

**Table S2.** Selected GO pathways for investigating DALIA-1

	GO ID	Description
1	GO:0002218 †	activation of innate immune response
2	GO:0006956 †	complement activation
3	GO:0002429 †	immune response-activating cell surface receptor signaling pathway
4	GO:0002758 †	innate immune response-activating signal transduction
5	GO:0019883 †	antigen processing and presentation of endogenous antigen
6	GO:0019884 †	antigen processing and presentation of exogenous antigen
7	GO:0048002 †	antigen processing and presentation of peptide antigen
8	GO:0002504 †	antigen processing and presentation of peptide or polysaccharide antigen via MHC class II
9	GO:0002475	antigen processing and presentation via MHC class Ib
10	GO:0002468	dendritic cell antigen processing and presentation
11	GO:0002578	negative regulation of antigen processing and presentation
12	GO:0002579 †	positive regulation of antigen processing and presentation
13	GO:0002577 †	regulation of antigen processing and presentation
14	GO:0002457	T cell antigen processing and presentation
15	GO:0002339	B cell selection
16	GO:0002263 †	cell activation involved in immune response
17	GO:0051607 †	defense response to virus
18	GO:0002432	granuloma formation
19	GO:0002434	immune complex clearance
20	GO:0043299 †	leukocyte degranulation
21	GO:0001909 †	leukocyte mediated cytotoxicity
22	GO:0019724 †	B cell mediated immunity
23	GO:0002228 †	natural killer cell mediated immunity
24	GO:0002707 †	negative regulation of lymphocyte mediated immunity
25	GO:0002708 †	positive regulation of lymphocyte mediated immunity
26	GO:0002706 †	regulation of lymphocyte mediated immunity
27	GO:0002456 †	T cell mediated immunity
28	GO:0002444 †	myeloid leukocyte mediated immunity
29	GO:0002704 †	negative regulation of leukocyte mediated immunity
30	GO:0002705 †	positive regulation of leukocyte mediated immunity
31	GO:0002703 †	regulation of leukocyte mediated immunity
32	GO:0002522	leukocyte migration involved in immune response
33	GO:0002698 †	negative regulation of immune effector process
34	GO:0008228	opsonization
35	GO:0002699 †	positive regulation of immune effector process
36	GO:0002697 †	regulation of immune effector process
37	GO:0002679 †	respiratory burst involved in defense response
38	GO:0002250 †	adaptive immune response
39	GO:0002367 †	cytokine production involved in immune response
40	GO:0006959 †	humoral immune response
41	GO:0002418 †	immune response to tumor cell
42	GO:0002437 †	inflammatory response to antigenic stimulus
43	GO:0006957 †	complement activation, alternative pathway
44	GO:0001867	complement activation, lectin pathway
45	GO:0002227	innate immune response in mucosa
46	GO:0045824 †	negative regulation of innate immune response
47	GO:0045089 †	positive regulation of innate immune response
48	GO:0045088 †	regulation of innate immune response
49	GO:0034341 †	response to interferon-gamma
50	GO:0034340 †	response to type I interferon
51	GO:0050777 †	negative regulation of immune response
52	GO:0002251 †	organ or tissue specific immune response
53	GO:0052555	positive regulation by organism of immune response of other organism
		involved in symbiotic interaction
54	GO:0002821 †	positive regulation of adaptive immune response
55	GO:0002922	positive regulation of humoral immune response
56	GO:0002839 †	positive regulation of immune response to tumor cell
57	GO:0002863 †	positive regulation of inflammatory response to antigenic stimulus
58	GO:0002830	positive regulation of type 2 immune response
59	GO:0002765 †	immune response-inhibiting signal transduction
60	GO:0002768 †	immune response-regulating cell surface receptor signaling pathway
61	GO:0052552	modulation by organism of immune response of other organism
		involved in symbiotic interaction
62	GO:0002819 †	regulation of adaptive immune response
63	GO:0002718 †	regulation of cytokine production involved in immune response
64	GO:0043309	regulation of eosinophil degranulation
65	GO:0002920 †	regulation of humoral immune response
66	GO:0002837 †	regulation of immune response to tumor cell
67	GO:0002861 †	regulation of inflammatory response to antigenic stimulus
68	GO:0033006 †	regulation of mast cell activation involved in immune response
69	GO:0043380	regulation of memory T cell differentiation
70	GO:0043313	regulation of neutrophil degranulation
71	GO:0045622 †	regulation of T-helper cell differentiation
72	GO:0002828 †	regulation of type 2 immune response
73	GO:0042092 †	type 2 immune response
74	GO:0002520	immune system development
75	GO:0002366 †	leukocyte activation involved in immune response

