

3rd International Conference and Exhibition on Addiction Research & Therapy

August 04-06, 2014 Hilton-Chicago/Northbrook, Chicago, USA

Anti-inflammation and neuroprotective drugs, beneficial in the treatment of heroin dependent patients

Ru-Band Lu^{1,4}, Sheng-Yu Lee^{1,2}, Shiou-Lan Chen^{1,3} and Yun-Hsuan Chang¹

¹National Cheng Kung University, Taiwan

²Kaohsiung Veteran's General Hospital, Taiwan

³Kaohsiung Medical University, Taiwan

⁴National Health Research Institute, Taiwan

Overactivation of inflammatory cytokine has been associated with the progression of heroin dependence. Both memantine and dextromethorphan (DM) belong to noncompetitive NMDA receptor antagonist, but low dose memantine/DM might possess anti-inflammatory effect that is mechanistically remote from an NMDA receptor. A randomized, double-blind, placebo-controlled 12-week study was conducted. Heroin dependence patients undergoing regular methadone maintenance therapy were randomly assigned to a group: Memantine (5 mg/day), DM (60~120 mg/day) or Placebo. Inflammatory markers factor including plasma TNF- α , IL-8, and TGF- β 1 levels were examined during weeks 0, 1, 4, 8, and 12. After treatment, inhibition of tolerance to methadone and decreasing methadone dosage would be found in patients who received memantine/DM compared to the placebo group. In addition, reduced plasma TNF- α was found in patients who received memantine/DM while increased TGF- β 1 was found only in the memantine group and IL-8 in DM group compared to the placebo group. It was suggested that low-dose memantine/DM might be a feasible adjuvant therapy for attenuating inflammation, providing neuroprotection, and inhibiting methadone tolerance in heroin dependent.

Biography

Ru-Band Lu graduated from National Defense Medical center Taipei, Taiwan. Since 1992 to 1993, he was a visiting Research Scientist in Human Genetics at Yale University, New Haven, CT, USA. In the past years, he studied molecular genetics and psycho-neuroimmune pharmacology in mood disorders and substance use disorders. In this decade, he works in mood and substance use disorders as well as the developmental navel treatment model in major mental illness. He has published more than hundred and fifty research articles in the recent ten years.

rblu@mail.ncku.edu.tw