

ISOLATION AND CHARACTERIZATION OF ANTIBIOTIC PRODUCING *ACTINOMYCETES* AGAINST CERTAIN PATHOGENS

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Abstract: Aim of the present study was isolation and identification of *Actinomycetes* against certain pathogens. *Actinomycetes* strains were isolated from cultivated field of Sudhowala, Dehradun and *Staphylococcus aureus*, *Escherichia coli*, *Salmonella typhi* were also isolated from sewage at Dehradun. Both *Actinomycetes* and pathogens were characterized on the basis of microscopy and various biochemical tests. Further, we evaluated antimicrobial activity of *Actinomycetes* strains against isolated pathogens. Microscopic examination and biochemical tests confirmed that isolated strains were *Actinomycetes*, *Staphylococcus aureus*, *Escherichia coli* and *Salmonella typhi*. *Actinomycetes* did not show inhibition zone against *Staphylococcus aureus*. But crude extract of *Actinomycetes* showed 191.66, 181.81 % more inhibition zone as compare to 25% extract concentration against pathogenic *E. coli* and *Salmonella typhi* respectively. It confirmed that *Actinomycetes* effectively control growth of *E. coli* and *Salmonella typhi*.

Keywords: *Actinomycetes*, Antibacterial, *Staphylococcus aureus*, *Escherichia coli*, *Salmonella typhi*

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