

4th World Congress on Cell Science & Stem Cell Research

June 24-26, 2014 Valencia Conference Centre, Valencia, Spain

Genotoxicity of gemcitabine low dose in white rat bone marrow cells

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There is no doubt that the treatment of malignant tumors by chemotherapeutic drugs has contributed directly to the reduction or elimination of some of diseases, but the side effects of such drugs still represent a real fear at the feasibility of their use. In spite of that companies supplying such drugs subject drugs to many repeated experiments before approval for use. People that deal with these drugs must be very careful so as not to cause adverse or side effects, for both patient and medical staff supervisor. Due to the principle of treatment which is designed to kill only cancer cells and not others, it remains harmful which includes the effect of it on the rest of the body's cells, especially germline cells or any associated somatic cells. Gemcitabine is a modern chemical drug used against many serious diseases including advanced cancers such as lung cancer, bladder and ovarian cancers & several blood cancers. Gemcitabine is one of the preferred choices in the treatment of pancreatic cancer. Short-term tests were conducted and the drug showed rapid and strong ability to detect toxicity or distorting the material studied in the neighborhood cells. Results showed that there are some changes in cell parameters which can be determined by cellular examination accurately. Also, exposing male inbred line SWR/J of laboratory mice to low dose of the drug Gemcitabine individually and combined affected significantly mitotic divisions and chromosomal aberrations and abnormalities.

Biography

Abdul Rahman A I Alyahya was appointed as Assistant Professor in Shaqra University, King Saud Arabia in 2011. He was graduated from the Department of Zoology; King Saud University (BSc), faculty of science. He received his MSc and PhD degrees in zoology (Cell Biology) from the same university. Since then, he has established a long and successful career both in research and teaching in medical zoology as well as clinical laboratory sciences. His research interests were directed towards cytology and cell biology including toxicology and cancer cells. He has been also actively trained in cell culture techniques, PCR, ELISA and laboratory diagnosis.

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