

Table S5 Lung 7 DAI vs Control

Gene	100 ug/kg Control		1000 ug/kg Control		Control Infected		100 ug/kg Infected		1000 ug/kg Infected	
	Fold	n	Fold	n	Fold	n	Fold	n	Fold	n
Alternatively Activated Mφ										
ARG1	1.3		1.6		-1.1		1.8	p < 0.05	-1.0	
CD8A	-1.3		1.6		-1.4		-2.9	p < 0.05	-1.2	
Chemokines										
CCL11 (EOTF)	2.8		4.0		4.7	p < 0.01	53.2	p < 0.01	40.3	p < 0.05
CCL24 (EOTF)	1.3		2.0		-1.1		1.0		-1.4	
CCL28 (EOTF)	1.7		1.7		3.5	p < 0.05	31.6	p < 0.005	3.5	
Chemokine Receptors										
CCR3	-3.6		-3.2		-3.0		-3.2		1.4	
CCR4	-1.1		-1.3		-1.0		-1.0		-1.0	
CCR7	1.4		-0.0		1.2		-1.2		-1.2	
CCR										
CCR1	1.3		1.7		-1.2		1.1		1.1	
CCR2	1.4		1.2		-2.0		1.0		-1.6	
Endothelial Associated										
EPX	-1.8		-2.2		2.3		1.4		-1.2	
Immunoglobulin Associated										
IGHA1	1.1		-1.1		1.6		2.0	p < 0.005	1.1	
IGHF	1.7		1.7		2.0		-1.0		2.8	
IGM1	-3.0	p < 0.05	-2.8	p < 0.05	-2.8	p < 0.05	-3.7	p < 0.05	-2.9	p < 0.05
IGHA2A	-2.3		2.1		4.7		-1.4		5.5	
IGHG2B	1.9	p < 0.05	1.2		3.1	p < 0.005	2.8	p < 0.005	3.8	p < 0.0005
IGM3	-2.4		-3.8		-6.7		-4.3		-347.3	p < 0.005
IGHG4	-2.6		1.3		1.3		-2.6		1.3	
IJJ	2.1		2.0		3.0	p < 0.05	5.2	p < 0.005	1.6	
IGM5	1.4		1.3		1.2		-1.2		-1.3	
Inflammation										
IL1B	1.3		1.4		-1.3		3.0	p < 0.005	-2.9	
IL6	-1.3		1.2		-1.2		2.9	p < 0.0005	1.1	
Mast Cell Associated										
CD44	-1.1		1.6		1.4		-1.0		-1.7	
CD45A	-1.9		1.5		1.4		2.4	p < 0.05	3.1	p < 0.05
CDK	-1.0		1.2		2.0	p < 0.05	1.2		1.9	
TPSAB1 (MC trypt)	-1.0		-1.8		2.5		1.5		3.1	p < 0.05

Table S5 Lung 7 DAI vs Control

Gene	100 usp/kg Control		1000 usp/kg Control		Control Infected		100 usp/kg Infected		1000 usp/kg Infected	
	Fold	n	Fold	n	Fold	n	Fold	n	Fold	n
Misc.										
BLKRB2	-1.1		-2.1		-2.6		-1.8		-4.0	
FNMT	2.2	p < 0.005	1.9		-1.6		1.4		1.1	
RNO	1.7		2.1		1.0		3.4		1.7	
TGFB1 (CD39)	1.8		1.4		1.2		-1.4		-1.7	
PRR	-4.6	p < 0.005	1.9		10.0	p < 0.0001	7.6	p < 0.0005	7.7	p < 0.0005
IL1A	1.7		-1.1		-1.5		1.0		-1.2	
Mucus and Fluid Generation										
CFTR	1.4		1.0		-1.3		-1.5		-1.6	
IL33	1.2		-1.5		3.1		3.3	p < 0.05	-3.1	
IL27	1.1		-1.4		-1.1		1.1		-1.2	
MUC	2.0		1.6		1.1		1.8		-1.4	
MUC2AC	-1.3		-1.1		2.4		1.2		-2.1	
MUC5B	1.0		-1.1		-2.0		-1.7		-2.8	
Prostaglandin/Leukotriene										
ALOX5	1.3		-1.0		-1.0		-1.0		1.1	
ALOX5AP	1.5		1.4		1.1		1.4		1.4	
CYP11B1	1.9		1.5		1.1		1.1		-1.1	
CYP17B2	1.0		-1.1		1.1		-1.3		1.1	
LT4S	-1.1		1.6	p < 0.05	1.4		-1.1		1.1	
PTGS2 (COX2)	1.2		-1.4		-1.4		-1.1		-2.1	
T Cell Costimulatory										
TNFSF8 (CD30L)	-1.3		1.9		1.0		-1.3		-1.2	
TNFSF4 (OX40)	1.0		1.1		1.4		-1.0		-2.2	p < 0.05
T Cell Expressed										
CD124	1.3		3.4	p < 0.05	1.4		1.2		-1.2	
CD5	1.7		-1.1		-1.2		-1.4		-1.4	
CD8A	1.1		1.8		1.1		-1.0		1.0	
TNFRSF4 (OX40)	-1.4		1.6		1.1		1.0		-1.1	

