

Table S6 Lung 14 DA vs Control

Gene	100 ug/kg Control		1000 ug/kg Control		Control Infected		100 ug/kg Infected		1000 ug/kg Infected	
	Fold	>	Fold	>	Fold	>	Fold	>	Fold	>
Alternatively Activated Mφ										
ARG1	1.5		-1.0		1.8		1.7		1.5	
CD8A	1.1		1.5		-2.9		-2.4		-1.8	
Chemokines										
CCL11 (EOTF)	1.0		1.9		7.9	$p = 0.06$	14.2	$p < 0.05$	8.3	$p < 0.05$
CCL24 (EOTF)	1.0		-3.1		1.0		1.0		1.6	
CCL3 (EOTF)	-1.2		-1.2		1.9		3.2	$p < 0.05$	1.9	
Chemokine Receptors										
CCR3	1.4		-1.2		1.5		2.4	$p < 0.05$	2.5	$p < 0.05$
CCR4	-1.0		1.3		2.9		1.2		2.4	
CCR7	-1.1		3.4		1.1		1.0		1.0	
CXCR										
EBI1 (CXCR1)	2.7		4.0		1.5		-1.2		-1.1	
EBI2 (CXCR2)	2.0		3.2		1.1		-1.9		1.2	
Eosinophil Associated										
EPY	1.7		2.8		2.5		12.7	$p < 0.005$	11.6	$p < 0.005$
Immunoglobulin Associated										
IgHA1	-1.4		-1.4		1.2		3.0	$p < 0.01$	-1.7	
IgH	-2.0		-1.4		4.9	$p = 0.07$	3.2		1.5	$p < 0.05$
IgG1	1.3		-1.1		2.3		1.8		1.6	
IgG2A	2.7		11.3	$p = 0.09$	1.4		7.8		7.3	
IgG2B	2.1		1.5		9.7	$p < 0.005$	7.6	$p < 0.005$	5.9	$p < 0.005$
IgG3	-1.3		-1.2		2.7		1.1		-9.2	
IgG4	3.1		10.5	$p < 0.05$	7.6		10.4	$p < 0.05$	14.5	$p < 0.05$
IgJ	-1.1		-1.0		2.4	$p < 0.05$	1.6		1.3	
IgM	1.2		1.5		1.1		1.5		1.9	
Inflammation										
IL1B	1.9		1.5		3.1	$p < 0.05$	-1.3		-1.8	
IL6	-1.0		1.3		-1.0		-1.8	$p < 0.05$	1.3	
Mast Cell Associated										
CD43	-1.3		1.1		-1.0		-1.6		1.2	
CD43A	1.3		1.9		4.1		2.8		4.1	
HMC	1.2		-1.0		6.1	$p < 0.0005$	3.4	$p < 0.005$	3.7	$p < 0.005$
TPS481 (MC Type)	-1.2		1.2		2.3	$p < 0.05$	2.1	$p < 0.05$	4.9	$p < 0.005$

Table S6. Lung 14 DAI vs Control

Gene	1000 up/kg Control		1000 up/kg Control		Control Infected		100 up/kg Infected		1000 up/kg Infected	
	Fold	>	Fold	>	Fold	>	Fold	>	Fold	>
Misc.										
BORRB2	-1.3		1.3		1.4		-3.7	$p < 0.05$	-1.4	
JMOT	1.4		1.6		1.9		1.1		1.1	
INDO	2.1		1.6		1.2		-1.7		-3.4	
ITGA1 (CD29)	-1.4		1.1		1.2		-3.4	$p < 0.06$	-1.3	
INR	-1.6		-1.3		-1.4		-1.3		1.1	
SLC11A	1.6		2.2		1.3		1.1		1.7	
Mucus and Fluid Generation										
CFTR	-1.3		-1.1		1.3		-2.7		-1.9	
SLCA1	-3.5	$p < 0.05$	-4.3	$p < 0.07$	1.8		1.7		1.3	
GCNT	1.2		1.1		1.2		-1.7		1.6	
MUC3	1.2		1.1		-1.1		-1.6		-1.2	
MUC5AC	-8.5		-4.2		-15.7	$p < 0.05$	-2.0		-2.5	
SCNN1G	-1.2		2.1		-1.2		-2.2		-1.1	
Prostaglandin/Leukotriene										
ALOX5	1.0		-1.1		1.9		-1.2		1.4	
ALOX5AP	1.2		1.1		1.7		1.0		1.4	
CYP2C8	-1.8		1.7		2.4		-1.6		1.1	
CYP2C19	-1.1		1.3		1.3		1.1		1.7	$p < 0.05$
LTC4S	-1.1		1.1		1.4		1.4		1.5	
PTGS2 (COX2)	1.4		1.4		1.9		-1.6		1.6	
T Cell Costimulatory										
Accessory Cell Expressed										
TNFSF (CD30L)	2.3	$p < 0.05$	2.4	$p < 0.05$	1.8		1.3		2.3	$p < 0.05$
TNFSF (HVEM)	-1.1		1.4		1.0		-1.9		-1.1	
T Cell Expressed										
CTLA4	1.4		1.0		1.3		-1.3		-1.1	
ICOS	1.4		1.5		1.9	$p < 0.05$	-1.7		1.4	
ITGA	1.7		1.7		1.4		-1.1		1.0	
TNFRSF4 (OX40)	1.4		1.8		1.3		-1.7		1.9	

