

**Table S1.** The individual classifiers of GO2PPI merged by PPCM

NO.	Machine learning algorithm GO NetWork
1	nb bp AT
2	nb bp DM
3	nb bp EC
4	nb bp HS
5	nb bp MM
6	nb bp SC
7	nb bp SP
8	nb bpcc AT
9	nb bpcc DM
10	nb bpcc EC
11	nb bpcc HS
12	nb bpcc MM
13	nb bpcc SC
14	nb bpcc SP
15	nb bpccmf AT
16	nb bpccmf DM
17	nb bpccmf EC
18	nb bpccmf HS
19	nb bpccmf MM
20	nb bpccmf SC
21	nb bpccmf SP
22	nb bpmf AT
23	nb bpmf DM
24	nb bpmf EC
25	nb bpmf HS
26	nb bpmf MM
27	nb bpmf SC
28	nb bpmf SP
29	nb cc AT
30	nb cc DM
31	nb cc EC
32	nb cc HS
33	nb cc MM
34	nb cc SC
35	nb cc SP
36	nb ccmf AT
37	nb ccmf DM

38	nb ccmf EC
39	nb ccmf HS
40	nb ccmf MM
41	nb ccmf SC
42	nb ccmf SP
43	nb mf AT
44	nb mf DM
45	nb mf EC
46	nb mf HS
47	nb mf MM
48	nb mf SC
49	nb mf SP
50	rf bp AT
51	rf bp DM
52	rf bp EC
53	rf bp HS
54	rf bp MM
55	rf bp SC
56	rf bp SP
57	rf bpcc AT
58	rf bpcc DM
59	rf bpcc EC
60	rf bpcc HS
61	rf bpcc MM
62	rf bpcc SC
63	rf bpcc SP
64	rf bpccmf AT
65	rf bpccmf DM
66	rf bpccmf EC
67	rf bpccmf HS
68	rf bpccmf MM
69	rf bpccmf SC
70	rf bpccmf SP
71	rf bpmf AT
72	rf bpmf DM
73	rf bpmf EC
74	rf bpmf HS
75	rf bpmf MM
76	rf bpmf SC
77	rf bpmf SP
78	rf cc AT

79	rf cc DM
80	rf cc EC
81	rf cc HS
82	rf cc MM
83	rf cc SC
84	rf cc SP
85	rf ccmf AT
86	rf ccmf DM
87	rf ccmf EC
88	rf ccmf HS
89	rf ccmf MM
90	rf ccmf SC
91	rf ccmf SP
92	rf mf AT
93	rf mf DM
94	rf mf EC
95	rf mf HS
96	rf mf MM
97	rf mf SC
98	rf mf SP

Table S2. The individual classifiers of Phyloprof merged by PPCM.

NO.	Network taxa optimization PPI prediction
1	AT hg et
2	AT hg ga
3	AT hg gapd
4	AT hg gatc
5	AT hg ite
6	AT hg ot
7	AT hg rt
8	AT hg to
9	AT mi et
10	AT mi ga
11	AT mi gapd
12	AT mi gatc
13	AT mi ite
14	AT mi ot
15	AT mi rt
16	AT mi to
17	AT sb et
18	AT sb ga
19	AT sb gapd
20	AT sb gatc
21	AT sb ite
22	AT sb ot
23	AT sb rt
24	AT sb to
25	SC hg et
26	SC hg ga
27	SC hg gapd
28	SC hg gatc
29	SC hg ite
30	SC hg ot
31	SC hg rt
32	SC hg to
33	SC mi et
34	SC mi ga
35	SC mi gapd
36	SC mi gatc
37	SC mi ite
38	SC mi ot
39	SC mi rt

40	SC mi to
41	SC sb et
42	SC sb ga
43	SC sb gapd
44	SC sb gatc
45	SC sb ite
46	SC sb ot
47	SC sb rt
48	SC sb to
49	HS hg et
50	HS hg ga
51	HS hg gapd
52	HS hg gatc
53	HS hg ite
54	HS hg ot
55	HS hg rt
56	HS hg to
57	HS mi et
58	HS mi ga
59	HS mi gapd
60	HS mi gatc
61	HS mi ite
62	HS mi ot
63	HS mi rt
64	HS mi to
65	HS sb et
66	HS sb ga
67	HS sb gapd
68	HS sb gatc
69	HS sb ite
70	HS sb ot
71	HS sb rt
72	HS sb to
73	EC hg et
74	EC hg ga
75	EC hg gapd
76	EC hg gatc
77	EC hg ite
78	EC hg ot
79	EC hg rt
80	EC hg to

81	EC mi et
82	EC mi ga
83	EC mi gapd
84	EC mi gatc
85	EC mi ite
86	EC mi ot
87	EC mi rt
88	EC mi to
89	EC sb et
90	EC sb ga
91	EC sb gapd
92	EC sb gatc
93	EC sb ite
94	EC sb ot
95	EC sb rt
96	EC sb to