

# GLOBAL MEDICAL MICROBIOLOGY SUMMIT & EXPO

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## Prevalence of heavy metal and multiple antibiotic resistances in bacterial species isolated from Hasdeo River water

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Continuous discharge of waste from industrial, agricultural and anthropogenic sources causes pollution of water by toxic heavy metals and with pathogenic microorganisms. As the heavy metal pollution of River was not only threat to human being but it also exert antibiotic resistance to bacterial species and pose serious threat to health of human and animal. Present study deals with the heavy metal driven co-selection of antibiotic resistance in the bacterial species in the water sample collected from River Hasdeo in Korba. Hasdeo River was found to be polluted with bacterial species such as *Bacillus* sp., *Pseudomonas* sp., *E. coli*, *Staphylococcus aureus*, which were also recorded to have multiple heavy metal (Cd, Cu, Zn, Fe, and As) resistance and multiple antibiotics resistance towards tigecycline, terramycin, lactoclave, Amoxycillin, Penicillin, Ecoflox, Ofloxacin and Tetracyclin (with MAR index 0.3). Present data reveals that detection of antibiotic substances in water resources has considerably increased in the recent past also the development of multiple antibiotic resistant microorganisms in the environment represent a challenge to maintaining public health in the future. The most significant aspects of studying the antibiotic sensitivity in water sample were to identify the source of microbial pollution in the water resources.

### Biography

Rajshree Singh, pursuing PhD from Dr. C V Raman University, Bilaspur, Chhattisgarh, India on topic entitled "Isolation and identification of bacteria intended for heavy metals remediation from industrial effluents". She is working as Assistant Professor in microbiology department, Shri Agrasen Girls College, Korba, Chhattisgarh. She has also having teaching experience of almost 5 years. She has published one paper and one review article accepted to be published in book chapter.

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