conferenceseries.com 2nd International Conference and Exhibition on Pharmacology and Ethnopharmacology

May 02-04, 2016 Chicago, USA

Identification and mechanism study of novel anti-cancer components from Garcinia species

Hong-Xi Xu

Shanghai University of Traditional Chinese Medicine, China

The Garcinia genus is an invaluable source of novel bioactive compounds. Of the 20 Garcinia spp. found across China, over 300 compounds including 90 novel xanthones and PPAPs from 15 such plants have been identified by our group. It is intriguing to find that xanthones and PPAPs possess discrete anti-cancer properties not limited to cell cycle arrest, apoptosis, autophagy and anti-metastasis. In this presentation, we will summarize our systematic work in the last 10 years including: (1) the bioassay-guided fractionation and identification of novel compounds from Garcinia plants; (2) the mechanism study of active compounds targeting multiple pathways such as apoptosis, autophagy, and metastasis; (3) the evaluation of synergistic effects of combinations of various lead compounds with anti-cancer drugs. The understanding of synergistic effects of isolated active compounds can be an imperative approach for finding new efficient drugs in the treatment of cancer. Our studies provide scientific evidences supporting further research and development of the promising lead compounds identified from Garcinia species in China.

xuhongxi88@gmail.com

Valuation of toxicity assay of crude drug; Clerodendrum infortunatum L.

Talukdar Muhammad Waliullah and Akter Mst Yeasmin Shizuoka University, Japan

Objective: To learn a scientific knowledge, this study was examined for evaluating anticancer, anti-microbial and pharmacological activities of natural products and the estimation of cytotoxic potency using root, leaf and stem of ethanol and ethyl acetate extracts of *Clerodendrum infortunatum* (Verbenaceae) due to randomly use in customary and traditional medicine to cure common ailments such as intestinal disorder, diarrhea, tuberculosis and respiratory problems etc.

Methods: The in vitro application was carried out by using disc diffusion, micro broth dilution and serial dilution techniques against clinically important life threatening organisms and the bench top bioassay method using brine shrimp lethality bioassay.

Results: All the extracts unveiled significant inhibitory activity over the bacteria and fungus comparable to the standard drug tetracycline and fluconazole. The maximum average diameter zone of inhibition was recorded to bacterial strains against B. *megaterium*, S. *typhi*, K. *pneumoniae* and to *fungi* against A. *niger* and C. *albicans*. The MIC values of ethanol leaf extract were determined 64µg/ml to B. *megaterium*, S. *typhi* and K. *pneumoniae*; 128 µg/ml to S. *aureus*, S.-β–haemolyticus and E. coli and interestingly, these extracts were also found to be conspicuously lethal precisely the LC50 value of root of ethanol fraction was 20.845 ppm compare to the standard drug tetracycline was 14.675 ppm to brine shrimp nauplii indicating that the extracts are biologically active.

Conclusion: The findings evidently appear promising antibacterial and antifungal along with cytotoxic properties of C. *infortunatum* against antagonistic pathogens. This study serves as a potential template for the implications of these results for bioactivity and drug discovery.

olymwt@live.com

Notes: