

Role of Zinc on prostate cancer

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Prostate cancer is one of the most frequently diagnosed cancers in men. Zinc accumulation diminishes early in the course of prostate malignancy and it inhibits the growth of several carcinoma cells through induction of cell cycle arrest and apoptosis. Insulin like growth factors signaling pathway contributes a major role in cell growth, survival and migration in prostate cancer. Our studies suggest that zinc decreases the survival of androgen independent prostate cancer cells by modulating the expression of IGF system components and its signaling molecules. Protective effects of zinc on prostate (dorsolateral and ventral) carcinogenesis induced by N-methyl-n-nitrosourea and testosterone in adult male Sprague Dawley rats have been recently studied. Chemoprevention of early stage of prostate cancer, prostatic intraepithelial neoplasia may be useful strategy in the prostate cancer prevention. Zinc supplementation has reversed the signs of dysplasia in the dorsolateral and ventral prostate in SD rats. Thus the results suggest that zinc may act as an essential trace element against MNU and testosterone-induced prostatic preneoplastic progression in SD rats. Zinc may be qualified as a potential agent for the treatment of prostate cancer.

Biography

Dr. J. Arunakaran, Assistant Professor, Department of Endocrinology, Post Graduate Institute of Basic Medical Sciences, University of Madras, Chennai 600 113, India. My areas of interest are : Environmental Endocrinology, Prostate cancer, Neuro-endocrinology. I have got PG degree in Biological Sciences, and M.Phil degree in Endocrinology and got Ph.D degree in April 1986 (Endocrinology). Faculty adviser for M.Sc students of Biomedical Sciences since 2005. Date of birth: 15-01-1956. Handled Major research projects under DST, UGC etc. Published more than 90 papers in good journals of good impact factors. Guided more than 7 students, they got Ph.D degrees and guided more than 40 for PG and M.Phil students. Participated several national and international conferences in the subject Endocrinology, cancer biology etc since 1981. At present, I am serving as Principal Investigator in a major project funded by UGC. and Programme Officer NSS PG Unit.

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