Reviewer’s report

Title: Beneficial immunostimulatory effect of short-term Chlorella supplementation: enhancement of Natural Killer cell activity and early inflammatory response

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Reviewer: Suzana Makpol

Reviewer’s report:

Title: Beneficial immunostimulatory effect of short-term Chlorella supplementation: enhancement of Natural Killer cell activity and early inflammatory response (Randomized, double-blinded, placebo-controlled trial)

Comments to the authors:

The manuscript of Kwak et al. examines the effects of short-term Chlorella supplementation on the enhancement of Natural Killer cell activity and early inflammatory response.

The manuscript presents potentially interesting issue ie. whether Chlorella enhances natural killer cell activity and early inflammatory response in normal healthy individual. However the research question was not well defined as the authors failed to explain in the introduction the beneficial effects of Chlorella in human focusing on the immune system. Authors shall explain the mechanism of early inflammatory responses in relation to enhancement of natural killer cells and relate to the property of Chlorella that may enhance the immune system.

Authors shall also highlight the differences between infected individual and normal healthy subjects and why this study focused on normal healthy subjects.

Recruitment of study subjects was not well explained. For example authors did not mention how the number of subjects was decided in the study, and why the supplementation was carried out for 8 weeks (short term) and not long term. The study designed was also not explained such as when the blood was collected and how many times the blood was collected though out the study.

As for the statistical analysis, the intra group comparison needs further clarification and was not indicated in the figures. The explanation on the strong and good correlation between the groups was not shown in the r value as majority of the r values fall between 0.2 and 0.5.

The discussion requires major editing as it shall discuss the findings of the study and not just reporting findings from other studies.

More data is required to support the conclusion on the enhancement of the inflammatory response and the correlation analysis did not indicate a strong and good correlation.
The title was appropriate but it shall be reworded and the brackets shall be removed.

The abstract conveyed the findings of the study but insignificant results shall be reported as no changes.

In my opinion this manuscript needs major compulsory revision and more data to support the conclusion on the enhancement of the inflammatory response before it can be considered for publication.

Thank you

**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:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests