Title: Inhibition of advanced glycation end products by red grape skin extract and its antioxidant activity

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Reviewer: Olaniyi Fawole

Reviewer’s report:

The authors of this manuscript report the inhibition of advanced glycation end products by red grape skin extract and its antioxidant activity. The work done is investigative in nature and overall the manuscript is well written, with the exception of a few minor mistakes in grammas and punctuations. However, there are major concerns especially because the authors failed to indicate how the sample (RGSE) extract was prepared. Also, data presentation in the Tables and Figures needs to be improved as in some instances, the results are confusing and do not reflect what is written in the methods and discussion. I am hesitant to recommend publication of the manuscript in its current condition, and suggest that the authors should address the following.

Minor Essential Revisions
i. Line 1, pg 6; Phytochemical analysis: Please include the equivalents of the contents of total phenolic, total flavonoid content and anthocyanins as indicated in lines 14 – 17, pg 10. How many replicates were used in the assays?
ii. DPPH assay: please indicate the range of sample concentrations used
iii. TEAC assay: please indicate the range of sample conc. used. Also indicate that you calculated the IC50
iv. In all the assays, the authors should indicate the replications used for clarity purpose
v. Line 14-15, pg 10; should read “The content of total phenolic compounds and flavonoids in RGSE was 246.3± 0.9 mg gallic acid equivalent/g dried extract and 215.9±1.3 mg catechin equivalent/g dried extract, respectively”
vii. Table 1: please include the equivalents of the antioxidant capacities in the table as opposed to in the footnote. Also include the IC50 values of the positive controls used in the assays
vii. Lines 1 -2, pg 16 is not clear. Please check
viii. For consistency, please in the results refer to the Figures as “Figure” (as indicated in the figure page) not “Fig”

Major Compulsory Revisions
i. As indicated earlier, the authors should include sample extraction procedure in the manuscript. What solvent was used for the extraction of RGSE used the
various assays?

ii. There are indications that in the results that some measurements were taken after a week. The procedure should be included in the corresponding methods for better understanding of the manuscript

iii. Statistics in Tables 2, 3 and 4, including Figures 1 and 2 are confusing. To start with, are the superscripts indicating mean values separation (posthoc test)? If yes, how come some mean values do not have any superscript on them? The authors should please clarify this and provide more information on the details of the comparison (column or row comparison). The authors should also provide the IC50 for the samples and positive controls in the tables and in the legends of the graphs

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests