

## Appendix 1

T-helper-associated gene sets: Acute group *vs.* Control group

T-helper-associated gene sets: Acute group <i>vs.</i> Control group	NES	NOM P	FDR
GOBP_REGULATION_OF_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.704452	0	0.00339
GOBP_REGULATION_OF_T_HELPER_17_TYPE_IMMUNE_RESPONSE	1.820383	0	0.003579
GOBP_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.72303	0.001783	0.003821
GOBP_REGULATION_OF_T_HELPER_17_CELL_DIFFERENTIATION	1.734111	0	0.004594
GOBP_T_HELPER_CELL_LINEAGE_COMMITMENT	1.679318	0.001866	0.005187
GOBP_T_HELPER_17_TYPE_IMMUNE_RESPONSE	1.738096	0.001931	0.006891
GOBP_T_HELPER_17_CELL_DIFFERENTIATION	1.649389	0.003552	0.009746
GOBP_T_HELPER_17_CELL_LINEAGE_COMMITMENT	1.628472	0.002037	0.014247
GOBP_NEGATIVE_REGULATION_OF_T_HELPER_CELL_DIFFERENTIATION	1.57841	0.011173	0.024044
GOBP_REGULATION_OF_T_HELPER_CELL_DIFFERENTIATION	1.585145	0.001862	0.025465
GOBP_TYPE_2_IMMUNE_RESPONSE	1.562233	0.005736	0.027203
GOBP_T_HELPER_1_CELL_DIFFERENTIATION	1.54876	0.025455	0.029312
GOBP_NEGATIVE_REGULATION_OF_T_HELPER_17_TYPE_IMMUNE_RESPONSE	1.537482	0.013384	0.031403
GOBP_REGULATION_OF_T_HELPER_1_CELL_DIFFERENTIATION	1.514717	0.017857	0.040041
GOBP_POSITIVE_REGULATION_OF_T_HELPER_17_TYPE_IMMUNE_RESPONSE	1.470493	0.040856	0.05918
GOBP_POSITIVE_REGULATION_OF_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.434333	0.047203	0.079935
GOBP_NEGATIVE_REGULATION_OF_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.422141	0.029126	0.084248

T-helper-associated gene sets: Chronic group *vs.* Control group

T-helper-associated gene sets: Chronic group <i>vs.</i> Control group	NES	NOM P	FDR
GOBP_REGULATION_OF_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.737106	0	0.006174
GOBP_T_HELPER_1_CELL_DIFFERENTIATION	1.675897	0	0.012215
GOBP_REGULATION_OF_T_HELPER_1_CELL_DIFFERENTIATION	1.672937	0	0.008578
GOBP_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.653312	0	0.009146
GOBP_TYPE_2_IMMUNE_RESPONSE	1.583631	0.002747	0.02551
GOBP_T_HELPER_17_TYPE_IMMUNE_RESPONSE	1.575377	0.004132	0.024841
GOBP_T_HELPER_CELL_LINEAGE_COMMITMENT	1.525732	0.014218	0.046626
GOBP_NEGATIVE_REGULATION_OF_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.504827	0.009058	0.056865
GOBP_REGULATION_OF_T_HELPER_17_TYPE_IMMUNE_RESPONSE	1.497294	0.014205	0.055657
GOBP_POSITIVE_REGULATION_OF_T_HELPER_1_CELL_DIFFERENTIATION	1.478647	0.026936	0.061901
GOBP_T_HELPER_17_CELL_LINEAGE_COMMITMENT	1.462021	0.030945	0.068156
GOBP_REGULATION_OF_T_HELPER_CELL_DIFFERENTIATION	1.428968	0.030702	0.092749

T-helper-associated gene sets: Chronic group vs. Acute group

T-helper-associated gene sets: Chronic group vs. Acute group	NES	NOM P	FDR
REGULATION_OF_T_HELPER_17_TYPE_IMMUNE_RESPONSE	1.820383	0	0.003579
REGULATION_OF_T_HELPER_17_CELL_DIFFERENTIATION	1.734111	0	0.004594
REGULATION_OF_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.704452	0	0.00339
GOBP_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.72303	0.001783	0.003821
GOBP_REGULATION_OF_T_HELPER_CELL_DIFFERENTIATION	1.585145	0.001862	0.025465
GOBP_T_HELPER_CELL_LINEAGE_COMMITMENT	1.679318	0.001866	0.005187
GOBP_T_HELPER_17_TYPE_IMMUNE_RESPONSE	1.738096	0.001931	0.006891
GOBP_T_HELPER_17_CELL_LINEAGE_COMMITMENT	1.628472	0.002037	0.014247
GOBP_T_HELPER_17_CELL_DIFFERENTIATION	1.649389	0.003552	0.009746
GOBP_TYPE_2_IMMUNE_RESPONSE	1.562233	0.005736	0.027203
GOBP_NEGATIVE_REGULATION_OF_T_HELPER_CELL_DIFFERENTIATION	1.57841	0.011173	0.024044
GOBP_NEGATIVE_REGULATION_OF_T_HELPER_17_TYPE_IMMUNE_RESPONSE	1.537482	0.013384	0.031403
GOBP_REGULATION_OF_T_HELPER_1_CELL_DIFFERENTIATION	1.514717	0.017857	0.040041
GOBP_T_HELPER_1_CELL_DIFFERENTIATION	1.54876	0.025455	0.029312
GOBP_NEGATIVE_REGULATION_OF_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.422141	0.029126	0.084248
GOBP_POSITIVE_REGULATION_OF_T_HELPER_17_TYPE_IMMUNE_RESPONSE	1.470493	0.040856	0.05918
GOBP_POSITIVE_REGULATION_OF_T_HELPER_1_TYPE_IMMUNE_RESPONSE	1.434333	0.047203	0.079935

