Reviewer’s report

Title: The protective effects of ginsenoside Rg1 against hypertension target-organ damage in spontaneously hypertensive rats

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Reviewer: Sérgio R Ambrósio

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Minor Essential Revisions

Comments about the manuscript – “The protective effects of ginsenoside Rg1 against hypertension target-organ damage in spontaneously hypertensive rats”

The manuscript describes the effect of chronic treatment of ginsenoside Rg1 on vascular remodeling and the effect of organ protection in SHR. The biological methods employed in the assays are appropriate and the Rg1 structure has been well characterized. In my opinion, this paper is publishable in BMC Complementary and Alternative Medicine, but the authors should clarify some points.

1. In “Background” – the authors should improve the explanation about the reason to investigate the effect of Rg1 in the vascular remodeling and target-organ damage induced by hypertension;

2. The chemical structure of Rg1 should be present as Figure and not as Supplementary Material;

3. In “Methods – Animals and Rg1, page 4” – the authors describe, based on the HPLC (high-performance liquid chromatographic) analysis, that the purity of Rg1 is higher than 99%. In my opinion, estimate the purity using only HPLC analysis is not appropriate. I believe that the purity statement of Rg1 must be certified by the Company Shangai Yousi Bio-Tech. The HPLC analysis and NMR data of Rg1 could be used to confirm the purity described by Shanghai Yousi Bio-Tech Co., Ltd;

4. In “Supplementary Figure 1” – the conditions used in HPLC analysis (flow, equipment used, mobile phase, UV detection, etc) should be placed in the Figure captions;

5. In “Supplementary Figure 2” – the equipment used to obtain the 13C NMR data should be cited in the Figure captions (same as 4.);

6. Despite the fact that the chemical structure of the ginsenoside Rg1 is very well established in the literature, a table content its 13C NMR data it is not necessary. The authors should write in the text that these data are in agreement with those previously reported in the literature;
7. Carefully check the text for spelling errors (Example – page 3 – Background – Although the blockers of calcium channel and inhibitors of rennin-angiotensin system are widely applied for clinical therapy, But……);

8. A careful revision of the text by a native speaker is recommended.

**Level of interest:** An article of importance in its field

**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.