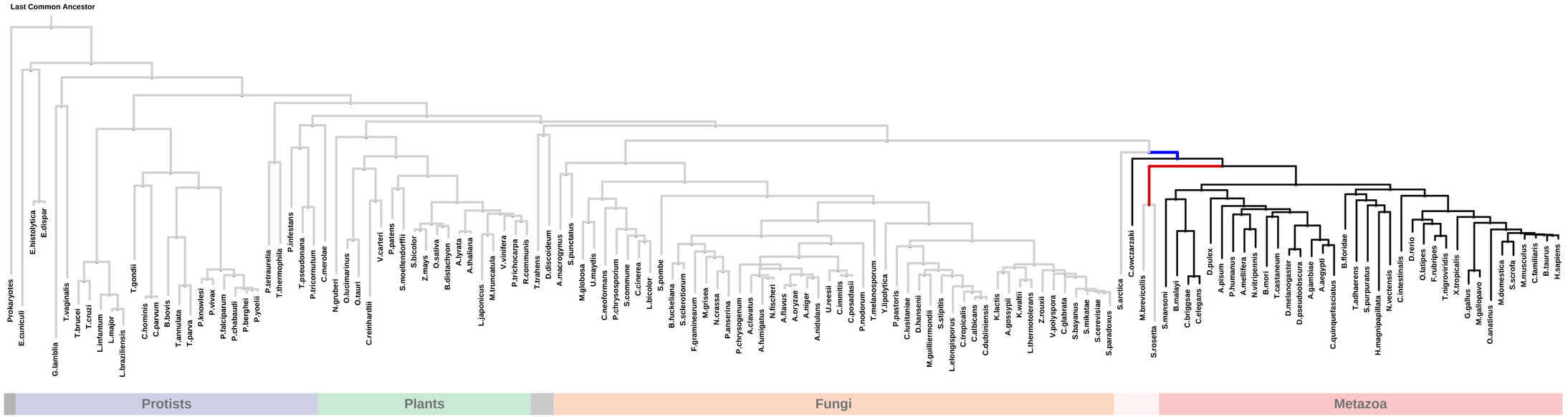


PG	Protein	LLR	Notes
A	CHRND	1.9	1 / 2
A	GABRB1	1.9	2 / 3
A	GABRD	1.9	2 / 3
	SHROOM3	1.5	4 / 5
B	SOCS4	1.5	
B	SOCS5	1.5	
	NDUFA7	1.0	6
A	HTR3E	1.0	2
A	GABRR2	1.0	2 / 3
A	HTR3C	1.0	2
C	ST7	1.0	
C	ST7L	1.0	
	DLGAP5	0.6	7

1: acetylcholine-gated channel complex || 2: postsynaptic membrane || 3: chloride channel complex || 4: adherens junction || 5: apical junction complex || 6: mitochondrial respiratory chain complex I || 7: spindle pole centrosome

ECM 3, Gene set "alphav-beta3 integrin-vitronectin complex", Page 1

Num of ECM Genes: 1. Num of Predicted Genes: 28



PG	Protein	LLR	Notes
	ITGA5		1 / 2 / 3 / 4 / 5 / 6 / 7
A	A2M	5.0	8
A	A2ML1	5.0	
	C4B	5.0	
A	C4B	5.0	
A	CD109	5.0	9
	CNPY3	5.0	10
B	DBP	5.0	
C	GNG12	5.0	11 / 12
C	GNG5	5.0	12
B	NFIL3	5.0	
	NTRK2	5.0	13 / 14 / 15 / 16 / 17 / 18
A	OVOS	5.0	
A	OVOS2	5.0	
A	PZP	5.0	
	UPK1A	5.0	
	TMEM185AP1	1.5	
D	NFE2L2	1.5	19
D	NFE2	1.5	20 / 21
	LRP11	1.1	
	PER3	0.8	
E	CHIC2	0.8	22
E	CHIC1	0.8	23
	NYX	0.8	24
F	GABRR2	0.7	25 / 26
G	ST7	0.7	
G	ST7L	0.7	
F	HTR3C	0.7	26
F	HTR3E	0.7	26

1: alphav-beta3 integrin-vitronectin complex || 2: cell-cell junction || 3: external side of plasma membrane || 4: focal adhesion || 5: integrin complex || 6: ruffle || 7: ruffle membrane || 8: platelet alpha granule lumen || 9: anchored to membrane || 10: endoplasmic reticulum lumen || 11: actin filament || 12: heterotrimeric G-protein complex || 13: endosome membrane || 14: excitatory synapse || 15: growth cone || 16: postsynaptic density || 17: presynaptic active zone || 18: terminal button || 19: chromatin || 20: actin cytoskeleton || 21: PML body || 22: Golgi-associated vesicle || 23: cytoplasmic membrane-bounded vesicle || 24: proteinaceous extracellular matrix || 25: chloride channel complex || 26: postsynaptic membrane