





Supplemental Table 1: Significant expression changes in inflammatory genes in the lungs of acrolein-exposed mice.

Description	Fold Change: Air vs Acrolein	95% CI
Aminoacyl tRNA synthetase complex-interacting multifunctional protein 1	1.0475	(1.00, 1.10)
Bone morphogenetic protein 2	1.0197	(0.97, 1.07)
Chemokine (C-C motif) ligand 1	1.0357	(0.94, 1.13)
Chemokine (C-C motif) ligand 11	0.9944	(0.93, 1.06)
Chemokine (C-C motif) ligand 12	1.0171	(0.95, 1.08)
Chemokine (C-C motif) ligand 17	0.8785	(0.83, 0.93)
Chemokine (C-C motif) ligand 19	1.0022	(0.97, 1.03)
Chemokine (C-C motif) ligand 2	1.0438	(0.97, 1.11)
Chemokine (C-C motif) ligand 20	1.113	(1.02, 1.20)
Chemokine (C-C motif) ligand 22	1.0411	(0.97, 1.11)
Chemokine (C-C motif) ligand 24	1.0723	(0.93, 1.21)
Chemokine (C-C motif) ligand 3	1.0447	(0.96, 1.13)
Chemokine (C-C motif) ligand 4	1.01	(0.94, 1.08)
Chemokine (C-C motif) ligand 5	0.8846	(0.84, 0.93)
Chemokine (C-C motif) ligand 6	0.7549	(0.72, 0.79)
Chemokine (C-C motif) ligand 7	1.1072	(1.05, 1.16)
Chemokine (C-C motif) ligand 8	0.9522	(0.89, 1.02)
Chemokine (C-C motif) ligand 9	0.9432	(0.86, 1.02)
Chemokine (C-C motif) receptor 1	1.0083	(0.96, 1.06)
Chemokine (C-C motif) receptor 10	1.0402	(0.97, 1.11)
Chemokine (C-C motif) receptor 2	0.8523	(0.73, 0.97)

Chemokine (C-C motif) receptor 3	0.9647	(0.83, 1.09)
Chemokine (C-C motif) receptor 4	1.0484	(0.97, 1.13)
Chemokine (C-C motif) receptor 5	1.0366	(0.93, 1.14)
Chemokine (C-C motif) receptor 6	1.0816	(0.95, 1.21)
Chemokine (C-C motif) receptor 8	1.0901	(0.96, 1.22)
CD40 ligand	1.0704	(0.97, 1.17)
Colony stimulating factor 1 (macrophage)	1.1663	(0.74, 1.59)
Colony stimulating factor 2 (granulocyte-macrophage)	1.0366	(0.93, 1.15)
Colony stimulating factor 3 (granulocyte)	0.7465	(0.33, 1.16)
Chemokine (C-X3-C motif) ligand 1	0.9498	(0.87, 1.02)
Chemokine (C-X-C motif) ligand 1	0.8119	(0.66, 0.97)
Chemokine (C-X-C motif) ligand 10	0.9697	(0.82, 1.11)
Chemokine (C-X-C motif) ligand 11	0.9884	(0.90, 1.08)
Chemokine (C-X-C motif) ligand 12	0.9286	(0.77, 1.09)
Chemokine (C-X-C motif) ligand 13	1.0206	(0.91, 1.13)
Chemokine (C-X-C motif) ligand 15	0.6857	(0.65, 0.72)
Chemokine (C-X-C motif) ligand 5	0.7628	(0.58, 0.95)
Chemokine (C-X-C motif) ligand 9	1.0493	(0.94, 1.16)
Chemokine (C-X-C motif) receptor 2	1.0092	(0.91, 1.11)
Chemokine (C-X-C motif) receptor 3	0.9017	(0.83, 0.97)
Chemokine (C-X-C motif) receptor 5	1.0621	(0.96, 1.17)
Fas ligand (TNF superfamily, member 6)	1.0083	(0.89, 1.13)
Interferon gamma	0.9892	(0.93, 1.05)

