

Supplemental Digital Content 6. Enriched GO terms among FDR corrected significant probes in the combined pediatric data after correction for Illumina 450k probes per gene. ^aRaw p value and ^bBenjamini-Hochberg corrected p value for enrichment.

GO term	P ^a	FDR ^b	Description
GO:0002376	6.28×10 ⁻¹⁰	4.32×10 ⁻⁶	immune system process
GO:0006952	6.37×10 ⁻¹⁰	4.32×10 ⁻⁶	defense response
GO:0048584	7.27×10 ⁻¹⁰	4.32×10 ⁻⁶	positive regulation of response to stimulus
GO:0006955	1.08×10 ⁻⁹	4.83×10 ⁻⁶	immune response
GO:0043123	1.77×10 ⁻⁹	6.32×10 ⁻⁶	positive regulation of I-kappaB kinase/NF-kappaB signaling
GO:0045321	8.06×10 ⁻⁹	2.40×10 ⁻⁵	leukocyte activation
GO:0002684	1.12×10 ⁻⁸	2.57×10 ⁻⁵	positive regulation of immune system process
GO:0002682	1.25×10 ⁻⁸	2.57×10 ⁻⁵	regulation of immune system process
GO:0050776	1.59×10 ⁻⁸	2.57×10 ⁻⁵	regulation of immune response
GO:0001775	1.63×10 ⁻⁸	2.57×10 ⁻⁵	cell activation
GO:0009611	1.72×10 ⁻⁸	2.57×10 ⁻⁵	response to wounding
GO:0006950	1.73×10 ⁻⁸	2.57×10 ⁻⁵	response to stress
GO:0009607	1.94×10 ⁻⁸	2.66×10 ⁻⁵	response to biotic stimulus
GO:0035556	3.98×10 ⁻⁸	5.07×10 ⁻⁵	intracellular signal transduction
GO:0007249	4.34×10 ⁻⁸	5.16×10 ⁻⁵	I-kappaB kinase/NF-kappaB signaling
GO:0048583	5.56×10 ⁻⁸	6.20×10 ⁻⁵	regulation of response to stimulus
GO:0043207	8.01×10 ⁻⁸	8.41×10 ⁻⁵	response to external biotic stimulus
GO:0007165	8.97×10 ⁻⁸	8.89×10 ⁻⁵	signal transduction
GO:0051707	1.12×10 ⁻⁷	9.83×10 ⁻⁵	response to other organism
GO:0002263	1.23×10 ⁻⁷	9.83×10 ⁻⁵	cell activation involved in immune response
GO:0002366	1.23×10 ⁻⁷	9.83×10 ⁻⁵	leukocyte activation involved in immune response
GO:0050896	1.27×10 ⁻⁷	9.83×10 ⁻⁵	response to stimulus
GO:0002252	1.28×10 ⁻⁷	9.83×10 ⁻⁵	immune effector process
GO:0046649	1.34×10 ⁻⁷	9.83×10 ⁻⁵	lymphocyte activation
GO:1902533	1.38×10 ⁻⁷	9.83×10 ⁻⁵	positive regulation of intracellular signal transduction
GO:0009617	1.46×10 ⁻⁷	1.00×10 ⁻⁴	response to bacterium
GO:0043122	1.52×10 ⁻⁷	1.00×10 ⁻⁴	regulation of I-kappaB kinase/NF-kappaB signaling
GO:0051716	2.55×10 ⁻⁷	1.63×10 ⁻⁴	cellular response to stimulus
GO:0006915	3.75×10 ⁻⁷	2.31×10 ⁻⁴	apoptotic process
GO:0043067	4.52×10 ⁻⁷	2.69×10 ⁻⁴	regulation of programmed cell death
GO:0010941	8.21×10 ⁻⁷	4.73×10 ⁻⁴	regulation of cell death
GO:0009967	9.66×10 ⁻⁷	5.27×10 ⁻⁴	positive regulation of signal transduction
GO:0002237	9.74×10 ⁻⁷	5.27×10 ⁻⁴	response to molecule of bacterial origin
GO:0012501	1.00×10 ⁻⁶	5.27×10 ⁻⁴	programmed cell death
GO:0006954	1.24×10 ⁻⁶	6.32×10 ⁻⁴	inflammatory response
GO:0050778	1.30×10 ⁻⁶	6.45×10 ⁻⁴	positive regulation of immune response
GO:0042981	1.37×10 ⁻⁶	6.59×10 ⁻⁴	regulation of apoptotic process
GO:0002286	1.86×10 ⁻⁶	8.75×10 ⁻⁴	T cell activation involved in immune response
GO:0046631	2.00×10 ⁻⁶	9.14×10 ⁻⁴	alpha-beta T cell activation
