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Department of Biology
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(In the Field of Molecular Genetic)

Title:

Evaluation of acacetin effect on expression of p۵۳, Bcl-۲ and caspase-۳ genes in testis ofcisplatin – treated mice

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Abstract

Infertility is one of the health problems that leave their effects in personal, social and economic fields. One of the common chemotherapy drugs is cisplatin, which is sold in the market under the name Platinol, which has nutrients on various tissues of the body, including reproductive systems, which are hindered by alkylating DNA. Flavonoids with phenolic structures have protective effects on coronary heart diseases and also have special properties of antioxidant, anti-inflammatory, anti-allergic and anti-cancer properties. In this research, the possible protection of Acacetin drug on the reproductive system damaged by cisplatin has been investigated by examining the expression of P٥٣, Caspase-٣ and Bcl-٢ genes and the increase in testosterone, LH and FSH hormones and sperm count in male mice. became. The results of this experimental study showed that the toxicity caused by cisplatin in the testicular tissue, which leads to cellular damage and reduced activity of spermatogenic lineage cells, can be prevented by akasti substance as a strong plant-based antioxidant. The research of this research, based on gene studies, showed that Acacetin can reduce apoptosis in damaged cells following cisplatin by increasing the expression of caspase-٣ and p٥٣, as well as increasing the expression of Bcl-٢. that Acacetin increases the production of testosterone, LH and FSH hormones compared to the group receiving cisplatin and has a great effect on sperm health indicators.

Therefore, it can be stated that Acacetin has protective properties and effects against the degradation of cisplatin drug.

Key words: cisplatin, acastin, gene expression