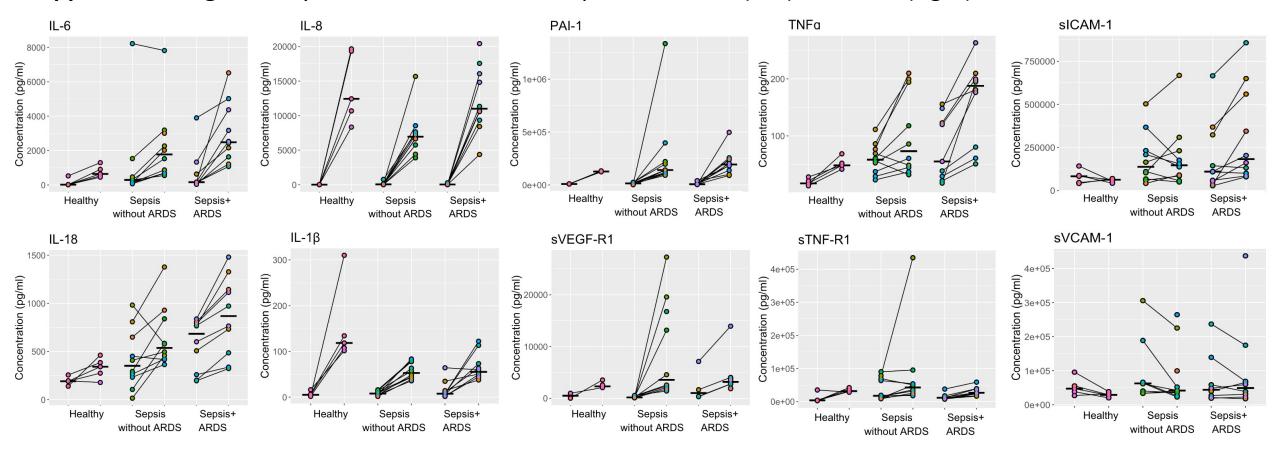
## Supplemental Figure 1: Lung Endothelial MPS

Α. Β. C. collagen I Small port **Cross Sectional** Nuclei F-actin View Side ports Large port cells Top layer + PDMS rod Top View Bottom layer 200µm

Supplemental Figure 1. A) Schematic of lung endothelial MPS. B) Images demonstrating coverage with endothelial cells prior to incubation of plasma in the lumens. C) Confocal microscopy of lung endothelial MPS lumen in cross section.

## **Supplemental Figure 2:** Cytokine concentrations in plasma before (left) and after (right) incubation with EC



Supplemental Figure 3: Correlation of vascular permeability and endothelial activation markers

