Reviewer's report

Title: Germinated brown rice and its Bioactives modulates the activity of uterine cells in Oophrectomized rats as evidenced by gross, cyto-histological and immunohistochemical changes

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Reviewer: Fazliana Mansor

Reviewer's report:

In the present study, the authors evaluate the effects of GBR in the OVX rats. The authors concluded that GBR and its bioactive compounds can be used to improve reproductive system atrophy, dryness and discomfort during menopause. I have a few minor comments about this interesting study:

- The authors need to explain why 200 mg were used for all GBR, ASG, GABA and Oryzanol. Different compounds are known to have different efficacies at different concentrations.

- Please mention the brand name/source for these estrogen (powder? Which brand? How the dilution was prepared) and other compounds as this information is helpful if this similar experiment is going to be repeated by other researchers. This is just to explain what type of estrogen is used - estradiol available from reagent company or estrogen used for hormonal replacement therapy.

- It is not mentioned on how GBR extract was obtained in this experiment (although it was mentioned in the background that brown rice is soaked 12-24 h at varying temperature). Please write in brief of this description in the method section.

- The unit for uterus and vaginal length is cm, and not cm2 (this is measuring an area).

- There are some minor spelling errors and punctuation marks (e.g: distil water = distilled water, PadiBeras National (BARNAS) = Padiberas Nasional (BERNAS)). Be consistent in using abbreviation – sometimes GBR is spelt out in full, sometimes abbreviation is used.

- In the conclusion of the abstract, it is mentioned ‘Thus, GBR and its bioactives can be used to improve reproductive system atrophy, dryness and discomfort during the menopause’. This statement might mislead the readers. As this study was conducted on animal model, it would be fair to conclude on what has been shown on animals only, as authors did not measure ‘discomfortness’ in the rats. Please rephrase. Otherwise, authors might use the word ‘potential’ in the conclusion sentence. The conclusion in the main text is well written.

- If possible, better images of the results should be provided. They are in acceptable quality. However, if better ones are available (same photos but better resolution), that would be great. Better viewing for readers.
**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.