Breast cancer, Malondialdehyde, Oxidative marker, N-saffron, Crocetin, Breast cancer, N-nitroso-N-

At first, purification of crocetin from saffron has several medicinal properties, especially anticancer effect. On the other hand breast cancer is the second leading cause of cancer related death among women and induction of mammary tumors by NMU in rat is a preferred model of breast cancer induction for investigating oxidative reactions and the biological harms resulting from these reactions. Furthermore the oxidative stress increase and insufficient of the defense ability of the anti-oxidative systems as an important mechanism influenced on the breast cancer emergence.

Keywords: Breast cancer, Malondialdehyde, Oxidative marker, Thiobarbituric acid

P-3-5264-6-Suppression of cyclin D1 expression by crocetin in N-nitroso-N-methyleurea induced breast cancer in female rats
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Background: Crocetin from saffron has several medicinal properties, especially anticancer effect. On the other hand breast cancer is the second leading cause of cancer related death among women and induction of mammary tumors by NMU in rat is a preferred model of breast cancer induction for investigating oxidative reactions and the biological harms resulting from these reactions. Furthermore the oxidative stress increase and insufficient of the defense ability of the anti-oxidative systems as an important mechanism influenced on the breast cancer emergence.

Materials and Methods: At first, purification of crocetin from saffron was performed. Then breast cancer was induced by intraperitoneal injection of NMU (50 mg/kg BW) at different ages of rats. The animals were weekly weighed and palpated for record the number, location and size of tumors. After appearance of tumors and normal mammary glands were dissected, immediately frozen and stored at -70 for RT-PCR and Western blot analysis. Results: The results showed that crocetin markedly decreased the increased expression of cyclin D1 due to NMU injection. Thus, crocetin suppresses tumor growth through the down-regulation of cyclin D1 expression.

Keywords: Saffron, Crocetin, Breast cancer, N-nitroso-N-methyleurea(NMU), Cyclin D1

P-3-74770-Tests histological changes induced by cisplatin administration in Balb/c mice
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Materials & Methods: Male mice aging 8-12 weeks (25-30 gr) were divided into two groups: (1) control, (2) Cisplatin-which ip injected for five days as 2.5 mg/kg/7days after the end of treatment, body and testicular weights and histopathological changes were evaluated.

Results: The body weights of group 2 was significantly reduced (p<0.05), also the microscopic observations indicated that the diameter of seminiferous tubules and epithelial thickness was diminished (p<0.05), on the other hand, the diameter of tubules was increased. Conclusions: We can conclude that this drug can not differentiate between cancerous and the normal cells. So mitotic cells such as spermatogonium also can affect with it. Cisplatin can affect spermatogenesis and spermatogenic cells possibly via free radicals production.

Keywords: Cisplatin, testes, spermatogenesis, free radicals

P-3-9126-An Efficient Synthesis of 1,2-Dihydrosquino- line Derivatives as Biochemical Compounds
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Background: Isoquinoline reacts with dialkyl acetylenedicarboxylate in the presence of N-phenylcarbamates or amides to produce dialkyl 2-[(alkoxycarbonyl)anilin]-2-[((alkyl)amin]-2-[([H]-isoquinolinyl]-2-butenedioates and dialkyl 2-[(alkyl)amin]-2-([H]-isoquinolinyl]-2-butenedioates good. The mild reaction conditions and high yields of the products are advantages of this method. The isoquinoline skeleton is found in a large number of naturally occurring and synthetic biologically active heterocyclic compounds [1]. In particular, 1,2-dihydro quinoline derivatives act as delivery systems that transport drugs through the otherwise highly impermeable blood-brain barrier [2]. These compounds also exhibit sedative [3], antidepressant [4], antitumor, and antimicrobial activities.

Materials & Methods: To a magnetically stirred mixture of N-phenyl carbamate and dialkyl acetylenedicarboxylate was slowly added isoquinoline, and the reaction mixture was stirred for 6 h at RT. After completion of the reaction (indicated by TLC), the residue was purified by chromatography using an n-hexane:AcOEt mixture (5:1) to afford the pure adducts.

Results and Discussion: The reaction of isoquinoline, N-phenyl carbamates, and dialkyl acetylenedicarboxylate proceeds smoothly under solvent-free conditions at room temperature to produce dialkyl 2-[(alkyl carbonyl) anilin]-2-[([H]-isoquinolinyl]-2-butenedioates derivatives in 75-85% yields.

Conclusions: The products were characterized on the basis of their data spectra. The mass spectra of compounds displayed molecular ion peaks at appropriate values, which were consistent with 1:1 adducts of isoquinoline, N-phenyl carbamates and the dialkyl acetylenedicarboxylate.

Keywords: Biochemical Synthesis, Acetylenedicarboxylates, N-phenylcarbamates, N-phenylcarbamates.