Acalypha indica- Its Antimicrobial activity – A Review

Vignesh M*, Malathi VB, Poorani V,
Department Of Microbiology, Chennai National Arts & Science College, Chennai, India.
Corresponding author email: m.vigneshtamil@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 54

ABSTRACT

Plant based drugs are being used worldwide in traditional medicines for treatment of various diseases. India, being the mother land of Siddha and Ayurveda medicine, had explored the herbs for the successful treatment of various dreadful diseases. *Acalypha indica* Linn. (Tamil - Kuppaimeni; Sanskrit – Arittamanjarie –Euphorbiaceae family) is a common annual shrub that grows in the tropical India and recognized as a medicinal plant in traditional Indian system. The plant possesses high medicinal value and used widely in all the three systems (Siddha, Ayurveda and Unani) of Indian traditional medicine. It is used in the treatment of cough, respiratory problems, dyspnosea, intestinal infections, rheumatoid arthritis, skin infection and wounds. Besides these, it is also used as a laxative and pain killer. Earlier reports recorded the antioxidant, analgesic, anti-inflammatory and wound healing activities of the extracts of *A. indica*. The extract possesses antimicrobial activity against bacteria, fungi and helminthic parasites. In addition they possess larvicidal and ovicidal activities and neutralize the *Viper russelli* venom induced lethality, cardiotoxicity, neurotoxicity. The antibacterial activity of *Acalypha indica* was investigated against three strains of human pathogenic bacteria viz., *Bacillus subtilis*, *Staphylococcus aureus* and *Klebsiella pneumoniae* using ethylacetate, hexane and methanol extracts of leaves, stem and roots of *Acalypha indica*. The ethylacetate extracts of leaves and roots inhibited the growth of all the three selected bacterial species. The cardioprotective role of methanolic extract in rats with induced myocardial infarction using isoproterenol was investigated. The levels of inflammatory marker,cardiac markers, lipid peroxidase activity were restored to normal levels in MI induced rats pretreated with leaf extract. In addition, the histopathological analysis of the heart tissue confirmed the protection of tissue damage by *A.indica*. The *A. indica* leaves possess possibly active metabolites that protects the cardiac tissue from cardiovascular diseases. The present review deals with the medicinal properties of *Acalypha indica* (L) and its potential antimicrobial and therapeutic applications.

Published: September 2014.