

Different transcutaneous auricular vagus nerve stimulation parameters modulate the anti-inflammatory effects on lipopolysaccharide-induced acute inflammation in mice

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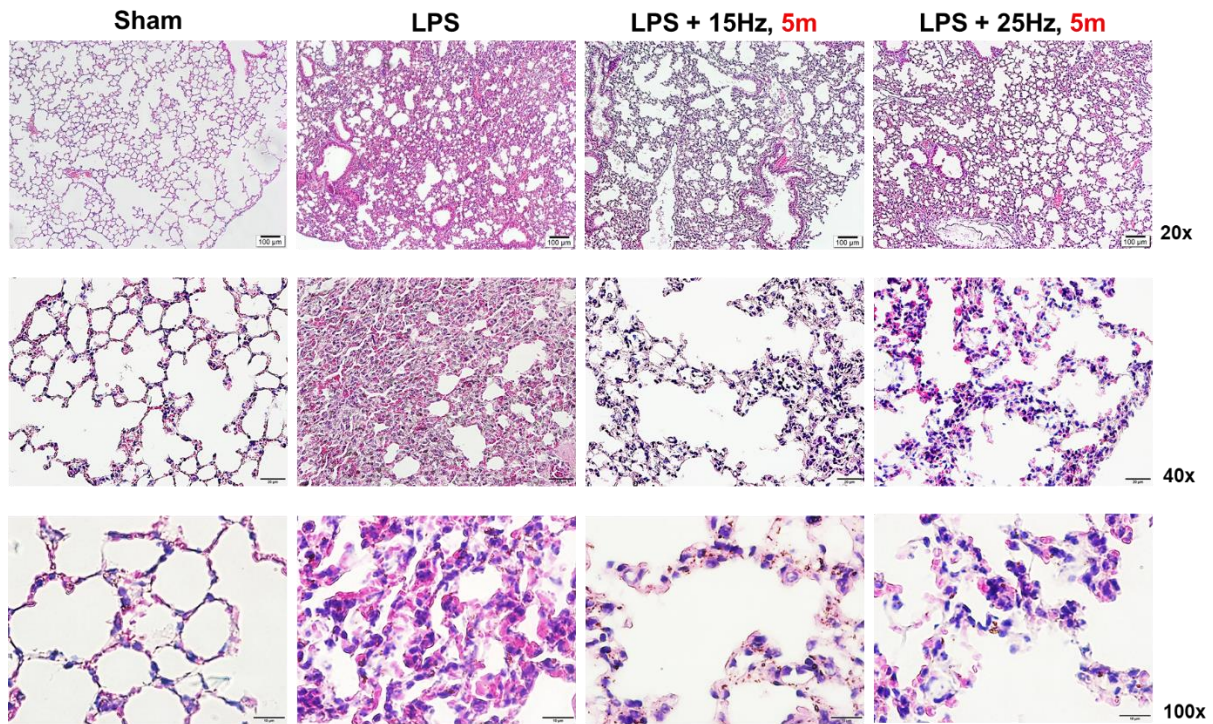
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Supplementary materials