Interleukin 10 receptor, alpha	1.0575	(1.00, 1.12)
Interleukin 10 receptor, beta	0.991	(0.90, 1.08)
Interleukin 11	0.9614	(0.82, 1.10)
Interleukin 13	1.0232	(0.97, 1.08)
Interleukin 15	1.0816	(0.99, 1.17)
Interleukin 16	1.0658	(0.97, 1.16)
Interleukin 17A	1.0901	(1.01, 1.17)
Interleukin 17B	1.0667	(0.99, 1.14)
Interleukin 17F	1.0872	(1.02, 1.16)
Interleukin 1 alpha	1.0807	(0.99, 1.17)
Interleukin 1 beta	0.9944	(0.91, 1.08)
Interleukin 1 receptor, type I	1.0816	(0.95, 1.22)
Interleukin 1 receptor antagonist	1.052	(1.00, 1.11)
Interleukin 21	1.1034	(0.99, 1.22)
Interleukin 27	1.0083	(0.94, 1.07)
Interleukin 2 receptor, beta chain	1.0612	(1.00, 1.13)
Interleukin 2 receptor, gamma chain	0.8954	(0.83, 0.96)
Interleukin 3	1.0603	(1.00, 1.12)
Interleukin 33	1.0022	(0.91, 1.09)
Interleukin 4	0.9782	(0.93, 1.03)
Interleukin 5	1.0995	(0.99, 1.21)
Interleukin 5 receptor, alpha	1.0882	(1.02, 1.16)
Interleukin 6 receptor, alpha	1.0967	(1.01, 1.19)
Interleukin 6 signal transducer	0.9286	(0.86, 0.99)

Interleukin 7	1.052	(0.97, 1.14)
Lymphotoxin A	0.9987	(0.93, 1.07)
Lymphotoxin B	1.0304	(0.98, 1.08)
Macrophage migration inhibitory factor	1.025	(0.96, 1.09)
Nicotinamide phosphoribosyltransferase	1.1354	(1.00, 1.27)
Oncostatin M	1.3432	(0.83, 1.86)
Platelet factor 4	1.0557	(0.89, 1.22)
Secreted phosphoprotein 1	0.8254	(0.73, 0.92)
Tumor necrosis factor	1.5563	(1.05, 2.06)
Tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin)	1.0844	(0.98, 1.19)
Tumor necrosis factor (ligand) superfamily, member 10	1.1256	(0.99, 1.26)
Tumor necrosis factor (ligand) superfamily, member 11	1.0402	(0.91, 1.17)
Tumor necrosis factor (ligand) superfamily, member 13	1.0074	(0.96, 1.06)
Tumor necrosis factor (ligand) superfamily, member 13b	0.8642	(0.73, 0.99)
Tumor necrosis factor (ligand) superfamily, member 4	0.8435	(0.66, 1.03)
Vascular endothelial growth factor A	0.7173	(0.56, 0.88)
Actin, beta	0.9302	(0.82, 1.04)
Beta-2 microglobulin (B2M)	0.4347*	(0.39, 0.48)
Glyceraldehyde-3-phosphate dehydrogenase	1.0179	(0.99, 1.05)
Glucuronidase, beta	0.9765	(0.94, 1.02)
Heat shock protein 90 alpha (cytosolic), class B	0.8112	(0.74, 0.88)

member 1		
Mouse Genomic DNA Contamination	0.7356	(0.58, 0.89)
Reverse Transcription Control	0.9731	(0.92, 1.02)
Reverse Transcription Control	0.9731	(0.92, 1.02)
Reverse Transcription Control	0.9731	(0.92, 1.02)
Positive PCR Control	0.7167	(0.58, 0.85)
Positive PCR Control	0.7311	(0.58, 0.88)
Positive PCR Control	1.7601	(0.00001, 4.17)

*, change in mRNA greater than threshold of log 2 considered for statistical significance.

Supplemental Table 2: Body and organs weights.

Parameters	Air	Acrolein (1ppm)
Initial Body weight (g)	26.5±0.6	25.5±0.3
Terminal Body weight (g)	28.9±0.7	27.5±0.4
Heart (g)	0.13±0.004	0.13±0.006
Heart / Body weight (%)	0.44±0.01	0.48±0.02
Liver (g)	1.29±0.04	1.18±0.03
Liver / Body weight (%)	0.045±0.001	0.043±0.001
Lungs (g)	0.17±0.004	0.16±0.004
Lungs / Body weight (%)	0.58±0.01	0.57±0.01
Kidneys (g)	0.34±0.01	0.31±0.01
Kidneys / Body weight (%)	1.16±0.01	1.16±0.04
Spleen (g)	0.09±0.003	0.08±0.03
Spleen / Body weight (%)	0.30±0.01	0.28±0.01

Values are mean ± SEM.