"Genotoxicity and Methods of Analysis" Course in TurkHeltox Congress

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Various chemical compounds that alter the genetic information in living cells cause mutations. These mutations results of different types of toxicities from cell death to malign growth. Genotoxicity tests are applied to identify chemicals that cause genetic damage in humans, to estimate the potential genotoxic carcinogens in the absence of carcinogenicity data to understand mechanisms of the action of chemical carcinogens. In the scope of this course, it will be discussed the followings; i. to define genotoxicity tests ii. to explain that which kind of biological materials are used iii. to demonstrate which types of damage can be detect iv. To explain the application areas and advantage and disadvantage of these test be discussed with examples.

<u>The course will address the following topics:</u>

1. Molecular Epidemiology and Biomarkers
2. The Types of Damage
3. Genotoxicity Tests
   a. AMES Test
   b. Sister Chromatid Exchange Test
   c. Chromosomal Aberration Test
   d. Micronucleus and Cytokinesis Block Micronucleus (CBMN) Test
   e. Comet (Single Cell Gel Electrophoresis) Test
4. Advantages and Disadvantages of Genotoxicity Tests