Reviewer's report

**Title:** Effects of short-term fructooligosaccharide intake on equol production in Japanese postmenopausal women consuming soy isoflavone supplements: A pilot study

**Version:** 3  **Date:** 21 March 2013

**Reviewer:** Charlotte Atkinson

**Reviewer’s report:**

- Major Compulsory Revisions

1. Background, paragraph 1: “indicates that isoflavones may distinct clinical effects” does not make sense. Please edit.

2. Background, paragraph 3: are Western intakes of soy foods really as low as 0.5 – 3 mg per day, or is that the intake of isoflavones? Please clarify.

3. Isoflavone supplement: I find this paragraph difficult to follow, and I’m still not sure how much daidzein was consumed in each capsule. Please clarify.

4. Results and discussion, paragraph 3: This paragraph is hard to follow and it is difficult to work out which comparisons are being reported. As such, it needs editing for clarity.

5. Results and discussion, paragraph 4: It isn’t clear what the authors mean by “More long-term FOS exposure to isoflavones would be required”

6. Results and discussion, paragraph 5: It isn’t clear what the authors mean by “Conversely, where a diet had low isoflavone content, the same experiment may provide quite different results” and it seems that this has simply been copied and pasted from one of the reviewer’s comments.

7. Results and discussion, paragraph 7; this paragraph is rather disjointed and seems to be a series of unrelated sentences. It requires editing to justify why you are telling us that, for example, there is a higher prevalence of equol producers in Korean Americans. How is it relevant to the ‘story’ being told? Also, it is unclear why the authors suggest that genetics may contribute to the ability to produce equol due to an absence of an effect of intervention with probiotics or dietary fiber. This needs further clarification / justification.

- Minor essential revisions

8. Abstract, paragraph 1, & Background paragraph 2: “attributed to their person’s ability” should be re-written as “attributed to a person’s ability”. Also, as per one of the other reviewer’s comments, it is not the clinical effectiveness of isoflavones per se that might be modified by the production of equol, rather it is the effectiveness of soy or daidzein that may be modified (as not all isoflavones are metabolised to equol).
9. Background, paragraph 4: This would read better if the two sentences were switched, such that the sentence beginning with “It is not clearly...” is at the beginning of this paragraph.

10. Subjects and design, paragraph 2: The sentence beginning with “During washout period...” could be edited to say “The washout period was 2 weeks and required the same dietary exclusions as the intervention period”. The statement “although antibiotics were not used” could be a stand alone sentence if you are trying to say that antibiotics were not used by any of the participants during the study. Did you assess antibiotic use in the two weeks prior to the start of the study?

11. Results and discussion, paragraph 2: Please switch the sentences beginning “The similarly increased...” and “However, there were no...”

12. Results and discussion, paragraph 6: “on postmenopausal Japanese women” should read “among postmenopausal Japanese women”

13. Results and discussion, paragraph 8: I think by saying “statistically significant populations” you are eluding to the fact that a sufficiently powered study is needed. Please clarify.

14. Conclusion: Please change “may not” to “does not”. Also, the sentence that starts “However, it may be possible...” is not a conclusion from your study and should be incorporated in the discussion with appropriate references for statements made.

Quality of written English: Not suitable for publication unless extensively edited

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