

SUITABLE HUMAN BIOMARKERS FOR BIOMONITORING OF ENVIRONMENTAL POLLUTION

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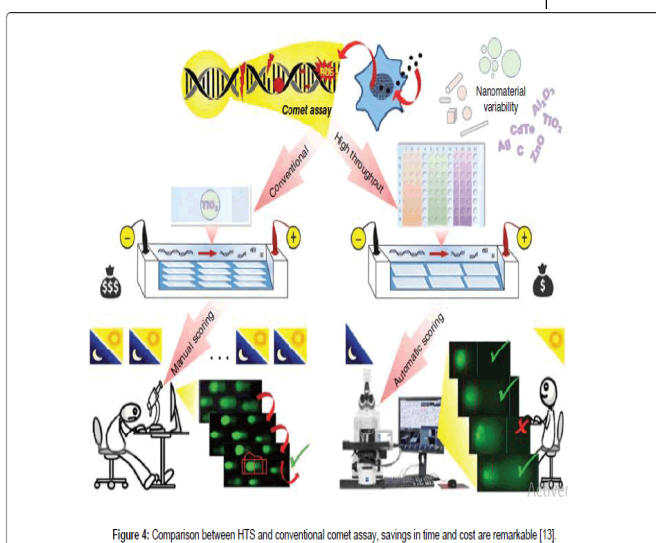
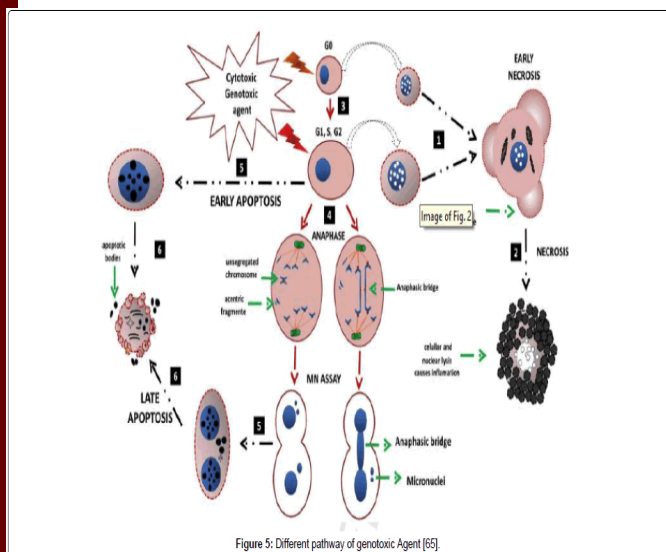


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There are many different types of pollutants released to environment in every moment by the human activity which classified in five categories: inorganic and organic pollutants, organo-metalic compounds, radioactive isotopes and gases. These toxic elements enter different ecosystems easily and their effects remain for a long period of time. In occupational health, biomonitoring deals with the systematic or repetitive measurement of chemical or biochemical markers in fluids, tissues, or other accessible samples from people exposed to or with past exposure to chemicals risk factors. Depending on their toxicological significance, biomarkers have been classified in three main categories: biomarkers of exposure, biomarkers of effect, and biomarkers of susceptibility.

Genotoxicological assays as micronucleus assay, comet assay, sister chromatid exchange (SCE) are very important test in ecotoxicology



STUDIES	LENGTH	ENDPOINTS
Acute Toxicity Assay	96 hours	LD ₅₀
Chronic Toxicity Assay	Variable	Reproduction and growth effects. Sublethal effects. NOEC LOEC
ADME Assay		Testing compound presence in tissues and water
Genotoxicity Assay		Comet assay Micronucleus
Cardiotoxicity Assay	24 hours	ECG patterns
Hepatotoxicity Assay	48 hours	Size modification. Necrosis. Steatosis.