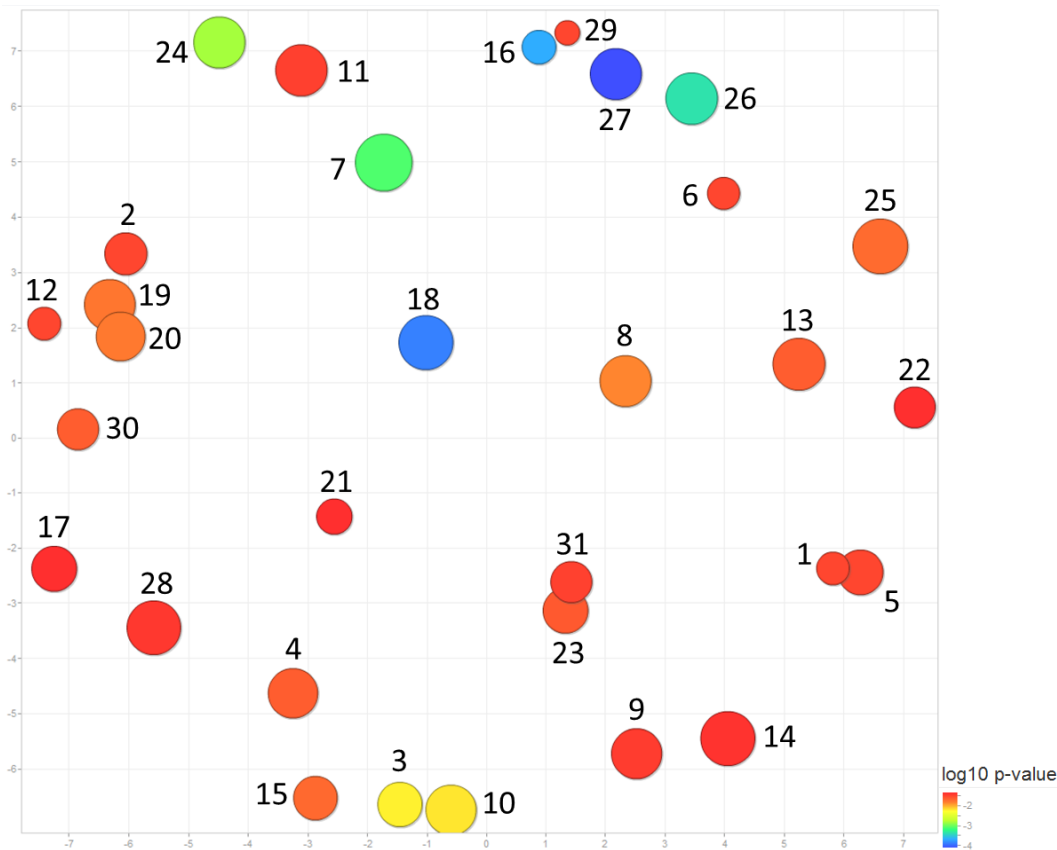


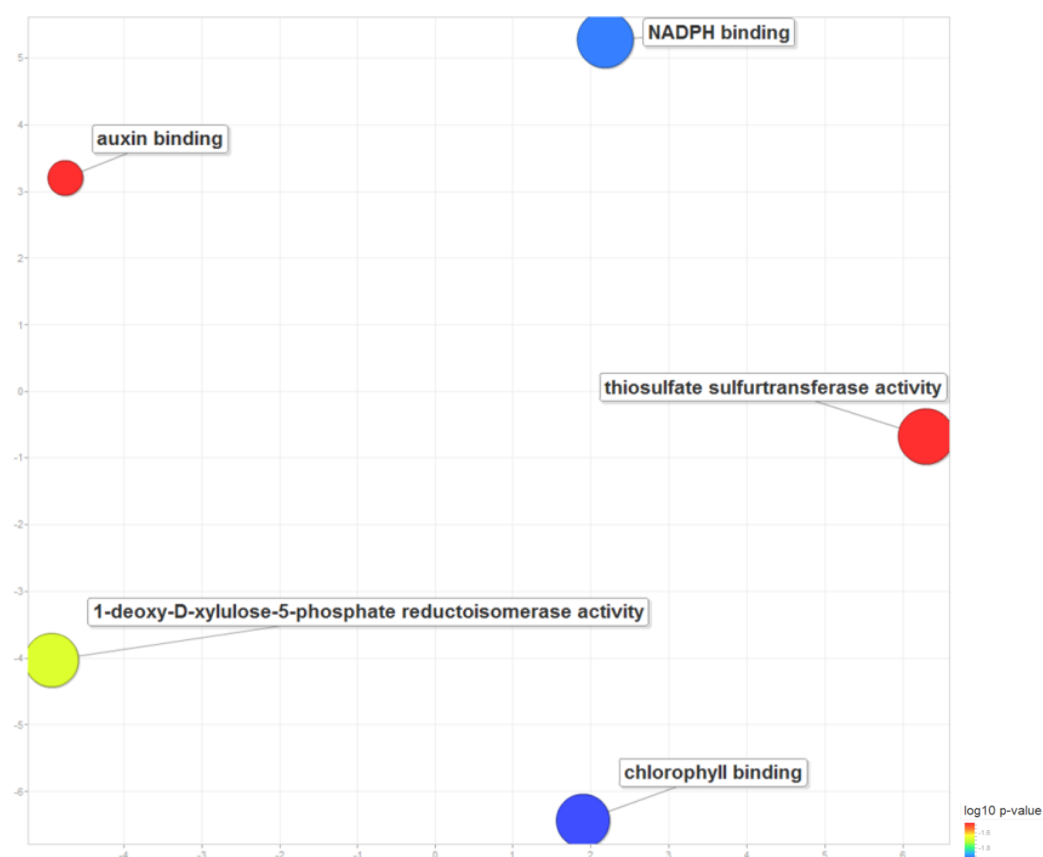
Supplementary File S7. Results of REVIGO analysis of the enriched GO "Molecular function" and "Cellular component" terms. Bubble colors indicate the $\log_{10}(\text{p-value})$ of the GO term and size is proportional to their frequencies.

(a) ILL5588 enriched up-regulated GO molecular function terms

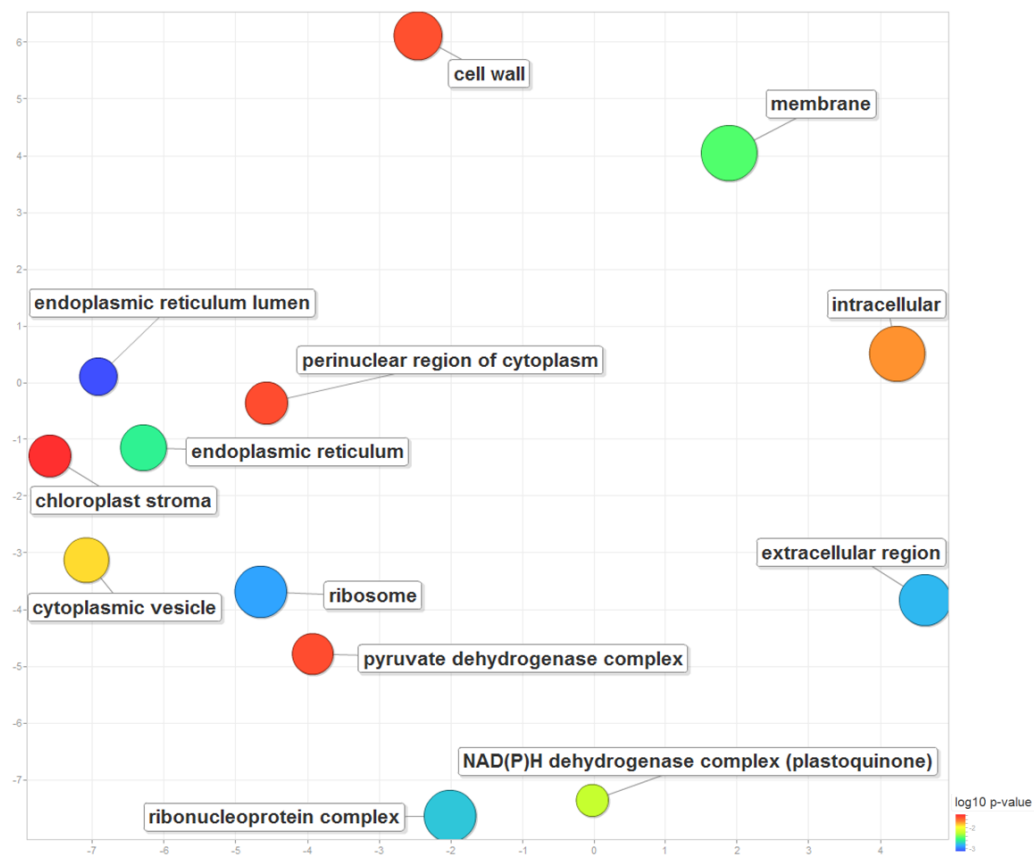


	term ID	description
1	GO:0016207	4-coumarate-CoA ligase activity
2	GO:0046429	4-hydroxy-3-methylbut-2-en-1-yl diphosphate synthase activity
3	GO:0003934	GTP cyclohydrolase I activity
4	GO:0051287	NAD binding
5	GO:0004075	biotin carboxylase activity
6	GO:0042409	caffeoyl-CoA O-methyltransferase activity
7	GO:0003824	catalytic activity
8	GO:0009055	electron carrier activity
9	GO:0050660	flavin adenine dinucleotide binding
10	GO:0016798	hydrolase activity, acting on glycosyl bonds
11	GO:0016853	isomerase activity
12	GO:0045703	ketoreductase activity
13	GO:0016829	lyase activity
14	GO:0046872	metal ion binding
15	GO:0070006	metalloaminopeptidase activity
16	GO:0016210	naringenin-chalcone synthase activity
17	GO:0005337	nucleoside transmembrane transporter activity
18	GO:0016491	oxidoreductase activity
19	GO:0016614	oxidoreductase activity, acting on CH-OH group of donors
20	GO:0016620	oxidoreductase activity, acting on the aldehyde or oxo group of donors, NAD or NADP as acceptor
21	GO:0045548	phenylalanine ammonia-lyase activity
22	GO:0003756	protein disulfide isomerase activity
23	GO:0046982	protein heterodimerization activity
24	GO:0003735	structural constituent of ribosome
25	GO:0016740	transferase activity
26	GO:0016746	transferase activity, transferring acyl groups
27	GO:0016747	transferase activity, transferring acyl groups other than amino-acyl groups
28	GO:0005215	transporter activity
28	GO:0050350	trihydroxystilbene synthase activity
30	GO:0008121	ubiquinol-cytochrome-c reductase activity
31	GO:0031625	ubiquitin protein ligase binding

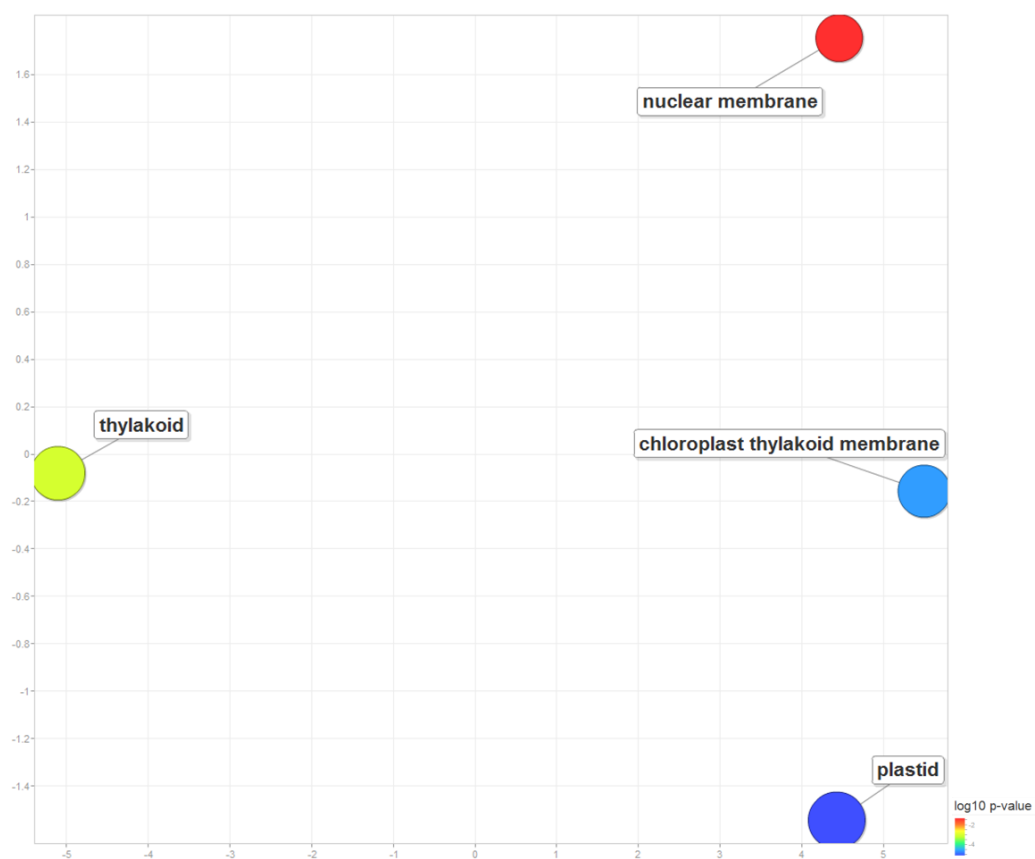
(b) ILL5588 enriched down-regulated molecular function terms



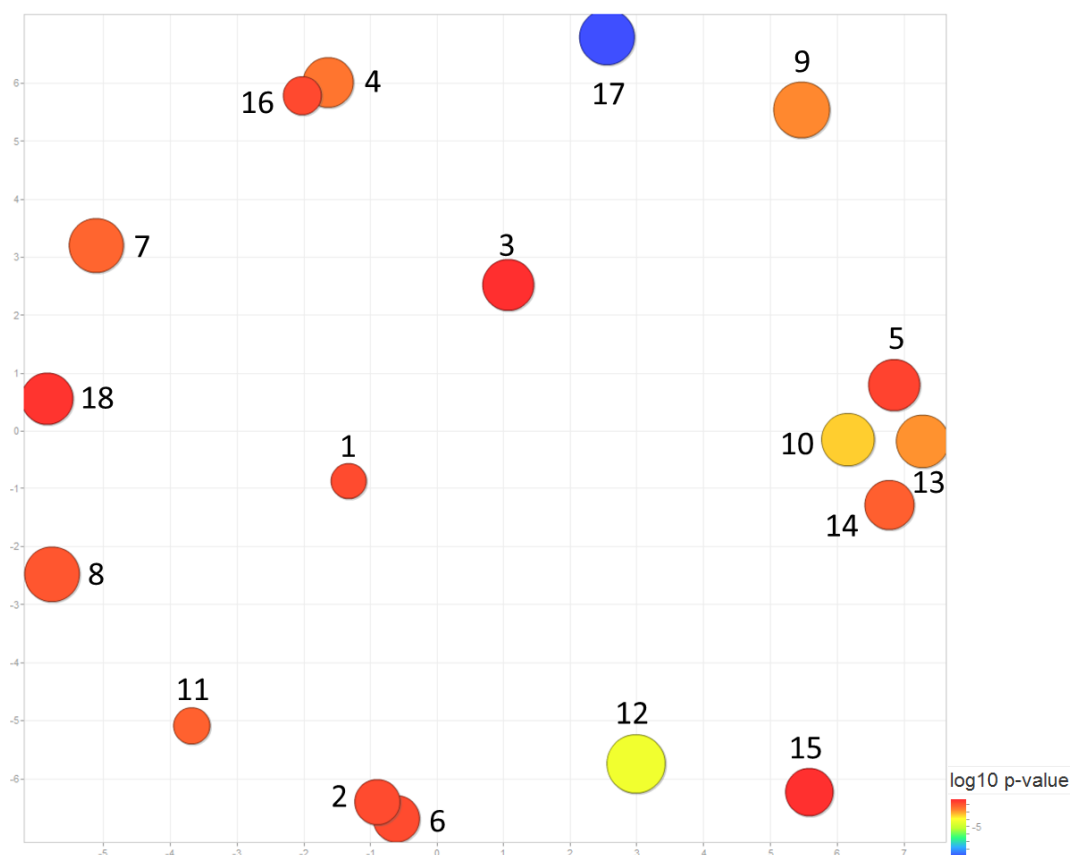
(c) ILL5588 enriched up-regulated GO cellular component terms



