



EFFECT OF TEMPERATURE ON ANTIMICROBIAL ACTIVITY OF *ANNONA SQUAMOSA* EXTRACT; PHYTOCHEMICAL SCREENING OF BIOACTIVE COMPOUNDS

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ABSTRACT

The effect of temperature on antimicrobial activity four different plant extract of *Annona squamosa* i.e. 100% acetone leaf, 100% chloroform leaf, 70% ethanol hot leaf and 100% chloroform hot leaf were studied during the course of this research. Antibiogram analysis of extracts at room temperature, 22°C, 50°C, 75°C and 100°C were carried out. All the extracts except 100% chloroform hot leaf showed increase in activity at 50°C. There was an increase in zone of inhibition from 16.5mm to 17.0, 17.0mm to 17.5 against *Staphylococcus aureus* and *Escherichia coli* for 100% acetone leaf extract. An increase from 15.0mm to 15.5mm was recorded against *Escherichia coli* for 100% chloroform leaf extract. Phytochemical screening revealed presence of many bioactive compounds such as terpenoids, flavonoids etc in the extracts.

Keywords: *Annona Squamosa*, heat shock, Phytochemical, antibiogram analysis.

INTRODUCTION

Natural remedies from medicinal plants are found to be safe and effective. Many plant species have been used in folkloric medicine to treat various ailments. Even today compounds from plants continue to play a major role in primary health care as therapeutic remedies in many developing countries. Plants are a rich source of secondary metabolites with interesting biological activities. In general, these

secondary metabolites are an important source with a variety of structural arrangements and properties (Vanitha, V., *et al.*, 2011).

Based to the assorted health organization surveys such as WHO, IHO, almost 70-80% populations living in the developing countries rely almost solely on conventional medicine for their basic health care needs. Investigation of the chemical constituents of