



RNA Seq Differential Gene Expression Analysis

Analysis for Walker lab

- **Prepared for:**
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 - **Process Executed on :** Jan-10-2024
 - **Input Data:** genes_expression_expected_count.tsv
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DESeq2 Results

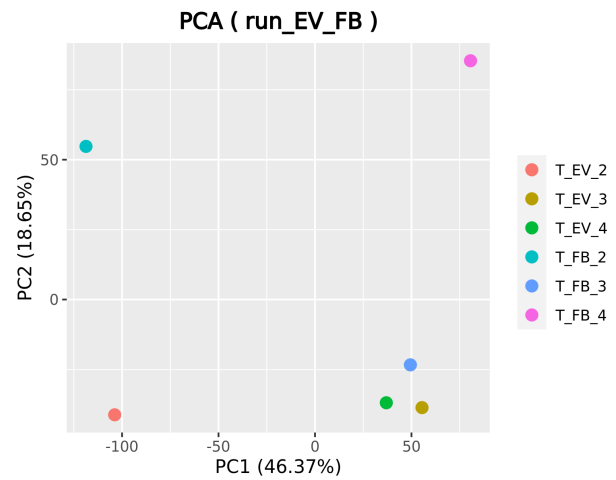
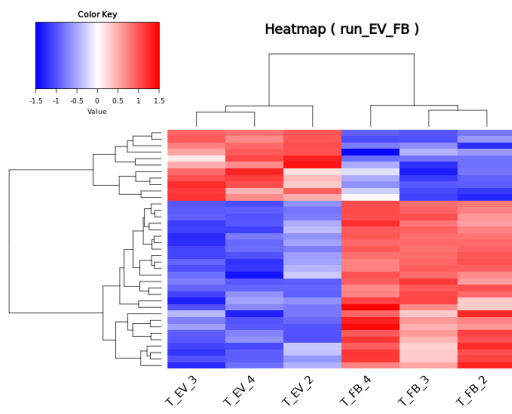
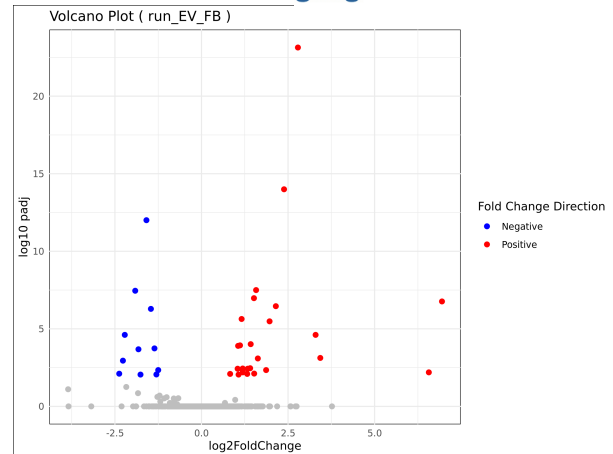
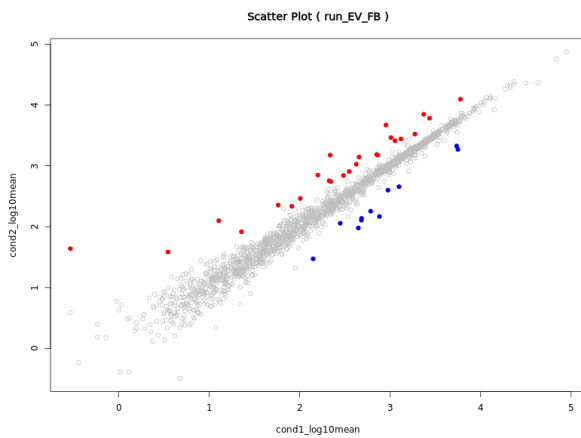
Experiment run_EV_FB