Table S5 Lung 7 DAI vs Control

Gene	100 ug/kg Control		1000 ug/kg Control		Control Infected		100 ug/kg Infected		1000 ug/kg Infected	
	Fold	α	Fold	α	Fold	α	Fold	α	Fold	α
Th1-Associated										
Cytokines										
IFN γ	3.2	$p < 0.05$	3.3	$p < 0.05$	3.9	$p < 0.05$	4.7	$p < 0.05$	3.2	$p = 0.07$
IL12 β	1.9		1.6		1.5		1.9		1.0	
IL12 α	1.9		1.9		-1.0		-3.1		-1.8	
IL22	-1.0		3.1		1.2		2.8		1.7	
Surface Receptors										
IL18RA	-1.1		1.2		-1.1		-1.8		-1.7	
SOCS/SHS										
SOCS1	1.0		1.1		-1.4		1.2		-1.8	
SHS4	1.1		-1.3		-1.2		-1.3		-1.4	
Intracellular Signaling										
TYK	1.4		2.4		-1.1		-1.1		-1.1	
Transcription Factors										
TFX21	1.4		-1.0		-1.1		-1.1		-1.0	
Th2-Associated										
Cytokines										
IL4	3.2	$p < 0.05$	2.4		1.6		4.0	$p < 0.05$	3.3	$p < 0.05$
IL5	1.8		-1.2		-1.7		4.6	$p = 0.07$	-1.2	
IL13	2.4		-1.1		-2.7		8.1	$p < 0.05$	1.4	
IMD1 (STAT1)	1.4		1.2		-1.1		-1.4		-1.4	
Cytokine Receptors										
IL4R	-1.1		1.1		-1.8		-1.2		-1.7	
IL13RA1	2.0		-1.1		-1.2		-1.9		-2.1	
IL13RA2	1.7		2.2	$p < 0.05$	1.3		1.7		1.4	
IL5R	1.5		2.4		2.0		1.9		2.0	
SOCS/SHS										
SHS1	-1.4		-1.1		-1.4		-1.8	$p < 0.05$	-1.4	
SHS3	-1.0		-1.3		-1.7		-2.0		-2.2	
SOCS3	1.1		-1.3		1.0		-1.2		-1.6	
Surface Receptors										
OPR4 (CRTH2)	1.7		1.0		1.2		1.5		-1.3	
Transcription Factors										
GATA3	-1.5		1.4		1.5		-2.7	$p < 0.05$	-2.0	
STAT6	-1.2		-1.1		-1.4		-1.5		-2.4	
Treg Associated										
CD25	1.2		1.7		1.1		1.1		1.3	
FOXP3	-1.3		1.1		1.3		-1.2		-1.4	
IL10	1.7		3.9		1.4		1.4		3.5	
FOXP1	-1.3		-1.2		-1.3		-1.7		-1.4	
TNFRSF18 (GITR)	-1.3		1.7		1.4		1.4		-1.0	

