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"STUDIES ON PRODUCTION & PURIFICATION OF ANTIMICROBIAL COMPONENTS FROM *S.aureus* USING SUBMERGED FERMENTATION"

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ABSTRACT

In the present study 11 bacterial isolates found to be positive during primary screening tentatively named as MJNK2015 01-MJNK2015 11 were subjected to secondary screening and the isolate MJNK2015 06 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 solvent extraction method using 80% Methanol, 70% Ethanol, Acetone, chloroform and ethyl acetate. Assessment of extracted metabolite for antibacterial nature was done by agar well diffusion method against test pathogens. Ethenol methanol and acetone were found to show antibacterial activity. Methenol extract was most effective showing a zone of inhibition of maximum 22mm against *Pseudomonas aeruginosa* and *Staphylococcus aureus* and maximum 14 mm against *Escherichia coli*.

Keywords: Staphylococcus aureus, Antibacterial activity, Solvent extraction, Antibacterial sensitivity

INTRODUCTION

Antibiotic are low molecular weight antimicrobial agent produced as secondary metabolite by microorganism that kill or inhibit other microorganism. Antibiotics or antibacterial are a type of antimicrobial used in the treatment and prevention of bacterial infection. They may either kill or inhibit the growth of bacteria.

The term antibiotic, coined by **Waksman**, originally described only those formulation