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In vitro scolicedal activity of synthesised silver nanoparticles from aqueous
plant extract against *Echinococcus granulosus*

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Biotechnology Reports

Volume 28, December 2020, e00545

Abstract

At present, biosynthesis of AgNPs is a very effective method to produce less toxic nanoparticles. The vision of this research is to use three different plant extracts derived from leaves of *Piper nigrum*, *Ziziphus Spina-Christi* and *Eucalyptus globulus* for rapid biosynthesis of AgNPs. This is in addition to investigating the scolicedal activity against *Echinococcus granulosus*. The methods of UV–vis spectroscopy, X-ray diffraction (XRD),

scanning electron microscopy (SEM), and energy-dispersive X-ray analysis (EDX) were employed to characterise the nanoparticles. UV spectra disclosed a maximum absorption at 437 nm for the biosynthesised AgNPs using EUCGLO extract. The XRD patterns revealed the (fcc) structure of the AgNPs with slightly shifted characteristic peaks at 2θ degree of 37.3° and 43.4° , respectively. The scolicidal activity against *E. granulosus* revealed that the AgNPs, which were synthesised using *Eucalyptus globulus*, have powered scolicidal of 47.8 % after 45 min. which is comparable to the treatment by Albendazole.

Keywords

Biosynthesis ,Plant extracts,Silver nanoparticles (AgNPs),Scolicidal activity

E. granulosus