



**Supplemental Fig. S1.** Lipid variability induces inflammation and apoptosis in human umbilical vein endothelial cell (HUVEC). Cells were exposed to different concentrations of palmitic acid (PA) for 48 hours (see Fig. 1A). The expression of genes associated with inflammation, adhesion molecules (A) and oxidative stress (B) were determined after PA treatment. Cell viability of HUVECs after PA exposure was measured using 3-(4,5-dimethyl-2-thiazolyl)-2,5-diphenyl-2H-tetrazolium bromide (MTT) assay (C). Data are presented as the mean  $\pm$  standard error of the mean of four or five independent experiments. <sup>a</sup> $P < 0.05$  and <sup>b</sup> $P < 0.01$  compared to untreated control; <sup>c</sup> $P < 0.05$  and <sup>d</sup> $P < 0.01$  compared to 50  $\mu\text{M}$ ; <sup>e</sup> $P < 0.05$  and <sup>f</sup> $P < 0.01$  compared to continuous 100  $\mu\text{M}$  PA.