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The effect of royal jelly on BAX and BCL-2 apoptosis proteins in different tissues of male rats

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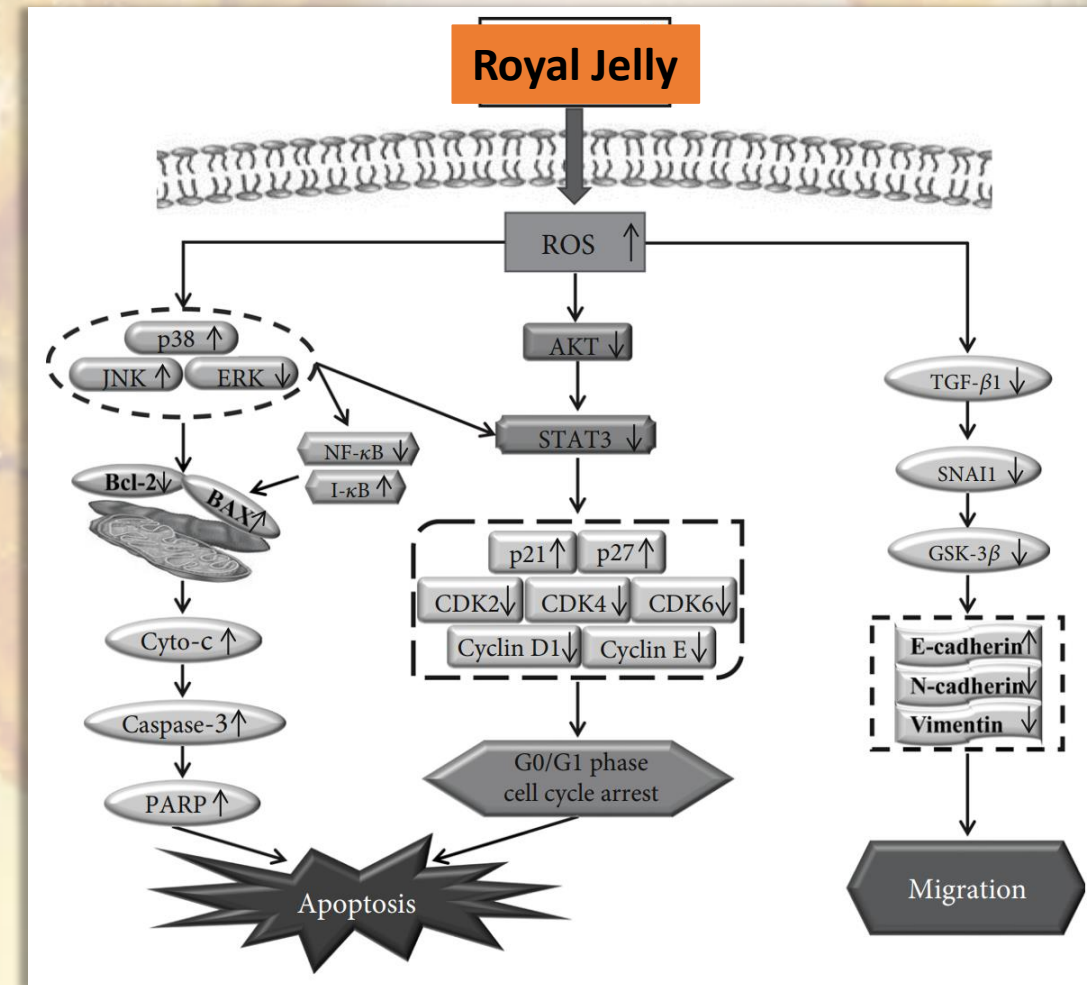
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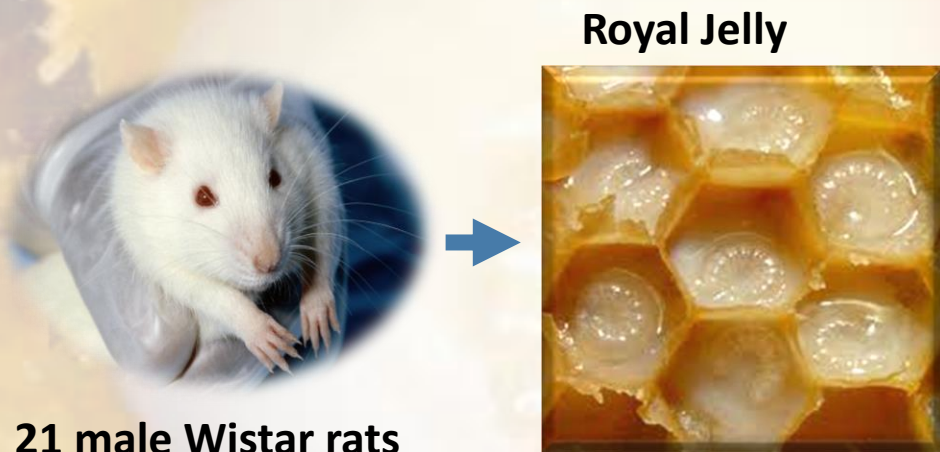
• Introduction:

