Anna Tompa, Arch Cancer Res 2018, Volume 6
DOI: 10.21767/2254-6081-C4-013

36th World Cancer Conference
&
3rd Edition of International Conference on Colorectal Cancer

October 11-13, 2018 Zurich, Switzerland

Anna Tompa

Semmelweis University, Hungary

28 years follow up by human genotoxicity studies, risk assessment, primary prevention and cancer incidence among oil refinery workers

A long term follow-up monitoring system was used in order to detect somatic mutations and chromosomal damages caused by environmental and occupational mutagens and carcinogens in the peripheral blood lymphocytes of oil-refinery workers. The damage can be detected by genotoxic monitoring using chromosomal aberration (CA) and sister-chromatide exchange (SCE) frequency and DNA-repair capacity measurements. This multiple end-point monitor (developed by us), was used annually and the frequency of alterations were followed over 28 years. Higher benzene exposure induced elevation of chromosomal aberrations and DNA-repair capacity compared to historical and industrial controls. Among the 333 workers exposed to benzene, polycyclic aromatic hydrocarbons and heavy metals during this follow-up study, elevation of these biomarkers was observed compared to controls. Malignant diseases occurred in 22 cases (6.1%) with an average exposure time of 21.2 years. The average age of the workers and of the 22 tumor bearing donors was 41 and 54 years, respectively. The healthy historical control group was tumor free, although the industrial controls had higher incidence of malignancies (11,54%) than the exposed workers. In the cancer patients of the study group CA frequencies were observed earlier and in significantly higher incidence than in the industrial controls, or non-tumor bearing exposed individuals. The observed contradictions will be explained in our lecture also giving more details.

Biography

Anna Tompa was graduated in medicine in Budapest Semmelweis Medical University and became an assistant professor at the Institute of Pathology and Cancer Research of the School of Medicine. After specialized in pathology she went to the United States to study the advanced methodology of experimental cancer research.. She has continued her research activities focused on the cancer prevention and obtained her D.Sc. in 1999 from Hungarian Academy of Sciences. She has written more, than 160 publications and given about 200 scientific lectures in different domestic and international congresses. She is a member of numerous domestic and international scientific societies, and presently she is emeritus fellow of Ramazzini Collegium and OECD expert in chemical safety. Today she is an emeritus professor and vice director of Public Health Institute in the Semmelweis University, Budapest, Hungary.

tompa.anna@med.semmelweis-univ.hu

Notes: