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Mixed medicinal herbs including *Rehmanniae Radix* preparata promote melanogenesis and hair growth *in vitro* and *in vivo***Yu-Jin Kim, So Young Kim and Mi Ryeo Kim**
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This study was carried out to evaluate effects of medicinal herbal mixture (JHU) including *Rehmanniae Radix Preparata* on the melanogenesis *in vitro* and hair growth *in vivo*. We assessed effects of JHU on melanin production through analysis of melanin contents and tyrosinase activity in B16F10 melanoma cells. After JHU treatment, cell viability was determined by MTT assay then there was no cytotoxicity (ranged below 0.4 mg/ml). Also, we were evaluated effect on the hair regrowth of JHU in an animal model using C57BL/6 mice (male and female). For 2 weeks, we put 0.2 ml of one of three solutions (control, JHU and minoxidil (MNXD, positive control) on shaved dorsal skin every day. Effects of JHU extract on hair regrowth were monitored through photographs and phototrichogram analysis by folliscope. And hair growth-related gene expressions were measured by immune-blotting. Also 5-alpha reductase activity of dermis and prostate gland and hair follicle morphometry by hematoxylin-eosin staining were performed. The results showed that hair melanogenesis significantly increased in JHU group compared to those of control group. In addition, the MNXD or JHU-treated group significantly increased the hair growth, hair density, size and number of follicle and the protein expression of dorsal IGF-1 and VEGF compared to those of the control group, respectively. 5-alpha reductase activities in tissues and the protein expression of dorsal TGFβ1 in MNXD or JHU treated-group significantly decreased compared to those of vehicle treatment, respectively. These results suggest that JHU has the promoting effect on hair melanogenesis and hair growth.

Biography

Yoo-Jin Kim is currently pursuing Master's degree from Daegu Haany University, Department of Herbal Pharmacology. She has published 2 papers in Korean journals.

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