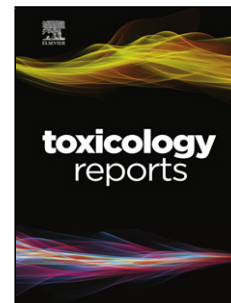


## Accepted Manuscript

Title: Evaluation of Selenium Nanoparticles and Doxorubicin  
Effect Against Hepatocellular Carcinoma Rat Model  
Cytogenetic Toxicity and DNA Damage

Authors: Omaima M. Abd-Elmoneim, Abeer H. Abd  
El-Rahim, Naglaa A. Hafiz



PII: S2214-7500(18)30081-7  
DOI: <https://doi.org/10.1016/j.toxrep.2018.07.003>  
Reference: TOXREP 596

To appear in:

Received date: 13-2-2018  
Revised date: 29-6-2018  
Accepted date: 24-7-2018

Please cite this article as: Abd-Elmoneim OM, Abd El-Rahim AH, Hafiz NA, Evaluation of Selenium Nanoparticles and Doxorubicin Effect Against Hepatocellular Carcinoma Rat Model Cytogenetic Toxicity and DNA Damage, *Toxicology Reports* (2018), <https://doi.org/10.1016/j.toxrep.2018.07.003>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# Evaluation of Selenium Nanoparticles and Doxorubicin Effect Against Hepatocellular Carcinoma Rat Model Cytogenetic Toxicity and DNA Damage

Omaima M Abd-Elmoneim\*, Abeer H. Abd El-Rahim, and Naglaa A. Hafiz

*Cell Biology Department, National Research Centre, El Tahrir Street, 12622 Dokki, Giza, Egypt*

*\* Corresponding author. E-mail address: emy.monem@yahoo.com*

## Highlights

- Selenium nanoparticles has important role in repression of hepatocellular carcinoma.
- Treatment with selenium nanoparticles caused decreased in chromosomal aberrations, micronucleus formation as well as decreased DNA damage.
- Treatment with Selenium nanoparticles with Doxorubicin was more effective than that treatment with drug alone.

## Abstract:

The present study aimed to demonstrate the potent role of nanoselenium and Doxorubicin in retrogression of genotoxicity induced in hepatocellular carcinoma rat model by studying chromosomal aberration, micronuclei formation, DNA fragmentation as well as comet assay. Male rats hepatocellular carcinoma model were treated with Se-Nanoparticles, Doxorubicin and the combination of both. The results revealed the protective effect of nanoselenium, Doxorubicin and their combination on bone marrow cytogenetic toxicity by decreasing chromosomal aberrations and micronuclei formation as well as their effects on rat's liver by decreasing DNA damage. Nevertheless, the treatment with nanoselenium either alone or in combination with Doxorubicin was more effective than treatment with doxorubicin alone.

Download English Version:

<https://daneshyari.com/en/article/8539707>

Download Persian Version:

<https://daneshyari.com/article/8539707>

[Daneshyari.com](https://daneshyari.com)