Author's response to reviews

Title: Investigation of the mechanisms of Angelica dahurica root extract-induced vasorelaxation in isolated rat aortic rings

Authors:

Kyungjin Lee (dostudy@naver.com)
Min Sik Shin (ilshim2001@hanmail.net)
Inhye Ham (iham@khu.ac.kr)
Ho-Young Choi (hychoi@khu.ac.kr)

Version: 5 Date: 29 September 2015

Author's response to reviews: see over
Revision letter

To the Editorial Officer:

*BMC Complementary and Alternative Medicine*

- Thank you for your advice.

Reviewer’s report

The authors have been quite thorough in answering to the points raised. I think the answer to question 6 and 7 should be part of discussion specially question 7.

Response: Thank you for your advice. We have included the answer to question 6 and 7 in discussion.

(Page 7. Line 192-205) In this study, 4-8 rat aortic rings were used in control and experimental groups. This number of aortic rings could be considered not statistically significant because 4 more aortic rings could be isolated from one rat. In the present study, we isolated 4 aortic rings from one rat and used 2 rings as the control group and 2 rings as the experimental group. In Figure 3, the control group comprised of 4 rings, while the ADE-treated group comprised of 8. In other words, 2 rats were used as the control group and 3 rats were used in the experimental group. We conducted various experiments and found that the contractions in the control group were not different from our previous experiments and there are little variations. Therefore, we used only 2 rats (4 rings) in the control group. In the *in vivo* experiment, many variations were observed in individual animals. However, in *ex vivo* experiments using aortic rings, there are little variations in individual animals. In Korea, minimum use of animals is recommended for animal welfare. We agree with your comments that more number of rings could be statistically significant. However, our experiments are *ex vivo* experiments using isolated rat aortic rings, and we believe that our results have statistical significance.

(page 8. Line 209-215) In addition, Bertin et al. showed that atropine and L-N\textsuperscript{G}-nitro-arginine methyl ester did not alter imperatorin-induced relaxation in rat aorta [42]. In the present study, ADE also relaxed the rat aortic rings pre-contracted with PE or KCl in an endothelium-independent manner. Therefore, the vasorelaxant effects of ADE might be partly attributable to
imperatorin. However, Hong et al. suggested that imperatorin relaxed the mouse thoracic aorta pre-contracted with PE in an endothelium dependent manner [44]. These different results might be attributed to the use of mouse thoracic aorta.

Sincerely,

□ Ho-Young Choi K.M.D., Ph.D., Professor

□ Department of Herbology,

□ College of Korean Medicine, Kyung Hee University,

□ 1 Hoegi dong, Dongdaemoon-gu, Seoul 130-701, Republic of Korea

Tel: +82 2 961 9372; Fax: +82 2 965 9372; E-mail address: hychoi@khu.ac.kr