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A preliminary investigations of novel putative non-stereo specific dehalogenase producing bacteria from Antarctic Psychrotropic *Bacillus sp. Ih1*

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2, 2 dichloropropionic acids (Dalapon) like most halogenated compounds are commonly used as herbicides and employed in agricultural areas and industries. Toxicity of these xenobiotic compounds causes serious environmental problems. *Bacillus sp ih1* was isolated from top cliff soil collected from Antarctica. The bacteria was first grown on Antarctic bacterial medium and later transferred to a minimal medium containing 2, 2, dichloropropionic acid as carbon source. It grew slowly in the minimal media in different concentrations of 10mM, 20mM, 30mM and 40mM of 2, 2 DCP. The best growth was observed in 20mM of 2, 2-DCP with 32hours as doubling time. To monitor the degradation activity of the bacteria, halide ion assay was carried out to check the release of chloride ion. The best release of chloride was 0.657 mMol/L in 20mM of 2, 2-DCP. The bacteria was identification using 16S rRNA, genomic DNA extraction method and PCR amplification of 16S rRNA was performed using universal primers 27F and 1492R. Nucleotide blast (BLASTn) showed 97% similarity with *bacillus sp.* Results from biochemical tests further confirm the bacteria as *bacillus sp.* Using phylogeny.fr, sequences from nucleotide blast result were used to build a phylogeny tree based on neighbor to neighbor joining.

Biography

Ismail Haruna is an assistant lecturer in Department of Microbiology Bauchi State university Gadau, Nigeria. He has a bachelors degree in Microbiology and Masters degree in Biotechnology. He has published 2 papers in reputed journals. He is also a member of Nigerian Society For Microbiology (NSM). He is looking for a PhD opportunity.