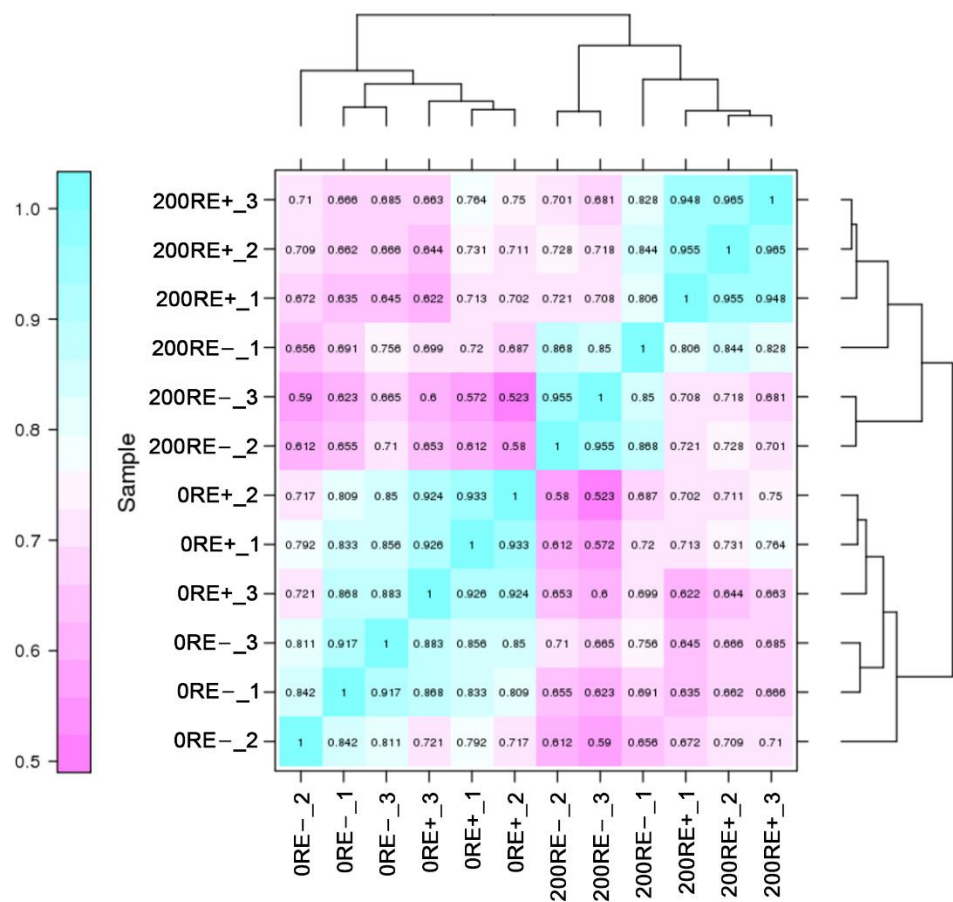
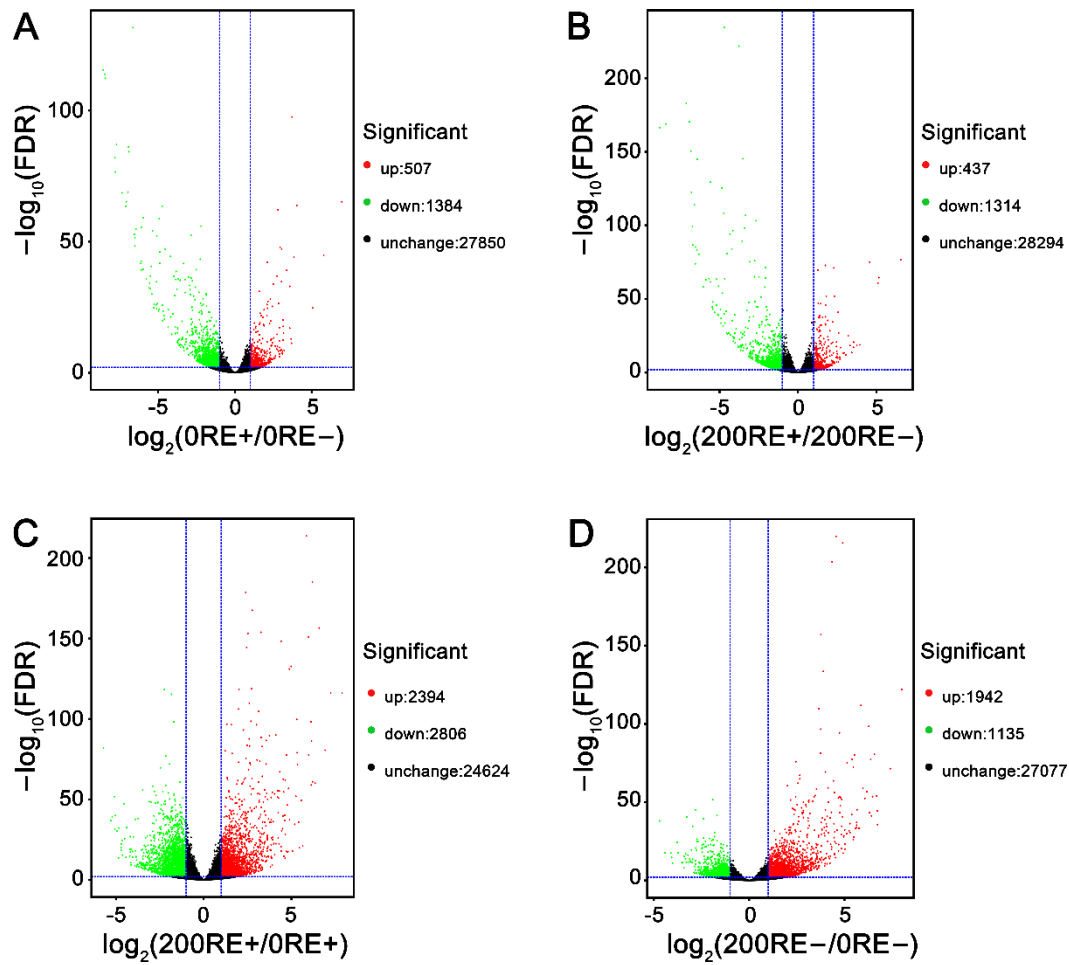


