

Accepted Manuscript

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PII: S1319-562X(17)30214-0

DOI: <http://dx.doi.org/10.1016/j.sjbs.2017.08.009>

Reference: SJBS 994

To appear in: *Saudi Journal of Biological Sciences*

Received Date: 19 April 2017

Revised Date: 16 August 2017

Accepted Date: 17 August 2017



Please cite this article as: Z. Fu, Z. Wei, M. Miao, Effects of Total Flavonoids of Raspberry on Perimenopausal Model in Mice, *Saudi Journal of Biological Sciences* (2017), doi: <http://dx.doi.org/10.1016/j.sjbs.2017.08.009>

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Effects of Total Flavonoids of Raspberry on Perimenopausal Model in Mice

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ABSTRACT

To study the effect of raspberry total flavonoids on perimenopausal model in mice. Blank group, sham operation, and the rest of the mice made the menopausal model. Choose 72 mice castrated completely random divided into 6 groups for the experiment, respectively: model group, gengnianan (GNA) capsule group, soybean isoflavone soft (SIS) capsule group, high, mid and low dose group of total flavonoids of raspberry (TFR). Animals in each group were given the corresponding drugs tenth days after operation, and were given intragastrical administration of once a day for continuous administration of 21 d. Each group of mice in the administration of 18 days to determine the number of autonomic activities within 5min, in the administration of 19 to 20 days to determine the incubation of the mice first entry into the darkroom and the number of shocks into the darkroom within 5 min. At 2 h after the last administration (fasting for 12 h), mice were sacrificed and serum was collected. Serum levels of E2, T, LH and FSH were measured. Dissect the uterus, thymus and spleen. Weigh the wet weight and calculate the organ index, the morphological changes of uterus, thymus and spleen were observed. The results showed that the TFR had a good therapeutic effect on the perimenopausal model of mice after giving a high, mid and low dose of raspberry flavonoids for some time.

Keywords: Total flavonoids of raspberry (TFR); Perimenopausal model; Autonomic activity; Memory; Sex hormone levels

Received xx xx 20xx; accepted xx xx 20xx

Available online xx xx 20xx

1. INTRODUCTION

Perimenopausal period, also known as menopause, is the transition from the reproductive age of women to the elderly (about 45 to 55 years old), due to a series of changes in ovarian dysfunction. Clinical manifestations of menstrual disorders to menopause, memory loss, irritability, tidal sweat, insomnia, joint pain, etc., is a necessary stage for every woman's life, have seriously affected women's physical and mental health, work and life (Li et al.,2016). Chinese medicine using the overall concept and syndrome differentiation theory, according to different physical, syndromes treatment of perimenopausal syndrome, efficacy and less adverse reactions. What we need to be concerned about is that women's perioperative prevention is particularly important, in the treatment of perimenopausal syndrome at the same time, should fully reflect the traditional Chinese medicine "treatment did not occur disease" thinking, take preventive measures. To avoid low-level Chinese medicine treatment of perimenopausal syndrome experimental and clinical research, under the guidance of traditional Chinese medicine theory, combined with traditional Chinese medicine technology and methods to strengthen scientific research and experimental design, unified standardized dialectical system, to find the objective of the disease differentiation indicators, the establishment of standardized index system, improve the scientific, objectivity and reliability of Chinese medicine for perimenopausal syndrome (Gohar et al., 2017; Jamal et al., 2017). Raspberry as a traditional nourishing kidney medicine, in China has thousands of years of use history, researchers from the raspberry separation of terpenoids, flavonoids, alkaloids, coumarins and other ingredients, and the preliminary pharmacological screening was carried out for the isolated compounds, in the anti-tumor, anti-aging, scavenging free radicals and other aspects of a clear activity. Perimenopausal care is a hot issue that is of great concern both at home and abroad, China's perimenopausal women ranks first in the world, therefore, the search for perimenopausal drugs and research is more urgent. In this study, ovarian castration was used to induce the perimenopausal model of mice to observe the effect of TFR on perimenopausal effects in mice (Fan et al.,2014).

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