

Figure S1. Fluorescence controls used for the flow cytometric detection of Annexin V and PI in HUVECs.

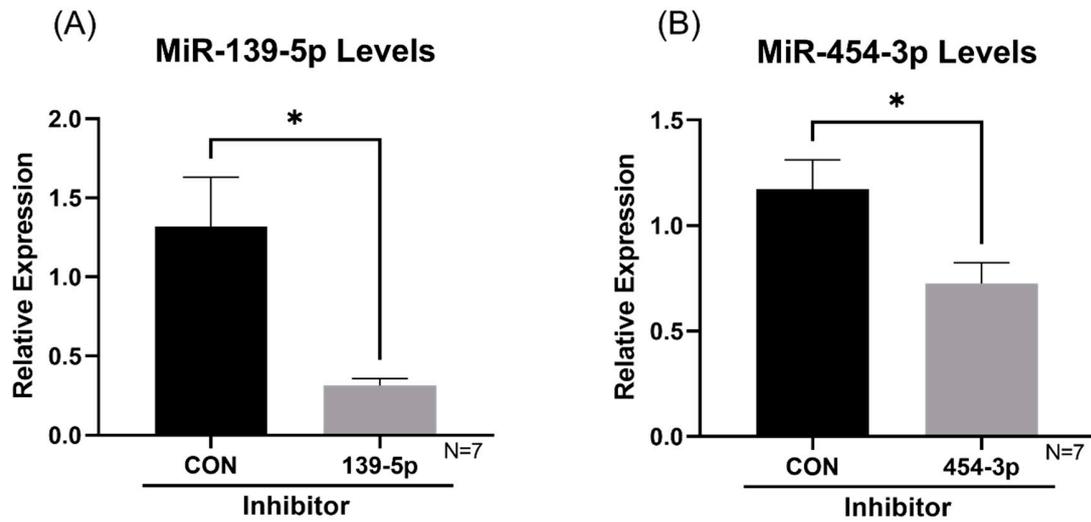


Figure S2. RT-qPCR measurement of miRs-139-5p and -454-3p after transfection with miRNA inhibitors. (A) Transfection of HUVECs with a miR-139-5p inhibitor resulted in significantly lower expression of miR-139-5p compared with negative controls (CON). (B) Transfection of HUVECs with a miR-454-3p inhibitor resulted in significantly lower levels of miR-454-3p compared with negative controls. * $p < 0.05$.