GO:0042113	3.23×10 ⁻⁶	0.001	B cell activation
GO:0044093	3.47×10 ⁻⁶	0.002	positive regulation of molecular function
GO:0009605	3.53×10 ⁻⁶	0.002	response to external stimulus
GO:0042110	4.42×10 ⁻⁶	0.002	T cell activation
GO:0008219	4.51×10 ⁻⁶	0.002	cell death
GO:0031349	4.66×10 ⁻⁶	0.002	positive regulation of defense response
GO:0016265	4.68×10 ⁻⁶	0.002	death
GO:0032496	4.69×10 ⁻⁶	0.002	response to lipopolysaccharide
GO:0080134	4.80×10 ⁻⁶	0.002	regulation of response to stress
GO:0046632	6.40×10 ⁻⁶	0.002	alpha-beta T cell differentiation
GO:0050730	6.44×10 ⁻⁶	0.002	regulation of peptidyl-tyrosine phosphorylation
GO:0048518	6.82×10 ⁻⁶	0.002	positive regulation of biological process
GO:0031347	7.28×10 ⁻⁶	0.002	regulation of defense response
GO:0023056	7.83×10 ⁻⁶	0.003	positive regulation of signaling
GO:0002285	8.38×10 ⁻⁶	0.003	lymphocyte activation involved in immune response
GO:0010647	8.91×10 ⁻⁶	0.003	positive regulation of cell communication
GO:0045087	8.94×10 ⁻⁶	0.003	innate immune response
GO:0002253	9.24×10 ⁻⁶	0.003	activation of immune response
GO:0007259	1.05×10 ⁻⁵	0.003	JAK-STAT cascade
GO:0033993	1.34×10 ⁻⁵	0.004	response to lipid
GO:0001816	1.48×10 ⁻⁵	0.004	cytokine production
GO:0043367	1.52×10 ⁻⁵	0.004	CD4-positive, alpha-beta T cell differentiation
GO:0051246	1.56×10 ⁻⁵	0.004	regulation of protein metabolic process
GO:0018108	1.64×10 ⁻⁵	0.005	peptidyl-tyrosine phosphorylation

GO:0050864	1.65×10 ⁻⁵	0.005	regulation of B cell activation
GO:0018212	1.98×10 ⁻⁵	0.005	peptidyl-tyrosine modification
GO:0002757	2.16×10 ⁻⁵	0.006	immune response-activating signal transduction
GO:0065007	2.17×10 ⁻⁵	0.006	biological regulation
GO:0006968	2.20×10 ⁻⁵	0.006	cellular defense response
GO:0070661	2.32×10 ⁻⁵	0.006	leukocyte proliferation
GO:0060255	2.32×10 ⁻⁵	0.006	regulation of macromolecule metabolic process
GO:0042228	2.40×10 ⁻⁵	0.006	interleukin-8 biosynthetic process
GO:0002294	2.48×10 ⁻⁵	0.006	CD4-positive, alpha-beta T cell differentiation involved in immune response
GO:0042093	2.48×10 ⁻⁵	0.006	T-helper cell differentiation
GO:0071396	2.61×10 ⁻⁵	0.006	cellular response to lipid
GO:0035710	2.63×10 ⁻⁵	0.006	CD4-positive, alpha-beta T cell activation
GO:0048522	2.74×10 ⁻⁵	0.006	positive regulation of cellular process
GO:0045088	2.97×10 ⁻⁵	0.007	regulation of innate immune response
GO:0050789	3.12×10 ⁻⁵	0.007	regulation of biological process
GO:0023052	3.32×10 ⁻⁵	0.007	signaling
GO:0044700	3.32×10 ⁻⁵	0.007	single organism signaling
GO:0002287	3.51×10 ⁻⁵	0.008	alpha-beta T cell activation involved in immune response
GO:0002293	3.51×10 ⁻⁵	0.008	alpha-beta T cell differentiation involved in immune response
GO:0007154	3.66×10 ⁻⁵	0.008	cell communication
GO:0080090	3.82×10 ⁻⁵	0.008	regulation of primary metabolic process
GO:0065009	3.95×10 ⁻⁵	0.008	regulation of molecular function
