Author's response to reviews

Title: Antioxidant, Anti-inflammatory and Cytotoxicity of Phaleria macrocarpa (Boerl.) Scheff Fruit

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Version: 4 Date: 30 September 2011

Author's response to reviews: see over
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Version: 1 Date: 11 August 2011

Author's response to reviews: see over
1. Why did the authors used air-drying instead of freeze-drying which is known to maintain better bioactive compounds.

We try to consider the real, normal preparation and storage conditions for our samples and evaluate its biological activities in that situation, since we know that when comes to the commercialization and marketing the low cost sample preparation is required.

2. The authors should mention the interferences/limitations of the Folin Ciocalteus assay. This evaluates better the reducing power of the samples rather than its antioxidant compoundents. For that, chromatographic techniques would be better.

The methods used to determine total phenolic is based on standard procedures as cited by Ismail et al 2010. The method used by Ismail to determine the phenolic compounds was based on Folin–Ciocalteu assay. This method is easy rapid, economic and common procedures to determine these bioactive compound concentrations however several interfering substances, such as sugars, aromatic amines, sulfur dioxide, ascorbic acid, organic acids, and Fe (II), as well as non phenolic organic substances led to overestimation in total phenolic concentrations. Despite
of the presence of some non-specific reactions still Folin Ciocalteus assay is applicable and the result gives a good estimation from the phenolic compounds present in the sample. As you mentioned the chromatographic techniques could determine the presence of each phenolic and flavonoid compounds individually however the colorimetric reaction is also easy, rapid, economic and common procedures to determine these bioactive compounds concentration and the result gives a good estimation from the phenolic and flavonoid compounds present in the sample.

The determination of flavonoid compounds by using HPLC has been published by the author Flavonoid Analyses and Antimicrobial Activity of Various Parts of Phaleria macrocarpa (Scheff.) Boerl Fruit, *Int. J. Mol. Sci.* 2011, 12(6), 3422-3431

3. Correct the name of DPPH to 2,2-diphenyl-1-picrylhydrazil

It has been corrected based on reviewer suggestion. See page 6 lines 159

4. It would be interesting to explore the mechanisms of action of the cytotoxicity, like the study of cell cycle or apoptosis induction.

The author is not able to mention the mechanism of action from the sample for cytotoxicity. In this paper, the author just did screening cytotoxicity from different cancer cell line. The mechanisms of actions are further experiments by using different methods

5. The IC50 values for non-tumor cells are not too low. Therefore, the samples at some EC50 values of antioxidant activity, might have toxicity for normal cells.

Values of antioxidant activity might have toxicity for normal cells. The biological activity observed in this study was based on crude extract, therefore we are not able to say it is toxic or not. For the further experiment that we are going to conduct, we will be working with the isolated compounds to look at their potential individually as antioxidant, anti inflammatory and anti cancer activities.
6. Edit the English, mainly in conclusions section.

The English proof reading was done.
Reviewer's report
Title: Antioxidant, Anti-inflammatory and Cytotoxicity of *Phaleria macrocarpa* (Boerl.) Scheff Fruit

Version: 1 Date: 12 August 2011
Reviewer: Ilhami Gülčin

Level of interest: An exceptional article
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.

Reviewer's report:
In the present study, the authors evaluated antioxidant, anti-inflammatory and cytotoxicity of Phaleria macrocarpa (Boerl.) scheff fruit. This study was well-performed and well-documented. It can be accepted after some amended corrections.

These corrections were listed in below:
Page 5/Line 15: For determination of “Total Antioxidant Activity Assay-Ferric Thiocyanate (FTC)” the reference of “Kikuzaki and Nakatani [8]” is old reference. Instead of this reference a new and actual reference such as “Antioxidant properties of resveratrol: A structure-activity insight. Innovative Food Science and Emerging Technologies, (2010), 11, 210-218” should be given.

It has been changed, see page 5 line 133


It has been changed, see page 6 line 145