



**SUPPLEMENTARY FIG. S3. Endothelial metabolomic responses to shear stress.** Metabolite samples were collected from HAEC exposed to static control (C), OSS, or PSS ( $n=6$  per condition). (A) PCA was performed on a host of measured metabolites to reveal significantly different metabolites in response to the three conditions. Of the 156 metabolites with a known identity, PCA revealed a significant overlap in response to the three conditions. The individual samples are numerically annotated. (B) After PSS and OSS, PCA revealed a distinct separation among six statistically different metabolites. (C) The concentrations of selected metabolites were significantly changed after PSS and OSS conditions ( $*p < 0.01$  vs. control,  $n=6$ ), including an increase in glycolysis-related metabolite, DHA, but a decrease in gluconeogenic metabolite, aspartic acid. DHA, dihydroxyacetone; PCA, principal component analysis.