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**BIOGENIC SYNTHESIS OF SILVER NANOPARTICLE FROM WASP NEST SOIL
FUNGUS, *Penicillium italicum* AND ITS ANALYSIS AGAINST
MULTI DRUG RESISTANCE PATHOGENS**

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ABSTRACT

The mortality rate has increased robustly due to the drug resistant microorganisms and is a major challenge before scientist. Since nature provides the clues to us to defend against unfavorable situation, the proposed study has focus on an insect-microbe symbiosis which plays a vital role for producing the natural product for an alternate source of antibiotic. In our present study we have isolated fungi *Penicillium italicum* from wasp nest soil and checked the symbiotic relation is more promising than the individual growth. Further the study was subjected to extracellular biosynthesis of silver nanoparticles. The biosynthesized nanoparticles were characterized by various techniques followed by antibacterial and antifungal activity against multi drug bacterial pathogens like *Staphylococcus aureus*, *Vibrio parahaemolyticus*, *E. coli*, *Shewanella putrefaciens* and fungal pathogen of *Candida albicans*. The silver nanoparticles were synthesized by adding silver nitrate to the culture extract of *Penicillium italicum*. The UV-Vis spectrophotometer showed the absorption

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