Reviewer's report

Title: Intestinal alpha-glucosidase and some pancreatic enzymes inhibitory effect of hydroalcoholic extract of Moringa stenopetala leaves

Version: 3 Date: 7 April 2014

Reviewer: Serawit Deyno

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General comment= This study describes intestinal alpha-glucosidase and pancreatic enzymes inhibitory effect of hydroalcoholic extract of Moringa stenopetala leaves. Moringa stenopetala leaves commonly used medicinal plant among the Ethiopian population. The study evidences have practical relevance in the use of traditional medicinal plant in the country. It is well designed and written scientific paper. I recommended the journal to publish the paper after incorporation of specific comments given below.

Outlined below are specific comments on the manuscript all considered to be Minor Essential Revisions revisions.

1. Abstract

P1, Line 2: “The successful prevention of the onset of diabetes consists in controlling postprandial hyperglycemia…” need to be changed to “One of the successful prevention of the onset of diabetes involves controlling postprandial hyperglycemia…"

P1 line 7: the “There by finding out the relevance of the plant in controlling blood sugar and lipid levels”. Needs revisiting and “There by” should be rewritten as one word.

The research major result is the enzyme inhibition while the extraction is the way to attaining the objective. However P3 line 4 the major resulting has been written as additional by using the conjunction “In addition”

P4 line 3 “A daily supplement intake” is not clear and the conclusion is vague to my understanding.

2. Introduction

Before the last paragraph: it is necessary to put why the authors need to conduct the tests? From the authors whole work it is visible that they are testing hypothesis stating “anti-hyperglycemic and anti-hyperlipedmic effect is because of intestinal alpha-glucosidase and pancreatic enzymes inhibiton”. Authors in their previous study concluded “mechanism of action Moringa Stenptola seems to be similar to that of sulphonureas” Toma et al, 2012. It is not clear why they
generated and tested other hypothesis before testing previously stated hypothesis?

3. Materials and Methods

In 2.1 Chemicals part: the last statement “All others chemicals used were of analytical grade”. It is important to give a list of such chemicals.

In 2.3 Preparation of plant material extract part: the last statement “The yield of the extract was 20.1 % in weight in weight (w/w)” should be corrected as “The yield of the extract was 20.1 % weight by weight (w/w).

In 2.5 Determination of total phenolic content: it is better to give one statement summary of what the pervious method was.

4. Result

On table 2: The inhibitory effect of Moringa stenopetala leaf extract on sucrase was given as 1.47 ±0.19 while for pancreatic #-amylase, maltase, pancreatic lipase, and pancreatic cholesterol esterase activities was given as > 5. It is not clear why the exact number was not given?

5. Discussion

P1 line 7 “This is the first study…” provide evidence or state “to the best of authors' knowledge”.

The authors stated “none of the currently available alpha glucosidase inhibitors for clinical use are devoid of severe adverse effects”. It seems that the authors are hypothesizing “natural alpha glucosidase inhibitors are devoid of severe adverse effects” what is the evidence?

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 have personal relationship with two of the authors. As I do not have any contact with the investigators during their study time it is unlikely to affect my decision.