## **Supplementary Table**

Figure 2A. AFC

				Mean difference (vs. Control)		Mean difference (vs. E. Coli pneumonia)		Mean difference (vs. NHLF MV)		Overall P-value
Group	N	Mean	SD	95% CI	P-value*	95% CI	P- value*	95% CI	P-value*	<0.001
Control	37	6.78	2.19	(reference)		-		-		
E. Coli pneumonia	9	4.76	4.92	-0.14 - 4.19	>0.999	(reference)		-		
NHLF MV	5	0	0	-8.794.78	0.002	-9.63 – 0.12	0.237	(reference)		
+ MSC MV 1x	6	16.51	5.76	7.16 – 12.28	<0.001	5.76 – 17.74	<0.001	10.62 – 22.39	<0.001	
+ MSC MV 2x	6	12.31	3.57	3.40 – 7.67	0.008	2.50 – 12.63	0.001	8.67 – 15.96	<0.001	
+ Poly(I:C) MSC MV	11	13.35	4.58	4.57 – 8.56	<0.001	4.12 – 13.06	<0.001	8.87 – 17.82	<0.001	

<sup>\*</sup>P-values were given by ANOVA test followed by Bonferroni adjustment. For the mean differences of the pair group comparisons, 95% confidence interval (CI) were calculated by unpaired t-tests.

Figure 3A. BAL CFU Counts

				Median difference (vs. E. Coli pneumonia)		Median difference (vs. NHLF MV)		Overall P-value
Group	N	Median	25% - 75% Percentile	95% CI	P- value*	Estimate (95% CI)	P-value*	0.016
E. Coli pneumonia	8	8.6 x 10 <sup>7</sup>	$3.3 \times 10^7 - 1.2 \times 10^9$	(reference)				
NHLF MV	5	1.5 x 10 <sup>8</sup>	$3.5 \times 10^6 - 6.2 \times 10^8$	$-1.3 \times 10^9 - 5.5 \times 10^8$	>0.999	(reference)		
+ MSC MV 1x	6	1.5 x 10 <sup>7</sup>	$9.0 \times 10^6 - 9.9 \times 10^7$	-1.3 x10 <sup>9</sup> – 3.1x10 <sup>6</sup>	0.650	$-6.5 \times 10^7 - 6.2 \times 10^8$	>0.999	
+ MSC MV 2x	6	2.8 x 10 <sup>7</sup>	$1.8 \times 10^7 - 5.1 \times 10^7$	-1.3 x10 <sup>9</sup> – 3.7x10 <sup>6</sup>	>0.999	$-4.6 \times 10^7 - 6.1 \times 10^8$	>0.999	
+ Poly(I:C) MSC MV	11	7.2 x 10 <sup>6</sup>	$3.6 \times 10^6 - 2.0 \times 10^7$	1.8 x10 <sup>7</sup> - 1.3x10 <sup>9</sup>	0.007	$-6.1 \times 10^6 - 6.2 \times 10^8$	0.599	

<sup>\*</sup>P-values given by Post-Hoc Dunn's Analyses Following Kruskal Wallis Test. For the mean differences of the pair group comparisons, 95% Cls were calculated by Hodges-Lehmann estimation of the location shift between the two groups.

Figure 3B. Perfusate CFU Counts

				Median difference (vs. E. Coli pneumonia)	1	Median difference (vs. NHLF MV)	Overall P-value	
Group	N	Median	25% - 75% Percentile	95% CI	P-value*	95% CI	P-value*	0.624
E. Coli pneumonia	7	258,650	71,900 – 9.5 x 10 <sup>6</sup>	(reference)				
NHLF MV	5	385,600	0 – 5.4 x 10 <sup>6</sup>	-9.5 x 10 <sup>6</sup> – 1.4 x 10 <sup>6</sup>	>0.999	(reference)		
+ MSC MV 1x	6	335,120	$0 - 3.1 \times 10^6$	$-9.5 \times 10^6 - 2.9 \times 10^6$	>0.999	$-2.8 \times 10^6 - 6.3 \times 10^6$	>0.999	
+ MSC MV 2x	6	116,320	14,160 – 6.3 x 10 <sup>6</sup>	$-9.4 \times 10^6 - 5.2 \times 10^6$	>0.999	-5.2 x 10 <sup>6</sup> – 9.2 x 10 <sup>6</sup>	>0.999	
+ Poly(I:C) MSC MV	11	106,040	0 – 424,800	-91,260 – 9.4 x 10 <sup>6</sup>	>0.999	-125,320 – 8.4 x 10 <sup>6</sup>	>0.999	