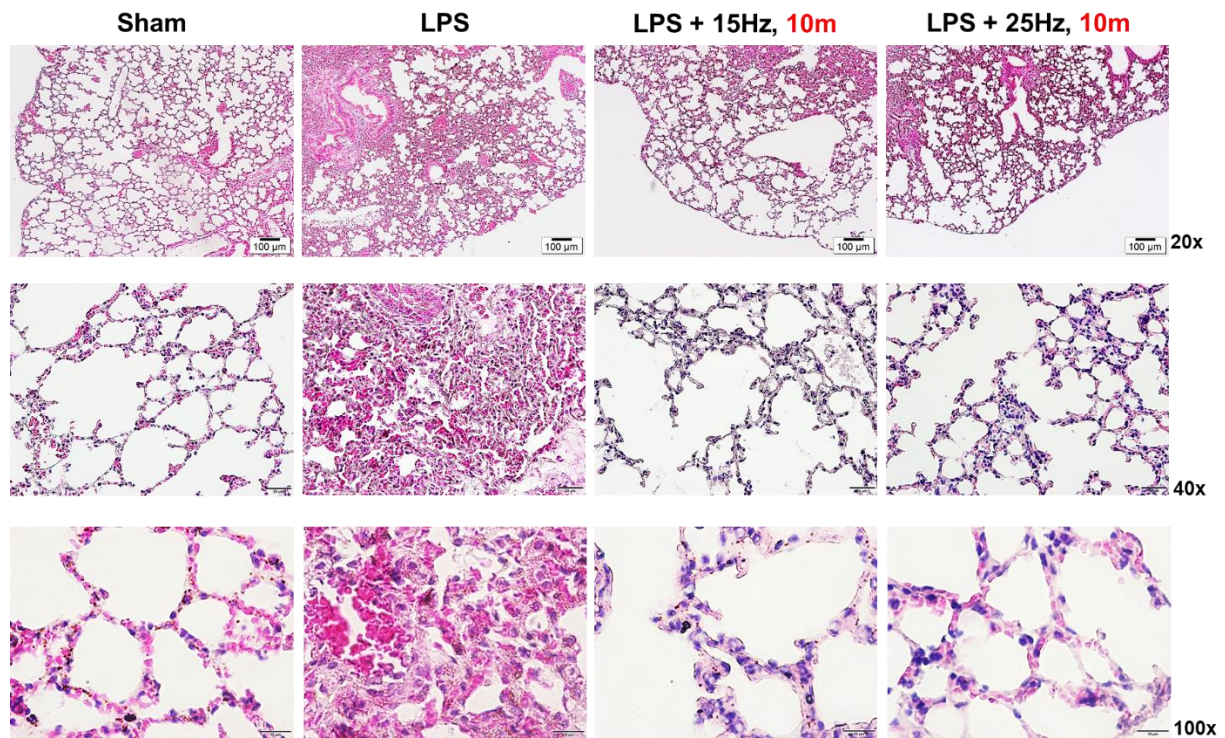
Supplementary video. taVNS 15 Hz and 25 Hz

These videos show the taVNS treated mice in two different pulse frequencies of taVNS (15 Hz and 25 Hz).