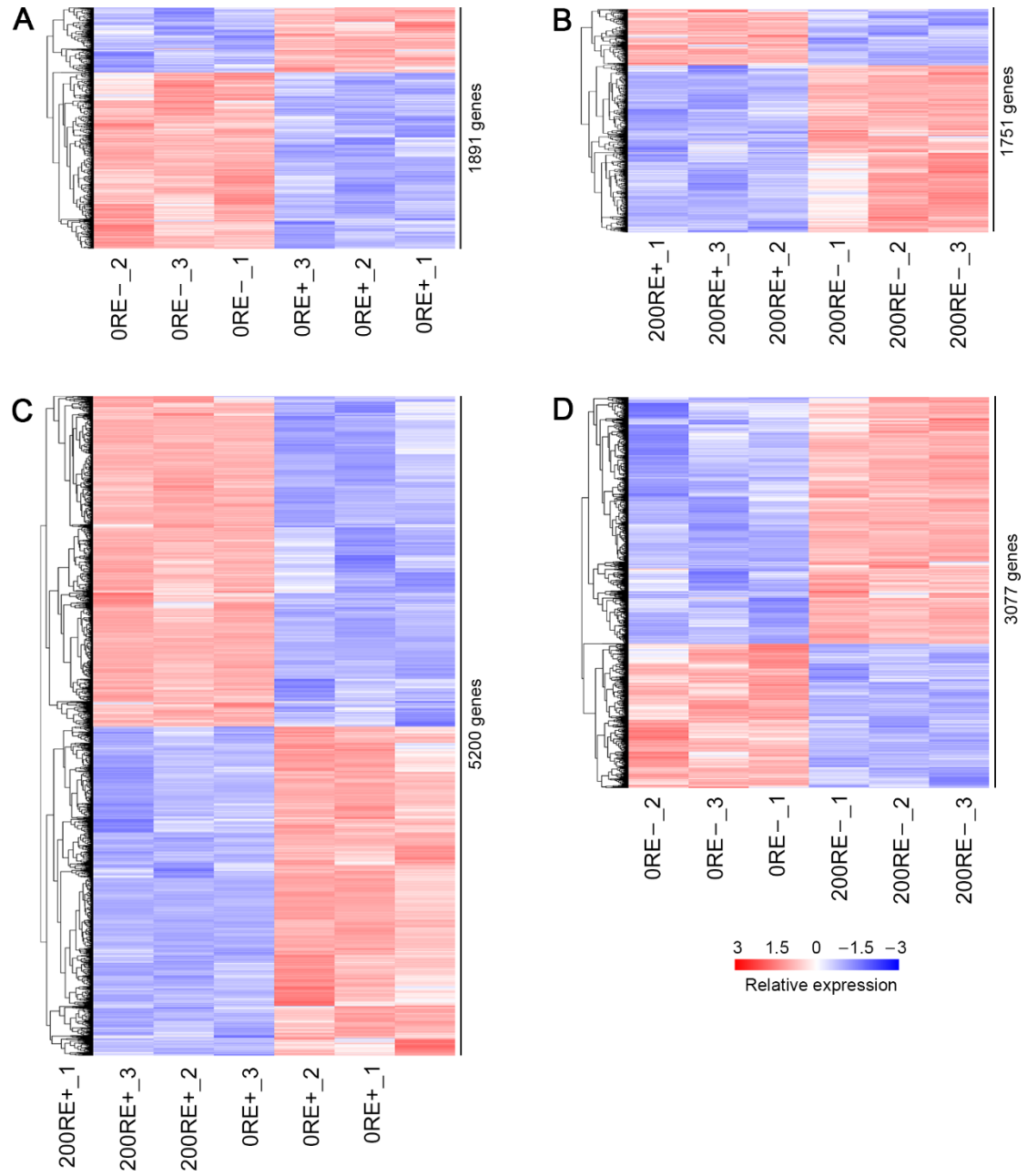
Supplement Data



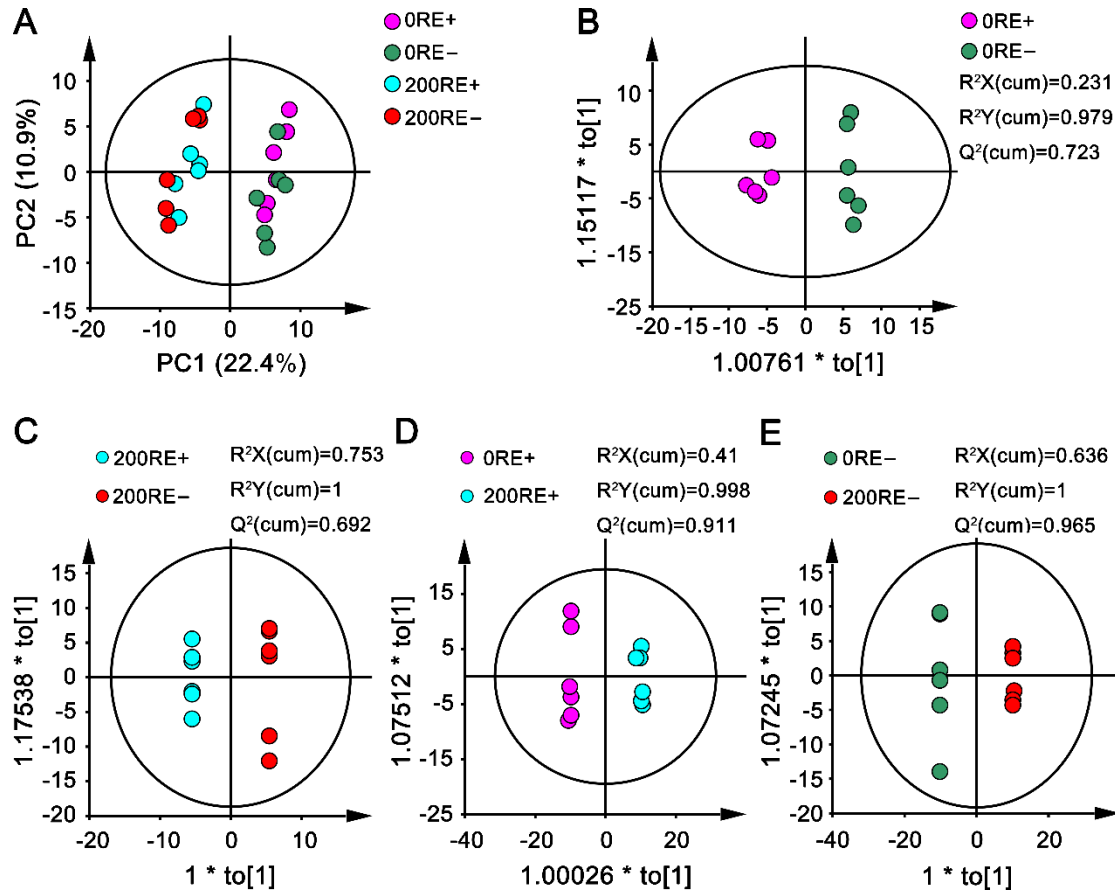
**Supplement Figure S1.** Heat map matrix showing the Pearson correlation among samples. Color bar represents the correlation coefficient ( $r^2$ ).



