



## **Bioprospecting Myxobacteria from the State of J&K for Novel Enzymes and Antimicrobial Activity**

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**ABSTRACT:** Myxobacteria are Gram-negative gliding bacteria with a high G + C content, performing a complex series of cellular differentiation processes that lead to fruiting body formation. Myxobacteria have been shown to be a rich source of industrially important enzymes like various type of hydrolases. Myxobacteria are also known to be a source of a wide variety of antibiotics, bacteriocins, cell wall lytic enzymes. In the present work ,an attempt was made to isolate Myxobacteria from soil samples collected from different places of J&K state, as till now there are no reports of any isolated Myxobacterial strains from this region. Various isolation techniques were standardized for the isolation of Myxobacterial strains from soil samples collected from various places of J&K state with an aim to discover novel strains of Myxobacteria for exploiting their biotechnological potential. Characteristic swarms and fruiting bodies were observed for various isolated cultures. Since studies on Myxobacteria are very few compared to other bacteria , the isolated strains were screened for the presence of industrially important enzymes like Proteases, Cellulases, Lipases and Amylases. The isolated Myxobacterial cultures were screened for antimicrobial activity as well against different pathogenic Microorganisms with an aim to discover some novel strains producing unique antimicrobial compounds. Preliminary screening indicated that this unusual group of bacteria is endowed with good industrial potential with respect to enzymes of industrial importance and antimicrobial activities against a broad range of pathogenic Microorganisms. © 2014 iGlobal Research and Publishing Foundation. All rights reserved.

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