

3RD WORLD CONGRESS ONMEDICINAL PLANTS AND
NATURAL PRODUCTS RESEARCH

OCTOBER 02-03, 2017 KUALA LUMPUR, MALAYSIA

Biologically synthesized silver nanoparticles from *Momordica charantia* and assessment of anti-diabetic activity on Streptozotocin induced diabetic rats**Gottumukkala Krishna Mohan and Kalakotla Shanker**

Jawaharlal Nehru Technological University Hyderabad, India

In recent research, biological methods have been used to synthesize silver nanoparticles in presence of medicinally active anti-diabetic plant and this intention made us to assess the Biologically Synthesized Silver Nanoparticles (BSSNP) from *Momordica charantia* using 1 mM silver nitrate solution. The synthesized nanoparticles were characterized by Scanning Electron Microscope (SEM), Transmission Electron Microscope (TEM), UV-visible spectroscopy, Fourier Transform Infrared Spectroscopy (FTIR) and X-Ray Diffraction (XRD). In current study, the silver nanoparticles tested for *in vivo* anti-diabetic activity in wistar rats. XRD graph represents presence of peaks at 2θ values 28.1° , 33.09° , corresponds to 111, 200, 202, planes of silver, respectively. Thus, the XRD spectrum confirms the crystalline nature of BSSNP. From EDX it is clear that, strong signal of silver in the spectra, confirms the formation of silver nanoparticles. The result obtained from study indicates that silver nanoparticles synthesized using plant have shown potent activity than that of plant extract. Biologically synthesized silver nanoparticles were successfully obtained from bio reduction of silver nitrate using *Momordica charantia* plant extract and have been appropriately characterized using different equipments. From the study, biologically synthesized silver nanoparticles exhibited strong anti-diabetic effect against Streptozotocin (STZ) induced diabetic rats than that of extract. The approach of green synthesis seems to be cost efficient, eco-friendly and easy alternative to conventional methods of silver nanoparticles synthesis.

drgkmohan@gmail.com