Reviewer's report

Title: Topical Application of Concentrated Deep Sea Water (CDSW) reduces inflammation in Atopic Dermatitis-like Skin Lesions in NC/Nga mice

Version: 2 Date: 24 April 2012

Reviewer: Naoki Inagaki

Reviewer's report:

Authors have revised their manuscript, but there are some errors and inappropriate descriptions. Some further revisions should be considered.

[1] Induction method for dermatitis by DNCB is still obscure. DNCB challenge was 12 times at interval of 3 days. But the interval between sensitization and the first challenge is not shown. Clinical score is evaluated weekly. Was the interval between scoring and challenge the same in all measurement? In this kind of experiments, important information for evaluating the results is time relationship between challenge and measurement. It should be shown in method or figure legend in all results.

[2] Application volume of CDSW is not shown as pointed out previously.

[3] The second sentence of method in abstract (page 2) is a result.

[4] The first sentence in the second paragraph of background (page 3) is obscure.

[5] “The cells” (page 3, line 3 from bottom) may be “Th cells.” ??

[6] Are BL/6N mice the same as NC/Nga? What experiments were BL/6N mice used? (page 5) Source of NC/Nga mice should be shown (page 6).

[7] Mice were divided into six groups (page 5-6). It is incorrect. Change to 5.

[8] “scissor” should be “scissors.”(page 7)

[9] To prepare spleen cell suspension, a glass homogenizer was used (page 7). “homogenizer” is an apparatus to crush cells. Actually was a homogenizer used? The expression should be changed.

[10] Duncan’s multiple comparison test does not control family wise error rate. So it should be avoided to use.

[11] The reason why CDSW was used is shown in page 8, lines 5-6 from bottom. The sentence does not explain the reason.

[12] Section title “Effect of CDSW on anti-allergic responses” is incorrect.

[13] IL-1β, IL-6 and TNF-α are pro-inflammatory cytokines. So, “anti-allergic responses” should be “anti-inflammatory activities.”(page 10, line 7)

[14] Some discussion on the effective constituents and the mechanisms should be added.

[15] Some abbreviations are used without spelling out. eg. ELISA, FACS
There are some errors in the text.

**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, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'