

Congratulations to Dr. Giftson J Senapathy, CGBIBT for receiving 'Best Oral Presentation Award for Research' in the 'International Conference on Phytomedicine-2018', held at Bharathiar University, Coimbatore on 29th-31st August, 2018.







Print ISSN 0975-4261
Online ISSN 0975-6892

Special Issue • Supplement 1 • August 2018

Medicinal Plants

International Journal of Phytomedicines and
Related Industries

International Conference on Phytomedicine



Organized by



DEPARTMENT OF BOTANY
Bharathiar University, Coimbatore, Tamil Nadu, India

In collaboration with
Defence Research & Development Organisation
Defence Research Laboratory - Tezpur, Assam



A Publication of
National Medicinal Plants Board
New Delhi



ICPM 2018
ABSTRACTS



Society for Conservation and Resource
Development of Medicinal Plants
www.smediplants.com

IndianJournals.com
A product of The Enterprise Pvt. Ltd.
www.indianjournals.com



Sensitizing, immunomodulatory and chemoprotective effects of the polyphenol ferulic acid in cell lines and Xenografted mice

Giftson J Senapathy¹ and R. Krishnamurthy^{2*}

CG Bhakta Institute of Biotechnology, Uka Tarsadia university, Bardoli, Surat, Gujarat- 394350

*E-mail : krishnashanti@gmail.com

In chemotherapy, one of the important treatment strategies for cancer, most of the chemotherapeutic drugs like cisplatin were immunosuppressant and exhibited toxicities to the host. Reports suggested that plant-based polyphenols could be promising agents which can sensitize and modulate therapy and protect therapy induced damage in the organs. Based on this, the present study was designed in cell lines and lymphoma induced mice to test whether ferulic acid (FA), a dietary polyphenol, could play an influential role in chemotherapy by modulating the immune system and reducing systemic toxicity or not cancer cell lines, normal and Daltons lymphoma xenografted mice were used for the present study. The effects of FA on cisplatin treatment in lymphoma induced mice was found by assessing bone marrow cellularity, caspase 3, p53 and Bcl-2 proteins, kidney histopathology, hepatic enzymes in liver and kidney, bodyweight index, platelets count, total WBC, differential count and total protein content of control and experimental mice. In parallel the sensitizing

effects were tested in the lymphoma cell lines by the assessment of cytotoxicity, apoptosis and micronuclei changes. Our results showed a significant alteration in the above mentioned parameters in the animals underwent with cisplatin therapy which indicated signs of immune and organotoxicity. When FA was introduced in the treatment, the values of these parameters were reversed significantly towards normalcy which indicated the immunomodulatory and chemoprotective effects of FA on immune system and organs.

Similarly in cancer cell lines, FA significantly increased the cytotoxicity, apoptosis and micronucleus formation in cisplatin treated cells than cells treated with cisplatin alone which indicated its sensitizing effects on cancer drugs. Hence from our study, it may be concluded that the introduction of FA in cytotoxic chemotherapeutic drugs can make chemotherapy a better treatment procedure for cancer.

Investigations of Antioxidant and Antimicrobial Capacity of *Elaeocarpus tectorius* against UTI Pathogens

Ashwini Lydia Manoharan, Suman Thamburaj, Kasipandi Muniyandi, Saikumar Sathyanarayanan, Gayathri Jagadeesan and Parimelzhagan Thangaraj*

Bioprospecting Laboratory, Department of Botany, Bharathiar University, Coimbatore 641 046, Tamil Nadu, India

*E-mail : drparimel@gmail.com

Plants are the natural honorarium used for primary health care and people rely upon herbal medications for the prevention and cure of numerous diseases that are caused by infectious pathogens. Urinary tract infections (UTI) are the most common infectious diseases prevailing among all the people. So the fruit extracts of *E. tectorius* were considered and tested against selective UTI pathogens.

Candida albicans). The extracts of fruit were by means of successive Soxhlet extractions using five solvents (Petroleum ether, Dichloromethane, Ethyl acetate, Methanol and water) varying in their polarity ranges. Phytoconstituents such as alkaloids, flavonoids, terpenoids, steroids and glycosides were screened. Quantification of polyphenols (phenolics) were done spectrophotometrically.