

عنوان مقاله:

A novel furan hydrazide derivative suppresses tumor progression in an in vivo model

محل انتشار:

دوازدهمین کنگره بین المللی سرطان پستان (سال: 1394)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Zahra Kooshafar - *Department of Biology, Engineering Science Faculty, Science & Art University, Yazd, Iran*

Mona Salimi - *Physiology & Pharmacology Department, Pasteur Institute of Iran, Tehran, Iran*

Ameneh Javid - *Department of Biology, Engineering Science Faculty, Science & Art University, Yazd, Iran*

خلاصه مقاله:

Introduction & Aim: Breast cancer drug development is expensive and inefficient without a consensus preclinical murine model. Thus, researchers are always looking for an efficient in vivo model of breast cancer. 4T1 mouse derived breast cancer cell line implanted into immune-intact syngeneic mice mimics human cancer progression and metastasize more efficiently. On the other hand, literature studies on hydrazones have shown that these derivatives possess a wide variety of biological activities including antitumor. These results motivated us to investigate the anti-breast cancer property of compound A in our breast cancer model **Methods:** We injected 106 4T1 cells into mammary fat pad of 6-8 week old female BALB/c mice to establish the syngenic breast cancer model in order to evaluate anti-cancer activity of compound A {2- (phenylthio) benzoic acid (5- nitro -2-furyliedene) hydrazide}. Lung metastasis was observed after 28 days of cell injection, which confirmed by histopathological and immunohistochemistry experiments. **Results:** Our results revealed that compound-A treated mice group significantly reduced primary tumor growth and lung metastasis at doses of 1,10 and 50 mg/kg after 3 weeks of i.p. administration; however, dose of 10 mg/kg was the most effective in tumor reduction size. As the histopathologic data showed, regression of tumor growth was associated with extensive inflammation. Furthermore, immunohistochemistry results demonstrated that compound A diminished Ki-67 expression, the protein involved in regulation of cell cycle progression, in both tumor and lung tissues **Conclusion:** Collectively, this model helped us to study anti-breast cancer activity of compound A as a chemotherapeutic candidate

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/740759>