Table S6: Lung 14 DAI vs Control

Gene	100 ug/kg Control		1000 ug/kg Control		Control Infected		100 ug/kg Infected		1000 ug/kg Infected	
	Fold	±	Fold	±	Fold	±	Fold	±	Fold	±
Th1-Associated										
Cytokines										
IFN γ	1.3		1.4		1.2		-1.1		-1.3	
IL12A	1.4		1.7		1.6		-1.0		-2.1	
IL12B	1.4		1.1		2.0		1.3		-1.1	
IL27	-1.2		-1.3		1.9		1.6		1.3	
							$p < 0.05$		$p < 0.05$	
Surface Receptors										
IL18R1	-1.4		1.0		1.0		-1.8		1.0	
SOCS/PIAS										
SOCS1	1.0		-1.2		1.2		-1.6		-1.8	
PIAS4	1.0		1.9		-1.1		-1.8		-1.2	
									$p < 0.05$	
Intracellular Signaling										
TRK	1.2		1.2		1.2		-2.9		-1.4	
									$p < 0.07$	
Transcription Factors										
IRF21	1.0		1.1		-1.4		-2.4		-1.1	
Th2-Associated										
Cytokines										
IL4	1.5		1.5		3.8		1.5		1.4	
IL5	1.4		1.4		2.1		1.2		1.0	
IL13	2.4		1.4		2.2		1.6		-2.8	
TMEF1 (STAT1)	-1.1		1.1		1.2		-1.2		1.1	
									$p < 0.05$	
Cytokine Receptors										
IL4R	-1.1		1.9		-1.0		-3.5		-1.3	
IL13RA1	2.0		-1.1		1.2		-1.9		-2.5	
IL13RA2	-1.9		-1.4		1.5		-1.9		-1.5	
IL5R	1.3		-1.0		1.2		2.1		-1.9	
									$p < 0.01$	
SOCS/PIAS										
PIAS1	1.0		1.3		-1.1		-1.9		-1.2	
PIAS3	-1.4		-1.3		-1.1		-2.1		-1.5	
SOCS3	-1.1		1.2		1.1		-1.8		-1.2	
									$p < 0.05$	
Surface Receptors										
OPRM1 (GPR1)	-1.4		-1.2		1.4		-1.2		1.8	
Transcription Factors										
GATA3	1.4		1.6		1.2		-1.2		1.4	
STAT6	1.0		1.8		1.3		-1.5		1.1	
Treg Associated										
IL2RA (CD25)	1.0		1.2		2.4		1.2		1.2	
FOXP3	-1.4		1.2		1.5		-1.2		1.7	
IL10	6.2		4.2		1.1		-1.5		1.1	
TIGIT	1.1		1.2		-1.5		-1.4		1.0	
ITKSF1A (GITR)	1.0		1.4		1.8		1.4		1.6	

