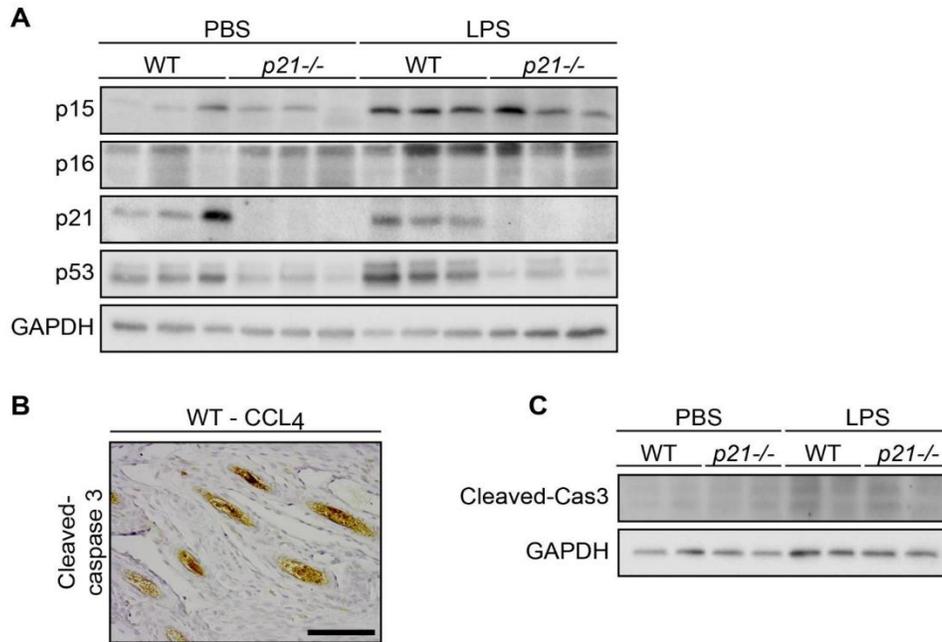
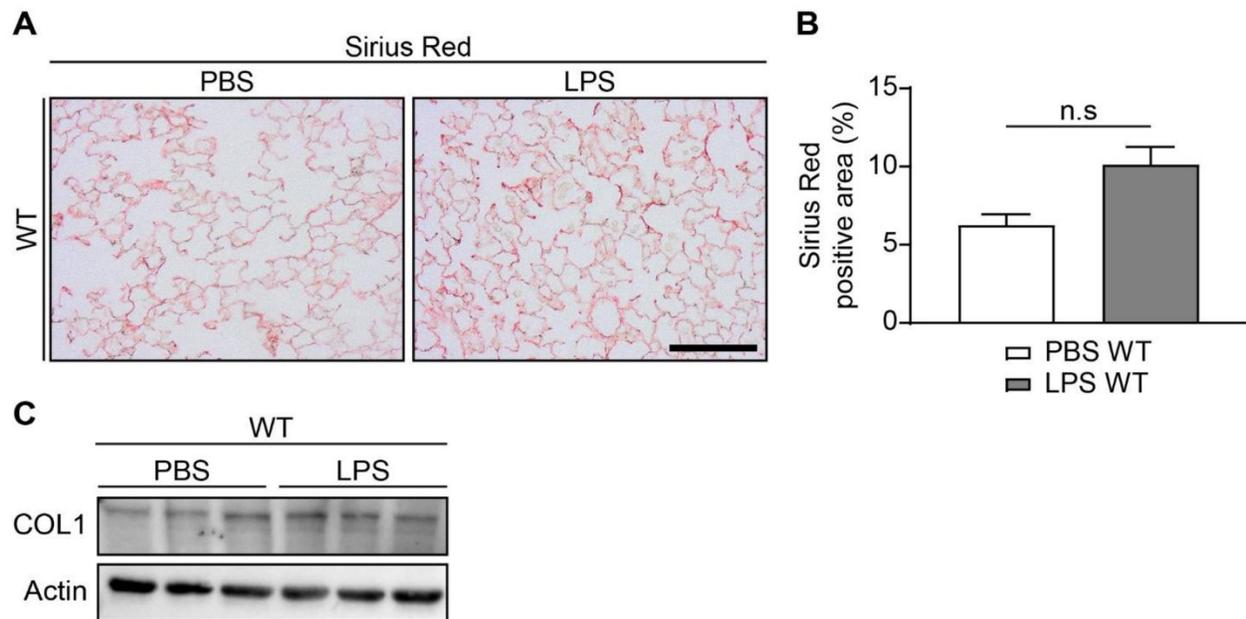


