Reviewer's report

Title: Piper sarmentosum Inhibits ICAM-1 and Nox4 Gene Expression in Oxidative Stress-Induced Human Umbilical Vein Endothelial Cells

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Reviewer: Haw-Wen Chen

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General comments:
In this study, aqueous extract of Piper sarmentosum (AEPS) was used to treat HUVECs and demonstrate its vasculature protective effect via inhibition of ICAM-1 and Nox4 expression and up-regulation of CAT, SOD1, and GPx expression.

Major concerns:
1) What is the rationale to use H2O2-induced HUVECs to simulate the in vivo atherosclerosis model?
2) In this study, 150 µg/mL AEPS was used, was there any evidence to support the dosage use?
3) In the experimental design, why use co-treatment with APES and H2O2 instead of pretreatment model?
4) The function of NF-#B is generally mediated by IKK via activation of I#B and subsequent proteasome degradation. In this study, authors evaluate the effect of AEPS on NF-#B mRNA expression. It is strongly suggested to investigate the effect of AEPS on H2O2-induced NF-#B activation.
5) Based on the experimental design, it is difficult to identify the vasculature-protective effect of APES is via its enhancement of cellular antioxidative capacity or its direct ROS scavenging ability.

Minor concerns:
1) In p4, ICAM-1 is intercellular adhesion molecule but not intracellular adhesion molecule.
2) In p13, Catalase and GPx detoxifies H2O2 into water and oxygen should be changed to detoxify.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.