

Reviewer's report

Title: Biomedical potential of genetically modified flax seeds overexpressing glucosyl transferase gene.

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Reviewer: Magdalena Zuk

Reviewer's report:

The manuscript presents an interesting area of research concerning the favourable effects of genetically modified flax seeds preparation on human fibroblasts growth, proliferation and on bacterial growth. The authors suggest the flax seeds preparation could be a novel interesting source of health-oriented compounds and the presented experiments support this thesis. So far no experiments concerning an effect of modified flax seeds extracts with the elevated level of phenylpropanoids on human fibroblasts cells has been showed. The results presented in the manuscript show considerable novelty and can be recommended for publication in BMC Complementary and Alternative Medicine with minor revisions:

- 1) The manuscript should be revised by a native speaker, as there are some stylistic and spelling mistakes, e.g. "Seedcakes, rich in phenylpropanoids known to possess significant antioxidative properties." should be "Seedcakes, rich in phenylpropanoids are known to possess significant antioxidative properties." (line no 1, page 10); "Antibacterial activity of GT4 seedcake extracts against *S.aureus* (A) and *E.coli* (B)." - misses an italic style of *S.aureus* and *E.coli* (caption of Figure 5).
- 2) Authors suggest that GT4 seedcake preparations possess high antioxidant activity due to the presence of phenylpropanoid compounds. The good complementation of the performed experiments and the above-mentioned hypothesis could be an antioxidative assay confirming the high antioxidant potential in comparison to the known compounds of antioxidative function.
- 3) Do the authors know if the treatment of normal human dermal fibroblasts with the individual phenylpropanoids standards, which are the constituents of the GT4 seedcake preparations, have similar or different effect on their growth and proliferation? Did such an experiment were performed?

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.

Declaration of competing interests:

I declare that I have no competing interests.