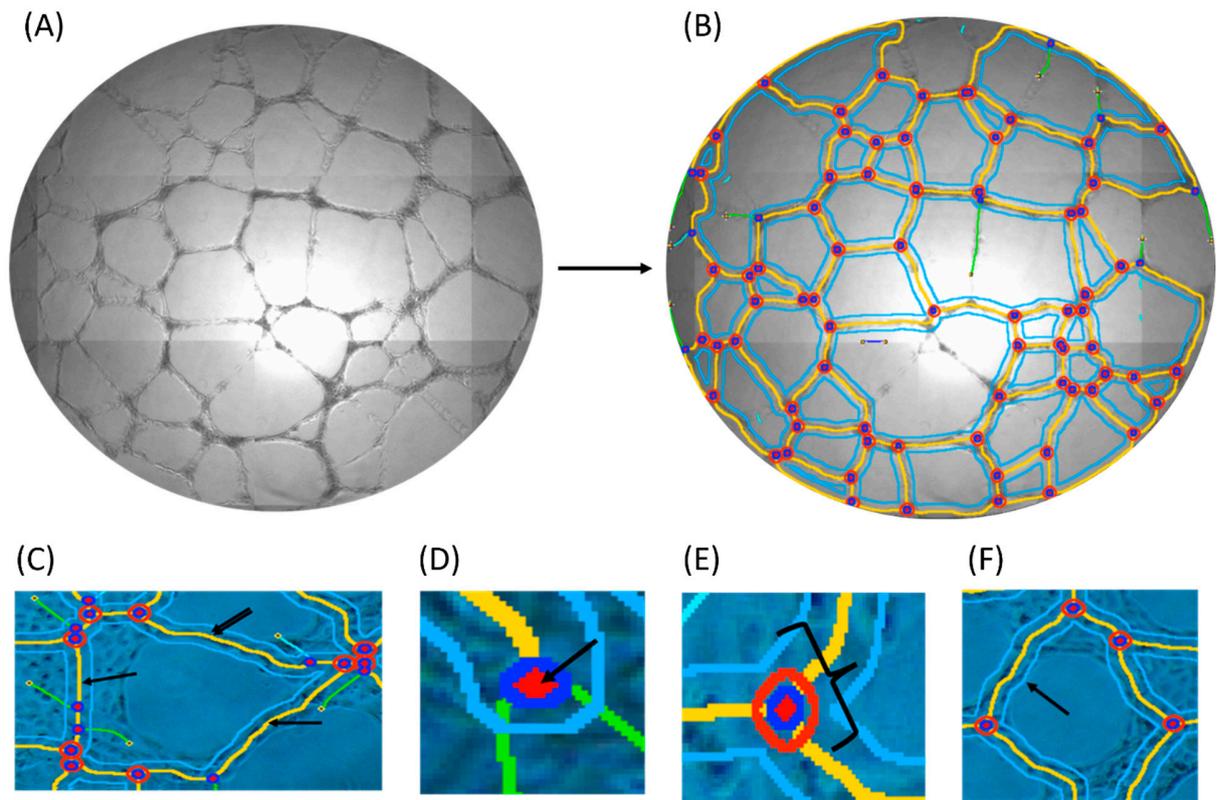


Figure S3. Tube formation analysis using the Angiogenesis Analyzer Software for ImageJ. **(A)** A standard tube formation image used for analysis. Images were cropped to fit a circle to remove the plate well periphery that could be misinterpreted by Angiogenesis Analyzer software. **(B)** An image after Angiogenesis Analyzer software labels tube-like structures. **(C)** Segments are denoted as yellow lines (black arrows) and are defined as a tube network connected by two junctions. **(D)** Nodes are shown as red pixels (black arrow) and are defined as a central connecting point. **(E)** Junctions are depicted as dark blue around red pixels (black right brace) and are defined as a central connecting point (node) with 3 connections (segments). **(F)** Meshes or rings are denoted as sky blue (black arrow) and are defined as areas enclosed by segments.

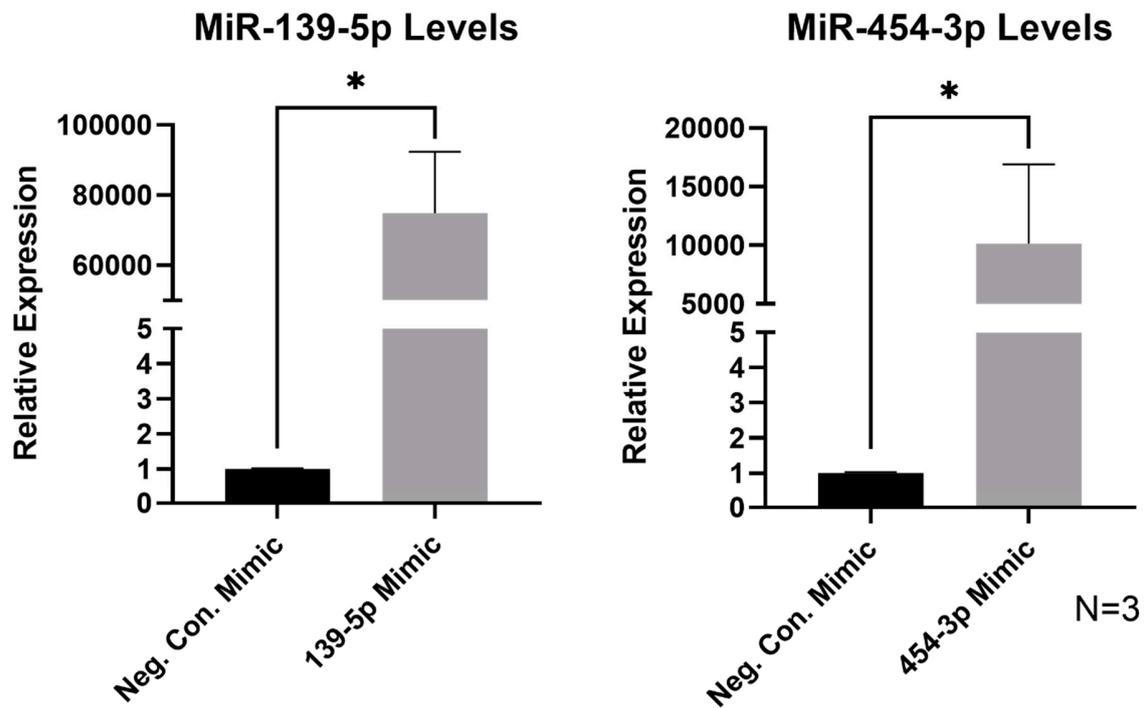


Figure S4: Measurement of miRs-139-5p and -454-3p by RT-qPCR after transfection of *ENG*-knockdown HUVECs with miRNA mimics. As shown in this figure, simultaneous transfection of *ENG*-knockdown HUVECs with miR-139-5p and miR-454-3p mimics resulted in significantly higher expression of both miRNAs compared with negative control mimics (Neg. Con. Mimic). * $p < 0.05$.