Nowadays, much attention is paid to the use of natural and biological therapies. Royal jelly (RJ), secreted from the mandible and pharyngeal glands of worker bees, has been widely used as a dietary supplement. It has a broad range of pharmaceutical activities, including antioxidant, antiaging, anti-tumor, and antiapoptotic. ***The aim of the current study was to investigate RJ impacts on the cell survival by measuring the amount of protein BCL2 and BAX on different tissues of rats.***





• Material & Method:



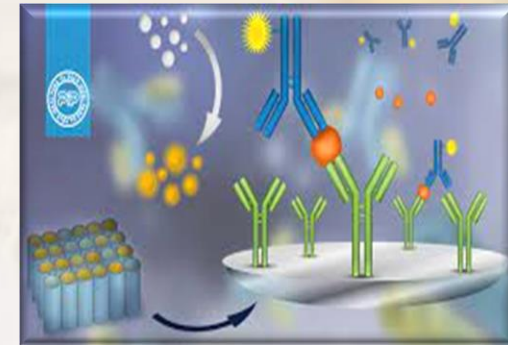
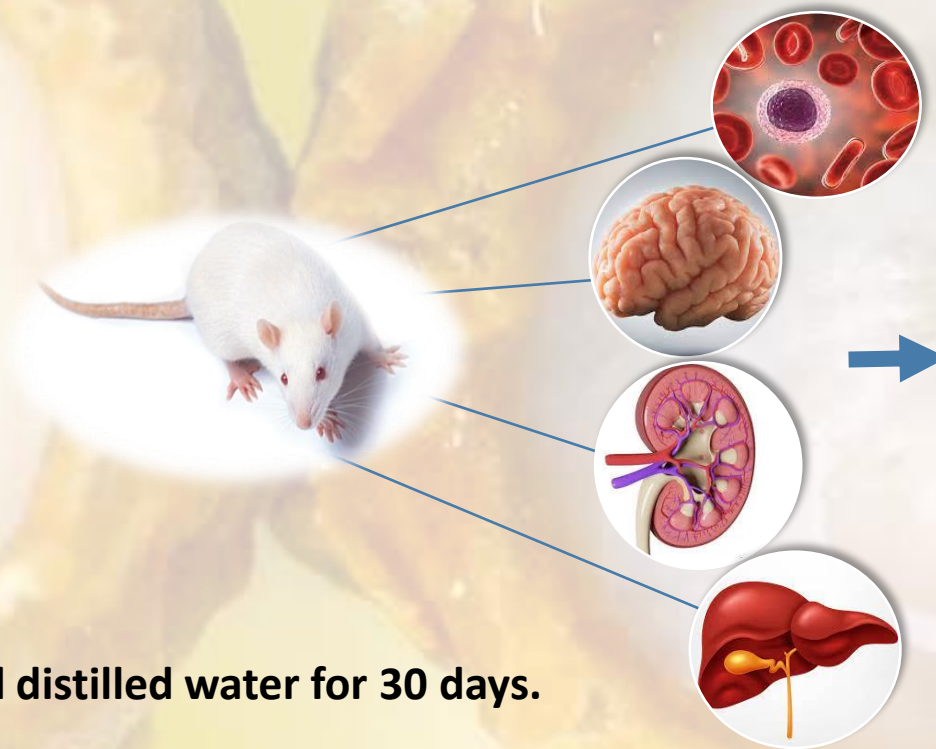
21 male Wistar rats

3 groups consisting of 7 rats

Group 1 : control group who were administered distilled water for 30 days.