GO:0002521	4.00×10 ⁻⁵	0.008	leukocyte differentiation
GO:0030097	4.12×10 ⁻⁵	0.008	hemopoiesis
GO:0006909	4.23×10 ⁻⁵	0.009	phagocytosis
GO:0050900	4.36×10 ⁻⁵	0.009	leukocyte migration
GO:1902531	4.37×10 ⁻⁵	0.009	regulation of intracellular signal transduction
GO:0002292	4.49×10 ⁻⁵	0.009	T cell differentiation involved in immune response
GO:0042742	4.63×10 ⁻⁵	0.009	defense response to bacterium
GO:0002694	4.70×10 ⁻⁵	0.009	regulation of leukocyte activation
GO:0032268	4.89×10 ⁻⁵	0.009	regulation of cellular protein metabolic process
GO:0007166	5.53×10 ⁻⁵	0.010	cell surface receptor signaling pathway
GO:0006464	5.60×10 ⁻⁵	0.010	cellular protein modification process
GO:0036211	5.60×10 ⁻⁵	0.010	protein modification process
GO:0002764	5.72×10 ⁻⁵	0.010	immune response-regulating signaling pathway
GO:0006468	5.90×10 ⁻⁵	0.011	protein phosphorylation
GO:0048534	6.26×10 ⁻⁵	0.011	hematopoietic or lymphoid organ development
GO:0006897	6.89×10 ⁻⁵	0.012	endocytosis
GO:0002520	7.15×10 ⁻⁵	0.012	immune system development
GO:0016310	7.20×10 ⁻⁵	0.012	phosphorylation
GO:0001817	7.45×10 ⁻⁵	0.013	regulation of cytokine production
GO:0002700	7.57×10 ⁻⁵	0.013	regulation of production of molecular mediator of immune response
GO:0071216	7.66×10 ⁻⁵	0.013	cellular response to biotic stimulus
GO:0019222	8.20×10 ⁻⁵	0.014	regulation of metabolic process
GO:0046651	8.45×10 ⁻⁵	0.014	lymphocyte proliferation
GO:0048519	8.50×10 ⁻⁵	0.014	negative regulation of biological process
GO:0045089	8.55×10 ⁻⁵	0.014	positive regulation of innate immune response
GO:0009966	8.89×10 ⁻⁵	0.014	regulation of signal transduction
GO:0042060	9.05×10 ⁻⁵	0.014	wound healing
GO:0070663	9.31×10 ⁻⁵	0.015	regulation of leukocyte proliferation
GO:0030098	9.54×10 ⁻⁵	0.015	lymphocyte differentiation
GO:0050794	9.71×10 ⁻⁵	0.015	regulation of cellular process
GO:0032943	9.87×10 ⁻⁵	0.015	mononuclear cell proliferation
GO:0031399	9.88×10 ⁻⁵	0.015	regulation of protein modification process
GO:0032637	1.00×10 ⁻⁴	0.015	interleukin-8 production
GO:0043085	1.03×10 ⁻⁴	0.015	positive regulation of catalytic activity
GO:0044267	1.05×10 ⁻⁴	0.016	cellular protein metabolic process
GO:0043412	1.07×10 ⁻⁴	0.016	macromolecule modification
GO:0018193	1.08×10 ⁻⁴	0.016	peptidyl-amino acid modification
GO:2001236	1.11×10 ⁻⁴	0.016	regulation of extrinsic apoptotic signaling pathway
GO:0048523	1.18×10 ⁻⁴	0.017	negative regulation of cellular process
GO:0008625	1.40×10 ⁻⁴	0.020	extrinsic apoptotic signaling pathway via death domain receptors
GO:0044763	1.53×10 ⁻⁴	0.022	single-organism cellular process
GO:0051251	1.54×10 ⁻⁴	0.022	positive regulation of lymphocyte activation
GO:0032103	1.61×10 ⁻⁴	0.022	positive regulation of response to external stimulus
GO:0002696	1.74×10 ⁻⁴	0.024	positive regulation of leukocyte activation

GO:0019538	1.80×10 ⁻⁴	0.025	protein metabolic process
