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RESPONSE TO LETTER

The Effectiveness of *Nigella sativa* and Ginger as Appetite Suppressants: An Experimental Study on Healthy Wistar Rats [Response to Letter]

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Dear editor

We would like to thank the authors of the Letter to Editor in regard to our article entitled "The Effectiveness of *Nigella sativa* and Ginger as Appetite Suppressants: An Experimental Study on Healthy Wistar Rats' Vascular Health and Risk Management. 2023;19:1–11" for their valuable comments and would like to clarify the following points.

Nigella sativa and ginger are well known traditionally as weight-lowering agents. Several experimental and clinical trials were conducted in order to navigate scientific evidence for the effect of these two herbs on body weight and appetite. Multiple systematic reviews and meta-analysis support the weight-lowering effect of these two natural products.[1,2] However, solid evidence for the mechanism of this effect was not sufficiently investigated. Therefore, we aimed in our study to investigate the mechanism of the weight-lowering and/or appetite suppressant effects of these two herbs.[3] Accordingly, we opted to choose an in vivo study with normal biological system to allow us to identify the response of multiple hormones and peptides involved in the appetite control which act as excitatory or inhibitory signals to the neurons of hunger and satiety centres of the hypothalamus.

On the other hand, this study was designed based on an observation found in our previous work. We previously studied the effect of two months' administration of *Nigella sativa* on the heart structure and electrophysiology, and unintentionally we observed a reduction of body weight of all treated rats.[4,5] The rats used for that study were normal healthy with body weight 250–350 g. Therefore, we planned to reproduce the weight reduction effect using the same experimental animal as well as the same dose, preparation and duration of *Nigella sativa* and explore its physiological mechanisms. Simultaneously, we were keen to adhere to the guiding principles of the 3Rs (Replace, Reduce, and Refinement). Thus, we elected to go with the minimum number of animals in each group taking into consideration the risk of missing few animals during the course of the study.

Despite all, we appreciate the recommendations of the authors of the Letter to Editor in regard to the utilization of obese animals and we will consider it in our future work.

Disclosure

The authors report no conflicts of interest in this communication.

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