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کتابچه خلاصه مقالات



چهارمین کنگره بین المللی و بیست و پنجمین کنگره  
فیزیولوژی و فارماکولوژی ایران  
**Proceedings of**  
**25<sup>th</sup> Iranian and 4<sup>th</sup> International Congress of**  
**Physiology and Pharmacology**

20-22 October, 2021

۲۸-۳۰ مهرماه ۱۴۰۰



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دانشگاه علوم پزشکی تهران  
و نهادهای وابسته آن



Ministry of Health and Medical Education

دبیرخانه کنگره: تهران، خیابان قدس، خیابان پورسینا، دانشگاه علوم پزشکی تهران، دانشکده پزشکی، گروه فارماکولوژی  
تلفکس: ۰۲۱-۶۶۴۰۲۵۶۹



No. P-237  
Abstract ID: 232

## Effects of Hydroalcoholic Extract of *Tagetes Erecta* Leaves on Coagulation Processes in Mice

Fateme sadat Hashemi<sup>1,2</sup>, Jaafar Vatandoost<sup>1</sup>, Masoud Fereidoni<sup>2</sup>

1. Department of Biology, Faculty of Science, Hakim Sabzevari University, Sabzevar, Iran.
2. Department of Biology, Faculty of Science, Ferdowsi University of Mashhad, Mashhad, Iran

**Background and Aim:** Uncontrolled bleeding can be fatal. Therefore, bleeding management (homeostasis) is an important issue. In this study, the effects of hydroalcoholic extract of *Tagetes erecta* leaves on blood coagulation process were investigated using various tests related to coagulation.

**Methods:** Male mice 20 to 25 g in control, positive control, sham and two doses of extract were treated by intraperitoneal injection for 14 constitutive days and in the 15th day, blood sampling were performed for examination of prothrombin time tests, activated partial thromboplastin time, clotting time and platelet count.

**Results:** Platelet count at 100 mg/kg ( $p = 0.0061$ ) and 200 mg/kg ( $p = 0.0053$ ) of extract were increased significantly compared to the control group. Extracts at 100 mg/kg ( $P < 0.001$ ) and 200 mg/kg ( $P < 0.001$ ) showed a significant decrease at coagulation time. Doses of 100 mg/kg ( $P < 0.001$ ) and 200 mg/kg ( $P < 0.001$ ) showed a significant decrease in prothrombin time. For activated partial thromboplastin time, 100 mg/kg ( $P < 0.001$ ) and 200 mg/kg extract ( $P < 0.001$ ) also led to a significant decrease.

**Conclusion:** The hydroalcoholic extract of *Tagetes erecta* leaves, possibly due to its biologically active compounds, including terpenoids, which are also present in the flowers of the plant, can have a good potential in accelerating the blood coagulation process by interfering with the coagulation cascade pathway, further studies on the mechanism of these effects are needed.

**Keywords:** *Tagetes erecta*, Blood coagulation, PT (Prothrombin Time), Aptt (Activated Partial Thromboplastin Time), CT (Clotting Time), Platelets