GO:0050670	1.81×10 ⁻⁴	0.025	regulation of lymphocyte proliferation
GO:0002699	1.84×10 ⁻⁴	0.025	positive regulation of immune effector process
GO:0030217	1.85×10 ⁻⁴	0.025	T cell differentiation
GO:0032944	1.94×10 ⁻⁴	0.026	regulation of mononuclear cell proliferation
GO:0050865	1.95×10 ⁻⁴	0.026	regulation of cell activation
GO:0050853	1.95×10 ⁻⁴	0.026	B cell receptor signaling pathway
GO:0023014	2.01×10 ⁻⁴	0.026	signal transduction by phosphorylation
GO:0070665	2.11×10 ⁻⁴	0.027	positive regulation of leukocyte proliferation
GO:0045414	2.19×10 ⁻⁴	0.028	regulation of interleukin-8 biosynthetic process
GO:2000116	2.21×10 ⁻⁴	0.028	regulation of cysteine-type endopeptidase activity
GO:1901701	2.23×10 ⁻⁴	0.028	cellular response to oxygen-containing compound
GO:0002697	2.30×10 ⁻⁴	0.029	regulation of immune effector process
GO:0071222	2.50×10 ⁻⁴	0.031	cellular response to lipopolysaccharide
GO:0031323	2.51×10 ⁻⁴	0.031	regulation of cellular metabolic process
GO:0007260	2.55×10 ⁻⁴	0.031	tyrosine phosphorylation of STAT protein
GO:0042221	2.68×10 ⁻⁴	0.033	response to chemical
GO:0030888	2.78×10 ⁻⁴	0.034	regulation of B cell proliferation
GO:0043281	2.84×10 ⁻⁴	0.034	regulation of cysteine-type endopeptidase activity involved in apoptotic process
GO:2000416	2.99×10 ⁻⁴	0.035	regulation of eosinophil migration
GO:0070229	3.00×10 ⁻⁴	0.035	negative regulation of lymphocyte apoptotic process
GO:0048008	3.02×10 ⁻⁴	0.035	platelet-derived growth factor receptor signaling pathway
GO:0032677	3.04×10 ⁻⁴	0.035	regulation of interleukin-8 production
GO:0098542	3.06×10 ⁻⁴	0.035	defense response to other organism
GO:0050867	3.06×10 ⁻⁴	0.035	positive regulation of cell activation
GO:0015629	3.08×10 ⁻⁴	0.035	actin cytoskeleton
GO:0002367	3.12×10 ⁻⁴	0.036	cytokine production involved in immune response
GO:0070228	3.16×10 ⁻⁴	0.036	regulation of lymphocyte apoptotic process
GO:0035025	3.19×10 ⁻⁴	0.036	positive regulation of Rho protein signal transduction
GO:2001233	3.27×10 ⁻⁴	0.037	regulation of apoptotic signaling pathway
GO:0033007	3.29×10 ⁻⁴	0.037	negative regulation of mast cell activation involved in immune response
GO:0071219	3.58×10 ⁻⁴	0.040	cellular response to molecule of bacterial origin
GO:1901700	3.61×10 ⁻⁴	0.040	response to oxygen-containing compound
GO:0070887	3.72×10 ⁻⁴	0.041	cellular response to chemical stimulus
GO:0002440	3.87×10 ⁻⁴	0.042	production of molecular mediator of immune response
GO:0052548	4.08×10 ⁻⁴	0.044	regulation of endopeptidase activity
GO:0045416	4.08×10 ⁻⁴	0.044	positive regulation of interleukin-8 biosynthetic process
GO:0097191	4.18×10 ⁻⁴	0.045	extrinsic apoptotic signaling pathway
GO:0002218	4.31×10 ⁻⁴	0.046	activation of innate immune response
GO:0002274	4.40×10 ⁻⁴	0.046	myeloid leukocyte activation
GO:0001932	4.52×10 ⁻⁴	0.047	regulation of protein phosphorylation