

## 6<sup>th</sup> International Conference and Exhibition on **Analytical & Bioanalytical Techniques**

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### **Synthesis of molecularly imprinted polymer based on iron magnetic nanoparticles for controlled delivery of doxorubicin in treatment of mouse kidney adenocarcinoma**

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In this research, firstly a magnetic nano drug based of molecular imprinting polymer was synthesized. Dopamine was used as monomer and magnetic iron nanoparticles are the core of this nano drug. Then adsorption and desorption of doxorubicin in vitro conditions were considered. In the next step, the operation of these magnetic nano drugs was analyzed according to these criteria: Histologic examination, tumor markers, tissue distribution of drug in the body by HPLC technique in a rat model. Tested Groups were included as, controls: Tumors with no treatment, sham: Tumors without medication and exposure to magnetic fields. First therapy Group: Tumors and injection of PBS solution containing the nanoparticles and free drug in the mouse model, second therapy Group: Tumors and medication by free Sunitinib, third therapy Group: Tumors treated with the drug nanoparticle-containing medication without exposure to magnetic fields, forth therapy Group: Tumors treated with the drug nanoparticles containing the drug and exposure to magnetic fields.

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### **Determination of some antioxidative enzymes as indicators of plant salinity stress in jasmonic acid treated experiments**

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Due to Iran's location in saline areas, salinity is one of the fundamental problems in the cultivation of plants such as mint. Jasmonic acid causes growth enhancement and efficiency of a plant in different environmental stresses. Therefore, in this study, the effect of jasmonic acid on some phytochemical and morphological traits of *Mentha piperita* L. was studied in saline condition. In this study, a factorial experiment in a completely randomized design and methyl jasmonate in 0 level (control treatment), 50, 100 & 150 mM and 0 salinity (without adding salt) as well as 1.5, 3 & 4.5 dS/m individually and in combinations with each other were applied with 16 treatments and 3 replications. The results showed that the factors used had significant effects on the catalase, peroxidase and superoxide dismutase activity. Maximum proline was observed in salinity of 5-4 dS/m and 0 mM concentrations of jasmonic acid. These results showed that the application of jasmonic acid led to increase in growth factors such as height, fresh and dry weight, number of flowers and tributaries and hence, it could be involved in increased resistance to salt stress.

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