

**Appendix 2.** Highly represented clusters of genes in the differential expression of data.

<b>Immune Cluster, Enrichment Score: 5.17</b>	
ID	GO term
GO:0048584	positive regulation of response to stimulus
GO:0050778	positive regulation of immune response
GO:0002684	positive regulation of immune system process
GO:0009617	response to bacterium
GO:0002252	immune effector process
GO:0002253	activation of immune response
Genes	Gene name
B2M	beta-2-microglobulin
CD38	CD38 molecule
CCL5	chemokine (C-C motif) ligand 5
C3AR1	complement component 3a receptor 1
C4A	complement component 4A (Rodgers blood group)
C4B	complement component 4B (Chido blood group)
CFB	complement factor B
ERAP	endoplasmic reticulum aminopeptidase 1
GCH1	GTP cyclohydrolase 1
IDO1	indoleamine 2,3-dioxygenase 1
IFNB1	interferon, beta 1, fibroblast
IL29	interleukin 29 (interferon, lambda 1)
IL6	interleukin 6 (interferon, beta 2)
IL8	interleukin 8
JAK2	Janus kinase 2
MYD88	myeloid differentiation primary response gene (88)
NFKBIA	nuclear factor of $\kappa$ light polypeptide gene enhancer in B-cells inhibitor, alpha
PDL1	programmed cell death 1 ligand 2
STAT1	signal transducer and activator of transcription 1, 91kDa
TLR3	toll-like receptor 3
TAP2	transporter 2, ATP-binding cassette, sub-family B (MDR/TAP)
TNFSF13B	tumor necrosis factor (ligand) superfamily, member 13b
<b>NF-<math>\kappa</math>B pathway cluster, Enrichment Score: 3.57</b>	

ID	GO term
GO:0010740	positive regulation of protein kinase cascade
GO:0043122	regulation of I- $\kappa$ B kinase/NF- $\kappa$ B cascade
GO:0043123	positive regulation of I- $\kappa$ B kinase/NF- $\kappa$ B cascade
GO:0010627	regulation of protein kinase cascade
GO:0010647	positive regulation of cell communication
GO:0009967	positive regulation of signal transduction
Genes	Gene name
B2M	beta-2-microglobulin
	caspase 1, apoptosis-related cysteine peptidase
CASP1	(interleukin 1, beta, convertase)
CD38	CD38 molecule
CCL5	chemokine (C-C motif) ligand 5
C3AR1	complement component 3a receptor 1
C4A	complement component 4A (Rodgers blood group)
C4B	complement component 4B (Chido blood group)
CFB	complement factor B
DICER1	dicer 1, ribonuclease type III
DDIT3	DNA-damage-inducible transcript 3
EGR1	early growth response 1
ERAP	endoplasmic reticulum aminopeptidase 1
EIF2AK2	eukaryotic translation initiation factor 2-alpha kinase 2
GCH1	GTP cyclohydrolase 1
	guanine nucleotide binding protein (G protein), beta
GNB4	polypeptide 4
IDO1	indoleamine 2,3-dioxygenase 1
IFNB1	interferon, beta 1, fibroblast
IL29	interleukin 29 (interferon, lambda 1)
IL6	interleukin 6 (interferon, beta 2)
IL8	interleukin 8
JAK2	Janus kinase 2
JUNB	jun B proto-oncogene
MYD88	myeloid differentiation primary response gene (88)
	nuclear factor of $\kappa$ light polypeptide gene enhancer in B-
NFKBIA	cells inhibitor, alpha
PMAIP1	phorbol-12-myristate-13-acetate-induced protein 1

