

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

Dataset:

Num of genes in input gene set: 20
Total number of genes: 20834
Prediction LLR threshold: 0

The CLIME PDF output two sections:

1) Overview of Evolutionarily Conserved Modules (ECMs)

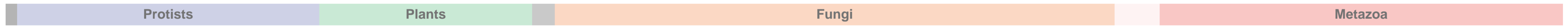
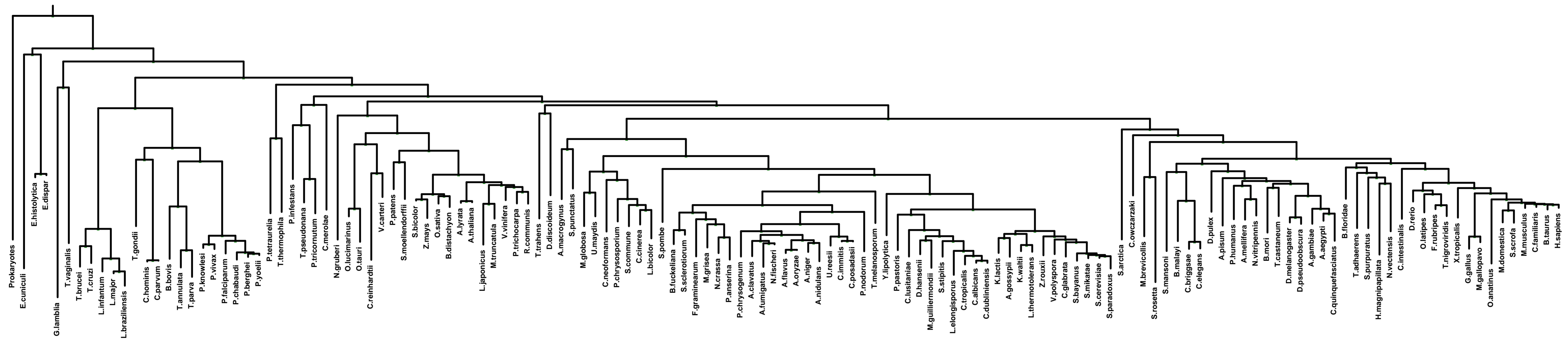
- Top panel shows the predefined species tree.
- Bottom panel shows the partition of input genes into Evolutionary Conserved Modules (ECMs), ordered by ECM strength (shown at right), and separated by horizontal lines.
- Each row show one gene, where the phylogenetic profile indicates presence (blue) 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)

Last Common Ancestor



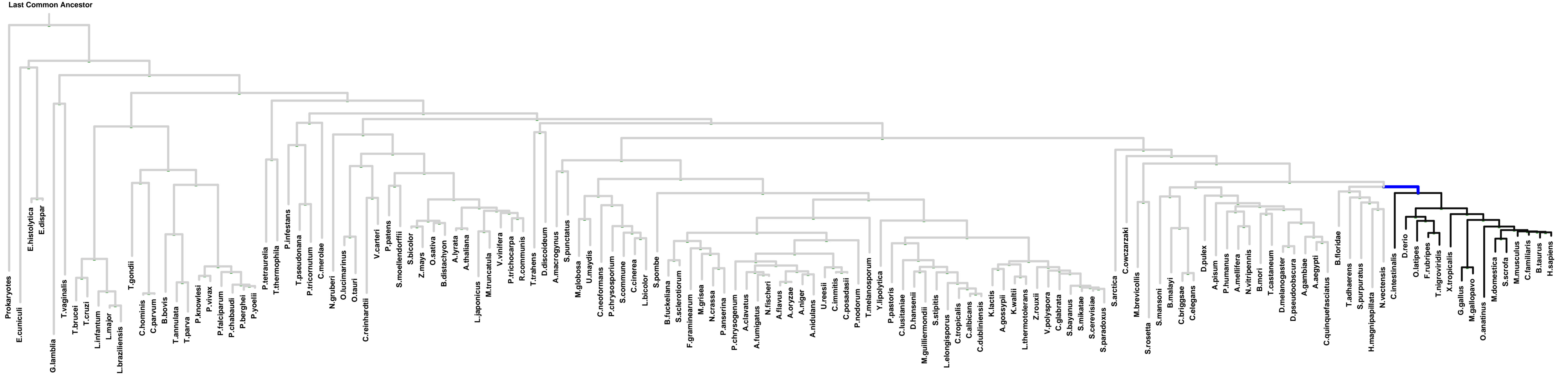
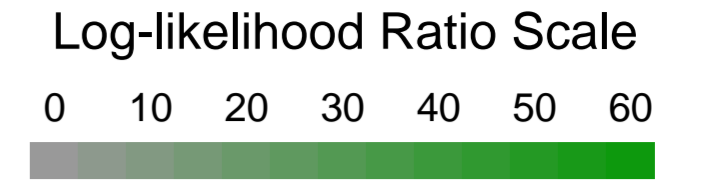
Protein	Species	Strength
ECM 1 20 genes	GJA1	0.0
	GJA10	
	GJA3	
	GJA4	
	GJA5	
	GJA8	
	GJA9	
	GJB1	
	GJB2	
	GJB3	
	GJB4	
	GJB5	
	GJB6	
	GJB7	
	GJC1	
	GJC2	
	GJC3	
	GJD2	
	GJD3	
	GJD4	

Strength

0.0

ECM 1, Gene set "connexon complex", Page 1

Num of ECM Genes: 20. Num of Predicted Genes: 0. ECM Strength: 0.0



PG	Protein	LLR	Notes
A	GJA1		1/2/3/4/5/6/7/8/9
A	GJA10		1
A	GJA3		1/9
A	GJA4		1/5
A	GJA5		1/5
A	GJA8		1
A	GJA9		1
A	GJB1		1
A	GJB2		1/12/13
A	GJB3		1/5
A	GJB4		1/5
A	GJB5		1
A	GJB6		1
A	GJB7		1
A	GJC1		1/5
A	GJC2		1/14
A	GJC3		1/14
A	GJD2		1/5
A	GJD3		1
A	GJD4		1

1: connexon complex || 2: contractile fiber || 3: early endosome || 4: fascia adherens || 5: gap junction || 6: Golgi-associated vesicle membrane || 7: intercalated disc || 8: lysosome || 9: membrane raft || 10: mitochondrial outer membrane || 11: multivesicular body || 12: endoplasmic reticulum-Golgi intermediate compartment || 13: lateral plasma membrane || 14: myelin sheath