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ABSTRACT
In the current study the acetone extract of flowers of *Nyctanthes arbortristis* were screened for antimicrobial activity using cup-plate method. Streptomycin was used as standard. The test microorganism used in the present study was *Escherichia coli* and *Streptococcus aureus*. Acetone extracts showing significant effect in higher concentrations (500µg/ml).

KEYWORDS: *Nyctanthes arbortristis*, Flowers, Anti-microbial activity.

INTRODUCTION
Nature has provided the storehouse of remedies to cure all ailments of mankind. Theses is no doubt that plants are a reservoir of potentially useful chemical compounds which serve as drugs and provide newer leads for modern drug synthesis. *Nyctanthes arbortristis* L. commonly known as harsinger or night jasmine is well documented plant belonging to the family Oleaceae.[1-2] This can be derived from barks, leaves, flowers, roots, fruits and seeds.[3] In India it grows in the outer Himalayas and is found in tracts of Jammu and Kashmir, Bengal, Tripura extended through the central region upto Godavari in the south.[4-5] *Nyctanthes arbortristis* plant have been screened for antimalarial activity, antihistaminic activity, antiarthritic activity, antihypnotic activity, analgesic, antiulcer, anti-inflammatory, antidepressant, antianxiety, antiallergic, antiviral activity, immunomodulatory activity, antihelminthic, antioxidant, antidiuretic and CNS modulatory.[6-8] The aim of the present study designed to evaluate antimicrobial activity of fresh flowers extract of *Nyctanthes arbortristis*.

MATERIAL AND METHODS
Collection of the plant material
The flowers of plant *Nyctanthes arbortristis* were authenticated by G. Pulla Rao, head of department of botany, Pragati junior college, Sattenapalli. They were collected from different places of Sattenapalli, Guntur dist., Andhra Pradesh, India.

Solvent Extraction
The flowers of *Nyctanthes arbortristis* were collected washed, dried and powdered. 50g of dried powder of the flowers was weighed and transferred into a conical flask and it was macerated with sufficient amount of acetone for 72 hours. It was filtered with appropriate filtration method and the solvent was evaporated and extract was collected.[9]

Microorganism: The test organisms used were *Escherichia coli* a Gram -ve strain and *Streptococcus aureus* a Gram +ve strain. The bacterial culture were grown and maintained on nutrient medium at 37°C for 24h.

ANTIMICROBIAL ACTIVITY
Antimicrobial activity by cup-plate method
Each Petri plate with the medium was inoculated with test organism (20ml of subculture medium per 100ml of the assay medium). 20ml each of inoculated media was distributed into Petri plates and maintained at room temperature. When it was solidified, 4 cups (8 mm diameter) were made using sterile cork borer. Into these cups two different concentrations of the test and standard solutions were placed under aseptic conditions. Dimethyl sulfoxide (DMSO) was used as control. The Petri plates were kept in the refrigerator for 2 hours to allow the uniform diffusion of drug into the agar medium. All the Petri plates were then incubated at 37°C for 24 hours and zone of inhibition were measured in mm.[10]

RESULTS AND DISCUSSION
Form in the results we observed the different concentration of test and standard solution have shown antimicrobial activity, based on their zone of inhibition. Here, T2 (*Nyctanthes arbortristis*-500µg/ml) was shown zone of inhibition when compared to T1 and Streptomycin which has been taken as Standard (S) shown good zone of inhibition. Finally based on the results it was confirmed that the T2 extract of *Nyctanthes arbortristis* was having antimicrobial activity and it has been showing significant effect in higher concentrations (500µg/ml).
Table: Antimicrobial activity of flowers of *Nyctanthes arbortristis*.

<table>
<thead>
<tr>
<th>S.NO</th>
<th>MICRO ORGANISMS</th>
<th>ZONE OF INHIBITION</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td><em>Nyctanthes arbortristis</em></td>
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<tr>
<td></td>
<td></td>
<td>250 µg/ml</td>
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<tr>
<td>1.</td>
<td><em>E.coli</em></td>
<td>4 mm</td>
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<tr>
<td>2.</td>
<td><em>S.aureus</em></td>
<td>6 mm</td>
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</table>

**CONCLUSION**

The acetone extract of flowers of *Nyctanthes arbortristis* has shown antimicrobial activity in both Gram-positive and Gram-negative bacteria at a concentration of 500 µg/ml. Where, the chemical constituent which was the exact reason for antimicrobial activity need to be finding in further investigation.

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**REFERENCES**