Reviewer’s report

Title: Application of Deep Sea Water Inhibits the Development of Atopic Dermatitis-like Skin Lesions in Isolated NC/Nga

Version: 1 Date: 12 March 2012

Reviewer: Mao-Qiang Man

Reviewer’s report:

The manuscript entitled “Application of Deep Sea Water Inhibits the Development of Atopic Dermatitis-like Skin Lesions in Isolated NC/Nga” by Bak, et al. described concentrated deep sea water influences cutaneous inflammation. This is a very interesting paper. It potentially provides alternative for treating and preventing AD.

All followings need major revision:
1. This manuscript was poorly written. And English needs major improvement. It is not acceptable at present status.

Specific Comments:
Title:
1. The result and conclusion stated that CDSW has therapeutic effect on AD, however the title suggested the DSW exhibits preventive effect;
2. Since only concentrated DSW benefits AD. Therefore the title should emphasis “CDSW”;

Abstract:
Results were not clearly presented;

Materials and methods:
1. Unconcentrated DSW should be used as another control group;
2. The concentrations of elements for 2% CDSW should be given in table 1;
3. The method describing how dermatitis was induced and treated was not clear. a. Was DNCB still used after 4 weeks when mice were treated with CDSW and pimecrolimus? b. How was the working concentration of DNCB determined?
4. The method to evaluate clinical severity is very subjective;
5. How was epidermal thickness measured?

Results:
1. Methods should be removed from this section and placed in materials and methods section;
2. The erytherma and edema in figure 1A-e did not differ dramatically from that in figure 1A-d;
3. What did "**" mean in figure 1B?
4. No magnification bars on figure 2A;
5. What did "**" mean in figure 2B?
6. The quality of figure 2A is not acceptable for publication;
7. Figure 1B showed a nice difference between 2% and 10% CDSW. But there seems no difference in inflammatory cell infiltration between 2% (figure 3d) and 10% CDSW (figure 3e); Again, the quality of figure 3 is poor;
8. What did "**" mean in figures 4, 5?
9. The significances were not well labeled in Table 2 and figure 6;

Discussion:
The discussion is out of focus. Data should not be repeated in this section (such as in paragraph 4).

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

Quality of written English: Not suitable for publication unless extensively edited

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