Table S6 Lung 7 DAI vs Infected

Gene	100 ug/kg Control		1000 ug/kg Control	
	Fold	n	Fold	n
Alternatively Activated Mφ				
ARG1	-1.1		-1.2	
CXRA	1.2		1.6	
Chemokines				
CCL11 (EOTF)	1.8		1.1	
CCL24 (EOTF)	1.0		1.6	
CCL28 (EOTF)	1.7		1.0	
Chemokine Receptors				
CCR3	1.7		1.7	
CCR4	-2.4		-1.2	
CCR7	-1.1		-1.1	
CXCR				
IL18R1 (CXCR1)	-1.8		-1.6	
IL18R2 (CXCR2)	-2.2		1.1	
Eosinophil Associated				
EPX	5.2	p = 0.08	4.7	p = 0.1
Immunoglobulin Associated				
IGHA1	1.3		1.1	
IGHF	-1.5		1.1	
IGHC1	-1.5		-1.5	
IGHGA	6.0		5.6	
IGHGB	-1.3		-1.6	
IGHG3	-2.1		-66.2	p = 0.08
IGHG4	1.4		1.9	
IJJ	-1.5		-1.8	
IGHE	1.3		1.7	
Inflammation				
IL1B	-3.9	p < 0.05	-6.9	p < 0.01
IL6	-1.9	p < 0.1	-1.3	
Mast Cell Associated				
SMN1	-1.6		1.3	
EPOR1A	-1.6		-1.9	
HMC	-1.8		-1.7	
TPSAB1 (MC 33)	-1.1		2.1	p = 0.08

Table S6 Lung 14 DAI vs

Gene	100 ug/kg Control		1000 ug/kg Control	
	Fold	n	Fold	n
Alternatively Activated Mφ				
ARG1	1.1		1.3	
CXRA	-2.7		-2.8	
Chemokines				
CCL11 (EOTF)	13.6	p < 0.05	6.5	
CCL24 (EOTF)	1.0		1.6	
CCL28 (EOTF)	5.5	p < 0.005	3.0	p < 0.05
Chemokine Receptors				
CCR3	1.3		3.0	p < 0.05
CCR4	1.3		1.8	
CCR7	1.2		-2.4	
CXCR				
IL18R1 (CXCR1)	-3.2		-4.3	
IL18R2 (CXCR2)	-3.7		-4.1	p < 0.05
Eosinophil Associated				
EPX	7.6	p < 0.05	4.1	p = 0.09
Immunoglobulin Associated				
IGHA1	2.6	p < 0.05	2.0	p < 0.08
IGHF	6.5	p < 0.05	7.8	p < 0.05
IGHC1	1.4		1.8	
IGHGA	2.9		-1.5	
IGHGB	3.6	p = 0.06	4.0	p < 0.05
IGHG3	1.3		-20.5	p = 0.08
IGHG4	3.3		1.4	
IJJ	1.7		1.3	
IGHE	1.3		1.3	
Inflammation				
IL1B	2.4	p = 0.07	2.3	p = 0.08
IL6	-1.7	p < 0.08	-1.7	
Mast Cell Associated				
SMN1	1.1		1.1	
EPOR1A	2.1		1.1	
HMC	2.9	p < 0.05	3.9	p < 0.005
TPSAB1 (MC 33)	2.6	p < 0.05	4.2	p < 0.005

Table S6 Lung 7 DAI vs Infected

Gene	100 ug/kg Control		1000 ug/kg Control	
	Fold	n	Fold	n
Misc.				
SLKRB2	-7.9	p < 0.05	-1.9	
FRMT	-1.8		-1.7	
RND	-1.9		-1.7	
ITGB1 (CD49)	-2.9	p = 0.06	-1.6	
PRR	1.1		1.5	
SLC11A	-1.2		1.3	
Mucus and Fluid Generation				
CFTR	-3.5		-2.5	
SLC41	-1.1		-1.2	
GLNT	-2.1		-1.2	
MUC3	-1.6		-1.1	
MUC5AC	-10.1	p = 0.09	7.8	
GNAN1G	-1.9		-1.1	
Prostaglandin/Leukotriene				
ALOX5	-2.2	p = 0.1	-1.4	
ALOX5AP	-1.6		-1.2	
CYP11B1	-2.7		-2.2	
KYSL1B2	-1.3		1.1	
LT4S	1.0		1.0	
EPOR (CD92)	-4.1	p < 0.05	-2.7	
T Cell Costimulatory				
TNFSF8 (CD30L)	-1.4		1.3	
TNFSF4 (OX40)	-1.9		-1.3	
Accessory Cell Expressed				
CTLA4	-1.7		-1.4	
ICOS	-6.2	p < 0.05	2.8	
CD8A	-1.6		1.4	
TNFRSF4 (OX40)	-2.2		1.5	

