

## عنوان مقاله:

The effect of the melatonin on cryopreserved mouse testicular cells

## محل انتشار:

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## خلاصه مقاله:

Background: After improvements in various cancer treatments, life expectancy has been raised, but success in treatment causes loss of fertility in many of the survived young men. Cryopreservation of immature testicular tissues or cells introduced as the only way to preserve fertility. However, freezing has some harmful effects. Melatonin, a pineal gland hormone, has receptors in reproductive systems of different species. It is assumed that melatonin has free radical scavenger properties. Objective: The aim of this study was to evaluate the effects of melatonin on the cryopreserved testicular cells in mouse. Materials and Methods: Cells from 7- 10 days old NMRI mice testes were isolated using two step enzymatic digestion. The testicular cells were divided into two groups randomly and cryopreserved in two different freezing media with and without the addition of 100  $\mu$ m melatonin. Finally, apoptosis of the cells was assayed by flow cytometry. Also, lactate dehydrogenase activity test was performed to assess the cytotoxicity. Results: The results of lactate dehydrogenase showed the nearly cytotoxic effect of melatonin. The results of flow cytometry showed increase in apoptosis in the cryopreserved cells in the media containing melatonin compared to the control group. Conclusion: The present study shows that melatonin has an apoptotic effect on cryopreserved mouse testicular cells.

## کلمات کلیدی:

Mouse, Testicular cells, Melatonin, Apoptosis

## لینک ثابت مقاله در پایگاه سیویلیکا:

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