Table S5 Lung 7 DAI vs Infected

	Gene	100 ug/kg Control		1000 ug/kg Control	
		Fold	n	Fold	n
Alternatively Activated Mφ	ARG1	1.9		1.0	
			p < 0.05		
	CD8A	-2.1		1.2	
Chemokines	CCL11 (EOTF)	-1.3		-2.4	
	CCL24 (EOTF)	1.1		-1.2	
	CCL28 (EOTF)	3.2		-1.9	
Chemokine Receptors	CCR3	-1.1		1.5	
	CCR4	1.0		-1.3	
	CCR7	-1.4		-1.5	
CCR	EBB1 (CCR1)	1.9		1.3	
	EBB2 (CCR2)	2.1		1.3	
Endothelial Associated	EPX	-1.6		-2.7	
Immunoglobulin Associated	IgHA1	2.0		1.1	
	IgHE	-1.3		4.6	p < 0.05
	IgHC1	-1.3		-1.0	
	IgHC2A	-8.7	p < 0.08	1.2	
	IgHC2B	-1.1		1.2	
	IgHC3	1.6		-5.1	p < 0.05
	IgHC4	-3.6	p < 0.06	1.4	
	IgJ	1.3		-1.2	
	IgM	-1.4		-1.5	
Inflammation	IL1B	4.0	p < 0.05	-2.2	
	IL6	3.4	p < 0.001	1.3	
Mast Cell Associated	MCN1	-2.4	p < 0.06	-2.2	
	EPX1A	1.8		-2.2	p < 0.05
	PKC	-1.6		-2.0	
	TPSAB1 (MC trypt)	-1.7		1.2	

Table S5 Lung 7 DAI vs Non-Infected ATRA Control

	100 ug/kg Control			1000 ug/kg Control		
	Fold	n		Fold	n	
	1.4			-1.6		
	-2.2			-1.9		
	1.6	p < 0.06		1.3		
	-1.3			-2.6		
	22.1	p < 0.005		1.7		
	1.3			1.7		
	1.0			-1.1		
	-1.7			-1.2		
	-1.1			-2.3		
	-1.3			-1.9		
	2.6			1.9		
	1.7			1.4		
	-3.4	p < 0.06		-1.1		
	-1.1			-1.0		
	1.2			-1.3		
	1.5	p < 0.08		3.1	p < 0.0005	
	-1.8			-9.9	p < 0.01	
	-1.1			-1.0		
	1.1			-1.5		
	-1.7			-1.7		
	2.3			-4.1	p < 0.05	
	-2.3	p < 0.05		-1.1		
	-1.7			2.6	p < 0.06	
	1.3			2.0	p < 0.06	
	1.3			1.4		
	1.5			5.5	p < 0.005	

Table S5 Lung 7 DAI vs Infected

Gene	100 ug/kg Control		1000 ug/kg Control	
	Fold	n	Fold	n
Misc.				
SLKRB2	1.5		-1.5	
PRMT	1.4		1.2	
RNO2	3.3		1.6	
TGFB1 (CD39)	-1.7		-2.0	
PRR	-1.3		-2.2	p < 0.05
SLC11A	1.6		1.2	
Mucus and Fluid Generation				
CFTR	-1.2		-1.2	
SLC41	1.8		-15.8	p < 0.05
GN2	1.2		-1.0	
MUC2	1.8		-1.4	
MUC5AC	2.2		-5.0	
GN2N1G	1.2		-1.4	
Prostaglandin/Leukotriene				
ALOX5	1.0		1.1	
ALOX5AP	1.2		1.2	
CYP11B1	1.5		-1.1	
KVSLYB2	1.2		1.0	
LTC4S	-1.6		-1.3	
PTGS2 (COX2)	1.0		-1.6	
T Cell Costimulatory				
TNFSF8 (CD30L)	-1.3		-1.2	
TNFSF4 (OX40L)	-1.3		-1.6	
Accessory Cell Expressed				
T Cell Expressed				
CTLA4	-1.2		-1.7	
ICOS	-1.2		-1.2	
CD28	-1.1		-1.0	
TNFRSF4 (OX40)	-1.1		-1.2	

Table S5 Lung 7 DAI vs Non-Infected ATRA Control

Gene	100 ug/kg Control		1000 ug/kg Control	
	Fold	n	Fold	n
Misc.				
	-1.6		-5.5	
	-1.6		-1.6	
	2.0		-1.5	
	-2.5		-2.4	
	-1.1		-2.4	p = 0.08
	-1.6		-1.1	
Mucus and Fluid Generation				
	-2.0		-1.6	
	-7.9	p = 0.07	-2.1	
	-1.2		1.1	
	-1.1		-2.2	
	-1.3		-2.4	
	-1.7		-2.2	
Prostaglandin/Leukotriene				
	-1.3		1.1	
	-1.1		-1.0	
	-1.1		-2.2	
	-1.3		-1.0	
	1.0		-1.5	
	-1.6		-1.4	
T Cell Costimulatory				
	1.0		-2.2	p = 0.06
	-1.1	p = 0.06	-1.4	p = 0.04
Accessory Cell Expressed				
	-1.1		-4.1	p < 0.01
	-1.4		-1.1	
	-1.4		-1.7	
	1.5		-1.7	

Table S5 Lung 7 DAI vs Infected

Gene	100 ug/kg Control		1000 ug/kg Control	
	Fold	n	Fold	n
TH1-Associated				
Cytokines				
IFN γ	1.2		-1.2	
IL12 β	-1.8		-1.5	
IL12 α	-3.1		-1.8	
IL22	2.4		1.5	
Surface Receptors				
IL13RA	-1.4		-1.5	
SOCS/SHS				
SOCS1	1.7		-1.3	
SHS4	-1.3		-1.2	
Intracellular Signaling				
TYK	-1.2		-1.6	
Transcription Factors				
TFX21	1.0		-1.4	
TH2-Associated				
Cytokines				
IL4	2.1	n < 0.05	-1.2	
IL5	1.1		-2.4	
IL13	22.1	p < 0.05	2.0	
TMED1 (STAT)	-1.2		-1.2	
Cytokine Receptors				
IL4R	1.5		1.1	
IL13RA1	-1.8		-2.1	
IL13RA2	1.5		1.0	
IL5R	-1.1		1.0	
SOCS/SHS				
SHS1	-1.4		-1.0	
SHS3	-1.7		-1.9	
SHS3	-1.3		1.0	
Surface Receptors				
GPR44 (CRTH2)	1.2		-1.6	
Transcription Factors				
GATA3	-1.8		-1.5	
STAT6	-1.0		-1.7	
Treg Associated				
CD25	1.0		1.1	
FOXP3	-1.5		-1.9	
IL10	1.2		2.1	
TIGB1	-1.3		-1.1	
TNFRSF18 (GITR)	1.1		-1.4	

Table S5 Lung 7 DAI vs Non-Infected ATRA Control

Gene	100 ug/kg Control		1000 ug/kg Control	
	Fold	n	Fold	n
TH1-Associated				
Cytokines				
IFN γ	-1.1		-1.6	
IL12 β	-1.0		-1.6	
IL22	-5.7	p < 0.05	-3.4	
IL23	2.9		-1.9	
Surface Receptors				
IL13RA	-1.7		-2.0	
SOCS/SHS				
SOCS1	1.2		-1.9	n < 0.02
SHS4	-1.6		-1.1	
Intracellular Signaling				
TYK	-1.1		1.3	
Transcription Factors				
TFX21	-1.5		-1.5	
TH2-Associated				
Cytokines				
IL4	2.3	n < 0.05	1.3	
IL5	5.5	p < 0.05	1.5	
IL13	3.1		-1.2	
TMED1 (STAT)	-1.9		-1.7	
Cytokine Receptors				
IL4R	-1.1		-1.8	
IL13RA1	-3.8	n < 0.05	-2.3	
IL13RA2	1.0		-1.7	
IL5R	-1.3		-1.1	
SOCS/SHS				
SHS1	-1.4		-1.4	
SHS3	-2.0		-1.5	
SHS3	1.0		1.0	
Surface Receptors				
GPR44 (CRTH2)	-1.1		-1.3	
Transcription Factors				
GATA3	-1.8		-1.5	
STAT6	-1.2		-2.0	
Treg Associated				
CD25	-1.1		-1.4	
FOXP3	1.1		-1.7	
IL10	-1.2		-1.6	
TIGB1	-1.3		-1.2	
TNFRSF18 (GITR)	1.9		-1.7	