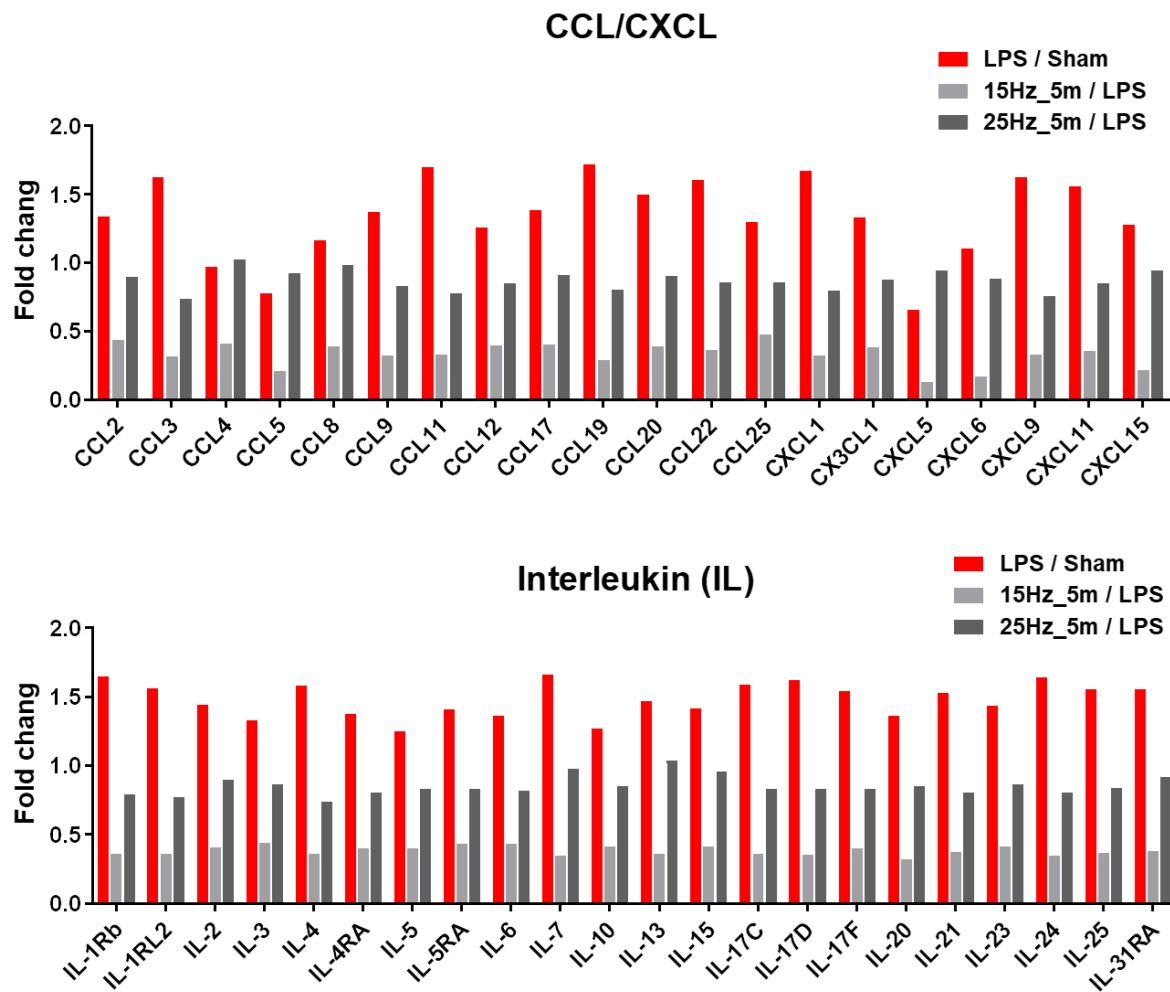
Supplementary Figure S1. Histological evaluation of the lung in taVNS 15 Hz for 5 min and 25 Hz for 5 min on LPS-induced endotoxemia

Hematoxylin and eosin (H&E) staining results of the lung in taVNS treatment with 15 Hz for 5 min and 25 Hz for 5 min on LPS-induced inflammation. Scale bar: 100 μ m (20x), 20 μ m (40x), 10 μ m (100x), respectively.



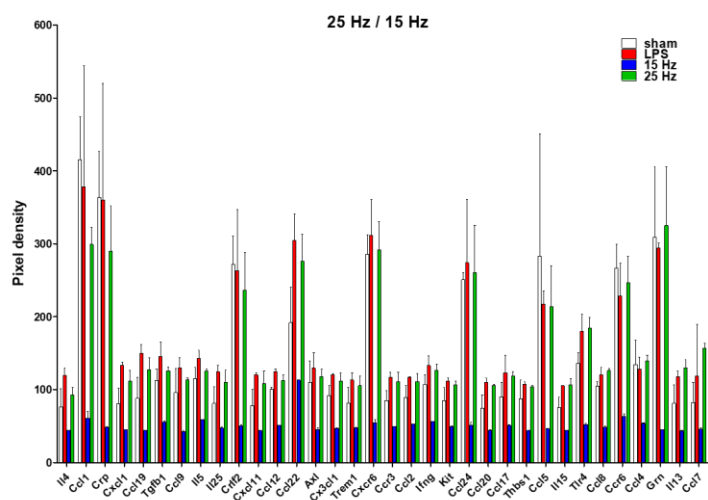
Supplementary Figure S2. Histological evaluation of the lung in taVNS 15 Hz for 10 min and 25 Hz for 10 min on LPS-induced endotoxemia.