Top 10 UP for run_EV_FB			
Wormbase_Id	Sequence_id	Gene_name	log2FoldChange
WBGene00002095	C17C3.19	ins-12	6.9454
WBGene00007872	C32H11.9	nan	6.5657
WBGene00015323	C02B8.5	frpr-1	3.4308
WBGene00010058	F54E4.2	nan	3.2956
WBGene00015623	C09B8.4	nan	2.7849
WBGene00015894	C17C3.12	acd-2	2.3843
WBGene00020182	T03D3.1	ugt-53	2.1472
WBGene00020528	T15B7.16	lgc-54	1.9663
WBGene00011184	R09H10.7	nan	1.8664
WBGene00019963	R08E5.3	rips-1	1.6273

Top 10 DOWN for run_EV_FB			
Wormbase_Id	Sequence_id	Gene_name	log2FoldChange
WBGene00021236	Y19D10B.7	pud-1.2	-2.3759
WBGene00019368	K03H6.2	txt-4	-2.2691
WBGene00008390	D1086.3	nan	-2.2153
WBGene00020674	T22B7.7	nan	-1.9138
WBGene00003539	T11F9.3	nas-20	-1.8205
WBGene00000708	M199.5	col-135	-1.7612
WBGene00017734	F23C8.5	nan	-1.5901
WBGene00009237	F28H7.3	nan	-1.4608
WBGene00017691	F22A3.6	ilys-5	-1.3580
WBGene00009215	F28D1.5	thn-2	-1.3024



RNA Seq Analysis

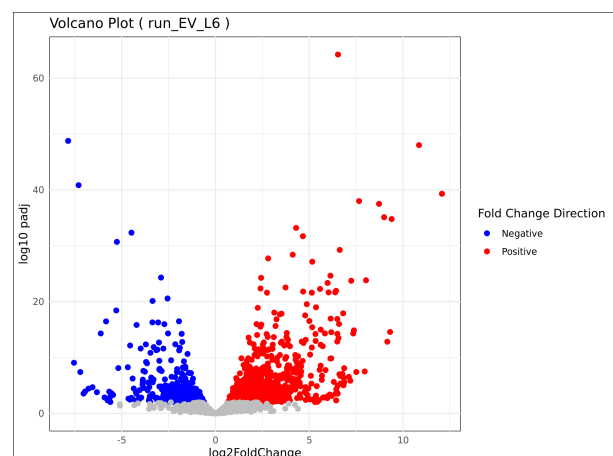
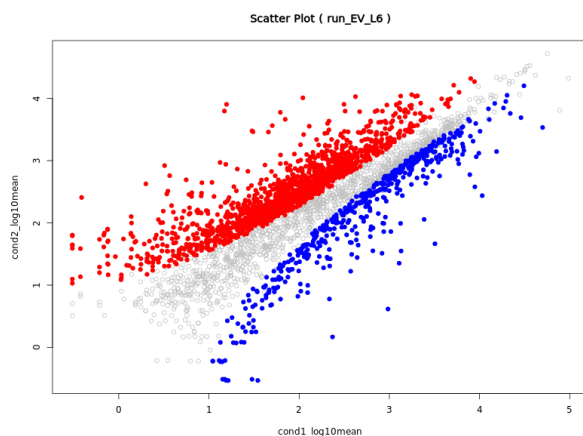




