

## **Prof. Dr. Rajeshwar Sharan - Genomic and Proteomic Biomarker for Molecular Biodosimetry in Future**

Recent nuclear power plant accidents and the general possibility of nuclear terrorism pose the necessity to address issues relevant to radiation damage. In such a nuclear disaster scenario, large segments of population will likely be simultaneously exposed to a range of doses. One of Prof. Sharan's research objectives is to find new biomarkers and establish a fast and convenient method to precisely estimate exposure doses of individuals to enable their proper medical treatment. In extended DNA microarray and further validation studies he found several promising Radiation Response Gene (RRG) candidates. The expression levels of these genes correlate with the dose of exposure and might therefore allow the estimation of radiation dose received by individuals. After validating the respective Radiation Response Proteins as bio-markers the ultimate goal would be to automate their detection for convenient bio-dosimetry.