

Assessing the Synthesis, Mechanism and Pharmacokinetics Profile of Silver Nanoparticles

Deepti Tomar and Dr. Hemant Bhardwaj

Research Scholar, Pharmacy

Professor Pharmacy

Monad University, Hapur, UP

Abstract: *This study provides a comprehensive overview of silver nanoparticles (AgNPs) in medical applications, emphasizing diagnostic and therapeutic uses alongside their antimicrobial properties. Addressing nano toxicity concerns, the research explores AgNP mechanisms, synthesis methods, pharmacokinetics, formulations, and applications in infertility, antibacterial effects, skin damage, burns, and cancer treatment. The study delves into the potential toxicological challenges, presenting a nuanced perspective on the multifaceted role of AgNPs in medicine. The major applications of silver nanoparticles in the medical field include diagnostic applications and therapeutic applications, apart from its antimicrobial activity. Due to their Nano toxicity, AgNPs have a several drawbacks too. This study presents a complete view of the mechanism of action, synthesis, the pharmacokinetics of silver nanoparticles, different formulations of AgNPs used in biomedical applications, infertility management, antibacterial effects, skin damage, burns, cancer treatment, etc. and various applications of silver nanoparticles together with the possible toxicological challenge*

Keywords: Applications, Mechanism, Silver, Nanoparticles, Liver