Reviewer's report

Title: Ssanghwa-tang, an oriental herbal cocktail, exerts anti-melanogenic activity by suppression of the p38 MAPK and PKA signaling pathways in B16F10 cells

Version: 4 Date: 26 June 2013

Reviewer: Hui-Min Wang

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BMC Complementary and Alternative Medicine
2013/6/26

In this manuscript entitle “Ssanghwa-tang, an oriental herbal cocktail, exerts anti-melanogenic activity by suppression of the p38 MAPK and PKA signaling pathways in B16F10 cells”, it contains some useful information. I give some advices shown below.

Major:
1. The “Treatment” items should be presented in italic type format. And, the capital letters should be paid attention.
2. Table 2 and 3 are not necessary, and authors should write it into the Materials & Methods.
3. In Figure 3A, it was quite strange that the tyrosinase protein didn’t show without SHT treatments.
4. There are about 20-30 published papers about melanogenic inhibitors within each year and reveal that some of these extracts or compounds may be potential. However, I know most of them may induce human skin side effects, and in these researches, the cytotoxicity is a very important issue. There are many platform studies for the melanin production inhibition assays of tyrosinase, including B16, human primary skin cell lines, zebrafish, mouse and human skin assays, such as Pigment Cell Research 20, 120-127, 2007; Bioorganic & Medicinal Chemistry, 18, 5241-5247, 2010; Experimental Dermatology, 20 (3), 242-248, 2011. As melanogenic regulatory compounds are being developed, potential safety shall be taken into consideration, such as the sensitivity, allergy, or toxicity tests in dermatological or cosmetics applications.

This manuscript contains some useful information, but there are still some mistakes on grammar and misuse of vocabulary. Some attention should be paid on use of vocabulary. Include more data in the article to support discussion.

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:

no