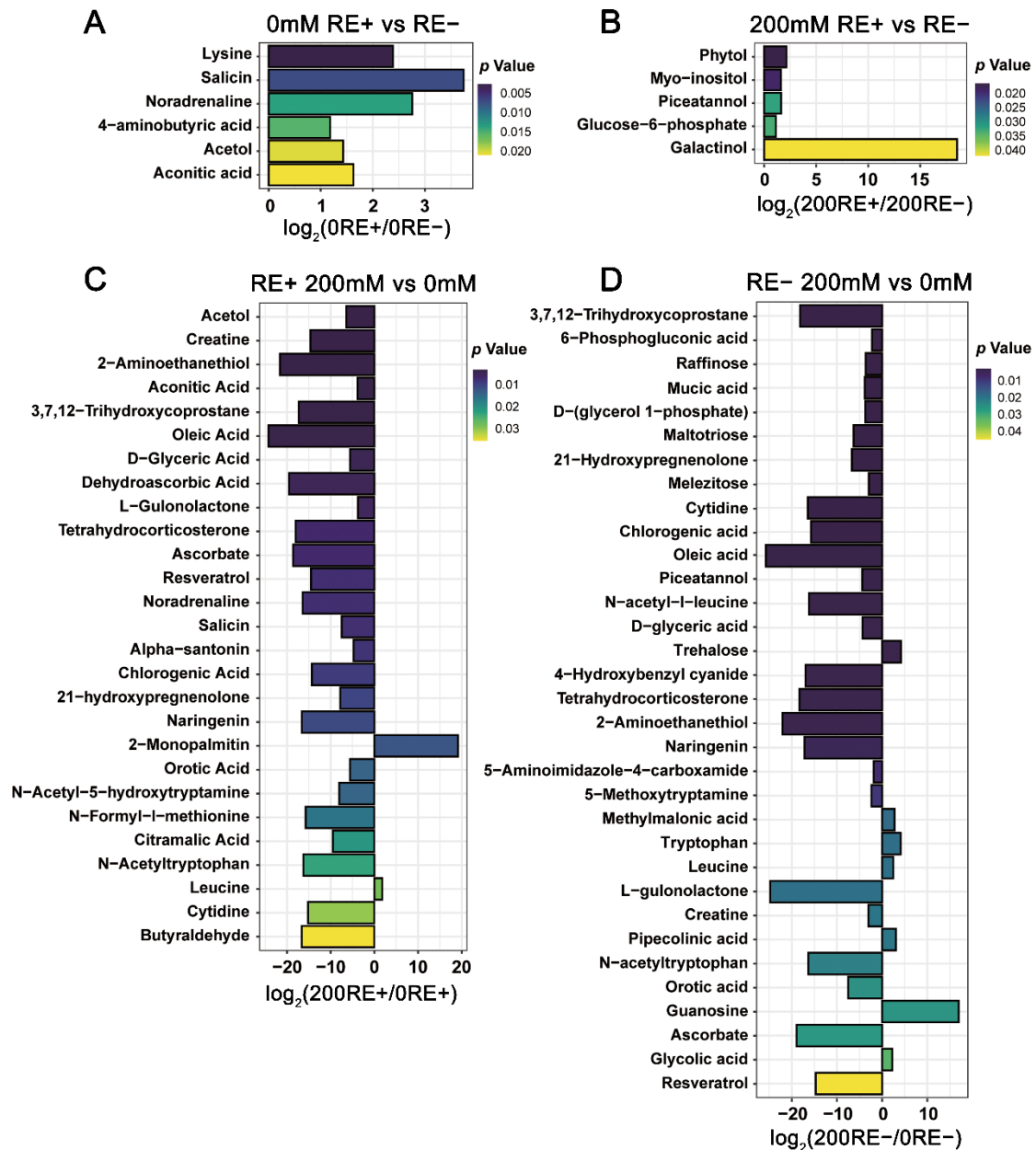
**Supplement Figure S2.** Volcano plots of differentially expressed genes for 0RE+ vs 0RE- (A), 200RE+ vs 200RE- (B), 200RE+ vs 0RE+ (C) and 200RE- vs 0RE- (D). The data for all identified genes are plotted as  $\log_2(\text{fold change})$  versus the  $-\log_{10}(\text{FDR})$ . Red dots represent the up-regulated DEGs, green dots represent the down-regulated DEGs, and black dots represent the genes with unchanged expression.



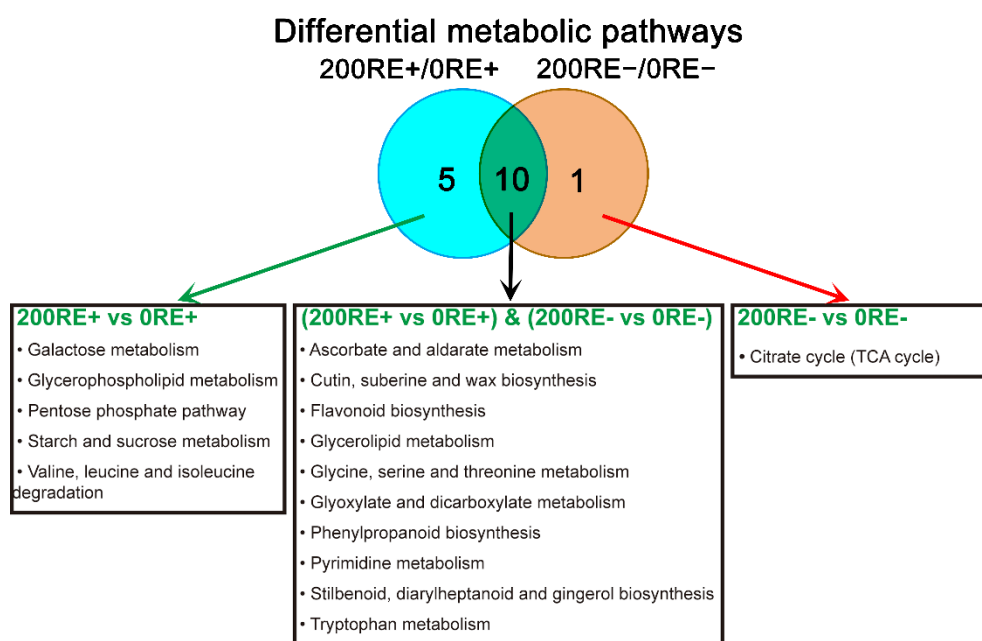
**Supplement Figure S3:** Heatmap exhibits hierarchical clustering of differentially expressed genes (DEGs) identified in comparative groups of "0RE+ vs 0RE-" (A), "200RE+ vs 200RE-" (B), "200RE+ vs 0RE+" (C), and "0RE- vs 200RE-" (D). Values are row-scaled to show relative expression. Blue and red represent low and high levels respectively. The relative expression is calculated using formula  $\log_2(\text{fold-change})$ .



