

Ming Zheng¹, Zhi Wang², Ting Ji¹

¹College of Animal Science and Technology, Yangzhou University, Jiangsu, China,

²Apiculture Science Institute of Jilin Province, Jilin 132108, China

Royal jelly (RJ) is rich in various nutrients, including proteins and amino acids. RJ consumption improves sexual and urinary function in postmenopausal women, possibly owing to its hormone-like effects. Currently, hormone level regulation and assisted reproductive technologies are widely used to treat thin endometria; however, high doses of these drugs can add to the liver burden. In this study, RJ proteins and fatty acids were isolated, and their therapeutic effects on thin endometria were investigated in vivo and in vitro to verify their hormone-like regulatory effects. The results showed that RJ and its extracts could regulate endometrial receptivity-related factor expression levels in rats with a thin endometrium, accelerate MCF-7 cell apoptosis, and increase estrogen receptor expression in MCF-7 cells. These findings further suggest the estrogen-like effects of RJ and that fatty acids may be the main contributors. RJ may present a potential natural hormone replacement therapy. Abstract text goes here. The abstract should be a single paragraph that summarises the content of the article