

Drosophila melanogaster testis structure can be affected by Crocus sativus stamen hydro-alcoholic extract

Reyhane Kosar¹ D, Masoud Fereidoni¹ O

¹ Department of Biology, Faculty of Science, Ferdowsi university of Mashhad, Mashhad. Iran

نوع پذيرش: پوستر | كد مقاله: G-19807

Abstract: Background: Infertility is a major and multinational problem worldwide that is increasing in both developed and developing countries. Due to the high costs of today's treatment methods and the lack of definite results, many couples are looking for comprehensive treatment methods using traditional herbal medicines. In this research, the effects of hydro-alcoholic extract of Crocus sativus Stamen with contain essential compound like as vitamin E, Pyranone, Linoleic acid, Linolenic acid, on the developmental and physiological changes of the testes structure of Drosophila were investigated. Materials and Methods: Investigating the developmental structure of the Drosophila testis performed by using the method of placing 2 pairs parent in per vials containing culture medium and then measurment of lengh, area and cell number of testes of offsprings 0-1 day old whitch passes developmental stage in culture medium (n=7). The same experiment performed using the culture medium containing hydro-alcoholic extract of safron flower stamen with concentrations (0.05, 0.1 and 0.2 gr/lit) (n=7 for each concentration). for the investigation of physiological effect of the extract on the testis structure, we placed 0-1 day old offsprings, inside the culture medium containing 0.2 gr/lit hydro-alcoholic extract saffron flower stamen for 36 hours and then similar measurment performed for their testis, and compaired with the same parameters in control group (n=7). Results: In the developmental experiments, the groups treated with flower stamen extract showed a significant increase in the size of their traits, so that the number of cells and the area of the testes at 0.2 g/lit showed the greatest difference in increasing the amount compared to the control group (P 0.05). Also, testis length (mm) in 0.1 and 0.2 gr/lit showed a significant increase compared to the control group (P0.05). Also, in the study of the physiological effects of flower stamen extract on the testes of fruit flies, all 3 traits of length, area and the number of cells at a concentration of 0.2 gr/lit showed a significant increase compared to the control group (p 0.05). Conclusion: It seems that saffron flower stamen extract maybe can increase reproduction by reducing free oxygen activity and with its antioxidant activity, because of components Pyranone, Linoleic acid, Linolenic acid and Vitamin E in Crocus sativus stamen, therefore can be studied pre-clinically as a useful and natural compound for Improve reproduction and for treatment infertility issues. Keywords: Drosophila melanogaster, Testis, Crocus sativus stamen, reproduction

> آدرس دبیر خانه: تهران، خیابان کارگر شمالی، روبروی مرکز قلب تهران، کوچه دانش ثانی، بعد از تقاطع صالحی، پلاک ۱۵، واحد ۲ تلفن تماس: ۸۸۰۲۰۹۱۶، ۲۰۱۰ آدرس وبسایت: isacl2023.congressapp.ir