**Supplement Figure S4.** The principal component analysis (PCA) for metabolic profiles of roots of E+ and E- plants under 0 mM and 200 mM NaCl concentration (A). And the score plots of orthogonal partial least squares discriminant analysis (OPLS-DA) exhibited the endophyte-dependent metabolite difference between RE+ and RE- under NaCl-free condition (B), between RE+ and RE- under 200 mM NaCl concentration; and the NaCl dose-dependent metabolite difference between 200 mM and 0 mM NaCl in RE+ (D), between 200 mM and 0 mM NaCl in RE- (E).



**Supplement Figure S5.** Histogram with fold changes and  $p$ -value showed the significantly different metabolites between RE+ and RE- at 0 mM (A) and 200 mM NaCl concentration (B); and between 200 mM and 0 mM NaCl treatment in RE+ (C) and RE- (D). Fold changes were evaluated with the formula  $\log_2(RE+/RE-)$  and  $\log_2(200\text{ mM}/0\text{ mM})$ .



**Supplement Figure S6.** Venn diagram analysis of differential metabolic pathways identified between 200 mM and 0 mM NaCl concentration in roots of E+ and E- plants. The overlapping region represents pathways shared in the two comparative groups, and the remaining regions indicate differential pathways in the corresponding groups.

**Supplement Table S1.** Statistical table of Illumina sequencing output and alignment results between sample sequencing data and PacBio data.

Samples	Clean reads	% ≥ Q30	Total reads	Mapped reads
0RE+_1	21,856,136	94.55%	43,712,272	31,699,873 (72.52%)
0RE+_2	21,358,666	94.42%	42,717,332	32,429,373 (75.92%)
0RE+_3	22,432,593	94.45%	44,865,186	35,042,735 (78.11%)
0RE-_1	19,085,883	94.28%	38,171,766	28,704,388 (75.20%)
0RE-_2	22,272,858	94.95%	44,545,716	30,790,736 (69.12%)
0RE-_3	19,230,555	94.71%	38,461,110	29,868,599 (77.66%)
200RE+_1	21,881,327	94.40%	43,762,654	32,996,379 (75.40%)
200RE+_2	22,296,357	94.71%	44,592,714	33,634,593 (75.43%)
200RE+_3	22,225,156	94.55%	44,450,312	33,475,300 (75.31%)
200RE-_1	22,602,966	94.24%	45,205,932	34,189,903

				(75.63%)
200RE-_2	21,652,720	94.66%	43,305,440	33,097,162
				(76.43%)
200RE-_3	22,119,123	94.25%	44,238,246	33,588,583
				(75.93%)

**Supplement Table S2.** Concentrations with mean  $\pm$  SE, fold changes, *p*-value for significantly changed metabolites identified between E+ and E- plants under 0 and 200 mM NaCl treatment.

Metabolite names	Relative concentration under		Fold Changes	<i>p</i> -value
	0 mM NaCl treatment			
	RE+	RE−	Log <sub>2</sub> (0RE+/0RE−)	
Lysine	0.129853±0.011318	0.024867±0.003721	2.38	0.004869
Salicin	0.3731±0.042647	0.027922±0.007228	3.74	0.008605
Noradrenaline	0.001863±0.000212	0.000276±0.000052	2.76	0.014194
4-aminobutyric acid	3.310951±0.189899	1.461069±0.177237	1.18	0.015635
Acetol	0.015531±0.000675	0.005762±0.001272	1.43	0.019795
Aconitic acid	0.014051±0.000888	0.004556±0.001093	1.62	0.020399
	Relative concentration under		Fold Changes	
	200 mM NaCl treatment			
	RE+	RE−	Log <sub>2</sub> (200RE+/200RE−)	
Phytol	0.034894±0.003594	0.007928±0.00112	2.14	0.015186
myo-Inositol	0.355494±0.03257	0.116332±0.010909	1.61	0.017471
Piceatannol	0.00854±0.000875	0.00276±0.000339	1.63	0.030683
Glucose-6-phosphate	0.005946±0.000273	0.002725±0.000452	1.13	0.031895
Galactinol	0.004992±0.000867	1.3e <sup>-08</sup> ±8.94e <sup>-10</sup>	18.55	0.040667
	Relative concentration in roots of		Fold Changes	
	E+ plants			
	200 mM NaCl treatment	0 mM NaCl treatment	Log <sub>2</sub> (200RE+/0RE+)	
Acetol	0.000179±4.71e <sup>-05</sup>	0.015531±0.000675	-6.44	0.000003
Creatine	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.00054±0.00003	-14.64	0.000023