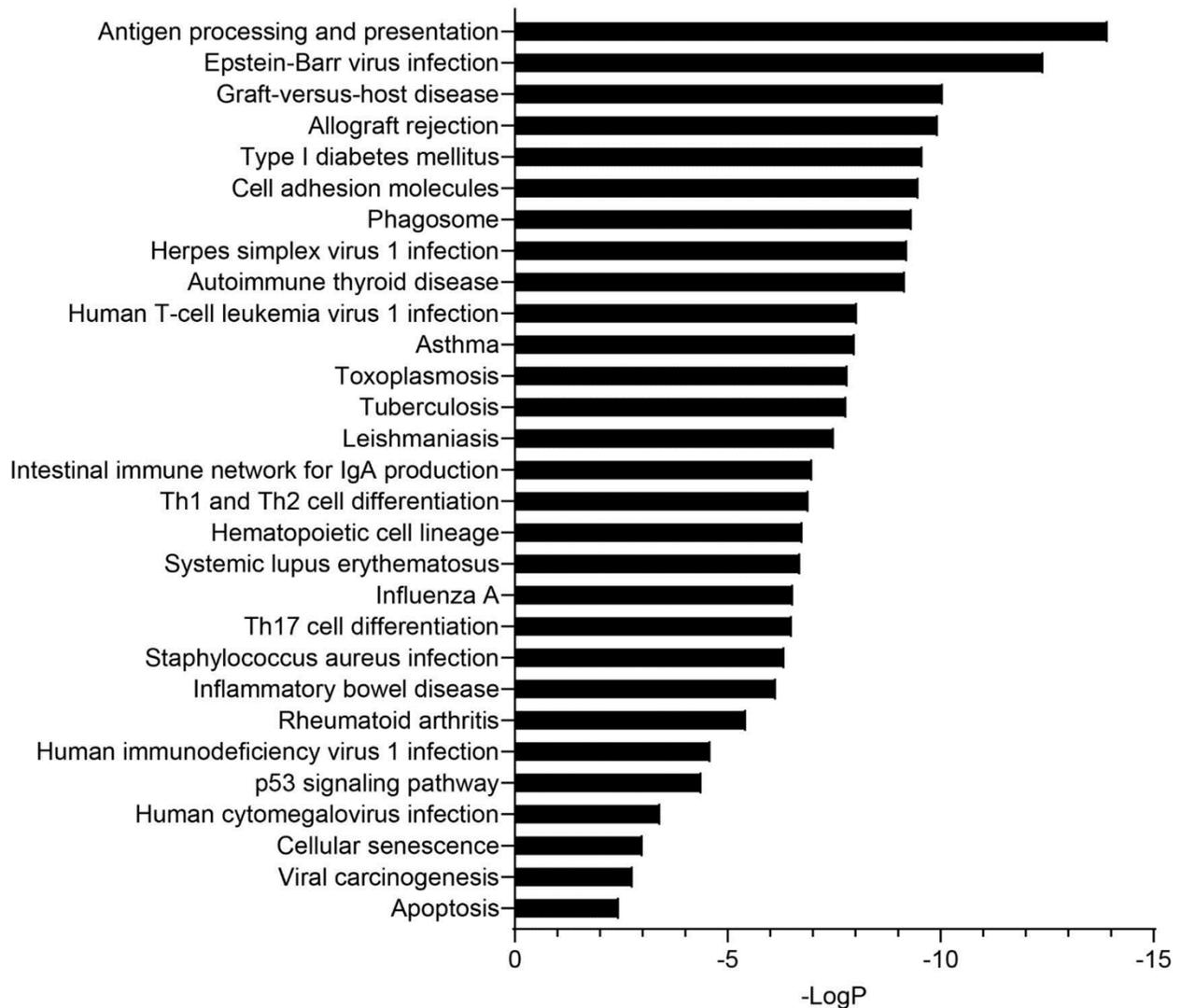
SUPPLEMENTARY FIGURES



Supplementary Figure 1. Evaluation of senescence and apoptosis markers following chronic LPS exposure. Related to figure 1. WT and *p21*^{-/-} mice were exposed to either PBS or aerosolized LPS (0.5 mg/ml), 3 times a week for 10 weeks. At 48 hours following the last LPS exposure, the lungs were harvested and frozen. Alternatively, lungs were harvested, fixed, and analyzed for markers of senescence. **(A)** Western blot analysis of senescence-associated proteins p15, p16, p21 and p53 in the mice lungs. **(B)** Immunohistochemistry (IHC) of liver section from WT mouse treated with CCl₄ for cleaved caspase 3. Scale bar represents 200µm. **(C)** Western blot analysis of apoptosis marker cleaved caspase 3 in the mice lungs. Data information: **(A)** n=3; **(B)** n=3; **(C)** n=2 independent repeats.



Supplementary Figure 2. Chronic LPS exposure does not lead to accumulation of fibrotic tissue. Related to Figure 2. WT and *p21*^{-/-} mice were exposed to either PBS or aerosolized LPS (0.5 mg/ml), 3 times a week for 10 weeks. At 48 hours following the last LPS exposure, the lungs were harvested and frozen. Alternatively, lungs were harvested, fixed, and analyzed for fibrosis. **(A)** Lung sections were stained for Sirius Red. Scale bar: 200 μ M. **(B)** Quantification of Sirius Red staining presented in **(A)**. **(C)** Western blot analysis of collagen-1 (COL1) in the mice lungs. Data information: Data were analyzed using Student's t-test, * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.005$. Data represent mean \pm SEM (**A**, **B**, $n = 3$; **C**, $n = 3$ independent repeats).

A**Endothelial - WT LPS vs. *p21*^{-/-} LPS**

Supplementary Figure 3. KEGG pathway analysis in endothelial cells following chronic LPS exposure. Related to figure 5. WT and *p21*^{-/-} mice were exposed to either PBS or aerosolized LPS (0.5 mg/ml), 3 times a week for 10 weeks. At 48 hours following 5 the last LPS exposure, whole lungs were dissected and dissociated into single cell suspensions and analyzed by flow cytometry and sorting for subsequent RNA sequencing. (A) KEGG pathway analysis of differentially expressed cellular pathways in endothelial cells population in the lungs of WT and *p21*^{-/-} mice following chronic LPS exposure. Data information: (A) n=4-5 independent repeats.