Reviewer’s report

Title: Lactobacillus fermentation enhances the inhibitory effect of Hwangryun-haedok-tang on ovariectomy-induced bone loss

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Reviewer: Nateetip Krishnamra

Reviewer’s report:

The manuscript present interesting data on the inhibitory effects of traditional herbal medicine on osteoclastogenesis. The authors also showed that fermented product of this herbal medicine exhibited more potent effect which was evident in the in vivo rat model.

1. Major Compulsory Revisions

1.1. Figure 3: Explain why authors did not quantify differences in mRNA expression and use statistics to conclude the inhibitory effects of the different samples

1.2. Method paragraph 9; What is the rationale for choosing the dose of 0.3 g/kg of fHRT in the in vivo experiment? Authors please add route of administration (Oral?) and single or multiple doses used in this study.

1.3. Discussion – paragraph 2, please explain why HRT-BU’s effect on osteoclastogenesis was less potent in cocultured osteoclasts than in single culture BMM’s (Fig2) and not effective at all in the in vivo model (fig6)

2. Minor Essential Revisions

Abstract

2.1. Paragraph 2, last sentence “analysis” changed to “analyse”.

2.2. Paragraph 3, mRNA expressions like as..” to “mRNA expressions such as…”

Background

2.3. Paragraph 2, line 4: “throughout” changed to “through” line 6: “signal pathways ” changed to “signaling pathways” line 9: “known as an master…” changed to “known as the master…”
2.4. Paragraph 3, last line: “study to evaluate whether HRT affects on…” to “study that evaluates whether HRT affects RANKL…”

2.5. Paragraph 4, line 1: “Permentation has suggested as traditional process enhancing the pharmacological effect of herbal medicine in the theory…” changed to “Fermentation has been suggested as a traditional process for enhancing the pharmacological effect of herbal medicine based on the theory…”
line 3: “influences on the health by health-promoting effect or preventing” disease” to “influences health through health promoting and disease preventing effects”
line 4: “Evidences” to “A body of evidence”
line 5: “fermentation are…” to “fermentation include…”
line 8: “However, it is…whether” to “However, there has been no investigation on”
line 9: “pharmacological” to “preventive”; “preventing” to “on”

2.6. Paragraph 5, last line: “fHRT in OVX…” To “fHRT on OVX…”

Methods

2.7. Paragraph 1 line 2: “were purchased …” changed to “were purchased from..”
line 6: “Cell singling” to “Cell signaling.”
line 7: “biotechnology Inc..” to “Biotechnology Inc.”

2.8. Paragraph 5, line 8: “contained more than…” to “containing more than…”

2.9. Paragraph 9, line 6: “devided either sham operated or…” to “devided into sham operated and …”
line 8,9: “administred..” to “administered…”

Discussion

2.10. Paragraph 1, line 3: “NF-kB play at…” to “NF-kB play a role at an early..”
line 10: “excluded due to they are..” to “excluded as they were…”

2.11 Paragraph 2, line 1: “having the benefial” to “that has beneficial”
line 3: “It has reported…” to “IT has been reported…”
line 13: “decrease of bone parameter” to “decreased bone parameter”

2.12 Paragraph 3, line 3: “influences” to “influence”
“further metabolism of them” to “metabolism in the liver”
line4: “the absorbed rate the absorbed amount than unchanged form,” to “the absorption rate and the amount absorbed”
line6: “Therefore , it could…” to “Therefore , these fluidugs”
line8: “which , at least” to “which are at least”
2.13 Paragraph4 ,line3: “slightly change” to “slightly changed”
“concentration of them” to “concentration of these components”

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

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.