Group 2 was treated with royal jelly at a concentration of 150 mg/kg for 30 days

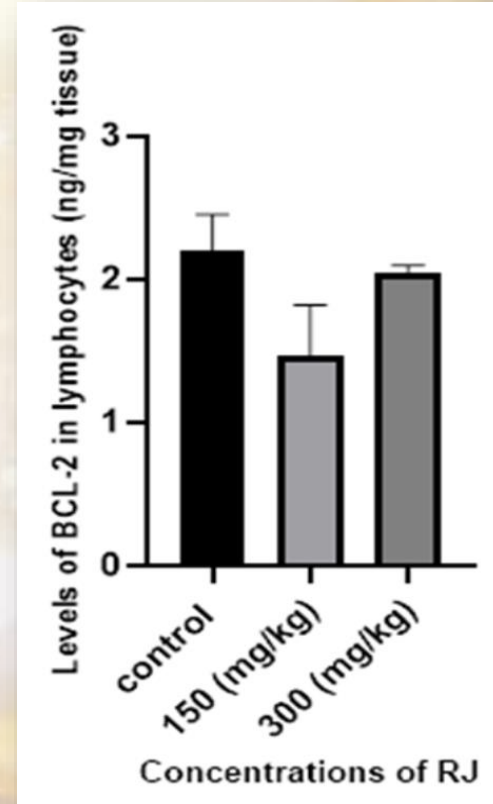
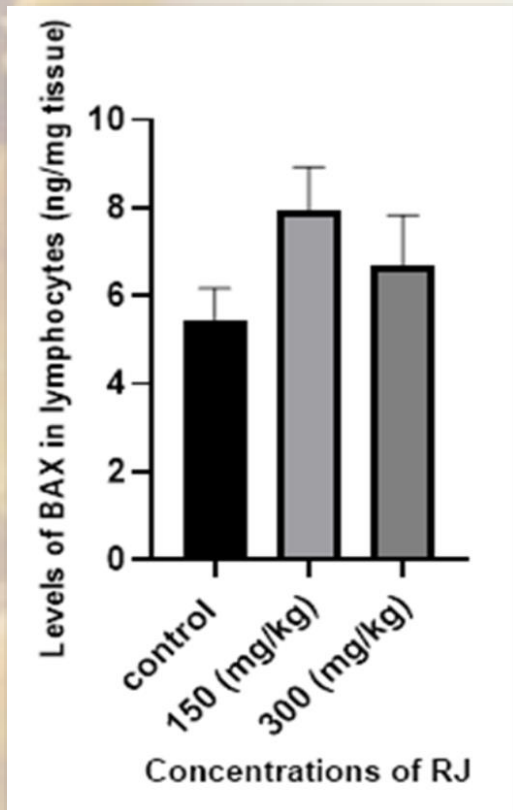
Group 3 was treated with RJ at a concentration of 300 mg/kg for the same duration



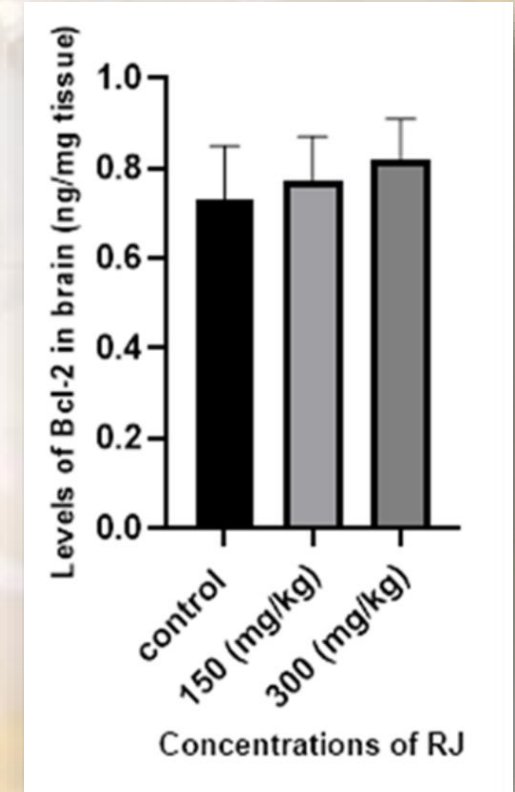
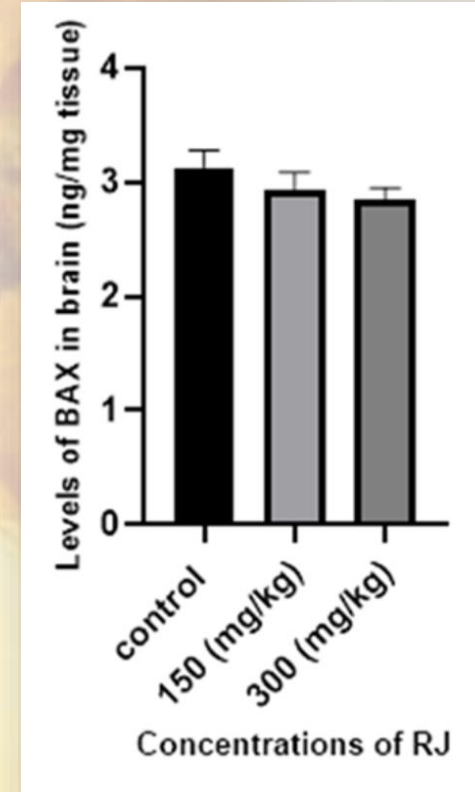


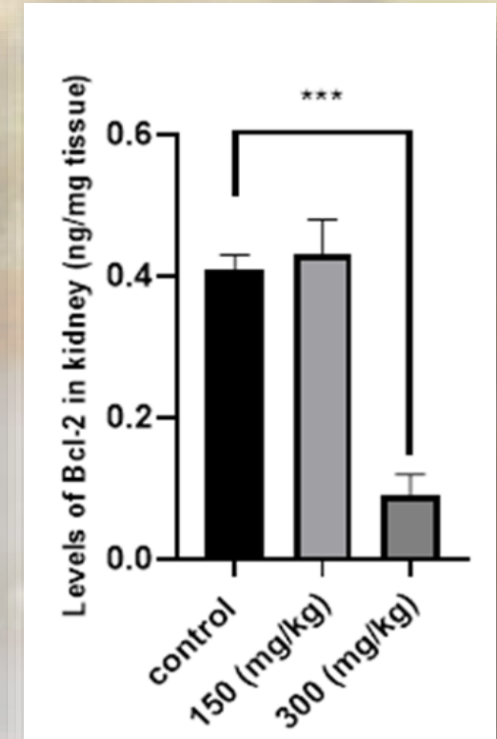
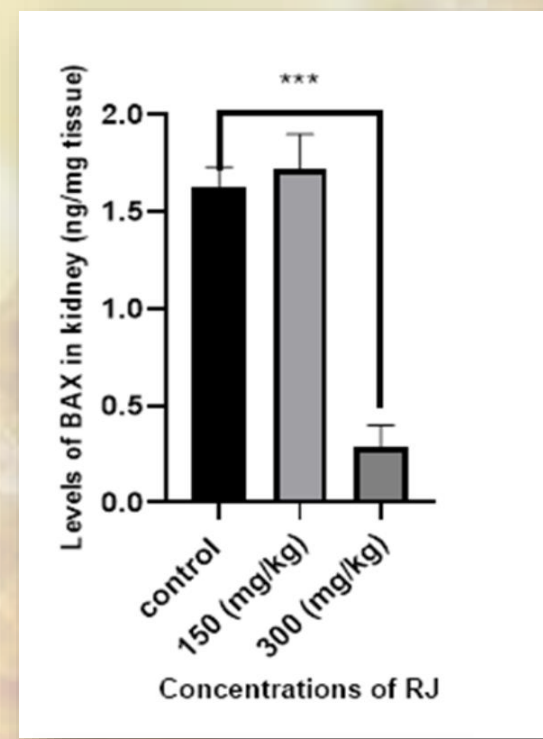
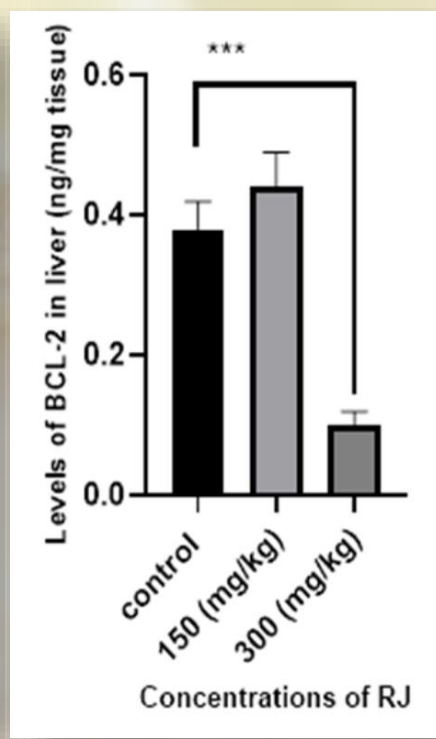
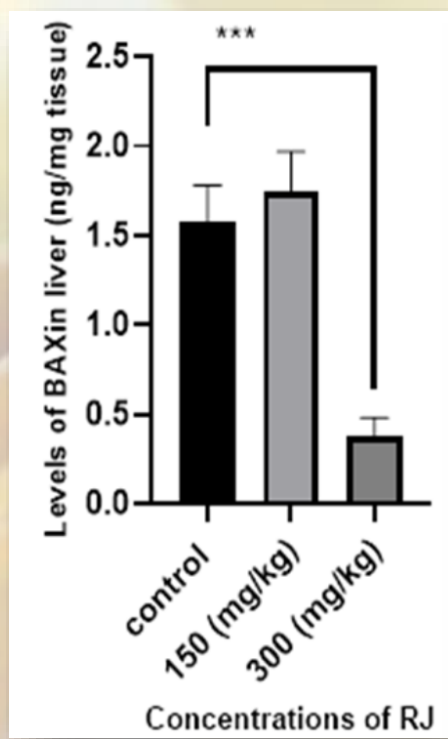
• Results

