

**Molecular and metabolomic changes in the proximal colon of pigs infected with *Trichuris suis***

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Supplemental Table S8

Supplemental Table S8: Clustered Down-regulation of Physiology and Immunology DEGs

Gene	Functional Categorization	52 DPI w worms vs Control Fold	EDGE FDR Adj p value	52 DPI w/o worms vs Control Fold	EDGE FDR Adj p value	(52 DPI Inf w/o worms vs w Worms Fold)	EDGE FDR Adj p value	(21 DPI Inf vs Control) Fold	EDGE FDR Adj p value
<b>Antigen Processing and Presentation</b>									
ADAM23	Positive Regulator of Antigen Presentation (27317750); ZnMc SF								
B2M	Positive Regulator of Surface Expression of MHC Class I (16181333); Ig SF	-2.0	5.66E-04						
CD74	MHC Chaperone (22306692); MHC2-interact SF	-2.5	2.92E-04			-2.0	7.72E-03		
CITA	Positive Regulator of MHC Class I and II Expression (14678199, (11486010); LRR SF					-1.7	4.54E-02		
CLEC4F	Glycolipid Antigen Presentation (23762286)	-4.6	4.26E-02						
CTSD	Antigen Processing and Presentation (16920965); Pepsin Retropepsin-like SF					-1.6	1.68E-02		
ERAP2	Antigen Processing and Presentation (12799365); Type 2 IFN Induced (12799365); GluZincin SF	-1.6	4.60E-02						
LGALS3BP	Antigen Processing and Presentation (15231701); SRCR SF	-1.9	3.18E-02						
PLCB2	(+) Regulator of B Cell Activation (20871625); PH-like SF; EF-hand-like SF; PI-PLC GDP SF SF; C2 SF	-2.0	1.74E-03						
PSMB10	Immunoproteasome Protease (9551082); Ntn Hydrolase SF; Pr Beta C SF	-1.8	3.20E-03						
PSMB8	Immunoproteasome Protease; Ntn Hydrolase SF; Pr Beta C SF	-1.6	2.91E-02						
PSMB9	Immunoproteasome Protease; Ntn Hydrolase SF; Pr Beta C SF	-1.8	9.65E-03						
PSME1	Antigen Processing and Presentation (12200048); PA28 Alpha SF; PA28 Beta SF	-1.6	5.26E-03						
SLA-11	MHC Class I SF	-2.3	1.08E-04			-1.6	4.46E-02		
SLA-2	MHC Class I SF					-1.7	5.02E-02		
SLA-3	MHC Class I SF	-2.3	1.89E-04					-1.8	3.72E-02
SLA-8	MHC Class I SF	-1.6	1.98E-02			-1.6	4.54E-02		
SLA-DMA	MHC Class II SF	-2.1	4.61E-03					-1.9	1.99E-02
SLA-DMB	MHC Class II SF	-2.2	8.10E-04			-1.7	2.70E-02	-2.4	3.61E-04
SLA-DOA	MHC Class II SF	-2.4	3.71E-03						
SLA-DQA1	MHC Class II SF	-2.3	3.27E-03			-2.0	1.33E-02		
SLA-DQB1	MHC Class II SF	-2.3	1.13E-02					-2.5	1.55E-03
SLA-DRA	MHC Class II SF	-2.4	1.06E-03			-2.1	5.53E-03		
SLA-DRB1	MHC Class II SF	-2.2	5.60E-03			-2.0	1.25E-02		
TAP1	Peptide Transporter; ABC Membrane SF	-1.9	5.73E-03			-1.7	2.23E-02		
TAP2	Peptide Transporter; ABC Membrane SF	-1.6	1.31E-02						
<b>Cytokines, Chemokines and Receptors</b>									
ADIPOQ	Adipocytokine; C1q SF	-4.2	5.00E-04					-2.2	4.06E-03
ANGPTL4	Adipocytokine; FReD SF	-2.9	1.19E-03	-2.0	4.70E-02				
BMP3	Bone Morphogenetic Protein (BMP) Family; TGFβ SF							-2.5	2.94E-03
CCL2	CCR2 Ligand; CCL Chemokine SF							-2.0	1.38E-03
CCL21	CCR7 Ligand; CCL Chemokine SF	-1.7	4.86E-02						
CCL3L1	CCL Chemokine SF							-5.6	2.84E-03
CCL3L2	CCL Chemokine SF	-5.4	6.08E-03					-10.6	5.90E-03
CCL4	CCR5 Ligand; CCL Chemokine SF	-2.4	1.16E-02						
CCL8	CCR1 Ligand; CCL Chemokine SF	-2.6	7.80E-03					-2.8	4.24E-02
CCR5	CCL3 Receptor; CCL4 Receptor; CCL5 Receptor; CCL Chemokine Receptor SF	-1.8	5.37E-03						
CCR9	CCL25 Receptor; CCL Chemokine Receptor	-3.0	5.47E-02					-5.8	1.14E-02
CNTRF	Cytokine Receptor (10812968); FN3 SF; Ig SF	-3.5	4.40E-04			-2.9	3.11E-03		
CSF1	Cytokine; Positive Regulator of Macrophage Development.	-1.5	3.58E-02			-1.5	1.68E-02		
CSF1R	CSF1 Receptor	-1.7	3.70E-03			-1.5	4.54E-02		
