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Silver nanoparticles in biomedical applications: Recent Advances and perspectives

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Silver nanoparticles (AgNPs) have enticed the attention of the scientific community and trade itself due to their wide range of applications in industry for the preparation of consumer products and highly accepted application in biomedical fields (especially their efficacy against microbes, anti-inflammatory effects, and wound healing properties). Silver nanoparticles exhibit strong antibacterial activity owing to their large surface to volume ratios and crystallographic surface structure. Nanosilver particles have been widely used in a range of biomedical applications including diagnosis, treatment, medical device coatings, drug delivery and personal health care products. With the growing application of nanosilver particles in medical contexts, it is becoming necessary for a better understanding the mechanisms of action, biological interactions and toxicity. Here we highlight to provide critical assessment of the current understanding of antibacterial activity, biomedical applications and toxicity of silver nanoparticles and the future prospect of these nanoparticles in day to day life.

Biography

Jamila Kathoon Adam has completed her PhD from Durban Institute of Technology and post-doctoral studies from Natal University, Department of Medicine, Durban, South Africa. She is the Director in the Department of Biomedical and Clinical technology at Durban University of Technology, South Africa. She has published more than 25 published papers in reputed journals and has been serving as Vice Chairperson of Health Professional Council of South Africa and Chairperson of Institutional Research Ethics Committee of Durban University of Technology.

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