Reviewer’s report

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

Version: 1 Date: 25 May 2012

Reviewer: Yoshiji Yamada

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Kwak et al. examined the effect of Chlorella on the NK cell activity and serum concentrations of interferon-gamma, interleukin-1beta, and interleukin-12 in 51 Korean healthy individuals. The authors observed that serum concentrations of interferon-gamma, interleukin-1beta, and interleukin-12 as well as the NK cell activity were increased in individuals having Chlorella compared to those having placebo after eight weeks. The authors concluded that short-term Chlorella supplementation enhanced the NK cell activity and the production of interferon-gamma, interleukin-1beta, and interleukin-12 in healthy individuals. Although the manuscript has interest observations, the reviewer has a few comments on the manuscript.

1. In Figure 1, serum concentrations of interferon-gamma and interleukin-12 were significantly decreased in the placebo group after eight weeks, and these components seemed to be substantial portions in the significant changes of these parameters shown in upper parts of the graphs. It is not clear why serum concentrations of interferon-gamma and interleukin-12 were significantly decreased in the placebo group.

2. In Figure 2, the NK cell activity was also decreased in the placebo group, although it was not significant. It was not clear why.

3. Given that the authors described P < 0.05 was considered statistically significant, P < 0.1 was not required to show.

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.