Macrophage-associated gene sets: Acute group vs. Control group

No macrophage-associated gene sets were significantly enriched in the acute group compared with the control group.

Macrophage-associated gene sets: Chronic group vs. Control group

Macrophage-associated gene sets: Chronic group vs. Control group	NES	NOM P	FDR
GOBP_MACROPHAGE_MIGRATION	1.836848	0	0
GOBP_REGULATION_OF_MACROPHAGE_MIGRATION	1.789986	0	0
GOBP_MACROPHAGE_CHEMOTAXIS	1.711382	0	0.00526
GOBP_MACROPHAGE_ACTIVATION	1.65574	0	0.008255
GOBP_POSITIVE_REGULATION_OF_MACROPHAGE_MIGRATION	1.638215	0	0.009159
GOBP_REGULATION_OF_MACROPHAGE_CHEMOTAXIS	1.660102	0	0.009623
GOBP_MACROPHAGE_ACTIVATION_INVOLVED_IN_IMMUNE_RESPONSE	1.625238	0.00468	0.010109
GOBP_MACROPHAGE_CYTOKINE_PRODUCTION	1.603887	0.001314	0.01301
GOBP_RESPONSE_TO_MACROPHAGE_COLONY_STIMULATING_FACTOR	1.576	0.001642	0.019695
GOBP_POSITIVE_REGULATION_OF_MACROPHAGE_CHEMOTAXIS	1.53668	0.014368	0.03135
GOBP_POSITIVE_REGULATION_OF_MACROPHAGE_ACTIVATION	1.517557	0.014793	0.033655
GOBP_REGULATION_OF_MACROPHAGE_ACTIVATION	1.523171	0.004132	0.03392
GOBP_MACROPHAGE_FUSION	1.465929	0.023769	0.056173
GOBP_NEGATIVE_REGULATION_OF_MACROPHAGE_CYTOKINE_PRODUCTION	1.475372	0.027735	0.056676
GOBP_POSITIVE_REGULATION_OF_MACROPHAGE_CYTOKINE_PRODUCTION	1.458374	0.027576	0.057924
GOBP_MACROPHAGE_INFLAMMATORY_PROTEIN_1_ALPHA_PRODUCTION	1.414035	0.038664	0.090876
GOBP_REGULATION_OF_CELLULAR_RESPONSE_TO_MACROPHAGE_COLONY_STIMULATING_FACTOR_STIMULUS	1.389834	0.037037	0.109249
GOBP_MACROPHAGE_COLONY_STIMULATING_FACTOR_SIGNALING_PATHWAY	1.37388	0.045531	0.115567

Macrophage-associated gene sets: Chronic group vs. Acute group

Macrophage-associated gene sets: Chronic group vs. Acute group	NES	NOM P	FDR
GOBP_MACROPHAGE_MIGRATION	1.66163	0	0.0314
GOBP_MACROPHAGE_CYTOKINE_PRODUCTION	1.672323	0.001783	0.058002
GOBP_POSITIVE_REGULATION_OF_MACROPHAGE_CYTOKINE_PRODUCTION	1.558678	0.005837	0.061063
GOBP_REGULATION_OF_MACROPHAGE_MIGRATION	1.603044	0.009416	0.054368
GOBP_MACROPHAGE_CHEMOTAXIS	1.539364	0.010989	0.062945
GOBP_POSITIVE_REGULATION_OF_MACROPHAGE_MIGRATION	1.562951	0.011472	0.072584
GOBP_POSITIVE_REGULATION_OF_MACROPHAGE_ACTIVATION	1.486416	0.016917	0.100164
GOBP_MACROPHAGE_ACTIVATION	1.350062	0.017825	0.18979
GOBP_RESPONSE_TO_MACROPHAGE_COLONY_STIMULATING_FACTOR	1.526161	0.021033	0.063287
GOBP_REGULATION_OF_MACROPHAGE_CHEMOTAXIS	1.449678	0.039033	0.119054
GOBP_POSITIVE_REGULATION_OF_MACROPHAGE_CHEMOTAXIS	1.466171	0.040385	0.111207

