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**PRODUCTION AND PARTIAL PURIFICATION OF ANTIBACTERIAL  
COMPOUND FROM *BACILLUS MEGATERIUM*****PANDEY A**

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The discovery of antibiotics was one of the greatest discoveries of the 21st 20th century. The current need for new antibiotics to fight bacterial pathogens that have become resistant is growing every day. In this work we characterize and partially purify an antibacterial compound that is produced by a soil bacterium. Bacterial strain MJAP04 was isolated from a soil sample collected in Baddi (Himachal Pradesh). In the present investigation isolates found to be positive during primary screening named as MJAP1504. All the isolates were found to be gram positive rods. All were subjected to secondary screening and the isolate MJAP04 was found to be most effective during secondary screening. The isolates growth parameters were studied and it was found to be growing well at 37 °C and pH 7. Production of antibacterial Metabolite was carried out by submerged fermentation procedure and extracellular metabolites were extracted by solvents (chloroform and ethyl acetate, acetone, methanol, Ethanol followed by dialysis and Metabolite extracted by chloroform, methanol and gave a zone of inhibition of 15-16 mm , 17-18 mm and 15-19mm respectively.

**Keywords: antibacterial compound, primary and secondary screening, extracellular metabolites****INTRODUCTION**

The discovery of antibiotics was one of the most important findings in the 20th century, completely transforming the process and greatly improving the success of bacterial disease therapy (Van Kraaig, 1999, and Livermore, 2004). The need for new

antibiotics is critical, as bacterial pathogens become resistant to existing compounds. Antibiotics are relatively small molecules, usually with a molecular weight less than 2000 Daltons, which either stop bacteria from growing, or render them in viable. Antibiotics are useful because of their