



Research article

Biosynthesis, characterization antibacterial effects of silver nanoparticle by using *Carica papaya* fruit extract and it's interaction with an anticancer drug (5-fluorouracil)

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Abstract

Silver nanoparticles (AgNp) has been synthesised using *Carica pappya* as a biological reduction technique. From the optical measurements, the synthesized silver nanoparticles exhibit high mono dispersed in nature it's an evident from SEM analysis. The concentration of silver nanoparticles determined by the Dube model using absorption spectrum. The interaction of AgNp with 5-Fluorouracil (5- FU) drug was studied using UV-Vis absorption spectra, fluorescence spectra, FT-IR and life time fluorescence spectra. The powdered form of silver nanoparticles was synthesised and characterized by XRD pattern to measure the size of nanoparticle, their Antibacterial activity was screened against both gram-negative and gram positive microorganisms. Thus, this method can be used for rapid and eco-friendly synthesis of biocompatible silver nanoparticles possessing Antibacterial activity suggesting their possible application in medical industry.

