



ChemTech

## International Journal of ChemTech Research

CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555  
Vol.10 No.9, pp 461-466,2017

# DelonixElata Leaf Extract Mediated Gold Nanoparticles and their Biological Applications

S.Akilandeswari\*, C.K.Sathiya

Department of Physics, Annamalai University, Annamalai Nagar, India

**Abstract:** Biosynthesis of gold nanoparticle is a simple and eco-friendly method is used in various biomedical applications. Bio-reduction of chloroauric acid ( $\text{HAuCl}_4$ ) for the synthesis of Au NPs with the plant extract of Delonixelata leaf extract at room temperature. The properties of the synthesized nanoparticles were characterized by UV-Vis, XRD, TEM, DLS and Zeta potential. A UV-vis spectrum shows the SPR at 534nm. TEM study of the Au NPs is spherical in most cases and some other having intermittently triangular and nanorods were also observed and an average diameter of 24nm. Furthermore the biologically synthesized Au NPs were found to be a good antibacterial activity against gram positive (*Staphylococcus aureus*, *Streptococcus pyogenes*) and gram negative (*Pseudomonas aeruginosa* and *Proteus vulgaris*) bacterial pathogens.

**Keywords :** Biosynthesis, Delonixelata, AuNPs, XRD, TEM, DLS.

S.Akilandeswari *et al*/International Journal of ChemTech Research, 2017,10(9): 461-466.

\*\*\*\*\*