## Phytochemical Screening, Antioxidant and antibacterial activity of *Eupatorium triplinerve* Leaf extracts

Sangeetha MR, Manjula K

<sup>1</sup>PG & Research Department of Biochemistry, Mohamed Sathak College of Arts & Science, Sholinganallur, Chennai - 600119,TN, India

Corresponding author email: manjusrini2009@gmail.com

From National Conference on Natural Products as therapeutics, Medical Microbiology, Nanobiology and System biology: Current Scenario & Emerging Trends, 'NATCON-2014'.

Post Graduate & Research Departments of Biochemistry, Microbiology, Biotechnology and Bioinformatics, Mohamed Sathak College of Arts & Science, Sholinganallur, Chennai-600119, India. 18-19 September 2014.

American J of Bio-pharm Biochem and Life Sci 2014 September, Vol. 4 (Suppl 1): P 95

## ABSTRACT

Most of the people in rural and urban areas of the world are dependent on the medicinal plants for the treatment of infectious disease. In this study, the plant Eupatorium triplinerve (in Tamil called " Ayappan") collected from Chengalpattu, Chennai was used for the analysis. The aim of this study was to identify the various phytochemical compounds present in Eupatorium triplinerve leaf extract and to study its antioxidant and antibacterial activity. The leaf extract of Eupatorium triplinerve was prepared using three different solvents such as ethanol, acetone and distilled water. Of the three different leaf extracts studied, only the ethanolic extract of Eupatorium triplinerve showed maximum number of phytochemicals such as tannins, saponins, flavonoids, quinones, glycosides, cardiac glycosides, terpenoids, phenols, coumarins, steroids, alkaloids and betacyanin followed by aqueous solvent and of these bioactive compounds, saponins, flavonoids, guinones, phenol and steroids were found to be present in high amounts in ethanolic leaf extract. The presence of coumarin compound in ethanolic leaf extract was confirmed by HPLC analysis. The antioxidant effect of the leaf extract was studied qualitatively by DPPH staining method and quantitatively by BHT (Butylated Hydroxy Toluene) free radical scavenging assay. The ethanolic leaf extract of Eupatorium triplinerve showed the maximum antioxidant activity (80.3 %) when compared to that of aqueous (68.8 %) and acetone (65.5 %) extracts. The antibacterial activity was studied by Disc and well diffusion methods. The results showed that the ethanolic leaf extract was effective against the bacterial species studied such as Bacillus subtilis, Bacillus cereus, Pseudomonas aeruginosa, Staphylococcus aureus, Eschericia coli. Thus Eupatorium triplinerve is found to be an effective medicinal plant.