<sup>\*</sup>P-values given by Post-Hoc Dunn's Analyses Following Kruskal Wallis Test. For the mean differences of the pair group comparisons, 95% CIs were calculated by Hodges-Lehmann estimation of the location shift between the two groups.

Figure 3C. Macrophage Phagocytosis (% of LPS Injured)

				Median difference (vs. Control)		Median difference (vs. LPS)		Overall P-value	
Group	N	Median	25% - 75% Percentile	95% CI	P- value*	95% CI	P-value*	0.026	
Control	8	107	82 – 136	(reference)					
LPS	8	102	96 – 123	-26 – 41	>0.999	(reference)			
LPS + MSC MV	8	70	57 – 87	2 – 68	0.078	9 – 64	0.044		

<sup>\*</sup>P-values given by Post-Hoc Dunn's Analyses Following Kruskal Wallis Test. For the mean differences of the pair group comparisons, 95% Cls were calculated by Hodges-Lehmann estimation of the location shift between the two groups.

**Figure 4. Absolute Neutrophils Counts** 

				Median difference (vs. E. Coli pneumonia)		Median difference (vs. NHLF MV)		Overall P-value
Group	N	Median	25% - 75% Percentile	95% CI	P- value*	95% CI	P-value*	0.024
E. Coli pneumonia	9	9.1x10 <sup>6</sup>	$8.6 \times 10^6 - 2.6 \times 10^7$	(reference)				
NHLF MV	5	11.0x10 <sup>6</sup>	$9.7 \times 10^6 - 3.4 \times 10^7$	$-1.8 \times 10^7 - 2.0 \times 10^7$	>0.999	(reference)		
+ MSC MV 1x	6	5.5x10 <sup>6</sup>	$3.9 \times 10^6 - 9.1 \times 10^6$	-2.1 x10 <sup>7</sup> – -221,100	0.372	760,800 – 3.3 x10 <sup>7</sup>	0.098	
+ MSC MV 2x	6	14.5 x10 <sup>6</sup>	$6.6 \times 10^6 - 2.1 \times 10^7$	$-1.6 \times 10^7 - 1.2 \times 10^7$	>0.999	$-1.1 \times 10^7 - 2.6 \times 10^7$	>0.999	
+ Poly(I:C) MSC MV	11	7.2 x10 <sup>6</sup>	$4.7x10^6 - 9.9x10^6$	80,700 – 1.9 x10 <sup>7</sup>	0.415	967,800 – 2.8 x10 <sup>7</sup>	0.104	

<sup>\*</sup>P-values given by Post-Hoc Dunn's Analyses Following Kruskal Wallis Test. For the mean differences of the pair group comparisons, 95% Cls were calculated by Hodges-Lehmann estimation of the location shift between the two groups.

Figure 5. Lung Protein Permeability

				Mean difference (vs. E. Coli pneun	nonia)	Overall P-value
Group	N	Mean	SD	95% CI	P-value*	
E. Coli pneumonia	3	7.96	1.35	(reference)	-	
+ MSC MV 1x	3	2.49	1.77	-9.031.91	0.003	0.001
+ MSC MV 2x	3	2.38	0.97	-8,232.92	0.003	
+ Poly(I:C) MSC MV	4	2.19	1.01	-8.053.51	0.001	

<sup>\*</sup> P-values were given by ANOVA test followed by Bonferroni adjustment. For the mean differences of the pair group comparisons, 95% confidence interval (CI) were calculated by unpaired t-tests.