Reviewer's report

Title: Quality Assessment and Anti-obesity activity of Stellaria media (Linn.) Vill.

Version: 1 Date: 2 March 2012

Reviewer: Watcho Pierre

Reviewer's report:

1-Major compulsory revisions

The topic is generally of great interest; however, the methodological approach appeared to be approximate to support the results of the findings. Two main points have to be well clarified for a better consideration of the paper:

* Experimental induction of obesity: Authors should provide references to support their methodology (i.e. 2 weeks of HFD) since many data from literature (Lee et al, Food Chem Toxicol 2006, 44(1); Okade et al, Phytotherapy Res 2011, 25(6); Kim et al, J Med Food, 2001, 14(6) etc) show that HFD-induced obesity is effective after at least 4 weeks.

** Dose of the plant extract used in the study

What is the main reason of using a single dose (900mg/kg b.w.) in the anti-obesity study?

Unless scientifically justified, a dose-dependent study could have been suitable to better ascertain the effects of the plant; authors are therefore encouraged to use at least two doses in the anti-obesity section of the work.

2-Minor essential revisions

Title: The running title should become the real title since ``quality assessment`` has no impact in the study.

Background: lines13-15: these lines reported results from a study; a reference is therefore needed.

Line 25: change ``under taken`` into undertaken

Methods – Chemicals: line 1 Glycyrrhizic into glycyrrhizic

Preparation of lyophilized juice: line 3: cancer lyophilizer

Quality control parameters of LJ: line 2: change the phsico-chemical parameters into the physico-chemical parameters.

Measurement of #-amyrase inhibitory activity: line 9: change ``by adding of 80µL of…`` into by adding 80µL of …``

Plasma triacylglycerol level after oral administration of lipid emulsion to mice: line 4 change ``Food was withheld`` into ``Food was withdrawn``
High fat-diet induced obesity: As mentioned above, two weeks duration for HFD-induced obesity appeared insufficient. What is the Kcal percentage of the HFD? What is the composition of normal diet?

The “histopathological study” should be inserted before “statistical analysis.”

Histopathological study: line 4; check the spelling of “Hematoxylen”
line 5: under compound trinocular microscope; what does that mean?

Results-effect of LJ on food consumption…
Authors found that there was no change in food consumption of HFD-induced obese mice.
It is likely difficult to approve such statement from which one important question rises: were the mice really obese? If yes, what were the initial criteria for considering those animals as obese? Were the mice hyperlipidemic rather than obese? Please specify.
Line 9: change “lowerd” into “lowered”

Results-histopathological study: please indicate those changes in the figures; you may use arrows.

Discussion: this section should be written in the lights of the results obtained. Specifically, comments on the contradictory results obtained for the food intake (no change), body weight (increase) and adipose tissue weight (increase) regarding the untreated HFD mice supported with recent references, if any.

References: ref 11; the Editor of the book is lacking
Ref 16 Plantes Medicinale Phytotherapie should be read as “Plantes Médicinales Phytothérapie”

Discretionary revisions
None

Based on the above mentioned remarks, the authors need to answer the major compulsory revisions before further consideration.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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.