(d) ILL5588 enriched down-regulated GO cellular component terms

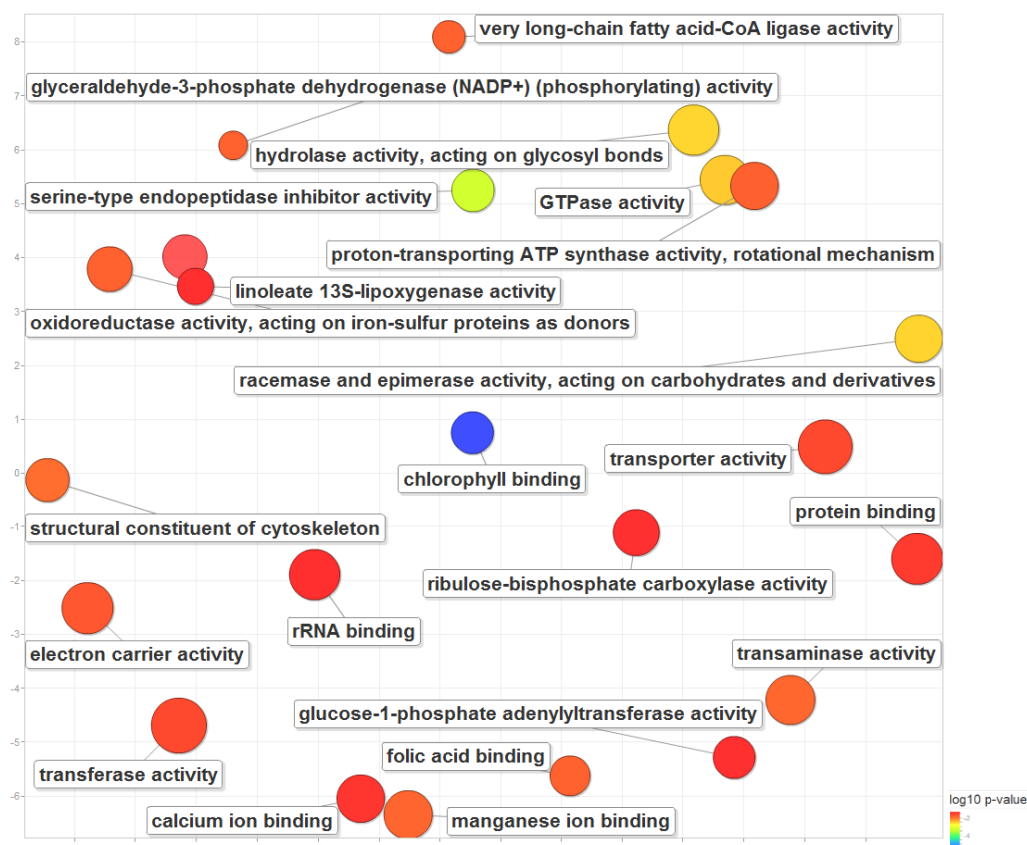


(e) *L. c. orientalis* enriched up-regulated molecular function terms

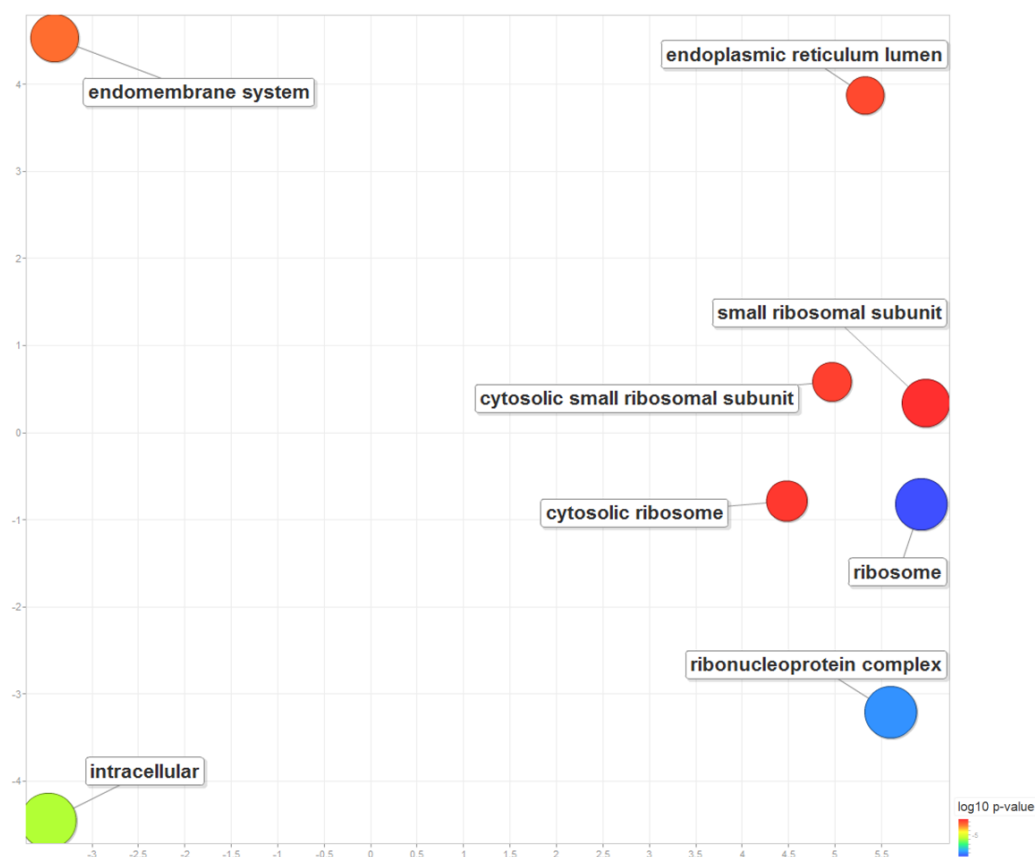


	term ID	description
1	GO:0016207	4-coumarate-CoA ligase activity
2	GO:0004648	O-phospho-L-serine:2-oxoglutarate aminotransferase activity
3	GO:0004177	aminopeptidase activity
4	GO:0016841	ammonia-lyase activity
5	GO:0051213	dioxygenase activity
6	GO:0004360	glutamine-fructose-6-phosphate transaminase (isomerizing) activity
7	GO:0020037	heme binding
8	GO:0005506	iron ion binding
9	GO:0016829	lyase activity
10	GO:0004497	monooxygenase activity
11	GO:0016210	naringenin-chalcone synthase activity
12	GO:0016491	oxidoreductase activity
13	GO:0016705	oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen
14	GO:0016701	oxidoreductase activity, acting on single donors with incorporation of molecular oxygen
15	GO:0019825	oxygen binding
16	GO:0045548	phenylalanine ammonia-lyase activity
17	GO:0003735	structural constituent of ribosome
18	GO:0003746	translation elongation factor activity