2-Aminoethanethiol	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.068416±0.004619	-21.63	0.000124
Aconitic acid	0.000976±0.000231	0.014051±0.000888	-3.85	0.000169
3,7,12-Trihydroxycoprostan	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.00351±0.000257	-17.34	0.000234
Oleic acid	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.420317±0.033439	-24.25	0.000443
D-Glyceric acid	0.012382±0.002852	0.586753±0.055516	-5.57	0.001777
Dehydroascorbic acid	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.016171±0.001607	-19.55	0.002116
L-Gulonolactone	0.041999±0.017145	0.573466±0.051886	-3.77	0.002641
Tetrahydrocorticosterone	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.005606±0.000621	-18.02	0.004225
Ascorbate	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.008485±0.000944	-18.62	0.00432
Resveratrol	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.000487±0.000055	-14.49	0.004916
Noradrenaline	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.001863±0.000212	-16.43	0.005001
Salicin	0.002076±0.000847	0.3731±0.042647	-7.49	0.005259
alpha-Santonin	0.000305±0.000124	0.008215±0.000916	-4.75	0.005781
Chlorogenic acid	0.000014±3.06e <sup>-06</sup>	0.291122±0.035095	-14.31	0.006928
21-Hydroxypregnenolone	0.000633±9.14e <sup>-05</sup>	0.142092±0.017636	-7.81	0.008366
Naringenin	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.002124±0.000269	-16.62	0.009021
2-Monopalmitin	0.004493±0.000586	7.71e <sup>-09</sup> ±2.43e <sup>-10</sup>	19.15	0.010786
Orotic acid	0.000016±6.63e <sup>-06</sup>	0.000784±0.000104	-5.59	0.013075
N-acetyl-5-hydroxytryptamine	0.000007±1.92e <sup>-06</sup>	0.001974±0.000267	-8.05	0.013274
N-formyl-L-methionine	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.001159±0.000163	-15.74	0.015617
Citramalic acid	0.000008±3.16e <sup>-06</sup>	0.005643±0.000846	-9.51	0.021577
N-acetyltryptophan	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.001637±0.000251	-16.24	0.023979
Leucine	0.62433±0.058184	0.180196±0.042858	1.79	0.030963
Cytidine	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.000784±0.000129	-15.18	0.032947
Butyraldehyde	2.11e <sup>-08</sup> ±2.59e <sup>-09</sup>	0.002167±0.000373	-16.65	0.039139

Relative concentration in roots of		Fold Changes
E- plants		
200 mM	0 mM	Log <sub>2</sub> (200RE-/0RE-)



