

Table S2. *Arabidopsis thaliana* genes significantly ($P \leq 0.05$) up-regulated (≥ 2 -fold) after 6 h of exposure to fagomine (A), gallic acid (B), or rutin (C) in the aquaculture medium.

A	Systematic	Fold-change	ID Affymetrix	Description
1	258675_at	7.45	At3g08770	lipid transfer protein 6 (LTP6)
2	266385_at	4.06	At2g14610	pathogenesis-related protein 1 (PR-1)
3	260745_at	3.99	At1g78370	glutathione S-transferase, putative
4	255517_at	3.95	At4g02290	glycosyl hydrolase family 9 protein
5	248048_at	3.72	At5g56080	nicotianamine synthase, putative
6	266222_at	3.51	At2g28780	expressed protein
7	245265_at	3.44	At4g14400	ankyrin repeat family protein
8	264100_at	3.41	At1g78970	lupeol synthase (LUP1) / 2,3-oxidosqualene-triterpenoid cyclase
9	255891_at	3.17	At1g17870	expressed protein
10	259640_at	3.15	At1g52400	glycosyl hydrolase family 1 protein / beta-glucosidase, putative (BG1)
11	265698_at	3.09	At2g32160	expressed protein
12	260693_at	2.96	At1g32450	proton-dependent oligopeptide transport (POT) family protein
13	264319_at	2.87	At1g04110	subtilase family protein
14	264377_at	2.85	At2g25060	plastocyanin-like domain-containing protein
15	250764_at	2.80	At5g05960	protease inhibitor/seed storage/lipid transfer protein (LTP) family protein
16	257947_at	2.79	At3g21720	isocitrate lyase, putative
17	262109_at	2.72	At1g02730	cellulose synthase family protein
18	259871_at	2.70	At1g76800	nodulin, putative
19	259766_at	2.67	At1g64360	expressed protein
20	262218_at	2.66	At1g74760	zinc finger (C3HC4-type RING finger) family protein
21	249894_at	2.63	At5g22580	expressed protein
22	247685_at	2.52	At5g59680	leucine-rich repeat protein kinase, putative
23	264802_at	2.51	At1g08560	syntaxin-related protein KNOLLE (KN) / syntaxin 111 (SYP111)
24	262312_at	2.50	At1g70830	Bet v I allergen family protein
25	264087_at	2.50	At2g31330	expressed protein
26	259563_s_at	2.49	At1g20590	cyclin, putative /// cyclin, putative
27	250471_at	2.48	At5g10170	inositol-3-phosphate synthase, putative / myo-inositol-1-phosphate synthase, putative / MI-1-P synthase, putative
28	252860_at	2.46	At4g39790	expressed protein
29	256497_at	2.46	At1g31580	expressed protein
30	256145_at	2.45	At1g48750	protease inhibitor/seed storage/lipid transfer protein (LTP) family protein
31	263913_at	2.42	At2g36570	leucine-rich repeat transmembrane protein kinase, putative
32	250942_at	2.42	At5g03350	legume lectin family protein
33	245739_at	2.40	At1g44110	cyclin, putative
34	263031_at	2.35	At1g24070	glycosyl transferase family 2 protein
35	245688_at	2.35	At1g28290	pollen Ole e 1 allergen and extensin family protein
36	245696_at	2.32	At5g04190	phytochrome kinase substrate-related
37	264880_at	2.32	At1g61210	WD-40 repeat family protein / katanin p80 subunit, putative
38	260364_at	2.32	At1g70560	alliinase C-terminal domain-containing protein
39	249890_at	2.32	At5g22570	WRKY family transcription factor