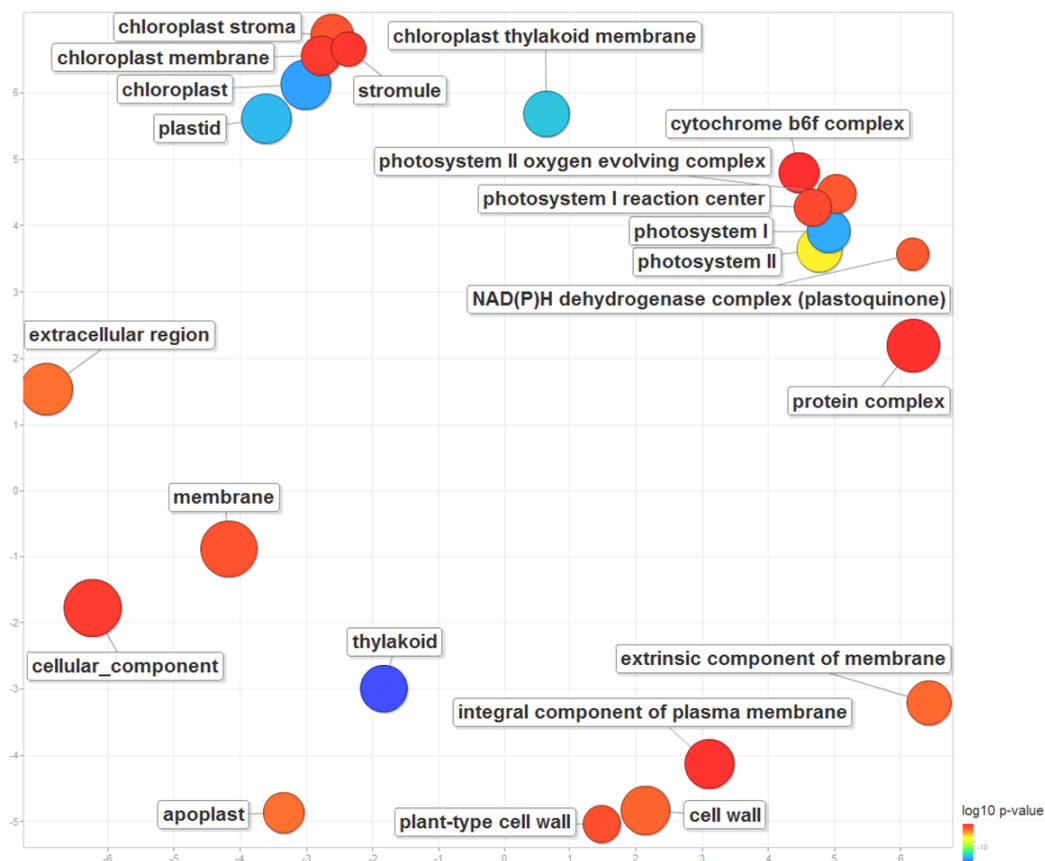
(f) *L. c. orientalis* enriched down-regulated molecular function terms



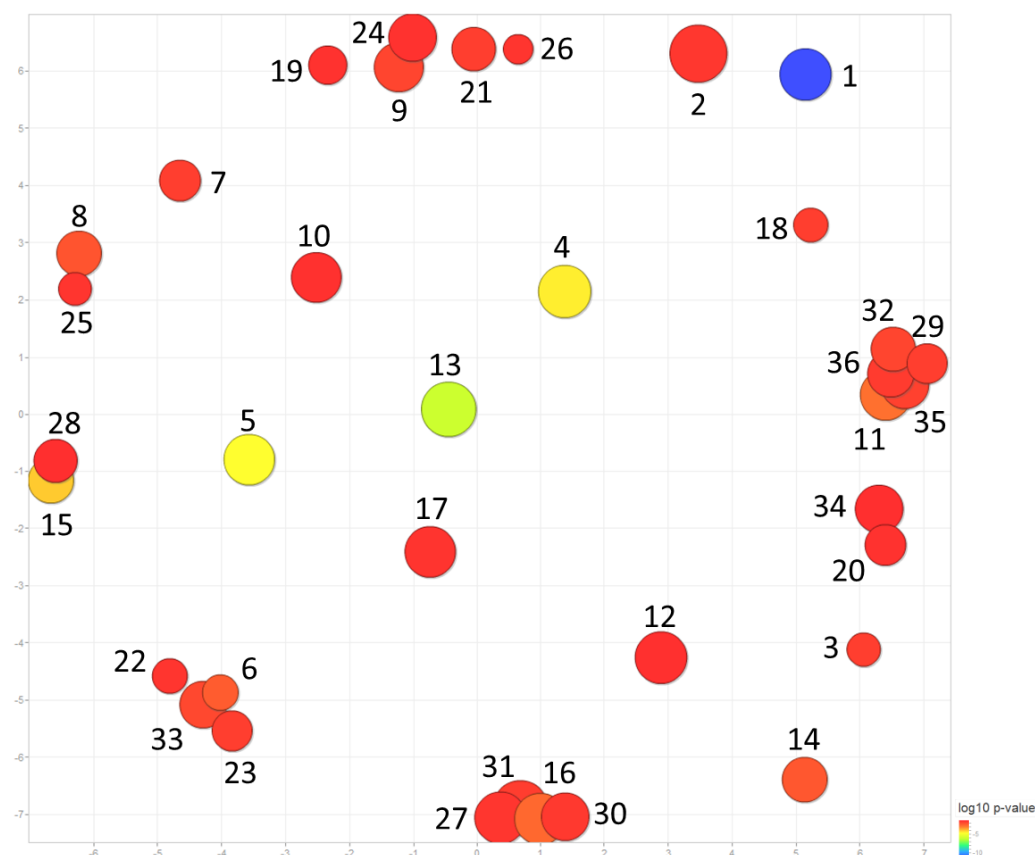
(g) *L. c. orientalis* enriched up-regulated cellular component terms



(h) *L. c. orientalis* enriched down-regulated cellular component terms

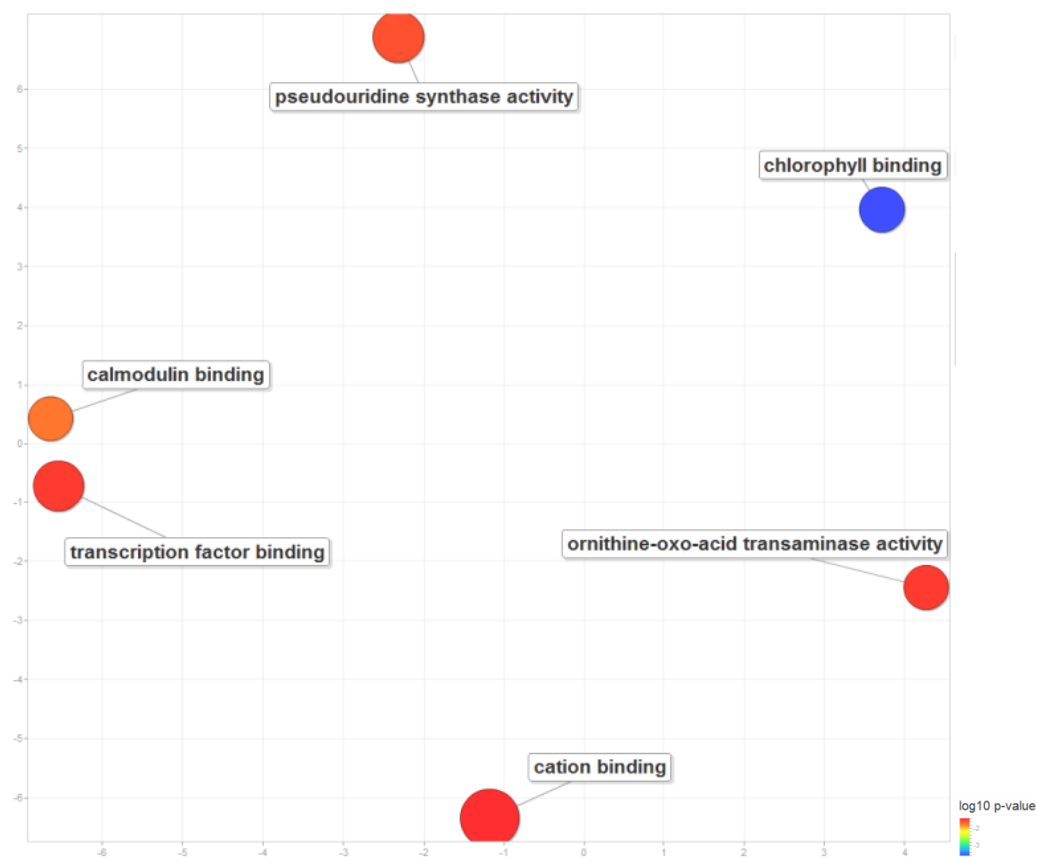


(i) Lupa enriched up-regulated molecular function terms

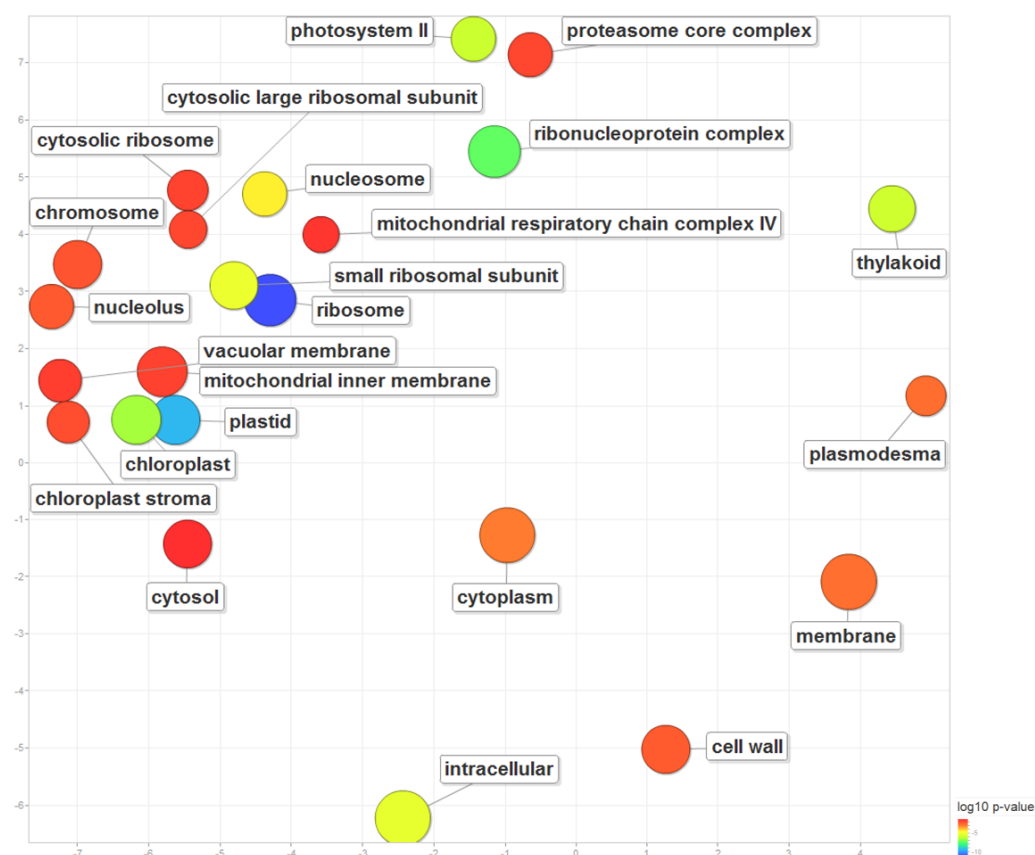


term ID	description
1	GO:0003735 structural constituent of ribosome
2	GO:0003824 catalytic activity
3	GO:0008515 sucrose transmembrane transporter activity
4	GO:0016829 lyase activity
5	GO:0019843 rRNA binding
6	GO:0045548 phenylalanine ammonia-lyase activity
7	GO:0003756 protein disulfide isomerase activity
8	GO:0004356 glutamate-ammonia ligase activity
9	GO:0016620 oxidoreductase activity, acting on the aldehyde or oxo group of donors, NAD or NADP as acceptor
10	GO:0008080 N-acetyltransferase activity
11	GO:0004175 endopeptidase activity
12	GO:0016853 isomerase activity
13	GO:0016491 oxidoreductase activity
14	GO:0042277 peptide binding
15	GO:0046982 protein heterodimerization activity
16	GO:0005506 iron ion binding
17	GO:0020037 heme binding
18	GO:0042973 glucan endo-1,3-beta-D-glucosidase activity
19	GO:0052716 hydroquinone:oxygen oxidoreductase activity
20	GO:0005388 calcium-transporting ATPase activity
21	GO:0004022 alcohol dehydrogenase (NAD) activity
22	GO:0004737 pyruvate decarboxylase activity
23	GO:0010333 terpene synthase activity
24	GO:0003995 acyl-CoA dehydrogenase activity
25	GO:0016207 4-coumarate-CoA ligase activity
26	GO:0046029 mannitol dehydrogenase activity
27	GO:0000287 magnesium ion binding
28	GO:0019904 protein domain specific binding
29	GO:0008798 beta-aspartyl-peptidase activity
30	GO:0005507 copper ion binding
31	GO:0046872 metal ion binding
32	GO:0004298 threonine-type endopeptidase activity
33	GO:0016841 ammonia-lyase activity
34	GO:0046933 proton-transporting ATP synthase activity, rotational mechanism
35	GO:0004177 aminopeptidase activity
36	GO:0008235 metalloexopeptidase activity

(j) Lupa enriched down-regulated molecular function terms



(k) Lupa enriched up-regulated cellular component terms



(I) Lupa enriched down-regulated cellular component terms