Experiment run_EV_L6

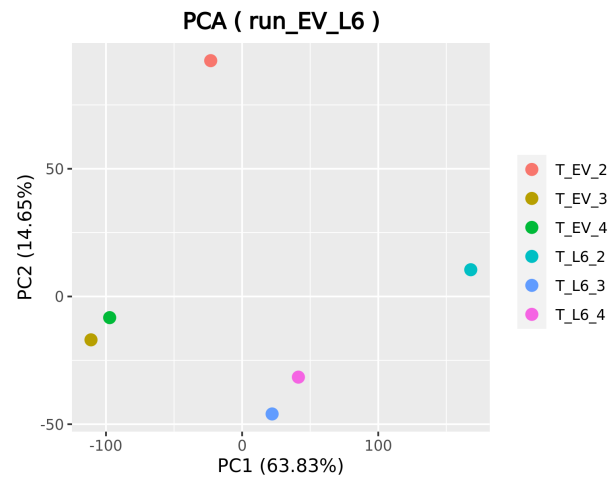
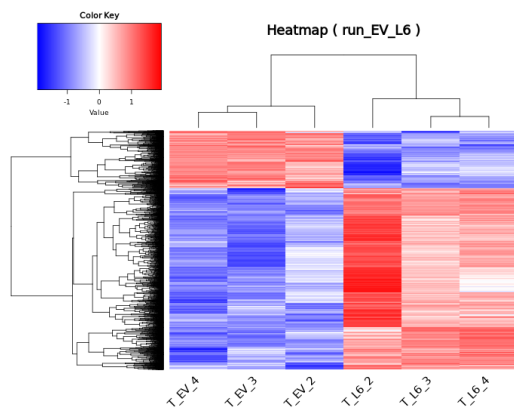
Top 10 UP for run_EV_L6			
Wormbase_Id	Sequence_id	Gene_name	log2FoldChange
WBGene00016670	C45G7.3	ilys-3	12.0777
WBGene00007872	C32H11.9	nan	10.8530
WBGene00000621	F54B11.2	col-44	9.3920
WBGene00044687	B0563.9	nan	9.3110
WBGene00050906	F20E11.17	nan	9.1623
WBGene00002018	Y46H3A.2	hsp-16.41	8.9932
WBGene00002016	Y46H3A.3	hsp-16.2	8.7203
WBGene00017466	F14F9.3	nan	8.0280
WBGene00189961	Y54G2A.57	nan	7.9579
WBGene00000756	F02D10.1	col-183	7.6586

Top 10 DOWN for run_EV_L6			
Wormbase_Id	Sequence_id	Gene_name	log2FoldChange
WBGene00015894	C17C3.12	acdh-2	-7.8539
WBGene00021233	Y19D10B.4	nan	-7.5412
WBGene00015623	C09B8.4	nan	-7.2956
WBGene00004171	Y73F8A.9	pqn-91	-7.2066
WBGene00018162	F38A5.5	nsppb-3	-7.0322
WBGene00020974	W03B1.5	nan	-6.9505
WBGene00018170	F38A5.14	nsppb-1	-6.7656
WBGene00018169	F38A5.12	nsppb-2	-6.5546
WBGene00022657	ZK105.6	nan	-6.3184
WBGene00017501	F15E11.15	pud-3	-6.1142





RNA Seq Analysis

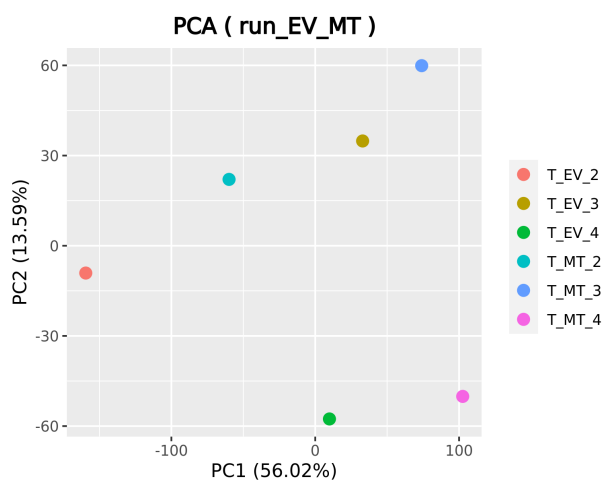
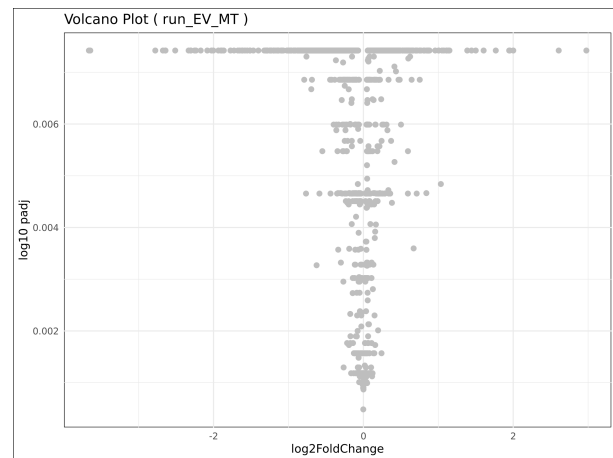
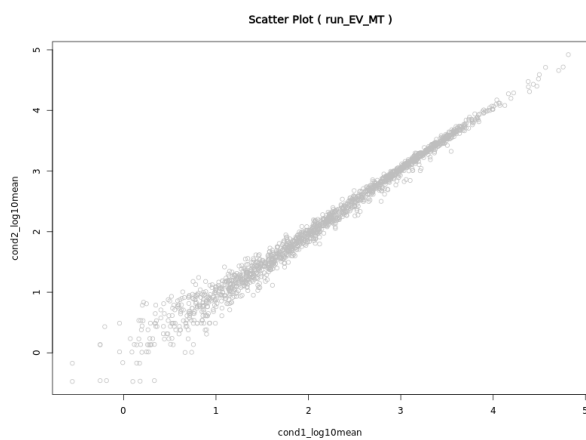