CSF2RB	GM-CSF/IL-3/IL-5 receptor Common Beta-Chain; Erythropoietin Receptor SF; FN3 SF; IL6Ra-bind SF					-1.5	4.36E-02		
CXCL10	Type 2 IFN Induced; CXCR3 Ligand; CXC Chemokine SF	-3.4	3.22E-02			-4.4	7.18E-03		
CXCL11	Type 2 IFN Induced; CXCR3 Ligand; CXC Chemokine SF	-4.8	3.33E-02						
CXCL12	CXCR4 Ligand; CXC Chemokine SF	-2.7	6.31E-04			-2.8	2.48E-04	-2.3	5.03E-03
CXCL13	CCL10 Ligand; CXCR5 Ligand; CXC Chemokine SF							-5.8	5.77E-08
CXCL9	Type 2 IFN Induced; CXCR3 Ligand; CXC Chemokine SF	-7.5	6.02E-04			-5.7	3.65E-03	-6.1	7.08E-08
CXCR3	CXCL9 Receptor; CXCL10 Receptor; CXCL11 Receptor; CXCL Chemokine Receptor SF	-2.2	1.38E-02						
EBI3	FN3 SF	-2.0	4.52E-02						
FLT3LG	Flt3 Lig SF	-1.8	3.71E-03						
GDF5	Bone Morphogenetic Protein (BMP) Family; TGFβ SF	-3.8	1.25E-02	-3.3	1.09E-03				
IGF2	IIGF-like SF	-3.2	5.66E-04			-2.2	2.80E-02		
IL10RA	Cytokine Receptor; Interferon-binding SF	-1.9	8.53E-04			-1.5	3.17E-02		
IL12B	Cytokine; IL12p40 SF	-4.7	1.02E-02						
IL12RB2	IL-12 Receptor; Th1-Associated (10666772); Lep Receptor Ig SF	-2.3	4.34E-02						
IL15	Th1-Associated (12759422); IL15 SF; IL2G Receptor Binding SF							-2.7	3.09E-02
IL17RA	IL-17 Receptor; TIR 2 SF	-1.5	1.36E-02						
IL2RB	IL2 Receptor; IL15 Receptor; FN3 SF					-1.7	2.69E-02		
IL34	Cytokine; IL34 SF	-2.5	3.63E-04			-2.1	4.12E-03		
KIT	Ig SF; PKC-like SF							-2.3	2.04E-02
LIFR	LIF Receptor; FN3 SF	-2.1	4.05E-04			-1.7	7.18E-03	-2.6	3.03E-05
LTBP3	TGFβ Binding Protein EGF CA SF	-1.6	4.59E-02						
LTBP4	TGFβ Binding Protein EGF CA SF	-2.2	9.11E-05			-1.8	5.61E-03		
MDK	Cytokine; (+) Regulator of Inflammation (30217121); PTN MK N SF	-2.0	1.75E-02						
PDGFC	Angiogenesis (20566880); CUB SF; PDGF SF							-2.3	2.70E-03
PF4	CXC Chemokine SF							-3.2	1.71E-02
PGF	PDGF SF	-1.9	4.93E-02						
RARRES2	Adipocytokine (17767914)	-1.6	4.83E-02						
THNSL2	Cytokine (19877052); Trp-synth-beta II SF	-2.3	1.15E-03						
TNFSF11	Positive Regulator of Microfold Cell Differentiation (22778137); TH1-Associated (14607948); TNF SF							-4.0	1.83E-03
TNFSF13B	(+) Regulator of B Cell Activation (16797504); Th1-Associated (15843552); TNF SF							-2.5	2.69E-04
XCL1	Th1-associated (14573634); XCR1 Receptor Ligand	-5.2	1.96E-06			-2.7	5.72E-03	-3.3	3.63E-03
<b>Extracellular Matrix and Remodeling</b>									
ADAM1A	Matelloprotease; Pep M12B Propep SF; ZnMc SF; Reprolysin SF; Disintegrin SF; ADAM CR SF							-52.9	1.87E-02
ADAMTS19	Matelloprotease; TSP 1 SF							-2.6	1.33E-02
ADAMTS5	Matelloprotease; Pep M12B Propep SF; ZnMc SF; TSP 1 SF; ADAM Spacer1 SF							-2.2	1.84E-02
ADAMTS8	Matelloprotease; TSP 1 SF					-1.9	1.07E-02		
ADAMTSL5	Matelloprotease; TSP 1 SF	-2.1	3.76E-02						
ANPEP	Aminopeptidase; GluZincin SF	-5.2	3.11E-04	-2.5	4.13E-02				
ASTL	Matelloprotease (15087446); ZnMc SF	-37.2	2.34E-02					-49.0	2.75E-02
BSG	Extracellular Matrix Remodeling (26084217); Treg-associated (23665204); Ig SF; KU SF					-1.5	2.27E-02		
COL1A1	Collagen SF							-1.7	3.72E-02
COL22A1	Collagen SF							-56.8	1.34E-02
COL25A1	Collagen SF							-5.6	7.28E-04
COL4A3	Collagen SF	-2.4	4.44E-02						
COL4A6	Collagen SF	-1.6	3.19E-02			-1.6	4.50E-02		
COL6A5	Collagen SF							-2.0	1.50E-02
COL6A6	Collagen SF	-7.8	1.07E-07			-5.7	3.03E-06	-5.7	3.51E-08
CST3	Cysteine Protease Inhibitor; Extracellular Matrix Formation/Degradation (19468292); Cystatin (CY) SF					-1.9	7.80E-03	-2.3	3.93E-04
CSTA	Protease Inhibitor; CY SF	-1.9	2.56E-02						
CTBS	Asn-linked Glycoprotein Catabolism; GH18 Chitinase-like SF	-3.6	8.38E-03			-2.9	4.10E-02		







