Reviewer’s report

Title: Citrus aurantium flavonoids inhibits adipogenesis and adipocyte differentiation through the Akt signaling pathway

Version: 1 Date: 25 January 2012

Reviewer: Jong Won Yun

Reviewer’s report:

My review results:

In this article, the authors described about effects of Citrus aurantium extract on anti-adipogenesis in 3T3-L1 adipocyte cells. The experimental design and data interpretation were well performed in a logical way. However, several issues should be clarified before possible consideration for publication as noted below.

Major concerns:

1. All data were based on the hypothesis that major constituent of CAL was flavonoids. On page 9, lines 6-8 (from the bottom), the authors mentioned that CAL consists of… However, in this study, there is no evidence that major component of CAL is flavonoids. This reviewer failed to find any descriptions for this fact from the current manuscript. The authors should clarify this issue.

2. Anti-adipogenic activity of CAF was clearly confirmed through essential molecular works. However, lipolytic activity of CAF was not fully verified. For example, LPL activity was not increased (Fig. 2B) even though released glycerol was increased (Fig. 4B) upon CAF treatments.

3. Many typo and grammatical errors are found throughout the manuscript. Moreover, structure of the manuscript should be extensively modified to meet scientific standard. In DISCUSSION section, some redundant statements that were already described in RESULTS section should be deleted. DISCUSSION section was not written in a continuous flow. For example, many expressions are not suitable for this section but suitable for INTRODUCTION section, and thus moved to INTRODUCTION section or removed (e.g. page 9, Citrus fruits are ……)

Minor points (the authors should have indicated line number!)

1. (Title) inhibits>inhibit, “Citrus aurantium” should be italicized throughout the text.

2. Page 2: type-2>type 2

3. Page 4: sigma>Sigma, culture>cultured, changes>changed, Fetal Bovine Serum>fetal bovine serum, obtained>purchased, as described>as described previously. Please delete “The anlyses of …Prof. Sung Chul Shin”

4. Page 5: All descriptions for suppliers should be notes as: supplier’s name, city, (state), country. From their second appearance, they can be used with only
supplier’s name without address. Intorgen>Introgen. Indicate addresses for Cell Signaling, Chemicon, and Jackson, etc.

5. Page 6, figure legends, and throughout the whole text: all “p” in statistical analysis should be italicized.

6. Page 11: Is it required for the abbreviation MCE?

7. (References) titles of the cited articles should carefully be corrected: bad use of capitals.

8. Figure legends should be shortened by removing redundant statements that were already stated in the METHODS section.

9. (Fig. 2A,B,C,D): beta and gamma should not be separated

10. (Fig. 4B) CAL>CAF?

11. (All figures) units should be separated from values (e.g. 10 ug/ml).