Experiment run_EV_MT

Top 10 UP for run_EV_MT			
Wormbase_Id	Sequence_id	Gene_name	log2FoldChange

Top 10 DOWN for run_EV_MT			
Wormbase_Id	Sequence_id	Gene_name	log2FoldChange

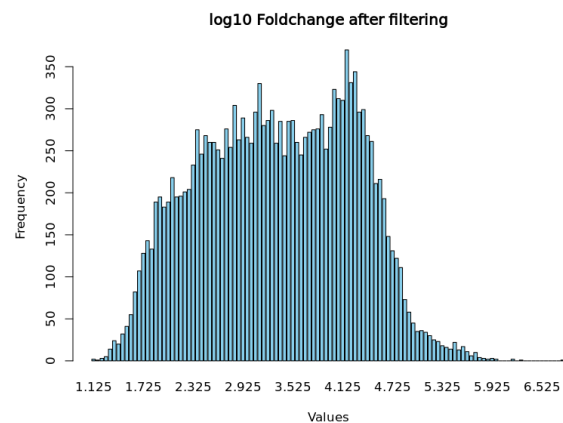
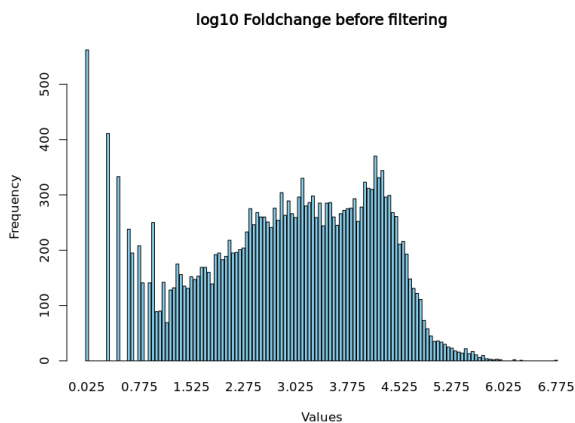




DESeq2 Data Preparation

Low Count Filtering

- **Criteria:** Filter features where MAX Value < 10



Low Count Filter

lib-name	Before	After
T_EV_2	19,102,080	19,097,415
T_EV_3	20,072,428	20,069,009
T_EV_4	19,868,698	19,865,398
T_FB_2	22,511,659	22,506,906
T_FB_3	19,084,215	19,080,292
T_FB_4	16,841,244	16,838,121
T_L6_2	17,212,828	17,206,446
T_L6_3	20,093,433	20,089,036
T_L6_4	20,406,145	20,400,984
T_MT_2	18,496,822	18,493,256
T_MT_3	19,796,365	19,793,292
T_MT_4	21,675,211	21,672,088