Hematoxylin and eosin (H&E) staining results of the lung in taVNS treatment with 15 Hz for 10 min and 25 Hz for 10 min on LPS-induced inflammation. Scale bar: 100 μm (20x), 20 μm (40x), 10 μm (100x), respectively.



Supplementary Figure S3. Fold changes of CCL/CXCL/IL in 15 Hz and 25 Hz taVNS on endotoxemia mice.

The relative expression of CCL/CXCL/IL in 15 Hz and 25 Hz taVNS on LPS-induced inflammation were compared using fold changes.



	Sham		LPS		15 Hz		25 Hz	
Il4	94.0	58.5	127.0	111.5	44.5	44.0	85.5	100.0
Ccl1	373.0	457.0	495.5	260.5	67.5	54.0	315.5	282.5
Crp	318.5	408.0	473.0	247.5	49.5	48.0	333.5	246.0
Cxcl1	96.0	65.5	130.0	136.5	45.0	44.5	102.0	122.0
Ccl19	108.5	67.5	158.5	141.0	44.5	44.0	115.0	139.0
Tgfb1	123.5	101.0	159.5	131.0	54.0	56.5	122.0	129.5
Ccl9	119.5	72.0	140.0	120.0	42.0	43.5	115.5	112.0
Il5	126.5	104.5	151.0	134.0	59.0	59.0	123.0	127.5
Il25	97.5	64.5	131.0	118.0	48.5	46.0	98.5	122.0
Crtf2	299.0	244.5	322.5	204.0	48.5	51.5	273.0	199.5
Cxcl11	94.0	62.5	122.0	118.5	43.5	44.0	96.0	120.5
Ccl12	99.0	102.5	127.0	122.0	51.0	51.0	106.5	118.0
Ccl22	226.0	157.5	330.5	279.0	113.5	113.0	249.5	302.5
Axl	130.5	89.5	144.5	114.5	47.0	44.0	125.0	110.5
Cx3cl1	101.5	81.5	121.5	119.0	47.5	46.5	104.0	119.5
Trem1	96.5	66.5	120.0	106.0	48.0	46.5	96.0	114.5
Cxcr6	304.5	267.0	346.5	276.0	57.5	52.5	319.0	264.0
Ccr3	95.0	75.0	112.5	122.0	49.5	49.5	101.5	120.0
Ccl2	100.5	77.0	117.5	117.0	53.0	52.5	103.5	119.0
Ifng	116.5	97.5	142.5	123.5	56.5	56.0	119.5	132.5
Kit	97.5	72.0	115.0	109.0	48.5	50.0	102.5	110.5
Ccl24	257.5	244.0	335.5	212.5	54.0	49.0	306.5	215.0
Ccl20	87.5	62.0	114.0	106.5	45.0	44.0	106.0	107.0
Ccl17	104.0	76.0	140.0	106.5	50.0	51.5	123.0	114.0
Thbs1	105.5	69.5	104.5	110.0	44.0	43.5	103.5	105.0
Ccl5	401.5	165.0	230.0	205.0	46.0	47.0	253.5	174.5
Il15	85.5	65.0	105.5	105.0	44.5	44.5	100.5	112.5
Tlr4	146.5	126.0	196.5	163.0	51.0	53.0	195.0	174.0
Ccl8	109.0	101.0	127.5	113.5	50.0	47.0	128.0	124.0
Ccr6	289.5	243.0	196.0	260.5	65.5	61.0	272.5	220.5
Ccl4	158.0	111.0	116.5	139.5	54.5	54.0	145.0	134.5
Grn	377.0	240.5	289.0	299.0	45.0	45.0	382.0	268.0
Il13	99.0	63.5	123.0	112.5	44.0	42.5	137.5	122.0
Ccl7	102.0	62.5	68.5	169.0	47.0	45.0	152.5	161.5

Supplementary Figure S4. The pixel intensity of chemokines/cytokines in 15 Hz and 25 Hz taVNS on endotoxemia mice.

The significantly downregulated chemokines/cytokines are listed in the graph and table.