Author's response to reviews

Title: Hair promoting activity of Thuja orientalis hot water extract

Authors:

Nan-nan Zhang (zhangzhinan585@gmail.com)
Dong Ki Park (parks@konkuk.ac.kr)
Hye-Jin Park (hyejinp@konkuk.ac.kr)

Version: 2 Date: 8 October 2012

Author's response to reviews: see over
Dear Editor-in-Chief

Enclosed please find a manuscript entitled “Hair promoting activity of *Thuja orientalis* hot water extract” by Nan-nan Zhang, Dong Ki Park, and Hye-Jin Park. We would like to have this paper considered for publication in *BMC Complementary and Alternative Medicine*.

*Thuja orientalis* has traditionally been used to treat patients who are suffering from baldness and hair loss in East Asia. In this study, we investigated hair growth promoting activity of *Thuja orientalis* hot water extract and its mechanism of action. *Thuja orientalis* hot water extract promoted hair growth through inducing anagen phase in telogenic C57BL/6N mice. Histomorphometry analysis data indicated that topical application of *Thuja orientalis* hot water extract could induce the earlier anagen phase and prolong the mature anagen phase compared to either control or 1% minoxidil treated group. In *Thuja orientalis* hot water extract treated group, we observed an increase in the number and the size of hair follicles. Immunohistochemical analysis revealed that earlier induction of β-catenin and Shh protein in the hair follicles of *Thuja orientalis* hot water extract treated group was observed than that in control group or 1% minoxidil treated group. Our data suggest that *Thuja orientalis* hot water extract promotes hair growth through the induction of anagen phase in resting hair follicles.

All of the authors are aware of and agree to the content of the paper and their being listed as an author on the paper. Neither the submitted paper nor any similar paper has been or will be submitted to or published in any other primary scientific journal.

Sincerely,

**Hye-Jin Park**

Assistant Professor
Tel.: +82-2-455-5589
Fax: +82-2-455-5517
E-mail: hyejinp@konkuk.ac.kr

Suggest reviewer

**Dr. Chang Yong Lee**
Department of Food Science and Technology
Cornell University,
Ithaca, New York 14853-7201
Fax: +1-315- 787-2284
E-mail: cyl@cornell.edu

**Dr. Wahn Soo Choi**
College of Medicine
Konkuk University
Gwangjin-Gu, Seoul, 143-701, Republic of Korea.
Phone: +82-2-2030-7813
E-mail: wahnchoi@kku.ac.kr

**Dr. Toshimitsu Hayashi**
Professor of the Graduate School of Medicine and Pharmaceutical Sciences
University of Toyama
2630 Sugitani, Toyama 930-0194, Japan
Phone: +81-76-434-7560  Fax: +81-76-434-5170
E-mail: hayashi9@pha.u-toyama.ac.jp

Dr. Hwa Jin Lee

Sookmyung University

Yongsan-Ku, Seoul, 140-742, Republic of Korea.

Phone: +82-2-2077-7870

E-mail: hwalee@sookmyung.ac.kr