(1)

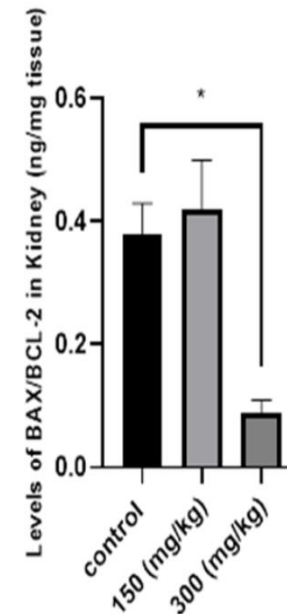
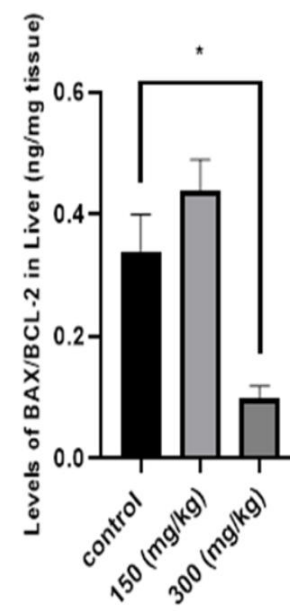
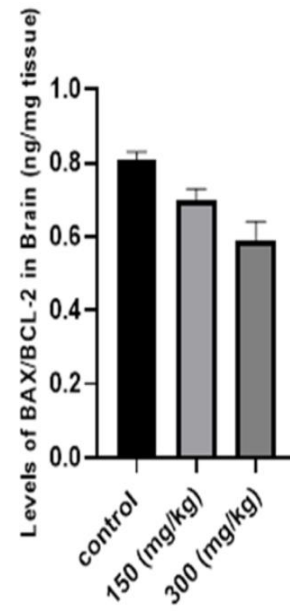
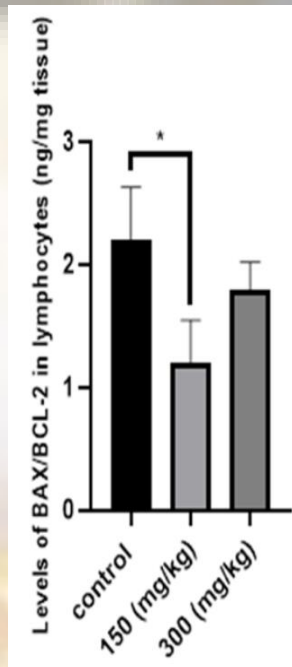


(2)





(3)



(5)

(4)



• Conclusion:

RJ appears to have potential anti-apoptotic effects on the rats' tissues studied via regulating the levels of BAX and BCL-2 proteins. With regard to the ratio of BAX/BCL-2, it is sensible to conclude that RJ tends to positively impact the cell survival rate at the dose of 300 mg/kg in Brain, Liver, and Kidney. Nonetheless, this ratio decreased more significantly at the dose of 150 mg/kg in lymphocytes, showing more potential to survive Brain cells in this concentration



• Results:

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