

The International Debate on Cross resistance is the cause for multi-drug resistance among soil flora

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Multi-drugs resistance among pathogenic bacteria is menaced in the recent past. Bacteria exposed to xenobiotics at sub-lethal concentration develop resistance through nonspecific hydrolysis of antibiotics. Soil isolates *Bacillus cereus* showed resistance against chloramphenicol, monochrotophos, ampicillin, cefotaxime, streptomycin and tetracycline. Multi-drug resistant properties of this particular strain have been confined to the plasmid, which was verified using plasmid curing by exposing to 2% sodium dodecyl sulfate and were able to resume multi-drug resistance properties once the plasmid was transformed back to bacteria. Further the plasmid DNA was sequenced on MiSeq using 2x300 bp chemistry to generate approximately 1 GB of data.

The Draft assemblies of short Illumina sequence reads (2x300 Mi-Seq library) was analyzed by 4200 tape station system. The presence of hydrolases and hypothetical proteins suggest that the plasmid is capable of degrading antibiotics and thus responsible for multi-drug resistance.

Biography:

He is the Associate Professor, Department of Microbiology, Periyar University. Previously he was working as lecturer in the Department of Microbiology and as a lecturer in the Department of Biotechnology in Muthayammal College of Arts and Science.