PHARMACOGNOSY RESEARCH
DOI: 10.4103/0974-8490.69112 | pp. 233-236 | January 2010
Published by Phcog.Net

Rapid preparation process of antiparkinsonian drug Mucuna pruriens silver nanoparticle by bioreduction and their characterization

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ABSTRACT

Backgorund Development of biologically inspired experimental processes for the synthesis of nanoparticles is evolving an important branch of nanotechnology. Methods The bioreduction behavior of plant seed extract of Mucuna pruriens in the synthesis of silver nanoparticles was investigated employing UV/visible spectrophotometry, X-ray diffraction (XRD), and transmission electron microscopy (TEM), Fourier transform - infra red (FT- IR). Result M. pruriens was found to exhibit strong potential for rapid reduction of silver ions. The formation of nanoparticles by this method is extremely rapid, requires no toxic chemicals, and the nanoparticles are stable for several months. Conclusion The main conclusion is that the bioreduction method to produce nanoparticles is a good alternative to the electrochemical methods and it is expected to be biocompatible.

KEYWORDS

Biosynthesis . nanomaterials . silver nanoparticle . transmission electron microscopy . Mucuna pruriens

REFERENCES

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