40	250517_at	2.31	At5g08260	serine carboxypeptidase S10 family protein
41	263034_at	2.29	At1g24020	Bet v I allergen family protein
42	264025_at	2.26	At2g21050	amino acid permease, putative
43	254153_at	2.24	At4g24450	starch excess protein-related
44	256647_at	2.23	At3g13610	oxidoreductase, 2OG-Fe(II) oxygenase family protein
45	257300_at	2.21	At3g28080	nodulin MtN21 family protein
46	247765_at	2.21	At5g58860	cytochrome P450 86A1 (CYP86) (CYP86A1) / CYPLXXXVI / P450-dependent fatty acid omega-hydroxylase
47	251012_at	2.20	At5g02580	expressed protein
48	259609_at	2.20	At1g52410	caldesmon-related
49	259561_at	2.20	At1g21250	wall-associated kinase 1 (WAK1)
50	256125_at	2.19	At1g18250	thaumatin, putative
51	263120_at	2.16	At1g78490	cytochrome P450 family protein
52	258067_at	2.15	At3g25980	mitotic spindle checkpoint protein, putative (MAD2)
53	251293_at	2.14	At3g61930	expressed protein
54	259481_at	2.13	At1g18970	germin-like protein (GLP1) (GLP4)
55	267645_at	2.13	At2g32860	glycosyl hydrolase family 1 protein
56	266421_at	2.12	At2g38540	nonspecific lipid transfer protein 1 (LTP1)
57	256766_at	2.12	At3g22231	expressed protein
58	254202_at	2.11	At4g24140	hydrolase, alpha/beta fold family protein
59	260540_at	2.11	At2g43500	RWP-RK domain-containing protein
60	260867_at	2.11	At1g43790	expressed protein
61	249659_s_at	2.10	At5g36710	expressed protein /// expressed protein
62	247425_at	2.10	At5g62550	expressed protein
63	265117_at	2.08	At1g62500	protease inhibitor/seed storage/lipid transfer protein (LTP) family protein
64	266708_at	2.07	At2g03200	aspartyl protease family protein
65	245451_at	2.07	At4g16890	disease resistance protein (TIR-NBS-LRR class), putative
66	265611_at	2.07	At2g25510	expressed protein
67	258859_at	2.06	At3g02120	hydroxyproline-rich glycoprotein family protein
68	252441_at	2.05	At3g46780	expressed protein
69	247074_at	2.05	At5g66590	allergen V5/Tpx-1-related family protein
70	262373_at	2.05	At1g73120	expressed protein
71	245734_at	2.04	At1g73480	hydrolase, alpha/beta fold family protein
72	250446_at	2.04	At5g10770	chloroplast nucleoid DNA-binding protein, putative
73	250228_at	2.03	At5g13840	WD-40 repeat family protein
74	251276_at	2.03	At3g61740	PHD finger family protein (ATX3)
75	262467_at	2.02	At1g50240	armadillo/beta-catenin repeat family protein
76	266817_at	2.00	At2g44960	zinc finger (C3HC4-type RING finger) family protein
77	253344_at	2.00	At4g33550	protease inhibitor/seed storage/lipid transfer protein (LTP) family protein
78	252638_at	2.00	At3g44540	acyl CoA reductase, putative
79	248382_at	2.00	At5g51890	peroxidase-related
80	252888_at	2.00	At4g39210	glucose-1-phosphate adenyltransferase large subunit 3 (APL3) / ADP-glucose pyrophosphorylase
81	248309_at	2.00	At5g52540	expressed protein
82	258419_at	2.00	At3g16670	expressed protein
83	260463_at	2.00	At1g10930	DNA helicase (RECQ14A)

84	251695_at	2.00	At3g56585	hydroxyproline-rich glycoprotein family protein
85	245555_at	2.00	At4g15390	transferase family protein
86	260192_at	2.00	At1g67630	DNA polymerase alpha subunit B family
87	255782_at	2.00	At1g19850	transcription factor MONOPTEROS (MP) / auxin-responsive protein (IAA24) / auxin response factor 5 (ARF5)
88	252943_at	2.00	At4g39330	mannitol dehydrogenase, putative
89	253510_at	2.00	At4g31730	expressed protein
90	265962_at	2.00	At2g37460	nodulin MtN21 family protein
91	264763_at	2.00	At1g61450	expressed protein
92	249320_at	2.00	At5g40910	disease resistance protein (TIR-NBS-LRR class), putative
93	258471_at	2.00	At3g06030	NPK1-related protein kinase, putative (ANP3)
94	259166_at	2.00	At3g01670	expressed protein

