Author’s response to reviews

Title: The potential of antioxidant-rich Maoberry (Antidesma bunius) extract on fat metabolism in liver tissues of rats fed a high-fat diet

Authors:

Chattraya Ngamlerst (ngamlerst.c@gmail.com)
Arunwan Udomkasemsab (arunudom@yahoo.com)
Ratchanee Kongkachuichai (ratchanee.kon@mahidol.ac.th)
Karunee Kwanbunjan (karunee.kwa@mahidol.ac.th)
Chaowanee Chupeerach (cchaowanee.chu@mahidol.ac.th)
Pattaneeya Prangthip (Pattaneeya.pra@mahidol.ac.th)

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Author’s response to reviews:

22 May 2019

Dear Editorial Office,

BMC Complementary and Alternative Medicine

Thank you for your letter. Please find enclosed our manuscript “The potential of antioxidant-rich Maoberry (Antidesma bunius) extract on fat metabolism in liver tissues of rats fed a high-fat diet” which we would like to be considered for publication as a Full length Article in BMC Complementary and Alternative. The grammatical structure of this study was proved by Enago™ – Language Editing Services.

According to editor’s comments, We EXPAND, CLARIFY, and DESCRIBE according to your guidelines. This could see in Responding to Editor's comments section.
We really like to thank you for your value suggestion and allow us to resubmit a revised copy of the manuscript.

Sincerely Yours,

Assist. Prof. Dr. Pattaneeya Prangthip
Department of Tropical Nutrition and Food Science
Faculty of Tropical Medicine, Mahidol University
Bangkok 10400, Thailand.
Tel: +66 2 354 9100, Fax: +66 2 644 7934
Email: pattaneeya.pra@mahidol.ac.th

Responding to Editor's comments:

Editor's comments 1. At present, we do not feel that there is sufficient evidence presented in your Background section to justify the testing of Antidesma bunius in an animal model. We would therefore ask you to expand this section to include as much referenced evidence as possible to explain why you would expect this treatment to have an effect in this model. This evidence should come from previous in vitro or animal work. Please note that we are unable to accept traditional medical use as sufficient justification for animal studies.

- Responding from authors: We expand the Background Section, line 18 page 4 - line 7 page 4 on why we tested Antidesma bunius in an animal model following
“Maoberry (Antidesma bunius) have been reported to have the antioxidant activity and capacity, due to rich in polyphenol, especially anthocyanin [3, 4]. There are many studies on anthocyanin for health-promoting attributes. They may help to improve the condition of blood sugar regulation, against hypercholesterolemia [5, 6]. Fruits rich in anthocyanins and phenolic acids have been shown to improve features of NAFLD, such as oxidative stress, dyslipidemia, liver steatosis, and inflammation in rodents [7-9]. Feeding high fat diet to rats were able to attribute characteristics hypercholesterolemia which is relevance to human biology [7-11]. Our previous study reported the health benefits of Maoberry around four to sixteen portions a day could against hypercholesterolemia and progression of cardiac tissue deterioration in rats [10,11]. Supplement rats with Maoberry might be somehow useful on fat metabolism in liver tissues. The objective of this study was to investigate the effect of Maoberry extract consumption on fat metabolism in liver tissues of rats fed a high-fat diet.

Editor's comments 2. In your methods section, please clarify how the mice were saturated with CO2.

-Responding from authors: How to saturate with CO2 was clarified. The sentence of “In short, each rat was normally placed in 25 liter polycarbonate chamber. Then, emitting CO2 into chamber at a flow rate of about 5.5 – 7.5 L/min until the rat was unconscious. The flow of CO2 continued for at least 60 seconds to ensure that the breath was not seen before removing the rat from the chamber” is added in Animals Section, line 19-22 Page 7.

Editor's comments 3. Please confirm whether a voucher specimen of this material has been deposited in a publicly available herbarium, and include this information in your manuscript. A deposition number should be included, if available.

-Responding from authors: Confirmed that voucher specimen deposited in a publicly available herbarium. The sentence of “A voucher specimen of this material has been deposited in Faculty of Natural Resources, Rajamangala University of Technology Isan, Sakon Nakhon, Thailand” is added in Methods Section - Maoberry extract preparation, line 14-15 Page 4.
Editor's comments 4. In the Funding section, please also describe the role of the funding body in the design of the study and collection, analysis, and interpretation of data and in writing the manuscript.

-Responding from authors: Described the role of the funding. The sentence of “This research was supported by Thailand Research Fund (TRF) under Grand No.MRG6180101. TRF was encouraging and counselling the corresponding author to develop the current version of study design. TRF also monitored the progress of the work during investigation. It was useful in enthusiasm for studying and solving problems as planned” is applied in Funding Section, line 19-22 Page 21.