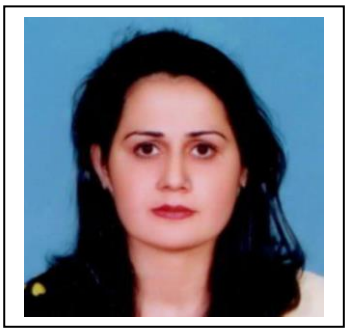


Title: *p53* mutation pattern in factory workers exposed to Polypropylene and impact on their reproductive hormones

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Polypropylene is a thermoplastic polymer playing role as Endocrine Disruptors which interferes with the union, emission, transport or elimination of normal hormones. Epidemiological information indicated relation of endocrine-disturbing chemicals with prostate cancer, testis tumor and diminished fertility. *p53* is a key tumor silencer gene. The aim of present study is to evaluate Luteinizing hormone (LH) and Follicle stimulating hormone (FSH) levels and the risk of *p53* mutations due to exposure of Polypropylene in non-tumorous adult male factory workers. For this purpose, Total 150 (controls=35, workers=115) subjects were recruited. Groups were maintained according to tenure of exposure G1 (1-5 years), G2 (6-10 years), G3 (11-15 years), G4 (16-20 years). Concentrations of LH and FSH were determined through Enzyme Linked Immunosorbent Assay (ELISA). Genotyping analysis was performed by polymerase chain reaction (PCR) based gel electrophoresis followed by sequencing. Mean plasma LH levels were significantly decreased in G1 ($p>0.05$) as well as G2, G3 and G4 ($p>0.001$) group, similarly FSH levels were significant decrease in G1 ($p>0.05$), G2 ($p>0.01$), G3 ($p>0.001$) and G4 ($P>0.001$) as compared to control group. Sequencing results found three variants i.e. g.13450T>G, g.13430C>T and g.13737G>A. One of them was predicted to be disease causing others are polymorphisms. These findings predict decreased fertility and risk of malignancies in future. The spectrum of *p53* mutations due to polypropylene exposure in Pakistani population have not been investigated before. Further studies and meta-analysis are required to elucidate the role of different plasticizers in reproduction and cancer-causing risk factors in a larger population.

Biography

Professor Dr Sarwat Jahan has completed her PhD in 2000 from Quaid-i-azam University and postdoctoral studies from Quaid-i-azam University Department of Animal sciences in 2004. She has 20 years research experience in biomedical sciences (Reproductive Physiology, Neuroendocrinology, Developmental Biology and Ethnopharmacology). She is the board member of Higher Education Commission (HEC) curriculum revision committee, Advanced Study and Research Board (ASRB), Society for study of Reproduction (SSR), Ethical Committee Faculty QAU of Biological Sciences, National Testing Service (NTS) Committee, Pakistan. Shee has published more than 60 papers in reputed journals and has been serving as an editorial board member of repute journals as well.

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