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Biogenic Silver Nanoparticles Synthesized From Root Extract Of Iris Germenica and its Antibacterial Application.

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ABSTRACT:

Biological entity is gaining significant importance due to its large area of medicinal applications. 80% of the world populations preferred plant based ayurvedic preparations since very long time due its fewer side effects. The synthesized metal nanoparticles are an expanding research area due to the potential applications in medical domain. In our research work, we have described a cost effective and environment friendly technique for green synthesis of silver nanoparticles and evaluated their Antibacterial activity. Synthesis and characterization of silver nanoparticles demonstrated by using root extract of Iris germanica plant as reducing agent as well as capping agent. The Synthesized nanoparticles were characterized with UV-Visible spectrometry (UV-Vis), Fourier transform infrared spectroscopy (FT-IR), Field Electron Gun Scanning Electron Microscopy (FEG-SEM), High Resolution Transmission Electron Microscopy (HR-TEM) and X-ray diffraction spectroscopy (XRD). Biologically synthesized silver nanoparticles exhibited significant antibacterial activity against pathogenic bacteria.

Keywords: Iris germanica plant extract as a reducing agent, Antibacterial activity, $AgNo_3$ salt.