

International Conference on

# Environmental Microbiology & Microbial Ecology

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# Ecology, Ecosystems & Conservation Biology

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*In-vitro*  
*cereus*

*Bacillus*

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**H**heavy metal contamination is a major global environmental issue and industrial effluents are commonly used for irrigation. Increasing industrial rate in the modern world is responsible for the increase in the concentration of these heavy metals. The present study was designed to isolate and evaluate some indigenous heavy metal tolerant bacteria from textile effluents of Faisalabad Pakistan. Out of 30 positive samples, two isolates were selected showing maximum tolerable concentration and multi-metal resistance to Ni and Co and were named AMIC2 and AMIC3. Molecular characterization confirmed AMIC2 as (*Bacillus cereus*, accession number LT838345) and AMIC3 as (*Bacillus cereus*, LT838346). Biosorptive potential was accessed using Inductively Coupled Plasma-Optical Emission Spectroscopy and it was found that AMIC2 reduced Ni (48.4%, 49%) and Co (70.6%, 73.6%) after 24 and 48 hours respectively whereas AMIC3 reduced Ni (50.6%, 51.8%) and Co (71.8%, 73.2%) after 24 and 48 hours respectively. Fourier transform infrared spectroscopy was used to analyze the functional groups and overall nature of