B	Systematic	Fold-change	ID_Affymetrix	Gene Title_Affymetrix
1	250351_at	15.57	At5g12030	17.7 kDa class II heat shock protein 17.6A (HSP17.7-CII)
2	250296_at	10.33	At5g12020	17.6 kDa class II heat shock protein (HSP17.6-CII)
3	252515_at	6.57	At3g46230	17.4 kDa class I heat shock protein (HSP17.4-CI)
4	265221_s_at	5.91	At2g02010	glutamate decarboxylase, putative /// glutamate decarboxylase, putative
5	248657_at	5.58	At5g48570	peptidyl-prolyl cis-trans isomerase, putative / FK506-binding protein, putative
6	248332_at	5.36	At5g52640	heat shock protein 81-1 (HSP81-1) / heat shock protein 83 (HSP83)
7	256245_at	5.08	At3g12580	heat shock protein 70, putative / HSP70, putative
8	266294_at	4.63	At2g29500	17.6 kDa class I small heat shock protein (HSP17.6B-CI)
9	260248_at	4.53	At1g74310	heat shock protein 101 (HSP101)
10	263150_at	4.22	At1g54050	17.4 kDa class III heat shock protein (HSP17.4-CIII)
11	254326_at	3.86	At4g22610	protease inhibitor/seed storage/lipid transfer protein (LTP) family protein
12	250500_at	3.73	At5g09530	hydroxyproline-rich glycoprotein family protein
13	245451_at	3.72	At4g16890	disease resistance protein (TIR-NBS-LRR class), putative
14	266992_at	3.56	At2g39200	seven transmembrane MLO family protein / MLO-like protein 12 (MLO12)
15	256169_at	3.47	At1g51800	leucine-rich repeat protein kinase, putative
16	259447_s_at	3.29	At1g02430	ADP-ribosylation factor, putative
17	246944_at	3.11	At5g25450	ubiquinol-cytochrome C reductase complex 14 kDa protein, putative
18	259120_at	3.10	At3g02240	expressed protein
19	248118_at	3.05	At5g55050	GDSL-motif lipase/hydrolase family protein
20	251895_at	2.98	At3g54420	class IV chitinase (CHIV)
21	254832_at	2.91	At4g12490	protease inhibitor/seed storage/lipid transfer protein (LTP) family protein
22	256170_at	2.90	At1g51790	leucine-rich repeat protein kinase, putative
23	257919_at	2.87	At3g23250	myb family transcription factor (MYB15)
24	266368_at	2.85	At2g41380	embryo-abundant protein-related
25	251513_at	2.82	At3g59220	pirin, putative
26	264213_at	2.81	At1g65400	disease resistance protein (TIR class), putative
27	266010_at	2.80	At2g37430	zinc finger (C2H2 type) family protein (ZAT11)
28	255891_at	2.77	At1g17870	expressed protein
29	247360_at	2.74	At5g63450	cytochrome P450, putative
30	259681_at	2.70	At1g77760	nitrate reductase 1 (NR1)
31	245181_at	2.69	At5g12420	expressed protein

32	256181_at	2.69	At1g51820	leucine-rich repeat protein kinase, putative
33	254839_at	2.63	At4g12400	stress-inducible protein, putative
34	249197_at	2.61	At5g42380	calmodulin-related protein, putative
35	266743_at	2.57	At2g02990	ribonuclease 1 (RNS1)
36	247431_at	2.56	At5g62520	expressed protein
37	261838_at	2.54	At1g16030	heat shock protein 70, putative / HSP70, putative
38	267165_at	2.51	At2g37710	lectin protein kinase, putative
39	259381_s_at	2.41	At3g16390	jacalin lectin family protein /// jacalin lectin family protein /// jacalin lectin family protein
40	255549_at	2.40	At4g01950	phospholipid/glycerol acyltransferase family protein
41	249773_at	2.40	At5g24140	squalene monooxygenase 2 / squalene epoxidase 2 (SQP2)
42	262518_at	2.40	At1g17170	glutathione S-transferase, putative
43	246597_at	2.37	At5g14760	L-aspartate oxidase family protein
44	248700_at	2.33	At5g48400	glutamate receptor family protein (GLR1.2)
45	254314_at	2.33	At4g22470	protease inhibitor/seed storage/lipid transfer protein (LTP) family protein
46	266165_at	2.32	At2g28190	superoxide dismutase (Cu-Zn), chloroplast (SODCP) / copper/zinc superoxide dismutase (CSD2)
47	252624_at	2.31	At3g44735	phytosulfokines-related
48	245760_s_at	2.27	At1g66920	protein kinase, putative /// protein kinase, putative
49	245265_at	2.27	At4g14400	ankyrin repeat family protein
50	246228_at	2.26	At4g36430	peroxidase, putative
51	261570_at	2.25	At1g01120	fatty acid elongase 3-ketoacyl-CoA synthase 1 (KCS1)
52	266385_at	2.25	At2g14610	pathogenesis-related protein 1 (PR-1)
53	266752_at	2.24	At2g47000	multidrug resistant (MDR) ABC transporter, putative
54	254453_at	2.24	At4g21120	amino acid permease family protein
55	248381_at	2.22	At5g51830	pfkB-type carbohydrate kinase family protein
56	260234_at	2.22	At1g74460	GDSL-motif lipase/hydrolase family protein
57	256787_at	2.20	At3g13790	beta-fructosidase (BFRUCT1) / beta-fructofuranosidase / cell wall invertase
58	260551_at	2.20	At2g43510	trypsin inhibitor, putative
59	263098_at	2.18	At2g16005	MD-2-related lipid recognition domain-containing protein / ML domain-containing protein
60	263231_at	2.18	At1g05680	UDP-glucuronosyl/UDP-glucosyl transferase family protein
61	265922_at	2.17	At2g18480	mannitol transporter, putative
62	260276_at	2.16	At1g80450	VQ motif-containing protein
63	262045_at	2.13	At1g80240	expressed protein
64	245928_s_at	2.12	At5g24780	vegetative storage protein 2 (VSP2) /// vegetative storage protein 2 (VSP2)
65	247444_at	2.12	At5g62630	expressed protein
66	256766_at	2.12	At3g22231	expressed protein
67	259297_at	2.10	At3g05360	disease resistance family protein / LRR family protein
68	256576_at	2.08	At3g28210	zinc finger (AN1-like) family protein
69	250200_at	2.08	At5g14130	peroxidase, putative
70	250670_at	2.07	At5g06860	polygalacturonase inhibiting protein 1 (PGIP1)
71	252487_at	2.07	At3g46660	UDP-glucuronosyl/UDP-glucosyl transferase family protein
72	253046_at	2.07	At4g37370	cytochrome P450, putative
73	253535_at	2.05	At4g31550	WRKY family transcription factor
74	261073_at	2.05	At1g07300	josephin protein-related
75	259478_at	2.05	At1g18980	germin-like protein, putative