Table S6 Lung 14 DAI vs Non-Infected ATRA Control

Gene	100 ug/kg Control		1000 ug/kg Control	
	Fold	n	Fold	n
Misc.				
	-4.3	p = 0.07	-1.8	
	-1.1		-1.1	
	-3.6		-2.3	
	-1.7		-1.4	
	1.4		1.4	
	-1.5		-1.3	
Mucus and Fluid Generation				
	-2.1		-1.6	
	9.4	p < 0.05	-7.5	p < 0.05
	-2.0		-1.9	
	1.9		-1.4	
	4.5		1.7	
	-1.8		-2.7	
Prostaglandin/Leukotriene				
	-1.2		1.6	
	-1.1		1.3	
	1.6		-1.6	
	1.0		1.3	
	1.7	p < 0.05	1.4	
	3.1		-1.4	
T Cell Costimulatory				
	-1.8		-1.0	
Accessory Cell Expressed				
	-1.7		-1.7	
T Cell Expressed				
	-1.8		-1.1	
	1.7		-1.1	
	-2.0	p = 0.08	1.2	
	-2.3		1.0	

Table S6 Lung 7 DAI vs Infected

Gene	100 ug/kg Control		1000 ug/kg Control	
	Fold	n	Fold	n
Th1-Associated Cytokines				
IFN γ	-1.3		-1.6	
IL12 β	-1.4		-2.9	
IL12 α	-1.6		-2.1	
IL22	1.0		1.0	
Surface Receptors				
IL18RA	-1.8		1.0	
SOCS1	-1.6		-2.1	
PIAS4	-1.7		-1.1	
Intracellular Signaling				
TRK	-3.4	p = 0.08	-1.6	
Transcription Factors				
IRX1	-1.7		1.3	
Th2-Associated Cytokines				
IL4	-2.5		-2.7	
IL5	-2.5	p = 0.08	-3.1	
IL13	-3.0	p = 0.08	-17.2	p = 0.005
TMD1 (ST2L)	-1.9	p = 0.05	-1.0	
Cytokine Receptors				
IL4R	-3.4		-1.3	
IL13RA1	-3.5	p = 0.06	-1.5	
IL13RA2	-2.9	p = 0.05	-2.2	
IL5R	-1.7		-1.3	
SOCS/PIAS				
PIAS1	-1.7		-1.1	
PIAS3	-2.0	p = 0.08	-1.4	
SOCS3	-2.0		-1.4	
Surface Receptors				
OPRM4 (OR104)	-2.3		1.3	
Transcription Factors				
GATA3	-1.4		1.2	
STAT6	-2.0		-1.1	
Treg Associated				
CD25	-2.1	p = 0.09	-1.4	
CD29	-1.8		-1.3	
IL10	-1.6		-1.0	
TIGP1	1.1		1.6	p = 0.09
TNFRSF18 (GITR)	-1.3		-1.1	

Table S6 Lung 14 DAI vs Non-Infected ATRA Control

Gene	100 ug/kg Control		1000 ug/kg Control	
	Fold	n	Fold	n
Th1-Associated Cytokines				
IFN γ	-1.5		-1.8	
IL12 β	-1.4		-2.5	
IL13	-1.1		-1.2	
IL22	1.0		1.0	
Surface Receptors				
IL18RA	-1.7		1.0	
SOCS/PIAS				
SOCS1	-1.6		-1.6	
PIAS4	-1.8	p < 0.05	1.5	p = 0.08
Intracellular Signaling				
TRK	-3.4	p = 0.05	-1.7	
Transcription Factors				
IRX1	2.5		-1.2	
Th2-Associated Cytokines				
IL4	1.0		-1.1	
IL5	1.0		-1.5	
IL13	-1.8		-3.9	p = 0.06
TMD1 (ST2L)	-1.5		1.0	
Cytokine Receptors				
IL4R	-3.1		-2.6	
IL13RA1	-1.8		-1.1	
IL13RA2	-1.0		-1.1	
IL5R	-1.7		-3.0	p < 0.05
SOCS/PIAS				
PIAS1	-1.8	p < 0.05	-1.5	p = 0.08
PIAS3	-1.5		-1.2	
SOCS3	-1.6		-1.4	
Surface Receptors				
OPRM4 (OR104)	-1.0		3.0	p < 0.05
Transcription Factors				
GATA3	-1.7	p < 0.05	-1.1	
STAT6	-1.5		-1.6	
Treg Associated				
CD25	1.1		1.0	
CD29	1.2		-1.0	
IL10	-3.2	p < 0.05	-3.0	
TIGP1	-1.5		-1.0	
TNFRSF18 (GITR)	1.4		-1.2	