

Supplementary Table S8. Top 50 canonical pathways identified using IPA in MaSC-enriched population from CAS and SPI-fed Wnt1-Tg mice (Total of 907 genes)

Ingenuity Canonical Pathway	-log (P-value)	P-value	Ratio	Molecules
Atherosclerosis Signaling	6.51E+00	3.09E-07	1.71E-01	ALOX15,VCAM1,SELE (includes EG:20339),IL1A,MMP3,CXCR4,CMA1,CLU,MM P13,IL6,CCL11,COL1A2,APOC1,COL1A1,COL5 A3,IL18 (includes EG:16173),SELP,IL1RN,LPL,SERPINA1,TNF,CO L3A1
Acute Phase Response Signaling	6.13E+00	7.41E-07	1.53E-01	MAP2K6,IL1A,SERPING1,FN1,SAA2,MAP3K5, MAPK13,IL6,C1R,NFKBIA,MRAS,SERPINA1,SE RPINE1,SAA1,C1S,MAP3K1,SERPINF1,VWF,C5 ,IL1R1,CRABP1,IL18 (includes EG:16173),RBP7,IL1RN,CRABP2,TNF,C2
Hepatic Fibrosis / Hepatic Stellate Cell Activation	5.01E+00	9.77E-06	1.50E-01	VCAM1,IL1A,FN1,CXCL9,EDNRB,FGFR2,MMP 13,IL6,CCL5,IL1R1,COL1A2,COL1A1,TLR4,LY9 6 (includes EG:17087),IGF1,PDGFRA,CCL21,FIGF,STAT1,T NF,COL3A1,PDGFRB
LXR/RXR Activation	4.62E+00	2.40E-05	1.40E-01	SCD,IL1A,VTN,SERPINF1,CLU,SAA2,ABCG1,IL 6,IL1R1,APOC1,FDFT1,TLR4,LY96 (includes EG:17087),IL18 (includes EG:16173),IL1RN,LPL,SERPINA1,SAA1,TNF
Communication between Innate and Adaptive Immune Cells	3.98E+00	1.05E-04	1.19E-01	B2M,IL1A,CCL5,IL6,CXCL10,TLR4,IL18 (includes EG:16173),HLA-E,IL1RN,HLA- B,CCL3L1/CCL3L3,TNF,HLA-C

Dendritic Cell Maturation	3.62E+00	2.40E-04	1.03E-01	B2M,IL1A,IL6,MAPK13,PIK3R4,FCGR2B,COL1A2,COL1A1,TLR4,IL18 (includes EG:16173),COL5A3,NFKBIA,IL1RN,FSCN1,HLA-B,STAT1,TNF,HLA-C,COL3A1
NF-κB Signaling	3.52E+00	3.02E-04	1.20E-01	SIGIRR,MAP2K6,IL1A,TGFBR3,FGFR2,TNFAIP3,IL1R1,PIK3R4,TLR4,IL18 (includes EG:16173),BMPR1B,NFKBIA,IL1RN,NTRK3,PLCG2,PDGFRA,MRAS,EIF2AK2,TNF,CARD11,PDGFRB
LPS/IL-1 Mediated Inhibition of RXR Function	3.44E+00	3.63E-04	1.02E-01	GSTA3,IL1A,CPT1A,MAP3K1,ABCG1,CHST12,IL1R1,APOC1,GSTT2/GSTT2B,TLR4,GSTT1,MAOB,IL18 (includes EG:16173),LY96 (includes EG:17087),ALDH1A1,SCARB1,IL1RN,ALDH1A3,SULT1A1,FABP4,CYP2C19,TNF,ALDH3A1,ACSL1
Complement System	3.34E+00	4.57E-04	2.00E-01	C1R,SERPING1,C1S,C1QC,C5,CFH,C2
Role of Cytokines in Mediating Communication between Immune Cells	3.28E+00	5.25E-04	1.45E-01	IL1A,IL18 (includes EG:16173),IL20,IL1RN,IL6,CSF3,IL24,TNF
Role of Macrophages, Fibroblasts and Endothelial Cells in Rheumatoid Arthritis	3.22E+00	6.03E-04	9.28E-02	MAP2K6,IL1A,FN1,SFRP2,MMP3,MMP13,CCL5,GNA14,IL6,PIK3R4,CCND1,IL18R1,NFKBIA,MRAS,PLCB1,FIGF,PRKD1,WNT5B,ADAMTS4,SELE (includes EG:20339),VCAM1,C5,IL1R1,TLR4,IL18 (includes EG:16173),PLCB4,IL1RN,PLCG2,NFATC2,PRKCH,TNF
Pathogenesis of Multiple Sclerosis	3.16E+00	6.92E-04	4.44E-01	CXCL10,CXCL9,CCL5,CXCL11