76	GO:0050902	leukocyte adhesive activation
77	GO:0042113 †	B cell activation
78	GO:0001767	establishment of lymphocyte polarity
79	GO:0001771	immunological synapse formation
80	GO:0002285 †	lymphocyte activation involved in immune response
81	GO:0030098 †	lymphocyte differentiation
82	GO:0046651 †	lymphocyte proliferation
83	GO:0030101 †	natural killer cell activation
84	GO:0051250 †	negative regulation of lymphocyte activation
85	GO:0031294 †	lymphocyte costimulation
86	GO:0050871 †	positive regulation of B cell activation
87	GO:0045621 †	positive regulation of lymphocyte differentiation
88	GO:0050671 †	positive regulation of lymphocyte proliferation
89	GO:0032816 †	positive regulation of natural killer cell activation
90	GO:0050870 †	positive regulation of T cell activation
91	GO:0050864 †	regulation of B cell activation
92	GO:0045619 †	regulation of lymphocyte differentiation
93	GO:0050670 †	regulation of lymphocyte proliferation
94	GO:0032814 †	regulation of natural killer cell activation
95	GO:0050863 †	regulation of T cell activation
96	GO:0050868 †	negative regulation of T cell activation
97	GO:0046634 †	regulation of alpha-beta T cell activation
98	GO:0046643 †	regulation of gamma-delta T cell activation
99	GO:2001188	regulation of T cell activation via T cell receptor contact with antigen bound to MHC molecule on antigen presenting cell
100	GO:0045580 †	regulation of T cell differentiation
101	GO:0042129 †	regulation of T cell proliferation
102	GO:0046631 †	alpha-beta T cell activation
103	GO:0001768	establishment of T cell polarity
104	GO:0046629 †	gamma-delta T cell activation
105	GO:0035709	memory T cell activation
106	GO:0002286 †	T cell activation involved in immune response
107	GO:0030217 †	T cell differentiation
108	GO:0042098 †	T cell proliferation
109	GO:0002274 †	myeloid leukocyte activation
110	GO:0002695 †	negative regulation of leukocyte activation
111	GO:0002696 †	positive regulation of leukocyte activation
112	GO:0043030 †	regulation of macrophage activation
113	GO:0033003 †	regulation of mast cell activation
114	GO:0030885	regulation of myeloid dendritic cell activation
115	GO:0001776 †	leukocyte homeostasis
116	GO:0050900 †	leukocyte migration
117	GO:0002262 †	myeloid cell homeostasis
118	GO:0002683 †	negative regulation of immune system process
119	GO:0050857 †	positive regulation of antigen receptor-mediated signaling pathway
120	GO:0060369	positive regulation of Fc receptor mediated stimulatory signaling pathway
121	GO:0002253 †	activation of immune response
122	GO:0002687 †	positive regulation of leukocyte migration
123	GO:0070426	positive regulation of nucleotide-binding oligomerization domain containing signaling pathway
124	GO:2000525	positive regulation of T cell costimulation
125	GO:0002645 †	positive regulation of tolerance induction
126	GO:0034123 †	positive regulation of toll-like receptor signaling pathway
127	GO:0002440 †	production of molecular mediator of immune response
128	GO:0002682	regulation of immune system process
129	GO:0002200 †	somatic diversification of immune receptors
130	GO:0045058 †	T cell selection
131	GO:0002507 †	tolerance induction

\*: significant (FDR<0.05) in pre-ATI †: significant (FDR<0.05) in post-ATI