Reviewer's report

Title: Beneficial effects of Korean red ginseng on lymphocyte DNA damage, antioxidant enzyme activity, and LDL oxidation in healthy participants: A randomized, double-blind, placebo-controlled trial

Version: 1 Date: 5 January 2012

Reviewer: Elena Azzini

Reviewer's report:

The authors provide an article on KGR consumption in healthy humans. The work could be useful, however it is presented in a fragmentary way and appears confusing: there are a lot of concepts without a linkage and an explanation.

The paper will be published after major and deep revisions

Introduction

The background should be improvable by focusing on relevant information that strictly reflects the main goal of the submitted manuscript. In particular:

Add current references regarding ginseng composition and supplementation even if the mechanism for ginseng’s health-promoting effects is unknown.

Move from discussion line 295 to 304 in this section. In the same way the controversies regarding supplemented dose should be reported. In addition the section from line 62 to 63 appears without a linkage and should be better organized.

The manuscript would be much improved if the background would provide a brief but referenced overview of the literature data available.

Methods

Subjects

From Results move line 239 to 242 after line 99 in this section

Test capsule and study design

Move line 111 to 116 at the beginning of this section and then add the study design including from line 100 to 110.

In addition the authors should be clarify and better explain how many capsules were consumed from subjects: 10 capsules in total per day or 10 capsules after each meal?
It should be useful to include the total daily supplementation in L and H dosage.

Move Safety parameters before Serum lipid profile and fasting glucose

Results
Start from line 244.
The quality of results could be improved showing a figure of Comet assay if the authors agree.

Discussion
I would suggest the authors to interpret and discuss the described results with a proper embedding in the literature available on the topic. The discussion should totally rewritten by focusing the attention on the obtained results that should be appropriately discussed. In particular:
From line to 289 to 294 were summarized the results observed in this study, so move the lines in the Conclusion.
Start the discussion from line 305 and even if mechanisms of action was not addressed in the study design the authors should be formulated some hypothesis of their achievements.
Line 309:........supplementation (6g)........specify per day or 8-week?
Line 337-339: Why the study would be useful to design a cranberry supplementation? I don’t understand the rationale and the purpose of the sentence.

Conclusion
Conclusions should be improved by highlighting the achievements and outcomes

Figure 3
Check the reported significance at level ††

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**
I declare that I have no competing interests