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3, 3-Diindolylmethane inhibits RAS/PI3K/AKT signaling through GPR30 abrogate cell proliferation by BPA induced female Sprague Dawley rats

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The present study was aimed to evaluate the antiestrogenic effect of 3, 3 -diindolylmethane (DIM) on bisphenol A (BPA) induced alteration in estrogen signaling pathway in mammary glands of female Sprague-Dawley rats. BPA (10 µg/kg/bw) administered rat mammary tissues western blot analysis shows an over expression of GPR30, Ras, Src, PI3K and Akt proteins and immunohistochemical analysis indicates an over expression of PCNA and no significant changes in ERs. Further, oral administration of DIM (5 mg/ kg/bw) to BPA treated rats alternative days for the period of 12 weeks reveals that significant decrease in the expression pattern of GPR30, Src, Ras, PI3K, Akt and PCNA as compared to BPA alone treated rats. The results of our study demonstrate that BPA induces rapid action via the over expression of proteins in nongenomic estrogen signaling pathway. Oral administration of DIM to BPA treated group inhibits rapid action of BPA by modulating the proteins of nongenomic estrogen signaling pathway.

Recent Publications :

- Thangarasu Rajakumar, Pachaiappan Pugalendhi, Subbaiyan Thilagavathi (2015) Dose response chemopreventive potential of allyl isothiocyanate against 7,12-dimethylbenz(a)anthracene induced mammary carcinogenesis in female Sprague-Dawley rats. *Chemico-Biological Interactions* 231: 35-43.

Biography

S Thilagavathi is a PhD Research Scholar working on Cancer Biology of in vivo model.

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