Role of Osteoblasts, Osteoclasts and Chondrocytes in Rheumatoid Arthritis	3.14E+00	7.24E-04	1.05E-01	MAP2K6,IL1A,SFRP2,MMP3,MMP13,IL6,MAP3K5,PIK3R4,IL18R1,NFKBIA,IGF1,ADAMTS5,WNT5B,BMP8A,ADAMTS4,CTSK,SPP1 (includes EG:20750),IL1R1,GSN,COL1A1,BMPR1B,IL18 (includes EG:16173),IL1RN,NFATC2,TNF
Role of Hypercytokinemia/hyperchemokinaemia in the Pathogenesis of Influenza	3.12E+00	7.59E-04	1.59E-01	CXCL10,IL1A,IL18 (includes EG:16173),IL1RN,CCL5,IL6,TNF
Role of Pattern Recognition Receptors in Recognition of Bacteria and Viruses	3.12E+00	7.59E-04	1.32E-01	PTX3,OAS1,C1QC,C5,CCL5,IL6,PIK3R4,IFIH1,TLR4,PLCG2,PRKCH,EIF2AK2,TNF,PRKD1
Graft-versus-Host Disease Signaling	2.93E+00	1.17E-03	1.60E-01	IL1A,IL18 (includes EG:16173),HLA-E,IL1RN,HLA-B,IL6,TNF,HLA-C
Interferon Signaling	2.92E+00	1.20E-03	1.94E-01	IFIT3,OAS1,IFI35,IRF9,PSMB8,STAT1,TAP1
VDR/RXR Activation	2.86E+00	1.38E-03	1.48E-01	CXCL10,SERPINB1,IGFBP6,SPP1 (includes EG:20750),CYP24A1,TRPV6,MXD1,PRKCH,HES1 (includes EG:15205),CCL5,THBD,PRKD1
HMGB1 Signaling	2.73E+00	1.86E-03	1.30E-01	MAP2K6,SELE (includes EG:20339),IL1A,VCAM1,MAPK13,IL1R1,PIK3R4,TLR4,RHOV,RND3,MRAS,SERPINE1,TNF
Activation of IRF by Cytosolic Pattern Recognition Receptors	2.63E+00	2.34E-03	1.25E-01	IFIH1,NFKBIA,ZBP1,IRF9,IL6,STAT1,IFIT2,TNF,ISG15
Leukocyte Extravasation Signaling	2.52E+00	3.02E-03	1.01E-01	CLDN10,TIMP3,VCAM1,MMP3,CXCR4,GNAI1,THY1,MMP13,MAPK13,CLDN7,NCF4,PIK3R4,CDH5,CLDN8,WAS,PLCG2,PRKCH,MMP12,PRKD1,MMP19
Starch and Sucrose Metabolism	2.51E+00	3.09E-03	5.42E-02	ENPP3,NUDT5,UGT1A6,PGM5,HPSE,PYGB,PYGL,ENPP2,MGAM

Xenobiotic Metabolism Signaling	2.49E+00	3.24E-03	8.50E-02	MAP2K6,IL1A,UGT1A6,IL6,MAP3K5,MAPK13,PIK3R4,CEL,GSTT2/GSTT2B,GSTT1,MAOB,ALDH1A1,ALDH1A3,MRAS,ALDH3A1,PRKD1,GSTA3,MAP3K1,CHST12,CYP1B1,SULT1A1,PRKCH,CYP2C19,TNF,EIF2AK3
Intrinsic Prothrombin Activation Pathway	2.46E+00	3.47E-03	1.88E-01	COL1A2,COL1A1,COL5A3,Klk1b1 (includes others),THBD,COL3A1
Antigen Presentation Pathway	2.38E+00	4.17E-03	1.50E-01	B2M,HLA-E,HLA-B,PSMB8,TAP1,HLA-C
IL-10 Signaling	2.30E+00	5.01E-03	1.28E-01	MAP2K6,IL1A,IL18 (includes EG:16173),NFKBIA,IL1RN,MAPK13,IL1R1,IL6,FCGR2B,TNF
IL-1 Signaling	2.27E+00	5.37E-03	1.13E-01	MAP2K6,ADCY9,GNB4,IL1A,NFKBIA,MAP3K1,MRAS,GNAI1,MAPK13,GNA14,IL1R1,ADCY7
Arginine and Proline Metabolism	2.25E+00	5.62E-03	5.68E-02	AOC3,MAOB,ALDH1A1,ALDH1A3,LOXL1,CKMT1A/CKMT1B,ALDH3A1,P4HA2,BCKDHB,ARG1
Thyroid Cancer Signaling	2.09E+00	8.13E-03	1.67E-01	CXCL10,Klk1b1 (includes others),BDNF,NTRK3,MRAS,RET,CCND1
Sphingosine-1-phosphate Signaling	2.06E+00	8.71E-03	1.06E-01	ADCY9,GNAI1,GNA14,PIK3R4,S1PR3,RHOV,PLCB4,RND3,PLCG2,PDGFRA,PLCB1,ADCY7,PDGFRB
Renin-Angiotensin Signaling	2.06E+00	8.71E-03	1.03E-01	ADCY9,MAP3K1,REN,MAPK13,CCL5,PIK3R4,PLCG2,MRAS,PRKCH,STAT1,ADCY7,TNF,PRKD1
±-Adrenergic Signaling	2.03E+00	9.33E-03	1.05E-01	ADRA2A,ADCY9,GNB4,PLCG2,MRAS,GNAI1,PTYGB,PYGL,PRKCH,ADCY7,PRKD1
Allograft Rejection Signaling	2.03E+00	9.33E-03	7.37E-02	B2M,H2-Q5,HLA-E,HLA-B,H2-T10/H2-T22,TNF,HLA-C