B-cell-associated gene sets: Acute group vs. Control group

B-cell-associated gene sets: Acute group vs. Control group	NES	NOM P	FDR
GOBP_NEGATIVE_REGULATION_OF_B_CELL_ACTIVATION	1.727551	0	0.01054
GOBP_B_CELL_ACTIVATION	1.530136	0	0.055048
GOBP_B_CELL_DIFFERENTIATION	1.514353	0	0.055465
GOBP_REGULATION_OF_B_CELL_ACTIVATION	1.501231	0	0.060845
GOBP_B_CELL_PROLIFERATION	1.545037	0.001323	0.054838
GOBP_REGULATION_OF_B_CELL_DIFFERENTIATION	1.574149	0.004587	0.041609
GOBP_NEGATIVE_REGULATION_OF_B_CELL_PROLIFERATION	1.616737	0.004769	0.027088
GOBP_REGULATION_OF_B_CELL_PROLIFERATION	1.377389	0.027894	0.207606

B-cell-associated gene sets: Chronic group vs. Control group

B-cell-associated gene sets: Chronic group vs. Control group	NES	NOM P	FDR
GOBP_POSITIVE_REGULATION_OF_B_CELL_ACTIVATION	1.587351	0	0.006746
GOBP_B_CELL_PROLIFERATION	1.691952	0	0.001756
GOBP_REGULATION_OF_B_CELL_MEDIATED_IMMUNITY	1.705311	0	0.001026
GOBP_B_CELL_DIFFERENTIATION	1.748585	0	9.39E-04
GOBP_REGULATION_OF_B_CELL_DIFFERENTIATION	1.792778	0	3.86E-04
GOBP_B_CELL_ACTIVATION	1.809937	0	5.79E-04
GOBP_REGULATION_OF_B_CELL_ACTIVATION	1.855945	0	0.001158
GOBP_REGULATION_OF_B_CELL_PROLIFERATION	1.631637	0.001277	0.003761
GOBP_POSITIVE_REGULATION_OF_B_CELL_MEDIATED_IMMUNITY	1.649829	0.001366	0.002943
GOBP_NEGATIVE_REGULATION_OF_B_CELL_ACTIVATION	1.703792	0.001445	8.55E-04
GOBP_B_CELL_ACTIVATION_INVOLVED_IN_IMMUNE_RESPONSE	1.520956	0.00246	0.014439
GOBP_POSITIVE_REGULATION_OF_B_CELL_PROLIFERATION	1.463069	0.009818	0.02567
GOBP_POSITIVE_REGULATION_OF_B_CELL_DIFFERENTIATION	1.556315	0.017857	0.010163
GOBP_NEGATIVE_REGULATION_OF_B_CELL_PROLIFERATION	1.485874	0.022936	0.020471

B-cell-associated gene sets: Chronic group vs. Acute group

B-cell-associated gene sets: Chronic group vs. Acute group	NES	NOM P	FDR
GOBP_POSITIVE_REGULATION_OF_B_CELL_ACTIVATION	1.587351	0	0.006746
GOBP_B_CELL_PROLIFERATION	1.691952	0	0.001756
GOBP_REGULATION_OF_B_CELL_MEDIATED_IMMUNITY	1.705311	0	0.001026
GOBP_B_CELL_DIFFERENTIATION	1.748585	0	9.39E-04
GOBP_REGULATION_OF_B_CELL_DIFFERENTIATION	1.792778	0	3.86E-04
GOBP_B_CELL_ACTIVATION	1.809937	0	5.79E-04
GOBP_REGULATION_OF_B_CELL_ACTIVATION	1.855945	0	0.001158
GOBP_REGULATION_OF_B_CELL_PROLIFERATION	1.631637	0.001277	0.003761
GOBP_POSITIVE_REGULATION_OF_B_CELL_MEDIATED_IMMUNITY	1.649829	0.001366	0.002943
GOBP_NEGATIVE_REGULATION_OF_B_CELL_ACTIVATION	1.703792	0.001445	8.55E-04
GOBP_B_CELL_ACTIVATION_INVOLVED_IN_IMMUNE_RESPONSE	1.520956	0.00246	0.014439
GOBP_POSITIVE_REGULATION_OF_B_CELL_PROLIFERATION	1.463069	0.009818	0.02567
GOBP_POSITIVE_REGULATION_OF_B_CELL_DIFFERENTIATION	1.556315	0.017857	0.010163
GOBP_NEGATIVE_REGULATION_OF_B_CELL_PROLIFERATION	1.485874	0.022936	0.020471
GOBP_B_CELL_APOPTOTIC_PROCESS	1.376815	0.040446	0.058667
GOBP_MATURE_B_CELL_DIFFERENTIATION_INVOLVED_IN_IMMUNE_RESPONSE	1.423141	0.040996	0.039412

Gamma-delta-T-associated gene sets:

No gene sets associated with gamma-delta T cells were enriched in the acute group or chronic group compared with the control group.