Reviewer's report

Title: Vasorelaxant effect of Prunus yedoensis bark

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Reviewer: Hyojin HJ An

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This manuscript reports that the methanol extract of Prunus yedoensis bark (MEPY) had a relaxant effect on rat thoracic aorta. MEPY relaxed the contractions induced by phenylephrine (PE) and KCl in a concentration-dependent manner in endothelium-intact and endothelium-denuded aorta. However, the relaxant effects of MEPY on endothelium-denuded aortic rings were reduced. The vasorelaxant activity of MEPY was reduced by pre-treatment with L-NAME, MB or ODQ. And MEPY inhibited Ca2+-induced contractions of aortic rings. However, the relaxant effects of MEPY were not affected by pretreatment with indomethacin, atropine, glybenclamide, TEA, or 4-AP. Finally, the authors show that the vasorelaxant mechanism of MESG includes activation of NO formation from L-Arg and NO-cGMP pathway, blocking the entry of extracellular Ca2+ via ROCCs and VDCCs. Overall the hypothesis is interesting and the data are of good quality. However, throughout the manuscript there are some mistakes. I made some corrections (see Minor Essential Revisions).

Minor Essential Revisions

1. There are only MEPY treated data in Figure 1. It is necessary to insert control data (not treated MEPY).
2. Page 3, line 1 – “PE (1 µM) or KCl (60mM)” should read as “PE (1 µM) or KCl (60 mM)”.
3. Page 5, line 6 – “dimethyl sulfoxide (DMSO)” should read as “DMSO”.
4. Page 5, line 13 – “37 °C” should read as “37°C”.
5. Page 5, line 21 – “37 °C” should read as “37°C”.
6. Page 12, line 2 – “MEPY (200 µg/ml)” should read as “MEPY (200 µg/ml)”.
7. Page 12, line 3 – “PE (1 µM)” should read as “PE (1 µM)”.
10. Page 13, 14, References – All the “page-page” should read as “page–page”.
11. Page 15, – “(n = 5–7). *P < 0.05, **P<0.01” should read as “(n = 5–7). *P < 0.05, **P < 0.01”.

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

**Quality of written English:** Acceptable

**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.