	NaCl treatment	NaCl treatment		
3,7,12-Trihydroxycoprostan	$1.3\text{e}^{-08}\pm 2.17\text{e}^{-09}$	$0.003893\pm 0.000649$	-18.19	$1.59\text{e}^{-06}$
6-Phosphogluconic acid	$0.000564\pm 0.000094$	$0.002626\pm 0.000438$	-2.22	$8.41\text{e}^{-06}$
Raffinose	$0.015498\pm 0.002583$	$0.196301\pm 0.032717$	-3.66	$1.06\text{e}^{-05}$
Mucic acid	$0.000609\pm 0.000101$	$0.008638\pm 0.00144$	-3.83	$1.07\text{e}^{-05}$
D-(glycerol 1-phosphate)	$0.005559\pm 0.000926$	$0.075165\pm 0.012528$	-3.76	$1.40\text{e}^{-05}$
Maltotriose	$0.000581\pm 0.000097$	$0.046896\pm 0.007816$	-6.34	$1.48\text{e}^{-05}$
21-Hydroxypregnenolone	$0.001093\pm 0.000182$	$0.113922\pm 0.018987$	-6.7	$2.20\text{e}^{-05}$
Melezitose	$0.001667\pm 0.000278$	$0.012948\pm 0.002158$	-2.96	$2.81\text{e}^{-05}$
Cytidine	$1.3\text{e}^{-08}\pm 2.17\text{e}^{-09}$	$0.00118\pm 0.000197$	-16.47	$4.89\text{e}^{-05}$
Chlorogenic acid	$5.78\text{e}^{-06}\pm 9.64\text{e}^{-07}$	$0.313605\pm 0.052267$	-15.73	$7.87\text{e}^{-05}$
Oleic acid	$1.3\text{e}^{-08}\pm 2.17\text{e}^{-09}$	$0.73529\pm 0.122548$	-25.75	0.000271
Piceatannol	$0.00276\pm 0.00046$	$0.057824\pm 0.009637$	-4.39	0.000552
N-acetyl-L-leucine	$1.3\text{e}^{-08}\pm 2.17\text{e}^{-09}$	$0.000974\pm 0.000162$	-16.19	0.000571
D-Glyceric acid	$0.013995\pm 0.002332$	$0.282373\pm 0.047062$	-4.33	0.000863
Trehalose	$0.252023\pm 0.042004$	$0.014102\pm 0.00235$	4.16	0.000878
4-Hydroxybenzyl cyanide	$1.3\text{e}^{-08}\pm 2.17\text{e}^{-09}$	$0.001615\pm 0.000269$	-16.92	0.001012
Tetrahydrocorticosterone	$1.3\text{e}^{-08}\pm 2.17\text{e}^{-09}$	$0.004153\pm 0.000692$	-18.28	0.001103
2-aminoethanethiol	$1.3\text{e}^{-08}\pm 2.17\text{e}^{-09}$	$0.056668\pm 0.009445$	-22.05	0.001292
Naringenin	$1.3\text{e}^{-08}\pm 2.17\text{e}^{-09}$	$0.001932\pm 0.000322$	-17.18	0.002543
5-Aminoimidazole-4-carboxamide	$0.000154\pm 0.000026$	$0.000564\pm 0.000094$	-1.87	0.006041
5-Methoxytryptamine	$0.001899\pm 0.000316$	$0.009796\pm 0.001633$	-2.37	0.007805
Methylmalonic acid	$0.030638\pm 0.005106$	$0.004567\pm 0.000761$	2.75	0.01791
Tryptophan	$0.105644\pm 0.017607$	$0.006145\pm 0.001024$	4.1	0.018572
Leucine	$0.324295\pm 0.054049$	$0.058134\pm 0.009689$	2.48	0.018818
L-Gulonolactone	$1.3\text{e}^{-08}\pm 2.17\text{e}^{-09}$	$0.379241\pm 0.063207$	-24.79	0.0192
Creatine	$0.000082\pm 0.000014$	$0.000659\pm 0.00011$	-3.01	0.020066

Pipecolinic acid	0.019699±0.003283	0.002365±0.000394	3.06	0.020489
N-Acetyltryptophan	1.3e <sup>-08</sup> ±2.17e <sup>-09</sup>	0.001089±0.000181	-16.35	0.02269
Orotic acid	0.000007±1.11e <sup>-06</sup>	0.001216±0.000203	-7.51	0.02624
Guanosine	0.000695±0.000116	5.52e <sup>-09</sup> ±2.17e <sup>-09</sup>	16.94	0.026719
Ascorbate	1.3e <sup>-08</sup> ±2.17e <sup>-09</sup>	0.006532±0.001089	-18.94	0.027557
Glycolic acid	0.0486±0.0081	0.010371±0.001729	2.23	0.034815
Resveratrol	1.3e <sup>-08</sup> ±2.17e <sup>-09</sup>	0.000347±0.000058	-14.7	0.049734

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