IFI27	Type 1 IFN Induced (20939681); Antiviral Response (27194766); Ifi-6-16 SF	-5.8	7.91E-04					-3.9	1.12E-02		
IFI44	Type 1 IFN Induced (7925411); Antiviral Immune Response (22896602); TLD SF	-2.9	1.80E-02					-2.7	2.55E-02		
IFI44L	Type 1 IFN Induced (21478870); Antigen Processing and Presentation (11021531); Ras-like GTPase SF	-2.3	3.75E-03					-2.0	1.59E-02		
IFITM1	Type 1 IFN Induced (14980080); Antiviral Immune Response (22344284); CD225 SF	-2.6	1.45E-02								
IFITM1L2*	CD225 SF	-2.3	6.10E-05					-1.7	8.91E-03		
IRF8	Type 1 IFN-Induced; Type 1 IFN Signaling (15864272); IRF SF; IRF4 Subfamily (11997525)	-1.6	1.94E-02								
MAP2K6	Type 1 IFN Induced (15644321); Antiviral Response (15229216); PKC-like SF	-1.8	3.77E-02					-1.8	4.90E-02		
MOV10	Type 1 IFN Induced (21478870); Antiviral Response (26842467); AAA 11 SF; UvrD C 2 SF	-1.7	1.22E-03					-1.5	1.20E-02		
MPEG1	Type 1 and 2 IFN Induced (23257510); Antibacterial Responses (23257510); MACPF SF	-2.2	4.93E-03					-2.1	5.72E-03	-2.1	7.99E-03
OASL	Type 1 IFN-Induced (10087211); Antiviral Response (22531715); NT Pol-beta-like SF; OAS1 C SF; UBQ SF	-14.4	5.68E-03					-12.1	1.20E-02		
PARP9	Type 2 IFN Induced (16809771); Antiviral Response (26479788); Macro SF; ADP Ribosyl SF							-1.9	1.04E-03		
RNF213	Type 1 IFN Induced (10547268); RING Ubox SF	-1.8	4.61E-02					-1.8	3.66E-02		
RSAD2	Type 1 IFN-induced (9391139); Antiviral Immune Response (20308629, 22377585); Viperin SF	-4.4	2.06E-02					-4.3	2.28E-02		
THAP12	Type 1 IFN Induced (21910972); Antiviral Response (21910972); THAP SF; Dimer Tnp hAT SF	-10.5	4.27E-02					-13.4	2.27E-02		