

PubMed ▾

Abstract

[Full text links](#)

Colloids Surf B Biointerfaces. 2013 Jun 1;106:86-92. doi: 10.1016/j.colsurfb.2013.01.027.
Epub 2013 Jan 23.

Biogenic silver nanoparticles for cancer treatment: an experimental report.

Jeyaraj M¹, Sathishkumar G, Sivanandhan G, MubarakAli D, Rajesh M, Arun R, Kapildev G, Manickavasagam M, Thajuddin N, Premkumar K, Ganapathi A.

Author information

Abstract

A generation of nanoparticles research has discussed recently. It is mandatory to elaborate the applications of biogenic nanoparticles in general and anticancerous property in particular. The present study was aimed to investigate the in vitro cytotoxicity effect of biogenic silver nanoparticles (AgNPs) against human breast cancer (MCF-7) cells towards the development of anticancer agent. Biogenic AgNPs were achieved by employing *Sesbania grandiflora* leaf extract as a novel reducing agent. It was well characterized by FESEM, EDAX and spectral studies showed spherical shaped nanoparticles in the size of 22 nm in slightly agglomerated form. It was surprising that biogenic AgNPs showed cytotoxic effect against MCF-7 cell lines were confirmed by MTT, AO-EB, Hoechst and COMET assays. There was an immediate induction of cellular damage in terms of loss of cell membrane integrity, oxidative stress and apoptosis were found in the cell which treated with AgNPs. This may be a first report on anti-MCF-7 property of biogenic AgNPs in the fourth generation of nanoparticles research. It is necessary to study the formulation and clinical trials to establish the nano drug to treat cancer cells.

Copyright © 2013 Elsevier B.V. All rights reserved.

PMID: 23434696 [PubMed - indexed for MEDLINE]

Publication Types, MeSH Terms, Substances



LinkOut - more resources



PubMed Commons

[PubMed Commons home](#)

0 comments

[How to join PubMed Commons](#)