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(71)Name of Applicant :

1)Monika Bhadauria

Address of Applicant :Department of Zoology, Guru Ghasidas University -----

2)Satendra Kumar Nirala

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)Monika Bhadauria

Address of Applicant :Department of Zoology, Guru Ghasidas University -----

2)Ankita Mukherjee

Address of Applicant :Toxicology and Pharmacology Laboratory, Department of Zoology, Guru Ghasidas Vishwavidyalaya, Bilaspur 495009 (C.G.) India Bilaspur

3)Asim Amitabh Sahu

Address of Applicant :Toxicology and Pharmacology Laboratory, Department of Zoology, Guru Ghasidas Vishwavidyalaya, Bilaspur 495009 (C.G.) India Bilaspur

4)Shubham Singh

Address of Applicant :Toxicology and Pharmacology Laboratory, Department of Zoology, Guru Ghasidas Vishwavidyalaya, Bilaspur 495009 (C.G.) India Bilaspur

5)Satendra Kumar Nirala

Address of Applicant :Laboratory of Natural Products, Department of Rural Technology and Social Development, Guru Ghasidas Vishwavidyalaya, Bilaspur 495009 (C.G.) India Bilaspur -----

(57) Abstract :

This investigation included value addition of caffeic acid by its transformation into silver nanoparticles (AgNPs) of caffeic acid with pharmacologically fit physico-chemical characteristics, antioxidant potential and in vivo safety profile for therapeutic applications. Particle size analyzer, X-ray powder diffraction and electron microscopy of AgNPs of caffeic acid reflected particle size of 43 nanometer with crystalline phase and cylindrical in shape. The AgNPs of caffeic acid showed excellent antioxidant potential and no observable adverse effect level (NOAEL) up to doses 3 mg/kg through oral route for continuous six days in Wistar rats. Thus, AgNPs of caffeic acid have pharmacologically appropriate properties and AgNPs of caffeic acid may have applications to combat diseases or disorders associated with oxidative stress up to doses 3 mg/kg.

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