76	258133_at	2.05	At3g24500	ethylene-responsive transcriptional coactivator, putative
77	260745_at	2.04	At1g78370	glutathione S-transferase, putative
78	259384_at	2.04	At3g16450	jacalin lectin family protein
79	245352_at	2.02	At4g15490	UDP-glucuronosyl/UDP-glucosyl transferase family protein
80	254243_at	2.02	At4g23210	protein kinase family protein
81	263800_at	2.00	At2g24600	ankyrin repeat family protein
82	265698_at	2.00	At2g32160	expressed protein
83	254416_at	2.00	At4g21380	S-locus protein kinase, putative (ARK3)
84	264153_at	2.00	At1g65390	disease resistance protein (TIR class), putative
85	254767_s_at	2.00	At4g13290	cytochrome P450 71A19, putative (CYP71A19) /// cytochrome P450 71A19, putative (CYP71A19)

C	Systematic	Fold-change	ID_Affymetrix	Gene Title_Affymetrix
1	245265_at	3.56	At4g14400	ankyrin repeat family protein
2	258675_at	3.38	At3g08770	lipid transfer protein 6 (LTP6)
3	252225_at	3.35	At3g49870	ADP-ribosylation factor, putative
4	248048_at	3.12	At5g56080	nicotianamine synthase, putative
5	266385_at	2.98	At2g14610	pathogenesis-related protein 1 (PR-1)
6	245451_at	2.98	At4g16890	disease resistance protein (TIR-NBS-LRR class), putative
7	257947_at	2.83	At3g21720	isocitrate lyase, putative
8	259561_at	2.82	At1g21250	wall-associated kinase 1 (WAK1)
9	255891_at	2.71	At1g17870	expressed protein
10	260556_at	2.64	At2g43620	chitinase, putative
11	256766_at	2.59	At3g22231	expressed protein
12	255111_at	2.55	At4g08780	peroxidase, putative
13	265698_at	2.53	At2g32160	expressed protein
14	247685_at	2.45	At5g59680	leucine-rich repeat protein kinase, putative
15	251695_at	2.31	At3g56585	hydroxyproline-rich glycoprotein family protein
16	266190_at	2.27	At2g38850	guanylate-binding family protein
17	259766_at	2.18	At1g64360	expressed protein
18	258255_at	2.18	At3g26800	expressed protein
19	250426_at	2.16	At5g10510	ovule development protein, putative
20	260092_at	2.16	At1g73280	serine carboxypeptidase S10 family protein
21	267076_at	2.08	At2g41090	calmodulin-like calcium-binding protein, 22 kDa (CaBP-22)
22	245393_at	2.07	At4g16260	glycosyl hydrolase family 17 protein
23	255419_at	2.05	At4g03230	S-locus lectin protein kinase family protein
24	255110_at	2.04	At4g08770	peroxidase, putative
25	260745_at	2.00	At1g78370	glutathione S-transferase, putative
26	256145_at	2.00	At1g48750	protease inhibitor/seed storage/lipid transfer protein (LTP) family protein
27	260118_s_at	2.00	At1g33940	hypothetical protein /// hypothetical protein
28	266222_at	2.00	At2g28780	expressed protein