Differential Regulation of Cytokine Production in Macrophages and T Helper Cells by IL-17A and IL-17F	2.01E+00	9.77E-03	2.22E-01	CCL5,IL6,CSF3,TNF
Cholecystokinin/Gastrin-mediated Signaling	1.94E+00	1.15E-02	1.13E-01	MAP2K6,RHOV,PLCB4,IL1A,IL18 (includes EG:16173),RND3,IL1RN,MRAS,PLCB1,PRKCH,TNF,PRKD1
Production of Nitric Oxide and Reactive Oxygen Species in Macrophages	1.94E+00	1.15E-02	8.57E-02	MAP3K1,CLU,MAPK13,NCF4,MAP3K5,PIK3R4,APOC1,TLR4,RHOV,NFKBIA,RND3,PPP1R14D,PLCG2,SERPINA1,PRKCH,STAT1,TNF,PRKD1
IL-17A Signaling in Gastric Cells	1.93E+00	1.17E-02	2.00E-01	CXCL10,MAPK13,CCL5,TNF,CXCL11
Oncostatin M Signaling	1.87E+00	1.35E-02	1.71E-01	TIMP3,MMP3,MRAS,MMP13,CHI3L1,STAT1
Histidine Metabolism	1.86E+00	1.38E-02	6.25E-02	AOC3,MAOB,HAL,ALDH1A1,ALDH1A3,ALDH3A1,ASPA
Melatonin Signaling	1.83E+00	1.48E-02	1.12E-01	MAP2K6,PLCB4,PLCG2,GNAI1,PLCB1,RORC,PRKCH,GNA14,PRKD1
Role of NFAT in Cardiac Hypertrophy	1.82E+00	1.51E-02	8.57E-02	MAP2K6,ADCY9,LIF,MAP3K1,GNAI1,IL6,MAPK13,GNA14,PIK3R4,GNB4,PLCB4,IGF1,PLCG2,MRAS,PLCB1,PRKCH,ADCY7,PRKD1
IL-6 Signaling	1.81E+00	1.55E-02	1.05E-01	MAP2K6,IL1A,MAPK13,IL1R1,IL6,PIK3R4,COL1A1,IL18 (includes EG:16173),NFKBIA,IL1RN,MRAS,TNFAIP6,TNF
Chemokine Signaling	1.79E+00	1.62E-02	1.23E-01	PLCB4,CXCR4,PLCG2,MRAS,GNAI1,PLCB1,MAPK13,CCL5,CCL11
IL-17 Signaling	1.79E+00	1.62E-02	1.22E-01	CXCL10,MAP2K6,MMP3,MRAS,MAPK13,IL6,PIK3R4,CCL11,CXCL11
Bile Acid Biosynthesis	1.76E+00	1.74E-02	6.67E-02	HADHB,CEL,ALDH1A1,ALDH1A3,ADH1C,ALDH3A1,HADHA

Differential Regulation of Cytokine Production in Intestinal Epithelial Cells by IL-17A and IL-17F	1.72E+00	1.91E-02	1.74E-01	IL1A,CCL5,CSF3,TNF
Ascorbate and Aldarate Metabolism	1.72E+00	1.91E-02	5.06E-02	ALDH1A1,ALDH1A3,ALDH3A1,BCKDHB
Aryl Hydrocarbon Receptor Signaling	1.68E+00	2.09E-02	8.81E-02	GSTA3,IL1A,IL6,CCND1,CYP1B1,NR2F1,GSTT2/GSTT2B,GSTT1,ALDH1A1,ALDH1A3,DCT,ALDH3A1,ESR1,TNF
Toll-like Receptor Signaling	1.67E+00	2.14E-02	1.27E-01	MAP2K6,TLR4,LY96 (includes EG:17087),NFKBIA,MAP3K1,MAPK13,EIF2AK2
Hepatic Cholestasis	1.65E+00	2.24E-02	8.00E-02	ADCY9,IL1A,IL1R1,IL6,TLR4,LY96 (includes EG:17087),IL18 (includes EG:16173),NFKBIA,IL1RN,PRKCH,ADCY7,TNF,ESR1,PRKD1