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# Screening of biologically active microbial strains having therapeutic applications

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Natural sources, particularly microbes yield active molecules that have wide application in food and pharmaceutical industries, degradation of hazardous bacterial biofilms, etc. Safety and acceptability of such drugs attract researchers' attention for new drug discovery. Here, we explored biologically active microbial strains having therapeutic applications isolated from five different geographical areas of India. On screening, we found 10 strains capable of producing chitinase (Chi), seven cholesterol oxidase (COD), five glutaminase (Gln) and two heparinase (Hep) producing strains. Most of the isolated strains were found to be actinomycetes. Morphological and biochemical characterization of the strains suggest that the selected 13 isolates belong to the genus *Streptomyces*. Out of which, four were characterized through 16S ribosomal RNA gene analysis as *Streptomyces xanthochromogenes* MTCC 11937 (S1), *Streptomyces violascens* (N1), *Streptomyces xanthopheus* MTCC 11938 (H1) and *Streptomyces rimosus* MTCC 10792 (Ay). Results suggest that the soil isolated *Streptomyces* strains continue to act as a fascinating source of clinical and commercially importance enzymes. Partially purified enzymes were found to possess a broad range of pH and temperature stability indicating their capability to be used in clinical and pharmaceutical fields.

**Keywords:** Actinomycetes, Chitinase, Cholesterol oxidase, Glutaminase, Heparinase, Soil isolates, *Streptomyces*