

Supplementary Table S7. Enriched GO terms in upregulated genes by severe or mild Al stress

Gene group	Enriched GO-BP term	Expected	Fold Enrichment	FDR
Upregulated genes by severe Al stress	2,4,6-trinitrotoluene catabolic process	0.02	90.47	0.0421
	sulfate transmembrane transport	0.07	45.23	0.00841
	toxin catabolic process	0.45	26.48	2.6E-10
	suberin biosynthetic process	0.19	21.29	0.00629
	glutathione metabolic process	0.61	19.74	2.92E-09
	defense response to bacterium, incompatible interaction	0.35	16.96	0.000425
	hyperosmotic salinity response	0.41	12.23	0.00762
	lateral root formation	0.33	12.06	0.0341
	response to oomycetes	0.34	11.67	0.0371
	leaf senescence	0.64	10.92	0.000777
	response to wounding	1.68	7.74	0.0000737
	response to oxidative stress	3.27	6.72	2.88E-09
	response to salicylic acid	1.5	6.65	0.000566
	response to jasmonic acid	1.68	5.95	0.00127
	response to nitrogen compound	2.32	3.88	0.0404
	cellular response to acid chemical	3.43	3.79	0.00569
	response to metal ion	3.23	3.72	0.0112
	response to abscisic acid	3.86	3.37	0.0149
	cellular response to oxygen-containing compound	4.33	3	0.0371
	oxidation-reduction process	10.76	2.79	0.0000983
Upregulated genes by mild Al stress	response to aluminum ion	0.09	34.12	0.0278
	calcium ion transmembrane transport	0.25	16.06	0.0268
	benzene-containing compound metabolic process	0.32	15.51	0.00699
	defense response to bacterium, incompatible interaction	0.47	10.66	0.0245
	toxin catabolic process	0.6	9.99	0.0091
	glutathione metabolic process	0.81	7.44	0.0286
	reactive oxygen species metabolic process	1.27	7.06	0.00265
	leaf senescence	0.85	7.06	0.0356
	cellular response to drug	1	7.03	0.0146
	response to salicylic acid	1.99	6.02	0.000577
	cofactor catabolic process	1.2	5.83	0.0349
	response to oxidative stress	4.34	4.84	0.0000634
	response to salt stress	4.97	3.22	0.0102
	oxidation-reduction process	14.26	2.1	0.0262

Analyzed by PANTHER classification system (<http://www.pantherdb.org/>).

Only bottom level of significantly enriched GO terms were shown.