

International Conference on

Pain Research & Management

October 03-04, 2016 Vancouver, Canada

Gut-the Trojan horse in remote organs' autoimmunity

Aaron Lerner

Technion-Israel Institute of Technology, Israel

Human beings assemble and maintain a diverse but host-specific gut microbial community along the longitudinal axis of the intestines. Helped by a functional tight junction, the default response to commensal microbes is tolerance, whereas the default response to pathogens is an intricately orchestrated immune response, resulting in pathogen clearance. Nutrients and industrial food additives were suggested to impact the intestinal ecosystem and to breach tight junction integrity, thus, contributing to autoimmunogenesis. Taken together, certain nutritional components, increased intestinal permeability, disease specific dysbiotic pathobionts and their capacity of post translation modification of proteins and their secreted metabolites are luminal events that impact autoimmunity. The current presentation expands on the multi gut originated axes and their relationship to remote organ autoimmune diseases. Brain, joint, bone, endocrine, liver, kidney, heart, lung and skin autoimmune diseases are connected to the intestinal luminal compartmental deregulated events to form the gut-systemic organs axes. Multiple brain functions, sensations, behavior and human mood originate from the intestinal lumen and traffic bi-directionally between the two organs, impacting the gut-brain axis.

aaronlerner1948@gmail.com

Qualitative phytochemical screening and evaluation of anti-inflammatory, analgesic and antipyretic activities of *Microcos paniculata* barks and fruits

Abdullah Aziz

Jessore University of Science and Technology, Bangladesh

Methanolic extracts of *Microcos paniculata* bark (BME) and fruit (FME) were qualitatively evaluated for phytochemical constituents, as well as to evaluate their anti-inflammatory, analgesic and antipyretic activities. Phytochemical constituents of BME and FME were determined by different qualitative tests such as Molisch's test, Fehling's test, alkaloid test, frothing test, FeCl₃ test, alkali test, Salkowski's test and Baljet test. The anti-inflammatory, analgesic and antipyretic activities of the extracts were evaluated through proteinase-inhibitory assay, xylene-induced ear edema test, cotton pellet-induced granuloma formation in mice, formalin test, acetic acid-induced writhing test, tail immersion test and Brewer's yeast induced pyrexia in mice. *M. paniculata* extracts revealed the presence of carbohydrates, alkaloids, saponins, tannins, flavonoids and triterpenoids. All of the extracts showed significant ($P < 0.05$, vs. aspirin group) proteinase inhibitory activity, whereas the highest effect elicited by plant extracts was exhibited by the BME (75.94% proteinase inhibition activity). Each extract at the doses of 200 and 400 mg/kg body weight showed significant ($P < 0.05$, vs. control) percentage inhibition of ear edema and granuloma formation. These extracts significantly ($P < 0.05$, vs. control) reduced the paw licking and abdominal writhing of mice. In addition, BME 400 mg/kg, and FME at 200 and 400 mg/kg showed significant ($P < 0.05$, vs. control) analgesic activities at 60 min in the tail immersion test. Again, the significant ($P < 0.05$, vs. control) post-treatment antipyretic activities were found by BME 200 and 400 mg/kg and FME 400 mg/kg, respectively. Study results indicated that *M. paniculata* could be a source of plant compounds with anti-inflammatory, analgesic and antipyretic activities.

mazju25@gmail.com