PML	promyelocytic leukemia; similar to promyelocytic leukemia protein isoform 1
PPP1R15A	protein phosphatase 1, regulatory (inhibitor) subunit 15A
STAT1	signal transducer and activator of transcription 1, 91kDa
SP100	SP100 nuclear antigen
TLR3	toll-like receptor 3
TAP2	transporter 2, ATP-binding cassette, sub-family B (MDR/TAP)
TNFSF13B	tumor necrosis factor (ligand) superfamily, member 13b
<b>Cell death cluster, Enrichment Score: 3.37</b>	
ID	GO term
GO:0042981	regulation of apoptosis
GO:0043067	regulation of programmed cell death
GO:0010941	regulation of cell death
GO:0006915	apoptosis
GO:0012501	programmed cell death
GO:0008219	cell death
GO:0016265	death
Genes	Gene name
ACTN2	actinin, alpha 2
BIRC3	baculoviral IAP repeat-containing 3
CASP1	caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase)
CD38	CD38 molecule
CSF1	colony stimulating factor 1 (macrophage)
DDIT3	DNA-damage-inducible transcript 3
GCH1	GTP cyclohydrolase 1
IDO1	indoleamine 2,3-dioxygenase 1
IFIH1	interferon induced with helicase C domain 1
IFI6	interferon, alpha-inducible protein 6
IFNB1	interferon, beta 1, fibroblast
IFI16	interferon, gamma-inducible protein 16
IL29	interleukin 29 (interferon, lambda 1)
IL6	interleukin 6 (interferon, beta 2)
JAK2	Janus kinase 2
LGALS9	lectin, galactoside-binding, soluble, 9

MYD88	myeloid differentiation primary response gene (88)
MX1	myxovirus (influenza virus) resistance 1, interferon-inducible protein p78 (mouse)
BST2	NPC-A-7; bone marrow stromal cell antigen 2
NFKBIA	nuclear factor of $\kappa$ light polypeptide gene enhancer in B-cells inhibitor, alpha
PMAIP1	phorbol-12-myristate-13-acetate-induced protein 1 promyelocytic leukemia; similar to promyelocytic leukemia
PML	protein isoform 1
SECTM1	secreted and transmembrane 1
STAT1	signal transducer and activator of transcription 1, 91kDa
SLC1A3	solute carrier family 1 (glial high affinity glutamate transporter), member 3
SOD2	superoxide dismutase 2, mitochondrial
TRAF1	TNF receptor-associated factor 1
TLR3	toll-like receptor 3
TRIM38	tripartite motif-containing 38
TNFSF10	tumor necrosis factor (ligand) superfamily, member 10 tumor necrosis factor receptor superfamily, member 10d,
TNFSRF10D	decoy with truncated death domain
TNFAIP3	tumor necrosis factor, alpha-induced protein 3

**Inflammatory cluster, Enrichment Score: 3.21**

ID	GO term
GO:0006952	defense response
GO:0005125	cytokine activity
GO:0006954	inflammatory response
GO:0009611	response to wounding
GO:0008009	chemokine activity
GO:0042379	chemokine receptor binding
GO:0042330	taxis
GO:0006935	chemotaxis
GO:0007610	behaviour
GO:0007626	locomotory behaviour
GO:0007166	cell surface receptor linked signal transduction
GO:0007186	G-protein coupled receptor protein signaling pathway
Genes	Gene name

ACTN2	actinin, alpha 2
APOL1	apolipoprotein L, 1
BIRC3	baculoviral IAP repeat-containing 3
CASP1	caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase)
CASP7	caspase 7, apoptosis-related cysteine peptidase
CD38	CD38 molecule
DDIT3	DNA-damage-inducible transcript 3
EIF2AK2	eukaryotic translation initiation factor 2-alpha kinase 2
GCH1	GTP cyclohydrolase 1
IDO1	indoleamine 2,3-dioxygenase 1
IFIH1	interferon induced with helicase C domain 1
IFI6	interferon, alpha-inducible protein 6

This table is an abbreviated version of the output generated from microarray data analysed via the functional clustering tool on the Database for Annotation, Visualization and Integrated Discovery (DAVID) website. The main biological processes represented in the table relate to immune response and to apoptosis. The biological process 'response to bacterium' appears likely due to the common genes shared this biological cluster and genes involved in viral response. *Abbreviation:* Gene Ontology (GO).